

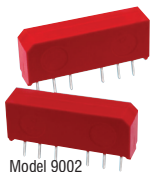
Relays & Solenoids

	Page		Page
8 & 11 Pin Plug-In Power Relays	2043	Panel Mounted Relays	2045
Automotive Relays	2036	Plug-In Relays	2039
DIN Rail Mount Power Relays	2023	Reed Relays	1997
Heavy Duty Power Relays	2042	Safety Relays	2038
High Frequency Relays	2011	Solenoids	2048
Interface Relays	2047	Solid State Relays	2002
MOSFET Relays	2000		

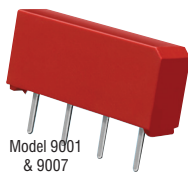
Reed Relays - Coto



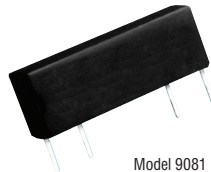
Reed - SIL 9000 Series



Model 9002
H = 3.18, W = 19.3,
D = 5.6mm



Model 9001
& 9007
H = 7.6, W = 19.3,
D = 5.08mm



Model 9081
H = 8, W = 22.6,
D = 6.98mm

Coil suppression diode option protects coil drive circuits
9002 version with coaxial shield for 50Ω impedance and switching of fast rise time digital pulses

- Hermetically sealed contacts for long life
- High dielectric strength
- High speed switching
- High insulation resistance
- Moulded thermoset body on integral lead frame
- CSA Approved and UL Recognised

Model	9001, 9002	9007, 9081
Switch power (max)	10W	10W
Switch voltage (max)	200V	200V
Switching current (max)	0.5A	0.5A
Switch carry current (max)	1.5A	1.0A
Contact resistance (max)	125mohm	200mohm
Insulation resistance (Min)	1000Gohm	10Gohm
Time, operate/release ms (max)	0.35/0.10	0.50/0.20
Life (Typical)	1000 x 10 ⁶ operations	100 x 10 ⁶ operations
Temperature, operating	-20 to +85°C	-20 to +85°C

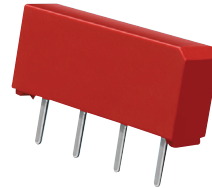
Mfrs. List No.	Order Code	Feature	Mfrs. List No.	Order Code	Feature
9001-05-00	108-1678		9001-12-00	108-1679	
9001-05-01	108-1617	Diode	9002-05-00	108-1680	
9001-05-02	108-1618	Form B contacts	9002-12-00	108-1681	
9001-12-01	108-1619	Diode	9007-05-00	108-1682	
9002-05-01	108-1620	Diode	9007-12-00	108-1683	
9007-05-01	108-1622	Diode	9081-05-00	108-1684	
9007-12-01	108-1623	Diode			

418376

COIL			Price Each
V dc	Ω ±10%	Order Code	
Model 9001			
5	500	108-1678	
5	500	108-1617	
5	500	108-1618	
12	1	108-1679	
12	1	108-1619	
Model 9002			
5	500	108-1680	
5	350	108-1620	
12	1	108-1681	
Model 9007			
5	500	108-1682	
5	500	108-1622	
12	1	108-1683	
12	1	108-1623	
Model 9081			
5	500	108-1684	

Reed - Surface Mount

9800 Series



Model 9814/9852 J-Lead with fitted external shield
Gull wing - H = 4.57, W = 10.16, D = 4.95mm
J-Lead - H = 5.08, W = 11.17, D = 4.95mm
Axial - H = 4.31, W = 10.16, D = 4.95mm



Model 9802 J-Lead - No shield fitted
Gull wing - H = 4.31, W = 11.68, D = 4.95mm
J-Lead - H = 4.82, W = 11.18, D = 4.95mm

- 3 package styles available: Axial, Gull wing and J-Lead
- Hermetically sealed contacts for long life
- High insulation resistance
- Coaxial shield for 50Ω impedance
- RF and fast rise time switching up to 6GHz
- External magnetic shield

Model	9802	9814	9852
Switch power (max)	3W	3W	3W
Switch voltage (max)	100V	100V	100V
Switching current (max)	0.25A	0.25A	0.25A
Switch carry current (max)	0.5A	0.5A	0.5A
Contact resistance (max)	125mohm	125mohm	125mohm
Insulation resistance (Min)	1000Gohm	1000Gohm	1000Gohm
Time, operate/release ms (max)	0.25/0.05	0.25/0.05	0.25/0.05
Life (Typical) - Operations	250 x 10 ⁶	1000 x 10 ⁶	100 x 10 ⁶ (N/C)
Temperature, operating	-20 to +85°C	-20 to +85°C	-20 to +85°C

Mfrs. List No.	Order Code	Package	Mfrs. List No.	Order Code	Package
9802-05-00	108-1689	Gull wing	9814-05-00	108-1691	Gull wing
9802-05-20	108-1633	J-Lead	9852-05-00	108-1693	Gull wing

418411

COIL			Price Each
V dc	Ω ±10%	Order Code	
Model 9802 - SPST			
5	150	SMD108-1689	
5	150	SMD108-1633	
Model 9814 - SPST			
5	150	SMD108-1691	
Model 9852 - SPDT			
5	110	SMD108-1693	

Reed - Miniature SIL

9091



Model 9091
H = 6.98, W = 15.24, D = 3.81mm

- Hermetically sealed contacts for long life
- High speed switching
- High insulation resistance
- Moulded thermoset body on integral lead frame
- Model 9091 UL Recognised

Coil suppression diode option protects coil drive circuits
Magnet shield reduces interaction

Model	9091
Switch power (max)	10W
Switch voltage (max)	200V
Switching current (max)	0.5A
Switch carry current (max)	1.5A
Contact resistance (max)	125mohm
Insulation resistance (Min)	1000Gohm
Time, operate/release ms (max)	0.5/0.3
Life (Typical)	500 x 10 ⁶ operations
Temperature, operating	-20 to +85°C

Mfrs. List No.	Order Code	Feature	Mfrs. List No.	Order Code	Feature
9091-05-00	108-1687		9091-12-01	108-1626	Diode
9091-05-01	108-1625	Diode			

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Reed Relays - Coto - continued

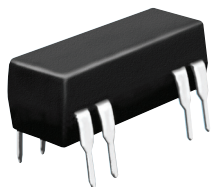
Reed - Miniature SIL - continued

9091 - continued

COIL		Order Code	Price Each
V dc	Ω ±10%		
Model 9091 - SPST			
5	500	108-1687	
5	500	108-1625	
12	1	108-1626	

Reed Relay - DIL

8L Series



- Drop-in low cost replacement for industrial standard DIL packages
- Moulded thermoset body on integral lead frame design
- Hermetically sealed contacts

Model 8L DIL package
H = 6.6, W = 19.5, D = 7.62mm

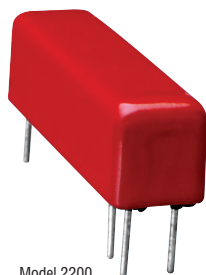
Model	8L01 & 8L02	8L41
Switch power (max)	10W	3W
Switch voltage (max)	200V	100V
Switching current (max)	0.5A	0.25A
Switch carry current (max)	1.0A	0.5A
Contact resistance (max)	150mohm	200mohm
Insulation resistance (Min)	10Gohm	1000Mohm
Time, operate/release ms (max)	0.5/0.5	1.0/1.0
Life (Typical) operations	500 x 10 ⁶	100 x 10 ⁶
Temperature, operating	-20 to +85°C	-20 to +85°C

Mfrs. List No.	Order Code	Feature	Mfrs. List No.	Order Code	Feature
2200-2301	108-1643	Electrostatic shield	8L02-05-11	108-1668	Electrostatic shield and Diode
8L01-05-001	108-1659		8L41-05-001	108-1672	
8L01-05-011	108-1660	Diode	8L41-05-011	108-1673	Diode
8L01-12-011	108-1662		8L41-05-111	108-1674	Electromagnetic shield and Diode
8L01-12-101	108-1663	Diode	8L41-12-001	108-1675	
8L02-05-00	108-1666		8L41-12-011	108-1677	Diode
8L02-05-01	108-1667	Diode			

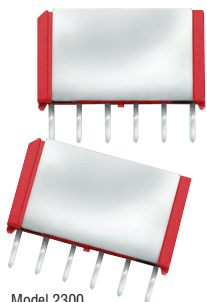
COIL		Order Code	Price Each
V dc	Ω ±10%		
Model 8L01 - SPST			
5	500	108-1659	
5	500	108-1660	
12	500	108-1662	
12	500	108-1663	
Model 8L02 - DPST			
5	200	108-1666	
5	200	108-1667	
5	200	108-1668	
Model 8L41 - SPDT			
5	200	108-1672	
5	200	108-1673	
5	200	108-1674	
12	500	108-1675	
12	500	108-1677	

Reed Relay

2200 and 2300 Series



Model 2200
H = 5.72, W = 20.57, D = 5.33mm



Model 2300
H = 9.4, W = 20.57, D = 5.33mm

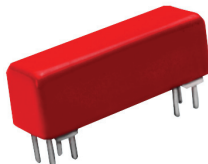
- Very small footprint
- Hermetically sealed contacts for long life
- High reliability
- Epoxy coated steel shell provides magnetic shielding

Model	2200 1 Form A 2301 & 2302	2200 1 Form C	2204	2204	2333 and 2341	2342
Switch power (max)	10W	3W	10W	=1,2276	=1,2276	10W
Switch voltage (max)	200V	100V	200V	=1,2274	=1,2274	200V
Switching current (max)	0.5A	0.25A	0.5A	=1,2275	=1,2275	0.5A
Switch carry current (max)	1.0A	0.5A	1.0A	=1,631	=1,631	1.0A
Contact resistance (max)	100mohm	150mohm	100mohm	=1,637	=1,637	100mohm
Insulation resistance (Min)	1000Gohm	100Gohm	1000Gohm	=1,1065	=1,1065	1000Gohm
Time, operate/release ms (max)	0.5/0.1	1/2	0.5/0.1	=1,967	=1,1249	0.5/0.1
Life (Typical) operations	500 x 10 ⁶	500 x 10 ⁶	500 x 10 ⁶	500 x 10 ⁶	500 x 10 ⁶	100 x 10 ⁶
Temperature, operating	-20 to +85°C	-20 to +85°C	-20 to +85°C	=1,5008 to +1,698	=1,698	-20 to +85°C
Mfrs. List No.	Order Code	Feature	Mfrs. List No.	Order Code	Feature	
2204-05-411	108-1646	Electrostatic shield	2341-05-020	108-1653	Coaxial shield	
2204-12-301	108-1648		2341-12-000	108-1654		
2211-12-201	145-4984		2341-12-020	108-1656	Coaxial shield	
2211-12-301	145-4986		2342-05-000	108-1657		

COIL		Order Code	Price Each
V dc	Ω ±10%		
Model 2200 - SPST			
5	370	108-1646	
12	1.5	108-1648	
Model 2200 - 1 Form C			
12	1500	145-4984	
12	1.5	145-4986	
Model 2300			
SPDT			
5	230	108-1653	
12	1	108-1654	
12	1	108-1656	
DPDT			
12	1	108-1658	

Reed Relay

2900 Series



- Very small size combined with high reliability
- High Insulation Resistance
- Hermetically sealed contacts for long life
- Epoxy coated steel shell provides magnetic shielding
- Optional Coaxial Shield for 50R impedance and switching of fast rise time digital pulses

H = 7.11, W = 20.82, D = 6.35mm

Switch power (max)	3W	Insulation resistance (Min)	100Gohm
Switch voltage (max)	150V	Time, operate/release ms (max)	1/2
Switching current (max)	0.25A	Life (Typical) operations	100 x 10 ⁶
Switch carry current (max)	1.0A	Temperature, operating	-20 to +85°C
Contact resistance (max)	150mohm		

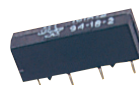
Mfrs. List No.	Order Code	Mfrs. List No.	Order Code	Co-axial Shield
2911-05-301	132-6196	2911-12-321	132-6199	Co-axial Shield
2911-05-321	132-6198			

COIL		Order Code	Price Each
V dc	Ω ±10%		
Model 2900 - SPDT			
5	230	132-6196	
Model 2900 - SPDT, with Co-axial Shield			
5	230	132-6198	
12	1.5	132-6199	

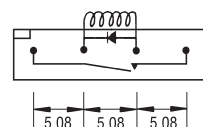
Reed Relays - Hamlin

Dry Reed, SIL

HAMLIN



L=19.5, W=5.1, H=7.6



Single pole normally open reed relays in single-in-line epoxy moulded package. Slim package allows relays to be mounted on 0.2" centres. Protection diode incorporated.

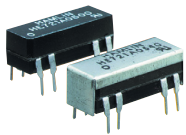
Switch voltage (max)	100V*	Contact resistance (max)	0.2Ω
Switch current (max)	0.5A	Operate/Release	0.5ms
Switch power (max)	10W	Insulation resistance	10GΩ
Hold off voltage (min)	250V	* 200V for Hamlin types	

Mfrs. List No.	Order Code
HE3621A0510	956-1927
HE3621A1210	956-1935
HE3621A2410	956-1943

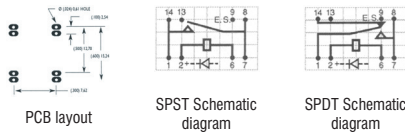
207146

COIL		Price Each	
V dc	$\Omega \pm 10\%$	Order Code	
3.75-10	500	956-1927	●
8-18	1	956-1935	●
16-40	2.15	956-1943	●

Reed - DIL
HE 700 Series



H = 7.5, W = 19.5, D = 7.24mm



HAMLIN

- Low coil power consumption
- Hermetically sealed, immune to environmental effects
- Standard Dual In Line package
- Internal suppression diode
- UL recognised (file E47258)

	SPST NO	SPDT CO	Mfrs. List No.	Order Code
Switch power W (max)	10	5	HE721A1210	956-1960
Switch voltage V dc (max)	200	175	HE721A0510	956-1986
Switching current A (max)	0.5	0.25		
Switch carry current A (max)	1.2	1.5		
Contact resistance mR (max)	150	200		
Insulation resistance MR	10000	10000		
Time, operate/release ms (max)	1.0/1.0	1.0/1.0		
Temperature, operating °C	-40 to +85	-40 to +85		

COIL		Price Each	
V dc	$\Omega \pm 10\%$	Order Code	
1 Form C (SPDT-CO)			
5	200	956-1986	●
1 Form A (SPST-NO)			
12	1	956-1960	●
24	2.15	956-1978	●

Dry Reed, DIL and DIP - HE700 Series

HAMLIN

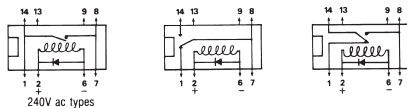


DIL - L=19.5, W=7, H=7
Pin spacing: 0.1" x 0.3"



DIP - L=30, W=12.5, H=9
Pin spacing: 0.1" x 1.0"

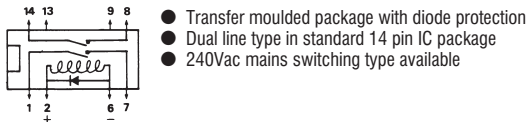
Single Pole - Top Views



240V ac types omit pins 1, 7, 9 & 13.

SPNO SPCO (pin out 1) SPCO (pin out 2)

Double Pole - Top View



- Transfer moulded package with diode protection
- Dual line type in standard 14 pin IC package
- 240Vac mains switching type available

200V dc Switching		240V ac Switching	
SPNO/DPNO (Form A)	SPCO (Form C)	SPNO (Form A)	SPCO (Form A)
Switch voltage (max)	0.5V dc	200V dc	240V ac
Switch current (max)	0.5A	0.25A	0.5A
Switch power (max)	10W	3W	10W
Hold-off voltage (min)	250V	200V	450V
Contact resistance (max)	2000 Ω	0.20 Ω	0.20 Ω
Operate/Release	0.5ms	1.5ms	0.5ms
Insulation resistance	100G Ω	1G Ω	100G Ω

Mfrs. List No.	Order Code	Mfrs. List No.	Order Code	Mfrs. List No.	Order Code
HE721A0510	956-1757	HE721E0510	956-1790	HE722A2410	956-1838
HE721C0510	956-1765			HE751A0510	956-1951
HE721C1210	956-1773	HE722A0510	956-1811	HE751A1210	956-1846
HE721C2410	956-1781	HE722A1210	956-1820	HE751A2410	956-1854

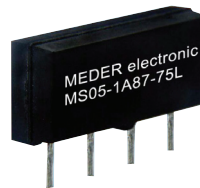
213444

COIL		Price Each	
V dc	$\Omega \pm 10\%$	Order Code	
SPNO (DIL Package)			
3.75-10	500	956-1757	●
SPCO (Pin-Out 1)			
3.75-10	200	956-1765	●
8-20	500	956-1773	●
16-32	2	956-1781	●
SPCO (Pin-Out 2)			
3.75-10	200	956-1790	●
DPNO (DIL Package)			
3.75-10	200	956-1811	●
8-20	500	956-1820	●
16-32	2.15	956-1838	●
240V ac Switching			
SPNO (DIL Package)			
3.75-10	500	956-1951	●
8-20	1	956-1846	●
16-32	2.15	956-1854	●

Reed Relays - Meder

Reed Relay

Micro-Single In Line



- Rugged molded design
- Requires half the area of a standard SIL Reed Relay
- Internal suppression diode version available
- Internal magnetic shield

H = 6.8, W = 15.2, D = 3.81mm

Contact Form	1A	Switch carry current A (max)	1
Contact resistance mR (max)	150	Breakdown voltage V dc	225
Switch power W (max)	10	Time, operate/release ms (max)	0.5/0.1
Switch voltage V dc (max)	200	Temperature, operating °C	-20 to +70
Switching current A (max)	0.5		

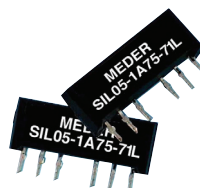
Mfrs. List No.	Order Code	Mfrs. List No.	Order Code
MS12-1A87-75L	107-9464	MS12-1A87-75D	107-9466
MS05-1A87-75D	107-9465		

417759

COIL		Price Each	
V dc	$\Omega \pm 10\%$	Order Code	
No Diode			
12	700	107-9464	●
With Diode			
5	280	107-9465	●
12	700	107-9466	●

Reed Relay

Single In Line



- Approved according to EN 60950
- 4.25 kV dc breakdown voltage
- High resistance coil
- Internal suppression diode version available

H = 7.8, W = 19.8, D = 5.08mm

Contact Form	1A	Contact Form	1A
Contact resistance mR (max)	150	Breakdown voltage V dc	320
Switch power W (max)	20	Insulation voltage V dc	4200
Switch voltage V dc (max)	200	Time, operate/release ms (max)	0.5/0.1
Switching current A (max)	1	Temperature, operating °C	-20 to +70
Switch carry current A (max)	1.25		

Mfrs. List No.	Order Code	Mfrs. List No.	Order Code
SIL05-1A72-71L	107-9456	SIL05-1A72-71D	107-9459
SIL12-1A72-71L	107-9457	SIL12-1A72-71D	107-9460
SIL24-1A72-71L	107-9458	SIL24-1A72-71D	107-9461

417757

COIL		Price Each	
V dc	$\Omega \pm 10\%$	Order Code	
No Diode			
5	500	107-9456	●
12	1	107-9457	●
24	2	107-9458	●
With Diode			
5	500	107-9459	●
12	1	107-9460	●
24	2	107-9461	●

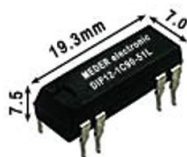
Reed Relays - Meder - continued

Reed Relay

Molded DIP



Products for tomorrow...



- IC-pin compatible
- Standard DIL pin configurations
- 4.25 kV dc breakdown voltage
- Internal suppression diode version available

Contact Form	1A	2A	1C
Contact resistance mR (max)	150	150	150
Switch power W (max)	20	20	3
Switch voltage V dc (max)	200	200	175
Switching current A (max)	1	1	0.25
Switch carry current A (max)	1.25	1.25	1.2
Breakdown voltage V dc	320	320	200
Insulation voltage V dc	1500	1500	1500
Time, operate/release ms (max)	0.5/0.1	0.5/0.1	0.7/1.5
Temperature, operating °C	-20 to +70	-20 to +70	-20 to +70

Mfrs. List No.	Order Code	Mfrs. List No.	Order Code
DIP05-1A72-12L	107-9435	DIP05-2A72-21D	107-9446
DIP24-1A72-12L	107-9437	DIP24-2A72-21D	107-9448
DIP05-1A72-12D	107-9439	DIP05-1C90-51L	107-9449
DIP12-1A72-12D	107-9441	DIP12-1C90-51L	107-9450
DIP24-1A72-12D	107-9442	DIP24-1C90-51L	107-9452
DIP05-2A72-21L	107-9443	DIP05-1C90-51D	107-9453
DIP12-2A72-21L	107-9444		
DIP24-2A72-21L	107-9445	DIP24-1C90-51D	107-9455

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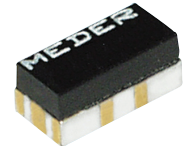
COIL		Price Each	
V dc	Ω ±10%	Order Code	
1 Form A			
No Diode			
5	500	107-9435	
24	2	107-9437	
With Diode			
5	500	107-9439	
12	1	107-9441	
24	2	107-9442	
2 Form A			
No Diode			
5	200	107-9443	
12	500	107-9444	
24	2	107-9445	
With Diode			
5	200	107-9446	
24	2	107-9448	
1 Form C			
No Diode			
5	200	107-9449	
12	500	107-9450	
24	2	107-9452	
With Diode			
5	200	107-9453	
24	2	107-9455	

Reed Relay

SPST - Low Profile



Products for tomorrow...



- Ceramic / thermoset package
- Smallest industry size device
- No lead frame
- No internal solder connections
- Internal magnetic shield
- Low thermal offset, typically 1µV
- Insulation resistance 10¹⁴R typical

H=3.4, W=8.6, D=4.4mm			
Contact ratings	10W	Coil resistance	150ohm
Switching voltage	170V DC or 170V ac peak	Coil voltage	5V
Switching current	0.5A	Operating temperature	-40 to 125°C
Carry current	0.5A		

486259

Mfrs. List No.	Order Code	Price Each
CRR05-1A	SMD 144-7643	
7 GHz switching, 50R Impedance version		
CRF05-1A	SMD 144-7644	

Reed Relay

High Voltage H Series



Products for tomorrow...



- Switching up to 7.5 kV dc
- 1000 Gigaohm between coil and contact
- Breakdown voltage of 15 kV dc
- Coil covered with a thermoplastic that meets **UL94V-0**

H = 30, W = 29.1 (body) 82 (overall), D = 18mm

Contact Form	SPST-NO / SPST-NC Contact Form	SPST-NO / SPST-NC
Contact resistance mR (max)	150	10
Switch power W (max)	50	15
Switch voltage kV dc (max)	7.5	Time, operate/release ms (max) 3/1.5
Switching current A (max)	3	Temperature, operating °C -20 to +70
Switch carry current A (max)	5	

COIL		Price Each	
V dc	Ω ±10%	Order Code	
Contact form 1A			
12	340	107-9507	
24	1.5	107-9509	
Contact form 1B			
12	275	107-9508	
24	650	107-9510	

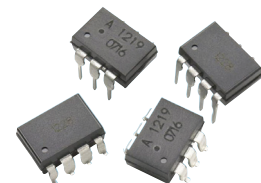
417887

MOSFET Relays - Avago

Photo MOSFET Relays



ASSR Series



Applications:

- Telecommunication Switching
- Data Communications
- Industrial Controls
- Medical
- Security
- EMR / Reed Relay Replacement



Avago Technologies' new ASSR Series are high-speed optically isolated MOSFET output solid-state relays that feature performance that has been qualified over a wide industrial temperature range of -40°C to +85°C. They are Form A (normally open) single-pole single-throw relays in industry-standard 6-pin and 8-pin dual-inline (DIP) packages, and 4-pin small outline (SO) packages. Their output ratings range from 60V to 600V maximum load voltage and from 40mA to 2.5A continuous output current. Their transient immunity of more than 1kV/µs and excellent noise rejection between input-output as well as between open terminals on the output will eliminate undesirable transient effects. Reinforced insulation of 3.75kV with fast switching speed makes them suitable for a wide range of industrial, consumer and automotive applications.

Mfrs. List No.	Load Voltage	Current	On Resistance	Terminal Type	Package Type
ASSR-1218-003E	60V	200mA	10ohm	SMD	SO-4
ASSR-1228-002E	60V	200mA	10ohm	THT	DIP-8
ASSR-1228-302E	60V	200mA	10ohm	SMD	DIP-8
ASSR-1410-003E	60V	600mA	1ohm	SMD	SO-4
ASSR-1420-002E	60V	600mA	1ohm	THT	DIP-8
ASSR-1420-302E	60V	600mA	1ohm	SMD	DIP-8
ASSR-1510-003E	60V	1A	0.5ohm	SMD	SO-4
ASSR-1520-002E	60V	1A	0.5ohm	THT	DIP-8
ASSR-1520-302E	60V	1A	0.5ohm	SMD	DIP-8
ASSR-1611-001E	60V	2.5A	0.1ohm	THT	DIP-6
ASSR-1611-301E	60V	2.5A	0.1ohm	SMD	DIP-6
ASSR-301C-003E	250V	50mA	50ohm	SMD	SO-4
ASSR-3210-003E	250V	200mA	10ohm	SMD	SO-4
ASSR-3220-002E	250V	200mA	10ohm	THT	DIP-8
ASSR-3220-302E	250V	200mA	10ohm	SMD	DIP-8
ASSR-322R-002E	250V	200mA	8.5ohm	THT	DIP-8
ASSR-322R-302E	250V	200mA	8.5ohm	SMD	DIP-8
ASSR-401C-003E	400V	40mA	100ohm	SMD	SO-4
ASSR-402C-002E	400V	40mA	100ohm	THT	DIP-8
ASSR-402C-302E	400V	40mA	100ohm	SMD	DIP-8
ASSR-4110-003E	400V	120mA	25ohm	SMD	SO-4
ASSR-4118-003E	400V	100mA	35ohm	SMD	SO-4
ASSR-4120-002E	400V	120mA	25ohm	THT	DIP-8
ASSR-4120-302E	400V	120mA	25ohm	SMD	DIP-8
ASSR-4128-002E	400V	100mA	35ohm	THT	DIP-8
ASSR-4128-302E	400V	100mA	35ohm	SMD	DIP-8
ASSR-5211-001E	600V	400mA	16ohm	THT	DIP-6
ASSR-5211-301E	600V	400mA	16ohm	SMD	DIP-6

536172

Mfrs. List No.	Order Code	Price Each
ASSR-1218-003E	170-8432	
ASSR-1228-002E	170-8433	
ASSR-1228-302E	170-8434	
ASSR-1410-003E	170-8435	
ASSR-1420-002E	170-8436	
ASSR-1420-302E	170-8437	

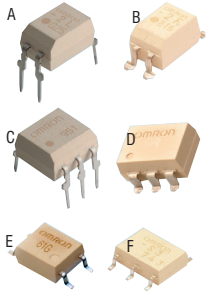
Over 500 000 products available online



Mfrs.	Price Each
List No.	Order Code
ASSR-1510-003E	170-8438
ASSR-1520-002E	170-8439
ASSR-1520-302E	170-8440
ASSR-1611-001E	170-8441
ASSR-1611-301E	170-8443
ASSR-301C-003E	170-8444
ASSR-3210-003E	170-8445
ASSR-3220-002E	170-8446
ASSR-3220-302E	170-8447
ASSR-322R-002E	170-8448
ASSR-322R-302E	170-8449
ASSR-401C-003E	170-8450
ASSR-402C-002E	170-8451
ASSR-402C-302E	170-8452
ASSR-4110-003E	170-8453
ASSR-4118-003E	170-8455
ASSR-4120-002E	170-8456
ASSR-4120-302E	170-8457
ASSR-4128-002E	170-8458
ASSR-4128-302E	170-8459
ASSR-5211-001E	170-8460
ASSR-5211-301E	170-8461

MOSFET Relays - Omron

MOSFET Relays G3VM Series



- High load voltage capability
- Large isolation between input and output
- MOSFET design ensures fast switching
- PCB THT and SMD versions available
- UL Recognised

Output Style	Dielectric strength I/O	Time on/off (ms)	LED forward voltage (min/max)	Load current (mA)	On state Resistance (max)	Mfrs. List No.	Order Code
SPST N/O	2500 V rms	1/1	1.0/1.3	120	50ohm	G3VM-351A	991-8779
SPST N/O	2500 V rms	1/1	1.0/1.3	120	50ohm	G3VM-351D	991-8795
SPST N/O	2500 V rms	1/1	1.0/1.3	120	50ohm	G3VM-351E	991-8809
SPST N/O	1500 V rms	1/3	1.0/1.3	110	35ohm	G3VM-351G	991-8817
SPST N/C	1500 V rms	1/3	1.0/1.3	120	25ohm	G3VM-353G	991-8876
SPST N/O	2500 V rms	1/1	1.0/1.3	120	35ohm	G3VM-401A	991-8892
SPST N/O	2500 V rms	1/1	1.0/1.3	120	35ohm	G3VM-401D	991-8914
SPST N/O	1500 V rms	1/1	1.0/1.3	120	35ohm	G3VM-401G	991-8930
DPST N/O	1500 V rms	1/1	1.0/1.3	120	35ohm	G3VM-402J	179-8609
SPST N/O	2500 V rms	2/0.5	1.0/1.3	500	2ohm	G3VM-61A1	991-8957
SPST N/O	2500 V rms	2/0.5	1.0/1.3	500	2ohm	G3VM-61B1	991-8965
SPST N/O	2500 V rms	2/0.5	1.0/1.3	500	2ohm	G3VM-61D1	991-8973
SPST N/O	2500 V rms	2/0.5	1.0/1.3	500	2ohm	G3VM-61E1	991-8981
SPST N/O	1500 V rms	2/0.5	1.0/1.3	400	2ohm	G3VM-61G1	991-8990
SPST N/O	1500 V rms	2/0.5	1.0/1.3	400	2ohm	G3VM-61H1	991-9007
SPST N/O	2500 V rms	1.5/0.4	1.18/1.48	2.5	0.1ohm	G3VM-61BR	179-8610
SPST N/O	2500 V rms	1.5/0.4	1.18/1.48	2.5	0.1ohm	G3VM-61ER	179-8611
SPST N/O	1500 V rms	3/1	1/1.3	1	0.7ohm	G3VM-61GR1	179-8612

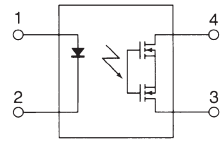
Load Voltage (Peak)	Case Style	Price Each
Style	Order Code	
350V AC	A	991-8779
350V AC	B	991-8795
350V AC	D	SMD 991-8809
350V AC	E	SMD 991-8817
350V AC	E	SMD 991-8876
400V AC	A	991-8892
400V AC	B	991-8914
400V AC	E	SMD 991-8930
400V ac	F	NEW 179-8609
60V AC	A	991-8957
60V AC	C	991-8965
60V AC	B	991-8973
60V AC	D	SMD 991-8981
60V AC	E	SMD 991-8990
60V AC	F	SMD 991-9007
60V ac	C	NEW 179-8610
60V ac	D	NEW 179-8611
60V ac	E	NEW 179-8612

MOSFET Relays - Panasonic

Photo MOS - AQY Series



Ultra-miniature
H=2.1, W=4.3, D=4.4
(Pin spacing 2.54 x 6.0)



Sub-miniature
H=3.2, W=4.78, D=6.4 (Pin spacing 2.54 x 8.3)

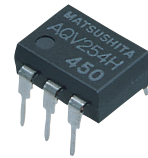
- Available in ultraminiature SO and subminiature DIL packages
- Reinforced barrier gives 5000V rms I/O isolation (EH and EHA types)
- ac or dc switching capability
- Low-level off state leakage current

Load Voltage (pk)	Load Current (mA)	Isolation Voltage (ac)	Mfrs. List No.	Order Code
Single Pole, N/C - Ultra-miniature - Surface mount	80	1500	AQY414S	310-5325
Single Pole, N/O - Sub-miniature - Through Hole	130	5000	AQY210EH	310-5337
Single Pole, N/C - Sub-miniature - Through Hole	120	5000	AQY414EH	310-5349
Single Pole, N/O - Sub-miniature - Surface mount	130	5000	AQY210EHA	310-5350
0 to 350V	120	1500	AQY210KS	372-7889

207082

Load Voltage Range	Order Code	Price Each
Single Pole, N/O - Ultra-miniature - Surface mount		
0 to 350	310-5313	
Single Pole, N/C - Ultra-miniature - Surface mount		
0 to 400	310-5325	
Single Pole, N/O - Sub-miniature - Through Hole		
0 to 350	310-5337	
Single Pole, N/C - Sub-miniature - Through Hole		
0 to 400	310-5349	
Single Pole, N/O - Sub-miniature - Surface mount		
0 to 350	310-5350	
0 to 350	372-7889	

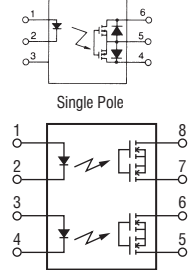
PhotoMOS - AQV/AQW21/25 Series



Single Pole (Through Hole)



Double Pole (Surface Mount)



The photoMOS relay provides solid state switching for low level signals, utilising MOSFET technology for the output stage.

- Reinforced barrier gives 5000V rms I/O isolation
- High sensitivity / low power consumption
- ac or dc switching capability
- Standard 6 and 8 pin IC and SO packages
- LED version gives clear operation visibility
- UL Recognised and CSA approved. Conforms to BS60950 (7002) and BS415

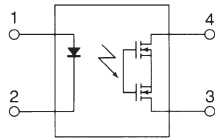
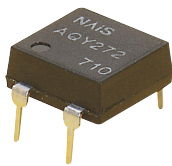
LED operate current	0.9mA (typ), 3mA (max)		
Turn on/Turn off time	0.8ms (typ), 2ms (max)		
Load Voltage Range (Vpk)	Load Current (mA) max.	Mfrs. List No.	Order Code
0 to 250V	200	AQV253H	112-4062
0 to 350V AC	130	AQV210EH	117-5731
0 to 400V	150	AQV254H	112-4063
0 to 350V AC	120	AQW210EH	117-5733
0 to 350V AC	100	AQW210S	117-5734

207012

Load Voltage Range	Order Code	Price Each
Single Pole, ac or dc load		
0 to 250	112-4062	
0 to 350	117-5731	
0 to 400	112-4063	
Double Pole, ac or dc load		
0 to 350	117-5733	
Surface Mount, Double Pole, ac or dc load		
0 to 350	SMD 117-5734	

MOSFET Relays - Panasonic - continued

Photo MOS - AQY27 Series



H=3.9, W=8.8, D=9.3

- High capacity switching
- ac or dc switching capability

- Low-level off state leakage current
- UL Recognised and CSA approved

Load voltage (pk)	Load current (ma)	Isolation voltage (ac)	Mfrs. List No.	Order Code
60V	2000	2500	AQY272	310-5611
400V	350	2500	AQY274	310-5623

207083

Price Each

Load Voltage Range	Order Code
Single Pole, N/O - Through Hole	
60V	310-5611
400V	310-5623

Panasonic

Mfrs.	Rated	Blocking	Control	Pick-up
Control Plug with Spring Terminals - Power: FASTON Terminals				
RX1A23A25MF	230V ac	25A 650Vp	24 - 275V ac	18V ac
RX1A23A50MF	230V ac	50A 650Vp	24 - 275V ac	18V ac
RX1A23D25MF	230V ac	25A 650Vp	4 - 32V dc	3.5V dc
RX1A23D50MF	230V ac	50A 650Vp	4 - 32V dc	3.5V dc
Control Plug with Spring Terminals - Power Plug with Spring Terminals				
RX1A23A25MP	230V ac	25A 650Vp	24 - 275V ac	18V ac
RX1A23A50MP	230V ac	50A 650Vp	24 - 275V ac	18V ac
RX1A23D25MP	230V ac	25A 650Vp	4 - 32V dc	3.5V dc
RX1A23D50MP	230V ac	50A 650Vp	4 - 32V dc	3.5V dc
Control Plug with Screw Terminals - Power Plug with Screw Terminals				
RX1A23A25VC	230V ac	25A 650Vp	24 - 275V ac	18V ac
RX1A23A50VC	230V ac	50A 650Vp	24 - 275V ac	18V ac
RX1A23D25VC	230V ac	25A 650Vp	4 - 32V dc	3.5V dc
RX1A23D50VC	230V ac	50A 650Vp	4 - 32V dc	3.5V dc

549548

Mfrs.	Order Code	Price Each
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List No.	Order Code
Base Module	
RX1A23A25	176-1601
RX1A23A50	176-1603
RX1A23D25	176-1604
RX1A23D50	176-1605

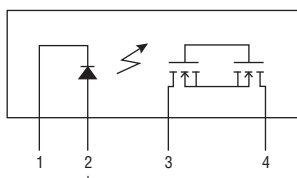
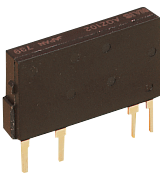
Mfrs.	Order Code
Control Plug with Spring Terminals - Power: FASTON Terminals	
RX1A23A25MF	176-1606
RX1A23A50MF	176-1607
RX1A23D25MF	176-1608
RX1A23D50MF	176-1609

Mfrs.	Order Code
Control Plug with Spring Terminals - Power Plug with Spring Terminals	
RX1A23A25MP	176-1610
RX1A23A50MP	176-1611
RX1A23D25MP	176-1612
RX1A23D50MP	176-1613

Mfrs.	Order Code
Control Plug with Screw Terminals - Power Plug with Screw Terminals	
RX1A23A25VC	176-1615
RX1A23A50VC	176-1616
RX1A23D25VC	176-1617
RX1A23D50VC	176-1618

Mfrs.	Order Code
Accessories	
RCM25	20 input plugs with spring terminals 176-1619
RCV25	20 input plugs with screw terminals 176-1620
RPC60	10 output plugs with screw terminals 176-1621
RPP60	10 output plugs with spring terminals 176-1622

PhotoMOS - AQZ Series



H=11, W=21, D=3.5

- Compact 4 pin SIL package
- High capacity AC / DC output switching

- Extremely low On-Resistance
- High isolation voltage 2500V

Load voltage (pk)	Load current (ma)	On-resistance (max.)Ω	Mfrs. List No.	Order Code
60V	3A	0.18	AQZ202	117-5735
100V	2A	0.34	AQZ205	117-5736

207047

Price Each

Load Voltage Range	Order Code
Single Pole, ac / dc Load	
0 to ± 60V	117-5735
0 to ± 100V	117-5736

Panasonic

20A DIN Rail Mounting Mini Solitron



These relays are designed to replace electro-mechanical contactors in industrial heating and motor control applications, especially when switching is frequent. The devices are ready to mount on DIN-rail or chassis and come with integral heatsink. The compact terminal layout allows SSR (U) type connection. Two 2.5mm² cables can be connected in each screw terminal to allow looping. A removable IP20 cover enables connection of a 4mm² cable with crimped terminal. An LED indicates the status of the control input. **UL Recognised and CE marked.**

H=80, W=22.5, D=103mm

- AC semiconductor contactor
- Zero switching
- Direct Copper Bonding (DCB) technology
- LED Indication
- Self lifting terminals
- Opto-isolation >4000V ac(rms)

Control voltage	554-0458 4 to 32V DC	554-0460 & 554-0471 24 to 275V AC/24 to 48V DC
Pick-up voltage	3.8V DC	22V ac/dc
Drop-out voltage	1.2V DC	6V ac/dc
Input current (Max.)	12 mA	17 mA
Rated operational current	AC1 - 20Aac (rms) @ Ta = 25°C, AC3 - 5Aac (rms) @ Ta = 25°C	
Minimum operational current	350mA ac (rms)	
Off state leakage current	<3mA ac (rms)	
Operational frequency	45 to 65Hz	
Operating temperature	-30 to 80°C	
Storage temperature	-40 to 100°C	
Junction temperature	125°C	

341200

Mfrs.	Order Code	Price Each
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List No.	Order Code
Operational Voltage = 660V AC	
RJ1A60D20UA	554-0458
RJ1A60A20UA	554-0460

List No.	Order Code
Operational Voltage = 230V ac	
RJ1A23A20UA	554-0471

Solid State Relays - Carlo Gavazzi

Solid State Relays RX1A Series



- Zero switching AC Solid State Relay
- Direct copper bonding (DCB) technology
- LED indication
- IP 20 protection cover
- Screw, Spring or FASTON terminal options
- Housing free of moulding mass
- 2 input ranges
- Blocking voltage: Up to 1200 Vp
- Opto-isolation: > 4000 VACrms
- Integrated snubber network

New

Mfrs. List No.	Rated Voltage	Rated Current	Blocking Voltage	Control Input	Pick-up Voltage	Order Code
Base Module						
RX1A23A25	230V ac	25A	650Vp	24 - 275V ac	18V ac	176-1601
RX1A23A50	230V ac	50A	650Vp	24 - 275V ac	18V ac	176-1603
RX1A23D25	230V ac	25A	650Vp	4 - 32V dc	3.5V dc	176-1604
RX1A23D50	230V ac	50A	650Vp	4 - 32V dc	3.5V dc	176-1605

Solid State Relays
Multi-Function Analog Switching



- AC semiconductor contactor
- Multi-function - 5 selectable modes of operation: Phase Angle, Distributed Full Cycle and Burst Control (1, 3 and 10s)
- Direct copper bonding (DCB) technology
- LED-indication for control and load status
- 0-10V control input
- Built-in varistor
- Blocking voltage: Up to 1200Vp
- Opto-isolation > 4000VACrms
- Cage clamp terminals
- IP20 protection



Operational voltage	42 to 660V AC
Operational frequency	45 to 65Hz
Operating temperature	-30 to 80°C
Storage temperature	-40 to 100°C
Junction temperature	≤125°C
Minimum operational current	150mA ac(rms)
Off-state leakage current	<3 mA ac (rms) @ rated voltage and frequency

	554-0483 & 554-0495	554-0501 & 554-0513	554-0525 & 554-0537
Rated operational current - AC51	25A ac(rms)	40A ac(rms)	55 ac(rms)
Rated operational current - AC53a	5A ac(rms)	8A ac(rms)	15A ac(rms)

Dimensions: W=45, H=81.7, D=107mm

Mfrs. List No.	Rated Voltage	Rated Current	Blocking Voltage	Control Input Voltage	Supply Voltage	Order Code
RJ1P23V30	230V ac	30A	650Vp	0-10V dc	24V ac/dc	176-1623
RJ1P23V50	230V ac	50A	650Vp	0-10V dc	24V ac/dc	176-1624
RJ1P48V50	480V ac	50A	1200Vp	0-10V dc	24V ac/dc	176-1628

Mfrs. List No.	Order Code	Price Each
RJ1P23V30	176-1623	
RJ1P23V50	176-1624	
RJ1P48V50	176-1628	

30A to 63A DIN Rail Mounting - RN Series



- Solid State Contactor (IEC 158-2)
- Front mounted heatsink
- LED status indication
- IP20 Protection
- Zero volt switching
- Contactor terminal layout
- CE Marked



30A to 50A DIN Rail Mounting



- 2 Pole AC solid state relay
- Analog switching for resistive loads (heating)
- 0-10 V controls
- Rated operational voltage up to 480 VAC
- LED-indication for normal operation and alarm status
- IP 20 protection
- DIN-rail mountable



RN..30: H=120, W=45, D=110mm					
RN..50: H=120, W=90, D=110mm					

Mfrs. List No.	Rated Voltage	Rated Current	Control Input	Order Code
RN2F48V30	480V ac	30A (2x15A)	0 - 10V dc	176-1625
RN2F48V50	480V ac	50A (2x25A)	0 - 10V dc	176-1627

Mfrs. List No.	Order Code	Price Each
RN2F48V30	176-1625	
RN2F48V50	176-1627	

Note: for 2 pole versions current rating is **SUM** of both poles - e.g. 15A+15A for 30A rating

Input Volts:	-AC/DC (ac input)	Input Current:	<12mA
	5-32V DC (dc input)	Min. Load Current:	200mA
Off-state leakage:	<1mA	dV/dt:	500V/μs

Load Current	Load Voltage	Blocking Voltage	1 cycle Surge	Mfrs. List No.	Order Code
30A	42-530Vac	1200V	250A	RN1A48A30	247-418
30A	42-530Vac	1200V	250A	RN1A48D30	247-406
50A	42-530Vac	1200V	600A	RN1A48D50	247-420
50A	42-530Vac	1200V	600A	RN2A48D50	310-3018

AC/DC input - ac output - 1 pole	AC/DC input - 480Vac output - 1 pole	DC input - 480Vac output - 2 pole
30A 42-530Vac Thyristor 1200 250 RN1A48A30 247-418	30A 42-530Vac Thyristor 1200 250 RN1A48D30 247-406	50A 42-530Vac Thyristor 1200 600 RN1A48D50 247-420
50A 42-530Vac Thyristor 1200 600 RN1A48D50 247-420	50A 42-530Vac Thyristor 1200 600 RN2A48D50 310-3018	

Load Current	Order Code	Price Each
AC/DC Input - 480Vac output - 1 pole		
30A	247-418	
DC Input - 480Vac output - 1 pole		
30A	247-406	
50A	247-420	
DC Input - 480Vac output - 2 pole		
50A	310-3018	

3 phase - 25, 40 & 55A
RZ3A Series



Solid state relays designed to switch loads such as heating elements, motors and transformers. Capable of switching voltages up to 600V ac (rms).

