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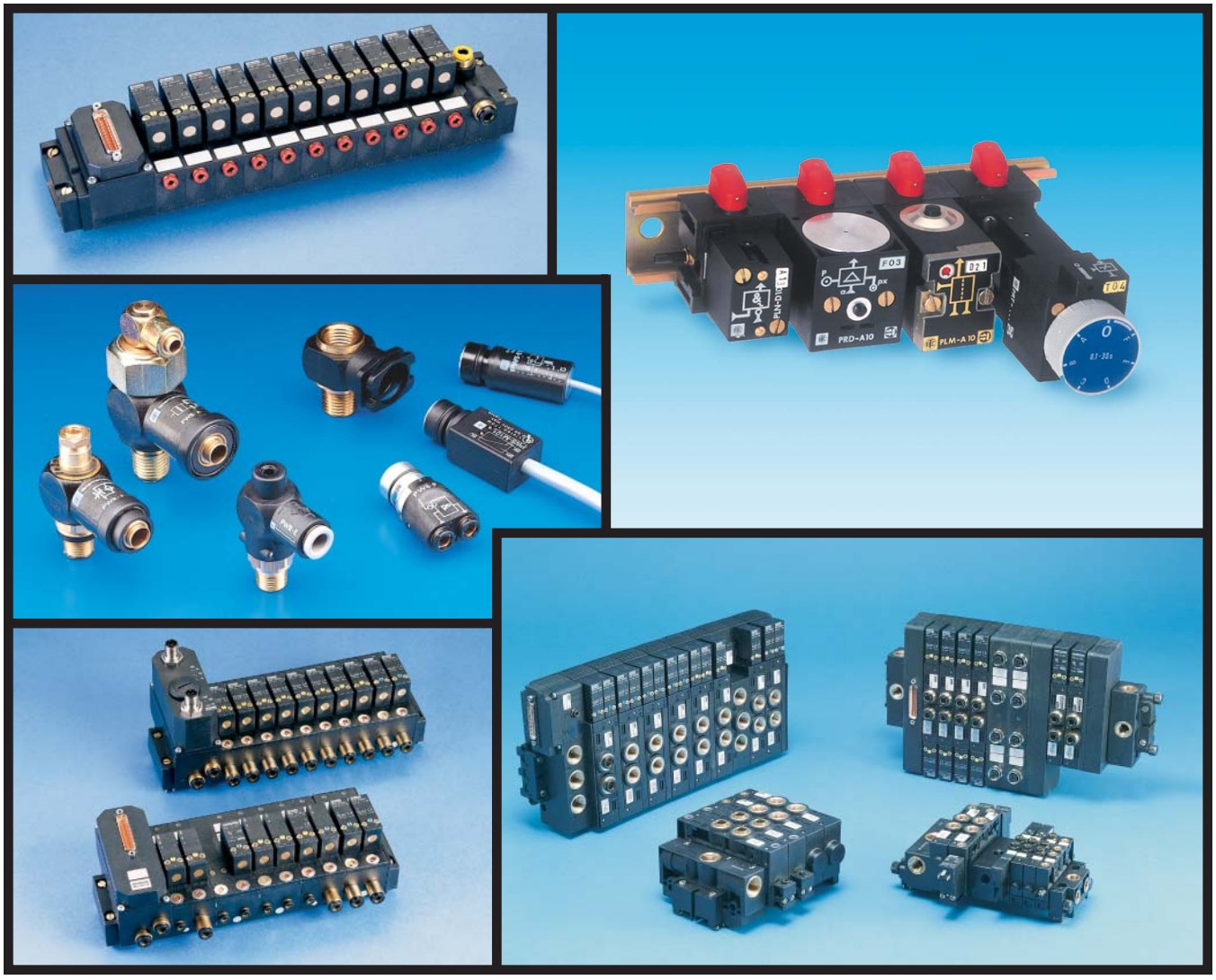
Parker Pneumatic

Pneumatic Control Components

Catalog Tele-E/USA
July 2005 *(Updated September 2005)*



Telepneumatic

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Parker Hannifin Corporation
Pneumatic Division
Richland, Michigan
www.parker.com/pneumatic

Cross Reference

Required Obsolete Part No.	Suggested Replacement	Difference of Suggested Replacement and/or Recommended Kits
70PPICB070		RVD: No Functional Replacement
80PPICB030		RVD: No Functional Replacement
80PPICB070		RVD: No Functional Replacement
8999114		RVD: No Functional Replacement
91500/1007		RVD: No Functional Replacement
91500/7001		RVD: No Functional Replacement
95043/250		RVD: No Functional Replacement
95092/0328		RVD: No Functional Replacement
98140/5006		RVD: No Functional Replacement
98140/5007		RVD: No Functional Replacement
98260/5024		RVD: No Functional Replacement
98524/5002		RVD: No Functional Replacement
A1-4419-D		RVD: No Functional Replacement
BAEP10		RVD: No Functional Replacement
BAEP20		RVD: No Functional Replacement
BASP10		RVD: No Functional Replacement
FR3P10		RVD: No Functional Replacement
K065J35961		RVD: No Functional Replacement
K41RB75612		RVD: No Functional Replacement
K41RB75617		RVD: No Functional Replacement
LNOTEC3P20		RVD: No Functional Replacement
LPSS3P16		RVD: No Functional Replacement
LSV10		RVD: No Functional Replacement
LSV10K	PRSA121F	RVD: Solenoid relay, 115/60 VAC mounted on PZUA12 base in place of Maxam Polylog base
LSV10M	PRSA122B	RVD: Solenoid relay, 24 VDC mounted on PZUA12 base in place of Maxam Polylog base
LSV15J3-21		RVD: No Functional Replacement
LTN10.3CABN		RVD: No Functional Replacement
M2.9X9.5		RVD: No Functional Replacement
MAN7P10		RVD: No Functional Replacement
MSUD.24937		RVD: No Functional Replacement
P1123P10		RVD: No Functional Replacement
P1233P10		RVD: No Functional Replacement
P2SBA1BA40	PVLBA1BA44	RVD: PVLB10 ASI Bus Module For Single Solenoid Valves - 4-Inputs and 4-Outputs
P2SBA2BA40	PVLBA3BA44	RVD: PVLB10 ASI Bus Module For Single To Double Solenoid Valves - 4-Inputs and 4-Outputs
P2SBA3BA40	PVLBA3BA44	RVD: PVLB10 ASI Bus Module For Single To Double Solenoid Valves - 4-Inputs and 4-Outputs
P2SBA5BA40	PVLBA1BA44	RVD: PVLB10 ASI Bus Module For Single Solenoid Valves - 4-Inputs and 4-Outputs
P2SBA6BA40	PVLBA3BA44	RVD: PVLB10 ASI Bus Module For Single To Double Solenoid Valves - 4-Inputs and 4-Outputs
P2S-EA162BA4V		RVD: No Functional Replacement I2K ASI Bus Head AND Tail Set
P2S-EA162BA8V		RVD: No Functional Replacement I2K ASI Bus Head AND Tail Set
P2S-EA162BP16A		RVD: No Functional Replacement I2K Profibus-DP Head AND Tail Set
P2S-EA162BS16A		RVD: No Functional Replacement I2K Interbus-S Head AND Tail Set
P2S-EA162C19A	P2S-EA162D25AT	RVD: D-Sub 25 Pin Connector
P2S-EW144ES2BQ	P2S-EW144ES2 W/PS3441B45P	RVD: 3/2 NO Valve Module Without Solenoid / Solenoid 12VDC Non-Locking Flush Override
P2S-EW144ES2CQ	P2S-EW144ES2 W/PS3441B49P	RVD: 3/2 NO Valve Module Without Solenoid / Solenoid 12VDC Non-Locking Flush Override
P2S-EW144ES4CQ	P2S-EW144ES4 W/PS3441B42P	RVD: 3/2 NO Valve Module Without Solenoid / Solenoid 24VAC Non-Locking Flush Override
P2S-EW144ES4FQ	P2S-EW144ES4 W/PS3441B53P	RVD: 3/2 NO Valve Module Without Solenoid / Solenoid 110VAC Non-Locking Flush Override
P2S-EW146ES2CQ	P2S-EW146ES2 W/PS3441B49P	RVD: 3/2 NO Valve Module Without Solenoid / Solenoid 24VDC Non-Locking Flush Override
P2S-EW162ES2BQ	P2S-EW162ES2 W/PS3441B45P	RVD: 3/2 NO Valve Module Without Solenoid / Solenoid 12VDC Non-Locking Flush Override
P2S-EW162ES2CQ	P2S-EW162ES2 W/PS3441B49P	RVD: 3/2 NO Valve Module Without Solenoid / Solenoid 24VDC Non-Locking Flush Override
P2S-EW162ES4CQ	P2S-EW162ES4 W/PS3441B42P	RVD: 3/2 NO Valve Module Without Solenoid / Solenoid 24VAC Non-Locking Flush Override
P2S-EW162ES4FQ	P2S-EW162ES4 W/PS3441B53P	RVD: 3/2 NO Valve Module Without Solenoid / Solenoid 110VAC Non-Locking Flush Override
P2S-EW344ES2BQ	P2S-EW344ES2 W/PS3441B45P	RVD: 3/2 NC Valve Module Without Solenoid / Solenoid 12VDC Non-Locking Flush Override
P2S-EW344ES4CQ	P2S-EW344ES4 W/PS3441B42P	RVD: 3/2 NC Valve Module Without Solenoid / Solenoid 24VAC Non-Locking Flush Override
P2S-EW344ES4FQ	P2S-EW344ES4 W/PS3441B53P	RVD: 3/2 NC Valve Module Without Solenoid / Solenoid 110VAC Non-Locking Flush Override
P2S-EW362ES2BQ	P2S-EW362ES2 W/PS3441B45P	RVD: 3/2 NC Valve Module Without Solenoid / Solenoid 12VDC Non-Locking Flush Override
P2S-EW362ES4FR	P2S-EW362ES4 W/PS3441C53P	RVD: 3/2 NC Valve Module Without Solenoid / Solenoid 110VAC Non-Locking Flush Override
P2S-EW444EE2BQ	P2S-EW444EE2 W/PS3441B45P	RVD: 4/2 Valve Module Without Solenoid / Solenoid 12VDC Non-Locking Flush Override
P2S-EW444EE4CQ	P2S-EW444EE4 W/PS3441B42P	RVD: 4/2 Valve Module Without Solenoid / Solenoid 24VAC Non-Locking Flush Override
P2S-EW444EE4FQ	P2S-EW444EE4 W/PS3441B53P	RVD: 4/2 Valve Module Without Solenoid / Solenoid 110VAC Non-Locking Flush Override
P2S-EW444ES2BQ	P2S-EW444ES2 W/PS3441B45P	RVD: 4/2 Valve Module Without Solenoid / Solenoid 12VDC Non-Locking Flush Override

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Cross Reference

Required Obsolete Part No.	Suggested Replacement	Difference of Suggested Replacement and/or Recommended Kits
P2S-EW444ES4CQ	P2S-EW444ES4 W/PS3441B42P	RVD: 4/2 Valve Module Without Solenoid / Solenoid 24VAC Non-Locking Flush Override
P2S-EW444ES4FQ	P2S-EW444ES4 W/PS3441B53P	RVD: 4/2 Valve Module Without Solenoid / Solenoid 110VAC Non-Locking Flush Override
P2S-EW446ES2CQ	P2S-EW446ES2 W/PS3441B49P	RVD: 4/2 Valve Module Without Solenoid / Solenoid 24VDC Non-Locking Flush Override
P2S-EW446ES4FR	P2S-EW446ES4 W/PS3441C53P	RVD: 4/2 Valve Module Without Solenoid / Solenoid 110VAC Non-Locking Flush Override
P2S-EW462EE2BQ	P2S-EW462EE2 W/PS3441B45P	RVD: 4/2 Valve Module Without Solenoid / Solenoid 12VDC Non-Locking Flush Override
P2S-EW462EE4CQ	P2S-EW462EE4 W/PS3441B42P	RVD: 4/2 Valve Module Without Solenoid / Solenoid 24VAC Non-Locking Flush Override
P2S-EW462EE4FQ	P2S-EW462EE4 W/PS3441B53P	RVD: 4/2 Valve Module Without Solenoid / Solenoid 110VAC Non-Locking Flush Override
P2S-EW462ES2BQ	P2S-EW462ES2 W/PS3441B45P	RVD: 4/2 Valve Module Without Solenoid / Solenoid 12VDC Non-Locking Flush Override
P2S-HA162C19A	P2S-HA162D25A	RVD: D-Sub 25 Pin Connector
P2S-HA162H20A		RVD: No Functional Replacement
P2S-HA246	P2S-HA262	RVD: Intermediate Air Supply Module With 1/4" Push-In Connection Ports
P2S-HW3442BQ	P2S-HW3442 W/PS3541B45P	RVD: Stackable Vdc interconnect subbase / Solenoid 12VDC Non-Locking Flush Override
P2S-HW3444CQ	P2S-HW3442 W/PS3541B49P	RVD: Stackable Vdc interconnect subbase / Solenoid 24VDC Non-Locking Flush Override
P2S-HW3444FQ	P2S-HW3442 W/PS3541B53P	RVD: Stackable Vdc interconnect subbase / Solenoid 110VAC Non-Locking Flush Override
P2S-KW1442BQ	P2S-KW1442 W/PS3541B45P	RVD: Stackable Vdc interconnect subbase / Solenoid 12VDC Non-Locking Flush Override
P2S-KW1442CQ	P2S-KW1442 W/PS3541B49P	RVD: Stackable Vdc interconnect subbase / Solenoid 24VDC Non-Locking Flush Override
P2S-KW1444FQ	P2S-KW1442 W/PS3541B53P	RVD: Stackable Vdc interconnect subbase / Solenoid 110VAC Non-Locking Flush Override
P6T-MC04N04-025		RVD: No Functional Replacement
P6T-MC04N07-100		RVD: No Functional Replacement
P8B-AVMP2		RVD: No Functional Replacement
P8C-MC35A		RVD: No Functional Replacement
PESC202		RVD: No Functional Replacement
PESD101	PESD100	RVD: PVLA Solenoid Plug 6 Feet
PESD102	PESD100	RVD: PVLA Solenoid Plug 6 Feet
PLKA15	PLKA11	RVD: Logc OR Element 5/32" Instant Connections
PPRL01		RVD: No Functional Replacement
PPRL02		RVD: No Functional Replacement
PPRL04		RVD: No Functional Replacement
PPRL06		RVD: No Functional Replacement
PPRL07		RVD: No Functional Replacement
PPRL08		RVD: No Functional Replacement
PPRL10		RVD: No Functional Replacement
PPRL11		RVD: No Functional Replacement
PPRL14		RVD: No Functional Replacement
PPRL18		RVD: No Functional Replacement
PPRL20		RVD: No Functional Replacement
PPRL21		RVD: No Functional Replacement
PPRL23		RVD: No Functional Replacement
PPRL34		RVD: No Functional Replacement
PPRL36		RVD: No Functional Replacement
PPRV36		RVD: No Functional Replacement
PPRV37		RVD: No Functional Replacement
PPRV38		RVD: No Functional Replacement
PPRV41		RVD: No Functional Replacement
PS1E1511M		RVD: No Functional Replacement
PS1E2301E		RVD: No Functional Replacement
PS1E2301M		RVD: No Functional Replacement
PS1E2351E		RVD: No Functional Replacement
PS1E2351M		RVD: No Functional Replacement
PS1E2352E	PS1E2302E	RVD: 48 VDC Solenoid Non-Locking Manual Override
PS1E2352J	PS1E2302J	RVD: 12 VDC Solenoid Non-Locking Manual Override
PS1E2391B	PS1E2301B	RVD: 24 VAC Solenoid Non-Locking Manual Override
PS1E2391F	PS1E2301F	RVD: 120 VAC Solenoid Non-Locking Manual Override
PS1E2391M	PS1E2301M	RVD: 240 VAC Solenoid Non-Locking Manual Override
PS1E2392B	PS1E2302B	RVD: 24 VDC Solenoid Non-Locking Manual Override
PS1E2401F		RVD: No Functional Replacement
PS1E2451F		RVD: No Functional Replacement
PS1E2452B		RVD: No Functional Replacement
PVAH2391B		RVD: No Functional Replacement
PVAJ1302J	PVAJ1302J9	RVD: PVLA Solenoid LED W/O Integral Surge Suppression W/O Plug 12VDC Non-Locking Override

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Cross Reference

Required Obsolete Part No.	Suggested Replacement	Difference of Suggested Replacement and/or Recommended Kits
PVAJ5302B0	PVAJ1302B0	RVD: PVLA Solenoid LED W/O Integral Surge Suppression W Plug 24VDC Non-Locking Override
PVAJ5302B9	PVAJ1302B9	RVD: PVLA Solenoid LED W/O Integral Surge Suppression W/O Plug 24VDC Non-Locking Override
PVAJ5302J0	PVAJ1302J0	RVD: PVLA Solenoid LED W/O Integral Surge Suppression W/Plug 12VDC Non-Locking Override
PVAJ5352B0	PVAJ1352B0	RVD: PVLA Solenoid LED W/O Integral Surge Suppression W/Plug 24VDC Non-Locking Override
PVAJ5352B9	PVAJ1352B9	RVD: PVLA Solenoid LED W/O Integral Surge Suppression W/O Plug 24VDC Non-Locking Override
PVAJ5352J0	PVAJ1352J0	RVD: PVLA Solenoid LED W/O Integral Surge Suppression W/Plug 12VDC Non-Locking Override
PVAJ5352J9	PVAJ1352J9	RVD: PVLA Solenoid LED W/O Integral Surge Suppression W/O Plug 12VDC Non-Locking Override
PVAR10		RVD: No Functional Replacement
PVAZF102B		RVD: No Functional Replacement
PVDB141128	PVLB111618	RVD: Inline single remote pilot 1/8" BSP ports
PVDB1416		RVD: No Functional Replacement
PVDB142128	PVLB111618 W/PVAP111	RVD: Inline double remote pilot 1/8" BSP ports
PVDB142428	PVLB111618	RVD: Inline single remote pilot 1/8" BSP ports
PVDB1426		RVD: No Functional Replacement
PVLA/1509545		RVD: No Functional Replacement
PVLA/1509546		RVD: No Functional Replacement
PVLA/1509570		RVD: No Functional Replacement
PVLA111104	PVLA111115	RVD: PVLA port type change from 5/32" tube to M5 connection
PVLA111304J50	PVLA111304 W/PVLAJ1352J0	RVD: PVLA 5/32" tube valve less solenoid / Solenoid LED W/O Integral Surge Suppression W/Plug 12VDC Locking Override
PVLA111315J50	PVLA111315 W/PVLAJ1352J0	RVD: PVLA M5 valve less solenoid / Solenoid LED W/O Integral Surge Suppression W/O Plug 12VDC Locking Override
PVLA111315B50	PVLA111315 W/PVLAJ1352B0	RVD: PVLA M5 valve less solenoid / Solenoid LED W/O Integral Surge Suppression W/Plug 24VDC Locking Override
PVLA112104	PVLA112115	RVD: PVLA port type change from 5/32" tube to M5 connection
PVLA112304B40	PVLA112304 W/PVLAJ1302B0	RVD: PVLA 5/32" tube valve less solenoid / Solenoid LED W/O Integral Surge Suppression W/Plug 24VDC Non- Locking Override
PVLA112304J40	PVLA112304 W/PVLAJ1302J0	RVD: PVLA 5/32" tube valve less solenoid / Solenoid LED W/O Integral Surge Suppression W/Plug 12VDC Non- Locking Override
PVLA112315B40	PVLA112315 W/PVLAJ1302B0	RVD: PVLA M5 valve less solenoid / Solenoid LED W/O Integral Surge Suppression W/Plug 24VDC Non-Locking Override
PVLA112315J40	PVLA112315 W/PVLAJ1302J0	RVD: PVLA M5 valve less solenoid / Solenoid LED W/O Integral Surge Suppression W/Plug 12VDC Non-Locking Override
PVLA121104	PVLA121115	RVD: PVLA port type change from 5/32" tube to M5 connection
PVLA121304B50	PVLA121304 W/PVLAJ1352B0	RVD: PVLA 5/32" tube valve less solenoid / Solenoid LED W/O Integral Surge Suppression W/Plug 24VDC Locking Override
PVLA121304J50	PVLA121304 W/PVLAJ1302J0	RVD: PVLA 5/32" tube valve less solenoid / Solenoid LED W/O Integral Surge Suppression W/O Plug 12VDC Locking Override
PVLA121315J50	PVLA121315 W/PVLAJ1302J0	RVD: PVLA M5 valve less solenoid / Solenoid LED W/O Integral Surge Suppression W/O Plug 12VDC Locking Override
PVLA121315B50	PVLA121315 W/PVLAJ1352B0	RVD: PVLA M5 valve less solenoid / Solenoid LED W/O Integral Surge Suppression W/Plug 24VDC Locking Override
PVLA122104	PVLA122115	RVD: PVLA port type change from 5/32" tube to M5 connection
PVLA122304B40	PVLA122304 W/PVLAJ1302B0	RVD: PVLA 5/32" tube valve less solenoid / Solenoid LED W/O Integral Surge Suppression W/Plug 24VDC Non- Locking Override
PVLA122304J40	PVLA122304 W/PVLAJ1302J0	RVD: PVLA 5/32" tube valve less solenoid / Solenoid LED W/O Integral Surge Suppression W/O Plug 12VDC Non- Locking Override
PVLA122315B40	PVLA122315 W/PVLAJ1302B0	RVD: PVLA M5 valve less solenoid / Solenoid LED W/O Integral Surge Suppression W/Plug 24VDC Non- Locking Override
PVLA122315J40	PVLA122315 W/PVLAJ1302J0	RVD: PVLA M5 valve less solenoid / Solenoid LED W/O Integral Surge Suppression W/O Plug 12VDC Non- Locking Override
PVLA1718	PVLA17187	RVD: Single Supply Head / Tail Set 1/8" NPT Port Size
PVLA1728	PVLA17287	RVD: Dual Supply Head / Tail Set 1/8" NPT Port Size
PVLB101606W1	PVLB1016067W1	RVD: PVLB10 Port type change from 6mm tube to 1/4" tube connection
PVLB101606W2	PVLB1016067W2	RVD: PVLB10 Port type change from 6mm tube to 1/4" tube connection
PVLB101618W1	PVLB1016187W1	RVD: PVLB10 Port type change from 1/8" BSP to 1/8" NPT connection
PVLB101618W2	PVLB1016187W2	RVD: PVLB10 Port type change from 1/8" BSP to 1/8" NPT connection
PVLB102606W1	PVLB1026067W1	RVD: PVLB10 Port type change from 6mm tube to 1/4" tube connection
PVLB102606W2	PVLB1026067W2	RVD: PVLB10 Port type change from 6mm tube to 1/4" tube connection
PVLB102618W1	PVLB1026187W1	RVD: PVLB10 Port type change from 1/8" BSP to 1/8" NPT connection