- 3 Phase Solid State Relay
- Zero switching
- Internal snubber networks
- IP 10 back-of-hand protection
- LED indicator



L = 103, W = 73.5, H = 41mm	
Mounting centres = 92 x 47.6mm	

Control voltage	4 to 32V DC	554-0495, 554-0513 & 554-0537	554-0483, 554-0501 & 554-0525
Pick-up voltage	3.8V DC		24 to 50V DC/24 to 275V AC
Drop-out voltage	1.2V DC		18V AC/20V dc
Input current (Max.)	≤23mA		9V AC
			≤15mA

Solid State Relays - Crydom

AC and DC Control - PCB Mount
CN Series



- Mini SIP SSRs
- Ratings 24 VDC @ 3.5 A, 48 VDC @ 100 mA and 240 VAC @ 2 A
- DC Control 5, 24 and 60 V
- IP67-protected fully encapsulated
- PCB mounted or installs in DRSCN Series sockets
- UL & cUL recognized, UL 100 K cycle extended endurance tested, CE & RoHS compliant

Mfrs. List No.	Operating Voltage	Load Current	Control Voltage Range	Input Current	Order Code
CN024D05	0V DC to 24V DC	3.5A	3 VDC to 12 VDC	10mA @ 5V	182-1821
CN024D24	0V DC to 24V DC	3.5A	15 VDC to 30 VDC	7mA @ 24V	182-1822
CN024D60	0V DC to 24V DC	3.5A	38 VDC to 72 VDC	3mA @ 60V	182-1823
CN048D05	0V DC to 48V DC	100mA	3 VDC to 12 VDC	4mA @ 5V	182-1824
CN048D24	0V DC to 48V DC	100mA	15 VDC to 30 VDC	5mA @ 24V	182-1825
CN048D60	0V DC to 48V DC	100mA	38 VDC to 72 VDC	3mA @ 60V	182-1826
CN240A05	24V AC to 280V AC	2A	3 VDC to 12 VDC	15mA @ 5V	182-1827
CN240A24	24V AC to 280V AC	2A	15 VDC to 30 VDC	6mA @ 24V	182-1828
CN240A60	24V AC to 280V AC	2A	38 VDC to 72 VDC	4mA @ 60V	182-1831

Relay/Socket Compatibility

Mfrs. List No.	For Use With	Input Voltage	Order Code
DRSCN05	CN024D05, CN048D05, CN240A05	5V DC	182-1832
DRSCN120	CN024D24, CN048D24, CN240A24	24V DC	182-1833
DRSCN24	CN024D60, CN048D60, CN240A60	120V AC	182-1834
DRSCN240	CN024D60, CN048D60, CN240A60	240V AC	182-1835

Solid State Relays - Crydom - continued

AC and DC Control - PCB Mount - continued

CN Series - continued

Mfrs. List No.	Order Code	Price Each
CN024D05	182-1821	●
CN024D24	182-1822	●
CN024D60	182-1823	●
CN048D05	182-1824	●
CN048D24	182-1825	●
CN048D60	182-1826	●
CN240A05	182-1827	●
CN240A24	182-1828	●
CN240A60	182-1831	●
Accessories		
DRSCN05 Socket	182-1832	●
DRSCN120 Socket	182-1833	●
DRSCN24 Socket	182-1834	●
DRSCN240 Socket	182-1835	●
CNLB Marker Strips - Blank	182-1836	●
CNLN Marker Strips - No. 1 to 10	182-1837	●
CNLN2 Marker Strips - No. 11 to 20	182-1838	●

15A/25A SIP SSR Relays



crydom

New

- Single, Dual Channel or 3 Phase output versions
- Panel mount with quick connects or PCB mounted versions
- 15 amps per channel output at 24 to 280 VAC for 3 phase versions
- 25 amps per channel output at 24 to 280 VAC for single and dual channel versions with appropriately sized heat sink
- 3 to 32, 3 to 15 or 4.5 to 8 VDC control input depending model
- Zero voltage or random turn on available

Series	UPD24	UPD24D	UPD24TP
Control Voltage	3 - 32V dc	3 - 15V dc	4.5 - 8V dc
Turn On Voltage	3V dc	3V dc	4.5V dc
Turn Off Voltage	1V dc	1V dc	1V dc
Input Current @ 12V dc	10mA	36mA	14mA
Dielectric Strength	2500V rms	2500V rms	2500V rms
Capacitance	10pF	8pF	8pF

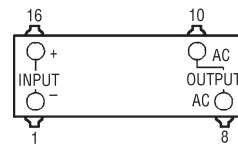
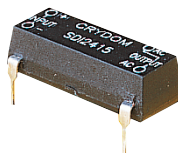
Mfrs. List No.	Voltage	Load Current	Surge Current	Output Function	Terminal Type
Single Channel					
UPD2415	24 - 280V rms	15A	120A	Zero-Cross	PCB Mount
UPD2415-10	24 - 280V rms	15A	120A	Random Turn-On	PCB Mount
UPD2415F	24 - 280V rms	15A	120A	Zero-Cross	FastOn
UPD2415F-10	24 - 280V rms	15A	120A	Random Turn-On	FastOn
UPD2425	24 - 280V rms	25A	120A	Zero-Cross	PCB Mount
UPD2425-10	24 - 280V rms	25A	120A	Random Turn-On	PCB Mount
UPD2425F	24 - 280V rms	25A	120A	Zero-Cross	FastOn
UPD2425F-10	24 - 280V rms	25A	120A	Random Turn-On	FastOn
Dual Channel					
UPD2415D	24 - 280V rms	15A	150A	Zero-Cross	PCB Mount
UPD2415D-10	24 - 280V rms	15A	150A	Random Turn-On	PCB Mount
UPD2415DF	24 - 280V rms	15A	150A	Zero-Cross	FastOn
UPD2415DF-10	24 - 280V rms	15A	150A	Random Turn-On	FastOn
Triple Channel					
UPD2415TP	24 - 280V rms	15A	150A	Zero-Cross	PCB Mount
UPD2415TP-10	24 - 280V rms	15A	150A	Random Turn-On	PCB Mount
UPD2415TPF	24 - 280V rms	15A	150A	Zero-Cross	FastOn
UPD2415TPF-10	24 - 280V rms	15A	150A	Random Turn-On	FastOn

Price Each

Mfrs. List No.	Order Code
Single Channel	
UPD2415	177-9777
UPD2415-10	177-9778
UPD2415F	177-9784
UPD2415F-10	177-9785
UPD2425	177-9790
UPD2425-10	177-9791
UPD2425F	177-9792
UPD2425F-10	177-9793
Dual Channel	
UPD2415D	177-9779
UPD2415D-10	177-9780
UPD2415DF	177-9781
UPD2415DF-10	177-9782

Mfrs. List No.	Order Code	Price Each
Triple Channel		
UPD2415TP	177-9786	●
UPD2415TP-10	177-9787	●
UPD2415TPF	177-9788	●
UPD2415TPF-10	177-9789	●

1.5A-SDI/SDV Series



L=21.6, H=4.8, W=6.7

- Miniature ac SSRs in compact 16 pin DIP package
- Suitable for high density PCB mounting
- SDI is current operated, SDV is voltage operated
- Zero voltage or random switching versions available
- SCR output

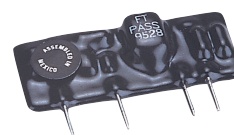
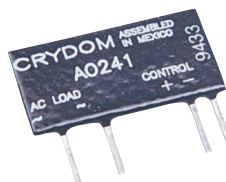
Load voltage range (Vrms)	Control current (mA)	Control voltage (V dc)	Load Current (A)	Mfrs. List No.	Order Code
12 - 280	10 - 50	—	0.025 - 1.5	SDI2415	120-0272
12 - 280	—	3.5 - 10	0.025 - 1.5	SDV2415	120-0273
Isolation	3750V rms		Off state dv/dt	500V/μs	

207028

Price Each

Load Rating	Order Code
Current Controlled Input	
1.5A zero voltage switching	120-0272
Voltage Controlled Input	
1.5A zero voltage switching	120-0273

1A/1.5A/2A/3A PCB Mini SIP Case Style



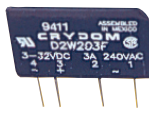
- Compact SIL epoxy dipped package
- 0.10" grid lead spacing
- Ideal for low current ac and dc loads
- NO and NC Output styles
- Logic compatible inputs
- Zero voltage switching

Control voltage	4 - 10V dc	Blocking voltage	600V pk		
Input current (typ.)	10mA (ac types)	dv/dt	200V/s		
	15.2 - 20mA (dc types)				
Load Current	Isolation	Surge Current	Load Voltage	Output Type	Order Code
DC Input - 240V ac Output					
25mA - 1A rms	2500V rms	40A pk	24 - 280V rms	Triac	121-3165
25mA - 1.5A rms	2500V rms	10A pk	10 - 280V rms	Thyristor	120-0222
25mA - 1.5A rms	4000V rms	10A pk	10 - 280V rms	Thyristor	120-0224
60mA - 2A rms	2500V rms	120A pk	12 - 280V rms	Thyristor	120-0223
DC Input - 60V dc Output - SPST - NO					
0 - 3A dc	2500V rms	12A dc (10ms)	0 - 60V dc	MOSFET	120-0225

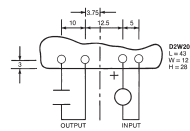
207004

Load Current	Mfrs. List No.	Order Code	Price Each
DC Input - 240V ac Output			
1A	A0241	121-3165	●
1.5A	AS0241	120-0222	●
1.5A	CX241	120-0224	●
2A	AS0242	120-0223	●
DC Input - 60V dc Output			
3A	DM0063	120-0225	●

2A/3A/3.5A PCB - D2W Series



H=30
W=43
D=12



- Compact SIL epoxy dipped package
- Built in snubber network (AC)
- Zero voltage switching
- UL recognised, CSA certified

Control voltage 3 - 32V dc
 Input current 3mA @ 5V dc, 19mA @ 28V dc
 Isolation 4000V rms

Load voltage 24 - 280V rms
 Blocking voltage 600V pk
 Off-state dv/dt 200V/μs

Load Current 60mA - 2A rms
 60mA - 3A rms

Surge Current (max.) 28A pk
 70A pk

Mfrs. List No. D2W202F
 D2W203F

Order Code 120-0279
 120-0280

207143

Price Each

Order Code
120-0279
120-0280
120-0281

3A/4A PCB -

MP Series



- AC type Triac output with zero voltage switching
- DC type Bipolar transistor output
- SIL package
- Suitable for logic level control
- Snubber network
- CSA and VDE Approved, UL Recognised.

H = 25.4, W = 43.1, D = 10.2mm

Input	Surge	Output	Mfrs.	Order			
Control Current	Control Voltage	Current Pk.	Load Voltage	Load Current	Type	List No.	Code

DC Input - AC Output							
2.6mA	3.5 to 32V	90A	24 - 280V	20mA to 3A	Triac - NO	MP240D3	120-0201
2.6mA	3.5 to 32V	130A	24 - 280V	20mA to 4A	Triac - NO	MP240D4	120-0202

DC Input - DC Output							
2.6mA	3.5 to 32V DC	5A	24 - 280V	0.02A to 3A	Transistor - N	MPDCD3	120-0204
2.6mA	3 to 32V	5A	3 - 60V	0.02A to 3A	Transistor - NC	MPDCD3-B	161-3902

206959

Load	Order Code
Current	

DC Input - 240VAC Output	
20mA to 3A	120-0201
20mA to 4A	120-0202

DC Input - 60VDC - Output	
20mA to 3A	120-0204
0.02A to 3A	161-3902

AC and DC Control - PCB Mount

CX/CMX Series



- High power switching in SIL package
- Extra high surge rating and extra low (off state) leakage
- UL Recognised, CSA and VDE approved
- CX240D5 conforms to EN60950:1993

H = 25.4, W = 43, D = 7.6mm

Control Voltage	Control Current	Load Voltage	Load Current	Output Type	Mfrs. List No.	Order Code
3 to 15V dc	15mA @ 5V dc	12 - 280V rms	0.06 to	SCR	CX240D5	120-0213
4 to 15V dc	15mA @ 5V dc	48 - 660V rms	0.06 to 5A	SCR	CX480D5	120-0214
4 to 15V dc	15mA @ 5V dc	48 - 530V rms	0.06 to 5A	SCR	CX380D5	161-3824
3 to 15V dc	15mA @ 5V dc	12 - 280V rms	0.06 to 5A	SCR	CX240D5R	161-3825
3 to 15V dc	15mA @ 5V dc	48 - 530V rms	0.06 to 5A	SCR	CX380D5R	161-3826
15 to 32V dc	15mA @ 5V dc	12 - 280V rms	0.06 to 5A	SCR	CXE240D5	161-3828
15 to 32V dc	15mA @ 5V dc	48 - 530V rms	0.06 to 5A	SCR	CXE380D5	161-3829

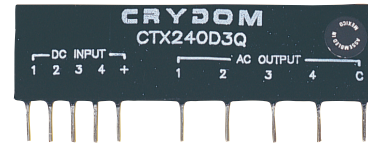
DC Input - DC Output						
3 to 10V dc	15mA @ 5V dc	0 - 60V dc	0 to 5A	MOSFET	CMX60D5	120-0212
3 to 10V dc	15mA @ 5V dc	0 - 60V dc	0 to 10A	MOSFET	CMX60D10	120-0211
3 to 10V dc	15mA @ 5V dc	0 - 60V dc	0 to 20A	MOSFET	CMX60D20	161-3823
3 to 10V dc	@ 5V dc	0 - 100V dc	0 to 10A	MOSFET	CMX100D10	177-9773

206976

Price Each

Load Rating	Order Code
DC Input - AC Output	
0.06 to @ 12 to 280V _{rms}	120-0213
0.06 to 5A @ 48 to 660V _{rms}	120-0214
0.06 to 5A @ 48 to 530V _{rms}	161-3824
0.06 to 5A @ 12 to 280V _{rms}	161-3825
0.06 to 5A @ 48 to 530V _{rms}	161-3826
0.06 to 5A @ 12 to 280V _{rms}	161-3828
0.06 to 5A @ 48 to 530V _{rms}	161-3829
DC Input - DC Output	
0 to 5A @ 0 to 60Vdc	120-0212
0 to 10A @ 0 to 60Vdc	120-0211
0 to 20A @ 0 to 60Vdc	161-3823
0 to 10A @ 0 to 100Vdc	NEW 177-9773

4 x 2.5A PCB - CTX240D3Q



H=25.4, W=84, D=6.4

- Four AC output relays in one package
- Extra low leakage (off-state)
- Zero voltage switching, triac output
- Compact package for high density PCB mounting
- High surge rating
- Opto-isolated 2500V rms
- 4-10V dc logic compatible input

Control voltage 4 - 10V dc
 Input current (typ.) 15mA @ 5V dc
 Surge current 120A pk
 Load voltage 24 - 280V rms
 Blocking voltage 600V pk
 Off-state leakage 0.1mA (max)

Load current, min. (A rms) 0.1A
 Load current, max. (A rms) 6A (1 section ON)
 4A (2 sections ON)
 3A (3 sections ON)
 2.5A (4 sections ON)

Mfrs. List No. CTX240D3Q

213432

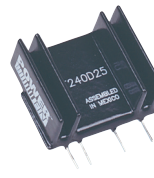
Order Code

120-0284

Price Each

25A 'PowerFin' -

PF Series



- Integral heatsink gives an ultra high steady state current rating
- Low leakage current
- SCR output
- DC control
- High surge rating of 250A Pk.
- High blocking voltage
- VDE and CE Approvals, UL Recognised

H=34.3 (excl. pins), W=43.2, D=22.8

Input/Control Voltage	Control Current	Load/Output Voltage	Current Convected
3 - 15V dc	15mA	12 - 280V rms	10A
4 - 15V dc	15mA	48 - 660V rms	10A

* Random turn-on version

213433

Price Each

Load Voltage	Order Code
12 to 280V rms	120-0285
12 to 280V rms	161-3907
48 to 660V rms	161-3908

DIN Rail SSR Relays



- 6.2mm Din-Rail Mount (35 mm) SSR Assembly
- Ratings 24VDC @ 3.5A, 48VDC @ 100mA and 240VAC @ 2A
- 5 & 24 VDC and 120V & 240 VAC Control
- UL & cUL recognized @ 40°C, 100K-Cycle Endurance Test (SSR Only)
- CE & RoHS Compliant
- Yellow LED input status indicator

Mfrs. List No.	Input Voltage	Control Voltage Range	Operating Voltage	Max. Load Current	Order Code
DRA-CN024D05	5V DC	3V DC to 12V DC	0V to 24V DC	3.5A	182-1839
DRA-CN024D24	24V DC	15V DC to 30V DC	0V to 24V DC	3.5A	182-1840
DRA-CN024D120	120V AC	90V AC to 140V AC	0V to 24V DC	3.5A	182-1841
DRA-CN024D240	240V AC	190V AC to 250V AC	0V to 24V DC	3.5A	182-1843
DRA-CN048D05	5V DC	3V DC to 12V DC	0V to 48V DC	100mA	182-1844
DRA-CN048D24	24V DC	15V DC to 30V DC	0V to 48V DC	100mA	182-1845
DRA-CN048D120	120V AC	90V AC to 140V AC	0V to 48V DC	100mA	182-1846
DRA-CN048D240	240V AC	190V AC to 250V AC	0V to 48V DC	100mA	182-1847
DRA-CN240A05	5V DC	3V DC to 12V DC	24V AC to 280V AC	2A	182-1848
DRA-CN240A24	24V DC	15V DC to 30V DC	24V AC to 280V AC	2A	182-1849
DRA-CN240A120	120V AC	90V AC to 140V AC	24V AC to 280V AC	2A	182-1850
DRA-CN240A240	240V AC	190V AC to 250V AC	24V AC to 280V AC	2A	182-1851

610553

Mfrs. List No.	Order Code
DRA-CN024D05	182-1839
DRA-CN024D24	182-1840
DRA-CN024D120	182-1841
DRA-CN024D240	182-1843
DRA-CN048D05	182-1844
DRA-CN048D24	182-1845
DRA-CN048D120	182-1846
DRA-CN048D240	182-1847
DRA-CN240A05	182-1848
DRA-CN240A24	182-1849
DRA-CN240A120	182-1850
DRA-CN240A240	182-1851

Price Each

Solid State Relays - Crydom - continued

SSR - Panel Mount

Evolution Dual Series



- 25A & 50A Output rating per channel @ 40°C
- 120/240 & 480VAC Operating voltage
- 4-32 & 15-32VDC Control input options
- Four input termination options
- Zero-crossing (resistive loads) or random-fire (inductive loads) output
- Input status LED indicator for each channel
- Available with IP20 "Touch-Safe" Covers

crydom



Mfrs. List No.	Control Voltage	Control Current	Load Current	Load Voltage	Surge Current	Terminal Type	Terminal Orientation
IP20 - Zero Cross Turn-On							
CC2425E3V	15 - 32V dc	18mA	150mA to 25A	24 - 280V ac	300A	Screw	V
CC2425E4V	15 - 32V dc	18mA	150mA to 25A	24 - 280V ac	300A	Spring	V
CC2425W3V	4 - 32V dc	10mA	150mA to 25A	24 - 280V ac	300A	Screw	V
CC2425W4V	4 - 32V dc	10mA	150mA to 25A	24 - 280V ac	300A	Spring	V
CC2450W3U	4 - 32V dc	10mA	150mA to 50A	24 - 280V ac	750A	Screw	U
CC2450W3V	4 - 32V dc	10mA	150mA to 50A	24 - 280V ac	750A	Spring	V
CC2450W4U	4 - 32V dc	10mA	150mA to 50A	24 - 280V ac	750A	Screw	U
CC2450W4V	4 - 32V dc	10mA	150mA to 50A	24 - 280V ac	750A	Spring	V
CC4825E3V	15 - 32V dc	18mA	150mA to 25A	48 - 600V ac	300A	Screw	V
CC4825E4V	15 - 32V dc	18mA	150mA to 25A	48 - 600V ac	300A	Spring	V
CC4825W3V	4 - 32V dc	10mA	150mA to 25A	48 - 600V ac	300A	Screw	V
CC4825W4U	4 - 32V dc	10mA	150mA to 25A	48 - 600V ac	300A	Spring	U
CC4825W4V	4 - 32V dc	10mA	150mA to 25A	48 - 600V ac	300A	Spring	V
CC4850E3V	15 - 32V dc	18mA	150mA to 50A	48 - 600V ac	750A	Screw	V
CC4850E4V	15 - 32V dc	18mA	150mA to 50A	48 - 600V ac	750A	Spring	V
CC4850W1V	4 - 32V dc	10mA	150mA to 50A	48 - 600V ac	750A	Screw	V
CC4850W3U	4 - 32V dc	10mA	150mA to 50A	48 - 600V ac	750A	Screw	U
CC4850W3V	4 - 32V dc	10mA	150mA to 50A	48 - 600V ac	750A	Screw	V
CC4850W4U	4 - 32V dc	10mA	150mA to 50A	48 - 600V ac	750A	Spring	U
CC4850W4V	4 - 32V dc	10mA	150mA to 50A	48 - 600V ac	750A	Spring	V

IP00 - Zero Cross Turn-On							
CD2450W3U	4 - 32V dc	10mA	150mA to 50A	24 - 280V ac	750A	Screw	U
CD2450W3V	4 - 32V dc	10mA	150mA to 50A	24 - 280V ac	750A	Screw	V
CD2450W4U	4 - 32V dc	10mA	150mA to 50A	24 - 280V ac	750A	Spring	U
CD2450W4V	4 - 32V dc	10mA	150mA to 50A	24 - 280V ac	750A	Spring	V
CD4850W1V	4 - 32V dc	10mA	150mA to 50A	48 - 600V ac	750A	Screw	V
CD4850W3U	4 - 32V dc	10mA	150mA to 50A	48 - 600V ac	750A	Screw	U
CD4850W3V	4 - 32V dc	10mA	150mA to 50A	48 - 600V ac	750A	Screw	V
CD4850W4U	4 - 32V dc	10mA	150mA to 50A	48 - 600V ac	750A	Spring	U
CD4850W4V	4 - 32V dc	10mA	150mA to 50A	48 - 600V ac	750A	Spring	V

IP20 - Random Turn-On							
CC2450W3VR	4 - 32V dc	10mA	150mA to 50A	24 - 280V ac	750A	Screw	V
CC2450W4VR	4 - 32V dc	10mA	150mA to 50A	24 - 280V ac	750A	Spring	V
CC4850W3VR	4 - 32V dc	10mA	150mA to 50A	48 - 600V ac	750A	Screw	V
CC4850W4VR	4 - 32V dc	10mA	150mA to 50A	48 - 600V ac	750A	Spring	V

IP00 - Random Turn-On							
CD4850W4VR	4 - 32V dc	10mA	150mA to 50A	48 - 600V ac	750A	Spring	V
CD2450W3VR	4 - 32V dc	10mA	150mA to 50A	24 - 280V ac	750A	Screw	V
CD2450W4VR	4 - 32V dc	10mA	150mA to 50A	24 - 280V ac	750A	Spring	V
CD4850W3VR	4 - 32V dc	10mA	150mA to 50A	48 - 600V ac	750A	Screw	V

Output Terminal Orientation:

U = A Channel Top, B Channel Bottom
V = A Channel on Left, B Channel on Right

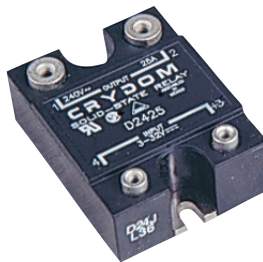
540526

Mfrs. List No.	Order Code	Price Each
IP20 - Zero Cross Turn-On		
CC2425E3V	173-5268	
CC2425E4V	173-5286	
CC2425W3V	173-5269	
CC2425W4V	173-5288	
CC2450W3U	173-5270	
CC2450W3V	173-5271	
CC2450W4U	173-5289	
CC2450W4V	173-5290	
CC4825E3V	173-5273	
CC4825E4V	173-5292	
CC4825W3V	173-5274	
CC4825W4U	173-5293	
CC4825W4V	173-5294	
CC4850E3V	173-5276	
CC4850E4V	173-5295	
CC4850W1V	173-5266	
CC4850W3U	173-5277	
CC4850W3V	173-5278	
CC4850W4U	173-5296	
CC4850W4V	173-5297	
IP00 - Zero Cross Turn-On		
CD2450W3U	173-5280	
CD2450W3V	173-5281	
CD2450W4U	173-5300	
CD2450W4V	173-5301	
CD4850W1V	173-5267	
CD4850W3U	173-5283	

Mfrs. List No.	Order Code	Price Each
IP00 - Zero Cross Turn-On		
CD4850W3V	173-5284	
CD4850W4U	173-5303	
CD4850W4V	173-5304	
IP20 - Random Turn-On		
CC2450W3VR	173-5272	
CC2450W4VR	173-5291	
CC4850W3VR	173-5279	
CC4850W4VR	173-5298	
IP00 - Random Turn-On		
CD4850W4VR	173-5306	
CD2450W3VR	173-5282	
CD2450W4VR	173-5302	
CD4850W3VR	173-5285	

2.5A to 125A Surface Mounting - 1 Series

crydom



- AC or DC control available
- UL recognised CSA and VDE approved
- Transparent safety cover available
- Zero voltage switching
- Conforms to EN60950:1993
- Thyristor output devices are suitable for inductive loads and high dv/dt applications

L=57.2, W=44.4, H=22.2
Fixing Centres=47.6, dia 4.4

TVS and LED Version

- Overvoltage protection
- Non degrading protection
- ZERO voltage or random switching(AC models only)
- Solid state reliability
- UL Recognised, CSA and VDE approved including protection
- Status indicating LED
- Microprocessor compatible input

A range of AC switching SSRs with internal overvoltage protection fitted as standard. Over 50% of SSR failures are attributed to overvoltage. Traditionally, SSRs have been protected by MOVs (Metal Oxide Varistors) which degrade over a period of time. The TVS diodes fitted 'self trigger' the devices so that the overvoltage is passed harmlessly to the load. The benefits to the user are a fully protected SSR without the need for additional components or assembly whilst maintaining the Solid State Reliability and international approvals.

Applications include switching of pumps, motors, lamps, solenoids and heating elements. Zero cross types can reduce EMI.

Input status is indicated with a green LED.

Input voltage	90 - 280V ac (ac series) 3 to 32Vdc (dc series)	Input resistance	60KΩ (ac series) 1500KΩ (dc series)
Isolation (input/output)	4.5 to 32V DC (P version) 4000V rms	Off-state dv/dt	500V/μs
		Must release voltage	10V ac (ac series) 1V dc (dc series)

Load Current (A)	Load Voltage (V ac)	Output Device	Blocking Voltage (V _{DRM})	Single Cycle Surge (A)	Mfrs. List No.	Order Code
AC Input - 240V ac Output						
10	24 - 280	Thyristor	600	120	A2410	120-0226
25	24 - 280	Thyristor	600	250	A2425	120-0228
40	24 - 280	Thyristor	600	625	A2440	120-0230
50	24 - 280	Thyristor	600	625	A2450	120-0231
AC Input - 240V ac Output with TVS and LED						
25	24 - 280	Thyristor	600	250	A2425PG	120-0229
AC Input - 480V ac Output						
25	80 - 530	Thyristor	800	250	A4825	120-0233
50	80 - 530	Thyristor	800	625	A4850	120-0234
75	80 - 530	Thyristor	800	1000	A4875	120-0235
DC Input - 120V ac Output						
25	24 - 140	SCR	400	250	D1225	161-3834
DC Input - 240V ac Output						
2.5	48 - 280	Thyristor	600	22.5	D2402	120-0236
10	40 - 280	Triac	500	70	TD2410	120-0267
10	48 - 280	Thyristor	600	120	D2410	120-0237
25	40 - 280	Triac	500	175	TD2425	120-0268
25	48 - 280	Thyristor	600	250	D2425	120-0241
40	48 - 280	Thyristor	600	625	D2440	120-0243
50	48 - 280	Thyristor	600	625	D2450	120-0244
50	24 - 280	SCR	600	625	D2450-10	161-3837
75	48 - 280	Thyristor	600	1000	D2475	120-0246
90	48 - 280	Thyristor	600	1200	D2490	120-0247
DC Input - 240V ac Output with TVS and LED						
10	48 - 280	Thyristor	600	120	D2410PG	120-0238
25	48 - 280	Thyristor	600	250	D2425PG	120-0242
50	48 - 280	Thyristor	600	625	D2450PG	120-0245
DC Input - 480V ac Output						
25	80 - 530	Thyristor	800	250	D4825	120-0248
40	80 - 530	Thyristor	800	625	D4840	120-0249
40	24 - 280	SCR	600	625	D2440D-10	161-3838
50	80 - 530	Thyristor	800	625	D4850	120-0250
75	80 - 530	Thyristor	800	1000	D4875	120-0251
90	80 - 530	Thyristor	800	1200	D4890	120-0253



Load Current (A)	Load Voltage (V ac)	Output Device	Blocking Voltage (V _{DRM})	Single Cycle Surge (A)	Mfrs. List No.	Order Code
DC Input - 480V ac Output - High Blocking Voltage						
25	48 - 530	Thyristor	1200	250	HD4825	120-0262
50	48 - 530	Thyristor	1200	625	HD4850	120-0263
50	48 - 530	SCR	1200	625	H12D4850	161-3839
50	48 - 530	SCR	1200	625	HD4850-10	161-3841
90	48 - 530	Thyristor	1200	1200	HD4890	120-0265
90	48 - 530	SCR	1200	1200	H12D4890	161-3840
90	48 - 530	SCR	1200	1200	HD4890-10	161-3842
110	48 - 530	Thyristor	1200	1500	HD48110	120-0260
125	48 - 530	Thyristor	1200	1750	HD48125	120-0261

DC Input - 660V ac Output - High Blocking Voltage						
50	48 - 660	Thyristor	1200	625	H12WD4850	120-0255
90	48 - 660	Thyristor	1200	1200	H12WD4890	120-0257

DC Input - 660V ac Output - High Blocking Voltage with TVS and LED						
50	48 - 660	Thyristor	1200	625	H12WD4850PG	120-0256

FOR SUITABLE HEATSINKS SEE ORDER CODES 175-647 & 175-648

Note: SSRs use semiconductor output devices therefore protective fuses should be semiconductor (ultra fast) type. 207020

Load Current	Peak Blocking Voltage	Order Code	Price Each
AC Input - 240V ac Output			
10A	600V	120-0226	
25A	600V	120-0228	
40A	600V	120-0230	
50A	600V	120-0231	
25A	600V	120-0229	

AC Input - 240V ac Output			
25A	800V	120-0233	
50A	800V	120-0234	
75A	800V	120-0235	

DC Input - 240V ac Output			
2.5A	600V	120-0236	
10A	500V	120-0267	
10A	600V	120-0237	
25A	500V	120-0268	
25A	600V	120-0241	
40A	600V	120-0243	
50A	600V	120-0244	
50A	600V	161-3837	
75A	600V	120-0246	
90A	600V	120-0247	

DC Input - 240V ac Output with TVS and LED			
10A	600V	120-0238	
25A	600V	120-0242	
50A	600V	120-0245	

DC Input - 480V ac Output			
25A	800V	120-0248	
40A	800V	120-0249	
40A	600V	161-3838	
50A	800V	120-0250	
75A	800V	120-0251	
90A	800V	120-0253	

DC Input - 480V ac Output - High Blocking Voltage			
25A	1200V	120-0262	
50A	1200V	120-0263	
50A	1200V	161-3839	
50A	1200V	161-3841	
90A	1200V	120-0265	
90A	1200V	161-3840	
90A	1200V	161-3842	
110A	1200V	120-0260	
125A	1200V	120-0261	

DC Input - 660V ac Output - High Blocking Voltage			
50A	1200V	120-0255	
90A	1200V	120-0257	

DC Input - 660V ac Output - High Blocking Voltage with TVS and LED			
50A	1200V	120-0256	

Accessories			
Thermal transfer pad	120-0269		
Safety cover (KS100)	120-0266		

7A to 100A DC Switching, Surface Mounting
Series 1-DC - MOSFET Output



- DC input/DC output solid-state relays with power MOSFET output
- Low on-state resistance, fast switching
- Control can be driven from most logic circuits requiring less than 1.6mA at 5Vdc
- DC control signal activates a 50KHz oscillator which is transformer coupled to the output

Input voltage	3.5 - 32V dc	Isolation	2500V rms
Input current (max.)	1.6mA @ 5V dc	Load current (min.)	20mA dc
	28mA @ 32V dc	Turn-on/turn-off (max.)	0.1ms/1.0ms

Load Current	Load Voltage (max.)	On-state Resistance (max.)	Surge Current (10ms)	Mfrs. List No.	Order Code
7A	100V dc	0.29Ω	15A	D1D07	120-0291
12A	100V dc	0.13Ω	28A	D1D12	120-0292
20A	100V dc	0.1Ω	42A	D1D20	120-0293
40A	100V dc	0.05Ω	106A	D1D40	120-0294
60A	100V dc	0.01Ω	180A	D1D60	177-9774
80A	100V dc	0.008Ω	220A	D1D80	177-9775
100A	100V dc	0.005Ω	330A	D1D100	177-9776
7A	200V dc	0.29Ω	22A	D2D07	120-0295
12A	200V dc	0.23Ω	27A	D2D12	120-0296
7A	400V dc	0.6Ω	17A	D4D07	161-3847
12A	400V dc	0.35Ω	36A	D4D12	161-3848
7A	500V dc	0.8Ω	19A	D5D07	120-0297
10A	500V dc	0.55Ω	29A	D5D10	120-0298
	Thermal Transfer Pad		TP01		120-0269

Note: SSRs use semiconductor output devices therefore protective fuses should be semiconductor (ultra fast) type. 222081

Load Rating	Order Code	Price Each
7A @ 100V dc	120-0291	
12A @ 100V dc	120-0292	
20A @ 100V dc	120-0293	
40A @ 100V dc	120-0294	
60A @ 100V dc	NEW 177-9774	
80A @ 100V dc	NEW 177-9775	
100A @ 100V dc	NEW 177-9776	
7A @ 200V dc	120-0295	
12A @ 200V dc	120-0296	
7A @ 400V dc	161-3847	
12A @ 400V dc	161-3848	
7A @ 500V dc	120-0297	
10A @ 500V dc	120-0298	
Thermal Transfer Pad	120-0269	

10A to 40A Surface Mounting - Series 1 (-10)
Phase Control (Instantaneous Switching)



- DC input with non-zero voltage (random) turn-on for operation from a phase controlled signal
- Suitable for light dimming, motor control etc
- Conforms to EN60950: 1993.

Input voltage	3.5 - 26V dc	Isolation	4000V rms
Input current (max.)	5mA @ 5V dc, 20mA @ 20V dc	Turn-on/turn-off (max.)	0.02ms/8.3ms
Input pulse (min.)	0.1ms		

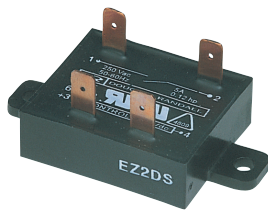
Load Current	Load Voltage	Blocking Voltage	Surge Current	Mfrs. List No.	Order Code
240V ac Output					
25A rms	90 - 280V rms	600V pk	250A pk	D242510	120-0216
480V ac Output					
40A rms	180 - 530V rms	800V pk	625A pk	D484010	120-0217

Note: SSRs use semiconductor output devices therefore protective fuses should be semiconductor (ultra fast) type. 206977

Load Current	Load Voltage	Order Code	Price Each
240V ac Output			
25A rms	90 - 280V rms	120-0216	
480V ac Output			
40A rms	180 - 530V rms	120-0217	
Thermal Transfer Pad		120-0269	

Over 500 000 products available online

5A/12A/18A Surface Mounting - EZ Series



- SPST - NO, AC Output
- Low leakage current
- Quick connect terminals
- Surface mounting with SCR output
- Zero voltage switching
- CSA, VDE and CE Approved, UL Recognised

L = 66.8, W = 38.0, H = 24.1 (incl. terminals)

Control Current	Control Voltage	Surge Current Pk.	Load Voltage	Load Current	Type	Order Code
13mA	4 to 15V	40A	24 - 280V	150mA to 5A	SCR	120-0289
15mA	3 to 15V	150A	24 - 280V	150mA to 12A	SCR	120-0286
15	3 to 15V	200A	24 - 280V	150mA to 18A	SCR	120-0287
15mA	15 to 32V	200A	48 - 660V	150mA to 18A	SCR	161-3864

Note: SSRs use semiconductor output devices therefore protective fuses should be semiconductor (ultra fast) type.

222078

Load Current	Mfrs. List No.	Order Code	Price Each
5A	EZ240D5	120-0289	
12A	EZ240D12	120-0286	
18A	EZ240D18	120-0287	
18A	EZ480D18	NEW SMD 161-3864	

10A to 75A Surface Mounting - CS Series



- Integrated circuit version of the D2400 Series relays
- Inverse parallel thyristor output
- Zero voltage switching, low off-state leakage current
- Conforms to EN60950:1993

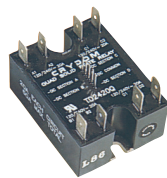
Load voltage	Isolation (input/output)	Off-state current	Load Current	Surge Current	Mfrs. List No.	Order Code
24 - 280V rms	4000V rms	1.0mA (max.)	10A rms	120A pk	CSD2410	120-0218
			25A rms	250A pk	CSD2425	120-0219
			50A rms	500A pk	CSD2450	120-0220

Note: SSRs use semiconductor output devices therefore protective fuses should be semiconductor (ultra fast) type.

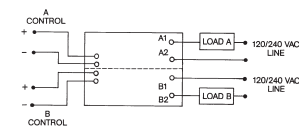
207002

Load Current	Input Voltage	Order Code	Price Each
10A	3.5 - 15V dc	120-0218	
25A	3.5 - 15V dc	120-0219	
50A	3.5 - 15V dc	120-0220	
Thermal Transfer Pad		120-0269	

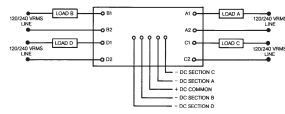
20A to 40A Dual and Quad Output



H=21, W=44.5, D=57.15. Fixing centres=47.5, 4.5 dia



Dual Output



Quad Output

- DC controlled
- Built-in snubber network

- Zero voltage switching
- UL recognised, CSA certified

Output terminations are via 6.35mm (1/4") push on terminals. Suitable input connectors are Order Codes 143-128 or 146-256 used in conjunction with 977-3789.

Input Voltage	Input resistance	Load voltage	Isolation (input/output)	Must release voltage	Off-state dv/dt	Operating temperature	1V dc	200V/μs	-30°to +80°
4-15V dc	310Ω	24-280V ac	2500V rms						



Load Current (A)	Output Device	Blocking Voltage V _{DRM}	Single Cycle Surge (A)	Overload Current-1sec A rms	Mfrs. List No.	Order Code
25	Thyristor	500	350	25	D2425D	120-0196
40	Thyristor	600	500	40	D2440D	120-0199
20	Triac	500	250	20	TD2420Q	120-0200

Note: SSRs use semiconductor output devices therefore protective fuses should be semiconductor (ultra fast) type.

206953

Description	Order Code	Price Each
Dual output 25A	120-0196	
Dual output 40A	120-0199	
Quad output 20A	120-0200	
Thermal Transfer Pad	120-0269	

25A DC Switching - High Voltage

800 to 1000V dc rated



A range of DC switching Solid State Relays in a robust panel mount package.

Loads of up to 25 Amps may be switched at voltages of 1000V dc, delivering greatly improved reliability over electro-mechanical devices.

800 V rated models include over voltage protection. Available with control voltages from 12 to 36V dc.

Suitable for switching pumps, motor brakes, solenoids and heating elements.

H=47.5, W=45.7, D=22.9mm

- Solid State Switch - High Reliability.
- DC Load Switching upto 1000Vdc.
- Built in Over-Voltage Protection (800V Model)
- Robust Panel Mount Construction.
- IGBT Output
- Surface Mount Technology.

Input Specifications

Nominal Voltage	Control voltage	Turn on voltage - Max	Turn on voltage - Min	Input impedance	Input current @ nominal voltage
12V dc	8 - 16V DC	8V dc	1V dc	780ohm	15 mA

Output Specifications

Operating voltage	Load current, min. (A rms)	Load current, max. (A rms)	Surge current	Leakage current	Turn on/off time
0 - 800V dc	20mA	25A	75A	0.3mA	1.5/1.5ms

24V dc	20 - 28V DC	20V dc	1V dc	1500ohm	15 mA
8 - 16V DC	20V dc	1V dc	1500ohm	15 mA	

SSC800 Series	SSC1000 Series
0 - 800V dc	0 - 1000V dc
20mA	20mA
25A	25A
75A	75A
0.3mA	0.3mA
1.5/1.5ms	1.5/1.5ms

347702

Mfrs. List No.	Nominal Control voltage	Order Code	Price Each
SSC800-25-12	12V dc	121-3173	
SSC800-25-24	24V dc	121-3170	
SSC1000-25-24	24V dc	121-3171	

100A Panel Mount MOSFET Output

MOSFET Output



A range of DC switching Solid State Relays in a robust panel mount package, with screw terminal connections. Load currents of up to 100A dc can be switched at up-to 60V dc, delivering greatly improved reliability over electromechanical devices. This series is compatible with control voltages of 3.5-32V dc. A SSR has no moving parts, hence no contacts to degrade and wear out.

Suitable for switching pumps, motors, lamps, solenoids and heating elements, DC Bus control.

H=58.4, W=45.7, D=22.9mm

- Solid State Switch - High Reliability.
- DC Control.
- DC Load Switching - up-to 100 amps.
- Robust Panel Mount Construction.
- Surface Mount Technology.
- MosFET Output

Output Specifications

Types	D60	D80	D100
Operating voltage	0 - 60V dc	0 - 60V dc	0 - 60V dc
Load current, min.	5mA dc	5mA dc	5mA dc
Load current, max.	60A dc	80A dc	100A dc
Max. Surge Current	180A dc	220A dc	270A dc
Leakage current	0.1mA	0.2mA	0.3mA
Max. Turn-On Time	300μs	300μs	300μs
Min. Turn-On Time	1.0μs	1.0μs	1.0μs

Input Specifications

Control voltage	Turn on voltage - Max	Turn on voltage - Min	Max. Input current
3.5 - 32V DC	3.5V dc	1.0V dc	1.6mA @ 5V dc, 28mA @ 32V dc

General Specifications	2500V rms	10 ⁹ R	-30 to 80°C
Dielectric Strength			
Insulation Resistance			
Operating Temperature			

347706

Mfrs. List No.	Order Code	Price Each
D06D60	121-3168	
D06D80	121-3169	
D06D100	121-3166	

Phase Angle Controller and SSR

MCPC Series



- Phase Angle Controller and SSR in one industry standard package
- Low voltage, current and potentiometer control versions available
- Output status indicator (Load open, no voltage)
- 0 - 100% Control range
- Separate output enable/disable control
- SCR Based output load switching
- Internal snubber network
- 50 Amp. Load current

H = 19.8, W = 45.7,
D = 58.4mm

The MCPC series of proportional controllers incorporates a complete phase-fired logic system and solid state relay in one small industry standard package. The MCPC uses microprocessor controlled logic, accepts a wide range of input logic power supply, provides an output status indicator, and has 4 modes of analog control input along with an Enable/Disable control. The MCPC does not require any calibration adjustment, is optically isolated to 4000V rms, includes an internal snubber network and has a load rating of 50A. The series is particularly suited to applications such as tungsten lamp dimming, vibratory feeders, universal motor control and resistive heating element control.

Voltage	Input Supply Voltage dc	Current mA	Load Current	Voltage V _{rms}	Mfrs List No.	Order Code
0 - 5V DC	8 - 32V	28mA to 30mA	150mA to 50A	180-280	MCPC2450A	161-3884
0 - 10V DC	8 - 32V	28mA to 30mA	150mA to 50A	180-280	MCPC2450C	161-3885
4 - 20mA	8 - 32V	28mA to 30mA	150mA to 50A	180-280	MCPC2450D	161-3887

517372

Price Each

Mfrs. List No.	Order Code
Soft Start	
MCPC2450A	161-3884
MCPC2450C	161-3885
MCPC2450D	161-3887

Solid State Relay

XBP60 Series



With Cover

- Low Leakage
- Panel Mount

- Zero and Random Voltage Switching
- SCR Output

	XBPW6025	XBPW6050	XBPW6060
Operating Voltage (47-63Hz) [Vrms]	24-660	24-660	24-660
Load Current w/ heatsink [Arms]	0.15-25	0.15-50	0.15-60
Transient Overvoltage [Vpk]	1200	1200	1200
Max. Surge Current, (16.6ms) [Apk]	250	625	625
Max. On-State Voltage Drop [Vpk]	1.6	1.6	1.3
Thermal Resistance Junction to Case [°C/W]	1.6	1.0	0.5
Max I2t for Fusing (8.3 msec) [A2sec]	260	1620	1620
Power Factor (Min.) with Max. Load	0.5	0.5	0.5

612681

Price Each

Mfrs. List No.	W/ Cover	Order Code
XBPW6025		179-3103
XBPW6025C	Yes	179-3104
XBPW6050		179-3105
XBPW6050C	Yes	179-3106
XBPW6060		179-3107
XBPW6060C	Yes	179-3108

Heatsink with Solid State Relay

HS271 & HS351 Series



HS271

HS351

- 2.7 / 3.5 °C/W Thermal resistance
- DIN rail or panel mounting

	HS271DR	HS351DR
Heatsink Thermal resistance [°C/W]	2.7	3.5
Surface area [in ² /cm ²]	68.5/442	44.9/290
Weight [lbs/grs]	0.51/232	0.40/181
Material	Aluminum	Aluminum
Finish	None	Black Anodized

612682

crydom

crydom

New

crydom

New

Mfrs. List No.	Order Code	Price Each
HS351DR-XBPW6025C	179-3109	
HS271DR-XBPW6025C	179-3110	
HS271DR-XBPW6060C	179-3112	

10A to 82.5A DIN Rail & Surface Mount

HS Series



- Combined AC output ratings from 5 to 80 amps rms @ 40°C
- 24 to 280 & 48 to 660 VAC 50/60 Hz AC line rated SSRs available
- Single, dual and 3 channel output models available
- AC or DC control models available
- Ready to use, no assembly required

New

Mfrs. List No.	Line Voltage Range	Load Current Range	Control Voltage Range	Control Current
Single Channel - DIN Rail				
HS501DR-D2425	24 to 280V	40mA to 10A	3V to 32V	3.4mA @ 5Vdc
HS501DR-HD6025	48 to 660V	40mA to 10A	3V to 32V	2.0mA @ 5Vdc
HS351DR-D2425	24 to 280V	40mA to 20A	3V to 32V	3.4mA @ 5Vdc
HS351DR-HD6025	48 to 660V	40mA to 20A	3V to 32V	2.0mA @ 5Vdc
HS301DR-D2425	24 to 280V	40mA to 24A	3V to 32V	3.4mA @ 5Vdc
HS301DR-HD6025	48 to 660V	40mA to 24A	3V to 32V	2.0mA @ 5Vdc
HS271DR-D2425	24 to 280V	40mA to 25A	3V to 32V	3.4mA @ 5Vdc
HS271DR-HD6025	48 to 660V	40mA to 25A	3V to 32V	2.0mA @ 5Vdc
HS202DR-D2450	24 to 280V	40mA to 35A	3V to 32V	3.4mA @ 5Vdc
HS202DR-HD6050	48 to 660V	40mA to 35A	3V to 32V	2.0mA @ 5Vdc
HS201DR-D2450	24 to 280V	40mA to 35A	3V to 32V	3.4mA @ 5Vdc
HS151DR-D2450	24 to 280V	40mA to 40A	3V to 32V	3.4mA @ 5Vdc
HS151DR-HD6050	48 to 660V	40mA to 40A	3V to 32V	2.0mA @ 5Vdc
HS122DR-D2450	24 to 280V	40mA to 45A	3V to 32V	3.4mA @ 5Vdc
HS103DR-D2490	24 to 280V	40mA to 55A	3V to 32V	3.4mA @ 5Vdc
HS103DR-HD6090	48 to 660V	40mA to 55A	3V to 32V	2.0mA @ 5Vdc
Dual Channel - DIN Rail				
HS201DR-CC2425W3U	24 to 280V	150mA to 35A	4V to 32V	10mA @ 12Vdc
HS122DR-CC2450W3U	24 to 280V	150mA to 45A	4V to 32V	10mA @ 12Vdc
3 Phase - DIN Rail				
HS103-D53TP25D	48 to 530V	50mA to 55A	3V to 32V	10mA @ 5Vdc
Single Channel - Panel Mount				
HS251-D2450	24 to 280V	40mA to 28A	3V to 32V	3.4mA @ 5Vdc
HS251-HD6050	48 to 660V	40mA to 28A	3V to 32V	2.0mA @ 5Vdc
HS172-D2450	24 to 280V	40mA to 36A	3V to 32V	3.4mA @ 5Vdc
HS172-HD6050	48 to 660V	40mA to 36A	3V to 32V	2.0mA @ 5Vdc
HS072-D2490	24 to 280V	40mA to 65A	3V to 32V	3.4mA @ 5Vdc
HS072-HD6090	48 to 660V	40mA to 65A	3V to 32V	2.0mA @ 5Vdc
3 Phase - Panel Mount				
HS053-D53TP50D	48 to 530V	50mA to 82.5A	3V to 32V	10mA @ 5Vdc

552247

Price Each

Mfrs. List No.	Order Code
Single Channel - DIN Rail	
HS501DR-D2425	177-5208
HS501DR-HD6025	177-5209
HS351DR-D2425	177-5210
HS351DR-HD6025	177-5211
HS301DR-D2425	177-5213
HS301DR-HD6025	177-5214
HS271DR-D2425	177-5215
HS271DR-HD6025	177-5216
HS202DR-D2450	177-5219
HS202DR-HD6050	177-5220
HS201DR-D2450	177-5221
HS151DR-D2450	177-5226
HS151DR-HD6050	177-5227
HS122DR-D2450	177-5228
HS103DR-D2490	177-5230
HS103DR-HD6090	177-5231
Dual Channel - DIN Rail	
HS201DR-CC2425W3U	177-5222
HS122DR-CC2450W3U	177-5229
3 Phase - DIN Rail	
HS103-D53TP25D	177-5232
Single Channel - Panel Mount	
HS251-D2450	177-5217
HS251-HD6050	177-5218
HS172-D2450	177-5223
HS172-HD6050	177-5225
HS072-D2490	177-5233
HS072-HD6090	177-5234
3 Phase - Panel Mount	
HS053-D53TP50D	177-5235

Solid State Relays - Crydom - continued

SSR Heat Sinks

HE Series



- Optimized thermal design for use with Crydom panel mount SSRs
- DIN rail and panel mountable heat sinks available
- Thermal Impedance Ratings from 5 up to 0.5 degrees C per watt
- All models Drilled and tapped to accept industry standard panel mount SSRs
- Models available to accept 1, 2 or 3 single or dual phase SSRs, or 1 three phase SSR

New *crydom*

Mfrs. List No.	Thermal Resistance (°C/W)	Width	Dimensions (mm) Length	Height
Panel Mount				
HS351	3.5	45.2	81	45.2
HS202	2	90.2	81.3	40.1
HS103	1	132	76.2	60
HS072	0.7	120.7	149.7	66.8
HS053	0.5	152.4	152.4	88.9
DIN Rail				
HS501DR	5	44.5	80	15.3
HS351DR	3.5	45.2	81	45.2
HS301DR	3	45.2	81	40.1
HS271DR	2.7	45.2	81	75.2
HS202DR	2	90.2	81.3	40.1
HS201DR	2	45.2	81	80
HS151DR	1.5	45.2	81.3	95
HS122DR	1.2	90	81.3	80
HS103DR	1	132	76.2	60.2

Mfrs. List No.	Order Code	Price Each
HS351	177-5192	
HS202	177-5193	
HS103	177-5195	
HS072	177-5196	
HS053	177-5197	
HS501DR	177-5198	
HS351DR	177-5199	
HS301DR	177-5201	
HS271DR	177-5202	
HS202DR	177-5203	
HS201DR	177-5204	
HS151DR	177-5205	
HS122DR	177-5206	
HS103DR	177-5207	

Accessories

DRK1	DIN Rail Kit 1	177-5237
DRK2	DIN Rail Kit 2	177-5238
HK1	Hardware Kit 1	177-5239
HK2	Hardware Kit 2	177-5240
TRM6	Output Terminal	177-5241

Filters, Single Phase and Three Phase

crydom



- Filter provides simple method of suppressing thyristor noise from SSRs
- Designed to enable equipment incorporating SSRs to conform to EMC directive 89/336/EEC
- Connects between incoming lines of the mains supply, reducing conducted noise by around 30dB.
- Easily added to existing designs
- Single filter is normally sufficient for multiple SSR systems
- Suitable for use with any Crydom single phase and three phase a.c. SSRs

H=28, W=42, D=42
Fixing centres=52
Flying leads L=200

Operating voltage, max.
Attenuation (150 to 250 kHz), type.
Current drain @ Vrms max.
Operating temperature
Connections

	Single Phase	Three Phase
Operating voltage, max.	275V rms	475V rms
Attenuation (150 to 250 kHz), type.	30BµV	25BµV
Current drain @ Vrms max.	40mA	35mA
Operating temperature	-40°C to 100°C	-40°C to 100°C
Connections	line-neutral	line-line-line

Mfrs. List No.	Order Code	Price Each
Single phase	1F25	120-0270
Three phase	3F20	120-0271

22.5mm DIN rail Mount

Series CKR240

crydom



- 10A, 20A, 30A models
- ac & dc control models
- Ready to mount and use
- Low leakage
- Integral heatsink
- Status indicating LED
- Industry standard 22.5mm narrow profile
- Ideal for motor pump and heating element switching
- UL Recognised, CSA, VDE approved

H=81.3, W=22.4, D=99

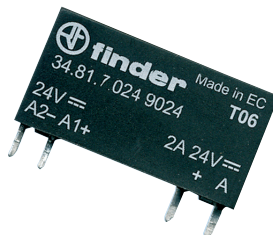
Input Voltage (V _{rms})	Input Current (mA)	Load Current (A)	Load Voltage (V)	Output Device	Blocking Voltage (V _{drm})	1 Cycle Surge (A)	dv/dt (vµsec)	Mfrs. List No.	Order Code
DC Control									
4.5 - 32V	15-20mA	10	24-280V ac	SCR	600	120	200	CKRD2410	120-0301
4.5 - 32V	15-20mA	20	24-280V ac	SCR	600	250	500	CKRD2420	120-0302
4.5 - 32V	15-20mA	30	24-280V ac	SCR	600	625	500	CKRD2430	120-0303
4 - 32V	8-12mA	30	48-530V ac	SCR	1200	625	500	CKRD4830	161-3754
4 - 32V	9-11mA	10	0-60V dc	MOSFET		30		CKM0610	161-3769
4 - 32V	9-11mA	20	0-60V dc	MOSFET		60		CKM0620	161-3771
4 - 32V	9-11mA	30	0-60V dc	MOSFET		90		CKM0630	161-3772
AC Control									
24-280V	2-4mA	10	24-280V ac	SCR	600	120	200	CKRA2410	120-0299
24-280V	2-4mA	30	24-280V ac	SCR	600	625	500	CKRA2430	120-0300
24-280V	2-4mA	20	24-280V ac	SCR	600	250	500	CKRA2420	161-3760
48-530V	2-4mA	30	48-530V ac	SCR	1200	625	500	CKRA4830	161-3767

Load Current (A)	Load Voltage (V)	Mfrs. List No.	Order Code	Price Each
DC Control				
10	24-280V ac	CKRD2410	120-0301	
20	24-280V ac	CKRD2420	120-0302	
30	24-280V ac	CKRD2430	120-0303	
30	48-530V ac	CKRD4830	161-3754	
10	0-60V dc	CKM0610	161-3769	
20	0-60V dc	CKM0620	161-3771	
30	0-60V dc	CKM0630	161-3772	
AC Control				
10	24-280V ac	CKRA2410	120-0299	
30	24-280V ac	CKRA2430	120-0300	
20	24-280V ac	CKRA2420	161-3760	
30	48-530V ac	CKRA4830	161-3767	

Solid State Relays - Finder

finder

2A Ultra-slim 34 Series



- Ultra slim, only 5mm wide
- Silent switching
- 7 mA input control current
- 2 A output load current
- ANCE and GOST Approved, UL Recognised

L = 28, W = 5, H = 15 mm

Control Voltage (I/P)	Load Voltage (O/P)	Order Code	Price Each
24V dc	1.5V DC to 24V DC	116-9344	
5V DC	1.5V DC to 12V DC	132-9715	
5V DC	12V AC to 240V AC	132-9717	
24V DC	12V AC to 240V AC	132-9718	

REACH - SVHCs



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Solid State Relays - Omron



5A to 40A Surface Mounting G3NA Series



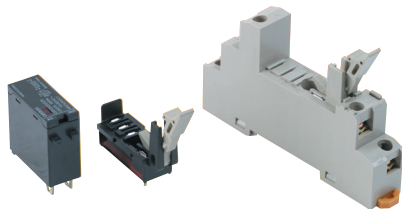
- AC or DC output switching
- AC or DC control available
- Built in varistor protection
- Operation indicator (red LED) enables monitoring
- Protective cover for greater safety
- UL Recognised, CSA approved

L=58, W=43, H=27
Fixing centres 47.5, dia 4.5

Input Voltage	200 - 240V ac (ac series) 5 - 24V dc (dc series)	Isolation	2500V ac	Load Current (A)	Load Voltage	Output Device	Mftrs. List No.	Order Code
AC Input - 240V ac Output								
10	19 - 264V ac	Triac	G3NA-210B 200-240VAC	10	19 - 264V ac	Triac	G3NA-210B 200-240VAC	118-1254
20	19 - 264V ac	Triac	G3NA-220B 200-240VAC	20	19 - 264V ac	Triac	G3NA-220B 200-240VAC	118-1255
DC Input - 240V ac Output								
5	19 - 264V ac	Triac	G3NA-205B 5-24DC	5	19 - 264V ac	Triac	G3NA-205B 5-24DC	118-1258
10	19 - 264V ac	Triac	G3NA-210B 5-24DC	10	19 - 264V ac	Triac	G3NA-210B 5-24DC	118-1259
20	19 - 264V ac	Triac	G3NA-220B 5-24DC	20	19 - 264V ac	Triac	G3NA-220B 5-24DC	118-1260
40	19 - 264V ac	Triac	G3NA-240B 5-24DC	40	19 - 264V ac	Triac	G3NA-240B 5-24DC	118-1261
DC Input - 200V dc Output								
10	- 220V dc	Transistor	G3NA-D210B 5-24DC	10	- 220V dc	Transistor	G3NA-D210B 5-24DC	118-1262

Load Current	Order Code	Price Each
AC Input - 240V ac Output		
10A	118-1254	
20A	118-1255	
DC Input - 240V ac Output		
5A	118-1258	
10A	118-1259	
20A	118-1260	
40A	118-1261	
DC Input - 200V dc Output		
10A	118-1262	

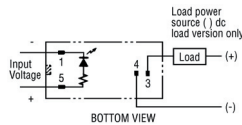
G3R Series Solid State Relays



G3R SSR - L = 29, W = 13, PCB Socket - L = 85.5, W = 16, DIN Socket - L = 32, W = 14, H = 28
H = 61
H = 41

Compact SSR's for I/O Interface with High Dielectric Strength Requirements

- High speed with optimum input ratings
- Same footprint as G2R Series relays
- Coupler approved by VDE 0884 assuring an I/O dielectric strength of 4 kV
- Incorporates an easy-to-see monitoring indicator
- UL Recognised. Approved by CSA and TUV



Mftrs. List No.	Order Code	Price Each
G3R Solid State Relays		
Control Voltage	4-32V (dc)	
Input resistance	1500ohm	
Isolation	2500V	
Load voltage	75-264V ac (118-1363) 75-264V dc (118-1364)	
G3R Solid State Relays		
Load current	0.1-2A (118-1363) 0.1-2A (118-1364)	
Temperature range	-30°C to 80°C	
333918		
DC Input, AC Output - G3R-0A202SZN		
G3R-0A202SZN 5/24DC	118-1363	
DC Input, DC Output - G3RD-0DX02SN		
G3R-0DX02SN 5/24DC	118-1364	

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High Frequency Relays - Teledyne



DPDT Sensitive Coil - T05 732 Series



The T0-5 style relay has become one of the industry standards for switching from low level to 1 ampere. This sensitive coil version has gold plated precious metal alloy contacts that ensure reliable switching from low level to full rated load. By virtue of the low intercontact capacitance and circuit losses these relays are ideal for switching frequency ranges well into the UHF spectrum. Applications are to be found wherever transmit receive switching is required and space is at a premium.

- High reliability
- Small size
- Low coil power consumption
- Low inter-contact capacitance
- High resistance to shock and vibration
- All welded construction

COIL	Price Each		
Volts	Ω	Order Code	
5V	100	990-6851	
12V	850	990-6860	

DPDT Standard 172 Series



The 172 relay is an ultra miniature, hermetically sealed, armature relay for commercial applications. Its low profile height of 7.11mm and 2.54mm grid spaced terminals, makes it an ideal choice where extreme packaging density and/or close PCB spacing are required. The relay operates well into the UHF spectrum making it ideal for applications including telecommunications, test equipment, mobile communications and attenuators.

- High reliability
- Compact size
- Low coil power consumption
- High resistance to shock and vibration
- All welded construction

COIL	Price Each		
Volts	Ω	Order Code	
5V	64	990-6894	
12V	400	990-6908	

DPDT High Repeatability T0-5 3 GHz - RF300 Series



Designed to provide improved RF insertion loss repeatability over the entire frequency range by balancing the aggregate insertion loss elements of the relays design. Suitable for use in all high performance applications in which high speed signals must be transferred. These relays feature broad bandwidth, metal enclosure for EMI shielding, ground pin option to aid in case grounding. Unique construction features and manufacturing techniques provide excellent resistance to environmental extremes and high reliability.

- High repeatability
- Broad bandwidth
- EMI shielded
- High resistance to ESD
- High isolation between control and signal paths

COIL	Price Each		
Volts	Ω	Order Code	
5V	50	990-6789	

Over 500 000 products available online



High Frequency Relays - Teledyne - continued

DPDT Standard - T05 712 Series



DPDT Standard TO-5 style relay with gold plated precious metal alloy contacts to ensure reliable switching from low level to full rated load. Designed for high-density PCB mounting they are among the most versatile ultraminiature relays available because of their compact size and low coil power dissipation.

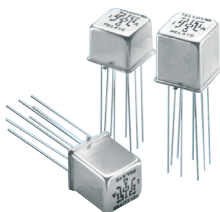
- High reliability
- Compact size
- Low coil power consumption
- High resistance to shock and vibration
- All welded construction

Contact arrangement	DPDT / 2 Form C	Insulation resistance	1000Mohm
Contact rating	1A @ 28V dc	Operate/Release time	4 / 3ms
Contact resistance	150mohm	Temperature range	-55°C to +85°C
Contact life	10,000,000 cycles	Interconnect capacitance	0.4pF
Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
990-6878	712-5	990-6886	712-12

414574

COIL		Price Each
Volts	Ω	Order Code
5V	50	990-6878 ●
12V	390	990-6886 ●

DPDT High Repeatability 0.3 MHz to 4 GHz - RF100 Series



Designed to provide improved RF insertion loss repeatability over the frequency range by balancing the aggregate insertion loss elements of the relays' design. Suitable for use in all high performance applications in which high speed signals must be transferred. The relays feature broad bandwidth, metal enclosure for EMI shielding to ensure that control and signal paths are highly resistant to ESD. Applications include attenuators and other precision RF circuits

- High repeatability
- Broad bandwidth
- EMI shielded
- High resistance to ESD
- High isolation between control and signal paths

Contact arrangement	DPDT	Insulation resistance	1000Mohm
Contact rating	10 to 50µA / 10 to 50mV	Operate time	4.0ms
Contact resistance	100mohm	Temperature range	-55°C to +85°C
Coil consumption	500mW	Interconnect capacitance	0.4pF
Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
990-6762	RF100-5	990-6770	RF100-12

414544

COIL		Price Each
Volts	Ω	Order Code
5V	50	990-6762 ●
12V	390	990-6770 ●

DPDT Low Profile ER114 Series



Low inter-contact capacitance and contact circuit losses allows for reliable signal transfer well into the UHF spectrum. The 114 series relays are low profile (6.9mm), ultra-miniature, hermetically sealed, armature relay with 2.54mm grid spaced terminals. Gold plated precious metal alloy contacts assure reliable switching from low level to full rated load. These relays are ideal for switching high frequency ac or high speed digital signals.

- High reliability
- Low inter-contact capacitance
- High resistance to shock and vibration
- All welded construction

Contact arrangement	DPDT / 2 Form C	Insulation resistance	10000Mohm
Contact rating	1A @ 28V dc	Operate/Release time	2.0 / 1.5ms
Contact resistance	100mohm	Temperature range	-65°C to +125°C
Contact life	10,000,000 cycles	Interconnect capacitance	0.4pF
Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
990-6827	ER114-12		

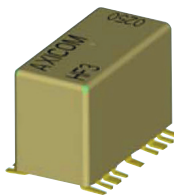
414555

COIL		Price Each
Volts	Ω	Order Code
12V	390	990-6827 ●

High Frequency Relays - Tyco Electronics



1A Single Pole HF3 Series, 50Ω



- DC to 3 GHz frequency range
- 2A maximum switching current
- Polarized coil
- Low power consumption ≤140 mW
- Immersion cleanable

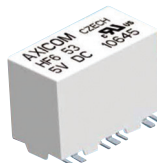
H=10, W=14.6, D=7.2mm

Contact arrangement	SPDT - 1 form C	Switching capacity	100mA
Frequency range	DC to 3GHz	Contact Material	Gold
Impedance	50ohm	Coil consumption	140mW
VSWR @ 3 GHz	1.2	Operate/Release	3 / 3ms typical
Continuous contact current	2A @ max. ambient temperature	Temperature range	-55 to 85°C
Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
991-3580	HF3-52	991-3599	HF3-56

414018

COIL		Price Each
Volts	Ω	Order Code
Non-Latching Single coil		
4.5V	145	SMD991-3580 ●
12V dc	1,028	SMD991-3599 ●

Shielded High Frequency Relay HF6 Series



- Y-Design
- Frequency range from DC to 6 GHz
- Impedance 50Ω
- 50 W hot switching
- 50 W RF power carry capacity
- Small dimensions
- Immersion cleanable
- Low power consumption of ≤140 mW

H = 10.6, W = 15, D = 7.6mm

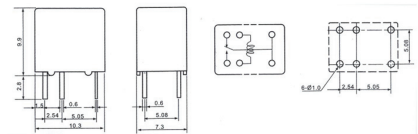
Contact arrangement	SPDT	Contact Resistance, max.	100mohm
Contact Rating, current	2A	Coil Resistance	140mW
Contact Rating, voltage	250V AC / 220V DC	Max. Continuous RF-power	50 W
Capacity Switching, max.	60W / 62.5VA	Temperature Range	-55 to +85°C
Order Code	Part Number	Mfrs. List No.	162-9105 1462052-6 HF6 56
162-9103	1462052-3	HF6 53	

519570

Coil		Price Each
Volts	Ω	Order Code
Non-Latching - 1 Coil		
5V	178ohm	SMD162-9103 ●
12V	1.028kohm	SMD162-9105 ●

Signal Relays - SPC MultiComp

Subminiature - HRA Series



- SPCO Series of relays
- Small size & light weight
- Plastic sealed (washable)
- DIL pitch terminal
- Approved to CSA No. 187233-250001849, UL Recognised

Contact arrangement	SPCO	Life Elect.	100,000 operations
Contact rating	1A @ 24Vdc/120Vac	Life Mech.	10,000,000 Operations
Voltage Switching Max.	30Vdc/120Vac	Resistance Insulation	100Mohm
Contact material	AuAg	Strength Dielectric	500V AC 1min between open contacts
Current Switching Max.	2.0A	Temperature range	1,000V ac 1min, contacts to coil
Power Switchings Max.	120VA/30W	Operate/Release	-25°C to 70°C
Resistance Contact	50mohm		6ms Max./4ms Max

Order Code	Coil Voltage (V dc)	Coil Resistance (Ω's)	Coil Operate Voltage	Coil Release Voltage	Coil Power Consumption (mW)
948-0137	5	55	3.5V dc	0.25V dc	450
948-0145	12	320	8.4V dc	0.60V dc	450
948-0153	24	1.28	16.8V dc	1.20V dc	450
948-0161	5	75	3.5V dc	0.25V dc	330
948-0170	12	440	8.4V dc	0.60V dc	330
948-0188	24	1.56	16.8V dc	1.20V dc	380

244120

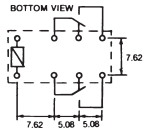
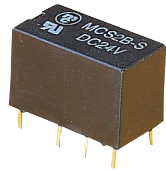
Over 500 000 products available online



COIL		Price Each
Volts	Order Code	
SPCO - 1 Form C		
5V dc	948-0137	
12V dc	948-0145	
24V dc	948-0153	
SPCO - 1 Form C High Sensitivity		
5V dc	948-0161	
12V dc	948-0170	
24V dc	948-0188	

COIL		Price Each
Volts	Ω	Order Code
DPCO - EA2 Series		
5V dc	178	109-4030
12V dc	1.028	109-4031
24V dc	2.88	109-4032
DPCO - EB2 Series		
5V dc	178	SMD109-4033
12V dc	1.028	SMD109-4034
24V dc	2.88	SMD109-4035

Subminiature - High Sensitivity



L=21.2,W=10.8,H=12

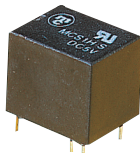
- Low profile
- Fully sealed
- Sensitive coil - 200mW
- UL Recognised

Contact arrangement	DPCO	Coil consumption	200mW sensitive
Contact rating	1A @ 24V dc/120V ac	Operate/Release	/
Contact material	Gold clad Silver	Temperature range	to +
Dielectric strength	1000V ac (coil-contact)		

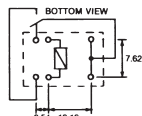
207035

COIL		Price Each
Volts	Ω	Order Code
5V dc	125	948-0196
9V dc	405	948-0200
12V dc	720	948-0218
24V dc	2.88	948-0226

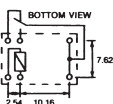
Subminiature High Sensitivity - MCS1H Series



D=10.5, W=15.5, H=11.8mm



MCS1HS



MCS1KHS

- Low profile
- High coil sensitivity
- Fully sealed
- UL Recognised

Contact arrangement	SPCO	Coil consumption	200mW
Contact rating	1A @ 24V dc/120V ac	Operate/Release	/5ms
Contact material	AgAu	Temperature range	-25°C to +55°C
Dielectric strength	1000V ac (coil-contact)		

207036/405690

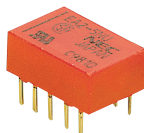
COIL		Order Code	Price Each
Volts	Ω	Code	
SPCO - MCS1H-S Series			
5V dc	120	948-0269	
12V dc	700	948-0277	
24V dc	2.8	948-0285	
SPCO - MCS1KH-S Series			
5V dc	120	948-0293	
12V dc	700	948-0307	
24V dc	2.8	948-0315	

Signal Relays - NEC

Subminiature Telecom - EA2/EB2 Series



PCB and Surface Mount



- 1500V FCC surge
- High sensitivity (140mW)

- Fully sealed
- UL Recognised & CSA approved

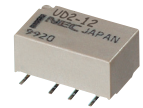
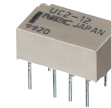
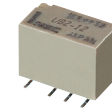
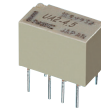
Contact arrangement	DPCO	Contact material	Silver alloy Gold overlay
Contact rating:		Coil consumption	140mW
Max. current	2A	Operate/Release	2ms/1ms
Max. voltage	220V dc/250V ac	Coil operating range	75 - 150%
Max. power	30W/62.5VA	Temperature range	-40°C to +85°C

207064

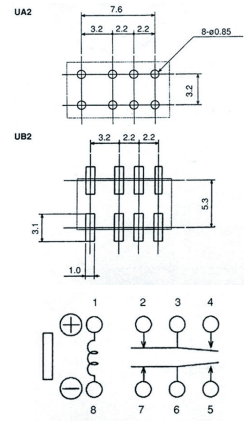
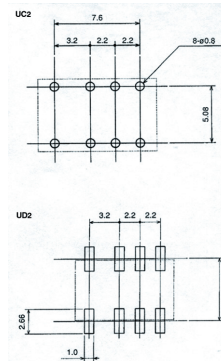
Subminiature - Signal



DPCO - 1A, 220V dc/250V ac



UA2 Type: H = 8.0mm, W = 10.6mm, D = 5.7mm
 UB2 Type: H = 8.8mm, W = 10.6mm, D = 5.7mm
 UC2 Type: H = 5.5mm, W = 10.6mm, D = 6.5mm
 UD2 Type: H = 5.5mm, W = 10.6mm, D = 6.5mm



- Compact and light weight
- 2 Form C contact arrangement
- Low power consumption (140mW)
- UL recognised, CSA certified
- Super high density mounting
- Meets Bell-Core standard requirements
- Meets IEC950/UL1950/EN60950 insulation distance

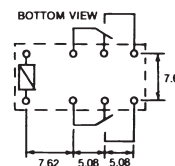
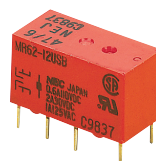
Contact arrangement	DPCO	Time, operate/release	4ms/4ms (without diode)
Current, switching (max)	1A	Resistance, contact	100mΩ max.
Voltage, switching (max)	220Vdc/250Vac	Operating range, temp.	-40°C to 85°C
Power, switching (max)	30W / 37.5VA	Insulation Resistance	1000Mohm
Material, contacts	Silver alloy, gold alloy overlay		

Order Code List No.	Mftrs.	Coil Voltage (V dc)	Coil Resistance (Ω's)	Order Code List No.	Mftrs.	Coil Voltage (V dc)	Coil Resistance (Ω's)
109-4048	UA2-5NU	5	178	109-4055	UC2-5NU	5	178
109-4049	UA2-12NU	12	1.028	109-4056	UC2-12NU	12	1.028
109-4050	UA2-24NU	24	2.504	109-4058	UD2-5NU	5	178
109-4052	UB2-5NU	5	178	109-4059	UD2-12NU	12	1.028
109-4053	UB2-12NU	12	1.028				

246090

Order Code	Price Each
DPCO - Through Hole UA2 type	
109-4048	
109-4049	
109-4050	
DPCO - Surface Mount UB2 type	
SMD109-4052	
SMD109-4053	
DPCO - Through Hole UC2 type	
109-4055	
109-4056	
DPCO - Surface Mount UD2 type	
SMD109-4058	
SMD109-4059	

Miniature Telecom - MR62 Series



- DIL Terminal Package
- 1500V FCC surge
- Fully sealed
- UL Recognised and CSA approved

Signal Relays - NEC - continued

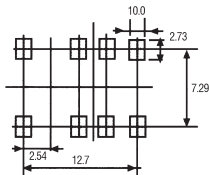
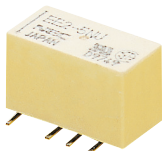
Miniature Telecom - MR62 Series - continued

Contact arrangement	DPCO	Contact material	Silver alloy Gold overlay
Contact rating:		Coil consumption	550mW
Max. current	2A	Operate/Release	3ms/2ms
Max. voltage	220V dc/250V ac	Coil operating range	30 - 125%
Max. power	60W/125VA	Temperature range	-40°C to +70°C

COIL		Price Each
Volts	Ω	Order Code
DPCO - MR62 Series		
4.5V dc	36	109-4023
24V dc	1.050	109-4025

Subminiature Telecom - EE2

Surface Mount



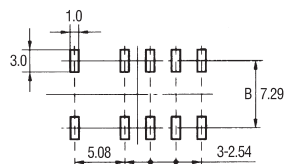
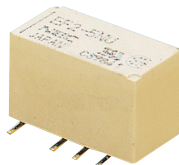
- 2500V surge
- Sensitive (140mW) coil
- Fully sealed
- UL Recognised and CSA approved

Contact arrangement	DPCO	Contact material	Silver alloy Gold overlay
Contact rating:		Coil consumption	140mW (200mW 24Vdc)
Max. current	2A	Operate/Release	2ms/1ms
Max. voltage	220V dc/250V ac	Coil operating range	75 - 150%
Max. power	30W/125VA	Temperature range	-40°C to +85°C

COIL		Price Each
Volts	Ω	Order Code
DPCO - EE2 Series		
5V dc	178	SMD109-4036
12V dc	1.028	SMD109-4037
24V dc	2.88	SMD109-4039

High Sensitivity Telecom - EF2 Series

Surface Mount



- 2500V surge
- High Sensitivity (50mW) coil
- Fully sealed
- UL Recognised and CSA approved

Contact arrangement	DPCO	Contact material	Silver alloy Gold overlay
Contact rating:		Coil consumption	50mW (60mW 12Vdc, 70mW 24Vdc)
Max. current	1A	Operate/Release	3ms/2ms
Max. voltage	220V dc/250V ac	Coil operating range	80 - 150%
Max. power	30W/62.5VA	Temperature range	-40°C to +70°C

COIL		Price Each
Volts	Ω	Order Code
DPCO - EF2 Series		
5V dc	500	SMD109-4041
12V dc	2.4	SMD109-4042
24V dc	8.229	SMD109-4043

Signal Relays - Omron

1A Signal Relay

G6J-Y Series



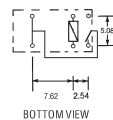
L=10.6, H=9, W=5.7mm

- Ultra-compact and Slim
- Single-winding latching models to save energy
- Conforms to FCC Part 68
- Dielectric strength of 1500 VAC and an impulse withstand voltage of 2,500 V for 2 x 10 μs

Contact arrangement	DPDT	Contact Rating	300mA @ 250VAC
Contact Material	Ag	Operate/Release	1A @ 28 VDC
Dielectric Strength	1500 VAC @ 50/60Hz	Coil Consumption	100mW
Coil Consumption	100mW	Mfrs. List No.	G6J-2FL-Y 12DC
Order Code	179-8618		

COIL		Price Each
Volts	Ω	Order Code
12	976.8	179-8618

Subminiature - High Sensitivity - G5V-1 Series



L=12.3, W=7.3, H=9.9

Contact arrangement	SPCO	Coil consumption (nom.)	150mW
Contact rating	1A @ 24V dc, 500mA @ 125V ac	Operate/Release (max.)	5ms/5ms
Contact material	Silver, Gold clad	Coil operating range	80% - 200% (@ 55°C)
		Temperature range	-40°C to +70°C

COIL		Price Each
Volts	Ω	Order Code
SPCO - G5V-1 Series		
5V dc	167	994-9577
12V dc	960	994-9585
24V dc	3840	994-9593

Miniature Signal - G6E Series



- SPCO contacts
- 98mW coil pick up power
- UL Recognised and CSA approved
- Fully sealed

Contact arrangement	SPDT/SPDT	Coil consumption:	200mW (400mW for 48V dc)
Contact rating	2A @ 220V, 400mA @ 250V	Operate/Release:	5ms/5ms
Contact material	Ag (Au-Alloy)	Temperature range	-40°C to +70°C

COIL		Price Each
Volts	Ω	Order Code
SPCO Single Coil - G6E-134P Series		
5V	125	994-9160
12V	720	994-9178
24V	2.88	994-9186
5V	125 + 125	118-1045

SPST 1A G6L Series



THT - H = 3.8, W = 10.6, D = 7mm
SMD - H = 4.2, W = 10.6, D = 7mm

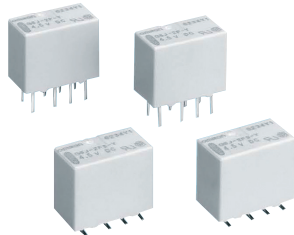
- High density mounting
- Dielectric strength of 1000V ac between coil and contacts
- High dielectric strength of 750V ac between contacts of the same polarity
- Conforms to FCC Part 68
- Approved to **CSA C22.2 No. 60950** and **UL Recognised**
- Use of lead completely eliminated

Contact arrangement	Single-side Stable
Mechanical life	5,000,000 Operations
Electrical life	100,000 operations min. (rated load)
Coil power	180mW
Contact resistance (initial)	100mohm max.
Rated carry current	1A
Max. switched voltage	125V, 60V
Max. switched current	1A
Rated load	0.3A @ 125V ac, 1A @ 24V dc
Operating temperature	-40 to 70°C

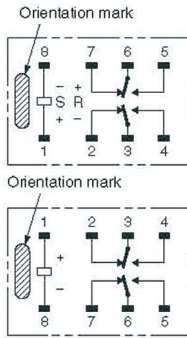
Order Code	Mfrs. List No.	Rated Current
444-6264	G6L-1P 3DC	60mA
444-6288	G6L-1P 5DC	36mA
444-6331	G6L-1F 5DC	36mA
444-6355	G6L-1F 24DC	9.6mA

COIL		Price Each
Volts	Ω	Order Code
Single-sided stable		
3V	50	444-6264
5V	139	444-6288
5V	139	SMD444-6331
24V	2.504	SMD444-6355

DPDT 1A
G6J Series



THT - H = 9, W = 10.6, D = 5.7mm
SMD - H = 10, W = 10.6, D = 5.7mm



- Ultra-compact and slim
- Dielectric strength of 1500V ac
- Conforms to North American Telcordia specifications (formerly Bellcore)
- Conforms to FCC Part 68
- Single-winding latching models to save energy
- **CSA** Approve and **UL** Recognised

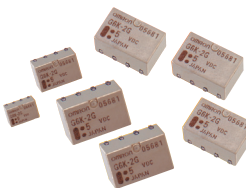
Contact arrangement	Single-side Stable or Single-winding Latching
Dielectric strength - Coil to contact	1500V AC
Impulse withstand voltage	2500V for 2 x 10µs
Coil power - Stable	140mW (230mW 24V version)
Coil power - Latching	100mW (100mW 24V version)
Contact resistance (initial)	100mohm max.
Rated carry current	1A
Max. switched voltage	110V DC, 125V AC
Max. switched current	1A
Rated load	300mA @ 1A @ 30V dc
Operating temperature	-40 to 85°C

Order Code	Mfrs. List No.	Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
989-9529	G6J-2FSY 5DC	989-9570	G6J-2PY 5DC	989-9600	G6JU-2FSY 3DC
989-9499	G6J-2FSY 24DC	989-9537	G6J-2PY 12DC	989-9626	G6JU-2FSY 5DC
989-9553	G6J-2PY 3DC	989-9545	G6J-2PY 24DC		

414420

COIL		Price Each
Volts	Ω	Order Code
Single-sided stable		
5V	173.1	SMD 989-9529 ●
24V	2.601	SMD 989-9499 ●
3V	62.5	989-9553 ●
5V	173.1	989-9570 ●
12V	976.8	989-9537 ●
24V	2.601	989-9545 ●
Single-winding latching		
3V	89	SMD 989-9600 ●
5V	245.5	SMD 989-9626 ●

DPDT 1A
G6K Series



THT - H = 5, W = 10, D = 6.5mm
SMD - H = 5.2, W = 10, D = 6.5mm

- Low profile and weight for improved mounting efficiency
- Low power consumption
- Dielectric strength of 1500V ac
- Conforms to FCC Part 68
- Approved to **CSA C22.2 No. 950** and **UL** Recognised

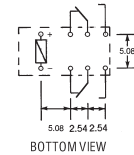
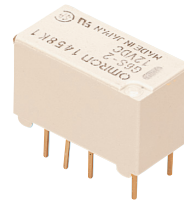
Contact arrangement	DPDT
Mechanical life	50,000,000 Operations
Electrical life	100,000 operations min. (rated load)
Coil power	100mW
Contact resistance (initial)	100mohm max.
Rated carry current	1A
Max. switched voltage	125V, 60V
Max. switched current	1A
Rated load	0.3A @ 125V ac, 1A @ 30V dc
Operating temperature	-40 to 70°C

Order Code	Mfrs. List No.	Rated Current	Order Code	Mfrs. List No.	Rated Current
444-6069	G6K-2P 3DC	33mA	444-6161	G6K-2F 3DC	33mA
444-6082	G6K-2P 5DC	21.1mA	444-6185	G6K-2F 5DC	21.1mA
444-6094	G6K-2P 12DC	9.1mA	444-6197	G6K-2F 12DC	9.1mA
444-6100	G6K-2P 24DC	4.6mA	444-6203	G6K-2F 24DC	4.6mA
			444-6215	G6K-2FY 3DC	33mA
444-6136	G6K-2PY 5DC	21.1mA	444-6239	G6K-2FY 5DC	21.1mA
444-6148	G6K-2PY 12DC	9.1mA	444-6240	G6K-2FY 12DC	9.1mA
444-6150	G6K-2PY 24DC	4.6mA	444-6252	G6K-2FY 24DC	4.6mA
118-1065	G6KU-2PY 3DC	33mA	118-1070	G6KU-2FY 3DC	33mA

311836

COIL		Price Each
Volts	Ω	Order Code
Single-sided stable		
3V	91	444-6069 ●
5V	237	444-6082 ●
12V	1.315	444-6094 ●
24V	5.22	444-6100 ●
3V	91	SMD 444-6161 ●
5V	237	SMD 444-6185 ●
12V	1.315	SMD 444-6197 ●
24V	5.22	SMD 444-6203 ●
Single-side stable Bellcore		
5V	237	444-6136 ●
12V	1.315	444-6148 ●
24V	5.22	444-6150 ●
3V	91	SMD 444-6215 ●
5V	237	SMD 444-6239 ●
12V	1.315	SMD 444-6240 ●
24V	5.22	SMD 444-6252 ●
Single Winding Latching		
3V	91	118-1065 ●
3V	91	SMD 118-1070 ●

Subminiature - High Sensitivity - G6S Series



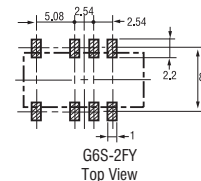
L=14.8, W=7.3, H=10.8

Contact arrangement	DPCO	Coil consumption (nom.)	140mW (5V, 12V), 200mW (24V)
Contact rating	2A @ 30V dc, 500mA @ 125V ac	Operate/Release	2.5ms/1.5ms
Contact material	Silver, Gold plated	Coil operating range	75 - 140% (@ 70°C)
Max. switch voltage	220V DC, 240V AC	Temperature range	-40°C to +85°C

206980

COIL		Price Each
Volts	Ω	Order Code
DPCO - G62-2 Series		
5V dc	178	995-0052 ●
12V dc	1.028	995-0060 ●
24V dc	2.88	995-0079 ●

Subminiature - G6S Series
High Sensitivity



G6S-2FY Series
L=15, W=7.5, H=9.4

- Surface mount relay conforms to **EN60950** supplementary isolation requirement
- Long terminals for soldering and mounting reliability
- High dielectric withstand voltage 2kV coil-contact, 1.5kV contact-contact
- High coil sensitivity (140mW)
- **UL** Recognised and **CSA** approved

Contact arrangement	DPCO	Coil operating range	75% - 170%
Contact rating	500mA @ 125V ac, 2A @ 30V dc	Operate/Release	4ms/4ms
Contact material	Silver, Gold plated	Temperature range	-40°C to +85°C
Coil consumption	140mW		

207033

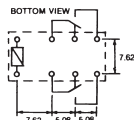
COIL		Price Each
Volts	Ω	Order Code
DPCO Outside-L Terminals - G6S-2FY Series		
5V dc	125	SMD 995-0028 ●
12V dc	125	SMD 995-0036 ●
24V dc	125	SMD 995-0044 ●
DPCO PCB Terminals - G6S-2Y Series		
5V	125	118-1055 ●
24V	125	118-1057 ●