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Cross Reference

Required Obsolete Part No.	Suggested Replacement	Difference of Suggested Replacement and/or Recommended Kits
PVLB102618W2	PVLB1026187W2	RVD: PVLB10 Port type change from 1/8" BSP to 1/8" NPT connection
PVLB1056067W1	PVLB1056187W1	RVD: PVLB10 Port type change from 1/4" tube to 1/8" NPT connection
PVLB1056067W2	PVLB1056187W2	RVD: PVLB10 Port type change from 1/4" tube to 1/8" NPT connection
PVLB105606W1	PVLB1056187W1	RVD: PVLB10 Port type change from 6mm tube to 1/4" tube connection
PVLB105606W2	PVLB1056187W2	RVD: PVLB10 Port type change from 1/8" BSP to 1/8" NPT connection
PVLB105618W1	PVLB1056187W1	RVD: PVLB10 Port type change from 1/8" BSP to 1/8" NPT connection
PVLB105618W2	PVLB1056187W2	RVD: PVLB10 Port type change from 1/8" BSP to 1/8" NPT connection
PVLB107606W1	PVLB1076067W1	RVD: PVLB10 Port type change from 6mm tube to 1/4" tube connection
PVLB107606W2	PVLB1076067W2	RVD: PVLB10 Port type change from 6mm tube to 1/4" tube connection
PVLB107618W1	PVLB1076187W1	RVD: PVLB10 Port type change from 1/8" BSP to 1/8" NPT connection
PVLB107618W2	PVLB1076187W2	RVD: PVLB10 Port type change from 1/8" BSP to 1/8" NPT connection
PVLB108606W1	PVLB1086067W1	RVD: PVLB10 Port type change from 6mm tube to 1/4" tube connection
PVLB108606W2	PVLB1086067W2	RVD: PVLB10 Port type change from 6mm tube to 1/4" tube connection
PVLB108618W1	PVLB1086187W1	RVD: PVLB10 Port type change from 1/8" BSP to 1/8" NPT connection
PVLB108618W2	PVLB1086187W2	RVD: PVLB10 Port type change from 1/8" BSP to 1/8" NPT connection
PVLB111606	PVLB111618	RVD: PVLB10 Port type change from 6mm tube to 1/8" BSP connection
PVLB112606	PVLB112618	RVD: PVLB10 Port type change from 6mm tube to 1/8" BSP connection
PVLB1156067		RVD: No Functional Replacement
PVLB1156187		RVD: No Functional Replacement
PVLB1176067		RVD: No Functional Replacement
PVLB1176187		RVD: No Functional Replacement
PVLB118606		RVD: No Functional Replacement
PVLB1186067		RVD: No Functional Replacement
PVLB1186187		RVD: No Functional Replacement
PVLC101608W1	PVLC1016097W1	RVD: PVLC10 Port type change from 8mm tube to 3/8" tube connection
PVLC101608W2	PVLC1016097W2	RVD: PVLC10 Port type change from 8mm tube to 3/8" tube connection
PVLC101619W1	PVLC1016197W1	RVD: PVLC10 Port type change from 1/4" BSP to 1/4" NPT connection
PVLC101619W2	PVLC1016197W2	RVD: PVLC10 Port type change from 1/4" BSP to 1/4" NPT connection
PVLC102608W1	PVLC1026097W1	RVD: PVLC10 Port type change from 8mm tube to 3/8" tube connection
PVLC102608W2	PVLC1026097W2	RVD: PVLC10 Port type change from 8mm tube to 3/8" tube connection
PVLC102619W1	PVLC1026197W1	RVD: PVLC10 Port type change from 1/4" BSP to 1/4" NPT connection
PVLC102619W2	PVLC1026197W2	RVD: PVLC10 Port type change from 1/4" BSP to 1/4" NPT connection
PVLC105608W1	PVLC1056197W1	RVD: PVLC10 Port type change from 8mm tube to 1/4" NPT connection
PVLC105608W2	PVLC1056197W2	RVD: PVLC10 Port type change from 8mm tube to 1/4" NPT connection
PVLC1056097W1	PVLC1056197W1	RVD: PVLC10 Port type change from 3/8" tube to 1/4" NPT connection
PVLC1056097W2	PVLC1056197W2	RVD: PVLC10 Port type change from 3/8" tube to 1/4" NPT connection
PVLC105619W1	PVLC1056197W1	RVD: PVLC10 Port type change from 1/4" BSP to 1/4" NPT connection
PVLC105619W2	PVLC1056197W2	RVD: PVLC10 Port type change from 1/4" BSP to 1/4" NPT connection
PVLC107608W1	PVLC1076197W1	RVD: PVLC10 Port type change from 8mm tube to 1/4" NPT connection
PVLC107608W2	PVLC1076197W2	RVD: PVLC10 Port type change from 8mm tube to 1/4" NPT connection
PVLC1076097W1	PVLC1076197W1	RVD: PVLC10 Port type change from 3/8" tube to 1/4" NPT connection
PVLC1076097W2	PVLC1076197W2	RVD: PVLC10 Port type change from 3/8" tube to 1/4" NPT connection
PVLC107619W1	PVLC1076197W1	RVD: PVLC10 Port type change from 1/4" BSP to 1/4" NPT connection
PVLC107619W2	PVLC1076197W2	RVD: PVLC10 Port type change from 1/4" BSP to 1/4" NPT connection
PVLC108608W1	PVLC1086197W1	RVD: PVLC10 Port type change from 8mm tube to 1/4" NPT connection
PVLC108608W2	PVLC1086197W2	RVD: PVLC10 Port type change from 8mm tube to 1/4" NPT connection
PVLC1086097W1	PVLC1086197W1	RVD: PVLC10 Port type change from 3/8" tube to 1/4" NPT connection
PVLC1086097W2	PVLC1086197W2	RVD: PVLC10 Port type change from 3/8" tube to 1/4" NPT connection
PVLC108619W1	PVLC1086197W1	RVD: PVLC10 Port type change from 1/4" BSP to 1/4" NPT connection
PVLC108619W2	PVLC1086197W2	RVD: PVLC10 Port type change from 1/4" BSP to 1/4" NPT connection
PVLC111608	PVLC111619	RVD: PVLC10 Port type change from 8mm tube to 1/4" BSP connection
PVLC112608	PVLC112619	RVD: PVLC10 Port type change from 8mm tube to 1/4" BSP connection
PVLC112419		RVD: No Functional Replacement
PVLC115608		RVD: No Functional Replacement
PVLC1156097		RVD: No Functional Replacement
PVLC1156197		RVD: No Functional Replacement
PVLC117608		RVD: No Functional Replacement
PVLC1176097		RVD: No Functional Replacement
PVLC1176197		RVD: No Functional Replacement
PVLC118608		RVD: No Functional Replacement

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Required Obsolete Part No.	Suggested Replacement	Difference of Suggested Replacement and/or Recommended Kits
PVLC1186097		RVD: No Functional Replacement
PVLC1186197		RVD: No Functional Replacement
PVLC1276097	PVLC1276197	RVD: PVLC10 Port type change from 3/8" tube to 1/4" NPT connection
PVLC1286097	PVLC1286197	RVD: PVLC10 Port type change from 3/8" tube to 1/4" NPT connection
PVLC2713B	PVLC27137B	RVD: Air supply module for serial bus communication port size change from 3/8" BSP to 3/8" NPT
PVLC1713B	PVLC17137B	RVD: Air supply module for serial bus communication port size change from 3/8" BSP to 3/8" NPT
PVLC2713C19A	PVLC17137C19A	RVD: Circular 19 pin connector w/o external pilot and 3/8" NPT ports
PXBM1011T4		RVD: No Functional Replacement
PZDE12017		RVD: No Functional Replacement
PZDE130		RVD: No Functional Replacement
PZDE1302		RVD: No Functional Replacement
PZDE219N1		RVD: No Functional Replacement
PZDF1202		RVD: No Functional Replacement
PZDF1302		RVD: No Functional Replacement
PZDFS124		RVD: No Functional Replacement
PZDL120		RVD: No Functional Replacement
PZDR110		RVD: No Functional Replacement
PZDR1119		RVD: No Functional Replacement
PZDR119		RVD: No Functional Replacement
PZDR122		RVD: No Functional Replacement
PZDR1304		RVD: No Functional Replacement
PZDR133		RVD: No Functional Replacement
PZDR219R2		RVD: No Functional Replacement
PZDS1340		RVD: No Functional Replacement
PZDSD1214		RVD: No Functional Replacement
PZDZ131		RVD: No Functional Replacement
PZTA422		RVD: No Functional Replacement
PZTA432		RVD: No Functional Replacement
PZTA442		RVD: No Functional Replacement
PZTA472		RVD: No Functional Replacement
TR2PK6-4		RVD: No Functional Replacement
W80429701	PXBDD104	RVD: 4 position, 4 output 3/2 rotary selector 22mm
ZB2BD8		RVD: No Functional Replacement
ZB2BY2004		RVD: No Functional Replacement

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Parker Pneumatic

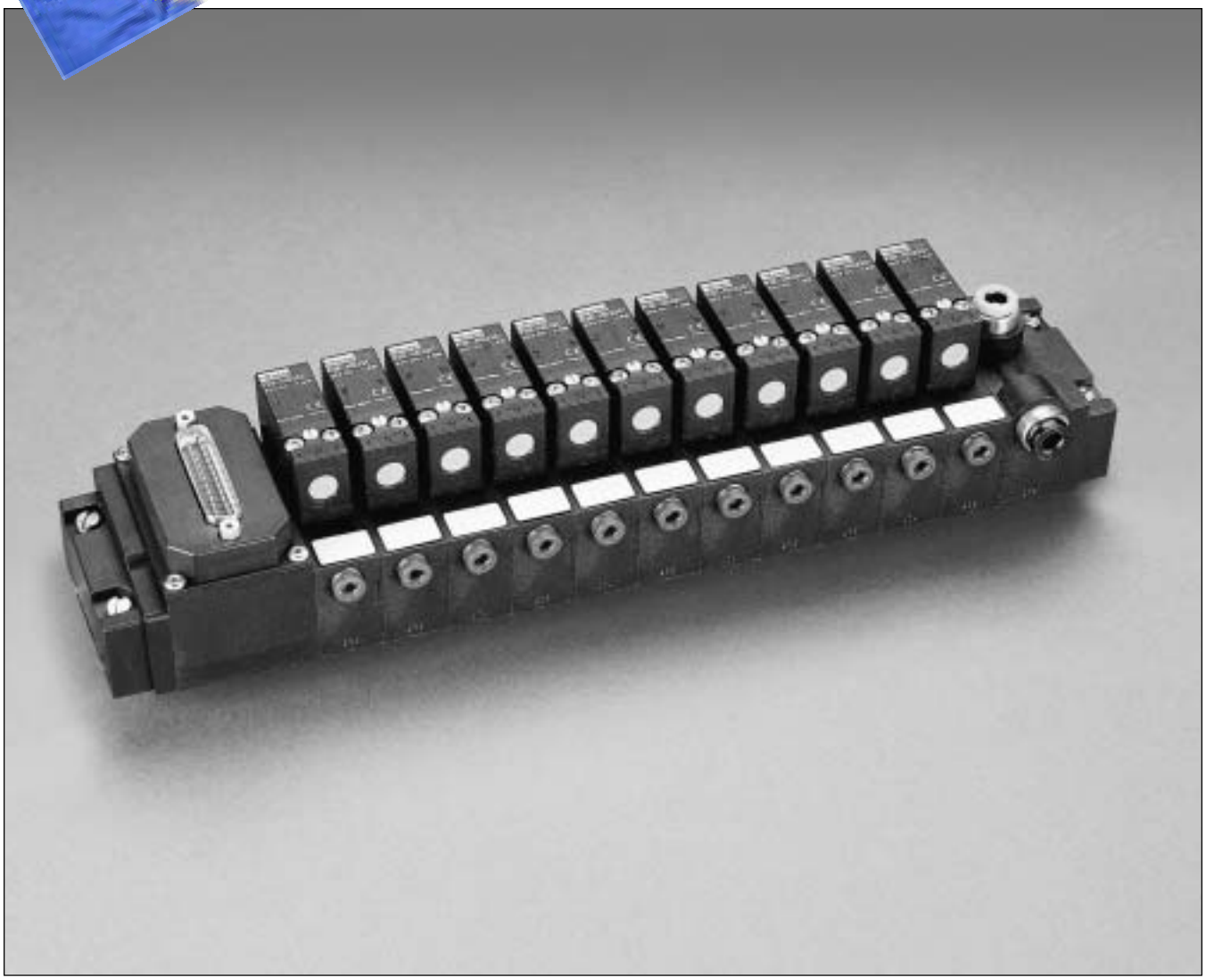
Solstar

Air Control Valves

15mm Solenoid Valves

B

Section B



Bold text part numbers are standard.
Standard text part numbers may have longer lead times.

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Specifications

- 3/2 NO or NC DIN-Rail mounted pilot valves.
- Outlet fittings (Push-In) for 5/32" tubing.
- System modification or expansion simplified by easily adding valves to stack.
- Intermediate supply modules enable different pressures to be used on the same manifold.
- Integrated LED and manual overrides for setup and troubleshooting.

Connectivity

- Simplified plug-in system of electrical connections.
- Completely modular design with high protection (IP65).
- D-Sub, 25-Pin and 19-Pin Circular connectors available.
- Automatic addressing of up to 16 valves.
- Common air supply and exhaust reduce connections to one tube per valve.

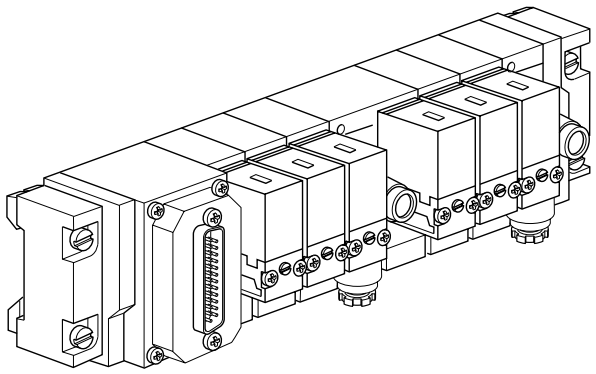
Solenoids

- 15mm Low Watt solenoids are UL certified and marked CE.
- Wide range of voltages available.
- Surge suppression standard.
- Overvoltage protection standard.
- LED standard

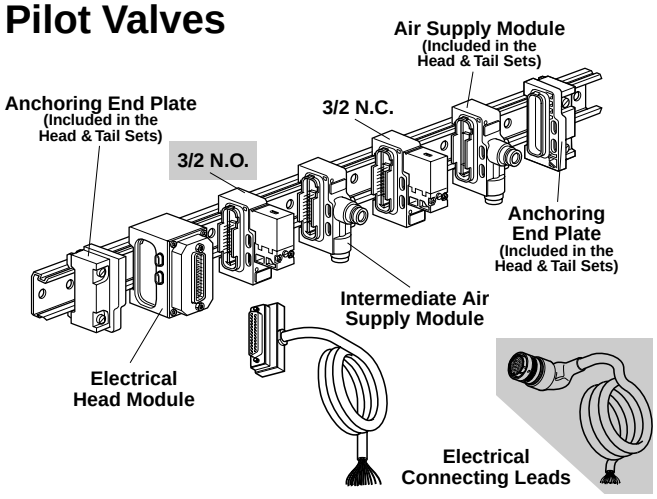
Applications

- Piloting for process control valves
  - Pharmaceutical Equipment
  - Waste Water Treatment Systems
  - Food Processing
  - Chemical Batching
- Industrial Laundry Equipment
- Paint Spray & Dyeing Equipment
- Textile winding applications.
- Vacuum and conveyor applications.

Solstar Manifold Assembly



3/2 NO or NC DIN Rail Mounted Pilot Valves



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Valves

Stackable	Function	Port Type	Tube Size	Type of Current	Voltage	Overrides & Indicator Light
P2S	- HW3	4	4	2	C	Q

Port Type
- **4 Push-In**

Flow
- **HW3 3/2 NC**
- **KW1 3/2 NO**

Tube Size
- **4 4mm - 5/32"**

Type of Current
- **2 DC**
- 4 AC 50/60

Voltage
- B 12V[1]
- **C 24V**
- **F 120/60 and 120/50**

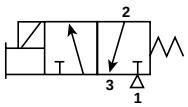
Override & Indicator Light
- **Q Non- Locking Flush & LED**
- R Locking Flush & LED

Notes:
1. Only available in DC.
2. Standard items in **Bold**.

P2S-HW3442CQ
3/2 NC, 5/32", 24VDC,
Non-Locking Flush
Manual Override & LED Indicator

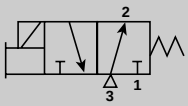
3/2 Normally Non-passing (NNP) / Normally Closed (NC) Valves

All model numbers shown include non-locking manual override.