Over 500 000 products available online



Signal Relays - Omron - continued

Subminiature - G5V-2 Series



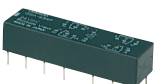
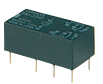
- DPCO contacts
- Fully sealed
- 10mA to 2A switching
- Bifurcated contacts ideal for signal switching
- UL Recognised and CSA approved
- Conforms to FCC Part 68

Contact arrangement	DPCO	Coil consumption	500mW
Contact rating	2A @ 30V dc, 500mA @ 125V ac	High sensitivity Operate/Release	150mW 7ms/3ms
Contact material	Silver, Gold clad	Coil operating range	75% - 120%
Dielectric strength	1000V ac (coil-contact)	Temperature range	-25°C to +65°C

206957

COIL		Order Code	Price Each
Volts	Ω		
DPCO - G5V-2 Series			
4.5V dc	40	994-9810	
5V dc	50	994-9488	
9V dc	162	994-9828	
12V dc	288	994-9496	
24V dc	1152	994-9500	
48V dc	4000	994-9836	
High Sensitivity DPCO - G5V-2-HI Series			
5V dc	166	994-9844	
9V dc	540	994-9852	
12V dc	960	994-9860	
24V dc	288	994-9879	

High Sensitivity - G6A Series



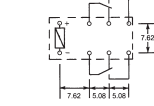
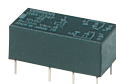
- DPCO and 4PCO bifurcated contacts
- Fully sealed, suitable for immersion cleaning
- Satisfies CCIT lighting test requirement
- Permanent magnet construction, coil polarity must be observed

G6A-234P	G6A-434P		
L=20.2, W=10.1, H=8.0	L=35.4, W=10.1, H=8.0		
Contact arrangement	DPCO/4PCO	Coil consumption:	G6A-234P/G6AK-234P 200mW / 180mW
Contact rating	300mA @ V ac		G6A-434P/G6AK-434P 360mW / 320mW
	1A @ 60V dc	Operate/Release:	G6A-234P/G6AK 234P 5ms/5ms
Contact material	Ag (Au-Alloy)		G6A-434P/G6AK 234P 7ms/5ms
Coil operating range	70 - 150%	Temperature range	-25°C to +70°C

207098

COIL		Order Code	Price Each
Volts	Ω		
DPCO - G6A-234P Series			
4.5 dc	101	994-8988	
12 dc	720	994-8996	
24 dc	2.88	994-9003	
48 dc	11.52	994-9011	
DPCO Latching - G6AK-234P Series			
5V	139 + 139	118-1048	
12V	800 + 800	118-1049	
4PCO Latching - G6AK-434P Series			
12V	450 + 450	118-1053	

High Isolation - G6A-BS Series



- DPCO contacts
- Approved to BAPT BS6301
- Fully sealed
- 2KVrms isolation coil/contact and 2.5mm creepage/clearance
- Suitable for telecoms and office equipment

Contact arrangement	DPCO	Coil consumption	280mW
Contact rating	300mA @ 110V ac	Operate/Release	5ms/3ms
	1A @ 60V dc	Coil operating range	70 - 150%
Contact material	Gold overlay Silver Palladium	Temperature range	-10°C to +70°C

207144

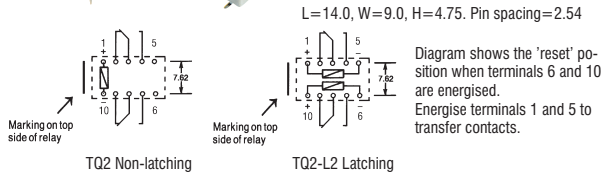
COIL		Order Code	Price Each
Volts	Ω		
DPCO - G6A-234P-BS Series			
5V dc	89	994-9100	
12V dc	514	994-9119	
24V dc	2.057	994-9127	

Signal Relays - Panasonic



Subminiature - TQ2/TQ2-L2 Series

Latching/Non-latching, High Sensitivity PCB and Surface Mounts



- DPCO subminiature relay fully sealed to IP67
- Gold plated crossbar contacts ensure maximum reliability
- Insertion loss below 0.1dB at 100MHz
- Sealed to IP67
- UL Recognised and CSA approved
- Surface mount version available

Contact arrangement	DPCO, bifurcated contacts
Contact rating	500mA @ 125V ac, 1A @ 30V dc
Switched current range	10µA - 1A
Switched voltage range	10mV - 125V
Max. power	300W/100VA
Contact material	Silver, Gold plated
Coil consumption (nom.)	140mW (non latching), 200mW (latching)
Operate/Release	3ms/3ms
Coil operating range	75 - 130% @ 40°C
Temperature range	-40°C to +70°C (PCB type) -40°C to +85°C (SM type)

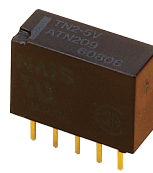
207158

COIL		Order Code	Price Each
Volts	Ω		
DPCO - TQ2 Series			
5V dc	178	117-5716	
12V dc	1.028	120-0949	
24V dc	2.88	117-5717	
Latching DPCO - TQ2-L2 Series			
5V dc	125 + 125	117-5718	
12V dc	720 + 720	117-5719	
24V dc	1.92 + 1920	117-5720	
Surface Mount - DPCO - TQ2SA Series			
5V dc	178	SMD112-4054	
12V dc	1.028	SMD112-4056	
24V dc	2.88	SMD112-4057	
Surface Mount - Latching DPCO - TQ2SA-L2 Series			
5V dc	178 + 178	SMD625-760	
12V dc	1.028 + 1028	SMD112-4058	

Miniature - TN/TNL/TNL2 Series

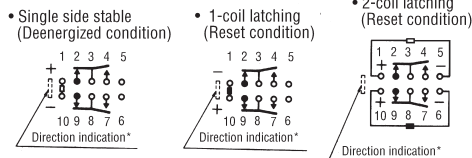


Non Latching/1 Coil Latching/2 Coil Latching



L=14, W=5.6, H=9.8,
Pin spacing 2.54,
PCB hole dia=1.0

- Ultra slim telecoms relay with 5.6mm width for minimal PCB mounting requirements
- Small header area makes higher density packaging possible
- High coil sensitivity
- Fully sealed construction
- High surge voltage resistance - 1500V FCC Part 68
- UL Recognised and CSA approved



*Orientation stripe located on top of relay

Contact arrangement	DPCO
Contact rating	500mA @ 125V ac, 1A @ 30V dc
Contact material	Silver, Gold plated
Coil consumption	140mW (non latching), 100mW (1 coil latching), 200mW (2 coil latching)
Coil operating range	75 - 150%
Operate/Release	2ms/1ms
Temperature range	-40°C to +70°C

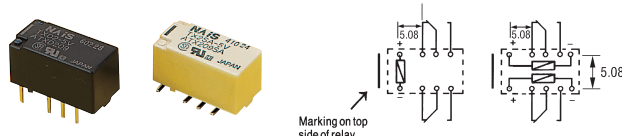
207129

Over 500 000 products available online



COIL			Price Each
Volts	Ω	Order Code	
DPCO - TN Series			
5V dc	178	120-0955	
12V dc	1.028	120-0956	
24V dc	2.88	910-405	
1 Coil Latching DPCO - TN-L Series			
5V dc	250	910-417	
2 Coil Latching DPCO - TN-L2 Series			
5V dc	125	910-442	

Subminiature - High Sensitivity - TX2 Series
PCB and Surface Mount



L=15, W=7.4, H=8.2 PCB hole dia=1.0
Pin Spacing=2.54

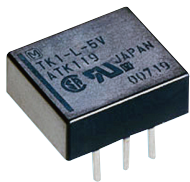
- High contact capacity : 2A 30V dc
- High coil/contact breakdown voltage 2kV
- High insulation version conforming to **EN41003** available
- Surface mount versions available with gull wing contacts

Contact arrangement	DPCO	Operate/Release	4ms/4ms
Contact rating	2A @ 30V dc, 500mA @ 125V ac	Coil operating range	75 - 150%
Max. switching power (res)	60W	Temperature range	-40°C to +85°C
Min. switching capability	10μA - 10mV dc		
Contact material	Silver alloy, Gold clad		
Coil consumption (nom.)	Non-Latching: 140mW Latching: 200mW		

207103

COIL			Price Each
Volts	Ω	Order Code	
DPCO - TX2 Series			
5V dc	178	120-0950	
12V dc	1.028	120-0952	
24V dc	4.114	112-4059	
Surface Mount - DPCO - TX2SA Series			
5V dc	178	120-0957	
12V dc	1.028	910-480	
Latching DPCO - TX2-L2 Series			
5V dc	125+125	625-826	
12V dc	720+720	112-4060	
24V dc	2.88+2880	112-4061	

4A Polarized TK Series



- Low profile 4mm (0.157")
- High contact capacity 2A
- Surge withstand voltage between contact and coil 2500V (Telecordia)
- UL Recognised, **CSA & BSI** approved

H = 4, W = 10.6, D = 9mm

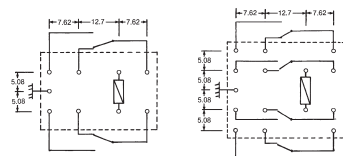
Switching voltage max.	220V DC	Contact material	Gold-clad silver
Switching power max.	60W	Operate/Release	3ms/2ms
Carrying current max.	2A	Breakdown voltage	1500V FCC (Surge between open contacts)
Coil power	140mW	Temperature range	-40°C to +85°C

Mfrs. List No.	Order Code
TK1-5V	= 138-0960
TK1-12V	= 138-0961

475496

COIL			Price Each
Volts	Ω	Order Code	
SPDT - Single Side Stable - 1 Form C			
5V	178	138-0960	
12V	1.028	138-0961	

Low Profile - NF2EB/4EB Series
Sealed



NF2EB L=29.6, W=19.6, H=10.8
NF4EB L=29.6, W=24.2, H=10.8

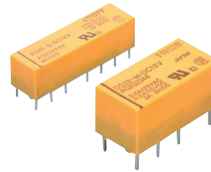
- DPCO and 4PCO contacts
- Fully sealed
- UL Recognised
- **CSA and VDE** approved
- Fully sealed

Contact arrangement	DPCO/4PCO	Operate/Release	15ms/10ms
Contact rating	2A @ 30V dc, 50V ac	Coil operating range	70 - 175%
Contact material	Silver, Gold clad	Temperature range	-40°C to +65°C
Coil consumption	DPCO 290mW 4PCO 400mW		

207103

COIL			Price Each
Volts	Ω	Order Code	
DPCO - NF2EB Series			
12V dc	500	120-0946	
24V dc	2	117-5714	
Latching DPCO - NC2D Series			
12V dc	180 + 180	117-5709	
4PCO - NF4EB Series			
5V dc	53	120-0947	
12V dc	330	117-5715	
24V dc	1.2	120-0948	

Subminiature - DS2 Series
Latching/Non-latching



- High sensitivity
- High switching capacity
- High breakdown voltage
- Can be used with IC socket
- UL Recognised, **CSA & BSI** approved

Switching voltage max.	220V DC, 250V ac
Switching power max.	60W/125VA
Carrying current max.	3A ac & dc
Contact material	Silver, Gold clad
Operate/Release	3ms/2ms
Breakdown voltage	1500V FCC (Surge between open contacts)
Temperature range	-40°C to +70°C

Order Code	Mfrs. List No.	Coil Power	138-0946	DS2E-M-DC5V	400mW
438-9920	DS2E-S-DC5V	200mW	138-0948	DS2E-M-DC12V	400mW
438-9931	DS2E-S-DC12V	200mW	138-0949	DS2E-M-DC24V	400mW
438-9943	DS2E-S-DC24V	200mW			

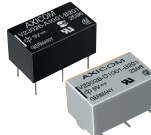
272334

COIL			Price Each
Volts	Ω	Order Code	
DPDT - Single Side Stable - 2 Form C			
5V	125	438-9920	
12V	720	438-9931	
24V	2.88	438-9943	
5V	62.5	138-0946	
12V	360	138-0948	
24V	1.44	138-0949	
DPDT - 2 Coil Latching - 2 Form C			
5V	139+139	438-9955	
12V	800+800	438-9967	

Signal Relays - Tyco Electronics



1A Subminiature P1 Series



- SPCO sealed relay
- Suitable for data, telecomms, control or medical equipment
- UL Recognised, **CSA and CECC** approved

Contact arrangement	SPDT, 1 Form C	Coil consumption	60mW to 130mW
Contact rating	1A @ 30V dc (30W), 500mA @ 110V ac (60VA)	Operate/Release	1ms/1ms
Contact material	Rhodium	Coil operating range	75 - 200%
		Temperature range	40°C to +70°C
Mfrs. List No:	V23026-A1001-B201 = 117-4999 V23026-A1004-B201 = 117-5001	V23026-A1002-B201 = 117-5000	

206964

COIL			Price Each
Volts	Ω	Order Code	
Monostable Single coil			
5V dc	370	117-4999	
12V dc	2.25	117-5000	
24V dc	4.5	117-5001	

Signal Relays - Tyco Electronics - continued

SPDT 1A

OUAZ Series



- Contacts suitable for low loads
- Small size
- 2.54 terminal pitch - same as IC socket terminal pitch
- Sensitive coil, 200mW
- Immersion cleanable, sealed plastic case
- **UL** Recognised and **CSA** Approved

H=11.2, W=15.4,
D=10.4mm

Contact arrangement	1 SPDT
Mechanical life	10,000,000 Operations (no load)
Electrical life	100,000 operations (rated load)
Minimum load	1mA @ 1V dc/240V
Contact resistance (initial)	50mohm @ 100mA, 6V dc
Contact ratings	1A @ 24V dc, 120VA ac (resistive)
Max. switched voltage	120V ac, 60V dc
Max. switched power	120VA, 30W
Dielectric strength (coil/contacts)	1000V ac 50/60Hz (1 min.)
Operating temperature	-30 to 75°C

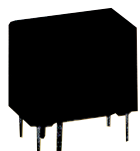
Order Code	Mftrs. List No.	Order Code	Mftrs. List No.
119-7687	OUAZ-SH-112L	117-5096	OUAZ-SH-124L

311797

COIL			Price Each
Volts	Ω	Order Code	
12V	700	119-7687	●
24V	2.8	117-5096	●

Subminiature - TSC Series

High Sensitivity



- High sensitive coil, 150mW
- IC Compatible
- Suitable for telecom applications
- Fully sealed
- **CSA** Approved, **UL** Recognised

Contact rating	1A @ 120V ac/24V dc
Contact material	AgNi 0.15 + Au overlay
Coil consumption	150mW
Operate/Release	5ms/5ms
Temperature range	-40°C to +85°C

L=12.5, W=7.5, H=10

207074

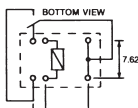
COIL		Mftrs.	Price Each
Volts	Ω	List No.	Order Code
SPCO - TSC Series			
5V	166	TSC-105L3H	965-9668 ●
12V	960	TSC-112L3H	117-5060 ●
24V	3.84	TSC-124L3H	117-5061 ●

Subminiature - V23101/5 Series

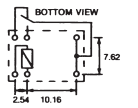


V23101D
L=15.6, W=10.6, H=11.5,
PCB hole dia.=1

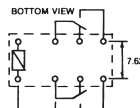
V123102C
L=20.2, W=10.0, H=10.7,
PCB hole dia.=0.8



Configuration A



Configuration B



Configuration C

● SPCO bifurcated contacts		● Sealed to IP67 suitable for immersion cleaning	
Contact arrangement	SPCO		
Contact rating			
Max. current	1.25A (switching)/1.25A (continuous)		
Max. voltage	120V dc/125V ac		
Max. power	30W/62.5VA		
Contact material	Silver Palladium, gold plated		
Operate time	5ms		
Release time	3ms		
Coil consumption	450mW		
Coil operating range	75 - 143%		
Temperature range	40°C to +85°C		
Coil Voltage	Sensitive/Standard	Terminal Config. Diagram	Mftrs. List No. Order Code
SPCO Relays:			
12V dc	Standard	B	V23101-D0006-B201 117-5004
24V dc	Standard	A	V23101-D0007-A201 117-5006

206975

COIL Price Each

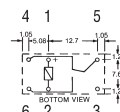
Volts	Ω	Order Code	
SPCO - V23101-D Series			
12V dc	320	117-5004	●
24V dc	1.28	117-5006	●

High Sensitivity - V23040 Series

Latching/Non-latching

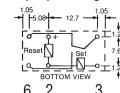


V23040A L=20.0,
W=10.0, H=8.2
PCB hole dia.=1.0



Connections on latching type:
When pin 2 is more +ive than pin 1 then the relay assumes the off position (contacts 4/5 closed). When pin 1 is more +ive than pin 2 (or pin 2 more than pin 3) the relay switches to the on position (contacts 5/6 closed).

V23040B L=20.0,
W=10.0, H=8.2PCB
hole dia.=1.0



- SPCO bifurcated contacts
- 'Getter' protected chamber gives exceptional life 10⁸ operations
- Low profile, fully encapsulated metal case
- **UL** Recognised and **CSA** approved

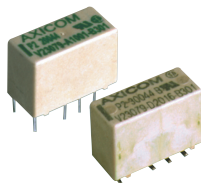
Contact arrangement	SPCO	Contact material	Rhodium
Contact rating:		Coil consumption	From 80mW - 5V version
Max. current	2A	Operate/Release	2ms/1ms
Max. voltage	150V dc/125V ac	Coil operating range	70 - 180%
Max. power	35W/60VA	Temperature range	-40°C to +70°C

207100

COIL			Price Each
Volts	Ω	Order Code	
SPCO - V23040-A B201 Series			
5V dc	320	117-4993	●
12V dc	1.14	117-4994	●
24V dc	4.37	117-4995	●
Latching SPCO - V23040-B B201 Series			
5V dc	315+315	117-4996	●
12V dc	1.1+1100	117-4997	●

2A, Subminiature

P2 V23079 Series



- Standard telecom relay (Ringing and test access)
- Through Hole Type and Surface Mount Type available
- 5A maximum switching current
- Bifurcated contacts
- High sensitivity - 140mW
- High mechanical shock resistance
- Immersion cleanable
- **UL** Recognised

L=15mm, B=7.5mm, H=9.9mm

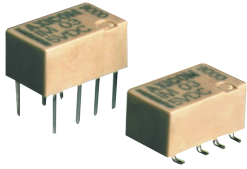
Contact arrangement	DPDT - 2 C/0 (2 Form C)
Contact rating	2A Carry, 5A Switching @ 220V dc, 250V ac
Switching capacity	62.5 VA, 60W
Contact Material	Silver Nickel, Gold Overlay
Coil consumption	140 mW
Operate/Release	3/4 ms typical
Temperature range	-40°C to +85°C

Order Code	Mftrs. List No.	Type	422-0006	3-1393788-6	V23079B1203B301
421-9960	1393788-3	V23079-A1001-B301	Order Code	Mftrs. List No.	Type
117-5081	1-1393788-1	V23079-A1003-B301	422-0020	4-1393788-5	V23079C1101B301
117-5082	1-1393788-6	V23079-A1005-B301	162-9014	4-1393789-3	V23079D2001B301
421-9995	3-1393788-3	V23079B1201B301	162-9015	4-1393789-5	V23079D2003B301

240021

COIL			Price Each
Volts	Ω	Order Code	
THT - Non-Latching - Standard Version, single coil			
5V dc	178	421-9960	●
12V dc	1.029	117-5081	●
24V dc	4.114	117-5082	●
THT - Latching - Standard Version, two coils			
5V dc	178	421-9995	●
12V dc	1.029	422-0006	●
THT - Latching - Standard Version, single coil			
5V dc	357	422-0020	●
SMT Long pins - Non-Latching - Overmolded single coil Version			
5V	178	SMD162-9014	●
12V	1.029	SMD162-9015	●

2A, Ultraminiature IM Series



L = 10, W = 6, H = 5.65 mm

- Telecom/signal relay (Dry circuit, test access, ringing)
- Minimum board space 60mm²
- Gold plated, bifurcated contacts
- Low power consumption
- High surge capacity meets Telecordia GR 1089, FCC Part 68 and ITU-T K20, 21, 45
- High mechanical shock resistance, up to 300 G functional, up to 500 G survival
- Hermetically sealed (RT V)
- Tested according to **CECC/IECO** and certified in accordance with **IEC/EN 60950** and **UL 60950**

Contact rating 2A @ 250V ac, 220V DC
 Switching capacity 62.5VA/240W
 Contact Material PdRu + Au covering
 Operate/Release 3 ms/3 ms - max.
 Temperature range -40°C to +85°C

Order Code	Mfrs. List No.	Type	Order Code	Mfrs. List No.	Type
132-6155	0-1462037-4	IM01TS	162-9009	9-1462037-9	IM06CGR
117-5065	1-1462037-3	IM02TS	162-9011	9-1462038-9	IM03DGR
117-5066	1-1462037-8	IM03TS	162-9012	1-1462039-8	IM06DGR
117-5067	2-1462037-7	IM06TS	162-9006	2-1462039-9	IM23GR
421-9211	3-1462037-0	IM07TS	162-9007	3-1462039-1	IM26GR
177-0584	1-1462038-3	IM03NS	162-9004	3-1462039-0	IM23TS
177-0586	1-1462038-6	IM06NS	162-9005	3-1462039-2	IM26TS
177-0587	1-1462038-7	IM07NS	177-0594	5-1462039-5	IM03PGR
132-6157	0-1462037-1	IM01GR	177-0595	5-1462039-6	IM06PGR
117-5068	0-1462037-9	IM02GR	177-0596	5-1462039-9	IM03PNS
117-5069	1-1462037-4	IM03GR	177-0598	6-1462039-0	IM06PNS
117-5070	2-1462037-3	IM06GR	177-0599	1462041-7	IMB03CGR
132-6154	4-1462037-7	IM07GR	177-0600	1462041-3	IMB06CGR
177-0588	5-1462037-8	IM43TS	177-0601	1462041-8	IMB03CTS
177-0589	6-1462037-6	IM46TS	177-0602	1462041-6	IMB06CTS
177-0590	6-1462037-9	IM47TS	177-0604	1462042-8	IMC03GR
177-0591	2-1462038-1	IM43NS	177-0605	1462042-3	IMC06GR
177-0592	2-1462038-4	IM46NS	177-0606	1462042-7	IMC03TS
177-0593	2-1462038-5	IM47NS	177-0607	1462042-6	IMC06TS
162-8996	5-1462037-9	IM43GR	177-0608	1462043-3	IME03GR
162-8997	6-1462037-7	IM46GR	177-0609	1462043-4	IME06GR
162-8998	7-1462037-0	IM47GR	177-0610	1462043-7	IME03TS
162-9000	1462039-4	IM13GR	177-0611	1462043-8	IME06TS
162-9003	1462039-6	IM17GR			

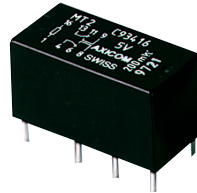
239930

COIL		Price Each	
Volts	Ω	Order Code	
THT Standard - Non-Latching - DPDT			
3V	64	132-6155	
4.5V	145	117-5065	
5V	178	117-5066	
12V	1.028k	117-5067	
24V	2.88k	421-9211	
THT Narrow - Non-Latching - DPDT			
5V	178	NEW 177-0584	
12V	1.029k	NEW 177-0586	
24V	2.88k	NEW 177-0587	
SMT Gull Wing - Non-Latching - DPDT			
3V	64	SMD 132-6157	
4.5V	145	SMD 117-5068	
5V	178	SMD 117-5069	
12V	1.028k	SMD 117-5070	
24V	2.88k	SMD 132-6154	
THT Standard - Latching - DPDT			
5V	250	NEW 177-0588	
12V	1.44k	NEW 177-0589	
24V	2.88k	NEW 177-0590	
THT Narrow - Latching - DPDT			
5V	250	NEW 177-0591	
12V	1.44k	NEW 177-0592	
24V	2.88k	NEW 177-0593	
SMT Gull Wing - Latching - DPDT			
5V	250	SMD 162-8996	
12V	1.44k	SMD 162-8997	
24V	2.88k	SMD 162-8998	
SMT Gull Wings - Non-Latching - High Sensitive - DPDT			
5V	238	SMD 162-9000	
24V	4.12k	SMD 162-9003	
SMT Gull Wings - Non-Latching - High Dielectric - DPDT			
12V	1.028k	SMD 162-9009	
SMT Gull Wings - Non-Latching - High Current/Low Contact Resistance - DPDT			
5V	178	SMD 162-9011	
12V	1.028k	SMD 162-9012	
SMT Gull Wings - Non-Latching - Ultra High Sensitive - DPDT			
5V	500	SMD 162-9006	
12V	2.88k	SMD 162-9007	
THT - Non-Latching - Ultra High Sensitive - DPDT			
5V	500	162-9004	
12V	2.88k	162-9005	

COIL		Price Each	
Volts	Ω	Order Code	
SMT Gull Wings - Non-Latching - High Contact Stability - DPDT			
5V	178	NEW SMD 177-0594	
12V	1.029k	NEW SMD 177-0595	
THT - Non-Latching - High Contact Stability - DPDT			
5V	178	NEW 177-0596	
12V	1.029k	NEW 177-0598	
SMT Gull Wings - Non-Latching - SPST-NO			
5V	178	NEW SMD 177-0599	
12V	1.029k	NEW SMD 177-0600	
THT - Non-Latching - SPST-NO			
5V	178	NEW 177-0601	
12V	1.029k	NEW 177-0602	
SMT Gull Wings - Non-Latching - SPDT			
5V	178	NEW SMD 177-0604	
12V	1.029k	NEW SMD 177-0605	
THT - Non-Latching - SPDT			
5V	178	NEW 177-0606	
12V	1.029k	NEW 177-0607	
SMT Gull Wings - Non-Latching - DPST-NO			
5V	178	NEW SMD 177-0608	
12V	1.029k	NEW SMD 177-0609	
THT - Non-Latching - DPST-NO			
5V	178	NEW 177-0610	
12V	1.029k	NEW 177-0611	

DPCO 2A

MT2 Series, non-latching



- 2 pole telecom/signal relay
- THT type
- Non-polarized, non-latching coil
- Bifurcated contacts
- Immersion cleanable

H=11, W=20.2, D=10mm

Contact arrangement	DPDT - 2 form C	Contact Material	Silver-nickel, gold covered
Switching voltage max.	220V DC / 250V AC	Coil consumption	150 / 200 / 400 / 550mW
VSWR @ 900 MHz	1.31	Operate/Release	4 / 1ms typical
Continuous contact current	2A @ max. ambient temp.	Temperature range	-55 to 85°C
Switching capacity	2A		

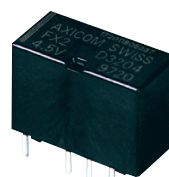
Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
991-3645	MT2-C93401	991-3696	MT2-C93419
991-3653	MT2-C93402	991-3700	MT2-C93422
991-3661	MT2-C93403	991-3718	MT2-C93424
991-3670	MT2-C93416	991-3726	MT2-C93425
991-3688	MT2-C93418	991-3742	MT2-C93432

414027

COIL		Price Each	
Volts	Ω	Order Code	
High sensitive version (150 mW)			
5V	168	991-3645	
12V dc	968	991-3653	
24V dc	3.872	991-3661	
Sensitive version (200 mW)			
5V	125	991-3670	
12V dc	720	991-3688	
24V dc	2.88	991-3696	
Standard version (400 mW)			
5V	63	991-3700	
12V dc	360	991-3718	
24V dc	1.44	991-3726	
Standard version (550 mW)			
12V	280	991-3742	

DPDT 2A

FX2 Series, single coil



- 2 pole telecom/signal relay
- THT type
- Bifurcated contacts
- Robust construction - mechanical shock up to 300 G
- Immersion cleanable

H=10.7, W=14.93, D=7.27mm

Signal Relays - Tyco Electronics - continued

DPDT 2A - continued

FX2 Series, single coil - continued

Contact arrangement	DPDT - 2 form C
Switching voltage max.	220V DC / 250V AC
VSWR @ 900 MHz	1.45
Continuous contact current	2A @ max. ambient temperature
Switching capacity	60W / 60VA
Contact Material	Palladium-ruthenium - gold covered
Operate/Release	3 / 3ms typical
Temperature range	-55 to 85°C

Order Code	Mfrs. List No.	Part No.	Order Code	Mfrs. List No.	Part No.
991-3882	FX2-D3209	1462034-9	991-3920	FX2-D3226	2-1462034-4
991-3890	FX2-D3202	1462034-1	991-3939	FX2-D3227	2-1462034-5
991-3904	FX2-D3212	1-1462034-4	991-3947	FX2-D3243	3-1462034-0
991-3912	FX2-D3223	2-1462034-1	991-3955	FX2-D3246	3-1462034-3

COIL		Order Code	Price Each
Volts	Ω		
Non-latching Single coil			
5V	178	991-3882	
12V dc	1.028	991-3890	
24V dc	2.88	991-3904	
Non-latching Single coil - Sensitive version			
5V	313	991-3912	
12V dc	1.8	991-3920	
24V dc	4.114	991-3939	
Latching Single coil			
5V	250	991-3947	
12V dc	1.44	991-3955	

High Sensitivity

D2n Series



- DPCO contacts
- Fully sealed
- UL Recognised and CSA approved

L = 20.3, W = 10.4, H = 11.4mm



Contact arrangement	DPCO	Coil consumption	200mW / 400mW
Contact rating	3A @ 220V dc, 3A @ 250V ac	Operate/Release	6ms/4ms
Contact material	Silver-nickel, Gold-covered	Coil operating range	70 - 150%
		Temperature range	-25°C to +85°C
Order Code	Mfrs. List No.	117-4985	V23105-A5305-A201
117-4983	V23105-A5301-A201	421-9582	V23105-A5401A201
117-4984	V23105-A5303-A201		

COIL		Order Code	Price Each
Volts	Ω		
DPCO - V23105-3 Series - 200mW			
5V dc	125	117-4983	
12V dc	720	117-4984	
24V dc	2880	117-4985	
DPCO - V23105-3 Series - 400mW			
5V dc	62	421-9582	

BT 47 Type - 3A

D2n Series



- DPCO contacts
- BT Type 47W, UL Recognised
- Suitable for private and public telecoms
- Sealed housing

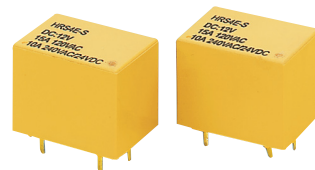
L = 20.3, W = 10.4, H = 11.4

Contact arrangement	DPCO	Coil consumption	500mW
Contact rating - Max.	3A	Operate/Release	10ms/10ms
Breaking capacity - Max.	60W / 125VA	Coil operating range	70 - 150%
Contact material	Gold silver alloy on silver palladium	Temperature range	-25°C to +70°C
Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
117-4986	V23105-A5475-A201	117-4989	V23105-A5477-A201
117-4987	V23105-A5476-A201	117-4991	V23105-A5478-A201

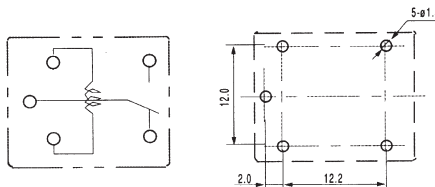
British Telecom COIL		Order Code	Price Each
Code	Volts		
DPCO - V23105-4 Series			
47W/5	5V dc	36	117-4986
47W/6	12V dc	280	117-4987
47W/7	24V dc	1.050	117-4989
47W/8	48V dc	4	117-4991

Power Relays - SPC MultiComp

5A/10A Vertical - MCHRS4 Series



MCHRS4 H=15.8, W=15.5, D=19.0
MCHRS4E H=17.0, W=15.5, D=21.5



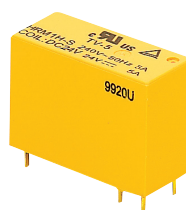
- SPCO contacts
- Sealed to allow washing after flow soldering

Contact rating	MCHRS4 Series	5A 240V ac / 24V	Operate/release time	8ms/5ms
	MCHRS4FH Series	10A 240V ac / 30V		10ms/5ms

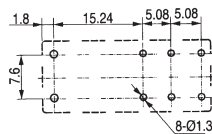
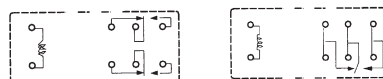
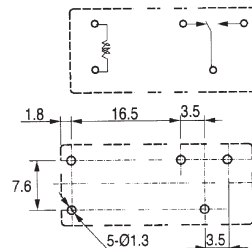
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COIL		Order Code	Price Each
Volts	Ω		
SPCO, 5A - MCHRS4 Series			
5V dc	50	948-0102	
12V dc	320	948-0110	
24V dc	820	948-0129	
SPCO, 10A - MCHRS4FH Series			
5V dc	70	NEW 169-5972	
12V dc	400	NEW 169-5973	
24V dc	1600	NEW 169-5974	

5A/10A/16A Vertical - MCHRM Series



H=20.8, W=29.0, D=12.6



- DPCO or SPCO contacts
- Sealed to allow washing after flow soldering
- UL Recognised and CSA approved

MCHRM Series - SPCO	10A 250V ac / 30V dc	Contact material	Silver alloy
MCHRM2 Series - SPCO	16A 250V ac / 30V dc	Coil power consumption	720 mW
MCHRM1 Series DPCO	5A 250V ac / 30V dc	Operate/release time	15ms/8ms
Operating temperature range	-30°C - +70°C		

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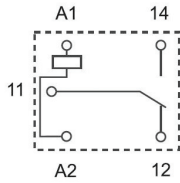
COIL		Order Code	Price Each
Volts	Ω		
SPCO, 10A - MCHRM Series			
5V dc	36	948-0021	
9V dc	115	948-0030	
12V dc	200	948-0048	
24V dc	820	948-0056	
SPCO, 16A - MCHRM2 Series			
5V dc	36	948-0064	
9V dc	115	948-0072	
12V dc	200	948-0080	
24V dc	820	948-0099	

COIL		Order Code	Price Each
Volts	Ω		
DPCO, 5A - MCHRM1 Series			
5V dc	36	947-9937	
9V dc	115	947-9945	
12V dc	200	947-9953	
24V dc	820	947-9961	

Power Relays - FINDER

2A Subminiature DIL Relays

30 Series



- 2 Pole changeover contacts
- Low level switching capability
- Subminiature - industry standard DIL package
- Sensitive DC coil - 200 mW
- Wash tight: RT III
- Cadmium Free contact material

Contact arrangement DPDT - CO
 Rated contact current/Max. peak current 2A / 3A
 Rated contact voltage 125V
 Contact Material AgNi + Au
 Operate/Release 6 / 2ms typical
 Temperature range -40 to 85°C

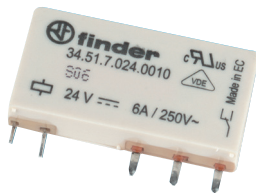
Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
121-7368	30.22.7.005.0010	176-5075	30.22.7.048.0010
121-7369	30.22.7.012.0010	121-7371	30.22.9.024.0010
121-7370	30.22.7.024.0010		

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COIL		Order Code	Price Each
Volts	Ω		
5	125	121-7368	
12	720	121-7369	
24	2.88K	121-7370	
48	11.52K	NEW 176-5075	
24	2.88K	121-7371	

6A Ultra-slim

34 Series



- Ultra slim, only 5mm wide
- Sensitive DC coil (170mW)
- 6kV insulation between coil and contacts

Contact arrangement SPCO
 Contact rating 6A @ 250V ac
 Switching capacity 250V ac
 Contact Material Silver Tin Oxide/Gold
 Coil consumption/Power lost 0.17 mW

L = 28, W = 5, H = 15 mm

Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
116-9338	34.51.7.005.0010	116-9341	34.51.7.005.5010
116-9339	34.51.7.012.0010		
116-9340	34.51.7.024.0010	116-9343	34.51.7.024.5010
176-5076	34.51.7.048.0010	176-5077	34.51.7.048.5010

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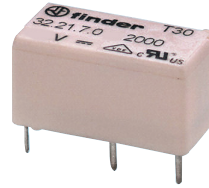
COIL		Order Code	Price Each
Volts	Ω		
Single Pole C/O contacts - 34.51 Series			
Contact Material Silver Nickel (AgNi)			
5V dc	130	116-9338	
12V dc	840	116-9339	
24V dc	3.35K	116-9340	
dc	12.3K	NEW 176-5076	
Contact Material Silver Nickel/Gold (AgNi+Au)			
5V dc	130	116-9341	
24V dc	3.35K	116-9343	
dc	12.3K	NEW 176-5077	
Accessories - Sockets			
DIN Rail mount		132-9719	
PCB Mount		132-9720	

Technical information at your fingertips



Over **352,000** technical datasheets available online. Visit www.element14.com and look for the Tech Info heading in your search results.

SPCO 6A
32 Series Subminiature



H=10.7, W=20.2, D=10mm

- Low profile package
- THT type

- Sensitive coil - 200 mW
- Immersion cleanable: RT III

Contact arrangement SPDT - CO
 Rated contact current/Max. peak current 6A / 15A
 Rated contact voltage 250V
 Contact Material AgCdO

Coil consumption 200mW
 Operate/Release 6 / 4ms typical
 Temperature range -40 to 85°C

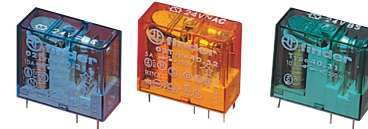
Order Code	Mfrs. List No.
132-9651	32.21.7.005.2000
132-9652	32.21.7.012.2000

Order Code	Mfrs. List No.
132-9653	32.21.7.024.2000

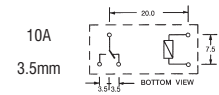
458021

COIL		Order Code	Price Each
Volts	Ω		
5V	125	132-9651	
12V	720	132-9652	
24V	2.88	132-9653	

8A/10A/16A Vertical - 40 Series

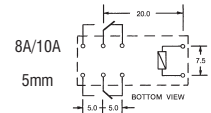
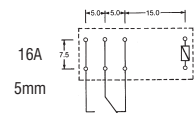


DC type L=29.0, W=12.4, H=25.0 PCB hol dia.=1.5
 AC type Latching



- SPCO and DPCO contacts
- Low cost power relays with a 4kV-8mm isolation between coil and contacts
- Flux proof terminals facilitate flow soldering
- Fluxproof IP40/RTII
- UL Recognised

VDE, BEAB, CSA, SEV, NF, IMQ, SEMKO, DEMKO approved (VDE, CSA, & IMQ, 44.62 Series)



Contact arrangement SPCO/DPCO
 Contact rating SPCO 10A @ 240V ac, 30V dc
 16A @ 240V ac, 30V dc
 DPCO 8A @ 240V ac, 30V dc
 10A @ 240V ac, 30V dc
 10A/8A Silver Nickel
 16A Silver Cadmium oxide

Coil consumption dc Std./Sensitive 650/500 mW
 Coil consumption ac 1.2VA
 Operate/Release 10ms/7ms
 Coil operating range 80 - 150%
 Temperature range -20°C to + 70°C

222076

COIL		Order Code	Price Each
Volts	Ω		
SPCO, 10A - 40.31 Series			
24V ac	320	116-9152	
110V ac	6.9	116-9155	
240V ac	31.5	116-9156	
6V dc	55	116-9157	
12V dc	300	116-9158	
24V dc	1.2	116-9159	
48V dc	3.5	116-9160	
SPCO, 16A - 40.61 Series			
24V ac	320	116-9161	
110V ac	6.9	116-9162	
240V ac	31.5	116-9163	
6V dc	55	116-9164	
12V dc	300	116-9165	
24V dc	1.2	116-9167	
48V dc	3.5	116-9168	
DPCO, 8A - 40.52 Series			
24V ac	320	116-9169	
110V ac	6.9	116-9170	
240V ac	31.5	116-9171	
6V dc	55	116-9172	

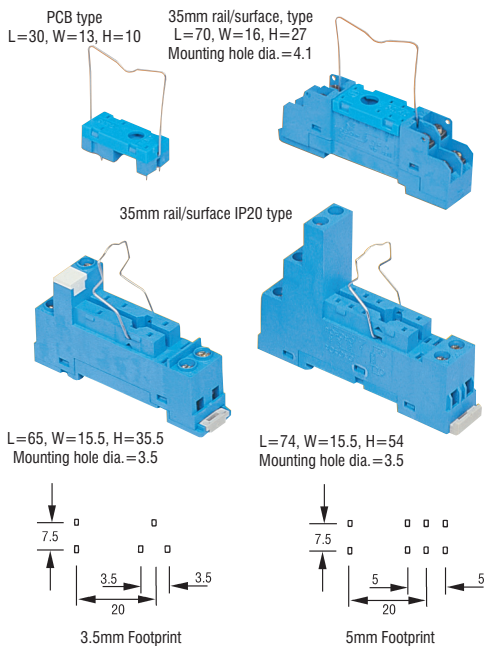
Power Relays - Finder - continued

8A/10A/16A Vertical - - continued

40 Series - continued

COIL		Order Code	Price Each
Volts	Ω		
DPCO, 8A - 40.52 Series			
12V dc	300	116-9173	
24V dc	1.2	116-9174	
48V dc	3.5	116-9175	
DPCO, 10A - 44.62 Series			
6V dc	75	116-9303	
12V dc	300	116-9304	
24V dc	1.2	116-9305	

35mm Rail Bases and Clips



- Sockets and clips for use with 3.5mm and 5mm pin spacing 'Vertical' style PCB power relays, including Finder 40 series
- PCB sockets are **UL** Recognised and **CSA** (10A) approved
- DIN rail/surface sockets Order Codes 116-9176 and 116-9177 are **UL** Recognised and **CSA** (5A) approved
- DIN rail/surface sockets Order Codes 116-9216 and 116-9230 have touchproof terminals to **IP20**. Both will accept an additional module to give the facilities of protection diode and/or LED indication, 116-9216 has an identification tab. Both are approved to **CSA, VL & FI**.

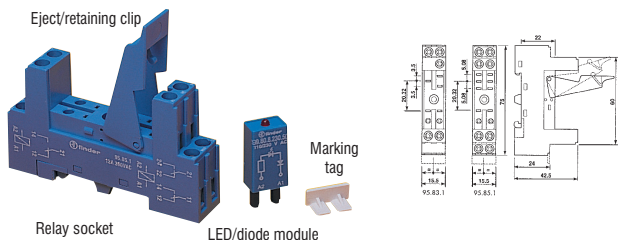
Load Rating 116-9217, 116-9518, 116-9176, 116-9177: 10A 250V ac (5A max. each circuit)
 116-9216, 116-9230: 10A 250V ac
 Housing Blue noryl, **UL94V-08**

222075

Mfrs. List No. 95.13.2SMA=116-9217 Mfrs. List No. 95.45SMA=116-9177
 95.15.2SMA=116-9218 95.63SMA=116-9216
 95.43SMA=116-9176 95.75SMA=116-9230

	Order Code	Price Each
3.5mm, PCB	116-9217	
5mm, PCB	116-9218	
3.5mm 35mm rail/surface	116-9176	
5mm, 35mm rail/surface	116-9177	
3.5mm 35mm rail/surface, IP20	116-9216	
5mm, 35mm rail/surface, IP20	116-9230	

35mm Rail Mount Socket & Accessories - 40 Series.



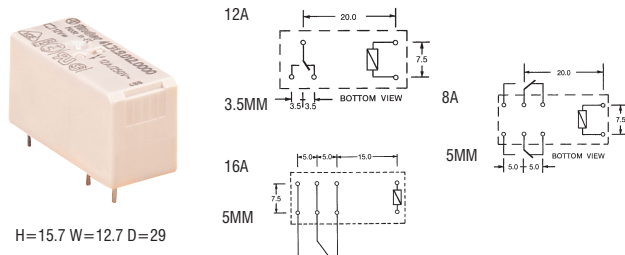
- A range of sockets and accessories to complement the 40 Series relays

Mfrs. List Nos: 95.83.3SXA = 116-9369 095.80.3 = 913-7696 99.80.0.230.50 = 116-9335
 95.85.3SXA = 116-9370 99.80.3.000.00 = 116-9333 99.80.9.024.90 = 116-9302
 095.91.3 = 116-9371 99.80.0.230.08 = 116-9334
 Load Rating 10A @ 250V ac Housing Blue PA66

207023

Sockets	Order Code	Price Each
3.5mm socket for 4031 relay	116-9369	
5mm socket for 4052 4061 relay	116-9370	
Accessories		
Eject retaining clip for sockets	116-9371	
Marking tag for sockets	913-7696	
Order Multiple = 1		
Diode Module, 6 - 220V dc	116-9333	
Varistor Module, 110 - 230V ac/dc	116-9334	
LED Module, 110 - 230V ac/dc	116-9335	
Diode and LED Module, 6 - 24V	116-9302	
8 Way Jumper Link	132-9739	

8A/12A/16A Low Profile 41 Series



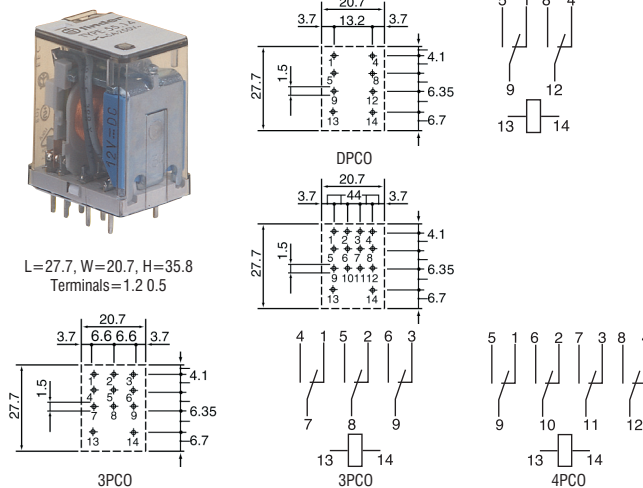
- Low profile only 15.7mm high
- SPCO and DPCO options
- 8mm between coil and contacts in accordance with **VDE0700**
- **CSA** and **VDE** approved, **UL** Recognised

Contact arrangement SPCO/DPCO Contact Material AgNi
 Contact Rating SPCO 12A @ 240Vac, 30Vdc Coil Operating Range 75 - 150%
 SPCO 16A @ 240Vac, 30Vdc Operate/Release 5ms/4ms
 DPCO 8A @ 240Vac, 30Vdc Temperature Range -40°C to +85°C
 Coil consumption 400mW

227661

COIL		Order Code	Price Each
Volts	Ω		
SPCO, 12A - 41.31 Series			
6V	90	116-9306	
12V	360	116-9307	
24V	1440	116-9308	
SPCO, 16A - 41.61 Series			
12V	360	116-9309	
24V	1440	116-9310	
DPCO, 8A - 41.52 Series			
12V	360	116-9311	
24V	1440	116-9313	
Accessories - Sockets			
41.31 Series		116-9217	
41.61 and 41.52 Series		116-9218	

7A/10A Miniature - 5512, 5513, 5514 Series



- Direct PCB mounting version of the Finder 55 Series miniature power relay
- Approved to **VDE, CSA, SEMKO, SEV** and **IMQ, UL** Recognised

Contact arrangement	DPCO/3PCO/4PCO	Contact material	Silver Nickel
Contact rating	DPCO and 3PCO: 10A @ 250V ac 4PCO: 7A @ 250V ac	Coil consumption	1.5VA, 1W
		Coil operating range	80 - 110%

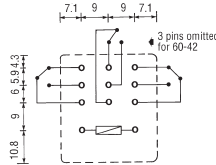
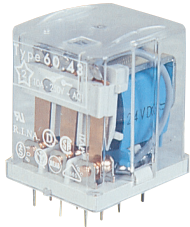
Mfrs. List No.

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55.12.9.012.0000=	116-9250	55.13.9.024.0000=	116-9254	55.14.9.012.0000=	116-9256
55.12.9.024.0000=	116-9251	55.14.8.024.0000=	132-9738	55.14.9.024.0000=	116-9258
55.13.8.230.0000=	116-9252				

207096

COIL		Order Code	Price Each
Volts	Ω		
DPCO, 10A - 5512 Series			
230V ac	-	116-9249	
12V dc	140	116-9250	
24V dc	600	116-9251	
3PCO, 10A - 5513 Series			
230V ac	-	116-9252	
12V dc	140	116-9253	
24V dc	600	116-9254	
4PCO, 7A - 5514 Series			
24V	-	132-9738	
230V ac	-	116-9255	
12V dc	140	116-9256	
24V dc	600	116-9258	

10A - 60 42/43 Series



L=36.0, W=32.2, H=43.0
PCB hole dia=1.5

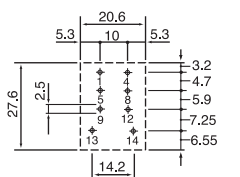
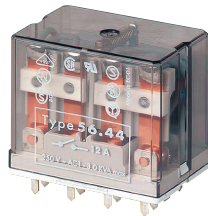
VDE, CSA, BEAB, IMQ, DEMKO (60.43 series), RINA, and SEV approved, UL Recognised

Contact arrangement	DPCO/3PCO	Max. Switching Voltage	400
Contact rating	10A @ 250V ac/30Vdc	Dielectric strength	2000V rms
Switching capacity	250VA	Operate/Release	15ms/15ms
Coil consumption	2.2VA ac, 1.3W dc	Coil operating range	80 - 110%
Max. Inrush current	20A	Temperature range	-40°C to +70°C

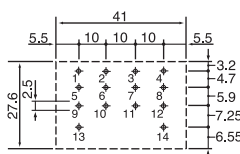
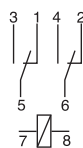
207117

COIL		Order Code	Price Each
Volts	Ω		
DPCO - 60 42 Series			
12V dc	110	116-9181	
24V dc	445	116-9182	
3PCO - 60 43 Series			
230V ac	7.25	116-9183	
12V dc	110	116-9184	
24V dc	445	116-9185	

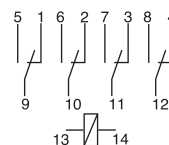
12A - 5642, 5644 Series



DPCO
L=27.6, W=20.6, H=35.5
Terminals=2 x 0.5



4PCO
L=27.6, W=41, H=35.5
Terminals=2 x 0.5



- Direct PCB mounting version of the Finder 56 Series power relay
- Approvals include VDE, CSA, IMQ, LCIE and SEV
- UL Recognised

Contact arrangement	DPCO/4PCO	Coil Consumption	DPCO 1.5VA, 1W
Contact Rating	12A@250Vac		4PCO 2VA, 1.3W
Contact Material	Silver Nickel	Coil Operating range	80-110%

Mfrs. List No.

56.42.8.230.0000 =	116-927256.42.9.024.0000 =	116-927456.44.9.024.0000 =	116-9276
56.42.9.012.0000 =	116-927356.44.9.012.0000 =		

207101

COIL		Order Code	Price Each
Volts	Ω		
230V ac	—	116-9272	
12V dc	140	116-9273	
24V dc	600	116-9274	
12V dc	123	116-9275	
24V dc	490	116-9276	

16A Modular Latching-20 Series



- A range of latching relays with EN 50022, 17.5mm wide housing
- Mechanical indicator for each contact
- AC and DC operation
- 1 hour rated coils
- Offset terminals to facilitate wiring
- IMQ, UR, NF, Lloyds Reg. approved

H = 84, W = 17.4, D = 58.4mm

These relays have just one coil. Pulse to operate and latch, the next pulse will unlatch. They have a manual button on the unit; push to change the contact state then push again to reset the contacts.

Contact rating	16A @ 240V ac	Dielectric strength:	
Max. inrush current	30A	Coil to contact	3.5kV
Rated voltage	250V	Contact to contact	2kV
Max. Switch voltage	400V	Coil operating range ac/dc	85 - 110% / 90 - 110%
Temperature range	-40°C to +40°C		

207024

COIL		Mfrs. List No.	Order Code	Price Each
Volts	Ω			
SPNO - 20.21 Series				
24V ac	27	20.21.8.024.4000	NEW 176-5063	
110V ac	590	20.21.8.110.4000	NEW 176-5064	
12V dc	27	20.21.9.012.4000	NEW 176-5065	
24V dc	105	20.21.9.024.4000	NEW 176-5066	
DPNO - 20.22 Series				
110V ac	590	20.22.8.110.4000	NEW 176-5067	
230V ac	2.5K	20.22.8.230.0000	116-9288	
12V dc	27	20.22.9.012.0000	116-9289	
24V dc	105	20.22.9.024.0000	116-9290	
SPNO / SPNC - 20.23 Series				
24V ac	27	20.23.8.110.4000	NEW 176-5068	
230V ac	2.5K	20.23.8.230.0000	116-9291	
12V dc	17	20.23.9.012.0000	132-9744	
24V dc	105	20.23.9.024.0000	132-9745	

20A Modular-22 Series



- EN 50022, 17.5mm wide housing
- Manual test push button
- AC or DC coil versions
- Rising clamp terminals
- IP20 rating

H = 84, W = 17.4, D = 58.4mm

Contact rating	20A @ 240V ac/24V dc	Dielectric strength:	
Max. inrush current	30A	Coil to contact	3.5kV
Rated voltage	250V	Contact to contact	2kV
Max. Switch voltage	400V ac	Coil operating range ac/dc	85 - 110%/90 - 110%
Temperature range	-40°C to +40°C		

207025

COIL		Mfrs. List No.	Order Code	Price Each
Volts	Ω			
SPNO -22.21 Series				
24V ac	41	22.21.8.024.4000	NEW 176-5069	
110V ac	970	22.21.8.110.4000	NEW 176-5070	
12V dc	460	22.21.9.012.4000	NEW 176-5071	
DPNO -22.22 Series				
24V ac	41	22.22.8.024.4000	116-9292	
230V ac	4.2K	22.22.8.230.4000	116-9295	
12V dc	115	22.22.9.012.4000	116-9296	
24V dc	460	22.22.9.024.4000	116-9297	

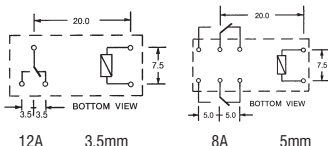
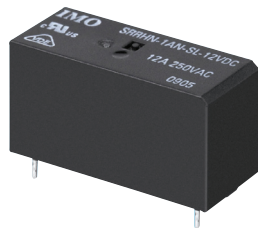
Power Relays - Finder - continued

20A Modular-22 Series - continued

COIL	Mfrs.	Price Each
Volts	List No.	Order Code
SPNO / SPNC -22.23 Series		
24V ac 41	22.23.8.024.4000	NEW 176-5072
110V ac 970	22.23.8.110.4000	NEW 176-5074
230V ac 4.2K	22.23.8.230.4000	116-9298
12V dc 115	22.23.9.012.4000	116-9299
24V dc 460	22.23.9.024.4000	116-9301

Power Relays - IMO

8A/12A Low Profile - SRRHN Series



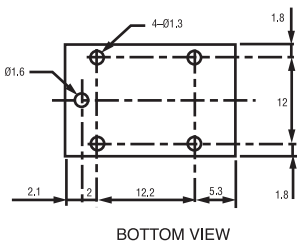
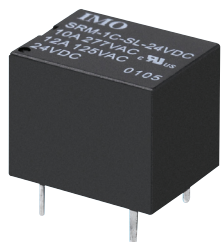
- SPCO or DPCO contacts
- VDE 4kV isolation
- Fully sealed
- UL Recognised

Contact arrangement	SPCO/ DPCO	Coil Consumption	400mW
Contact Rating	SPCO, 12A@440Vac DPCO, 8A@440Vac	Operate/ Release Time	15ms/8ms
Switching Capacity	SPCO 3000VA/360W DPCO 2000VA/240W	Coil Operating Range	80% to 130%
Contact Material	Silver Tin oxide	Temperature Range	-40°C to +85°C

207060

COIL	Price Each	
Volts	Ω	Order Code
SPCO, 12A - SRRHN - 1C Series		
5V dc	62	109-4011
12V dc	360	109-4012
24V dc	1440	109-4013
DPCO, 8A - SRRHN - 2C Series		
5V dc	62	109-4015
12V dc	360	109-4016
24V dc	1440	109-4017

10A, Miniature Power SRM Series



- Low profile
- Light weight

- Fully sealed
- UL Recognised, VDE approved

Contact arrangement	SPCO	Operate/Release time	10ms/5ms
Contact rating	10A @ 250V ac	Contact Material	Silver Tin oxide
Coil consumption	360mW	Coil operating range	75% - 130%
Switching capacity	2770VA/210W	Temperature range	-40°C to +85°C

207065

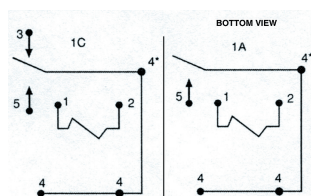
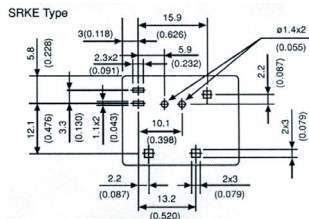
COIL	Price Each	
Volts	Ω	Order Code
SPCO - 10A, SRM Series		
5V dc	70	109-4018
12V dc	400	109-4019
24V dc	1600	109-4020

PCB Automotive Power SPNO and SPCO 40A



- 40A, 14V dc rated
- Fully sealed

H = 22.3, W = 26.5, D = 22mm



Contact arrangement	SPNO/SPCO	Time, operate/release	5ms/3ms
Current, switching/carry max	SPNO 45A SPDT 45A(NO) SPCO 30A (NC)	Resistance, contact	100mohm
Voltage, switching max	30Vdc	Resistance, insulation	50Mohm
Power, switching max	630W	Temperature, operating	-40°C to 125°C
		Power, consumption (@rated load)	1.6W

Order Code	Mfrs. List No.	Coil Resistance (Ω's)
109-4082	SRKE-1AT-SL-12VDC	90
109-4083	SRKE-1AT-SL-24VDC	362
109-4084	SRKE-1CT-SL-12VDC	90
109-4085	SRKE-1CT-SL-24VDC	362

246125

COIL	Price Each	
Volts	Ω	Order Code
SPNO Type		
12V dc		109-4082
24V dc		109-4083
SPCO Type		
12V dc		109-4084
24V dc		109-4085

Power Relays - Omron



5A Miniature G5NB-E Series - 10kV Withstand Voltage



- SPST contacts
- High sensitivity (200mW)
- Clearance/creepage distance of 7.1/7.2mm
- Tracking resistance CTI>250
- Approved to CSA & VDE, UL Recognised

Contact arrangement	SPST
Contact rating (Resistive) - AC	5A @ 250V
Contact rating (Resistive) - DC	3A @ 30V
Switching capacity	1250VA, 90W
Coil consumption (nom.)	200mW
Time - Operate/release	10ms/10ms
Dielectric strength - Coil and contacts	4000V AC
Temperature range	-40 to 85°C

H = 15.3, W = 20.5, D = 7.2mm

Mfrs. List No.	Order Code	Mfrs. List No.	Order Code
G5NB-1AE 12DC	= 133-3632	G5NB-1AE 24DC	= 133-3633

459017

COIL	Price Each	
Volts	Ω	Order Code
12V	720	133-3632
24V	2.88	133-3633

SPDT - 5A G5SB Series



(No coil polarity)

H = 15.8, W = 20.3, D = 10.3mm

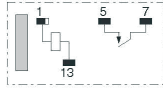
Contact arrangement	SPDT
Mechanical life	5,000,000 operations
Electrical life	10000operations: 5A (NO) / 3A (NC) @ 30V dc resistive load
Coil power	400mW
Contact resistance (initial)	100mohm max.
Rated carry current	5A (NO) / 3A (NC)
Max. switched voltage	250V AC, 30V DC
Max. switched current	5A (NO) / 3A (NC)
Operating temperature	-40 to 70°C

Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
991-9031	G5SB-14 5DC	991-9023	G5SB-14 24DC
991-9015	G5SB-14 12DC		

414192

COIL	Price Each	
Volts	Ω	Order Code
5V	63	991-9031
12V	360	991-9015
24V	1.44	991-9023

5A Subminiature - G6D Series



L=17.5, W=6.5, H=12.5
Socket L=19.7, W=6.9, H=6.0
(above PCB)

- SPNO contacts
- Dielectric strength of 3KV
- Low power consumption, 200mW
- Fully sealed
- UL Recognised and CSA approved

Mfrs. List No. Mfrs. TypRef. Fab. P6D-04P = 994-9631 G6D-1A-ASI 12DC = 981-2679
G6D-1A-ASI 5DC = 981-2660 G6D-1A-ASI 24DC = 981-2687

Contact arrangement	SPNO	Operate/release	10ms/5ms
Contact rating	5A @ 250V ac, 30V dc	Coil operating range	70 - 130%
Switching capacity	1250VA, 150W	Temperature range	-25°C to +70°C
Coil consumption (nom.)	200mW		

COIL		Order Code	Price Each
Volts	Ω		
SPNO - G6D Series			
5V	125	981-2660	
12V	720	981-2679	
24V	2.88	981-2687	
PCB Socket		994-9631	

5A Miniature - Slim G6DS Series



- SPNO contacts
- Low power consumption 180mW with high sensitive version (120 mW) available
- Fully sealed
- Satisfies EN 61131-2 (PLC) and EN 61010
- UL Recognised, CSA and VDE approved

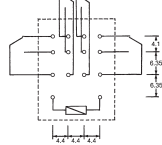
H = 12.5, W = 20.3, D = 5.08mm

Contact arrangement	SPST	Operate/release	10ms/5ms
Contact rating (Resistive)	5A @ 250V ac, 30V dc	Coil operating range	5 - 70%
Switching capacity	1250VA, 150W	Temperature range	-40 to 85°C
Coil consumption (nom.)	180mW		

Mfrs. List No.	Order Code	Mfrs. List No.	Order Code
G6DS-1A 5DC	= 125-7557	G6DS-1A 24DC	= 125-7561
G6DS-1A 12DC	= 125-7558	G6DS-1AH 24DC	= 125-7564

COIL		Order Code	Price Each
Volts	Ω		
180mW Coil - Standard			
5V	139	125-7557	
12V	800	125-7558	
24V	3.2	125-7561	
120mW Coil - High Sensitivity			
24V	4.8	125-7564	

5A Miniature - MY4-02 Series



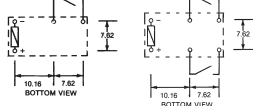
- Direct PCB mounting version of the Omron MY4 power relay
- UL Recognised

L = 28.0, W = 21.5, H 35.5

Contact arrangement	4PCO	Operate/Release	20ms max
Contact rating	5A @ 240V ac, 30V dc (resistive)	Coil operating range	80 - 110%
Contact material	Silver, Gold plated	Temperature range	-25°C to +70°C
Coil consumption	0.9W1.2VA ac		

COIL		Order Code	Price Each
Volts	Ω		
4PCO - MY4-02 Series			
12V dc	160	134-0945	
24V dc	650	134-0946	
110V ac	—	134-0947	
240V ac	—	134-0948	

5A/8A Subminiature - G6B Series



G6B-2214P
L=20, W=11,
H=11

G6B-1114P L=20, W=10, H=10
G6B-1174P L=20, W=10, H=12.5
P6B-04P L=24, W=10, H=7
(above PCB)

- SPNO and DPNO contacts
- Fully sealed
- Permanent magnet construction, requires correct coil polarity
- UL Recognised and CSA approved
- PCB socket available for SPNO version

Contact arrangement	SPNO	SPNO	DPNO
Contact rating (resistive)	5A @ 250V ac, 30V dc	5A @ 250V ac, 30V dc	8A @ 250V ac, 30V dc
Contact material			
Switching capacity (max.)	1250VA, 150W	1250VA, 150W	2000VA, 240W
Coil consumption (normal)	200mW	300mW	200mW
Operate/Release (max.)	10ms	10ms	10ms
Coil operating range (@23°C)	80 - 110%	80 - 110%	70 - 130%
Temperature range	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C

COIL		Order Code	Price Each
Volts	Ω		
SPNO, 5A - G6B-1114P Series			
5V	125	994-9089	
12V	720	994-9097	
24V	2.88	124-3011	
SPNO, 8A - G6B-1174P Series			
5V	125	994-9542	
12V	720	994-9550	
24V	2.88	994-9569	
DPNO, 5A - G6B-2214P Series			
5V	83	994-9224	
12V	480	994-9232	
24V	1.92	994-9240	
Relay Sockets			
Single Pole Relay		994-9259	
G6B-2 Relays		118-1039	

SPST-NO & SPDT 10A G5Q Series



- Compact, High Isolation
- Up to 10A switching on the NO contacts
- Withstand impulse voltage (between coil and contacts) 8000V
- Low coil consumption
- UL class F coil insulation
- UL recognised, CSA and VDE approved

H = 15.8, W = 20.3, D = 10.3mm

Contact arrangement	SPDT, SPST-NO
Mechanical life	10,000,000 Operations
Electrical life	50,000 operations: 10A (NO) @ 125V ac
Coil power	400mW
Contact resistance (initial)	100mohm max.
Rated carry current	10A
Max. switched voltage	277V, 30V
Max. switched current	10A
Rated load	10A @ 125V ac [SPDT (NO) & SPST-NO] 5A @ 30V dc [SPDT (NO) & SPST-NO]
Operating temperature	-40 to 105°C

Order Code	Mfrs. List No.	Rated Current	Order Code	Mfrs. List No.	Rated Current
118-1041	G5Q-1EU 5DC	80mA	118-1043	G5Q-1AEU 5DC	40mA
444-6434	G5Q-1EU 12DC	33.3mA	444-6471	G5Q-1AEU 12DC	16.7mA
444-6446	G5Q-1EU 24DC	16.7mA	444-6483	G5Q-1AEU 24DC	8.3mA
118-1042	G5Q-14EU 5DC	80mA			
444-6458	G5Q-14EU 12DC	33.3mA	179-8617	G5Q-1A4-EU 12DC	16.7mA
444-6460	G5Q-14EU 24DC	16.7mA	444-6501	G5Q-1A4EU 24DC	8.3mA

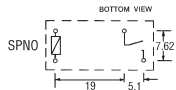
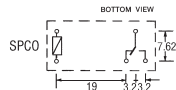
COIL		Order Code	Price Each
Volts	Ω		
SPDT - Vented			
5V	63	118-1041	
12V	360	444-6434	
24V	1.44k	444-6446	
SPDT - Sealed			
5V	63	118-1042	
12V	360	444-6458	
24V	1.44k	444-6460	
SPST - NO - Vented			
5V	125	118-1043	
12V	720	444-6471	
24V	2.88k	444-6483	
SPST - NO - Sealed			
12V	720	NEW 179-8617	
24V	2.88k	444-6501	

Over 500 000 products available online



Power Relays - Omron - continued

8A Low Profile - G6RN Series



G6RN-1 series: L=30, W=10, H=14.5
G6RN-1A series: L=28.5, W=10, H=14.5

- SPCO and SPNO contacts
- 4kV isolation and 8mm creepage/clearance
- Low power consumption, 220mW
- Fully sealed
- VDE, IEC and CENELEC approved

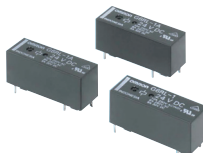
Contact arrangement	SPCO/SPNO	Coil consumption	220mW
Contact rating	8A @ 240V ac	Operate/Release	15ms/5ms
Contact material	AgNi + Gold plating	Coil operating range	70 - 110%
Switching capacity	2000VA	Temperature range	-40°C to +85°C

206987

COIL		Order Code	Price Each
Volts	Ω		
SPCO - G6RN1 Series			
5V dc	114	994-9933	●
12V dc	655	994-9941	●
24V dc	2.62	994-9950	●
SPNO - G6RN-1A Series			
5V dc	114	994-9968	●
12V dc	655	994-9976	●
24V dc	2.62	994-9984	●

10A - Low Profile

G6RL Series



- Low profile - 12.3mm
- Max. switching capacity 2500VA (NO)
- Dielectric strength 5 kV
- Clearance and creepage distance 10mm
- VDE Approved, UL Recognised

H = 12.3, W = 28.5, D = 10mm

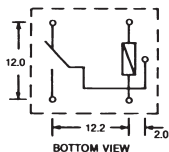
Contact arrangement	SPDT/SPST
Contact (carry) ratings	10A @ 250V AC, 5A @ 24V DC
Contact material	AgNi
Switching capacity	2500VA
Coil consumption	220mW
Operate/Release	10ms/5ms
Coil operating range	10 - 70%
Temperature range	-40°C to +85°C

485376

COIL		Mfrs. List No.	Order Code	Price Each
Volts	Ω			
SPDT - G6RL-1 Series				
5V	113.6	G6RL-1 5DC	145-5495	●
12V	654.5	G6RL-1 12DC	145-5496	●
24V	2.618	G6RL-1 24DC	145-5498	●

10A and 16A - Miniature

G5LE Series



- SPCO contacts
- High impulse withstand voltage of 4.5kV coil/contacts
- Fully sealed or flux sealed construction
- UL Recognised and CSA approved

L = 21.6, W = 15.6, H = 18.5mm
PCB hole dia. = 1.3mm

Contact arrangement	SPDT	Coil consumption	400mW
Contact rating	Standard 10A @ 120V / 30V High capacity 16A @ 250V	Operate/Release	10ms/5ms
		Temperature range	-40°C to +85°C

Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
994-9887	G5LE-1 5DC	179-8615	G5LE-1-36 24DC
994-9895	G5LE-1 12DC	994-9798	G5LE-14 12DC
994-9909	G5LE-1 24DC	994-9801	G5LE-14 24DC
183-2577	G5LE-1VD 12DC	133-3640	G5LE-1E 5DC
183-2579	G5LE-1VD 24DC	133-3642	G5LE-1E 12DC
179-8616	G5LE-1-36 5DC	133-3643	G5LE-1E 24DC
179-8614	G5LE-1-36 12DC		

206955

COIL		Order Code	Price Each
Volts	Ω		
Flux protection, SPCO, 10A, G5LE-1 Series			
5V dc	63	994-9887	●
12V dc	360	994-9895	●
24V dc	1.44k	994-9909	●
Flux protection, SPDT, 10A, G5LE-1-VD Series (VDE Approved)			
12V dc	360k	NEW 183-2577	●
24V dc	1.44k	NEW 183-2579	●

COIL		Order Code	Price Each
Volts	Ω		
Flux protection, SPCO, 10A, G5LE-1-36 Series			
5V	70	NEW 179-8616	●
12V	400	NEW 179-8614	●
24V	1.6k	NEW 179-8615	●
Fully sealed, SPCO, 10A, G5LE-14 Series			
12V dc	360	994-9798	●
24V dc	1.44k	994-9801	●
Flux protection, SPCO, 16A, G5LE-1E Series			
5V	62.5	133-3640	●
12V	360	133-3642	●
24V	1.44k	133-3643	●



15A Sub-Miniature - Flat

G5CA Series



- SPNO contacts
- Power consumption 200mW
- 15A @ 110V ac/ 10A @ 30V dc switching capacity
- UL Recognised, CSA and TUV approved

H = 11, W = 22, D = 16mm

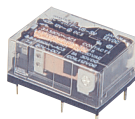
Contact arrangement	SPST	Operate/release	10ms/10ms
Contact rating (Resistive)	15A @ 250V ac, 125V dc	Coil operating range	10 - 75%
Switching capacity	2500VA, 300W	Temperature range	-25 to 70°C
Coil consumption (nom.)	200mW		

Mfrs. List No.	Order Code	G5CA-1AE 12DC	=	125-7566	
G5CA-1AE 5DC	=	125-7565	G5CA-1AE 24DC	=	125-7567

443908

COIL		Order Code	Price Each
Volts	Ω		
5V	125	125-7565	●
12V	720	125-7566	●
24V	2.88	125-7567	●

7A/10A Low Profile - G6 Series



- SPNO and SPNO+SPNC contacts
- Permanent magnet construction correct coil polarity must be observed
- UL Recognised, CSA and SEV approved

Contact arrangement	SPNO/SPNO	Coil consumption	200mW
Contact rating (resis)	SPNO: 10A @ 240V ac SPNO: 10A @ 240V ac	Operate/Release	10ms
Contact material	Ag Alloy	Coil operating range	70 - 130%
		Temperature range	-10°C to +70°C

207113

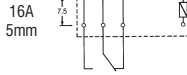
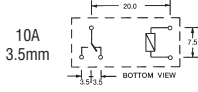
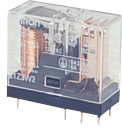
COIL		Order Code	Price Each
Volts	Ω		
Single Coil			
SPNO - G6C-1117P Series			
12V dc	720	994-9038	●
24V dc	2.88	994-9046	●
SPNO + SPNC - G6C-2117P Series			
5V dc	125	994-9054	●
12V dc	720	994-9062	●
24V dc	2.88	994-9070	●
Double Coil Latching			
SPNO - G6CK-1117P Series			
5V dc	89.3	118-1027	●
SPNO + SPNC - G6CK-2117P Series			
12V dc	514	118-1031	●
Accessories			
Socket - PCB G6C Relays		133-1562	●
Socket - PCB G6CK Relays		133-1563	●
Clip, Plastic for G6 Relay Bases		133-1564	●

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5A/10A/16A Vertical - G2R Series



L=29.0, W=13.0, H=25.5

- SPCO contacts
- Dielectric strength 5kV ac coil/contacts with creepage distance 8mm minimum
- Pin sealed base to facilitate flow soldering
- UL Recognised, **CSA**, **SEMKO** and **SEV** approved

Rating, contact	SPCO 10A @ 240V ac,30Vdc 16A @ 240V ac,30Vdc	Consumption, coil	530mW
	DPCO 5A @ 240V ac,30Vdc	Operate/Release	15ms/15ms
Material, contacts	10A/16A 5A Silver	Operating Range, coil	70 - 110%
		Temperature, operating	-40°C to +70°C

207116

COIL		Order Code	Price Each
Volts	Ω		
SPCO, 10A - G2R-1 Series			
110V ac	4.6k	994-9739	
230V ac	26.85k	994-9747	
5V dc	47	994-9372	
12V dc	275	124-3025	
24V dc	1.1k	994-9380	
SPST-NO, 10A - G2R-1A Series			
12V dc	275	NEW 183-2570	
24V dc	1.1k	NEW 183-2571	
SPCO, 16A - G2R-1E Series			
230V ac	26.85k	NEW 183-2572	
5V dc	47	994-9402	
12V dc	275	994-9410	
24V dc	1.1k	994-9429	
48V dc	4.17k	994-9437	
DPCO, 5A - G2R-2 Series			
24V ac	260	994-9755	
110V ac	4.6k	994-9763	
5V dc	47	994-9445	
6V dc	68	NEW 183-2573	
12V dc	275	994-9453	
24V dc	1.1k	994-9461	
48V dc	4.17k	994-9470	

8A/12A/16A

General purpose - Flux protection



H=15.7, W=12.7, D=29 H = 15.9, W = 12.6, D = 29.6(body) 40.3(O/A) mm

- SPCO and DCPO contacts
- Low profile 15.7mm in height
- High sensitivity 400mW coil
- Cadmium free contacts
- 10mm Creepage and clearance distance
- UL Recognised, **CSA** and **VDE** approved

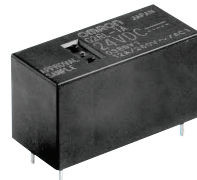
Contact arrangement	SPCO/DCPO	Coil consumption	400mW
Contact rating	SPCO 12A @ 240V ac,30Vdc 16A @ 240V ac,30Vdc	Operate/Release	7ms/5ms
	DPCO 8A @ 240V ac,30Vdc	Coil operating range	70 - 130%
Contact material	AgNi	Temperature range	-40°C to 85°C

207090

COIL		Order Code	Price Each
Volts	Ω		
SPST-NO, 16A - G2RL-1A-E			
12V dc	360	NEW 183-2574	
24V dc	1.44k	NEW 183-2575	
SPDT, 12A - G2RL-1 Series			
5V dc	62.5	995-0087	
12V dc	360	995-0095	
24V dc	1.44k	995-0109	
SPDT, 16A - G2RL-1-E Series			
5V dc	62.5	995-0125	
12V dc	360	995-0133	
24V dc	1.44k	995-0141	
48V dc	5.358k	995-0150	

COIL		Order Code	Price Each
Volts	Ω		
DPST-NO, 8A - G2RL-2 Series			
12V dc	360	NEW 183-2576	
DPDT, 8A - G2RL-2 Series			
5V dc	62.5	995-0168	
24V dc	1.44k	995-0184	
48V dc	5.358k	995-0192	

16A, Low Profile G2RL Series



- SPST-NO contacts
- Low Profile (15.7mm height)
- UL Recognised

Dimensions (mm): H=15.7, W=29, D=12.7

Contact arrangement	SPST N/O	Coil consumption	250mW
Contact (carry) ratings	16A @ 250V, 16A @ 30V	Operate/Release	15ms/5ms
Contact material	Ag Alloy (Cd free)	Coil operating range	10 - 70%
Switching capacity	4000VA	Temperature range	-40°C to +85°C

Mfrs.List No.	Order Code	Mfrs.List No.	Order Code
G2RL-1A-E-CV DC12	= 169-5877	G2RL-1A-E-CV DC24	= 169-5878

535724

Coil		Order Code	Price Each
Volts	Ω		
12V dc	576	169-5877	
24V dc	2304	169-5878	

16A Low Profile G5RL Series



- SPST or SPDT contacts
- Power consumption 0.75VA
- Clearance/creepage distance (coil to contacts) of 8mm
- UL Recognised, **CSA** and **VDE** approved

H = 15.7, W = 29, D = 12.7mm

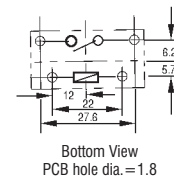
Contact arrangement	SPDT / SPDT	Coil consumption (nom.)	0.75VA
Contact rating (Resistive) - (NO)	16A @ 250V, 24V	Operate/release	20ms/20ms
Contact rating (Resistive) - (NC)	5A @ 250V ac, 24V dc	Coil operating range	15 - 75%
Switching capacity	4000VA, 384W	Temperature range	-40 to 70°C

Mfrs.List No.	Order Code	Mfrs.List No.	Order Code
G5RL-1E 230/240AC	= 125-7569	G5RL-1E-HR 12DC	= 133-3638
G5RL-1E-HR 5DC	= 133-3637	G5RL-1E-HR 24DC	= 133-3639

443920

COIL		Order Code	Price Each
Volts	Ω		
AC Coil - SPDT			
230V	47.6	125-7569	
DC Coil - SPDT (High inrush version)			
5V	62.5	133-3637	
12V	360	133-3638	
24V	1.44	133-3639	

20A with Quick Connect Terminals G4A Series



L=30.5, W=16, D=23.5 (case)
Output terminals 6.3 x 0.8

Contact arrangement	SPST	Operate/Release	20ms/10ms
Contact Rating	20A@ 250V ac/30V dc	Coil Consumption	900mW
Dielectric Strength	4500V ac(coil/contact) 1000V/m(contact/contact)	Coil Operating Range	70%-160%
Contact Material		Operating Temperature	-20°C to 60°C

206989

COIL		Order Code	Price Each
Volts	Ω		
SPNO - G4A-1A Series			
12V dc	160	995-0249	
24V dc	640	995-0257	

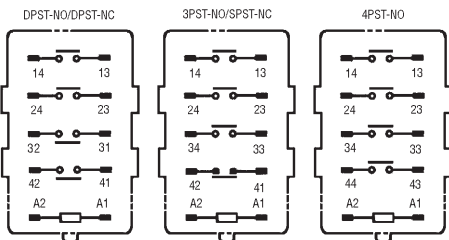
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241558

Power Relays - Omron - continued

25A-G7J Series

Screw and PCB Termination



Screw termination
H=64, W=51.5, D=34.5

- High capacity, high withstand-voltage multi-pole relay
- Can be used like a contactor
- Miniature hinge for maximum switching capacity of motor loads as well as resistive and inductive loads
- PCB or Screw termination
- No contact chattering for momentary voltage drops up to 50% of rated voltage
- Withstands more than 4KV between coil/contacts and contacts of different polarity
- Fire resistant case (UL94V-0 qualifying)
- Approved to **CSA** and **UL** Recognised

Contact rating NO 25A @ 220Vac/30Vdc NC 8A @ 220Vac/30Vdc
Coil operating range 75-110%

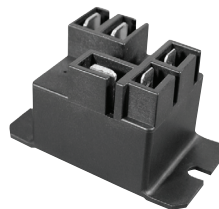
COIL		Order Code	Price Each
Volts	Ω		
Screw Termination			
DPST-NO/DPST-NC-G7J-2A2 Series			
24Vdc	288	118-1264	
3PST-NO/SPST-NC-G7J-3A1 Series			
24Vdc	288	118-1265	
4PST-NO-G7J-4A Series			
24Vdc	288	118-1266	
PCB Termination			
Mounting Bracket		118-1263	

Electromechanical

27

30A PCB Power Relay

G8P Series - Open Enclosure



- Complies with UL873 and UL508 column A spacings (1/8" through air, 1/4" over surface)
- Quick-connect terminals versions ideal for PC board and panel mounting
- UL Class F insulation standard
- Compact, yet capable of switching up to 30A loads
- Ideal for home and industrial appliances, HVAC (heating, ventilating, and air conditioning), and many other applications
- Open enclosure rating

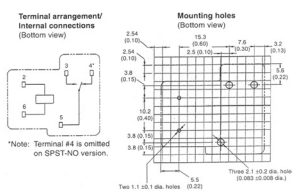
Contact arrangement SPST-NO Contact Material AgSnIn
Contact Rating 30A @ 250VAC Operate/Release 15ms/10ms
Dielectric Strength 2500 VAC @ 50/60Hz Coil Consumption 900mW
Operating Temperature -55°C to 105°C

Coil		Order Code	Price Each
Volts	Ω		
12	155	179-8619	
24	660	179-8620	

Relays & Solenoids

30A SPNO/SPCO

G8P Series



Overall Dimensions L=32.1, W=27.7, H=20.1

- Heavy duty, capable of switching up to 30A loads
- SPNO or SPCO contact configuration
- Minimum 6kV impulse surge withstand
- Temperature range -55°C to +105°C
- **UL** Recognised and **CSA** approved

Contact arrangement SPST/SPDT Operate/Release 15ms/10ms
Contact Rating 30A @ 250V ac SPNO,SPCO Coil Consumption 900mW
Dielectric Strength 1.5kV @ 50/60Hz Operating Temperature -55°C to 105°C
Contact Material

COIL		Order Code	Price Each
Volts	Ω		
SPNO G8P Series - PCB			
12V	155	995-0206	
24V	660	995-0214	
SPCO G8P Series - PCB			
12V	155	995-0222	
24V	660	995-0230	
SPCO G8P Series - Quick Connect & PCB			
12V	155	118-1036	

100A DC Switching

G9EA-1 Series



- Compact size capable of interrupting high-voltage, high-current loads
- Sealed construction requires no arc space
- M 3.5 screw terminals
- SPST-NO contacts

H = 67.2, W = 73, D = 36mm

Rated load - Standard models 60A @ 400V, 100A @ 120V dc
Rated carry current 60A
Switching capacity 60A @ 400V
Switching voltage - Max. 400V

High current models 60A @ 400V, 100A @ 120V dc
Coil consumption (nom.) 5W
Operate/release 50ms/30ms
Coil operating range 8 - 75%
Temperature range -40 to 70°C

COIL		Order Code	Price Each
Volts	Ω		
High Current Models			
12V	28.8	125-7574	
24V	115.2	125-7575	

200A DC Switching

G9EC-1 Series



- Compact size capable of interrupting high-voltage, high-current loads
- Sealed construction requires no arc space
- M 3.5 screw terminals
- SPST-NO contacts
- **UL / CSA** Standard UL508 Approved

H = 86.7, W = 98, D = 44mm

Rated load 200A @ 400V
Rated carry current 200A
Switching current - Max. 200A
Switching voltage - Max. 400V

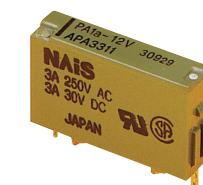
Standard models 200A @ 400V
Coil consumption (nom.) 11W
Operate/release 50ms/30ms
Coil operating range 8 - 75%
Temperature range -40 to 50°C

COIL		Order Code	Price Each
Volts	Ω		
12V	12.8	125-7578	
24V	51.2	125-7579	

Terminal Cover	125-7580
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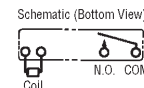
Power Relays - Panasonic

5A- Ultra Slim - PA Series.



L=20, W=5, H=12.5
PCB hole dia=1.0 (coil), 1.2 (contacts)

- Ultra slim package permits higher density mounting
- Wide switching capacity - 100mA, 100mV to 3A 250Vac
- High surge voltage resistance 4000V between coil and contacts
- SIL terminal layout
- **UL** Recognised and **CSA** approved

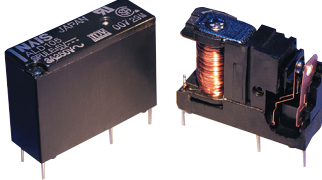


Contact arrangement	SPNO	Operate/Release	6ms/3ms
Contact rating	5A @ 250V ac/30Vdc	Coil operating range	70 - 120%
Contact material	Silver alloy, Gold plated	Temperature range	-40°C to +70°C
Coil consumption	12V 120mW, 24V 180mW		

206952

COIL		Order Code	Price Each
Volts	Ω		
SPNO — PA Series			
12V dc	1.2	910-363	
24V dc	3.2	910-375	

3A @ 277V ac, 30V dc
LD Series SPST - NO



- Low operating power
- Long life expectancy
- High shock resistance
- High insulation resistance
- **CSA, VDE, TUV approved, UL Recognised**

H=15, W=20.3, D=7 mm

Contact arrangement	SPST-NO (1 N/O)	Coil consumption	200 mW
Contact rating	3A ac/dc	Shock resistance	30 G functional, 100 G destructive
Switching capacity	831VA/90W	Resistance, insulation	Min. 1,000 MΩ @ 500V dc
Contact Material	Silver alloy		

241412

COIL		Mfrs List No.	Order Code	Price Each
Volts	Ω			
SPST NO contacts - LD Series				
5V dc	125	ALD105	372-7154	
12V dc	720	ALD112	372-7166	
24V dc	2.88	ALD124	372-7178	

Miniature - S2/S4 Series



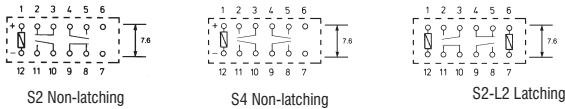
Latching/Non-latching



- Available as a monostable or bistable device with bifurcated contacts ensuring low contact resistance
- Unique five layer contact design permits load switching between 1nW and 1KVA
- Pivoting rotating armature ensures high shock and vibration resistance
- Permanent magnet field is used in conjunction with the coil force resulting in a high reliability, high sensitivity relay

L=28.4, W=12.5, H=10.2
Pin spacing=5.08

- High frequency characteristics exhibit insertion losses of below 0.5dB at 100MHz
- Sealed to **IP67**



Correct coil polarity must be observed.