Voltage	5/32" (4mm) Tube Push-In Connection Ports
12VDC	P2S-HW3442BQ
24VDC	**P2S-HW3442CQ**
24VAC	P2S-HW3444CQ
120VAC	**P2S-HW3444FQ**

3/2 Normally Passing (NP) / Normally Open (NO) Valves



Voltage	5/32" (4mm) Tube Push-In Connection Ports
12VDC	P2S-KW1442BQ
24VDC	**P2S-KW1442CQ**
24VAC	P2S-KW1444CQ
120VAC	**P2S-KW1444FQ**

B

Head & Tail Sets and Intermediate Air Supply Modules

Stackable	Type	Port Type	Tube Size	Type of Connector	Option Level
P2S-HA	**1**	**6**	**2**	**D25**	**A**

Type	
1	**Head & Tail Set[1]**
2	**Intermediate Air Module**

Port Type	
4	Metric Push-In
6	**Inch Push-In**

Tube Size	
2	**1/4"**
6	6mm

Type of Connector	
D25	**D-Sub, 25-Pin**
C19	19-Pin Circular
Blank	**Intermediate Air Module[3]**

Option Level	
A	**Standard**
Blank	**Intermediate Air Module[3]**

Notes:
1. Air supply module is included in the head and tail set.
2. Standard items in **Bold**.
3. Intermediate Air Supply Module provides air to the valves on the left hand side only. It isolates the valves on the right hand side. For NC valves, the pressure has to be applied at the inlet port and for NO valves, the pressure has to be applied at the exhaust port. The colored rings at these ports may be changed for future references. The inlet port uses a green ring for 1/4" tubing, and a black ring for 6mm tubing. The exhaust port uses a yellow ring for both types.

P2S-HA162D25A
Head & Tail Set with D-Sub, 25-Pin Connector

Head and Tail Sets

Used to mount valves to DIN Rail and provide supply and exhaust ports. All hardware is included.

1/4" Push-in Connection Ports	
P2S-HA162D25A	With D-Sub, 25-Pin Connector
P2S-HA162C19A	With 19-Pin Circular Connector

Intermediate Air Supply Module

P2S-HA262	1/4" Push-In Connection Ports
P2S-HA246	6mm Push-In Connection Ports

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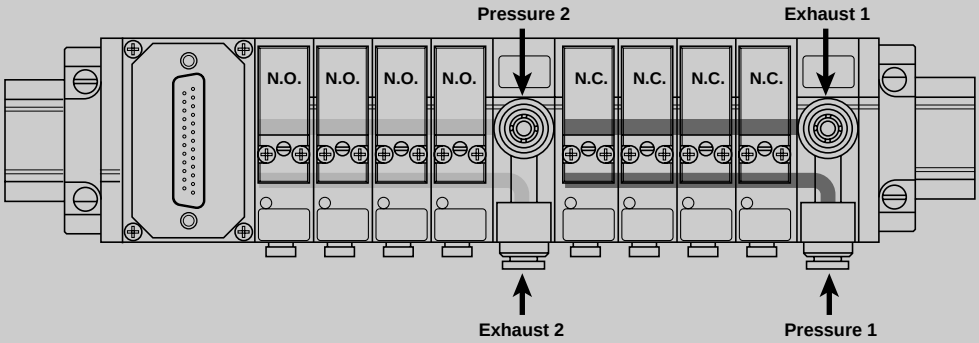
Example 1: Application requires eight, 3/2 NC, Solstar valves with 1/4" supply & exhaust ports. 24VDC with D-Sub 25-Pin Connector.

Qty.	Part Number	Description
8	P2S-HW3442CQ	3/2 NC, 24VDC Valves, Station 1 through 8
1	P2S-HA162D25A	Head & Tail Set with D-Sub, 25-Pin Connector, 1/4" Tube

Example 2: Application requires four 3/2 NC and four 3/2 NO Solstar valves with Intermediate Air Module with 1/4" supply & exhaust ports. 12VDC with D-Sub 25-Pin connector.

Qty.	Part Number	Description
4	P2S-KW1442BQ	3/2 NO, 12VDC Valves, Station 1 through 4
1	P2S-HA262	Intermediate Air Module
4	P2S-HW3442BQ	3/2 NC, 12VDC Valves, Station 5 through 8
1	P2S-HA162D25A	Head & Tail Set with D-Sub, 25-Pin Connector, 1/4" Tube

Notes: NO and NC valves can be used on the same manifold.
All NC and NO valves have to be separated by the Intermediate Air Module P2S-HA***.
The Intermediate Air Supply Module provides air to the valves on the left hand side only.
It isolates the valves on the right hand side. For Example 2 above, look at the illustration below.



Valve Specifications

Air Flow:
NO: 0.033 Cv, 33NL/min
NC: 0.05 Cv, 50NL/min

Air Quality:
Standard shop air, lubricated or non-lubricated, 50µ filtered

Body Material:
Glass Filled Polyamide

Degree of Protection:
IP65 (Washdown)

Life Expectancy:
30 million cycles

Maximum Operating Frequency:
10Hz

Mounting:
35mm (DIN) rail

Operating Medium:
Compressed air

Operating Pressure Range:
0 to 145 PSI (0 to 10 bar)

Operating Temperature Range:
5°F to 140°F (-15°C to 60°C)

Overvoltage Protection:
DC versions are protected up to 300V

Power Consumption:

Hold:	DC 1.8W	AC 2.4VA	NO
Inrush:	DC 1.8W	AC 5.5VA	NO
Hold:	DC 1.8W	AC 2.4VA	NC
Inrush:	DC 1.8W	AC 5.5VA	NC

Response Time:
10 -15 ms @ 90 PSIG

Maximum Allowable Currents:
2000 mA (2 Amp)

⚠ **Simultaneous Operation:**
Some applications require simultaneous use of devices during setup or operation. Under normal single device operation, reliability can be assured by staying within the stated "Maximum Allowable Currents". During simultaneous operation, however, only ten 12VDC solenoids can be operated simultaneously because their total accumulated current = 1000 mA.

Supply and Exhaust Ports:
1/4" and 6mm tube

Surge Suppression:
Diode for DC version
Varistar for AC version

Tube Connections:
Push-In (Instant) fittings

Voltage Tolerance:
+10 to -15% of rated voltage @ 70°F (20° C)

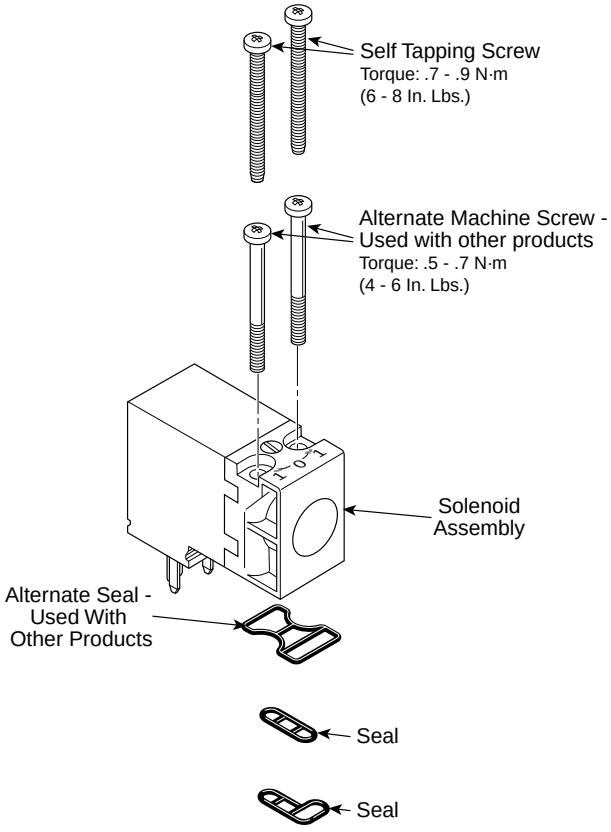
NO (NP) Solenoids

Voltages	Power Consumption	Rated Current	Kit Numbers With Non-Locking Flush Manual Override	Kit Numbers With Locking Flush Manual Override
12VDC	1.8W	150 mA	PS3201B45P	PS3201C45P
24VDC	1.8W	75 mA	PS3201B49P	PS3201C49P
24VAC	2.4VA	100 mA	PS3201B42P	PS3201C42P
115VAC, 50Hz 120VAC, 60Hz	2.4VA	20 mA	PS3201B53P	PS3201C53P

NC (NNP) Solenoids

Voltages	Power Consumption	Rated Current	Kit Numbers With Non-Locking Flush Manual Override	Kit Numbers With Locking Flush Manual Override
12VDC	1.8W	150 mA	PS3541B45P	PS3541C45P
24VDC	1.8W	75 mA	PS3541B49P	PS3541C49P
24VAC	2.4VA	100 mA	PS3541B42P	PS3541C42P
115VAC, 50Hz 120VAC, 60Hz	2.4VA	20 mA	PS3541B53P	PS3541C53P

Notes:
Kit includes: Solenoid, (2) machine screws, (2) self threading screws, (1) gasket, (1) 3-cell gasket.



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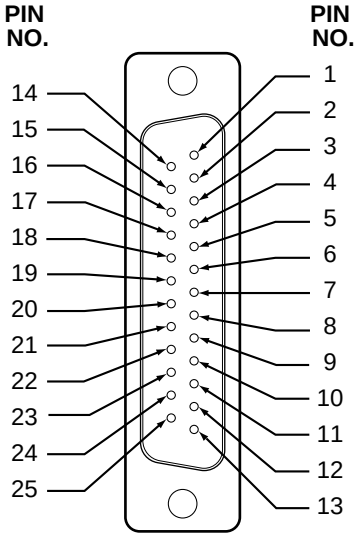
Pin Out Detail
D-Sub, 25-Pin Connector

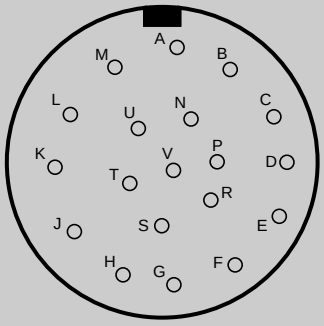


Output Solenoid No.	D-Sub, 25-Pin No.	IP65 Cable Colors
1	13	Green
2	25	Transparent
3	12	Dark Blue
4	24	Light Blue
5	11	Pink
6	23	Purple
7	10	Dark Green / Black
8	22	Yellow
9	9	Light Green / Black
10	21	Yellow / Black
11	8	Blue / Black
12	20	White / Black
13	7	Khaki
14	19	Orange
15	6	White
16	18	Grey
Not Used	5	Red / Black
Not Used	17	Red
Not Used	4	Brown
Valve Common	16	Black

Notes: Solenoids are polarity sensitive. The common must be at OV. Switching must be at the high potential.

Maximum 16 solenoid outputs with one valve (negative) common line on Pin 16.

19-Pin Circular Connector



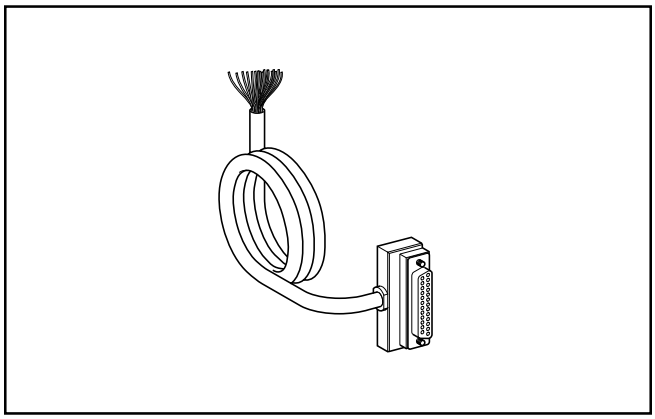
Output Solenoid No.	19-Pin Connector	IP65 Cable Colors
1	A	Pink / Brown
2	B	White / Green
3	C	White / Yellow
4	D	White / Grey
5	E	White / Pink
6	F	Brown / Green
7	G	Red / Blue
8	H	Grey / Pink
9	J	Brown / Yellow
10	K	Violet
11	L	Blue
12	M	Pink
13	N	Grey
14	P	Yellow
15	R	White
16	S	Green
Valve Common	T	Black
Not Used	U	Brown
Not Used	V	Red

Notes: Solenoids are polarity sensitive. The common must be at OV. Switching must be at the high potential.

Maximum 16 solenoid outputs with one valve (negative) common line on Pin T.

B

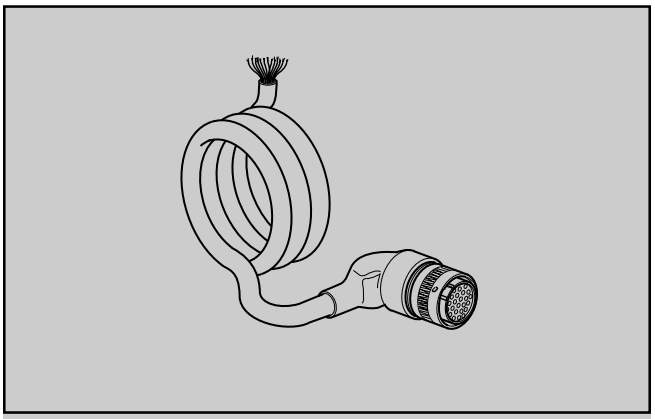
IP65 Cable Assembly



Cable with Female D-Sub, 25-Pin Connector

P8L-MD25A5B	5 Meters / 16.40 Ft

Connection to the control system is through 20 colored wires AWG 24, rated at 2.5 amp. For use with Solstar, Interface 2000, PVLB10 and PVLC10 valves only.



Cable with Female 19-Pin Connector

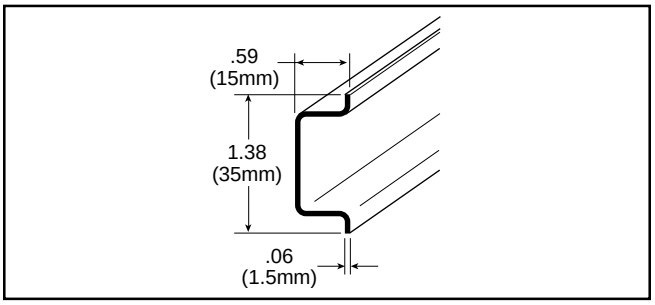
P8L-MC19A5	5 Meters / 16.40 Ft

Connection to the control system is through 19 colored wires AWG 20, rated at 5 amp.

35mm DIN Rail

AM1DE200	1.83 Meters / 6.0 Ft

DIN rail can be mounted to grids or other surfaces to allow snap in mounting of pneumatic and electrical components.



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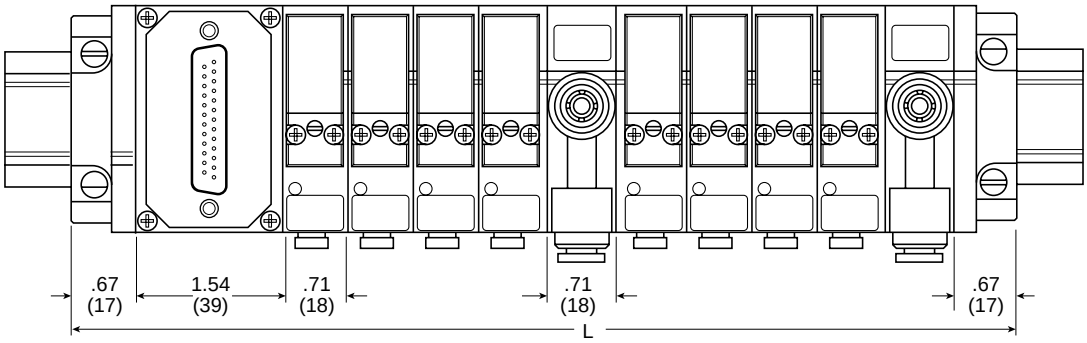
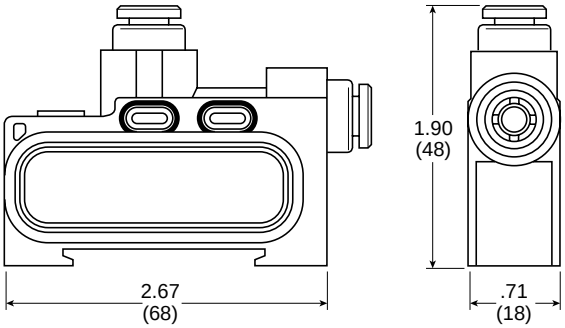
Solstar Manifold with D-Sub, 25-Pin Connector Module and Intermediate Air Supply Module



L = 2.87 (73) + [n x .71 (18)]
n = Number of Valves

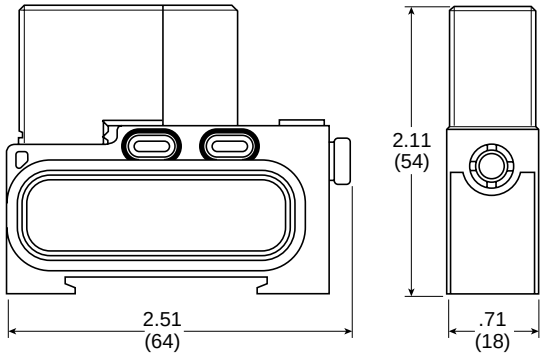
P2S-HA262

Intermediary Air Supply Module



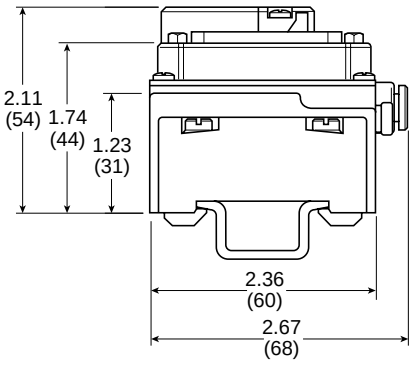
P2S-HW***

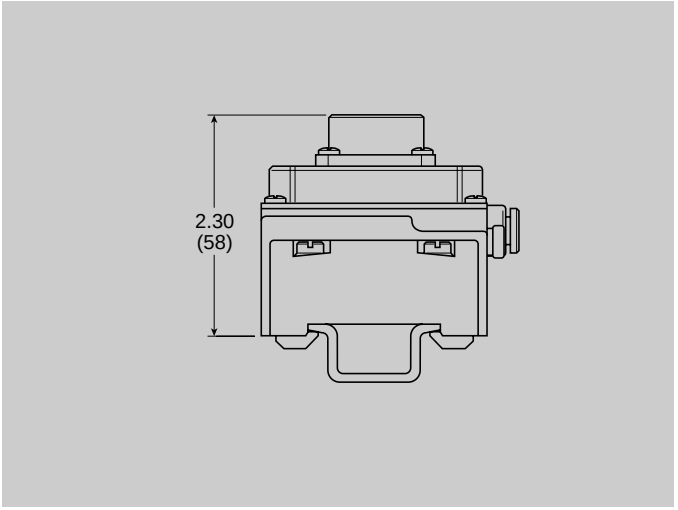
Basic Module with Solenoid Valve



P2S-HA162D25A

Head Module: D-Sub, 25-Pin Connector





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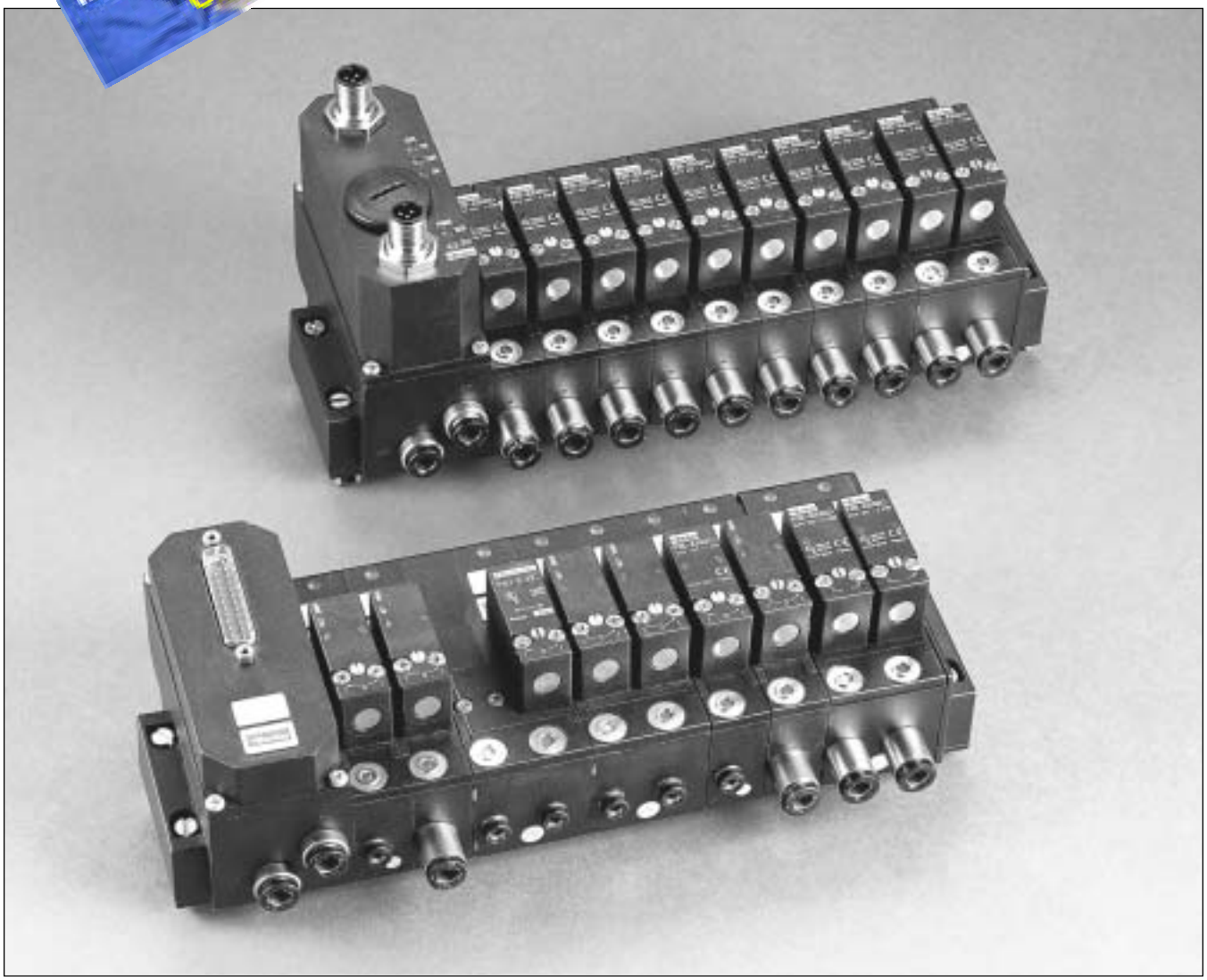
Interface 2000

Air Control Valves

C

la maintenance au quotidien
Cliquez sur l'image !

Section C



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C

Compact, easy to install, reliable, serial bus compatible...

Easy to meet system design needs

- Full flow capacity allows direct operation of small cylinders (single or double acting) or pneumatic piloting of larger control valves (pneumatic or hydraulic).
- Valve configurations in 3/2 or 4/2 (single or double acting).
- 5/32" or 1/4" push-in tube fittings.
- System modification or expansion simplified by easily adding modules to stack.
- Wide range of voltages available.
- Solenoids are CE marked.
- Multiple pressures possible in one assembly.
- Compatibility with *Device**Net***™, Profibus-DP®, Interbus-S® and ASI®.
- Surge suppression, LED's and overvoltage protection standard.

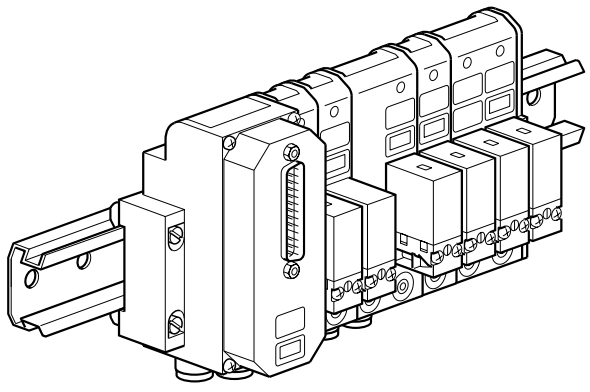
Easy to install in your system

- Modules snap together and mount on 35mm (DIN) rail.
- Common air supply and exhaust connections through the manifold.
- Completely modular design with high protection (IP65).
- Small serial bus electronic package.
- Automatic addressing of up to 16 valves.

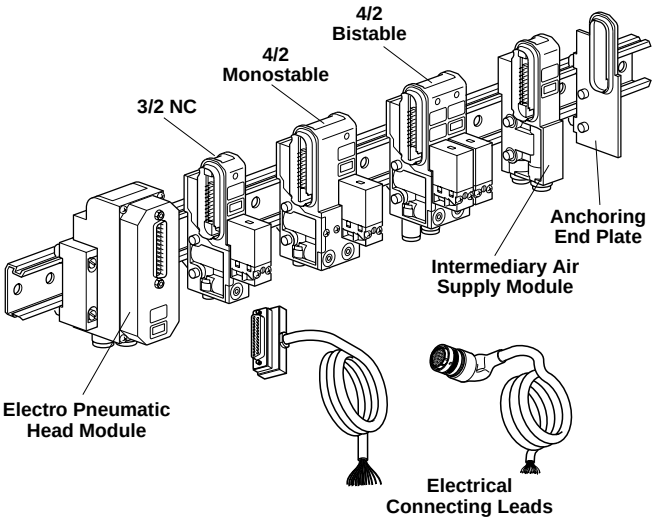
Easy to maintain system operation

- Manual override for setup and troubleshooting.
- Poppet design for long, trouble free life (lubricated or non-lubricated air).
- Integrated diagnostics (main air test point, pneumatic output indicator, suppressor / LED) provide system status at a glance.
- Modular design and easy connection aid in module replacement or system expansion.

Interface 2000 Manifold Assembly



3/2 NO, 3/2 NC and 4/2 Function



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Valves with Solenoid Operators

Stackable	Function	Port Type	Tube Size	Operator	Return	Type of Current	Voltage	Override & Indicator
P2S-EW	3	6	2	E	S	2	C	Q

Function
- **1 3/2 NO (Sgl Solenoid Only)**
- **3 3/2 NC (Sgl Solenoid Only)**

Port Type
- **4 Metric Push-In**
- **6 Inch Push-In**

Tube Size
- **2 1/4"**
- **4 4mm - 5/32"**
- 6 6mm

Operator
- **E Solenoid**

Return
- **S Single Solenoid Spring Return**

Type of Current
- **2 DC**
- **4 AC 50/60**

Voltage
- B 12V[1]
- **C 24V**
- **F 120/60 and 120/50**

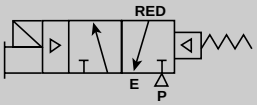
Override & Indicator
- **Q Non-Locking Flush & LED**
- R Locking Flush & LED

Notes:
1. Only available in DC.
2. All units include pop-up indicator for pneumatic output.
   Red indicates NNP / NC function,
   Yellow indicates NP / NO function.
3. Standard items in **Bold**.

P2S-EW362ES2CQ
Single Solenoid - Spring Return 3/2
(Shown with 1/4" Push-In Fitting)

3/2 Normally Non-passing (NNP) / Normally Closed (NC) Valves

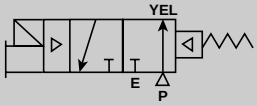
All model numbers shown include non-locking manual override.



Voltage	Output Port Push-In Connection Size	
	5/32" (4mm) Tube	1/4" Tube
12VDC	P2S-EW344ES2BQ	P2S-EW362ES2BQ
24VDC	**P2S-EW344ES2CQ**	**P2S-EW362ES2CQ**
24VAC	P2S-EW344ES4CQ	P2S-EW362ES4CQ
120VAC	**P2S-EW344ES4FQ**	**P2S-EW362ES4FQ**

3/2 Normally Passing (NP) / Normally Open (NO) Valves

All model numbers shown include non-locking manual override.



Voltage	Output Port Push-In Connection Size	
	5/32" (4mm) Tube	1/4" Tube
12VDC	P2S-EW144ES2BQ	P2S-EW162ES2BQ
24VDC	**P2S-EW144ES2CQ**	**P2S-EW162ES2CQ**
24VAC	P2S-EW144ES4CQ	P2S-EW162ES4CQ
120VAC	**P2S-EW144ES4FQ**	**P2S-EW162ES4FQ**

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C

Valves with Solenoid Operators

Stackable	Function	Port Type	Tube Size	Operator	Return	Type of Current	Voltage	Override & Indicator
P2S-EW	4	6	2	E	S	2	C	Q

Function
4 4/2 (Single or Double Solenoid)

Operator
E Solenoid

Type of Current
2 DC
4 AC 50/60

Voltage
B 12V[1]
C 24V
F 120/60 and 120/50

Tube Size
2 1/4"
4 4mm - 5/32"
6 6mm

Return
E Double Solenoid
S Single Solenoid Spring Return

Port Type
4 Metric Push-In
6 Inch Push-In

Override & Indicator
Q Non- Locking Flush & LED
R Locking Flush & LED

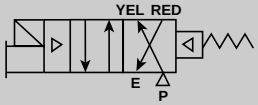
Notes:
1. Only available in DC.
2. All units include pop-up indicator for pneumatic output.
   Red indicates NNP / NC function,
   Yellow indicates NP / NO function.
3. Standard items in **Bold**.

P2S-EW444ES2CQ
(Shown with 5/32" - 4mm Push-In Fitting)

P2S-EW462EE2CQ
(Shown with 1/4" Push-In Fitting)

Single Solenoid - Spring Return 4/2 Valves

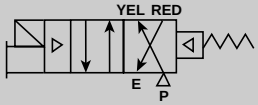
All model numbers shown include non-locking manual override.



Voltage	Output Port Push-In Connection Size	
	5/32" (4mm) Tube	1/4" Tube
12VDC	P2S-EW444ES2BQ	P2S-EW462ES2BQ
24VDC	**P2S-EW444ES2CQ**	**P2S-EW462ES2CQ**
24VAC	P2S-EW444ES4CQ	P2S-EW462ES4CQ
120VAC	**P2S-EW444ES4FQ**	**P2S-EW462ES4FQ**

Double Solenoid 4/2 Valves

All model numbers shown include non-locking manual override.



Voltage	Output Port Push-In Connection Size	
	5/32" (4mm) Tube	1/4" Tube
12VDC	P2S-EW444EE2BQ	P2S-EW462EE2BQ
24VDC	**P2S-EW444EE2CQ**	**P2S-EW462EE2CQ**
24VAC	P2S-EW444EE4CQ	P2S-EW462EE4CQ
120VAC	**P2S-EW444EE4FQ**	**P2S-EW462EE4FQ**

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Head & Tail Sets and Intermediate Air Supply Modules

Stackable	Accessory Type	Port Size	Tube Size	Type of Connector	Option Level
P2S-EA	**1**	**6**	**2**	**D25**	**A**

Type

1	**Head & Tail Set**
2	**Intermediate Air Supply Module**

Port Type

4	Metric Push-In
6	**Inch Push-In**

Tube Size

2	**1/4"**
6	6mm

Type of Connector

D25	**D-Sub 25-Pin[2]**
C19	19-Pin Circular[2]
Blank	**Intermediate Air Supply Module**

Option Level

A	For 19-Pin Circular[2]
AT	**For D-Sub 25-Pin[2]**
Blank	**Intermediate Air Supply Module**

Notes:
1. Standard items in **Bold**.
2. A maximum of 16 solenoid addresses.

P2S-EA162D25A
Head & Tail Set with D-Sub 25-Pin Connector

P2S-EA262
Intermediate Air Supply Module

Head and Tail Sets

Used to mount valves to DIN Rail and provide supply and exhaust ports. All hardware is included.

1/4" Push-in Connection Ports	
P2S-EA162D25AT	With D-Sub, 25-Pin Connector
P2S-EA162C19A	With 19-Pin Circular Connector

Intermediate Air Supply Module

Used when multiple pressures are required on a manifold. Plugs are included to isolate supply and / or exhaust ports.

P2S-EA262	1/4" Push-In Connection Ports
P2S-EA246	6mm Push-In Connection Ports

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C

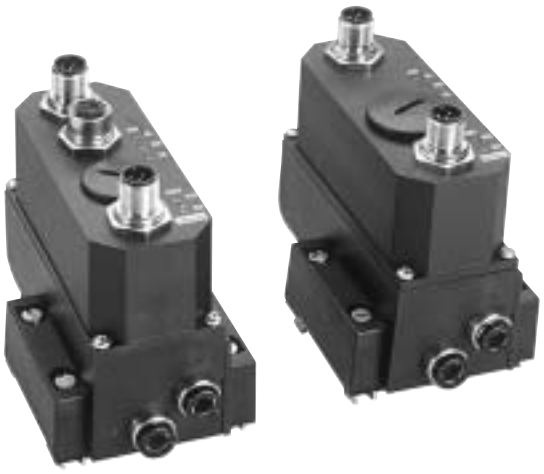
Head & Tail Sets with Serial Bus Communications

Stackable	Accessory Type	Port Size	Tube Size	Type of Connection	Type of Bus	Number of Outputs	Option Level
P2S-EA	**1**	**6**	**2**	**B**	**D**	**16**	**A**

Type	Tube Size	Type of Bus	Option Level
1 Head & Tail Set	**2 1/4"**	A ASI	**A Standard**
	6 6mm	**D DeviceNet**	V Vampire Plug[3]
		P Profibus-DP	
		S Interbus-S	

Port Type	Type of Connection	Number of Outputs
4 Metric Push-In	**B Bus**	4 4 Outputs[2]
6 Inch Push-In		8 8 Outputs[2]
		16 16 Outputs

Notes:
1. Standard items in **Bold**.
2. Only available with ASI Bus Communications
3. Select when ordering ASI Bus Communications.



P2S-EA162BP16A
Head & Tail Set with Profibus-DP®

P2S-EA162BD16A
Head & Tail Set with *DeviceNet™*

Head and Tail Sets with Serial Bus Communications

Used to mount valves to DIN Rail and provide supply and exhaust ports. All hardware is included.

1/4" Push-in Connection Ports	
P2S-EA162BA4V	With ASI®
P2S-EA162BD16A	With *DeviceNET*™
P2S-EA162BP16A	With Profibus-DP®
P2S-EA162BS16A	With Interbus-S®

Note: EDS / GSD files can be downloaded from our website http://www. parker.com/pneumatic. Click on Solenoid / Air Operated Valves and then click on Interface 2000 Valves and finally click on Service / Maintenance.

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Example 1: Application requires ten, 3/2 NC,
Interface 2000 valves with 1/4" tube size.
24VDC with D-Sub, 25-Pin Connector.

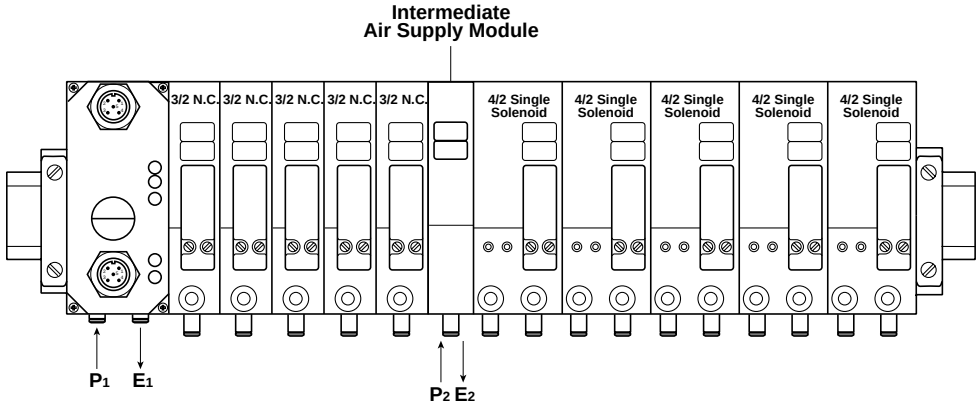
Qty.	Part Number	Description
10	P2S-EW362ES2CQ	3/2 NC, 24VDC, 1/4" Tube Valves
1	P2S-EA162D25A	Head & Tail Set with D-Sub, 25-Pin Connector, 1/4" Tube

Example 2: Application requires five, 3/2 NC and five 4/2 single solenoid Interface 2000 valves with Intermediate Air Supply Module with 1/4" tube size, 24VDC with *Device**Net***™.

Qty.	Part Number	Description
5	P2S-EW362ES2CQ	3/2 NC, 24VDC, 1/4" Tube Valves
1	P2S-EA262	Intermediate Air Supply Module, 1/4" Tube
5	P2S-EW462ES2CQ	4/2 Single Solenoid, 24VDC, 1/4" Tube Valves
1	P2S-EA162BD16A	Head & Tail Set with *Device**Net***™, 1/4" Tube

Notes:

For Example 2 above, look at illustration below. Isolator plugs provided with the Intermediate Air Supply Module have to be mounted on the left hand side of the Intermediate Air Supply Module. This isolates the 3/2 NC valves on the left hand side.



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C

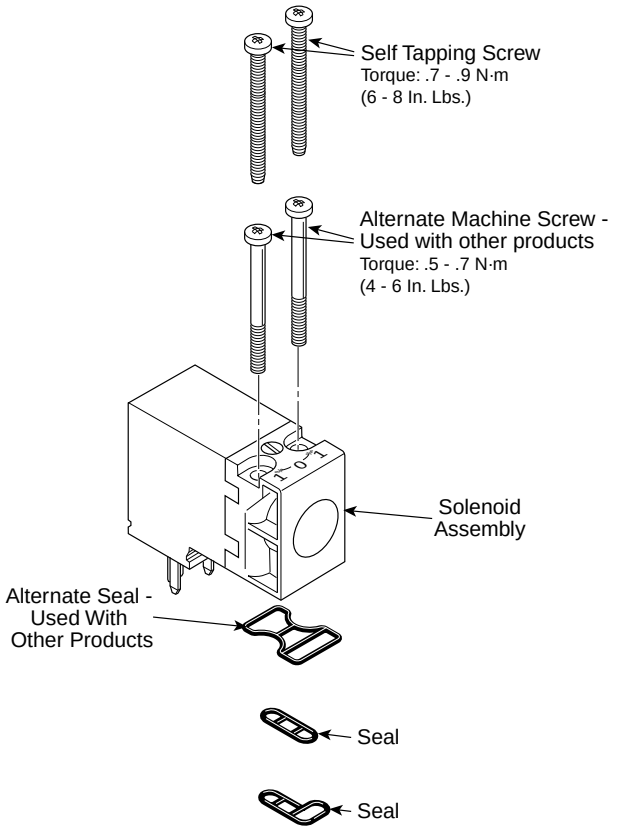
NC (NNP) Solenoids

Voltages	Power Consumption	Holding Current	Id (Drop-Out Current)*	Kit Numbers With Non-Locking Flush Manual Override	Kit Numbers With Locking Flush Manual Override
12VDC	1.2W	100 mA	10 mA	PS3441B45P	PS3441C45P
24VDC	1.2W	50 mA	5 mA	PS3441B49P	PS3441C49P
24VAC	1.6VA	65 mA	22 mA	PS3441B42P	PS3441C42P
110VAC, 50Hz 120VAC, 60Hz	1.6VA	13.3 mA	5 mA	PS3441B53P	PS3441C53P

* When using a programmable controller, be sure that the leakage current of the controller outputs is lower than the drop-out current value.

Notes:

Kit includes: Solenoid, (2) machine screws, (2) self threading screws, (1) gasket, (1) 3-cell gasket, (1) L-shaped 3-cell gasket.



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Valve Specifications

Air Flow:
0.19 Cv, 200NL/min

Air Quality:
Standard shop air, lubricated or non-lubricated, 50µ filtered

Body Material:
Glass filled polyamide

Degree Of Protection:
IP65 (Washdown)

LED / Noise Suppressor:
Combination LED (Green) and zener diode

Life Expectancy:
30 million operations

Maximum Operating Frequency:
10Hz

Mounting:
35mm (DIN) rail

Operating Medium:
Compressed air

Operating Pressure Range:
45 to 120 PSI (3 to 8 bar)

Operating Principal:
Solenoid pilot operated poppet valve

Operating Temperature Range:
5°F to 140°F (-15°C to 60°C)

Overvoltage Protection:
DC versions are protected up to 300V

Power Consumption:

Hold:	DC 1.2W	AC 1.6VA
Inrush:	DC 1.2W	AC 3.5VA

Response Time:
10 - 15 ms @ 90 PSIG

Seal Material:
Poppet - Polyurethane
Seals - Nitrile (Buna N)

Supply and Exhaust Ports:
1/4"

Maximum Allowable Currents:
1000 mA (1 Amp)

⚠ **Simultaneous Operation:**
Some applications require simultaneous use of devices during setup or operation. Under normal single device operation, reliability can be assured by staying within the stated "Maximum Allowable Currents". During simultaneous operation, however, only ten 12VDC solenoids can be operated simultaneously because their total accumulated current = 1000 mA.