Contact arrangement	DPNO, 4NO
Contact rating	4A @ 250V ac, 3A @ 30V dc
Max. power	90W/1000VA
Contact material	Silver alloy
Coil consumption (nom.)	192mW
Operate/Release	15ms/10ms (S2), 9ms/5ms (S3), 10ms/5ms (S4)
Coil operating range	65 - 140%
Temperature range	-55°C to +65°C

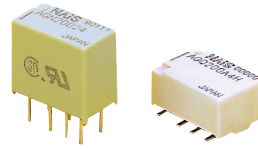
207159

COIL		Order Code	Price Each
Volts	Ω		
DPNO + DPNC - S2 Series			
5V dc	130	117-5721	
12V dc	720	117-5722	
24V dc	2.85	117-5723	
4PNO - S4 Series			
5V dc	130	117-5724	
12V dc	720	117-5726	
24V dc	2.85	117-5727	
Latching DPNO + DPNC - S2-L2 Series			
5V dc	130 + 130	117-5728	
12V dc	720 + 720	117-5729	
24V dc	2.85 + 2850	117-5730	

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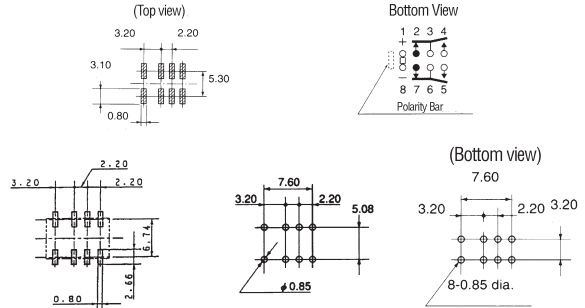
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Ultraminiature - AGN/AGQ Series



- Ultraslim and Ultraflat body styles available
- Through hole or surface mount options
- Twin crossbar contacts for high reliability
- High sensitivity coil (140mW)
- Satisfies BELL-CORE requirements for 2.5kV coil/contact
- Applications include Telecomms, Measuring instruments and Multimedia TVs

AGN L=10.6, W=5.7, D=9.00
AGQ L=10.6, W=7.2, D=5.20



Contact arrangement	DPCO	Coil consumption	140mW
Contact rating	A @ 125V ac, 1mA @ 30V dc	Operate/Release	4ms/4ms
Contact material	Silver Palladium, Gold clad	Temperature range	-40°C to +85°C

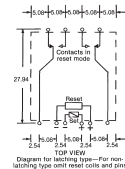
207084

COIL		Order Code	Price Each
Volts	Ω		
DPCO Slim - AGN Series			
4.5V dc	145	310-4771	
12V dc	1.028	310-4783	
DPCO Slim Surface Mount - AGN Series			
4.5V dc	145	310-4795	
12V dc	1.028	310-4801	
DPCO Flat - AGQ Series			
4.5V dc	145	310-4813	
12V dc	1.028	310-4825	
DPCO Flat Surface Mount - AGQ Series			
4.5V dc	145	310-4837	
12V dc	1.028	310-4849	

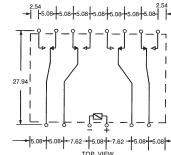
4A/5A Low Profile - NC2D/4D Series
Latching/Non-latching



NC4D
L=38.1,
W=25.4,
H=10.9



NC2D
L=25.4,
W=25.4,
H=10.9



- DPCO and 4PCO bifurcated contacts
 - Flux protected
- | | | | |
|---------------------|--------------------------------|----------------------|---------------------|
| Contact arrangement | DPCO/DPCO | Operate/Release | 10ms/5ms |
| Contact rating | DPCO 5A @ 250V ac | Coil operating range | DPCO 80-135% |
| Contact material | Silver Nickel alloy, Gold clad | Temperature range | DPCO 80-135% |
| Coil consumption | DPCO 800mW, DPCO 800mW | | DPCO -40°C to +70°C |
| | DPCO latching 450mW-800mW | | DPCO -40°C to +70°C |
- 207112

COIL		Order Code	Price Each
Volts	Ω		
DPCO - NC2D JP Series			
12V dc	400	117-5707	
24V dc	1.6	117-5708	
Latching DPCO - NC2D JP L2 Series			
12V dc	180+ 180	117-5709	
4PCO - NC4D JP Series			
12V dc	200	117-5711	
24V dc	800	117-5712	

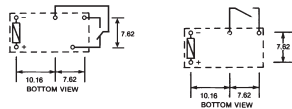
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Power Relays - Panasonic - continued

5A Miniature - JQ Series

Panasonic



L=20, W=10, H=15.6
PCB Hole dia.=1.3

- Mains switching SPNO/SPCO relays in a compact package
- High electrical noise immunity
- High surge voltage resistance - 8000V between coil and contact
- High coil sensitivity - 200mW(NO), 400mW(CO)
- **UL** Recognised, **CSA**, **TUV** and **SEMKO** approved

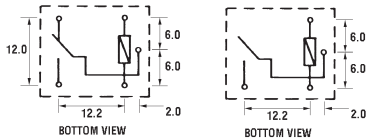
Contact arrangement	SPNO/SPCO	Operate/Release	6ms/4ms
Contact rating	5A @ 125Vac/2A @ 240Vac	Coil operating range	SPNO 75 - 130%
Contact material	Silver alloy		SPCO 75-110%
Coil consumption	200mW SPNO/400mW SPCO	Temperature range	-40°C to +85°C

207136

COIL		Price Each	
Volts	Ω	Order Code	
SPNO - JQ1A Series			
5V dc	125	119-1227 ●	
12V dc	720	119-1228 ●	
24V dc	2.88	119-1229 ●	
SPCO - JQ1 Series			
12V dc	360	119-1230 ●	

6A/10A/15A Miniature - JS/JSM Series

Panasonic



L=22, W=16.4, H=16.4 (16 JSM)
PCB hole dia.=1.3

- Miniature size with universal terminal footprint
- High switching capacity 10A @ 125Vac/6A 277Vac
- Fully sealed construction
- Automotive version available for high capacity DC switching 15A 16Vdc
- Approvals include **UL** and **CSA** and **TUV** for JS Series

Contact arrangement	SPNO/SPCO	Operate/Release	10ms/10ms
Contact rating	JS:-6A @ 277V ac /10A @ 125V JSM:-6A @ 30V dc	Coil operating range	JS: 70 - 130%
Contact material	Silver alloy		JSM: 53-133%
Coil consumption	JS:-360mW; JSM:360mW	Temperature range	JS:-40°C to +70°C JSM:-40°C to +85°C

207130

COIL		Price Each	
Volts	Ω	Order Code	
SPNO,6A - JS1A Series			
12V dc	400	119-1232 ●	
SPCO,6A - JS1 Series			
5V dc	69.4	119-1233 ●	
12V dc	400	120-0953 ●	
24V dc	1.6	120-0954 ●	
SPCO Automotive 15A - JSM1 Series			
12V dc	225	910-351 ●	

**16A @ 277V ac
LE Series SPST - NO**

Panasonic



- Excellent heat resistance
- High insulation resistance
- Low operating power
- Approved to **CSA** & **TUV**, **UL** Recognised

Contact arrangement	SPST, 1 NO (1 Form A)
Contact rating	16 into resistive load
Switching Current, Min.	1.0A
Coil Power (nominal)	1.58W400mW
Contact Material	Silver
Temperature, operating	-40°C to 85°C
Insulation resistance	1000Mohm

H = 24.9, W = 28.6, D = 12.4 mm
TMP type. PCB side with 4 terminals

241416

Coil	Mfrs.	Price Each
Volts	Ω List No.	Order Code
TMP type - PCB side with 4 terminals		
5V dc	63 ALE14B05	372-7180 ●
12V dc	360 ALE14B12	372-7191 ●
PCB type		
5V dc	63 ALE1PB05	NEW 171-2521 ●
12V dc	360 ALE1PB12	NEW 171-2522 ●
24V dc	1440 ALE1PB24	NEW 171-2523 ●

Power Relays - Tyco Electronics

Tyco Electronics

**SPNO 3A
PCN Series**



- Slim, only 5mm deep
- Load range 1mA to 3A
- Sensitive coil of 120mW
- Cadmium-free contacts
- Reinforced insulation, washtight
- Approved to **VDE**, **UL** (United States and Canada) Recognised

H = 12.5, W = 20, D = 5 mm

Contact arrangement	SPNO	Breaking voltage (max)	750VA
Type of contact	Bifurcated	Contact Material	AgNi
Contact rating	3A	Minimum contact load	5V dc / 1mA
Rated voltage	250V		
Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
444-4930	PCN-105D3MHZ	444-4954	PCN-124D3MHZ
444-4942	PCN-112D3MHZ		

311622

COIL		Price Each	
Volts	Ω	Order Code	
5V	208	444-4930 ●	
12V	1.2	444-4942 ●	
24V	4.8	444-4954 ●	

5A Miniature - PE Series Bistable

Tyco Electronics



- SPCO contacts
- Low profile, 10mm height
- 4 kV coil/contact insulation
- Sensitive coil, 200mW
- **VDE** approved, **UL** Recognised

L=20, W=10, H=1
PCB hole dia.=1.3

Contact arrangement	SPCO	Coil Consumption	200mW
Contact Rating	5A @240V	Mechanical life	5 x 10 ⁶ operations
Contact Material	AgNi 90/10	Temperature Range	-40°C to +85°C
Mfrs. List No.	PE014F05=991-3440		PE014F12=991-3459

413956

COIL		Price Each	
Volts	Ω	Order Code	
SPCO - PE bistable			
5V	125	991-3440 ●	
12V	650	991-3459 ●	

**6A - Ultra Slim
V23092 Series**

Tyco Electronics



- Ultra slim package, 5mm width
- Sensitive coil - 170mW
- 4kV dielectric strength, coil/contact
- SIL terminal layout
- Upright and Flatpack versions available
- **VDE** Approved, **UL** Recognised

L=28, W=5, H=15mm. PCB hole dia 1.3mm=contact, 1mm=coil

Contact arrangement	SPNO/SPCO	Operate/ Release	5ms/2.5ms
Contact Rating	6A @ 250V ac	Coil Operating Range	65-160%
Contact Material	AgSnO2	Temperature Range	-40°C to +85°C
Coil Consumption	170mW		
Order Code	Type No.	Mfrs. List No.	Order Code
117-5047	V23092-A1905-A302	5-1393236-8	117-5052
117-5048	V23092-A1012-A302	0-1393236-8	117-5053
117-5049	V23092-A1024-A302	2-1393236-5	162-9031
117-5050	V23092-A1905-A301	5-1393236-7	

207026

COIL		Price Each
Volts	Ω	Order Code
SPNO - V23092-A1xxx-A302 Series - Upright		
5V dc	148	117-5047
12V dc	848	117-5048
24V dc	3.39	117-5049
SPCO - V23092-A1xxx-A301 Series - Upright		
5V dc	148	117-5050
12V dc	848	117-5052
24V dc	3.39	117-5053
SPCO - V23092-B1xxx-A301 Series - Flat Pack		
24V	3.39	162-9031

xxx = coil voltage

5A Miniature U Series



- Compact, low cost PCB mounting relays for switching supply voltages
- High switching capacity up to 1250VA
- Dielectric strength of 4000Vac
- Creepage and clearance distances in excess of 2.3mm
- Fully sealed

L = 21.2, W = 16.5, H = 14.9
PCB hole dia = 1.5 (contacts), 1.2 (coil)

Contact arrangement	SPCO	Operate/ Release	7ms/3ms
Contact Rating	5A @ 250V/26Vdc	Coil Operating Range	70-120%
Contact Material	AgNi 10	Temperature Range	-25°C to +70°C
Coil Consumption	330mW		
Mfrs. List No.	V23148-A1105-A101 = 117-5042 V23148-A1107-A101 = 117-5043		

206944

COIL		Price Each
Voltage	Ω	Order Code
SPCO - V23148 Series		
12V dc	440	117-5042
24V dc	1.78	117-5043

SPST-NO 5A PCJ Series



- Small size
- High dielectric capacity
- Immersion cleanable with vented (flux-tight) cover
- Cadmium-free contacts
- Approved to **CSA** and **VDE**, **UL** Recognised

H = 15, W = 20.4, D = 7mm

Contact arrangement	1 form A (1 SPNO)
Mechanical life	5,000,000 Operations (no load) 10,000,000 operations (rated load)
Minimum load	100mA @ 5V dc
Contact resistance (initial)	100mohm
Max. switched voltage	250V AC
Max. switched power	750VA
Dielectric strength (coil/contacts)	4000V AC
Operating temperature	-40 to 90°C
Order Code	Mfrs. List
117-7782	PCJ-105D3M
117-7784	PCJ-112D3M

311629

COIL		Price Each
Volts	Ω	Order Code
5V	125	117-7782
12V	720	117-7784

6A Miniature RE Series



- Single pole 6A 1NO contact
- Sensitive coil 200 mW
- Optimized height 10.6mm
- PCB area 200 mm²
- Wash tight

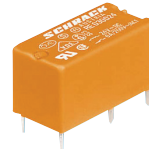
H = 10.6, W = 20, D = 10mm

Contact arrangement	SPNO	Coil Consumption	200mW
Contact Rating	6A @ 250V ac	Temperature Range	-40 to +70°C (+85°C @ 4A)
Operate/ Release	6ms/2ms		
Order Code	Type No.	Mfrs. List No.	Order Code
515-838	RE030005	0-1393217-1	162-9021
515-840	RE030012	0-1393217-4	162-9022
515-851	RE030024	0-1393217-8	RE034024

206991

COIL		Price Each
Volts	Ω	Order Code
AgCdO Contact Material		
5V dc	125	515-838
12V dc	720	515-840
24V dc	2.88	515-851
AgNi 90/10 Contact Material		
12V	720	162-9021
24V	2.88	162-9022

SPST-NO - 6A @ 240V ac RE Series - Sensitive Coil



- Single Pole, 1 NO contact
- Sensitive coil 200 mW
- 4 kV coil-contact dielectric strength
- Wash tight
- Only occupies 200 mm² PCB area

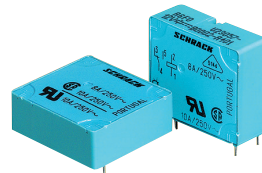
H = 10.6, W = 20, D = 10mm

Contact arrangement	SPNO	Dielectric voltage between and contacts	1000V AC
Contact current rating	6A @ 240V ac	Contact material	AgNi 0.15
Breaking capacity (max)	1500 VA	Contact plating	Gold
Power - Coil	200mW	Operating temperature	-40 to 70°C
Dielectric voltage between coil and contacts	4000V AC		
Mfrs. List No.	Order Code	Mfrs. List No.	Order Code
RE032005	965-9676	RE032024	965-9692
RE032012	965-9684		

411866

COIL		Price Each
Voltage	Ω	Order Code
5V	125	965-9676
12V	720	965-9684
24V	2.88	965-9692

8A and 5A Low Profile/Vertical Card E Series



- SPCO contacts
- Low profile or vertical packages
- 4kV coil-contact isolation
- Wash tight
- **VDE & CSA** approved, **UL** Recognised

Contact arrangement	SPCO	Operate/Release	7ms/6ms
Max. continuous current	8A/5A with AgNi 0.15 contacts	Coil operating range	65 - 175%
Contact material	AgNi 20/AgNi 0.15	Temperature range	-40°C to +70°C
Coil consumption	500mW		

207057

COIL		Price Each
Volts	Ω	Order Code
Low Profile - Fine Silver Nickel (AgNi 0.15) Contacts-V23057-AX-A101 (5A)		
12V dc	330	117-5010
24V dc	1.2	119-7650
Low Profile - Silver Nickel (AgNi 20) Contacts - V23057-AX-A201 (8A)		
12V dc	330	119-7651
Vertical - Fine Silver Nickel (AgNi 0.15) Contacts - V23057-BX-A101 (5A)		
12V dc	330	119-7648
24V dc	1.2	119-7649
Vertical - Silver Nickel (AgNi 20) Contacts - V23057-BX-A20 (8A)		
12V dc	330	119-7652
24V dc	1.2	119-7653

6A Miniature PT Series



- 4 pole contact arrangement
- Industry standard terminal layout
- Cadmium free AgNi contacts
- Mechanical Flag
- **VDE** approved

L = 28, W = 22.5, H = 29

Contact Rating	6A @ 230V ac	Coil Consumption	1VA ac, 750mW dc
Contact Material	AgNi 90/10	Temperature Range	-45°C to +70°C
Operate/ Release	15ms/10ms		
Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
307-2824	PT571024	307-2990	PT571615
		307-3014	PT571730

Power Relays - Tyco Electronics - continued

6A Miniature - continued

PT Series - continued

COIL			Price Each
Volts	Ω	Order Code	
4PCO - PT57 Series			
24V dc	777	307-2824	
115V ac	4.845	307-2990	
230V ac	19.465	307-3014	

8A Low Profile

MSR Series



- SPCO contacts
- 4kV isolation and 8mm creepage/clearance
- Gold contact version has minimum load of 1mA/6Vdc
- VDE and CSA approved, UL Recognised

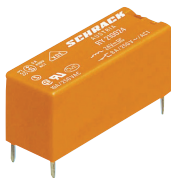
L=30, W=10, H=15 PCB hole dia.=1.3

Contact arrangement	SPCO	Operate/Release	6ms/2.5ms
Contact rating	8A @ 250V ac/30V dc	Coil operating range	70 - 230%
Contact material	Silver Cadmium oxide	Temperature range	-40°C to +85°C
Coil consumption	210 to 260mW		
Order Code	Mfrs. List	Order Code	Mfrs. List
102-3957	V23061B1003A301		
102-3958	V23061B1005A301	102-4038	V23061B1005-A601
102-3959	V23061B1007A301		

COIL			Price Each
Volts	Ω	Order Code	
SPCO - V23061-B100X-A301			
6V dc	165	102-3957	
12V dc	650	102-3958	
24V dc	2.27	102-3959	
Gold Plated Contacts SPCO - V23061-B100X-A601			
12V dc	650	102-4038	

Single Pole CO or NO - 8A @ 240V ac

RY Series



- Single Pole 8A, 1 x CO or 1 x NO contact
- Low height 12.3mm
- Reinforced insulation
- Wash tight

H = 12.3, W = 28.5, D = 10.1mm

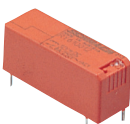
Contact arrangement	SPCO / SPNO
Contact current rating	8A @ 240V ac
Breaking capacity (max)	2000 VA
Power - Coil	200mW
Dielectric voltage between coil and contacts	5000V AC
Dielectric voltage between and contacts	1000V AC
Contact material	AgNi 0.15
Operating temperature	-40 to 70°C

Mfrs. List No.	Order Code	Mfrs. List No.	Order Code
RY611005	965-9706	RYA31005	965-9730
RY611012	965-9714	RYA31012	965-9749
RY611024	965-9722	RYA31024	965-9757

COIL			Price Each
Voltage	Ω	Order Code	
1 x CO contact - 3.2mm pinning			
5V	112	965-9706	
12V	627	965-9714	
24V	2.35	965-9722	
1 x NO contact - 5mm pinning			
5V	112	965-9730	
12V	627	965-9749	
24V	2.35	965-9757	

8A Low Profile

RY2 Series



- SPCO contacts
- 5 kV / 8mm coil-contact
- Low profile, 12.3mm height
- Reinforced insulation
- VDE Approved, UL Recognised

L=28.5, W=10.1, H=12.0, PCB hole dia.=1.3

Contact arrangement	SPCO	Operate/Release	7ms/3ms
Contact Rating	8A @ 250Vac	Coil Consumption	220mW (nom)
Contact Material	Silver Cadmium oxide / AgNi 0.15	Temperature Range	-40°C to +85°C

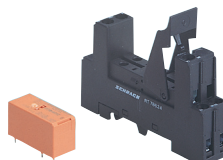
Order Code	Type No.	Mfrs. List No.	Order Code	Type No.	Mfrs. List No.
515-863	RY610005	0-1393225-7	162-9032	RY211005R	1-1956170-2
515-875	RY610012	1-1393225-0	162-9033	RY211012R	1-1956170-6
515-887	RY610024	1-1393225-4	162-9034	RY211024R	1956164-1

206990

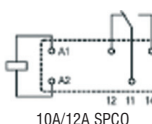
COIL			Price Each
Volts	Ω	Order Code	
3.2mm pinning, wash tight - AgCdO Contact Material			
5V dc	113	515-863	
12V dc	620	515-875	
24V dc	2.35	515-887	
3.2mm pinning, flux proof - AgNi 0.15 Contact Material			
5V	112	162-9032	
12V	627	162-9033	
24V	2.35	162-9034	

8A/10A/12A/16A

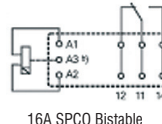
RT Series



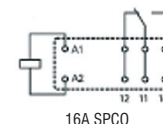
Relay: L=29, W=12.7, H=15.7mm
Socket: L=75.5, W=15.5, H (overall, incl. ejector)=60mm



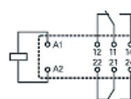
10A/12A SPCO



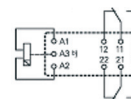
16A SPCO Bistable



16A SPCO



8A DPCO



8A DPCO Bistable

Relays:

- Fully sealed construction
- Cadmium-free contact material
- IP20 protected terminals
- Coil/contact 5kV/10mm
- Sensitive coil 400mW(250mW high sensitivity)

Sockets: (Single coil version only)

- Relay Retainers + Ejectors available
- 15.5mm width only
- Protection category 2 to VDE0700

10/12A and 16A SPCO and 8A DPCO power relays with industry standard '3.5mm' and '5mm' footprints, but with a height of only 15.7mm. Approvals to VDE, OVE, SEV, UL and pending to CSA, BEAB. DIN rail sockets available for panel mount applications.

Contact arrangement	SPCO/DPCO	Operate/Release	7ms/3ms		
Contact Rating	SPCO 10/12/16A @ 250Vac	Coil Consumption	400mW(250mW high sensitivity)		
Contact Material	DPCO 8A @ 250Vac	Temperature Range	-40°C to +70°C		
	Silver Nickel 90/10	Coil Operating Range	70-175%		
Order Code	Mfrs. List No.	Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
117-5013	RTB14012	162-9044	RT314012	117-5037	RTE24524
117-5015	RTB14024	162-9045	RT314024	117-5039	RTE24615
117-5035	RTB14615	162-9047	RT314524	117-5041	RTE24730
117-5036	RTB14730	162-9048	RT314615	162-9052	RT424005
162-9036	RT114012	162-9051	RT314730	162-9053	RT424012
162-9038	RT114024	177-0612	RT31C012	162-9054	RT424024
162-9040	RT114524	177-0613	RT31C024	162-9055	RT424048
162-9041	RT114615	162-9018	RT114012	162-9056	RT424524
162-9042	RT114730	117-5083	RT314F12	162-9057	RT424615
117-5044	RTB74005	117-5084	RT314F24	162-9058	RT424730
117-5045	RTB74012	117-5019	RTE24006	117-5085	RT424F12
117-5016	RTD14012	117-5020	RTE24012	117-5086	RT424F24
117-5017	RTD14024	117-5021	RTE24024	991-3548	RT17040
117-5018	RTD14048	117-5022	RTE24048	991-3521	RT78726
162-9043	RT314005				

272823

COIL			Price Each
Volts	Ω	Order Code	
SPCO, 12A - RT11 Series			
12V dc	360	162-9036	
24V dc	1.44k	162-9038	
24V ac	350	162-9040	
115V ac	8.1k	162-9041	
230V ac	32.5k	162-9042	
SPCO, 12A - RTB14 Series			
12V dc	360	117-5013	
24V dc	1.44k	117-5015	
115V ac	8.1k	117-5035	
230V ac	23.5k	117-5036	
SPCO, 16A - RTD14 Series			
12V dc	360	117-5016	
24V dc	1.44k	117-5017	
48V dc	5.52k	117-5018	
SPCO, 16A - RTH14 Series - 105°C			
12V dc	360	162-9018	

COIL		Order Code	Price Each
Volts	Ω		
DPCO, 8A - RTE24 Series			
6V dc	90	117-5019	
12V dc	360	117-5020	
24V dc	1.44k	117-5021	
48V dc	5.52k	117-5022	
24V ac	350	117-5037	
115V ac	8.1k	117-5039	
230V ac	32.5k	117-5041	
SPCO, 16A - RT31 Series			
5V dc	62	162-9043	
12V dc	360	162-9044	
24V dc	1.44k	162-9045	
24V ac	350	162-9047	
115V ac	8.1k	162-9048	
230V ac	32.5k	162-9051	
SPCO, 16A - RT31 Series - Bifurcated			
12V dc	360	NEW 177-0612	
24V dc	1.44k	NEW 177-0613	
SPCO, 16A - RT31 Series - Bistable			
12V dc	240	117-5083	
24V dc	886	117-5084	
DPCO, 8A - RT42 Series			
5V dc	62	162-9052	
12V dc	360	162-9053	
24V dc	1.44k	162-9054	
48V dc	5.52k	162-9055	
24V ac	350	162-9056	
115V ac	8.1k	162-9057	
230V ac	32.5k	162-9058	
DPCO, 8A - RT42 Series - Bistable			
12V dc	360	117-5085	
24V dc	360	117-5086	
SPCO, 10A - RTB74 Series - High Sensitivity			
5V dc	100	117-5044	
12V dc	576	117-5045	
DIN Rail Sockets with Retainer/Ejector			
Retainer Clip - 3.5mm		991-3513	
Retainer Clip - 5mm		991-3521	
PCB Sockets and Clips			
3.5mm		119-7679	
5mm		119-7681	
Metal Clip			
		119-7682	
Plastic Clip			
		119-7683	
Marking Tag			
		991-3548	

SPST-NO - 16A @ 240V ac
RT1 Series



- Single Pole, 1 NO contact
- 10A / 250V ac making and breaking capacity (IEC 60669-1)
- 165A / 20 ms inrush peak current
- 5 kV / 10mm coil-contact
- Reinforced insulation

H = 15.7, W = 29, D = 12.7mm

Contact arrangement	SPST N/O	Dielectric voltage between coil and contacts	4000V AC
Contact current rating	16A @ 240V ac	Dielectric voltage between and contacts	1250V AC
Inrush peak current rating	165A / 20 ms	Contact material	AgSnO
Power - Coil	400mW		

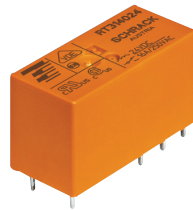
Order Code	Type No.	Mfrs. List No.	Order Code	Type No.	Mfrs. List No.
162-9016	RTS3L012	1-1415898-9	177-0618	RTS3LA24	2-1415898-4
162-9017	RTS3L024	1-1415898-4	965-9560	RTS3T012	0-1415898-0
177-0617	RTS3LA12	2-1415898-3	965-9579	RTS3T024	0-1415898-1

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COIL		Order Code	Price Each
Voltage	Ω		
Standard contact - Monostable Coil			
12V	360	162-9016	
24V	1.44k	162-9017	
Standard contact - Bistable Coil			
12V	360	NEW 177-0617	
24V	1.44k	NEW 177-0618	
Tungsten (W) pre-make contact - Monostable Coil			
12V	360	965-9560	
24V	1.44k	965-9579	

Over 500 000 products available online

SPST-CO - 16A @ 250V ac



- 1 pole 16 A, 1 NO contact
- For inrush peak currents up to 80 A
- Sensitive coil 400mW
- 5 kV / 10 mm coil-contact
- Reinforced insulation



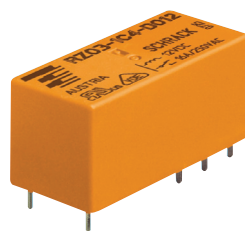
Contact arrangement	SPST - NO	Dielectric voltage between coil and contacts	5000V rms
Contact current rating	16A @ 250V ac	Dielectric voltage between and contacts	1000V rms
Power - Coil	400mW	Contact material	AgSnO ₂

Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
177-0614	RT33L012	177-0616	RT33L024

549381

COIL		Order Code	Price Each
Volts	Ω		
12V dc	360	177-0614	
24V dc	1.44k	177-0616	

SPCO-CO 12A/16A
RZ Series



- 1 pole 12 / 16 A
- 1 CO contact
- DC-coil 400mW
- 5 kV / 10 mm coil-contact, reinforced insulation
- Ambient temperature 85°C



Applications:

- Household appliances
- Boiler control
- Timers
- Garage door control
- POS automation

H=15.7, W=29, D=12.7mm

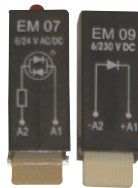
Rated voltage / max. switching voltage AC	250 / 400 VAC
Rated current	12A 3000VA 16A 4000VA
Maximum breaking capacity AC	
Contact material	AgNi 90/10
Operate / release time DC coil	max 8 / 6 ms

Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
171-4771	RZ01-1C4-D012	171-4773	RZ03-1C4-D012
171-4772	RZ01-1C4-D024	171-4774	RZ03-1C4-D024

537267

COIL		Order Code	Price Each
Volts	Ω		
SPCO - 12A - 3.5mm Pinning			
12V	360	171-4771	
24V	1440	171-4772	
SPCO - 16A - 5mm Pinning			
12V	360	171-4773	
24V	1440	171-4774	

Protection and Indication Modules



- Plug-in modules for use with sockets Order Codes 625-619 and 625-620 detailed above
- Diode version provides protection for DC coils
- LED versions provide indication for commissioning and monitoring purposes
- Modules are securely held in place once the relay is fitted

Mfrs. List No.	PTMT00A0=991-3556
	PTML0524=991-3564
	PTML0730=991-3572

H=23, W=13, D=9

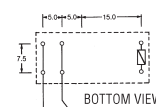
207016

Type	Operating Voltage	Order Code	Price Each
Diode	A1+, A2-	991-3556	
LED	6 to 24V ac/dc	991-3564	
LED	110 to 230V ac	991-3572	

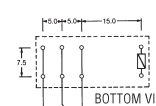
8A/12A/16A Vertical
RP Series



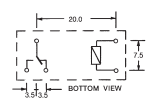
L=29, W=12.6, H=25.5



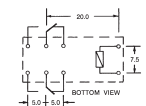
SPNO 16A



SPCO 16A



SPCO 12A



DPCO 8A

Power Relays - Tyco Electronics - continued

8A/12A/16A Vertical - continued

RP Series - continued

- SPNO/SPCO or DPCO contacts
- Flux-tight or IP67 sealed version
- 4kV/8mm coil-contact isolation
- Vent hole which can be pierced after assembly

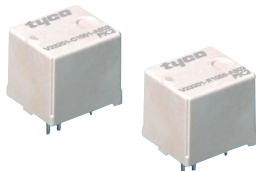
Contact arrangement	SPNO/SPCO/DPCO	Contact Material	Silver Cadmium oxide
Contact Rating	SPNO, 16A@250Vac SPCO, 12A@250Vac SPCO, 16A@250Vac DPCO, 8A@250Vac	Operate/ Release Temperature Range	8ms/2ms -40°C to +70°C

Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
388-178	RP330012	No Order Code	RP310024
388-180	RP330024	388-312	RP710012
388-191	RP418012	388-324	RP710024
388-221	RP418024	No Order Code	RP420012
388-270	RP818012	No Order Code	RP420024
388-282	RP818024	117-5011	RP821012
388-294	RP310012	No Order Code	RP821024

207050

COIL		Order Code	Price Each
Volts	Ω		
SPNO - 16A - RP33 Series			
12V dc	270	388-178	
24V dc	1.1	388-180	
SPCO - 12A - RP41 Series			
12V dc	270	388-191	
24V dc	1.1	388-221	
SPCO - 12A, Sealed- RP81 Series			
12V dc	270	388-270	
24V dc	1.1	388-282	
SPCO - 16A - RP31 Series			
12V dc	270	388-294	
24V dc	1100	388-300	
SPCO - 16A Sealed - RP71 Series			
12V dc	270	388-312	
24V dc	1.1	388-324	
DPCO - 8A - RP42 Series			
12V dc	270	388-336	
24V dc	1100	388-348	
DPCO-8A - Sealed RP82 Series			
12V dc	270	117-5011	
24V dc	1100	119-7647	

SPST-NO - 33A @ 12V dc



- Applications:
- ABS control
 - Blower fans
 - Cooling fan
 - Engine control
 - Fuel pump
 - Glow plug
 - Hazard warning signal
 - Switched power supply



Dimensions: W=16, H=15.9, D=18.3mm

Contact Configuration	SPST-NO (1 Form A)	Max. Switching Current:	On 200A
Rated Voltage	12V		Off 40A
Rated Current	33A		
Contact Material:	Silver Based		
Mfrs. List No.	Order Code		
V23201C1001A502	177-0634		

549420

COIL		Order Code	Price Each
Volts	Ω		
12V dc	176	177-0634	

12A, Special Load

RP3SL Series



- High inrush capability, 120A for 20ms
- Standard 5mm pinning
- Rated carry current of 12A@250Vac
- Protection category II to **VDE 0631** and **VDE 0700**
- Ideal for switching incandescent and fluorescent lamps and highly inductive/ capacitive loads
- **UL** Recognised, **VDE** approved

L=29, W=12.6, H=25.5mm

Contact arrangement	SPNO	Coil Consumption	500mW
Contact Rating	16A@250Vac/24Vdc	Inrush Current (max)	120A (20 ms)
Contact Material	AgSnO	Temperature Range	-40°Cto +70°C
Operate/ Release	8ms/2ms		

Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
117-5054	RP3SL012	117-5055	RP3SL024

207072

COIL

Volts	Ω	Order Code	Price Each
SPNO - RP3SL Series			
12V dc (8.6-23.4)	270	117-5054	
24V dc(17.3-46.8)	1.1	117-5055	

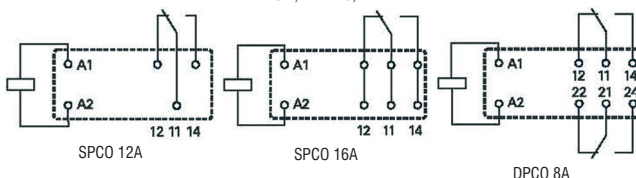
8A/12A/16A RX Series

AC and DC Versions of SPCO and DPCO



- 4 kV/8 mm coil-contact
- Reinforced insulation (protection class II)
- Flux-tight case
- Transparent cover

H = 15.7, W = 29, D = 12.7mm



Contact arrangement	SPCO/DPCO	Order Code	Mfrs. List No.
Contact Rating	8 / 12 / 16A @ 250V	965-9285	RX314730C
Contact Material	AgNi 90/10	965-9293	RX424012C
Coil Consumption - ac coil/dc coil	500mW / 0.75VA	965-9307	RX424024C
Operate/ Release time - dc coil	7ms/2ms	965-9315	RX424730C
Temperature Range - SPCO dc coil	-40°C to 85°C		
Temperature Range - All other versions	-40°C to 70°C		

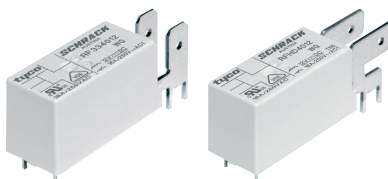
Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
117-5054	RP3SL012	965-9285	RX314730C
965-9234	RX114012C	965-9293	RX424012C
965-9269	RX314012C	965-9307	RX424024C
965-9277	RX314024C	965-9315	RX424730C

411370

COIL		Order Code	Price Each
Volts	Ω		
SPCO - 12A, 3.5mm pinning			
12V	274	965-9234	
SPCO - 16A, 5mm pinning			
12V	274	965-9269	
24V	1.095	965-9277	
230V	32.5	965-9285	
DPCO - 8A, 5mm pinning			
12V	274	965-9293	
24V	1.095	965-9307	
230V	32.5	965-9315	

SPST-NO - 16A @ 240V ac

Quick Connect Terminals - RF Series



- Single Pole 16A NO contact
- Switching capacity 4000 VA
- Coil power 400 mW
- Quick connect terminals for load side
- Reinforced insulation

Vertical terminals H=16, W=29, D=13.2mm (Body)
Horizontal terminals H=16, W=29, D=13.2mm (Body)

Contact arrangement	SPST N/O	Order Code	Mfrs. List No.
Contact current rating	16A @ 240V ac	965-9587	RFHD4012WG
Maximum switching voltage	400V ac	965-9595	
Maximum breaking capacity (ac)	4000 VA		
Power - Coil	400mW		
Dielectric voltage between coil and contacts	4000V AC		
Dielectric voltage between and contacts	1500V AC		
Contact material	AgNi 90/10		
Operating temperature	-40 to 105°C		

Mfrs. List No.	Order Code	Mfrs. List No.	Order Code
RFH34012WG	965-9587	RFHD4012WG	965-9617
RFH34024WG	965-9595		

411792

COIL		Order Code	Price Each
Voltage	Ω		
Vertical terminals			
12V	360	965-9587	
24V	1.44	965-9595	
Horizontal terminals			
12V	360	965-9617	

Over 500 000 products available online



10A Miniature - SPCO

T7N Series



- Popular footprint, lower height package
- Cadmium-free contacts
- Flux-proof package
- Vent hole which can be pierced after assembly
- VDE and CSA approvals, UL Recognised

L = 21, W = 16, H = 16.3mm

Contact arrangement SPDT
 Contact Rating 10A @ 250V/30Vdc, 12A @ 125Vac
 Contact Material Silver Tin Oxide
 Operate/Release 10ms/5ms
 Temperature Range -40°C to +85°C

Mfrs. List No. T7NS5D4-06	Order Code 965-9641	Mfrs. List No. T7NS5D4-24	Order Code 121-8837
T7NS5D4-12	117-5012	T7NS5D4-48	965-9650

207003

COIL			Price Each
Volts	Ω	Order Code	
SPCO - T7N Series			
6V	100	965-9641	
12V dc	320	117-5012	
24V dc	1.28	121-8837	
48V	6.4	965-9650	

10A @ 125V ac/5A @ 30V dc - Miniature PCH Series



- Compact size
- Sealed plastic case
- High surge voltage - 8000V
- CSA and VDE Approved, UL Recognised

H = 15.2, W = 19.8, D = 9.9 mm

Contact arrangement SPST or SPDT
 Contact current rating 10A @ 125V ac resistive
 5A @ 30V dc
 Power - Coil 200mW - SPST, 400mW - SPDT
 Surge between coil and contacts 8000V
 Contact material AgSnO

Order Code 117-5073	Mfrs. List No. PCH-112D2H	Order Code 965-9323	Mfrs. List No. PCH-105L2MH
117-5074	PCH-124D2H	965-9331	PCH-112L2MH
		965-9340	PCH-124L2MH

239948

COIL			Price Each
Volts	Ω	Order Code	
SPDT-CO			
12V dc	360	117-5073	
24V dc	1.44	117-5074	
SPST-NO			
5V	125	965-9323	
12V	420	965-9331	
24V	2.8	965-9340	

10A, Miniature PB Series



- Minimal footprint
- PCB Through Hole Type mounting
- UL recognised, VDE approved

Contact arrangement SPDT- changeover (1 Form C)
 Contact rating 10A
 Contact Material Silver Nickel
 Coil consumption 360 mW

L = 15, W = 15, H = 20 mm

Order Code 117-5076	Mfrs. List PB114006	Order Code 117-5077	Mfrs. List PB114012
117-5078	PB114024		

239955

COIL			Price Each
Volts	Ω	Order Code	
SPDT C/O contacts - PB Series			
6V dc	100	117-5076	
12V dc	400	117-5077	
24V dc	1.6	117-5078	

10A/30A - PCB or Panel Mount T9A Series



- SPNO and SPCO contacts
- Quick connect power output terminals and PCB terminal for both coil and contact or
- All PCB terminal versions available
- Water-tight (Washable) plastic case
- CSA approved and UL Recognised

H (Quick Connect) = 27.94, (PCB Pins) = 20.4mm
 W = 32.51, D = 27.43mm

Contact arrangement SPNO/SPCO
 Contact rating, SPNO 30A @ 240V ac / 28V dc
 Contact rating, SPCO 20A @ 240V ac / 28V dc (IV/C)
 Contact material Silver Cadmium oxide / AgNi
 Dielectric strength 2500V AC rms

Operate/Release 15ms/15ms
 Coil consumption 1mW
 Coil operating range 75-110%
 Temperature range -55°C to +85°C

Order Code 619-723	Part No. 1-1419104-7	Mfrs. List No. T9AS1D22-12	Order Code 162-9071	Part No. 7-1423091-0	Mfrs. List No. T9AS5D24-12
619-735	2-1419104-1	T9AS1D22-24	162-9072	7-1423091-1	T9AS5D24-24
162-9063	6-1423091-6	T9AS1D24-5	162-9059	6-1423091-2	T9AS1D14-5
162-9064	6-1423091-7	T9AS1D24-12	162-9061	6-1423091-3	T9AS1D14-24
162-9066	6-1423091-8	T9AS1D24-24	162-9067	6-1423091-4	T9AS5D14-5
619-747	3-1419104-3	T9AS5D22-12	162-9068	6-1423091-5	T9AS5D14-12
619-759	3-1419104-6	T9AS5D22-24	162-9069	7-1423091-3	T9AS5D14-24
162-9070	6-1423091-9	T9AS5D24-5			

207008

COIL			Price Each
Volts	Ω	Order Code	

Quick Connect Terminals with PCB Mount Pins

SPNO - Silver Cadmium Contacts			
12V dc	144	619-723	
24V dc	576	619-735	

SPNO - AgNi Contacts			
5V	25	162-9063	
12V	144	162-9064	
24V	576	162-9066	

SPCO - Silver Cadmium Contacts			
12V dc	144	619-747	
24V dc	576	619-759	

SPCO - AgNi Contacts			
5V	25	162-9070	
12V	144	162-9071	
24V	576	162-9072	

PCB Pin Terminals with PCB Mount Pins

SPNO - AgNi Contacts			
5V	25	162-9059	
24V	576	162-9061	

SPCO - AgNi Contacts			
5V	25	162-9067	
12V	144	162-9068	
24V	576	162-9069	

15A, Low Profile PCD Series



- Low profile (10mm)
- Sealed plastic case
- Sensitive coil (200mW)
- UL Recognised, CSA, TUV approved

L = 23, W = 16.1, H = 10.2 mm

Contact arrangement SPST-NO (1 Form A)
 Contact rating 15A @ 125V ac resistive, 10A @ 24V dc resistive
 Switching capacity 1800VA/240W
 Contact Material AgSnO
 Coil consumption 200 mW
 Operate/Release 15 ms/8 ms max.
 Coil operating range 75% to 10%
 Temperature range -30°C to +70°C

Order Code 177-0619	Mfrs. List No. PCD-105D2M	Order Code 102-3960	Mfrs. List No. PCD-112D2MH
177-0620	PCD-112D2M	102-3961	PCD-124D2MH
177-0621	PCD-124D2M		

239905

COIL			Price Each
Volts	Ω	Order Code	
Flux Proof			
5V dc	125	NEW 177-0619	
12V dc	720	NEW 177-0620	
24V dc	2.88k	NEW 177-0621	
Wash Tight			
12V dc	720	102-3960	
24V dc	2.88k	102-3961	

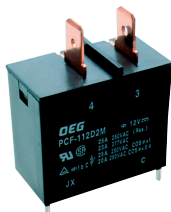
Power Relays - Tyco Electronics - continued



SPST-NO - 25A @ 250V ac



Quick connect - PCF Series



- Compact size
- High surge voltage
- Sensitive coil
- **CSA** and **TUV** Approved, **UL** Recognised

H = 26.5, W = 30.4, D = 16mm

Contact arrangement SPNO
 Contact current rating 25A @ 250V ac resistive
 Contact current rating 20A @ 250V ac inductive
 Power - Coil 900mW
 Surge between coil and contacts 10,000V
 Dielectric voltage between coil and contacts 5,000V
 Contact material Silver Tin Oxide

Mfrs. List No.	Order Code	Mfrs. List No.	Order Code
PCF-112D2M	965-9447	PCF-124D2M	965-9455

411723

COIL		Price Each
Voltage	Ω	Order Code
12V	160	965-9447
24V	640	965-9455

High Power - 100A

SPST - NO (1 Form X)



- Hermetically sealed - Intrinsically safe
- No contamination or oxidation of contacts, including long periods of non-operation
- 8kV isolation between open contacts
- Designed and built in accordance with AIAG QS9000
- Flying leads (0.4m) for coil connections (Not shown)

H= 52.52mm (body), 57.96mm (OA)
 Dia=39.5 (body) Mounting holes=46.3mm

Contact arrangement SPST (1 Form X) Time, operate/release 40 / 10ms
 Continuous contact current 100A Life, mechanical 1 million cycles
 Contact voltage range 9 to 16V DC Temperature range -40 to 85°C

COIL	Mfrs.	Price Each
Voltage	List No.	Order Code
Bottom Mount		
12V	LEV100A4ANG	143-6198
Side Mount		
12V	LEV100A4ANH	143-6199

480785

High Power - 500A

SPST - NO



- High contact rating - 2000A interrupt at 320V dc
- Built in coil economiser - 1.7W holding power at 12V dc
- Hermetically sealed - Intrinsically safe
- No coil back EMF
- Auxiliary contact version - Monitor for contact position
- **CE** marked and **UL** Recognised

H= 55.81mm (body), 72.3mm (OA)
 Dia=51.9 (body) Mounting holes=68.28mm

Contact arrangement SPST N/O - 1 form A Time, operate/release 15 / 12ms
 Continuous contact current 500A @ max. 50°C Life, mechanical 1 million operations
 Contact voltage range 12 to 500V dc Temperature range -40 to 85°C

COIL	Mfrs.	Price Each
Voltage	List No.	Order Code
SPST - NO		
9 to 36V DC	EV200AAANA	991-3971
SPST - NO with aux. contacts (SPST-NO)		
9 to 36V DC	EV200HAANA	991-3980

414056

Electromechanical

20/40A, Single Pole



V23076 Series



- Immersion cleanable (waterproof)
- PCB terminals
- Power Relay K

Contact arrangement SPDT, 1 C/O (1 Form C)
 Contact rating 40A into resistive load
 Switching Current, Min. 1.0A
 Coil Power (nominal) 1.6W
 Contact Material Silver

L = 26.5, W = 21.5, H = 21.5 mm

Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
102-4021	V23076A1001C133	102-4022	V23076A1022C133