Surge Suppression:
Diode for DC version
Varistar for AC version

Tube Connections:
Push-In (instant) fittings
5/32" or 1/4"

Voltage Tolerance:
+10 to -15% of rated voltage @ 70°F (20° C)

Serial Bus Module Specifications

Bus Connection on Head Module:
Interbus-S:
Connector M23 male 5-Pins (Bus IN)

Connector M23 female 5-Pins (Bus Out)

Profibus-DP:
Micro Connector (M12) male 5 pins (Bus IN)

Micro Connector (M12) female 5 pins (Bus Out)

DeviceNet:
Micro Connector M12 male 5 pins (Bus)

External Power Supply Voltage:
20.4 to 30VDC
(Not required for ASI)

Electrical Power Supply Connection on Head Module:
Micro Connector (M12) male 5 pins

ASI Bus Connection:
Vampire Plug

ASI Bus Supply Voltage:
29.5 to 31.6VDC

Diagnostic Bus:
3 or 4 LED

Diagnostic Voltage:
2 LED

EMC Protection:
IEC 801-2 level 3
IEC 801-3 level 3
IEC 801-4 level 3

Number of Outputs:
16 Max. for DeviceNet, Interbus-S, Profibus-DP

8 Max. for ASI

Protection Level:
IP65 (Washdown)

Shock:
IEC 68-2-27 15g 11 ms

Short Circuit Protection:
Diagnostic by LED

Supply and Exhaust Ports:

Solenoid Supply Voltage:
21.6 to 26.4VDC

Storage Temperature:
-40°F to 158°F
(-40°C to 70°C)

Working Temperature:
32°F to 130°F
(0°C to 55°C),
Intermittent Duty (60% Rating)

32°F to 104°F
(0°C to 40°C),
Continuous Duty (100% Rating)

Note: For Installation Instructions (V-660P) and EDS/GSD files, visit our website http://www. parker.com/pneumatic. Click on Solenoid/Air Operated Valves and then click on Interface 2000 Valves and finally click on Service/Maintenance.

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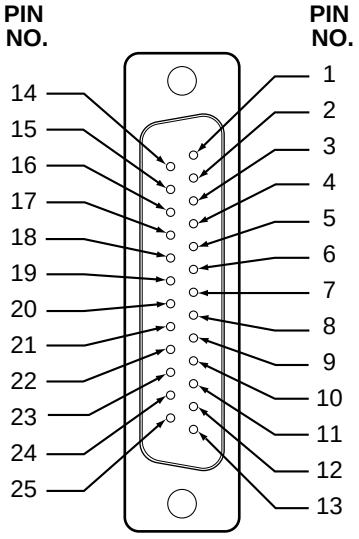
C

Pin Out Detail
D-Sub, 25-Pin Connector

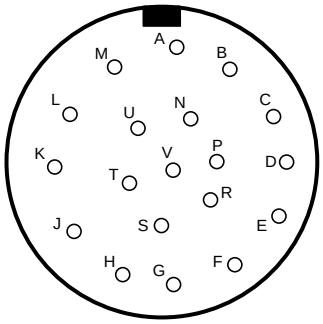


Output Solenoid No.	D-Sub, 25-Pin No.	IP65 Cable Colors
1	13	Green
2	25	Transparent
3	12	Dark Blue
4	24	Light Blue
5	11	Pink
6	23	Purple
7	10	Dark Green / Black
8	22	Yellow
9	9	Light Green / Black
10	21	Yellow / Black
11	8	Blue / Black
12	20	White / Black
13	7	Khaki
14	19	Orange
15	6	White
16	18	Grey
Not Used	5	Red / Black
Not Used	17	Red
Not Used	4	Brown
Valve Common	16	Black

Notes: Solenoids are polarity sensitive. The common must be at OV. Switching must be at the high potential.

Maximum 16 solenoid outputs with one valve (negative) common line on Pin 16.

19-Pin Circular Connector

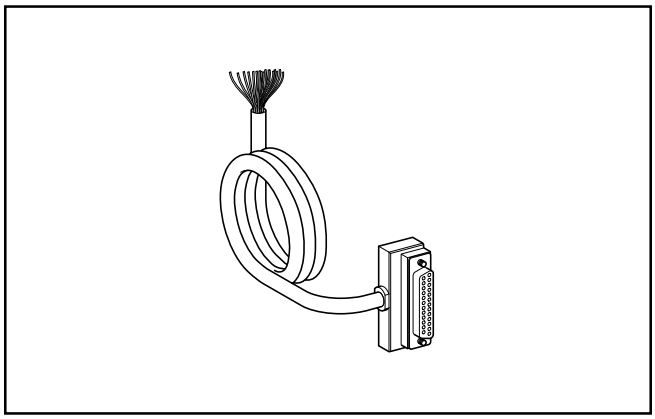


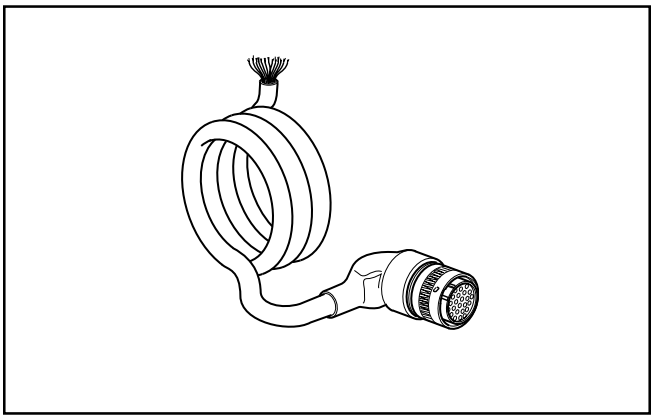
Output Solenoid No.	19-Pin Connector	IP65 Cable Colors
1	A	Pink / Brown
2	B	White / Green
3	C	White / Yellow
4	D	White / Grey
5	E	White / Pink
6	F	Brown / Green
7	G	Red / Blue
8	H	Grey / Pink
9	J	Brown / Yellow
10	K	Violet
11	L	Blue
12	M	Pink
13	N	Grey
14	P	Yellow
15	R	White
16	S	Green
Valve Common	T	Black
Not Used	U	Brown
Not Used	V	Red

Notes: Solenoids are polarity sensitive. The common must be at OV. Switching must be at the high potential.

Maximum 16 solenoid outputs with one valve (negative) common line on Pin T.

IP65 Cable Assembly





Cable with Female D-Sub, 25-Pin Connector

P8L-MD25A5B	5 Meters / 16.40 Ft

Connection to the control system is through 20 colored wires AWG 24, rated at 2.5 amp. For use with Solstar, Interface 2000, PVLB10 and PVLC10 valves only.

Cable with Female 19-Pin Connector

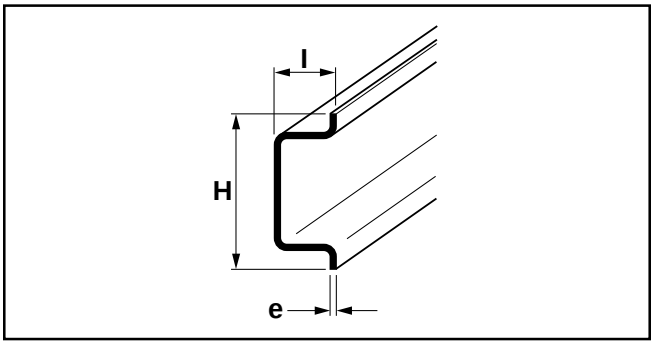
P8L-MC19A5	5 Meters / 16.40 Ft

Connection to the control system is through 19 colored wires AWG 20, rated at 5 amp.

35mm DIN Rail

AM1DE200	1.83 Meters / 6.0 Ft

DIN rail can be mounted to grids or other surfaces to allow snap in mounting of pneumatic and electrical components.



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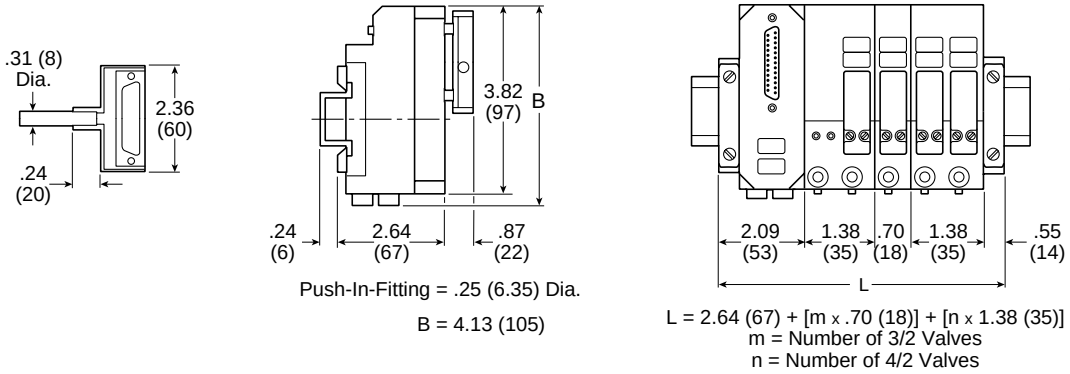
C

Interface 2000 Manifold with D-Sub, 25-Pin Connector Module



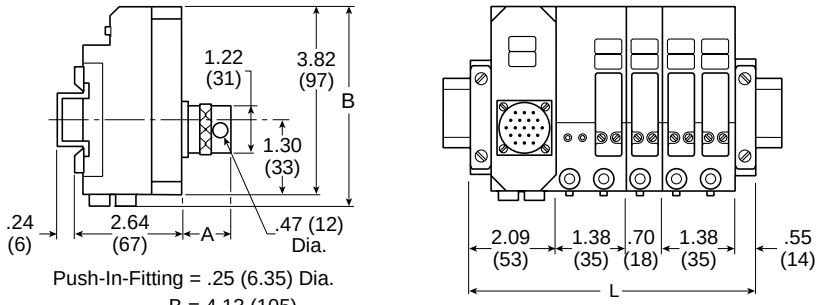
Push-In-Fitting = .25 (6.35) Dia.

B = 4.13 (105)

L = 2.64 (67) + [m x .70 (18)] + [n x 1.38 (35)]
m = Number of 3/2 Valves
n = Number of 4/2 Valves

Notes:
1. Sub-D Module shown with 1/4" ports
2. Valves shown with 4mm (5/32") ports.

Interface 2000 Manifold with 19-Pin Circular Connector Module



Push-In-Fitting = .25 (6.35) Dia.

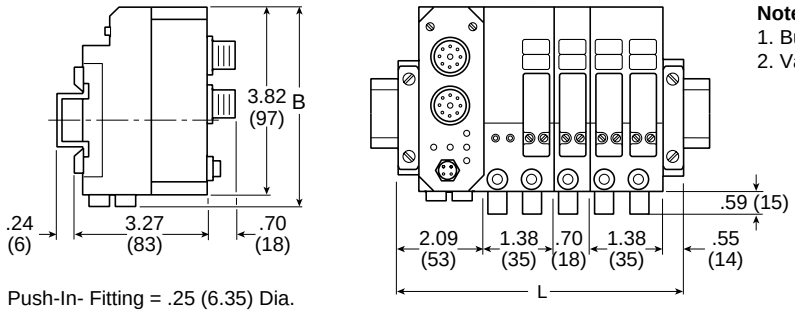
B = 4.13 (105)

L = 2.64 (67) + [m x .70 (18)] + [n x 1.38 (35)]
m = Number of 3/2 Valves
n = Number of 4/2 Valves

Notes:
1. 19-Pin Circular Connector Module Shown With 1/4" Ports
2. Valves shown with 4mm (5/32") ports.

Connector 19-Pins	A = 3.54 (90)
Cable	A = 2.36 (60)

Interface 2000 Manifold with DeviceNet, Profibus-DP, Interbus-S and ASI Bus Module



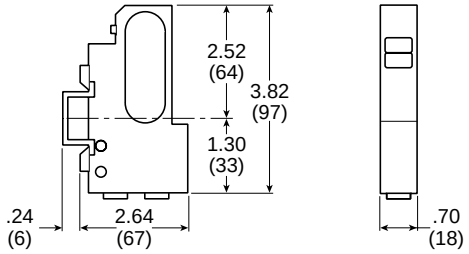
Push-In- Fitting = .25 (6.35) Dia.

B = 4.13 (105)

L = 2.64 (67) + [m x .70 (18)] + [n x 1.38 (35)]
m = Number of 3/2 Valves
n = Number of 4/2 Valves

Notes:
1. Bus Module shown with 1/4" ports
2. Valves shown with 1/4" ports.

Intermediate Air Supply Module



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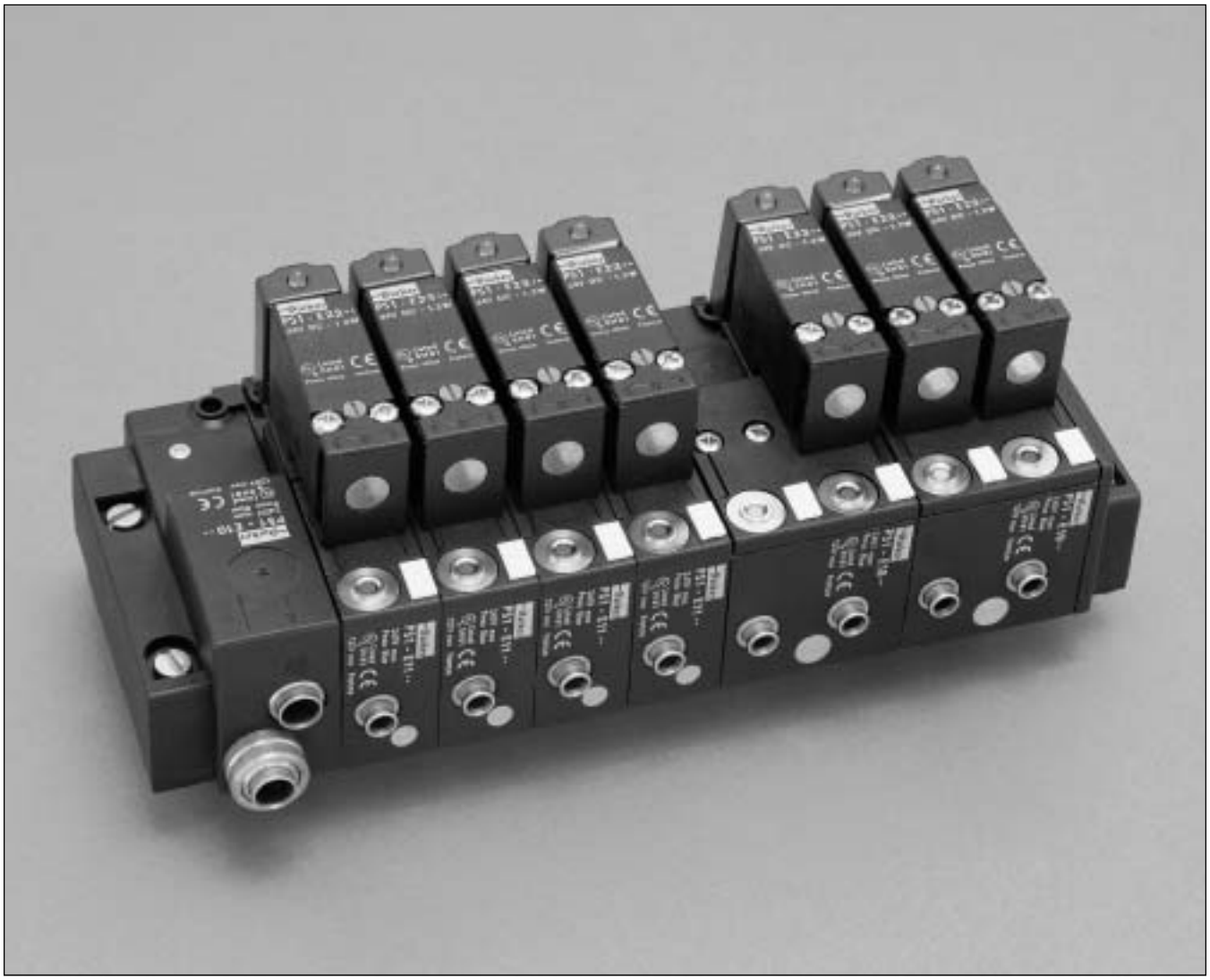
Parker Pneumatic

PS1E Series

Electro-pneumatic Interface Valves

D

Section D



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Compact, easy to install, reliable...

Easy To Meet System Design Needs

- Full flow capacity allows direct operation of small cylinders (single or double acting) or pneumatic piloting of larger control valves (pneumatic or hydraulic).
- Valve configurations in 3/2 or 4/2 (single or double acting).
- Outlet fittings (push-in) for 5/32" or 1/4" tubing.
- System modification or expansion simplified by easily adding modules to stack.
- Wide range of voltages available.
- Multiple pressures possible in one assembly.

Easy To Install In Your System

- Modules snap together and mount on 35mm (DIN) rail.
- Micro-valve stack and PLC may be mounted in the same enclosure.
- Common air supply, exhaust, and electrical supply reduce connections to 1 wire and 1 tube per module.
- Supply and exhaust air can be piped with only one tube for each.
- Fast hook-up with captive wire clamp connections and push-in fittings.
- Compatible pneumo-electric module provides integrated feedback capability for the PLC.
- Eliminates cumbersome electrical connections on machine mounted solenoid valves.

Easy To Maintain System Operation

- Manual override for setup and troubleshooting.
- Poppet design for long, trouble free life (lubricated or non-lubricated air).
- Integrated diagnostics (main air test point, output pneumatic indicator, optional suppressor / LED) provide system status at a glance.
- All electrical connections are in a protected enclosure.
- Modular design and easy connection aid in module replacement or system expansion.

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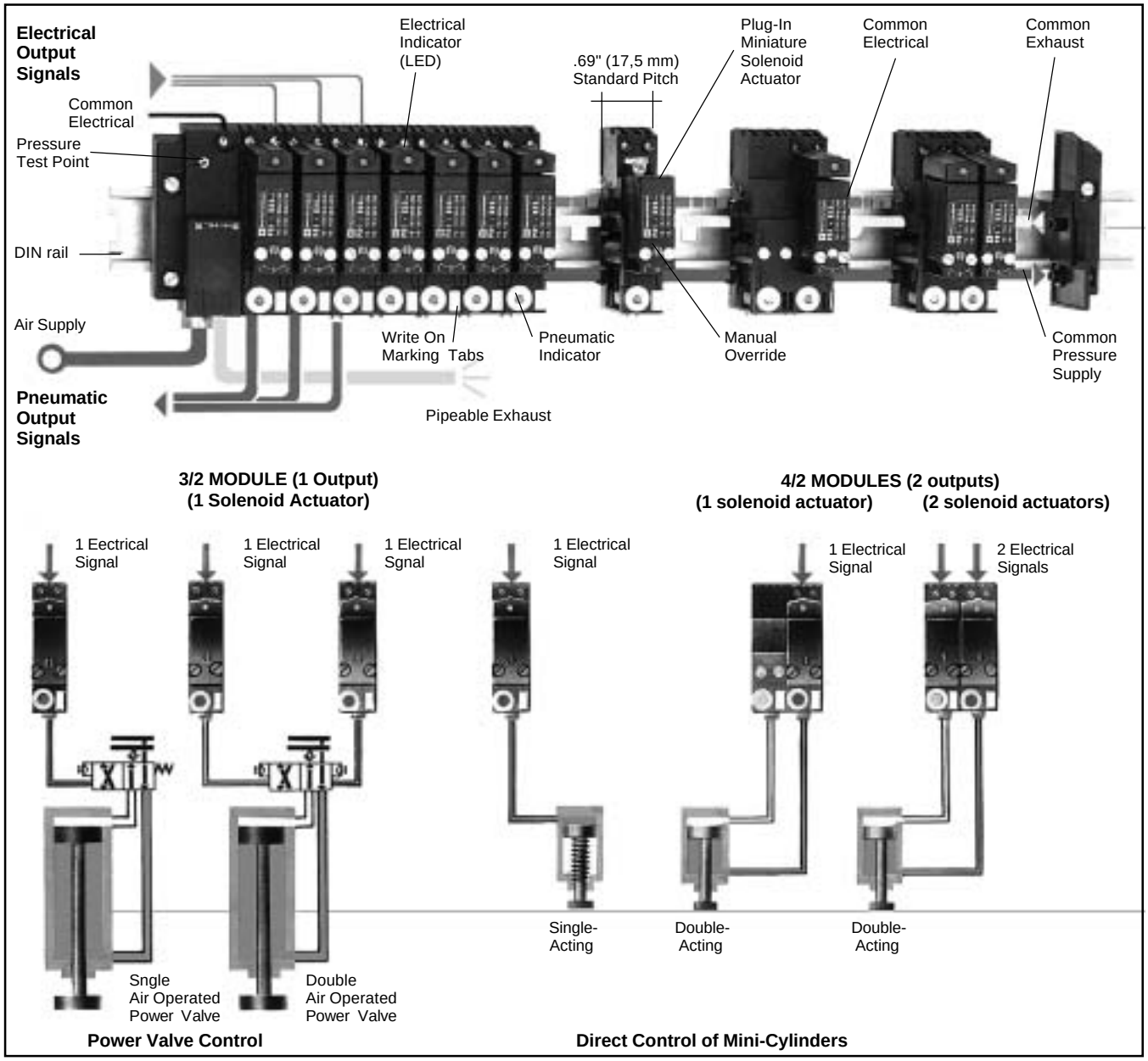

⚠ **Caution**: Because these are poppet valves, the common air supply pressure must be built up rapidly (never use a slow start valve 2/2 on the air supply for the interfaces). When pressure is applied, the 4/2 valve takes up a predetermined position (unactuated) when no electrical signal is present.
- Output 2 (yellow indicator) passing.
- Output 4 (red indicator) non-passing.

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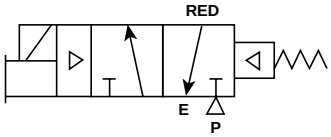
Assembled Units

All units include pop-up indicator for pneumatic output. Red indicates NNP / NC function. Yellow indicates NP / NO function.
All model numbers shown include non-locking manual override.
(For other voltages, use component parts shown on page 5).

PS1E21102••

Single Solenoid - Spring Return 3/2 -
Normally Non-Passing (NNP) / Normally Closed (NC)

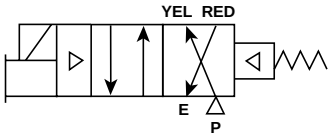


Voltage	Output Port Push-In Connection Size	
	5/32" (4 mm) Tube	1/4" Tube
12V DC	PS1E21102J	PS1E216702J
24V DC	PS1E21102B	PS1E216702B
24V AC	PS1E21101B	PS1E216701B
120V AC	PS1E21101F	PS1E216701F

Weight: 0.21 lb (0.095 kg)

PS1E29102••

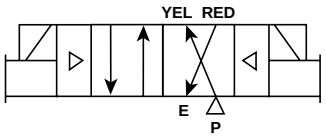
Single Solenoid - Spring Return 4/2



Voltage	Output Port Push-In Connection Size	
	5/32" (4 mm) Tube	1/4" Tube
12V DC	PS1E28102J	PS1E286702J
24V DC	PS1E28102B	PS1E286702B
24V AC	PS1E28101B	PS1E286701B
120V AC	PS1E28101F	PS1E286701F

Weight: 0.36 lb (0.165 kg)

Double Solenoid 4/2



Voltage	Output Port Push-In Connection Size	
	5/32" (4 mm) Tube	1/4" Tube
12V DC	PS1E29102J	PS1E296702J
24V DC	PS1E29102B	PS1E296702B
24V AC	PS1E29101B	PS1E296701B
120V AC	PS1E29101F	PS1E296701F

Weight: 0.45 lb (0.205 kg)

Head and Tail Sets

Used to mount valves to DIN rail and provide supply and exhaust ports. All hardware is included.

Single supply type supplys from one end of the manifold assembly with the other end blocked.

Double supply type provides pressure and exhaust ports on both ends of the assembly.

PS1E1027

Push-In Connection Ports		
1/4" Tube	PS1E1017	PS1E1027
6mm Tube	PS1E101	PS1E102
	Wt: 0.22 lb (0.100 kg)	Wt: 0.28 lb (0.125 kg)

Intermediate Supply Module - PS1E10387

1/8" Pipe port for supply and exhaust ports.

Allows replenishment or isolation of the supply and / or exhaust ports using included plugs.

Weight: 0.28 lb (0.125 kg)

PS1E10387

1/8" Pipe Supply & Exhaust	
NPT	PS1E10387
BSP	PS1E1038

Shaded Items: Consult factory for availability.

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D

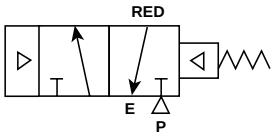
Valves Without Solenoid Operators (1)

All valve units include pop-up indicator for pneumatic output. Red indicates NNP / NC function. Yellow indicates NP / NO function.

(1) To obtain a complete assembled unit, i.e. PS1E21102J, order valve PS1E111 + solenoid PS1E2302J.

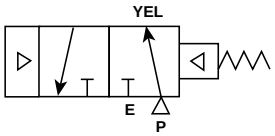
PS1E11●

Single Acting - Spring Return 3/2 -
Normally Non-Passing (NNP) / Normally Closed (NC)



Output Port Push-in Connection Size			
5/32" (4 mm) Tube	6 mm Tube	1/4" Tube	10-32 UNF
PS1E111	PS1E116	PS1E1167	PS1E115

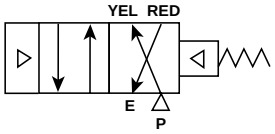
Single Acting - Spring Return 3/2 - Normally Passing (NP) / Normally Open (NO)



Output Port Push-in Connection Size			
5/32" (4 mm) Tube	6 mm Tube	1/4" Tube	10-32 UNF
PS1E121	PS1E126	PS1E1267	PS1E125

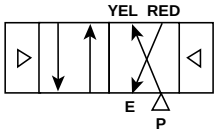
PS1E19●

Single Acting - Spring Return 4/2



Output Port Push-in Connection Size			
5/32" (4 mm) Tube	6 mm Tube	1/4" Tube	10-32 UNF
PS1E181	PS1E186	PS1E1867	PS1E185

Double Acting 4/2



Output Port Push-in Connection Size			
5/32" (4 mm) Tube	6 mm Tube	1/4" Tube	10-32 UNF
PS1E191	PS1E196	PS1E1967	PS1E195

Plug-In Solenoid Operators

PS1E230●●

Voltage	Power Consumption	Drop-out* Current (mamp)	With Non-Locking Manual Override	With Locking Manual Override
12 VDC	1.2W		PS1E2302J	PS1E2352J
24 VDC	1.2W	5	PS1E2302B	PS1E2352B
48 VDC	1.2W	2.5	PS1E2302E	PS1E2352E
24 V 50-60 Hz	1.6VA**	22	PS1E2301B	PS1E2351B
48 V 50-60 Hz	1.6VA**	12	PS1E2301E	PS1E2351E
120V 60Hz / 115V 50Hz	1.6VA**	5	PS1E2301F	PS1E2351F
240V 60Hz / 230V 50Hz	1.6VA**	2	PS1E2301M	PS1E2351M

** 3.5VA Inrush

Weight: 0.10 lb (0.043 kg)

* The solenoid valves are programmable controller compatible provided that leakage currents of the PLC outputs are lower than the drop-out current value.

Line Mounted Pressure Switch

PS1P10●●

Includes pop-up indicator to show presence of pressure.

Includes Clip for mounting on 35mm DIN Rail.

1 SPDT Contact.

5A 250V

5/32 (4 mm) Push-In Tubing Port

Shaded Items: Consult factory for availability.

Switching Pressure	
20 PSIG Fixed PS1P1081	30 - 75 Adjustable PS1P1091

Wt: 0.11 lb (0.050 kg)

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Valve Specifications

Body Material:
Glass filled polyamide
Electrical Connection:
Captive wire clamp
LED / Noise Suppressor*:
Combination LED (green) and zener diode
Life Expectancy:
10 million operations
Maximum operating frequency:
10 Hz
Medium Quality:
Standard shop air, lubricated or non-lubricated, 50µ filtered
Mounting:
35mm (DIN) rail

*120/240VAC LED only (No noise suppressor)

Operating Medium:
Compressed air
Operating Pressure Range:
40 to 120 PSI (3 to 8 bar)
Operating Principal:
Solenoid pilot operated poppet valve
Operating Temperature Range:
5° to 140°F (-15° to 60°C)
Response Time:
10-15 ms (electronic signal to pneumatic output
Seal Material:
Poppet - polyurethane
Seals - Nitrile (Buna N)

Supply and Exhaust Ports:
1/4"

Outlet port:	5/32"	1/4"
Flow rate: (SCFM @ 90 PSI)	7.1	9.2
Cv	.14	.16

Tube Connections:
Push-in (instant) fittings
Voltage Tolerance:
+10 to -15% of rated voltage @ 70°F
Wire Size:
14 - 22 AWG

Caution: Memory in double acting (Bistable) 4/2 modules is input dependent. Either air supply or electrical command signal must be maintained or memory may be lost.

Pressure Switch Specifications

Body Material:
Glass filled polyamide
Contact Material:
Silver
Contact Rating:
10A / 250VAC
Maximum Operating Frequency:
10 Hz
Mechanical Life:
30 million operations

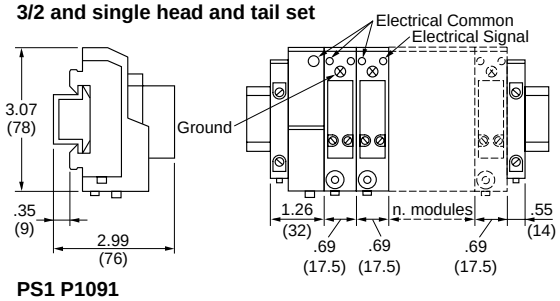
Operating Pressure Range:
Fixed pressure:
19 to 120 PSI (1.3 to 8 bar)
Adjustable pressure:
30 to 120 PSI (2 to 8 bar)
Operating Temperature Range:
5° to 140°F (-15° to 60°C)
Operating Principal:
Pressure operated micro switch

Seal Material:
Poppet - polyurethane
Seals - Nitrile (Buna N)
Switch Pressure:
Fixed pressure:
>19 PSI (>1.3 bar)
Adjustable pressure:
30 to 75 PSI (2 to 5 bar)

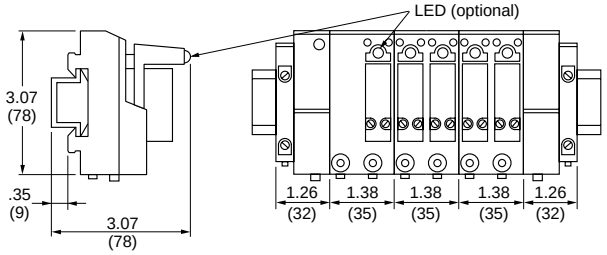
		AC				DC		
Contact life		**24V**	**48V**	**120V**	**240V**	**12V**	**24V**	**48V**
1 Million Operations	Inductive	25	56	115	140	17	24	37
	Resistive	86	190	370	440	42	58	88
2 Million Operations	Inductive	–	–	–	–	10	14	25
	Resistive	–	–	–	–	30	43	70
5 Million Operations	Inductive	10	14	19	21	–	–	–
	Resistive	35	82	160	200	–	–	–

Dimensions *shown in inches (mm)*

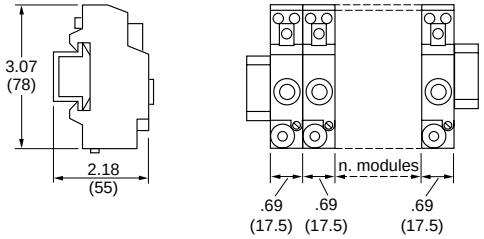
3/2 and single head and tail set



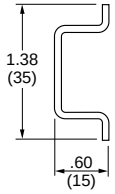
4/2 and double head and tail set



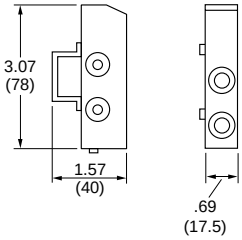
PS1 P1091



35mm (DIN) rail*



Intermediate module



***Rail at less than .6" does not allow enough room for mounting clips and may cause air leaks.**

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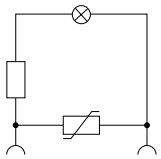
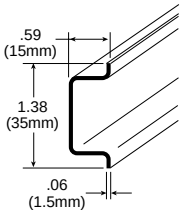
Suppressor and LED Indicators

PS1E1620●

Mount between Solenoid Valve and the Interface Module

Characteristics	Circuit Diagram	Voltage	Part Number	Weight lb	Weight kg
Indication by LED Sold in Lots of 5		24 VDC and 50/60 Hz	PS1E1620B	.022	0.010
		48 VDC and 50/60 Hz	PS1E1620E	.022	0.010
		120 V / 60 Hz 115 V / 50 Hz	PS1E1511F	.028	0.012
		240 V / 60 Hz 230 V / 50 Hz	PS1E1511M	.028	0.012

Mounting Rail 35mm (DIN)



AM1 DE200

Material	Length	Part Number
Steel	6'	AM1 DE200

Spare Parts

Description	Part Number
1 lot of 100 O-ring seals Between Modules (Pressure - Exhaust)	PPR-L12
1 lot of 50 seals Between Modules 3/2 or 4/2 and Coil PS1-E23 - 25 Seals (Type A) for Modules 3/2 and 4/2 Bistable - 25 Seals (Type B) for Modules 4/2 Monostable and Bistable	PPR-L13

Marking Accessories

To be used in place of Write-On Marking Tabs

AB1-G●

Clip-On Marker Strips	Part Number
Strip of 10 Identical Numerals (State the Number required)	AB1-R.
Strip of 10 Identical Letters (State the Letter required)	AB1-G·
Strip of 10 + Signs*	AB1-R12
Strip of 10 - Signs*	AB1-R13

*Sold in Lots of 25 Strips of 10 Markers

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Parker Pneumatic

"PVL" Series

Solenoid & Remote Pilot Operated M5, 1/8", & 1/4" Valves

Section E

E

Bold text part numbers are standard.
Standard text part numbers may have longer lead times.

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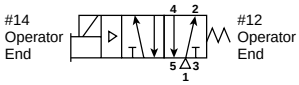
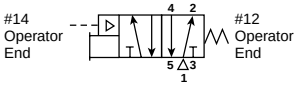
Single Solenoid
4-Way, 2-Position



De-energized position – Solenoid operator #14 de-energized. Pressure at inlet port 1 connected to outlet port 2. Outlet port 4 connected to exhaust port 5.

Energized position – Solenoid operator #14 energized. Pressure at inlet port 1 connected to outlet port 4. Outlet port 2 connected to exhaust port 3.

Single Remote Pilot
4-Way, 2-Position

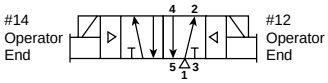


Normal position – Pressure at inlet port 1 connected to outlet port 2. Outlet port 4 connected to exhaust port 5.

Operated position – Maintained air signal at port 14. Pressure at inlet port 1 connected to outlet port 4. Outlet port 2 connected to exhaust port 3.

E

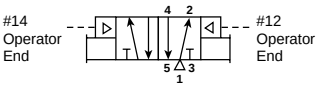
Double Solenoid
4-Way, 2-Position



Solenoid operator #14 energized last. Pressure at inlet port 1 connected to outlet port 4. Outlet port 2 connected to exhaust port 3.

Solenoid operator #12 energized last. Pressure at inlet port 1 connected to outlet port 2. Outlet port 4 connected to exhaust port 5.

Double Remote Pilot
4-Way, 2-Position



Momentary air signal at port 14 last. Pressure at inlet port 1 connected to outlet port 4. Outlet port 2 connected to exhaust port 3.

Momentary air signal at port 12 last. Pressure at inlet port 1 connected to outlet port 2. Outlet port 4 connected to exhaust port 5.

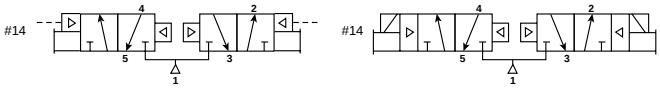
Double Solenoid
3-Position

With #12 operator energized – inlet port 1 connected to cylinder port 2, cylinder port 4 connected to exhaust port 5.
With #14 operator energized – inlet port 1 connected to cylinder port 4, cylinder port 2 connected to exhaust port 3.

All Ports Blocked
All ports blocked in the center position.

Center Exhaust
Cylinder ports 2 and 4 connected to exhaust ports 3 and 5 in center position. Port 1 is blocked.

Double Solenoid / Remote Pilot
Dual 3-Way, 2-Position NC



With #14 & #12 operators both de-energized – pressure at inlet port 1 blocked, outlet port 4 connected to exhaust port 5, outlet port 2 connected to exhaust port 3.
With #14 operator energized – pressure at inlet port 1 connected to outlet port 4, exhaust port 5 blocked, outlet port 2 connected to exhaust port 3.
With #12 operator energized – pressure at inlet port 1 connected to outlet port 2, exhaust port 3 blocked, outlet port 4 connected to exhaust port 5.
With #14 & #12 operators both energized – pressure at inlet port 1 connected to outlet ports 4 & 2, exhaust ports 3 & 5 blocked.

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Application

The PVL Series stacking system permits assembly of several valves into one stack. Supply is connected at either a single or dual head / tail set.* Two common exhaust galleries are provided. Connections to outlet ports #2 and #4 on each valve can be accomplished by threaded pipe or instant tube fittings.

Electrical connection is made to each solenoid utilizing a 15mm, 3-Pin connector plug (PVLB & PVLC) or a 2-Pin phone jack style connector (PVLA).

Each stack assembly can handle any combination of the following valve types:

- Single Solenoid
- Double Solenoid
- Single Remote Pilot
- Double Remote Pilot

Two valve sizes can be combined in one stack using a transition kit.

* For simultaneous operation of more than 5 valves, a dual head / tail set is recommended.

PVLB

Stack shows solenoid and remote pilot valves, threaded pipe ports, instant tube fittings, and a single supply head / tail set.