239979

COIL		Price Each
Volts	Ω	Order Code
SPDT C/O contacts - V23076 Series		
12V dc	90	102-4021
24V dc	362	102-4022

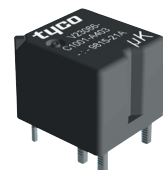
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Relays & Solenoids

Micro Power K - 30A



V23086 Series



- Sealed to **IP67**
- PCB Terminals
- Immersion cleanable
- Small size with minimum weight
- Double version with two separate systems

H = 9.9, W = 12, D = 12.9 mm H = 9.9, W = 23.6, D = 12.9 mm

Continuous current (NC @ 23°C) 25A @ 85°C 15A
 Switching current (on/off) 40A / 30A Max. switching rate 50Hz
 Power consumption (single/double) 0.55W / 0.57W Operating temperature -40 to 105°C
 Contact Material AgSnO₂ Protection class IP 67

Order Code	Mfrs. List No.	Type	Order Code	Mfrs. List No.	Type
965-9013	V23086C1001A403	Single	965-9021	V23086C2001A403	Double
965-9030	V23086M1011A403	Single - SMD			

411407

COIL		Price Each
Volts	Ω	Order Code
SPDT		
12V	254	965-9013
12V	254	SMD 965-9030
2 x SPDT		
12V	254	965-9021

Automotive Relays

DPDT Automotive Relay



Nano Series



- First automotive relay using overmolding technology
- Low noise operation
- Minimum PCB area required: 157mm²
- Minimal weight
- Reflow solderable

SPDT: H=14, W=10.2, D= 8mm

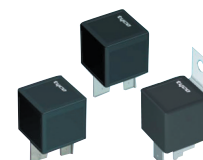
Contact Rating, current NC - 15A, NO - 20A Coil Voltage 12V
 Contact Rating, voltage 12V Coil Resistance 0.8W
 Operate/ Release Time 3ms/1.5ms Temperature Range -40 to +105°C
 Order Code Part Number Mfrs. List No.
 177-0633 1-1414960-7 V23138R1005A403

COIL		Price Each
Volts	Ω	Order Code
SPDT - 1 Form C		
12V	180ohm	NEW 177-0633

519477

Single Pole

V23134 Series



- Dust protected
- Plug-in terminals
- Power Relay F4
- IP 54 to IEC 529
- With or without mounting bracket

Contact Ratings - SPNO 12V - 240A on/70A off
 24V - 240A on/25A off
 Contact Ratings - SPCO (12V & 24V) - 120A on/60A off
 Switching Current, Min. 1.0A @ 5V
 Coil Power (nominal) 1.58W
 Contact Material Silver

H=24.9, W=25.9, D=25.9mm

Order Code	Part No.	Mfrs. List No.	Order Code	Part No.	Mfrs. List No.
991-3785	1393304-9	V23134J1052D642	117-5079	5-1393302-8	V23134A1052C643
991-3793	1-1393304-1	V23134J1053D642	117-5080	6-1393302-3	V23134A1053C643
991-3769	7-1393303-3	V23134J52D642	162-9097	3-1393302-6	V23134A52X205
991-3777	9-1393303-7	V23134J53D642	162-9100	1-1414167-0	V23134A56X432

239988

COIL		Order Code	Price Each
Volts	Ω		
SPNO contacts - with Mounting Bracket			
12V	91	991-3785	
24V	332	991-3793	
SPNO contacts			
12V	91	991-3769	
24V	332	991-3777	
SPCO contacts - with Mounting Bracket			
12V dc	91	117-5079	
24V dc	332	117-5080	
Coil Suppression Versions			
SPCO contacts - Diode Suppression			
12V	90	162-9097	
24V	268	162-9100	

Automotive Relay Sockets

ISO - V2333 Series



- Solderable connectors
- Enables relays with plug-in terminals to be mounted on leadframes
- Allows easy replacement in case of maintenance
- 23°C ambient temperature
- 20 - 50% RH

Type	Order Code	Part Number	Mfrs. List No.
Micro ISO	162-9093	2-1904045-7	V23333Z0002B049
Mini ISO	162-9094	2-1904045-4	V23134J1052D642

519459

Type	Order Code	Price Each
Micro ISO	162-9093	
Mini ISO	162-9094	

10/20A, Single Pole

V23072 Series



- Immersion cleanable (waterproof)
- PCB terminals
- Power Relay K

Contact arrangement	SPDT, 1 C/O (1 Form C)
Contact rating	5A into resistive load
Switching Current, Min.	1.0A
Coil Power (nominal)	1.11W
Contact Material	Silver

Order Code	Mfrs. List No.
102-4023	V23072C1062A303

L = 17.5, W = 15, H = 19.5 mm

239986

COIL		Order Code	Price Each
Volts	Ω		
SPDT C/O contacts - V23072 Series			
24V dc	520	102-4023	

High Current Automotive Relay

Star Point



- Full, symmetric star-point disconnection of an electric (Power steering) motor
- Limiting continuous current 90A
- Disconnection of high over-currents up to 200A
- Contact arrangement fulfills 42V power net requirements
- Resistant to high ambient temperature up to 135°C
- Contact resistance typically less than 2 mR per path of load current 20A

H = 17.5, W = 32, D = 18mm

Contact arrangement	3 N/O - 1 Tripple make contact/Form 3	Coil Voltage	12V
Contact Rating, current	NC - 15A, NO - 20A	Coil Resistance	1.5W
Contact Rating, voltage	12V	Temperature Range	-40 to +125°C
Operate/Release Time	20ms/10ms		
Order Code	Part Number	Mfrs. List No.	
162-9096	1-1414704-0	V23135W1001A309	

519556

COIL		Order Code	Price Each
Volts	Ω		
12V	150ohm	162-9096	

Battery Disconnect Switch



- Limiting continuous current 190 A at 85°C
- Electrically settable and resettable ON/OFF bistable device
- Suitable for voltage levels up to 42V
- High peak current carrying capability up to 1500 A



Dimensions: W=83, H=33, D=86mm

Applications:

- Preheating systems (e.g. for diesel engines, catalytic converters)
- Battery disconnection to prevent fire caused by short circuits during an accident
- Dual battery applications provide the start reliability by a separate starter battery
- Energy-management
- Seasonal, service and transport deactivation

Contact Configuration	Form X	Contact Material:	Silver Based
Rated Voltage	12V or 24V	IP Rating	54
Rated Current	190A		
Mfrs. List No.	Order Code	Mfrs. List No.	Order Code
V23130C2021A412	177-0635	V23130C2421A431	177-0636

549422

COIL		Order Code	Price Each
Volts	Ω		
12V dc	4.7	177-0635	
24V dc	19.9	177-0636	

Automotive Power

SPCO - 30A



- 30A, 14V dc rated
- Plug-in quick connect terminals

H = 25.4, W = 23.0, D = 15.5mm

Contact arrangement	SPCO	Time, operate/release	10ms/10ms
Contact rating	30A @ 14V dc	Power, operating	1.2W
Power, switching max	540W	Resistance, insulation	100Mohm
Voltage, switching max	27V dc	Temperature, operating	-40°C to 125°C
Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
109-4086	SRZ-1CT-DL-12VDC	109-4088	SRZ-1CT-DL-24VDC

246162

COIL		Order Code	Price Each
Volts	Ω		
SPCO Type			
12V dc	90	109-4086	
24V dc	360	109-4088	

15/25A, Single Pole

V23074 Series



- Dust protected
- Plug-in terminals
- Micro Power Relay A

Contact arrangement	SPDT, 1 C/O (1 Form C)
Contact rating	25A into resistive load
Switching Current, Min.	1.0A
Coil Power (nominal)	1.37W
Contact Material	Silver Tin Oxide

Order Code	Mfrs. List No.
119-7662	V23074A1001A403
177-0632	V23074A1002A403

L=23, W=15.5, H=25.4 mm

239987

COIL		Order Code	Price Each
Volts	Ω		
SPDT C/O contacts - V23074 Series			
12V dc	105	119-7662	
24V dc	347	NEW 177-0632	

REACH - SVHCs



We've checked over **200,000 products** for **Substances of Very High Concern** under REACH and are continuing to check more every day. Easily identify these products online and access supporting safety datasheets when you see this logo. Visit www.element14.com to stay up-to-date.

High Current - 150A
V23132 Series



- Dust proof
- Heat, moisture and vibration resistant
- Immersion cleanable
- Terminals: Quick connect (coil), Screw (load)

H=45, W=63, D=40 mm (Body)

Contact rating	150A	Operating temperature	-40 to 125°C
Continuous current @ 23°C	150A (Form A), 130A (Form X)		
Power consumption (nominal)	3.3W	Flammability	UL94-HB
Contact Material	AgNi 0.15	Protection class	IP 67
Order Code	Mfrs. List No.	Contact configuration	
965-9048	V23132A2001B100	1 make contact/1 Form A	
965-9056	V23132B2002B100	1 double make contact/1 Form X	

410960

COIL		Price Each
Volts	Ω	Order Code
12V	43.5	965-9048
24V	178	965-9056

Safety Relays

Safety Relays



- 4 or 6 pole safety relay
- Rated current 8 A
- Forcibly guided contacts according to EN50205

Applications:

- Emergency shut-off
- Press control
- Machine control
- Elevator and escalator control
- Safety modules

Dimensions: W=55, H=16.5, D=16.5mm

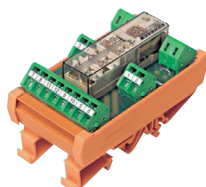
Rated Voltage	250V ac	Contact Material:	
Rated Current	8A	800mW Versions	AgSnO ₂ + 0.2 μm Au
Max. Breaking Capacity AC	2000 VA	1200mW Versions	AgSnO ₂

Mfrs. List No.	Volts (V dc)	COIL Ω	No. of Poles	Contact Configuration	Rated Coil Power (mW)
SR6D4012	12	120	4	2 N/O + 2 N/C	1200
SR6M4012	12	120	4	3 N/O + 1 N/C	1200
SR6D4024	24	480	4	2 N/O + 2 N/C	1200
SR6M4024	24	480	4	3 N/O + 1 N/C	1200
SR6A6K12	12	180	6	3 N/O + 3 N/C	800
SR6B6K12	12	180	6	4 N/O + 2 N/C	800
SR6A6K24	24	720	6	3 N/O + 3 N/C	800
SR6B6K24	24	720	6	4 N/O + 2 N/C	800

549418

Mfrs. List No.	Order Code	Price Each
SR6D4012	177-0622	
SR6M4012	177-0624	
SR6D4024	177-0623	
SR6M4024	177-0625	
SR6A6K12	177-0626	
SR6B6K12	177-0628	
SR6A6K24	177-0629	
SR6B6K24	177-0630	

8A PCB - SR6Z Safety Relay on DIN Rail
Forcibly Guided Contacts

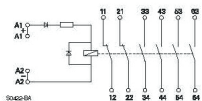


L = 87, W = 46, H = 58mm

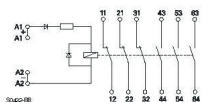
- 6 pole safety relay
- Forcibly guided contacts to EN50205
- Rated current 8A
- 6 kV surge resistance between poles
- CE approved
- Spring connectors

Mfrs. List No.	SR6ZA024=991-3491
	SR6ZA730=177-0631
	SR6ZB024=991-3505

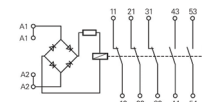
DC module, 4 NO+2 NC version



DC module, 3 NO+3 NC version



AC/DC module, 3 NO+3 NC version

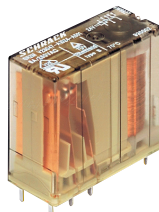


Contact Rating	8A	Mechanical life	10 x 10 ⁶ operations
Contact Material	AgSnO ₂	Temperature Range	-25°C to +50°C
Breaking Capacity - ac	2000 VA		

413973

Contact Configuration	Coil Volts	Order Code	Price Each
3 N/O + 3 N/C	24V dc	991-3491	
3 N/O + 3 N/C	230V ac	NEW 177-0631	
4 N/O + 2 N/C	24V dc	991-3505	

6A, 2 Pole
V23047 Series



- Low cost SR2M Safety Relay
- Forcibly guided contacts according to EN 50205 - Type B
- 700mW coil
- UL recognised, TUV approved, VDE Component mark

Contact arrangement	DPDT, 2 C/O (2 Form C)
Contact rating	6A @ 250V ac resistive
Contact Material	Silver Nickel Alloy
Relay Base	Order Code 119-7685

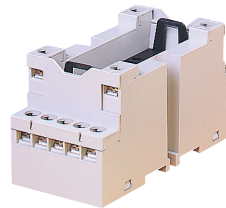
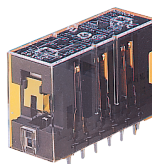
L = 29, W = 12.6, H = 25.4 mm

Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
117-5062	V23047-A1012-A501	117-5064	V23047-A1024-A501

239929

COIL		Price Each
Volts	Ω	Order Code
DPDT C/O contacts - V23047 Series		
12V dc	206	117-5062
24V dc	823	117-5064

6A Plug-In G7S Series
G7S Series Positively Guided Contacts



Relay: L=62, W=22.5, H=37
Din Rail Socket: L=90, W=40, H=47
PCB Socket

- 4NO + 2NC and 3NO + 3NC versions
- Contact clearance of >70.5mm maintained at all times
- Forcibly guided contacts
- Conforms to EN50205

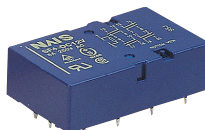
Contacts arrangement	4 N/O + 2 N/C/4 N/O + 2 N/C
Contact rating	3A @ 250 Vac/24Vdc
Coil consumption	0.8W
Operate/release time	50ms
Coil operating range	80 - 110%
Temperature range	-10 to +70°C

Mfrs. List No:	Order Code	Mfrs. List No:	Order Code
G7S-4A2B 24VDC	118-1248	P7S-14F	137-2570
G7S-3A3B 24VDC	118-1249	P7S-14P	137-2571

207039

COIL		Price Each
Volts	Ω	Order Code
4NO+2NC		
24V dc	800	118-1248
3NO+3NC		
24V dc	800	118-1249
Sockets		
Rail DIN/Surface		137-2570
PCB		137-2571

6A, SF4 Series
Positively Guided Contacts



- Low profile compact packages with PCB terminals
- Now with twin contacts (4NO + 4NC)
- IP67, IP30 (breathing hole open) sealed
- Approved to TUV, SEV and CSA, UL Recognised
- Overvoltage category as per IEC 60664-1 III/4 kV
- Rated voltage in V as per IEC 60664-1 basic insulation

SF4 Series : L=53.3, W=33.4, H=16.5

4 pole safety relays with forced operation contacts, such that in case of welding of one of the contacts, associated open contacts cannot close.

Contacts arrangement	4PCO	Max. switch frequency	10 Hz (without load)
Contact rating (max)	6A @ 250V ac/30V dc	Coil operating range	75 - 120%
Switch voltage (max)	440V	Temperature range	-40 to +70°C
Power consumption	500mW		

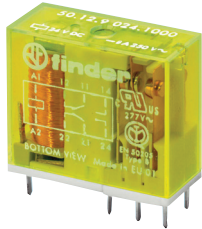
535263

COIL		Mfrs.	Price Each
Volts	Ω	List No.	Order Code
12V dc	288	SF4-D-12	438-8392
24V dc	1.152	SF4-D-24	438-8409

270977

DPCO 8A

50 Series - Forcibly Guided Contacts



- High physical separation between adjacent contacts
- 8mm, 6 kV (1.2/50 μs) isolation, coil-contacts
- Flux proof: RT II
- Approved to CE, IMQ and UL Recognised

H = 25, W = 29, D = 12.4mm

Contact arrangement	DPDT - CO	Coil consumption	700mW
Rated contact current/Max. peak current	8A / 15A	Operate/Release	10 / 4ms typical
Rated contact voltage	250V	Temperature range	-40 to 70°C
Contact Material	AgNi		

Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
176-5083	50.12.9.005.1000	132-9681	50.12.9.024.1000
132-9680	50.12.9.012.1000	176-5084	50.12.9.048.1000

458256

COIL		Price Each
Volts	Ω	Order Code
5V	35	NEW 176-5083
12V	205	132-9680
24V	820	132-9681
48V	3280	NEW 176-5084

8A, 4 Pole - Safety

SR4 Series



- Very small footprint
- Forcibly guided contacts according to EN 50205
- 2 N/O + 2 N/O and 3 N/O + 1 N/C versions available
- Washtight to IEC 61810 RTIII
- UL (United States and Canada) Recognised and VDE approved

H = 16, W = 40, D = 13 mm

Type of contact	3 N/O + 1 N/C, 3 N/O + 1 N/C	Minimum contact load	>50mW
Continuous thermal load	8A	Contact resistance	≤100 mR/1A/24V dc ≤20 R/10mA/5V dc
Rated voltage	250V ac	Operating temperature	-25 to 70°C
Breaking voltage (max)	440V ac	Mechanical life	≥ 10,000,000 Operations

Max breaking capacity	2000 VA		
Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
117-5092	SR4D4012	117-5094	SR4M4012
117-5093	SR4D4024	117-5095	SR4M4024

311624

COIL		Price Each
Volts	Ω	Order Code
2 N/O + 2 N/C contacts		
12V	180	117-5092
24V	720	117-5093
3 N/O + 1 N/C contacts		
12V	180	117-5094
24V	720	117-5095

Plug-In Relays

10A with Contact Indicator

MK-S Series



New



- DPDT and 3PDT contact
 - Built in operation indicator
 - Up to 10A switching on the NO contacts
 - UL Recognised
- | | | |
|-----------------------------------|--------------|------------------------|
| Contact rating (resistive) | N.O. contact | 10A @ 250V ac / 30V dc |
| Contact rating (inductive pf 0.4) | N.O. contact | 5A @ 250V ac / 30V dc |
| Contact material | N.O. contact | 7A @ 250V ac |
| Dielectric strength | | 2500V |
| Operate/Release | | ac 20ms, dc 20ms/20ms |
| Coil consumption | | 2.7VA (ac), (dc) |
| Coil operating range | | 80% - 110% |
| Temperature range | | -40°C to 60°C |

H=52.5, W=34.5, D=34.5

Mfrs. List No.	Volts	Ω	Order Code	Price Each
DPDT				
MKS2PIAC24	24V dc	48.4	169-1482	
MKS2PIAC110	110V dc	1240	169-1483	
MKS2PIAC230	230V dc	6170	169-1484	
MKS2PIDC24	24V dc	430	169-1485	

Mfrs. List No.	Volts	Ω	Order Code	Price Each
3PDT				
MKS3PI5AC24	24V dc	62	169-1486	
MKS3PI5AC110	110V dc	1240	169-1487	
MKS3PI5AC230	230V dc	6170	169-1488	
MKS3PI5DC24	24V dc	430	169-1489	

5A Plug In

R10 Series - Form C contacts



Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
122-7085	R10-E1X2-V700	122-7092	R10-E1X4-V2.5
122-7089	R10-E1Y2-V700	122-7093	R10-E1Y4-V185
122-7090	R10-E1X4-V185	122-7094	R10-E1Y4-V700
122-7091	R10-E1X4-V700		

H = 30.15, W = 24.13, D = 18.67mm

Contact arrangement	DPCO / DPCO
Contact Style and Rating - X versions	Single Stud Contact - Max 5A @ 115V AC or 28V DC
Contact Style and Rating - Y versions	Single Stud Contact - Max 3A @ 115V AC or 28V DC
Power - Coil	500mW
Dielectric Strength	1000V AC
Case Style	Non-sealed - Polycarbonate
Terminals and Mounting	Solder/plug-in - Terminals with 6-32 Thread Mounting Stud
Operating Temperature Approvals	-55 to 75°C CSA and UL Recognised

443336

COIL		Price Each
Volts	Ω	Order Code
DPCO, 5A		
24V	700	122-7085
DPCO, 3A		
24V	700	122-7089
4PCO, 5A		
12V	185	122-7090
24V	700	122-7091
48V	2.5	122-7092
4PCO, 3A		
24V	700	122-7094

Cradle Relay Sockets and Accessories



2 pole PCB Socket & clip 6 pole PCB Socket & clip
4 pole PCB Socket & clip

Terminal Type	PC Yes	Plating, Contact Mating Area	Silver
Grounding Provision	Yes	Body Material	Polycarbonate
Contact Material	Copper Tin		
Mfrs. List No.	Mfrs. List No.	Mfrs. List No.	Price Each
V23154-Z1001=119-7663	27E126=122-7096	V23154-Z1022=117-5090	
V23154-Z1002=119-7664	V23154-Z1021=117-5089	V23154-Z1034=117-5091	
V23154-Z1028=119-7665			

241631

Order Code		Price Each
Cradle Socket		
2 pole	119-7663	
4 pole	119-7664	
6 pole	119-7665	
PCB/Panel Socket		
4 pole	122-7096	
Clip, Cradle Sockets		
2 pole	117-5089	
4 pole	117-5090	
6 pole	117-5091	

Over 500 000 products available online



Plug-In Relays - continued

5A Miniature Plug In - HY Series



- 4 Pole changeover with manual test button
- CSA, TUV, and VDE approved, UL Recognised
- Gold flashed silver nickel contacts for high reliability

Contact arrangement 4PCO Operate/release time 25ms
 Contact rating 5A @ 250V Coil operating range 80% - 110%
 Temperature range -55°C - +70°C Coil consumption 1.2VA

207089

COIL			Price Each
Volts	Ω	Order Code	
4PCO with LED Indicator			
12V ac	46	109-3978	
24V ac	184	109-3979	
110V ac	4550	109-3980	
230V ac	14400	109-3981	
12V dc	160	109-3982	
24V dc	650	109-3983	
Sockets + Clips			
DIN Rail Socket		993-9237	

5A/10A Miniature - MY2(S), MY2N(S), MY4N(S)



With Mechanical and LED Indicators, Labelling Facility, Test Button, ac and dc Suppression



- Versatile, full featured miniature power relays
- DPCO and 4PCO contact arrangements
- All relays have mechanical flag indication and label facility
- Other features include - LED indication, push to test button, CR or diode suppression
- VDE and CSA approved, UL Recognised

L=28, W=21.5, H=36

Contact arrangement DPCO/4PCO Coil consumption 0.9-1.2VA ac, 0.9W dc
 Contact rating DPCO, 10A @ 250V ac/30V dc Operate/release time 20ms
 4PCO, 5A @ 250V ac/30V dc Coil operating range 80% - 110%
 Contact material DPCO, Silver/4PCO, Silver, Gold Flashed Temperature range -55°C - +70°C

207048

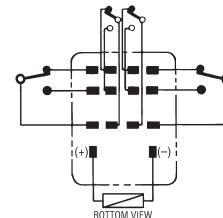
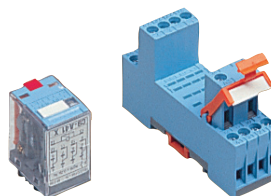
COIL			Price Each
Volts	Ω	Order Code	
DPCO - MY2(S) Series			
12V dc	160	186-235	
24V dc	636	186-247	
12V ac	46	186-259	
24V ac	180	186-260	
220/240V ac	18.79	186-284	
DPCO with LED Indication - MY2N(S) Series			
24V dc	636	186-302	
240V ac	18.79	186-340	
DPCO with LED Indicator and Push to Test Button - MY2IN(S) Series			
12V dc	160	186-351	
24V dc	636	186-363	
24V ac	180	186-387	
240V ac	18.79	186-405	
DPCO with LED Indicator and Diode Suppression - MY2N-D2(S) Series			
24V dc	636	186-429	
DPCO Latching - MY2(K) Series			
Set/Reset			
24V dc	470/940	134-0951	
4PCO - MY4(S) Series			
6V dc	39.8	315-8834	
12V dc	160	186-454	
24V dc	636	186-466	
48V dc	2.56	315-8846	
110V dc	11.1	315-8858	
6V ac	12.2	315-8810	
12V ac	46	186-478	
24V ac	180	186-480	
50V ac	788	315-8822	
120V ac	4.43	186-491	
240V ac	18.79	186-508	
4PCO with LED Indication - MY4N(S) Series			
24V dc	636	186-521	
120V ac	4.43	186-557	
240V ac	18.79	186-569	

COIL			Price Each
Volts	Ω	Order Code	
4PCO with LED Indication and Push to Test Button - MY4IN(S) Series			
24V dc	636	186-582	
24V ac	180	186-600	
120V ac	4.43	186-612	
240V ac	18.79	186-624	
4PCO with LED Indication and Diode Suppression - MY4N-D2(S) Series			
24V dc	636	186-648	
Mounting Rail			
		118-1250	
Sockets			
DPCO Surface/DIN rail		134-0952	
DPCO PCB		118-1252	
4PCO Surface/DIN rail		134-0953	
4PCO PCB		118-1253	
Clips			
DPCO Surface/DIN			
without test button (PK2)			
		103-923	
Clips			
DPCO Surface/DIN			
with test button			
		186-685	
DPCO PCB			
		186-703	
4PCO Surface/DIN rail (PK2)			
		103-923	
4PCO PCB			
		137-2565	



5A Miniature - Full Featured

QRC C9 series



H=37, W=21, D=28 H=46.5, W=22.5, L=75

A range of 4PCO relays with features including a colour lockable "Pull to test" button, lamp indication of coil status, mechanical flag indication of contact position and labelling facility.

The 24V dc version is also available with incorporated diodes to protect the relay from incorrect connection and to protect external equipment such as PLC's from spikes generated by the relay on switch off.

The sockets are a space saving 22.5mm wide allowing maximum packing density. The DIN rail socket features touch-proof terminals, retention clip with identification label, and bracket allowing surface or DIN rail mounting.

All relays and socket have CSA, NEMKO, SETI, SEMKO, DEMKO and Lloyd's approval and are UL Recognised

Contact arrangement 4PCO Operate/release time 10ms/6ms
 Contact rating 5A Coil operating range 80% - 110%
 Max. switched voltage 250V ac Temperature range -20°C to 60°C
 Max. switched power 660VA/75W Cover Clear Polycarbonate, **UL94V-0**
 Contact material Silver Nickel, Gold Flashed Relay base Grey valox, **UL94V-0**
 Coil consumption 1.5VA/1W Socket Blue noryl, **UL94V-1**

213429

COIL			Price Each
Volts	Ω	Mftrs. List No.	Order Code
4PCO			
24V ac	160	C9-A41X24A	108-6860
115V ac	3.5	C9-A41X115A	108-6861
230V ac	13.8	C9-A41X230A	108-6862
24V dc	640	C9-A41X24D	108-6863
24V dc			
(diodes)	640	C9-A41FX24D	108-6864
Socket			
Surface DIN rail		S9-M	108-6865

6/10/12A Miniature - PT Series



- 2, 3 and 4 pole contact arrangements
- Industry standard terminal layout
- Cadmium free AgNi contacts
- Mechanical Flag
- VDE approved

L=28, W=22.5, H=29

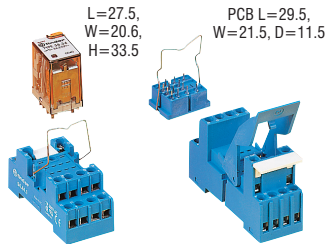
Contact rating ,12 @ ac Coil consumption 1VA ac, 750mW dc
 3PCO, 10A @ 230V ac Operate/release time 15ms
 , @ ac Temperature range to +
 Contact material AgNi 90/10

207073

COIL	Price Each	
Volts	Ω	Order Code
DPCO - PT27 Series		
24V dc (18-40.8)	777	117-5056
230V ac (184-368)	19465	117-5058
3PCO - PT37 Series		
24V dc (18-40.8)	777	307-2745
230V ac (184-368)	19465	307-2770
4PCO - PT57 Series		
24V dc (18-40.8)	777	307-2782
24V (19.2-38.4)	192	117-5059
115V ac (92-184)	4845	307-2800
230V ac (184-368)	19465	307-2812
PCB Mount Socket for PT relays		
4 pole relay socket		113-2590
Clip for 4 pole relay socket		119-7655
Surface/DIN Sockets		
2PCO		991-3807
3PCO		991-3815
4PCO		991-3823
2PCO logical		991-3858
4PCO logical		991-3866
Clips		
Metal		307-3063
Plastic		991-3831
Marking Tab		991-3840
Modules		
Diode		991-3556
LED 24V ac/dc		991-3564
LED 155/230V ac		991-3572

7A Miniature - 5534 Series

With Contact Indicator, Test Button, Module Facility



L=27.5, W=20.6, H=33.5
PCB L=29.5, W=21.5, D=11.5

- 4 pole changeover with manual test button and mechanical flag indicator
- Standard 35mm rail/surface socket has touch proof terminals to IP20 and accepts one module for added facilities
- Slim line 35mm rail/surface socket has rising clamp terminals, leaf connection for positive relay connection and accepts standard 40 series modules **page 735723**
- All sockets are complete with clips
- DIN rail sockets have a user leg-engageable removable identification tab

Screw Term. L=75, W=27, H=43
Mounting holes=3.2 dia
35mm rail/surface socket - Clamp L=66, W=29.2, H=29.5
Mounting holes=3.2 dia

- Relays approved to **IMQ, SEMKO, CSA, DEMKO, VDE, SEV** and **UL** Recognised
- Sockets approved to **CSA** and **UL** Recognised. PCB type also **SEV** approved

Contact arrangement	4PCO	Sockets	Load rating	PCB & Panel	10A 250V
Contact rating	7A @ 250V ac	Screw	DIN rail/surface	DIN rail/surface	10A 250V
Contact material	Silver Nickel	Clamp	DIN rail/surface	DIN rail/surface	10A 250V
Coil consumption	1.5VA, 1W	Housing	PCB & Panel	Blue noryl, UL94V-0	
Operate/release time	9ms/3ms		DIN rail/surface	Blue polymeride/glass fibre	
Coil operating range	80% - 110%				
Temperature range	-40°C - +70°C				

Mfrs. List No.

55.34.8.012.0040=116-9219	55.34.9.024.0040=116-9226	99.01.3.000.00=116-9329
55.34.8.024.0040=116-9220	55.34.9.048.0040=116-9227	99.01.9.024.90=116-9330
55.34.8.048.0040=116-9222	55.34.9.110.0040=116-9228	99.01.0.024.50=116-9332
55.34.8.110.0040=116-9223	94.14SMA=116-9229	99.01.0.230.50=116-9337
55.34.8.230.0040=116-9224	94.04SMA=426-9081	94.84.3SPA=913-7661
55.34.9.012.0040=116-9225	94.74SMA=913-7653	

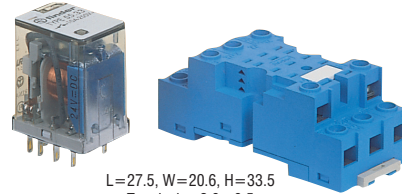
222080

COIL	Price Each	
Volts	Ω	Order Code
4PCO - 5534 Series		
12V ac	50	116-9219
24V ac	190	116-9220
48V ac	770	116-9222
110V ac	4	116-9223
230V ac	17	116-9224
12V dc	140	116-9225
24V dc	600	116-9226
48V dc	2.4	116-9227
110V dc	12.5	116-9228
Sockets with Clips		
PCB		116-9229
35mm rail/surface		913-7653

COIL	Price Each	
Volts	Ω	Order Code
Modules		
Diode 6 to 220V dc		116-9329
Diode + LED, 6 to 24V dc		116-9330
Diode 6 to 24V ac/dc		116-9332
LED, 110 to 240V ac/dc		116-9337
Accessories		
Marking Tab		913-7661

10A Miniature - 5532, 5533 Series

With Module Facility



L=27.5, W=20.6, H=33.5
Terminals=2.0 x 0.5

General purpose 2 pole and 3 pole changeover relays identical in size to Finder 5534 Series relays. The 2 pole relays are approved to **IMQ, SEMKO, CSA, SEV, VDE, BEAB** and **UL** Recognised. The 3 pole relays are approved to **VDE, SEV(8A) CSA (8A)** and **SEMKO (8A)**.

The DIN rail/surface sockets have touchproof terminals to **IP20** and will accept an additional module to give the extra facilities of protection diode and/or LED indication. The sockets are approved to **CSA, SEV** and are **UL** Recognised.

Contact arrangement	DPCO/3PCO	Coil consumption ac/dc	1.5 VA/1W
Contact rating	10A @ 250V	Coil operating range	80/110%
Contact material	Silver Nickel	Socket load rating	10A 250V ac

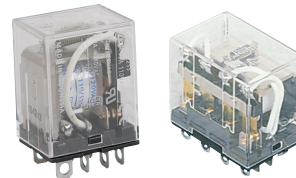
Mfrs. List No.

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55.32.8.024.0000=116-923255.32.9.012.0000=116-923755.33.9.012.0000=116-9241
55.32.8.048.0000=116-923455.32.9.024.0000=116-923855.33.9.024.0000=116-9242
55.32.8.110.0000=116-923555.33.8.024.0000=116-9239

207095

COIL	Price Each	
Volts	Ω	Order Code
DPCO - 5532 Series		
12V ac	—	116-9231
24V ac	—	116-9232
48V ac	—	116-9234
110V ac	—	116-9235
230V ac	—	116-9236
12V dc	140	116-9237
24V dc	600	116-9238
3PCO - 5533 Series		
24V ac	—	116-9239
230V ac	—	116-9240
12V dc	140	116-9241
24V dc	600	116-9242
Sockets with Clips		
DPCO PCB		116-9243
DPCO Chassis		116-9244
DPCO 35mm rail/surface		116-9246
3PCO PCB		116-9247
3PCO 35mm rail/surface		116-9248

10A - LY2/LY4 Series



DPDT

4PDT

- Equipped with arc barrier
- Dielectric strength 2000V
- Plug-in/solder terminals, 5.0 x 0.5mm
- **CE, SEV, LR, VDE** and **CSA** approved, **UL** Recognised

Contact arrangement	DPCO/4PCO	Dielectric strength	2000V rms
Contact rating (resistive)	10A @ 230V ac	Coil operating range	85% - 110%
	10A @ 24V dc (resistive)	Temperature range	-5°C - +45°C
Contact material	Silver Cadmium Oxide		

207121

Order Multiple=1

COIL	Mfrs.		Price Each
Volts	Ω	List No.	Order Code
DPDT - LY2 Series			
110V ac	4.43	LY2 110/120 VAC	134-0932
240V ac	15.97	LY2 220/240 VAC	134-0933
24V dc	650	LY2 24VDC	134-0934
12V dc	160	LY2 12VDC	134-0935

COIL		Order Code	Price Each
Volts	Ω		
SPNO - G7L-1A-T Series			
200 to 240V AC	—	994-9640	
12Vdc	75	994-9658	
24Vdc	303	994-9666	
DPNO - G7L-2A-T Series			
24Vac	—	994-9674	
100 to 120V AC	—	994-9682	
200 to 240V AC	—	994-9690	
12Vdc	75	994-9704	
24Vdc	303	994-9712	
Accessories			
Mounting bracket		118-1247	
DIN rail socket		994-5431	
DIN rail bracket		994-5440	

8 and 11 Pin Power Relays

5A with Contact Indicator

MK2P, MK3P5 Series



Two and three pole changeover power relays for plug-in octal and 11 bases. The relays have serrated contacts giving low contact resistance and a mechanical flag indicator to show contact operation. The relays are available either with or without a manual test button. See this section for suitable bases etc.

H=52.5, W=34.5, D=34.6

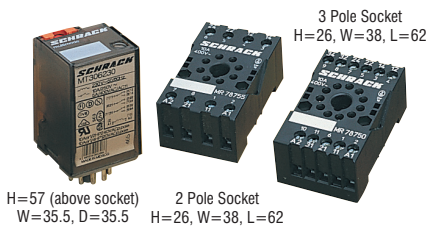
Contact arrangement	DPCO	Dielectric strength	2500V
Contact rating (resistive)	N.O. contact 10A @ 250V ac/28V dc	Operate/Release	ac 20ms, dc 20ms/20ms
Contact rating (inductive pf 0.4)	N.O. contact 5A @ 250V ac/28V dc	Coil consumption	2.7VA (ac), (dc)
Contact material	N.O. contact 7A @ 250V ac	Coil operating range	80% - 110%
		Temperature range	-10°C to -40°C
	Silver		

207131

COIL		Order Code	Price Each
Volts	Ω		
With Test Button and Contact Indicator			
DPCO - MK2P-S Series			
24V ac	48.4	169-1482	
110V ac	1240	169-1483	
230V ac	6170	169-1484	
24V dc	430	169-1485	
3PCO - MK3P5-S Series			
24V ac	62	169-1486	
110V ac	1240	169-1487	
230V ac	6170	169-1488	
24V dc	430	169-1489	

10A with Contact Indicator and Test Button

MT2/3 Series



H=57 (above socket) 2 Pole Socket
W=35.5, D=35.5 H=26, W=38, L=62

'Multimode' power relays for plug-in octal and 11 pin bases, incorporating a simple locking test feature. A lifting 'tab' which presents a clearly visible, orange indicator when activated, quickly and securely locks the relay test function allowing one man and long term testing.

- Contacts rated at 10A/250V ac per pole
- 'Flag' indicator gives operational status
- Colour coded, blue-dc and orange-ac
- Finger protected push to test button
- Din rail sockets offer finger protected terminals, clear marking and segregation of low level control circuits from the load
- Module sockets allow the use of protection and timer modules to be used with the relays
- Timer module has 24V to 240V ac/dc voltage range with Delay-On, Delay-Off, Single shot, Delay On (external trigger) and Flasher functions and time ranges from 50ms to 240 hours

Contact arrangement	DPCO/3PCO	Dielectric strength	2500V
Contact rating	10A @ 240V ac	Operate/Release	12ms/9ms
Max. switched current	20A	Coil consumption	2.3VA (ac), 1.2W (dc)
Max. Break voltage	400V AC	Coil operating range	80% - 140%
Switching capacity	2500VA	Temperature range	-45°C to +50°C
Contact materials	Silver / Nickel Alloy		

207015

COIL		Mfrs. List No.	Order Code	Price Each
Volts	Ω			
DPCO				
24V ac	86	MT226024	117-5023	
115V ac	2	MT226115	117-5024	
230V ac	8.3	MT226230	117-5025	
12V dc	110	MT221012	117-5027	
24V dc	475	MT221024	117-5028	
3PCO				
24V ac	86	MT326024	117-5029	
115V ac	2	MT326115	117-5030	
230V ac	8.3	MT326230	117-5031	
12V dc	110	MT321012	117-5032	
24V dc	475	MT321024	117-5033	
Sockets				
DPCO	—	MT78755	119-7643	
3PCO	—	MT78750	119-7644	
Module Sockets				
DPCO	—	MT78745	119-7645	
3PCO	—	MT78740	119-7646	
Modules				
Diode		MTMT00AO	102-4019	
Timer		MTMF0000	102-4020	

10A with Contact Indicator and Test Button

60-12/13 Series



Two and three pole changeover power relays for plug-in octal and 11-pin bases. The relays have manual test button and mechanical flag contact operating indicator. AC coils are dual frequency 50/60 Hz. VDE, CSA, RINA, BEAB, IMQ, DEMKO and SEV approved, UL Recognised. The cover is flame retardant. See this section for suitable bases etc.

Contact arrangement	DPCO/3PCO	Max. Switch voltage	400V
Contact rating (resistive)	10A @ 250V ac/30V dc	Contact materials	Silver Nickel
Contact rating (inductive pf 0.4)	3A @ 250V ac	Dielectric strength	2000V
	5A @ 24V dc	Operate/Release time	9ms / 9ms
Switching capacity	2500VA	Coil consumption	2.2VA (ac), 1.3W (dc)
Max. Inrush current	20A	Coil operating range	80% - 110%
		Temperature range	-40°C to +70°C

Order Code	Mfrs. List Nos:	Order Code	Mfrs. List Nos:	Order Code	Mfrs. List Nos:
116-9186	60.12.8.012.0040	116-9193	60.12.9.024.0040	116-9199	60.13.9.012.0040
116-9187	60.12.8.024.0040	116-9194	60.12.9.048.0040	116-9200	60.13.9.024.0040
116-9188	60.12.8.048.0040	116-9195	60.12.9.110.0040	116-9201	60.13.9.048.0040
116-9189	60.12.8.110.0040	116-9196	60.13.8.024.0040	116-9202	60.13.9.110.0040
116-9190	60.12.8.230.0040	116-9197	60.13.8.110.0040	116-9213	90.20SMA
116-9192	60.12.9.012.0040	116-9198	60.13.8.230.0040	116-9215	90.21SMA

213447

COIL		Order Code	Price Each
Volts	Ω		
DPCO - 60-12 Series			
12V ac	19	116-9186	
24V ac	74	116-9187	
48V ac	290	116-9188	
110V ac	1.6	116-9189	
230V ac	7.25	116-9190	
12V dc	110	116-9192	
24V dc	445	116-9193	
48V dc	1.772	116-9194	
110V dc	9.42	116-9195	
3PCO - 60-13 Series			
24V ac	74	116-9196	
110V ac	1.6	116-9197	
240V ac	7.25	116-9198	
12V dc	110	116-9199	
24V dc	445	116-9200	
48V dc	1.772	116-9201	
110V dc	9.42	116-9202	
Relay Bases			
DPCO		116-9213	
3PCO		116-9215	

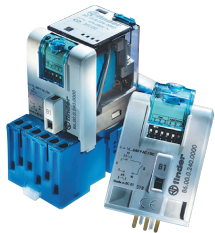
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Relay Bases and Timers

Multi-function, Multi-voltage - 86 Series



- 8 Timing functions (116-9366)
- 2 Functions (132-9733) A1 and D1
- 7 Time scales from 1s to 100h
- Wide supply voltage range from 12 to 240V ac & dc
- Protected, but accessible, function and time scale setting switches
- Works with 60 series relays via dedicated socket

Timer and Timer fitted to base with relay

Functions

- | | |
|--|---------------------------------------|
| AI ON delay | CE Signal ON & OFF delay |
| DI ON pulse | DE Signal ON pulse |
| SW Symmetrical recycler: ON start | EE Signal OFF pulse |
| BE Signal OFF delay | FE Signal ON delay + OFF pulse |

	116-9366	132-9733
Operating voltage	12 to 240V DC, 12 to 240V AC	12 to 24V DC / dc
Rated power ac/dc	1.2W	0.15W
Specified time range	0.05-1, 0.5-10, 5-100 seconds	
	0.5-10, 5-100 minutes, 0.5-10, 5-100 hours	
Operating temperature	-20 to 50°C	-20 to 50°C
Protection category	IP20	IP20
Order Code	Mftrs. List Nos:	Order Code
116-9366	86.00.0.240.0000	116-9368
132-9733	86.30.0.024.0000	132-9734
116-9367	90.02SMA	132-9735
		95.03SMA
		95.05SPA

For 60.12 & 60.13 Series relays SEE WEBSITE







272414

	Order Code	Price Each
Timer		
Multi Function & Multi Voltage	116-9366 ●	
Bi-Function & Multi Voltage	132-9733 ●	
Sockets		
8 Pin (60.12 relays)	116-9367 ●	
11 Pin (60.13 relays)	116-9368 ●	
5 Pin 8630 & 40/44	132-9734 ●	
8 Pin 8630 & 40/44	132-9735 ●	

Electromechanical

27

35mm Rail/Surface Mounting

<p>116-9211 L=51, W=41, H=23 Fixing centres=33</p> 	<p>116-9212 L=56, W=43, H=31 Fixing centres=35</p> 	<p>116-9213, 116-9215 L=67, W=38, H=26 Fixing centres=30</p> 
<p>134-0949 L=52, W=41, H=41 Fixing centres=33</p> 	<p>134-0950 L=52, W=43, H=3, Fixing centres=34</p> 	
<p>177-176: L=43, W=43, H=20, Fixing centres=33, 177-177: L=47, W=47, H=20, Fixing centres=34.</p> 		

Screw terminal bases for mounting on 35mm DIN rail or for screw mounting to flat surfaces. 116-9211, 116-9212: Colour blue.

134-0949, 134-0950: Colour black.

116-9213, 116-9215: Sockets will accept Diode and LED modules detailed below. Colour blue.

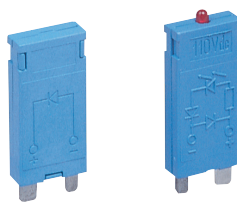
177-176, 177-177: Compact low profile sockets designed to take up no extra space when used with DIN48 packages. Contact rating 10A.