Features

- Greatly reduces installation costs
- Reduces piping and the risk of leaks
- Consolidates controls, saves space
- Provides custom valving arrangements with standard components
- Improves appearance of pneumatic equipment
- Common main supply port
- Allows for two common exhausts which can easily be plumbed away for cleanliness
- Indicator lights and surge suppression available
- Designed for 35mm DIN rail mounting. May be surface mounted by removing DIN rail clips.
- Servicing valves can be accomplished quickly without disassembling the entire stack or removing plumbing

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"PVLA" Series
"PVLB" Series
"PVLC" Series

Specifications

- 4-Way, 5-Port, 2 or 3-Position Valves
- Single & Double Solenoid
- Single & Double Remote Pilot
- Dual 3/2 (PVLB & PVLC Only)

PVLA - .17 Cv
- M5 & 5/32" Tube Porting

PVLB - .6 Cv
- 1/8" NPT & BSP
- 1/4" & 6mm Tube Porting

PVLC - 1.2 Cv
- 1/4" NPT & BSP
- 3/8" & 6mm Tube Porting

Mounting Style
- Stacking Manifold Valve
- DIN Rail Mounting (35mm)

Solenoid Pilot Actuation

- Continuous Duty Rated

PVLA
- .9W - 12VDC & 24VDC
- Phone Jack Type Connector

PVLB, PVLC
- 1.2W - 12VDC & 24VDC
- 1.6VA - 24VAC, 120VAC, 240VAC
- 3-Pin, 15mm (9.4mm Pin Spacing)

Manual Overrides

- Non-Locking & Locking (PVLA)
- Brass Locking & Non-Locking (PVLB, PVLC)

Operating Pressure

- 30 to 150 PSI (310 to 1035 kPa)

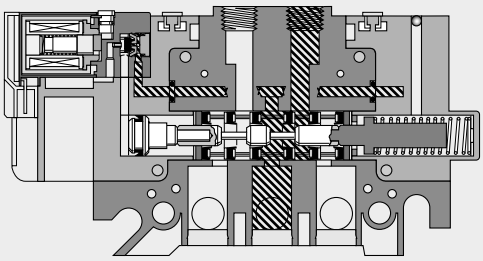
Operating Temperature

- 5°F to 140°F (-15°C to 60°C)

Certification / Approval

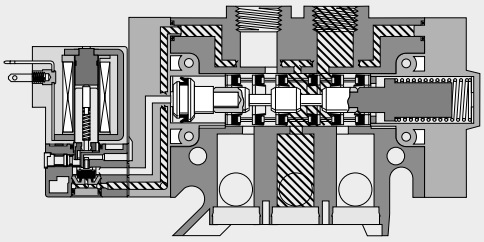
- Approved to be CE Marked
- UL (except 240VAC) (PVLA, PVLB & PVLC)
- NFC 79 300 (PVLA, PVLB & PVLC)

Note: DC units are polarity sensitive.



PVLA (M5)

Shown De-Energized



PVLB (1/8"), PVLC (1/4")

Shown De-Energized

Pressure **Exhaust**

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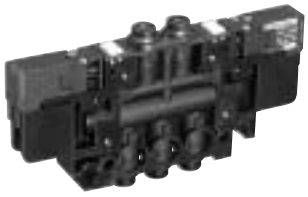
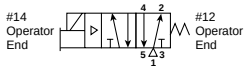
Single Solenoid
4-Way, 2-Position



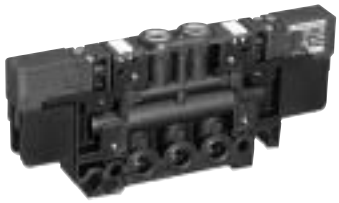


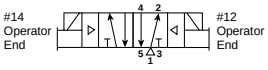
PVLA			
	PVLA121315J50	M5	12VDC
	PVLA121315B50	M5	24VDC
	PVLA121315	M5	Valve Less Solenoid
	PVLA121304J50	5/32" Tube	12VDC
	PVLA121304B50	5/32" Tube	24VDC
	PVLA121304	5/32" Tube	Valve Less Solenoid

Locking Manual Override, Phone Jack Connector w/ 6' cord, LED, No Surge Suppression. †

† If Surge Suppression or different override desired, choose Valve Less Solenoid and select .9W solenoid separately from page 12.

Double Solenoid
4-Way, 2-Position



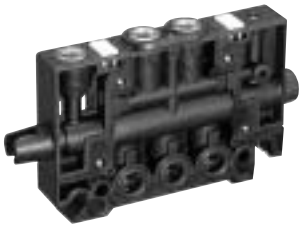


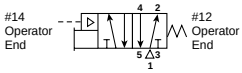
PVLA			
	PVLA122315J40	M5	12VDC
	PVLA122315B40	M5	24VDC
	PVLA122315	M5	Valve Less Solenoid
	PVLA122304J40	5/32" Tube	12VDC
	PVLA122304B40	5/32" Tube	24VDC
	PVLA122304	5/32" Tube	Valve Less Solenoid

Non-Locking Manual Override, Phone Jack Connector w/ 6' cord, LED, No Surge Suppression. †

† If Surge Suppression or different override desired, choose Valve Less Solenoid and select .9W solenoid separately from page 12.

Single Remote Pilot
4-Way, 2-Position

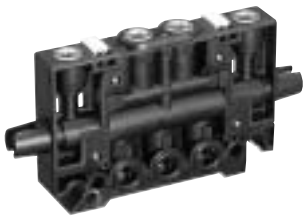


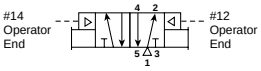


PVLA			
	PVLA121115	M5	Non-Locking
	PVLA121104	5/32" Tube	Non-Locking

Note: Pilot port(s) is same type and size as main ports.

Double Remote Pilot
4-Way, 2-Position





PVLA			
	PVLA122115	M5	Non-Locking
	PVLA122104	5/32" Tube	Non-Locking

Note: Each valve is shipped with 2 tie rods for stacking assembly.

NOTE:

Standard Part Numbers in Bold.

Solenoids must be ordered separately, see page 12.

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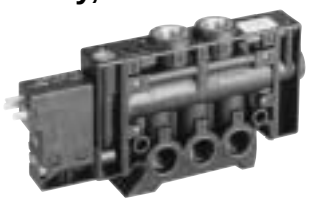
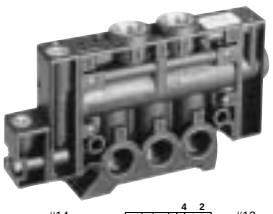
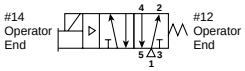
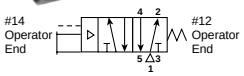
E

Single Solenoid / Remote Pilot
4-Way, 2-Position

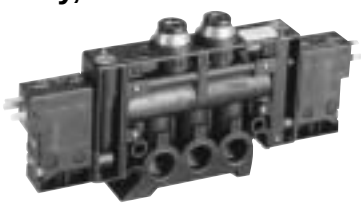
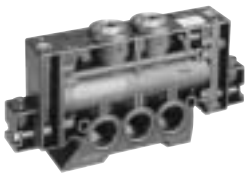
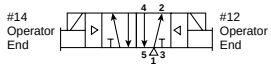




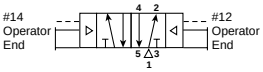


PVLB	PVLB121618	1/8" BSP	0.6 Cv
	PVLB1216187	1/8" NPT	
	PVLB121606	6mm Tube	
	PVLB1216067	1/4" Tube	
PVLC	PVLC121619	1/4" BSP	1.2 Cv
	PVLC1216197	1/4" NPT	
	PVLC121608	8mm Tube	
	PVLC1216097	3/8" Tube	

Locking Manual Override, Valve Less Solenoid.

Double Solenoid / Remote Pilot
4-Way, 2-Position

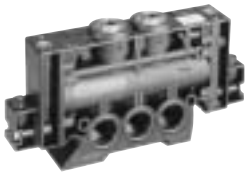
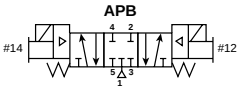




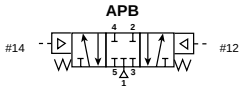


PVLB	PVLB122618	1/8" BSP	.06 Cv
	PVLB1226187	1/8" NPT	
	PVLB122606	6mm Tube	
	PVLB1226067	1/4" Tube	
PVLC	PVLC122619	1/4" BSP	1.2 Cv
	PVLC1226197	1/4" NPT	
	PVLC122608	8mm Tube	
	PVLC1226097	3/8" Tube	

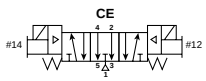
Non-Locking Manual Override, Valve Less Solenoid.

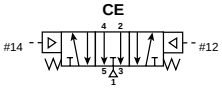
Double Solenoid / Remote Pilot
4-Way, 3-Position



PVLB	PVLB127618	1/8" BSP	0.6 Cv
	PVLB1276187	1/8" NPT	
	PVLB127606	6mm Tube	
	PVLB1276067	1/4" Tube	
PVLC	PVLC127619	1/4" BSP	1.2 Cv
	PVLC1276197	1/4" NPT	
	PVLC127608	8mm Tube	
	PVLC1276097	3/8" Tube	

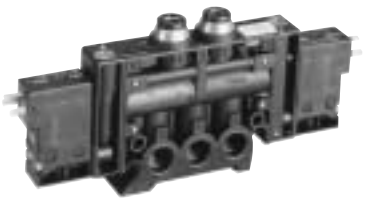
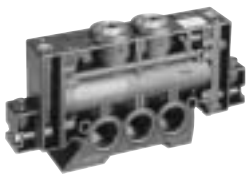
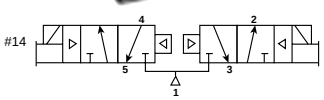


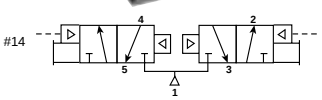


PVLB	PVLB128618	1/8" BSP	0.6 Cv
	PVLB1286187	1/8" NPT	
	PVLB128606	6mm Tube	
	PVLB1286067	1/4" Tube	
PVLC	PVLC128619	1/4" BSP	1.2 Cv
	PVLC1286197	1/4" NPT	
	PVLC128608	8mm Tube	
	PVLC1286097	3/8" Tube	

Non-Locking Manual Override, Valve Less Solenoid.

Double Solenoid / Remote Pilot
Dual 3/2 Normally Closed



PVLB	PVLB125618	1/8" BSP	0.6 Cv
	PVLB1256187	1/8" NPT	
	PVLB125606	6mm Tube	
	PVLB1256067	1/4" Tube	
PVLC	PVLC125619	1/4" BSP	1.2 Cv
	PVLC1256197	1/4" NPT	
	PVLC125608	8mm Tube	
	PVLC1256097	3/8" Tube	

Non-Locking Manual Override, Valve Less Solenoid.

NOTES:

Solenoids or Remote Pilot Adapter must be ordered separately from page 12.

Each valve is shipped with 2 tie rods for stacking assembly.

Standard Part Numbers in Bold.

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Mounting on 35mm DIN Rail

Valve stacks mount quickly and easily to 35mm DIN rail with the use of a pneumatic head / tail set. The dual head / tail set provides input and exhaust ports at both ends and is recommended if more than 5 valves are to be operated simultaneously.

Surface Mounting

Stacks may be surface mounted by removing the 35mm DIN mounting hardware on the pneumatic head / tail set.

Removal or Replacement

Modules are removed in reverse of the order shown at right. Before removing a module for service or replacement, loosen the *pneumatic* tail piece.

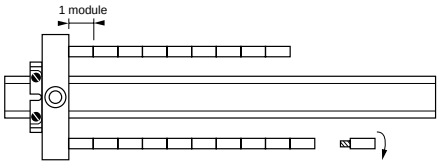
PVLB

Stack shows solenoid and remote pilot valves, threaded pipe ports, instant tube fittings, and a single supply head / tail set.

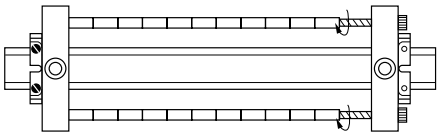
Mounting Procedure

1. Clip on and tighten the pneumatic head piece.

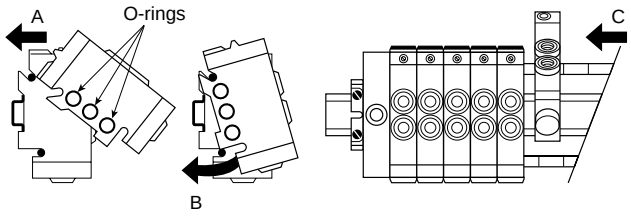
2. Assemble the two parallel mounting rods using cross rods provided with modules.



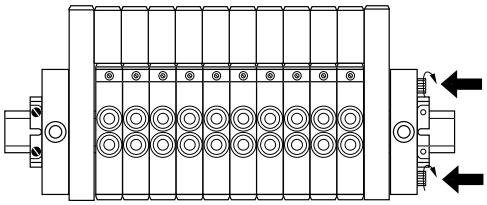
3. Clip on the pneumatic tail piece. Start screws into mounting rod but leave loose for module insertion.



4. To mount valves, position upper slot then push-lock lower slot. Mount modules (valves, modules, transition pieces, etc.) and press together.



5. Tighten the assembly.



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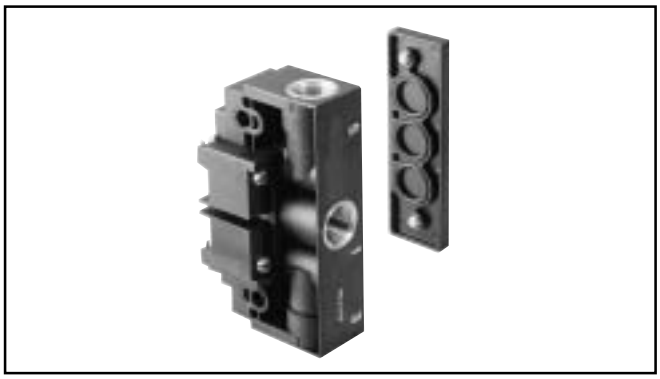
Single Supply Head / Tail Sets



Series	Model Number	Port Size
PVLA*	**PVLA17187**	1/8" NPT
	PVLA1718	1/8" BSP
PVLB**	**PVLB17197**	1/4" NPT
	PVLB1719	1/4" BSP
PVLC**	**PVLC17137**	3/8" NPT
	PVLC1713	3/8" BSP

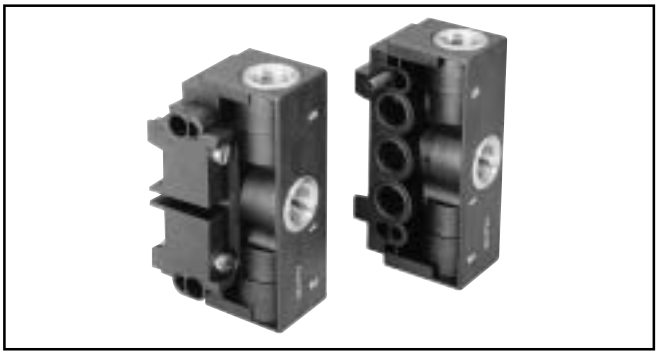
Kit includes: 1 Ported End (head) and 1 Blank End (tail) plus all necessary hardware.

* DIN rail mounting clips on both head and tail. Maximum stack length of 16 valves.

** ⚠ ***Caution:*** DIN rail mounting clips *on head piece only. Maximum stack length of 8 valves.*

Note: DIN rail mounting clips may be removed for surface mounting.

Dual Supply Head / Tail Sets

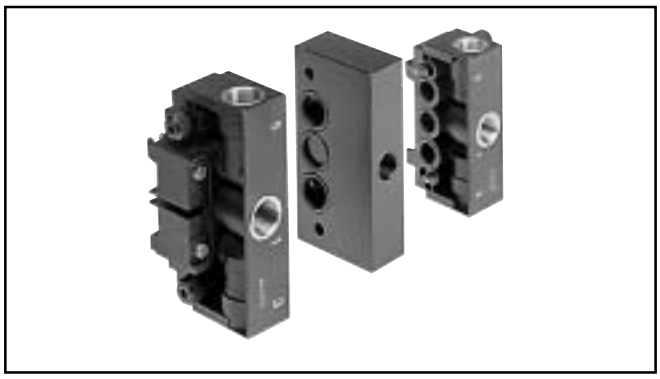


Series	Model Number	Port Size
PVLA	**PVLA17287**	1/8" NPT
	PVLA1728	1/8" BSP
PVLB	**PVLB17297**	1/4" NPT
	PVLB1729	1/4" BSP
PVLC	**PVLC17237**	3/8" NPT
	PVLC1723	3/8" BSP

Kit includes: 2 Ported Ends (head and tail) plus all hardware. Mounts to 35mm DIN rail at both ends. Maximum stack length of 16 valves.

Note: DIN rail mounting clips may be removed for surface mounting.

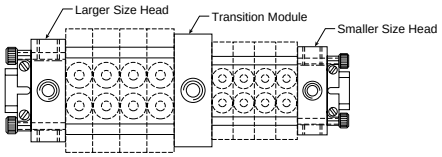
Transition Kits



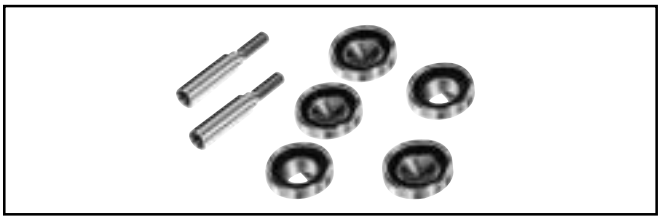
Combination	Model Number	Port Size
PVLA & PVLB	**PVULBA1187**	NPT
	PVULBA118	BSP
PVLB & PVLC	**PVULCB1197**	NPT
	PVULCB119	BSP

Kit enables valves of two different sizes to be combined in the same stack.

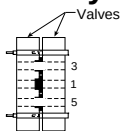
Kit includes: 2 Ported Heads (one for each valve size) and a Transition Module with an Auxiliary Supply Port. Maximum number of valves for each size is 16.



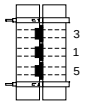
Pressure Isolation Kit



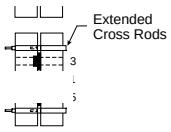
Assembly Instructions



Example 1: Two different pressures P1 and P2 can supply the same bank of power valves, the exhausts remaining common.



Example 2: Complete isolation of the commons in the same bank of power valves: main pressure and exhaust commons.



Example 3: The exhaust commons can be isolated within the same bank of power valves, while the main pressure supply remains common.

Series	Model Number	Kit includes:
PVLA	**PVLA1901**	3 isolation plugs, 2 open port plugs and 2 extended cross rods.
PVLB	**PVLB1901**	
PVLC	**PVLC1901**	
PVLB	**PVLB1902**	10 isolation discs and 10 O-rings.
PVLC	**PVLC1902**	

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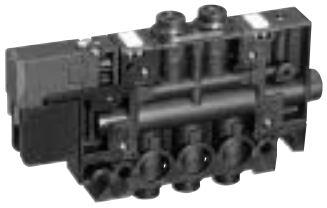
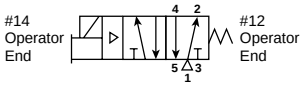
Single Solenoid
4-Way, 2-Position





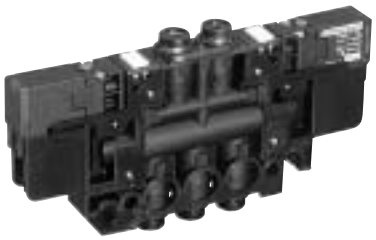
PVLA			
	PVLA111315J50	M5	12VDC
	PVLA111315B50	M5	24VDC
	PVLA111315	M5	Valve Less Solenoid
	PVLA111304J50	5/32" Tube	12VDC
	PVLA111304B50	5/32" Tube	24VDC
	PVLA111304	5/32" Tube	Valve Less Solenoid

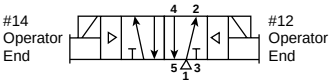
Locking Manual Override, Phone Jack Connector w/ 6' cord, LED, No Surge Suppression. †

† If Surge Suppression or different override desired, choose Valve Less Solenoid and select .9W solenoid separately from page 12.

* Plug-in electrical connector must be ordered separately from page 12.

Double Solenoid
4-Way, 2-Position





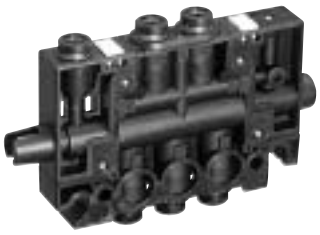
PVLA			
	PVLA112315J40	M5	12VDC
	PVLA112315B40	M5	24VDC
	PVLA112315	M5	Valve Less Solenoid
	PVLA112304J40	5/32" Tube	12VDC
	PVLA112304B40	5/32" Tube	24VDC
	PVLA112304	5/32" Tube	Valve Less Solenoid

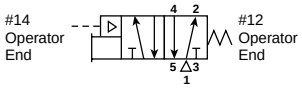
Non-Locking Manual Override, Phone Jack Connector w/ 6' cord, LED, No Surge Suppression. †

† If Surge Suppression or different override desired, choose Valve Less Solenoid and select .9W solenoid separately from page 12.

* Plug-in electrical connector must be ordered separately from page 12.