Note: All FINDER bases now supplied complete with retaining clip

206949

Description	Mftrs. List No.	Order Code	Price Each
Finder			
8 pin base	90.26SMA	116-9211 ●	
11 pin base	90.27SMA	116-9212 ●	
8 pin base	90.20SMA	116-9213 ●	
11 pin base	90.21SMA	116-9215 ●	
Omron			
11 pin base	PF113A-E	134-0950 ●	
Retaining Clip	PFC-N8	160-4873 ●	

Protection and Indication Modules



These modules can be easily inserted in the special relay sockets Order Codes 116-9213 and 116-9215 (detailed above) to provide extra facilities for Finder 8 and 11 pin 60 series relays. The modules provide back EMF diode protection, LED indication, or both.

The modules are also suitable for use with Finder PCB power relays and bases (see **Order Code 116-9216**).

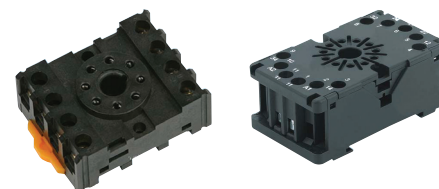
Mftrs. List No.	Order Code	Mftrs. List No.	Order Code	Mftrs. List No.	Order Code
99.01.3.000.00	116-9329	99.01.0.230.98	176-5107	99.02.9.220.99	176-5093
99.01.9.024.90	116-9330	99.01.0.024.09	176-5108	99.02.0.024.98	176-5094
99.01.9.024.99	176-5101	99.01.0.060.09	176-5109	99.02.0.060.98	176-5095
99.01.9.060.99	176-5102	99.01.0.230.09	176-5110	99.02.0.230.98	176-5096
99.01.9.220.99	176-5104	99.02.3.000.00	176-5090	99.02.0.024.09	176-5098
99.01.0.024.98	176-5105	99.02.9.024.99	176-5091	99.02.0.060.09	176-5099
99.01.0.060.98	176-5106	99.02.9.060.99	176-5092	99.02.0.230.09	176-5100

224494

Type	Operating Voltage	Order Code	Price Each
99.01 Series			
Diode	6 - 220V dc	116-9329 ●	
Diode + LED	6 - 24V dc	116-9330 ●	
Diode + LED	6 - 24V dc	NEW 176-5101 ●	
Diode + LED	28 - 60V dc	NEW 176-5102 ●	
Diode + LED	110 - 220V dc	NEW 176-5104 ●	
Varistor + LED	6 - 24V dc	NEW 176-5105 ●	
Varistor + LED	28 - 60V dc	NEW 176-5106 ●	
Varistor + LED	110 - 220V dc	NEW 176-5107 ●	
RC Circuit	6 - 24V dc	NEW 176-5108 ●	
RC Circuit	28 - 60V dc	NEW 176-5109 ●	
RC Circuit	110 - 220V dc	NEW 176-5110 ●	
99.02 Series			
Diode		NEW 176-5090 ●	
Diode + LED	6 - 24V dc	NEW 176-5091 ●	
Diode + LED	28 - 60V dc	NEW 176-5092 ●	
Diode + LED	110 - 220V dc	NEW 176-5093 ●	
Varistor + LED	6 - 24V dc	NEW 176-5094 ●	
Varistor + LED	28 - 60V dc	NEW 176-5095 ●	
Varistor + LED	110 - 220V dc	NEW 176-5096 ●	
RC Circuit	6 - 24V dc	NEW 176-5098 ●	
RC Circuit	28 - 60V dc	NEW 176-5099 ●	
RC Circuit	110 - 220V dc	NEW 176-5100 ●	

DIN Rail/Surface Mount

Screw Terminals



Rated Voltage 300V ac
Rated Current 10A
Insulation Voltage Material - Base ≥3kV
Flame Retardant PA66

522106

Mftrs. List No.	Order Code	Price Each
Clip Attachment		
8 Pin	MCCDSA-08	163-8152 ●
11 Pin	MCCDSA-11	163-8153 ●
Spring Attachment		
8 Pin	MCCDSB-08	163-8155 ●
11 Pin	MCCDSB-11	163-8156 ●

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 See inside front cover

 See inside front cover

 www.element14.com

Chassis, Panel or DIN Rail Mount Sockets

10A @ 250V ac Rated



Screw terminal bases for mounting on 35mm DIN rail or for screw mounting to flat surfaces. This range of compact sockets is manufactured in flame retardant UL94 V0 rated nylon. All screw terminals are shrouded and are finger proofed to maximise safety. The bases can easily be removed from DIN rail by a release tab. The cover has a cable entry knockout at each end.

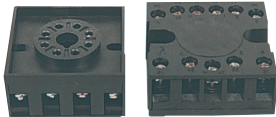
FOR SUITABLE 35mm DIN RAIL SEE Web

500886

Mfrs. List No.	Order Code	Price Each
8 pin base MCS8P	154-7936	
11 pin base MCS11P	154-7937	
Cover MCFWSP	154-7939	

Chassis Mount Sockets

10A @ 250V ac Rated



Compact screw terminal bases for screw mounting to flat surfaces. This range of sockets is manufactured in flame retardant UL94 V0 rated nylon. All screw terminals are shrouded and are finger proofed to maximise safety. The screw terminals are on the reverse side, allowing access with the unit mounted on the panel.

154-7943 Top View 43 x 43 x 20.5mm
154-7944 Rear View 47 x 47 x 20.5mm

500891

No. of Ways	Mfrs. List No.	Order Code	Price Each
8 pin base	MCCDSR08	154-7943	
11 pin base	MCCDSR11	154-7944	

Chassis Mounting



Body Dia: = 30
Fixing centres = 40mm (slots)

207134

Mfrs. List No.	Order Code	Price Each
8 Pin Bases		
PL08	118-1272	
11 Pin Bases		
PL11	118-1273	

PCB Mounting



207135

Mfrs. List No.	Order Code	Price Each
11 Pin Base PLE11-0	118-1274	

8/11 Way Free Sockets

10A @ 250V ac Rated



The sockets incorporate an adjustable cable clamp and are terminated via solder lugs. Suitable for many types of panel mounted relays and timers, or as an inline connector. This range of compact sockets is manufactured in flame retardant UL94 nylon.

500889

No. of Ways	Mfrs. List No.	Order Code	Price Each
8 pin	MCS8F	154-7941	
11 pin	MCS11F	154-7942	

Panel Mounted Relays - Finder



16A/CO and NO Types

62 Series



2 and 3 pole power relays available with either changeover or normally open contacts. The normally open contact relays have 3mm contact gaps conforming to IEC730 regulations for office and domestic appliances.

H (case) = 48, H (incl. fixing lugs) = 68, W = 38.2, D = 35.8
Fixing centres = 63.5, Slot W = 3.6, Terminals Faston 250 = 6.35 x 0.8

Contact arrangement	DPCO/DPNO/3PCO/3 N/O	Coil consumption	2.2VA, 1.3W
Contact rating	16A @ 250V ac	Coil operating range	80-110%
Contact material	Silver Cadmium oxide		

Mfrs. List Nos:	Mfrs. List Nos:	Mfrs. List Nos:
62.82.8.230.0000 = 116-9277	62.82.9.024.0300 = 116-9283	62.83.9.024.0300 = 116-9287
62.82.9.012.0000 = 116-9278	62.83.8.230.0000 = 116-9284	62.83.8.230.0300 = 132-9747
62.82.9.024.0000 = 116-9279	62.83.9.012.0000 = 116-9285	62.83.9.024.0300 = 116-9287
62.82.8.230.0300 = 116-9280	62.83.9.024.0000 = 116-9286	

207110

COIL	Volts	Ω	Order Code	Price Each
DPCO, 16A - 6282 Series				
230V ac	—	110	116-9277	
12V dc	110	445	116-9278	
24V dc	445	—	116-9279	
DPNO, 16A - 6282-0300 Series (3mm gap)				
230V ac	—	110	116-9280	
24V dc	192	—	116-9283	
3PCO, 16A - 6283 Series				
230V ac	—	110	116-9284	
12V dc	110	445	116-9285	
24V dc	445	—	116-9286	
3PNO, 16A - 6283-0300 Series (3mm gap)				
230V	5	—	132-9747	
24V dc	192	—	116-9287	

20A/30A 6531 Series



Single pole power relays with VDE, CSA, SEV approvals. UL Recognised. Transparent polycarbonate case has fixing lugs for screw mounting.

L = 36.5, W = 32.2, H = 42.2
Fixing centres = 52.5 (slots 3.6 dia)
Terminals = 6.3 x 0.8

Contact arrangement	SPST NO & SPST NC / SPST NO	Dielectric strength	2000V ac
Contact rating	20A / 30A @ 250V ac	Coil consumption	2.2VA, 1.3W
Switching capacity	5000VA / 7500VA	Coil operating range ac/dc	85-110%/80 - 110%
Max. Inrush current	40 / 50A	Operate release/time	≤ 15msms
Max. switching voltage	400V ac	Temperature range	-40°C to +70°C
Contact material	Silver Cadmium oxide(90/10%)		

Order Code	Mfrs. List Nos:	Order Code	Mfrs. List Nos:
116-9203	65.31.9.012.0300	116-9206	65.31.9.012.0000
116-9204	65.31.9.024.0300	116-9207	65.31.9.024.0000
116-9205	65.31.8.230.0300	116-9209	65.31.8.230.0000

207123

COIL	Volts	Ω	Order Code	Price Each
SPNO, 30A - 6531 NO Series				
12V dc	110	—	116-9203	
24V dc	445	—	116-9204	
230V ac	7.25	—	116-9205	
SPNO + SPNC, 20A - 6531 CO Series				
12V dc	110	—	116-9206	
24V dc	445	—	116-9207	
230V ac	7.25	—	116-9209	

DPDT 30A - Panel Mount



66.82 Series



- 30A Rated Contacts
- AC and DC Versions Available
- Flange Mount
- Faston 250 Connections
- Reinforced Insulation between coil and Contacts According to EN 60335-1
- 8mm Creepage and Clearance Distances
- Approved to CE, CSA, ANCE, IMQ, VDE and UL Recognised

H = 31, W = 68, D = 33.5mm

Panel Mounted Relays - Finder - continued

DPDT 30A - Panel Mount - continued

66.82 Series - continued

Contact arrangement	DPDT - CO	Contact Material	AgCdO
Rated contact current/Max. peak current	30A / 50A (NO), 10A / 20A (NC)	Operate/Release	8 / 15ms typical
Rated contact voltage	250V	Temperature range	-40 to 70°C
Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
132-9688	66.82.8.024.0000	132-9691	66.82.9.012.0000
132-9689	66.82.8.110.0000	132-9692	66.82.9.024.0000
132-9690	66.82.8.230.0000		

458261

COIL		Price Each
Volts	Ω	Order Code
24V	50	132-9688
110V	930	132-9689
230V	4	132-9690
12V	85	132-9691
24V	340	132-9692

Panel Mounted Relays - Tyco Electronics

16A/25A/30A - RM Series



Suitable for direct control of squirrel-cage motors, heaters or electrical appliances. The RM7 and RM8 series both have a mechanical flag indicator. The RM7 series has **CSA** approvals and is **UL** Recognised. The RM8 has **VDE** (dc coils only), **SEV** and **CSA** approvals and is **UL** Recognised.

H (case) = 48.5, H (inc. fixing lugs) = 73.5, W = 38.5, D = 35.5. Fixing centres = 64. Terminals = 6.3 x 0.8

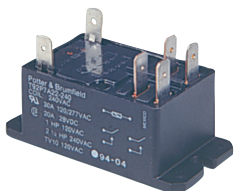
Contact arrangement	SPNO/DPCO/3PCO
Contact rating	SPNO - 30A @ 240V ac DPCO - 25A @ 240V ac 3PCO - 16A @ 380V ac
Switching capacity	SPNO-7200VA (2HP @ 240V ac) DPCO-6000VA (2HP @ 240V ac) 3PCO-6000VA (0.5HP @ 240V ac)
Contact material	Silver Cadmium oxide
Dielectric strength (min.) Coil/Contact	2500V AC
Dielectric strength (min.) Contact/Contact	4000V AC
Coil consumption	SPNO/DPCO - 2.8VA, 1.2W 3PCO - 2.8VA, 1.6W
Temperature range	dc -45 to +60°C ac -45°C to +40°C
Case material	Tinted polycarbonate, UL94V-2
Base material	Polyester, UL94V-0

206967

COIL		Mfrs.	Price Each
Volts	Ω	List No. Order Code	
SPNO, 30A			
12Vdc	110	RMD05012	225-678
24Vdc	475	RMD05024	225-680
230Vac	7.5	RMD05730	225-691
DPCO, 25A			
12Vdc	110	RM805012	225-708
24Vdc	475	RM805024	225-710
110/120Vac	1.85	RM805615	225-721
230Vac	7.5	RM805730	225-733
3PCO, 16A			
12Vdc	86	RM705012	225-745
24Vdc	345	RM705024	225-757
230Vac	7.5	RM705730	225-769

30A - Panel Mount

T92 Series



- 30A DPST-NO and DPDT switching capabilities
- Designed to control compressor loads up to 3.5 tons, 25.3 FLA, 110 LRA
- Extended life, 300000 ops @ 30A (dc coil), 100000 ops @ 30A (ac coil)
- **CSA, VDE** Approvals, **UL** Recognised

L=69, W=34, H (case) = 26
Terminals = 6.3 x 0.8

Contact arrangement	DPNO-DPCO
Contact rating	N/O-30A @ 240V ac N/O-20A @ 240V ac N/C-3A @ 240V ac
Dielectric strength	4000V rms
Contact material	Silver Cadmium oxide/Silver tin indium oxide
Operate/Release	15ms/10ms
Coil consumption	1.55W (dc), 4VA (ac)
Coil operating range	80-110%
Temperature range	-40 to +65°C

Order Code	Part No.	Mfrs. List No.	Order Code	Part No.	Mfrs. List No.
270-313	6-1393211-9	T92P7D22-12	270-350	5-1393211-4	T92P11D22-24
270-325	7-1393211-9	T92P7D22-24	270-362	4-1393211-4	T92P11A22-240
270-337	6-1393211-2	T92P7A22-240	162-9076	1423008-9	T92P7D24-24
270-349	5-1393211-3	T92P11D22-12			

206970

COIL		Mfrs.	Price Each
Volts	Ω	List No. Order Code	
DPNO - Silver Cadmium Oxide contacts			
12V dc	93.75	T92P7D22-12	270-313
24V dc	375	T92P7D22-24	270-325
240V ac	4.083	T92P7A22-240	270-337
DPNO - Silver Tin Indium Oxide contacts			
24V	350	T92P7D24-24	162-9076
DPCO - Silver Cadmium Oxide contacts			
12V dc	93.75	T92P11D22-12	270-349
24V dc	375	T92P11D22-24	270-350
240V ac	4.083	T92P11A22-240	270-362

Panel Mounted Relays - IMO

General Purpose 10A Power Relay



DPCO - Flange Mount



- Arc barriers prevent flashover between contacts
- High reliability/long life expectancy
- **UL/cUL** approved

Rated Load	Resistive	Inductive
Rated Current	10A @ 240V ac/30V dc	7.5A @ 240V ac, 5A @ 30V dc
Maximum Switching Voltage		250V ac/30V dc
Operating Time		25ms Max.
Release Time		25ms Max.
Dielectric Strength		1500V ac 50/60Hz for 1 min.
Ambient Operating Temperature	-40 to 70°C	-40 to 70°C
Mechanical Service Life		20 million ops min.
Electrical Service Life		100,000 ops at rated load
Power Consumption		0.9W dc
Rated Voltage	AC Coils.	DC Coils.
12V	Coil Resistance	Coil Resistance
24V		160ohm
230V	14.4kohm	650ohm

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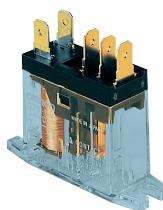
Mfrs. List No.		Price Each
Order Code		
QY21XXF12DC	100-8803	
QY21XXF24DC	100-8804	
QY21XXF230AC	100-8807	

Panel Mounted Relays - Omron

10A - SPCO



G2R-I-T Series



- SPCO relays capable of switching 10A
- Quick connect terminals, ideal for panel mounting
- Terminals accept 4.8 x 0.5 "faston" connectors
- **CSA, TUV, VDE, SEMKO, NEMKO, IMQ** and **SETI** approved, **UL** Recognised

H=29.5 W=45 D=14
Fixing Centres=38

Connect arrangement	SPCO	Coil consumption	530mW/0.9VA
Contact rating	10A @ 250 Vac/30Vdc	Coil operating range	70-110% dc/80-110% ac
Contact material	Silver Cadmium oxide		

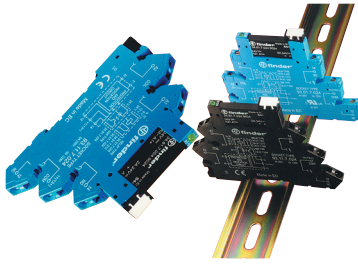
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COIL		Price Each
Volts	Mfrs. List No. Ω Order Code	
SPCO -G2R-1-T-Series		
12Vdc	G2R-1-T 240VAC	30 909-993
24Vdc	G2R-1-T 24VDC	1.1 909-968
24Vac	G2R-1-T 24VAC	260 909-970
110Vac	G2R-1-T 110VAC	5.5 909-981
240Vac	G2R-1-T 240VAC	30 909-993

Interface Relays

38 Series Relay Interface Modules

Electromechanical and SSR



- 35mm DIN rail (EN 50022) mount
- DC and AC/DC versions available
- Supplied with integral coil indication and protection circuit
- Instant removal of relay using plastic retaining clip
- 6kV/8mm isolation between coil and contacts
- Screw terminal and Screwless terminal types available
- Relays approved to **CSA, VDE, SEV, SETI, BEAB, SEMKO, DEMKO, and IMQ, UL** Recognised.

SEV, SETI, BEAB, SEMKO, DEMKO, and IMQ, UL Recognised.

Electromechanical versions		SSR Versions	
Contact arrangement	SPCO 6A/DPDT 8A	2A	
Current rating Max/peak	6/10A SPCO / 8A/15A DPCO	2/20A	
Voltage Rating/switching max	250/400	1.5 - 24V	
Load rating AC1/AC15	SPCO 1500/300V ac / DPCO 2000/400VA	Blocking Voltage = 33V	
Load switching min.	500mW		
Temperature Range	-40°C to, 55°C(ac/dc) 70°C(dc)	-20°C to 55°C	
Category protection	IP 20	IP 20	
Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
116-9345	38.51.7.006.0050	116-9355	38.51.0.125.0060
116-9346	38.51.7.012.0050	116-9356	38.51.0.240.0060
116-9347	38.51.7.024.0050	132-9725	38.52.7.024.0050
116-9352	38.51.0.012.0060	132-9726	38.52.0.024.0060
116-9353	38.51.0.024.0060	132-9727	38.52.0.125.0060
116-9354	38.51.0.048.0060	116-9357	38.81.7.024.9024
		132-9721	38.81.7.006.9024
		132-9723	38.81.7.024.8240
		116-9349	38.61.7.012.0050
		116-9351	38.61.7.024.0050
		426-7850	093.64
		116-9358	093.20

Price Each

Volts	Order Code
SPCO, 6A - Screw Terminals 38.51/81 Series	
6V dc	116-9345
12V dc	116-9346
24V dc	116-9347
12V ac/dc	116-9352
24V ac/dc	116-9353
48V ac/dc	116-9354
125V ac/dc	116-9355
220V ac/dc	116-9356
DPDT, 8A - Screw Terminals 38.52 Series	
24V	132-9725
24V ac/dc	132-9726
110V ac/dc	132-9727
SSR, 2A Screw Terminals 38.81 Series	
24V dc I/P - 24V dc O/P	116-9357
6V DC I/P - 24V DC O/P	132-9721
24V DC I/P - 240V AC O/P	132-9723
SPCO, 6A - Screwless Terminals 38.61/91 Series	
12V dc	116-9349
24V dc	116-9351
Accessories	
ID Labels	426-7850
Jumper Link, 20 way	116-9358

3A, 4 x SPNO Relay Modules

G6D-4B Series



- Compact terminal relay with 4 x SPNO Outputs
- Equipped with 4 G6D-1A relays providing 3A switching capability
- LED operation indicator
- Equipped with diode to absorb coil surge
- DIN rail or screw mountable
- Individual relays are **UL** Recognised and **CSA** approved

H=94 W=28 D=45

COIL		Mfrs.		Price Each	
Volts	Ω	List No.	Order Code		
4 SPNO-G6D-4B Series					
24V dc	2.88	G6D-4B 24DC	994-5466		
Replacement Relays					
12V dc	720	G6D-1A-ASI 12DC	981-2679		
24V dc	2.88	G6D-1A-ASI 24DC	981-2687		

Single Pole Change Over - 6A

ST Relay Package



- Package consists of DIN-rail socket and ST relay
- Electrical indicator LED standard
- AC and DC versions
- Protection circuit
- Screw terminals
- **VDE** Approved and **UL** (United States and Canada) Recognised

For individual ST relays see the V23092 Series relay section of the main catalogue

Contact arrangement	SPCO
Contact current rating	6A
Dielectric strength - coil to contacts	4 kV / 8mm
Contact material	AgSnO ₂
Contact plating (9659463 & 9659510 only)	Gold

H = 94, W = 80, D = 6.2mm

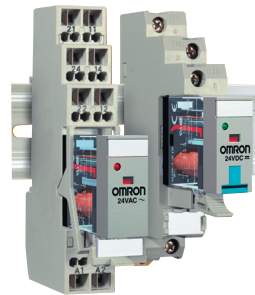
List No.	Order Code	List No.	Order Code
ST3P2LC4	965-9463	ST3P3LC4	965-9480
ST3P3LB2	965-9471	ST3P3TP0	965-9501

411415

COIL	Order Code	Price Each
24V	965-9463	
12V	965-9471	
24V	965-9480	
230V	965-9501	

5A & 10A with Opto Indicator

G2RS Series



Slim styled relays ideal for space saving when used as an interface between a PLC and input/output devices. Relays have an LED indicator and come with a nameplate and mechanical indicator as standard. Lockable test button version available.

The plug in terminals give good electrical and mechanical connections when used with the easy eject socket. Terminals accept 4.8 x 0.5mm "fast-on" connectors. **UL** Recognised, **CSA, VDE** and **LR** approved.

- Environmentally friendly construction - Cd and Pb free
- AC type with coil disconnection self diagnostic function
- High switching power
- Lockable test button model available

G2R Electromechanical Relay		Coil consumption	
Contact arrangement	SPCO/SPCO	530mW	
Contact rating (SPCO)	10A @ 250Vac / 30V dc	Operate/release	15ms/5ms (dc) 10ms (ac)
Contact rating (DPCO)	10A @ 250Vac / 30V dc	Coil operating range	80 - 120% @ 50°C
Contact material	Silver Cadmium Oxide	Temperature range	-40°C - 70°C

COIL		Mfrs.		Price Each	
Volts	Ω	List No.	Order Code		
SPCO, 10A - G2R-1-SN Series (with LED indicator)					
24V ac	253	G2R-1-SN 24AC	437-5154		
110V ac	5.566	G2R-1-SN 110AC	437-5166		
230V ac	27.172	G2R-1-SN 230AC	437-5178		
12V dc	278	G2R-1-SN 12DC	437-5180		
24V dc	1.113	G2R-1-SN 24DC	437-5191		
SPCO, 10A - G2R-1-SND Series (with LED indicator and Diode)					
12V dc	278	G2R-1-SND 12DC	437-5208		
24V dc	1.113	G2R-1-SND 24DC	437-5210		
SPCO, 10A - G2R-1-SNI Series (with LED indicator and Test Button)					
24V ac	253	G2R-1-SNI 24AC	437-5221		
230V ac	27.172	G2R-1-SNI 230AC	437-5245		
12V dc	278	G2R-1-SNI 12DC	437-5257		
24V dc	1.113	G2R-1-SNI 24DC	437-5269		
SPCO, 10A - G2R-1-SNDI Series (with LED indicator and Diode and Test Button)					
12V dc	278	G2R-1-SNDI 12DC	437-5270		
24V dc	1.113	G2R-1-SNDI 24DC	437-5282		
DPCO, 5A - G2R-2-SN Series (with LED indicator)					
24V ac	253	G2R-2-SN 24AC	437-5294		
110V ac	5.566	G2R-2-SN 110AC (S)	437-5300		
230V ac	27.172	G2R-2-SN 230AC	437-5312		
12V dc	278	G2R-2-SN 12DC	437-5324		
24V dc	1.113	G2R-2-SN 24DC	437-5336		
DPCO, 5A - G2R-2-SND Series (with LED indicator and Diode)					
12V dc	278	G2R-2-SND 12DC	437-5348		
24V dc	1.113	G2R-2-SND 24DC	437-5350		

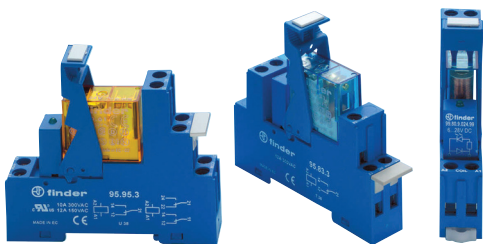
Interface Relays - continued

5A & 10A with Opto Indicator - continued

G2RS Series - continued

COIL	Mfrs.	Price Each	Order Code	
			Volts	Ω
DPCO, 5A - G2R-2-SNI Series (with LED indicator and Test Button)				
230V ac	27.172	G2R-2-SNI 230AC	437-5385	
24V dc	1.113	G2R-2-SNI 24DC	437-5403	
DPCO, 5A - G2R-2-SNDI Series (with LED indicator and Diode and Test Button)				
12V dc	278	G2R-2-SNDI 12DC	437-5415	
24V dc	1.113	G2R-2-SNDI 24DC	437-5427	

Single Pole 10A Relay Interface Module



- Ideal interface for PLC and electronic control systems
- Insulation between coil and contacts 6kV (8mm)
- Supply status indication and coil suppression module included
- Relay ejection/retaining clip included
- Identification label included
- 15.5mm wide
- 35mm rail mounting
- Approvals include UL, CSA, VDE and Lloyds register

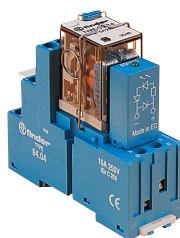
Output	SPDT	Breaking Capacity DC1 30V dc	10A
Rated Current/Max Peak Current	10/20A	Minimum Switching Load	300mW
Rated Voltage/Max Switching Voltage	250/400V AC	Contact Material	AgNi
Rated Load AC1	2500 VA	Electrical Life at Rated Load AC1	200,000 Cycles
Rated Load AC15	500 VA	Ambient Temperature	-40 to 70°C
Single Phase Motor Rating 230V ac	0.37kW	Protection Category	IP20

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Supply	Mfrs.	Price Each	Order Code
Voltage	List No.		
12V DC	49.31.7.012.0050SPA	134-4202	
24V DC	49.31.7.024.0050SPA	134-4203	
230V AC	49.31.8.230.0060SPA	134-4205	

58 Series Relay Interface Module

7A 4PCO



- 35mm DIN rail (EN 50022) mount
- DC version complete with LED and protection diode module
- AC version complete with LED and varistor module
- Isolation to VDE0100
- 2kV isolation between coil and contacts, 1.55kV contact to contact
- Relays approved to CSA, DEMKO, NEMKO, SEMKO, SEV, BEAB, GOST, IMQ, UTE and VDE

Contact arrangement	4PCO 7A	Load switching min.	300mW
Current rating Max/peak	7/15A	Temperature operating	-40°C to 70°C
Voltage Rating/switching max	250/250	Category protection	IP 20
Load rating AC1/AC15	1750/350 VA		

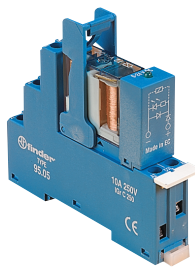
Order Code	Mfrs. List	Order Code	Mfrs. List
116-9314	58.34.8.024.0060SMA	116-9316	58.34.9.012.0050SMA
116-9315	58.34.8.230.0060SMA	116-9317	58.34.9.024.0050SMA
176-5089	58.34.8.110.0060SMA		

248989

COIL	Price Each	Order Code
Volts	Ω	
4PCO, 7A - 58.34 Series		
24V ac	190	116-9314
110V ac	4K	NEW 176-5089
230V ac	17K	116-9315
12V dc	140	116-9316
24V dc	600	116-9317

8A/10A/16A SPCO & DPCO

48 Series Relay Interface Module



- 35mm DIN rail (EN 50022) mount
- DC version complete with LED and protection diode
- AC version complete with LED and varistor module
- Sensitive coil
- 4kV/8mm isolation between coil and contacts
- Relays approved to CSA, VDE, SEV, SETI, BEAB, SEMKO, DEMKO, IMQ, and UL Recognised

Contact arrangement	SPCO 10A	SPCO 16A	DPCO 8A	DPCO 10A
Current rating Max/peak	10/20A	16/30A	8/15A	10/20A
Voltage Rating/switching max	250/400	250/400	250/250	250/400
Load rating AC1/AC15	2500/500 VA	4000/750 VA	2000/400 VA	2500/500 VA
Load switching min.	500mW	500mW	500mW	500mW
Temperature Range	-40°C to 70°C			
Category protection	IP 20			

Order Code	Mfrs. List No.	Order Code	Mfrs. List No.	Order Code	Mfrs. List No.
116-9363	48.31.8.230.0060SPA	176-5081	48.61.8.024.0060SPA	116-9323	48.52.7.024.0050SPA
176-5080	48.31.8.110.0060SPA	176-5082	48.61.8.110.0060SPA	116-9364	48.62.7.012.0050SPA
116-9359	48.31.7.012.0050SPA	116-9325	48.61.8.230.0060SPA	116-9365	48.62.7.024.0050SPA
116-9360	48.31.7.024.0050SPA	116-9327	48.61.7.024.0050SPA	116-9322	48.52.7.012.0050SPA
116-9320	48.51.7.024.0050SPA	116-9321	48.52.8.230.0060SPA		

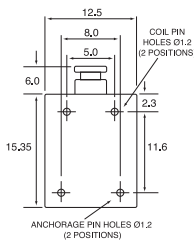
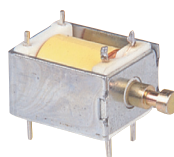
248947

COIL	Price Each	Order Code
Volts	Ω	
SPCO, 10A - 48.31 Series - 3.5mm Pin Pitch		
110V ac	6.9K	NEW 176-5080
230V ac	28K	116-9363
12V dc	300	116-9359
24V dc	1.2K	116-9360
SPCO, 10A - 48.51 Series - 5mm Pin Pitch		
24V dc	1.2K	116-9320
SPCO, 16A - 48.61 Series		
24V ac	320	NEW 176-5081
110V ac	6.9K	NEW 176-5082
230V ac	31.5K	116-9325
12V dc	300	116-9326
24V dc	1.2K	116-9327
DPCO, 8A - 48.52 Series		
230V ac	31.5K	116-9321
12V	300	116-9322
24V dc	1.2K	116-9323
DPCO, 10A - 48.62 Series		
12V dc	300	116-9364
24V dc	1.2K	116-9365

Solenoids

PCB Miniature

45 Series



- DC Operate
- Low profile (12mm high)
- Ideal for pulse drive

H (above PCB) = 12.0, W = 12.5

Average performances at 20°C ambient temperature

Pull force, continuous	35gf @ 1.0mm, 10gf @ 2.0mm
Pull force, 25% duty	105gf @ 1.0mm, 50gf @ 2.0mm
Closed power, continuous (dc)	1.5W

213434

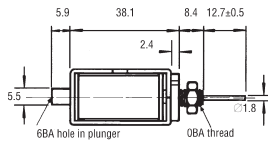
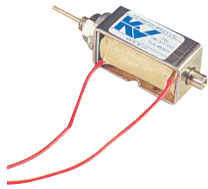
Voltage	Mfrs. List No.	Order Code	Price Each
6Vdc	45-120-610-540	968-7920	
12Vdc	45-120-610-620	968-7939	

Spotted an error?



Now you can update our product information online. Simply search for the order code at www.element14.com and look for this logo to notify us of an error.

Miniature - SMO



H=18.3, W=15.9, Leads=150

A solenoid suitable for light high speed duty and capable of operating in excess of 300 cycles/minute. Pull or thrust action. Maximum stroke 16mm.

Pull force, continuous: 25gf @ 8.0mm, 70gf @ 3.0mm
 Pull force, 25% duty: 70gf @ 8.0mm, 300gf @ 3.0mm
 Coil consumption: 3W continuous, 24W @ 25% duty

KEYSWITCH

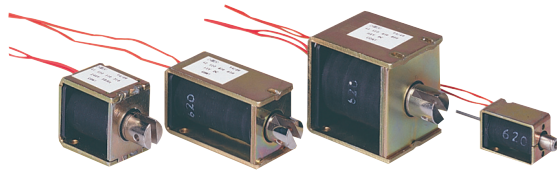
207137

Price Each

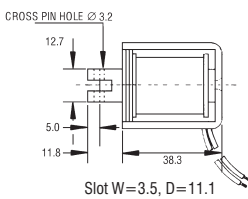
Voltage	Order Code
12Vdc	118-1451

Miniature and Standard Size Solenoids

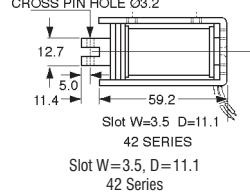
Monostable - Pull Action



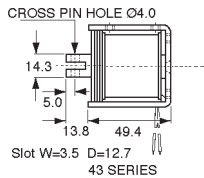
41 Series H=32, W=26.7 42 Series H=32, W=26.7 43 Series H=47.5, W=41.5 44 Series H=19.4, W=16



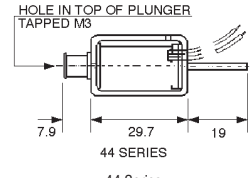
Slot W=3.5, D=11.1
41 Series



Slot W=3.5, D=11.1
42 Series



Slot W=3.5, D=12.7
43 SERIES



44 Series

A range of general purpose, monostable, pull action solenoids designed to give a range of force/size ratios. AC and DC types are externally identical but the AC types in Series 41, 42, 43 and 44 are fitted with a copper shading ring to reduce AC vibration noise. The coils are all continuously rated at the stated voltages. The 43 series is suitable for heavy-duty applications and the 42 and 147 series provide high forces over longer strokes. The miniature 44 series offers high force for short stroke applications, where the sub-miniature 133 and 134 series are ideal for discrete small force/stroke applications where space is at a premium. 120-7155, 120-7156 and 120-7157 come complete with an anti-residual "push-off" spring.

Series	Pull force, continuous	Pull force, 25% duty	Coil consumption, continuous
41, dc	400gf @ 4mm, 100gf @ 8.0mm	gf @ 16.0mm, gf @ 3.0mm	6.5W
41, ac	300gf @ 4mm, 200gf @ 10.0mm	1500gf @ 4.0mm, 700gf @ 10.0mm	10.5W
42, dc	350gf @ 4mm, 150gf @ 8.0mm	1250gf @ 6.0mm, 300gf @ 18.0mm	10W
43, dc	1150gf @ 3mm, 150gf @ 9.0mm	3700gf @ 3.0mm, 1500gf @ 9.0mm	12W
44, ac	80gf @ 2.0mm, 25gf @ 8.0mm	230gf @ 2.0mm, 55gf @ 8.0mm	3W

207152

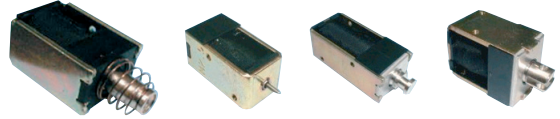
Price Each

Voltage	Mfrs. List No.	Order Code
41 Series		
12V dc	41 120 610 620	968-7769
24V dc	41 120 610 720	968-7777
240V ac	41 120 110 310	968-7785
42 Series		
12V dc	42-120-610-620	968-7831
12V	42-120-611-620	120-7156
24V dc	42-120-610-720	968-7840
240V ac	42-120-110-310	968-7858
43 Series		
12V dc	43-120-610-620	968-7866
24V dc	43-120-610-720	968-7874
240V ac	43-120-110-310	968-7882

Voltage	Mfrs. List No.	Order Code	Price Each
44 Series			
6V dc	44A-220-620-540	968-7890	
12V dc	44A-220-620-620	968-7904	
12V	44A-220-621-620	120-7157	
24V dc	44A-220-620-720	968-7912	
24V	44A-220-621-720	120-7158	

DC Pulse Operated

Pull type - Latching



65 Series H=10, W=22, D=15, Leads=203mm 66 Series H=14, W=30, D=16, Leads=203mm 67 Series H=15.5, W=40, D=19, Leads=203mm 68 Series H=21.5, W=36, D=26, Leads=203mm

A latching or bi-stable solenoid incorporates a set of permanent magnets that allows the solenoid to offer hold force even after the power has been disconnected. The term bi-stable is given to this type of solenoid because it has two stable positions. The first is when the solenoid is de-energised and the plunger is fully extended in the open position. The second position is when the solenoid is energised and the plunger is attracted into its closed position, the power can then be removed and the plunger will be held in place with the permanent magnets. The electrical force moves the solenoid from the open position to the closed position. The closed stable position can be neutralised by applying a reverse polarity across the coil, this neutralises the effects of the permanent magnets and allows the plunger to be withdrawn from the body and back into the open position by means of a spring or other external force.

- No self heating
- Can operate by a pulse signal
- Continues to hold even after the power is disconnected
- A charge / discharge of capacitor will be enough to set and reset

Series	Coil voltage	Coil consumption	Magnet holding force @ 25°C	Mfrs. List No.	Order Code
66	12V	3W	0.48kgf	66-120-610-620	968-7947
67	12V	5W	1.0kgf	67-120-610-620	968-7963
68	12V	10W	2.2kgf	68-120-610-630	968-7823

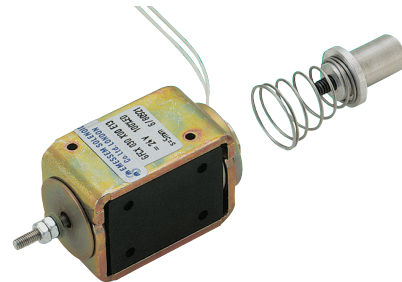
★ With push-off spring

411912

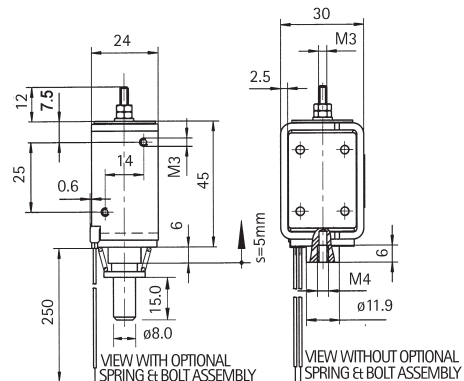
Price Each

Voltage	Order Code
66 Series	
12V	968-7947
67 Series	
12V	968-7963
68 Series	
12V	968-7823

High-Performance, Long-Life Solenoids MAGNETSCHULTZ



GFCX 030 solenoid with optional spring return and bolt



- High-performance device for push-and-pull operation
- Armature supported by PTFE-lined bearings for arduous, long-life applications
- Vibration and shock-resistant injection-moulded coil with class F insulation
- Optimised flux-path design for maximum force from minimum electrical power in com-

Electromechanical

27

Relays & Solenoids

Solenoids - continued

High-Performance, Long-Life Solenoids - continued

- Compact space envelope
- Electroplated frame, armature and pole piece for corrosion resistance
- Conical spring-return assembly / shotbolt end (accessory pack)
- Tapped armature / threaded pushrod for attachment to host mechanism

High force dc solenoid for arduous applications requiring long-term reliability and highly repeatable operation. Available with 24volt 100% or 15% rated coils (24V 15% coil can be used for 12V 100% rated applications if solenoid is mounted on a suitable heatsink).

Supply Voltage Vdc	Duty Rating %	Rated Stroke mm	Holding Force N	Magnetic Force at Rated Stroke N	Power Consumption W	Order Code
24	100	5	1.1	4.3	7	116-2564
24	15	5	2.5	14.2	36	116-2565

Price Each

Description	Order Code
GFCX030X00E13,24V100%	116-2564
GFCX030X00E13,24V15%	116-2565
GFCX030 SPRING SET	116-2566

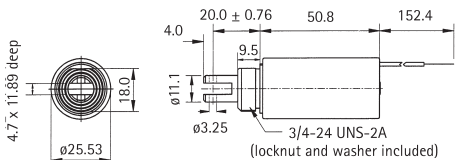
205718

Cylindrical Solenoids



R16 x 16 cylindrical solenoid

- Available with 24 volt continuous or intermittent coils
- Robust, enclosed coil design with threaded nose for mounting through bulkhead
- Integral clevis end for pull operation
- Compact, long stroke design
- Threaded mounting nose with anti-rotation feature, locknut and shakeproof washer
- Electroplated body, armature and pole piece for corrosion resistance
- Coil insulation to class B



Supply Voltage V dc	Duty Rating	Maximum Stroke mm	Holding Force N	Magnetic Force at Max. Stroke N	Power Consumption W	Mfrs. List No.
24	Continuous	25	25.3	0.1	5.5	R16X16,24V100%
24	Intermittent	25	35.6	1.2	38	R16X16,24V15%

Force figures: ±10%, solenoid HOT condition and heat-sink mounting (6"x6"x.125" steel), rated voltage

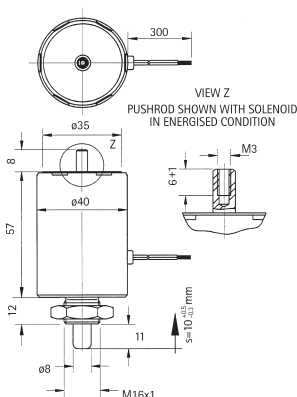
Power consumption figures: 25°C coil temperature

205719

Price Each

Duty Rating	Order Code
Continuous	116-2567
Intermittent	116-2568

Heavy-duty, Long-Life



- For use in fail-safe locking of guards, drawers and covers
- Solenoid-operated bolt with integral spring return
- Spring to lock, energise to unlock
- Available with 12V or 24V 100% rated coils
- Bolt and armature supported in PTFE-lined bearings for arduous, long-life applications
- Robust cylindrical construction with electroplated body for corrosion resistance
- Threaded mounting nose with locknut
- Long stroke design with increasing force characteristic
- Stainless steel bolt with spherical end for 'slam-shut' applications
- Tapped pushrod for possible attachment of manual override or limit switch actuator
- Simple installation and control
- Totally-enclosed coil with class F insulation

Supply Voltage V dc	Duty Rating %	Stroke mm	Power Consumption W	Max. Radical Bolt Load Static N	Max. Radical Bolt Load Stroke N	Mfrs. List No.
24	100	10	12.9	1500	8	GHUZ040M20D01,24V100%
12	100	10	12.9	1500	8	GHUZ040M20D01,12V100%

Force figures: ±10%, solenoid HOT condition and heat-insulated mounting, 90% of rated voltage
Power consumption figures: 20°C coil temperature

205724

Supply Voltage	Order Code	Price Each
24	116-2576	
12	116-2577	

Miniature Solenoid Valves



Connector supplied

Valve

H=22, W=58, D=30 (excl blades), D=61 (overall with connector)
Mounting holes=2 x M4 tapped., Fixing centres=134

A range of direct action, 3-way solenoid operated valves singularly mounted with 1/8" BSP ports. By inserting a 146-372 plug (M5 thread) with a 146-373 nylon washer in the venting port, the valve is converted to a 2-way valve.

The body is manufactured in brass with stainless steel inner parts and nitrile rubber seals making it ideally suited for controlling the flow of air and other non-corrosive gasses with a maximum differential pressure of 150psi (10 bar). Electrical connection is by a three pin DIN 40050 connector which is available separately.

The connector is complete with sealing ring and fixing screw giving protection to IP65. Connection pins are 6.35mm blade types allowing the connection by 'Fast-On' connectors as an alternative.

Coil consumption ac	8.5VA	Temperature range	-10°C to +50°C
dc	5W		
Coil operating rate ac	85-110%	Fluid temperature	50°C max
dc	95-100%		
		Orifice size	1.5mm (exhaust 1.8mm)

Mfrs. List No: A331-1-C2-A73=285-079 A331-1-C2-A7D=285-080 A331-1-C2A7M=285-092

227662

Order Multiple = 1	Price Each
24Vdc	285-079
110Vac	285-080
240Vac	285-092
Order Multiple = 3	Price Each
Plug	146-372
Spare Connector	Price Each
Without lamp	146-374

FREE technical support

Our trained engineers are here to help!

- See inside front cover
- See inside front cover
- www.element14.com