Single Remote Pilot
4-Way, 2-Position

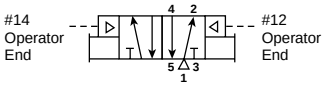




PVLA			
	PVLA111115	M5	Non-Locking
	PVLA111104	5/32" Tube	Non-Locking

Note: Pilot port(s) is same type and size as main ports.

Double Remote Pilot
4-Way, 2-Position



PVLA			
	PVLA112115	M5	Non-Locking
	PVLA112104	5/32" Tube	Non-Locking

Solenoids must be ordered separately, see page XX.

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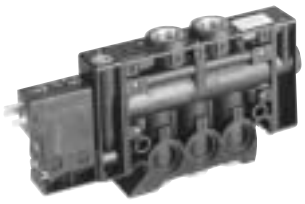
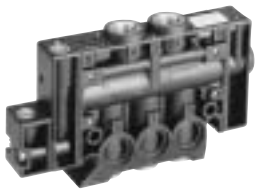
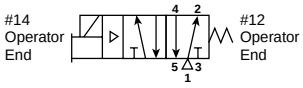
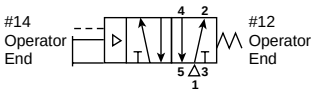
E

Single Solenoid / Remote Pilot
4-Way, 2-Position





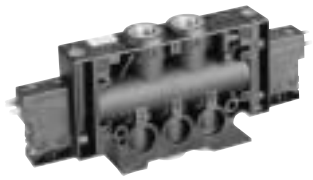


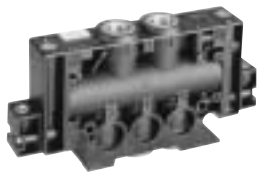


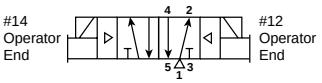
PVLB	PVLB111618	1/8" BSP	0.6 Cv
	PVLB1116187	1/8" Pipe	
	PVLB111606	6mm Tube	
	PVLB1116067	1/4" Tube	
PVLC	PVLC111619	1/4" BSP	1.2 Cv
	PVLC1116197	1/4" Pipe	
	PVLC111608	8mm Tube	
	PVLC1116097	3/8" Tube	

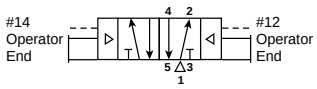
Solenoid sold separately.

Double Solenoid / Remote Pilot
4-Way, 2-Position









PVLB	PVLB112618	1/8" BSP	0.6 Cv
	PVLB1126187	1/8" Pipe	
	PVLB112606	6mm Tube	
	PVLB1126067	1/4" Tube	
PVLC	PVLC112619	1/4" BSP	1.2 Cv
	PVLC1126197	1/4" Pipe	
	PVLC112608	8mm Tube	
	PVLC1126097	3/8" Tube	

Solenoid sold separately.

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PVLA 10mm Solenoids with LED's

For inventory flexibility, solenoid pilots can be stocked and/or ordered separate from the valve body.

Voltage	Override	LED w/o Integral Surge Suppression		LED w/ Integral Surge Suppression	
		w/o Plug*	w/ Plug (6' Lead)	w/o Plug*	w/ Plug (6' Lead)
12VDC	Non-Locking	**PVAJ1302J9**	**PVAJ1302J0**	**PVAJ5302J9**	**PVAJ5302J0**
	Locking	**PVAJ1352J9**	**PVAJ1352J0**	**PVAJ5352J9**	**PVAJ5352J0**
24VDC	Non-Locking	**PVAJ1302B9**	**PVAJ1302B0**	**PVAJ5302B9**	**PVAJ5302B0**
	Locking	**PVAJ1352B9**	**PVAJ1352B0**	**PVAJ5352B9**	**PVAJ5352B0**

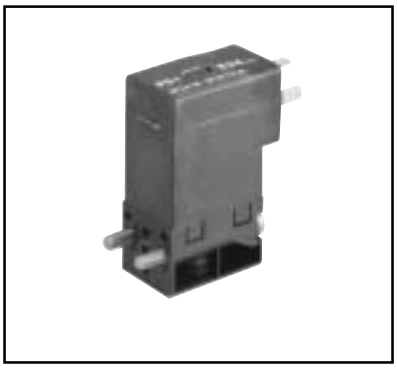
* Plug-in electrical connector must be ordered separately as shown below.

PVLB & PVLC 3-Pin, 15mm Solenoids

(9.4mm Pin Spacing) (w/o electrical connectors)

Voltage	Model Number	Power Consumption
12VDC	**PS1E2492J**	1.2W
24VDC	**PS1E2492B**	1.2W
24V-50/60Hz	**PS1E2491B**	1.6VA
120V/60Hz	**PS1E2491F**	1.6VA
240V/60Hz	**PS1E2491M**	1.6VA

Two screws are provided for quick mating to the valve body. Electrical connectors must be ordered separately from the chart shown below.

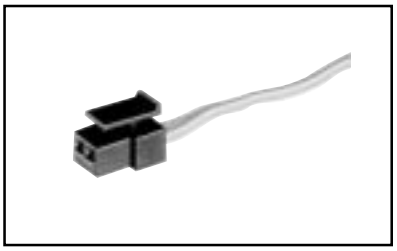


Plug-In Electrical Connectors

For use with 10mm solenoids on PVLA (M5) valves.

Model Number	Cord Length
PESD100	**6 Feet**
PESD101	**15 Feet**
PESD102	**30 Feet**

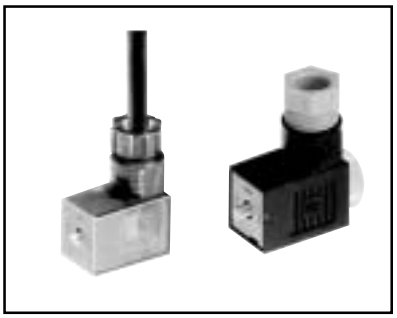
Note: Some valve model numbers include connector with 6 foot cord.



Plug-in Electrical Connectors

Indication	Voltage	Unwired Plug	Plug with 6' Lead
None	N/A	**PESC10**	**PESC12**
LED & Suppression	12/24V	**PESC2020B**	**PESC2220B**
	120VAC	**PESC2001F**	**PESC2201F**

For use with 1.2W/1.6VA solenoids on PVLB (1/8") and PVLC (1/4") valves. These IP65 connectors use a maximum 20 AWG wire size or come pre-wired.

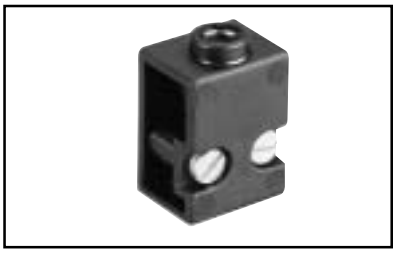


Remote Pilot Connectors

PVLB (1/8") & PVLC (1/4") Valves

Model Number	Port Fitting
PVAP111	**5/32" Tube**
PVAP115	**10-32 UNF (M5)**

Supplied with two screws to quickly mate with the valve body.



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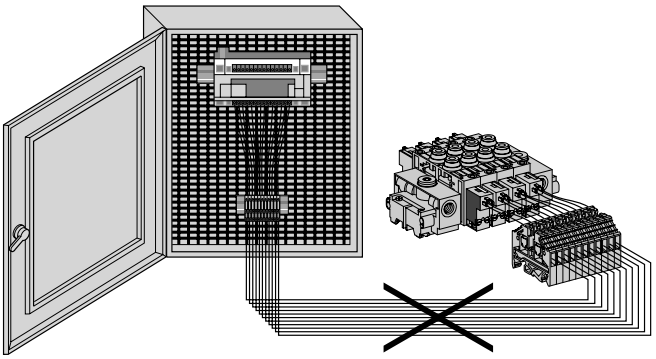
Simplified Electrical Wiring

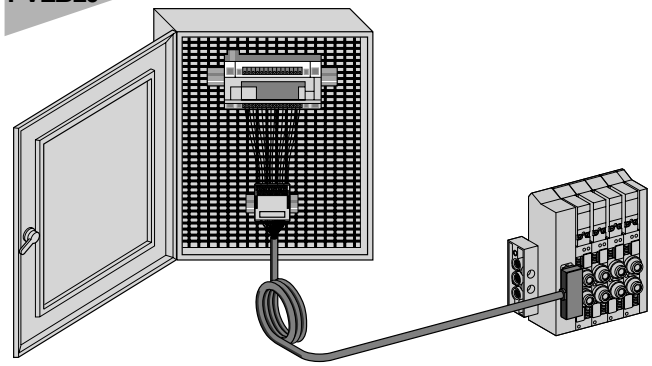
Eliminate costly wiring of individual solenoids with compact PVLB10 or PVLC10 stacks of up to 16 modules with built-in electrical connectors.



Simplified Setup

A single cable provides electrical connection to PLC or special terminal block.

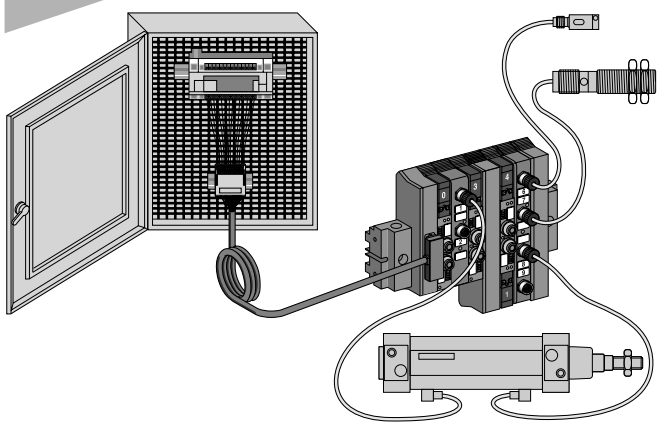
PVLB10



External Connections

External connection modules with PVLB10 valves allow sensor feedback or output connections to be integrated into the valve stack.

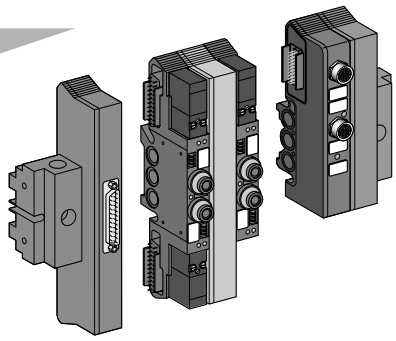
PVLB10



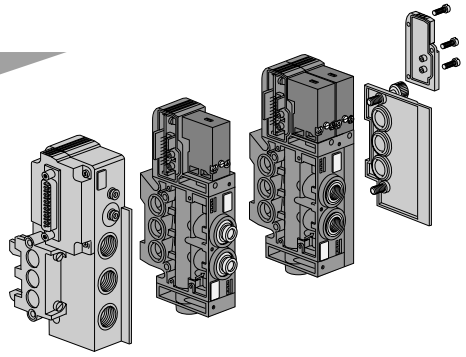
Modular Stacking

- The modular stacking system permits easy assembly of valves and external connection modules into a single stack.
- Integral supply and exhaust ports are manifolded as the stack is assembled.
- Intermodular electrical connection is accomplished through integral 20-Pin electrical connectors, eliminating the need for harnessing or wiring within the stack.
- PVLB10 single and double solenoid valves can be combined into one stack with the use of transition modules.
- PVLC10 single and double solenoid valves can be combined into one stack without any transition modules.
- The electrical head / tail set provides a single electrical connection from the stack to a PLC or terminal block.
- Each stack mounts easily to 35mm DIN rail by means of a pneumatic head / tail set, which also provides common air supply and exhaust.

PVLB10



PVLC10



Stacking System Benefits

- Reduces wiring, saves space.
- Allows custom arrangements with standard components.
- Further reduces wiring by integrating feedback and output connections into the PVLB10 valve stack.
- Greatly reduces installation time and costs.
- Servicing valves can be accomplished quickly without disassembling the entire stack.

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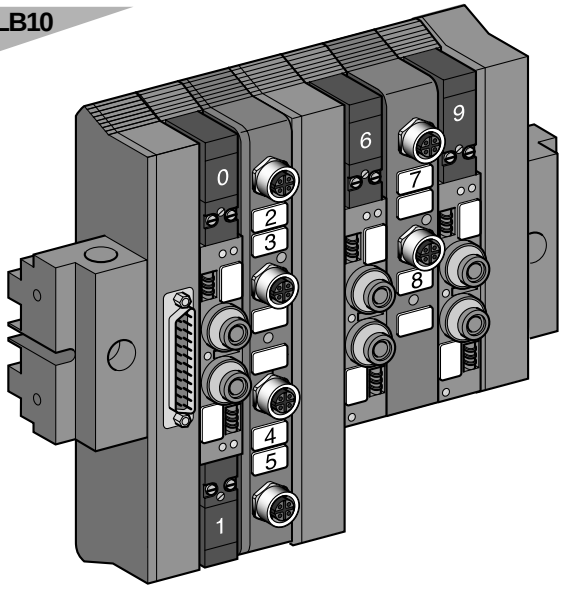
Autoconfiguration

The construction of the stack determines the relationship of each connector pin and the device it is to control. The address of each solenoid valve and each feedback or output connection is based on its physical position in the stack. For PVLB10, addresses are assigned consecutively from top to bottom and left to right beginning at top left with 0. For PVLC10, addresses are assigned consecutively from left to right and beginning at top left with 0.

PVLB10



It is easy to add or remove one or more modules to adapt to machine modifications. Once the controller is programmed, however, it is recommended that, where possible, the addition or permanent removal of any module be done at the tail (right-hand) end of the stack to prevent affecting the addresses of other modules in the stack. A change in address requires reprogramming of the controller.

Connector Options

PVLB10

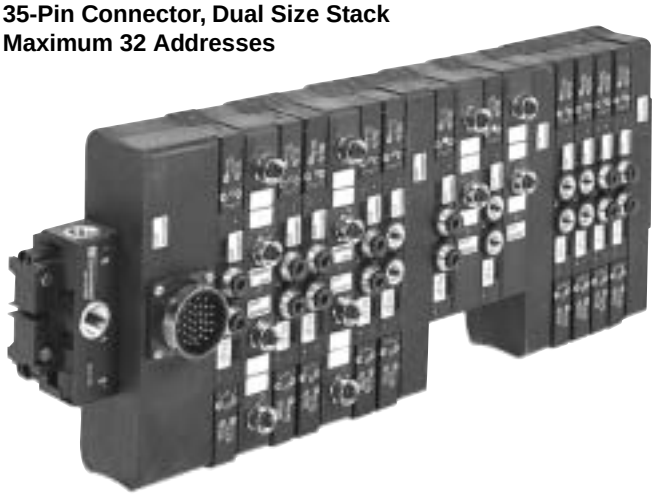
25-Pin Connector, Single Size Stack
Maximum 16 Addresses

PVLB10

25-Pin Connector, Dual Size Stack
Maximum 21 Addresses

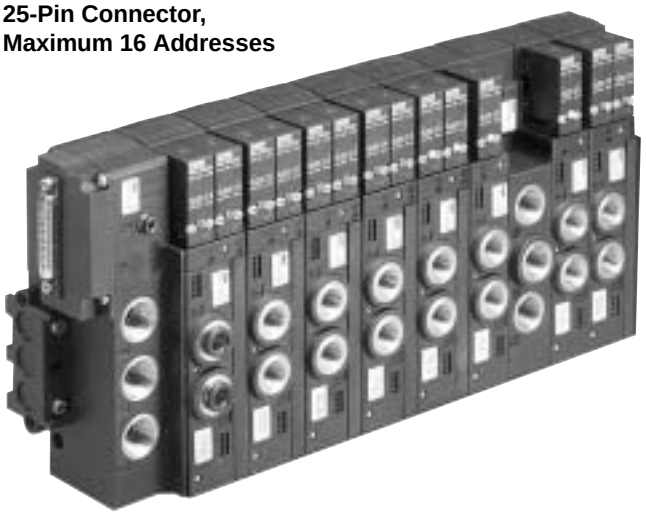
PVLB10

35-Pin Connector, Dual Size Stack
Maximum 32 Addresses



PVLC10

25-Pin Connector,
Maximum 16 Addresses



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"PVLB10" Series
"PVLC10" Series

Specifications

- 4-Way, 5-Port, 2 or 3-Position Valves
- Single & Double Solenoid
- Dual 3/2 Valves

PVLB10 - 0.6 Cv

- 1/8" NPT & BSP
- 1/4" & 6mm Tube Porting

PVLC10 - 1.2 Cv

- 1/4" NPT & BSP
- 3/8" & 8mm Tube Porting

Mounting Style

- DIN Rail Mounting (35mm)
- Stacking Manifold Valve

Solenoid Pilot Actuation

PVLB10, PVLC10

- Low watt solenoid pilots: 1.2W/1.6VA
- Lights & Surge Suppression Standard
- 12VDC to 120VAC

Operating Pressure

- 30 to 150 PSI (310 to 1035 kPa)

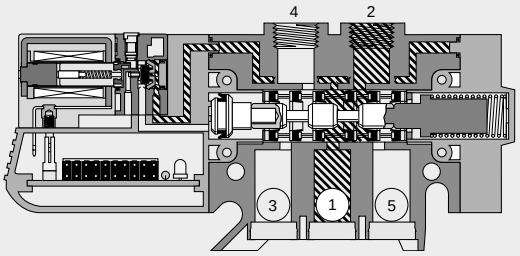
Operating Temperature

- 5°F to 140°F (-15°C to 60°C)

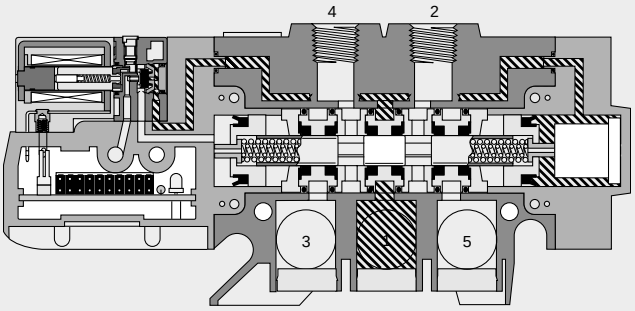
Certification / Approval

- Approved to be CE Marked
- IP65

Note: DC units are polarity sensitive.



PVLB10 Single Solenoid
Shown De-Energized



PVLC10 3-Position APB

Pressure **Exhaust**

Parker Hannifin Corporation
Pneumatic Division
Richland, Michigan
www.parker.com/pneumatic

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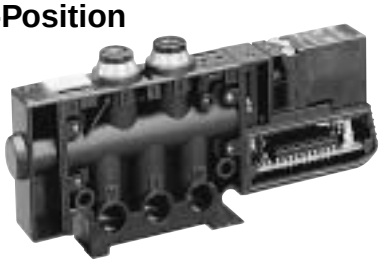
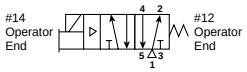
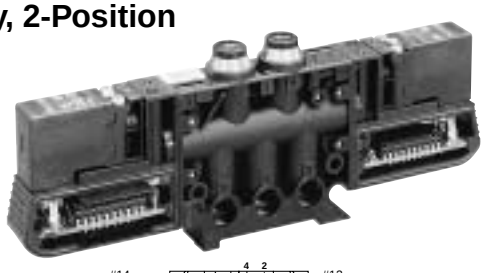
Single Solenoid
4-Way, 2-Position

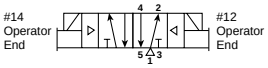




PVLB10				
	PVLB1016187W2	1/8" NPT	12-24 VDC	0.6 Cv
	PVLB1016187W1		24-120 VAC	
	PVLB1016067W2	1/4" Tube	12-24 VDC	
	PVLB1016067W1		24-120 VAC	
	PVLB101618W2	1/8" BSP	12-24 VDC	
	PVLB101618W1		24-120 VAC	
	PVLB101606W2	6mm Tube	12-24 VDC	
	PVLB101606W1		24-120 VAC	

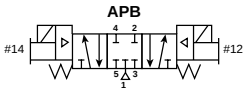
Double Solenoid
4-Way, 2-Position



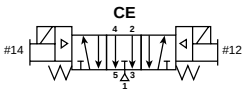


PVLB10				
	PVLB1026187W2	1/8" NPT	12-24 VDC	0.6 Cv
	PVLB1026187W1		24-120 VAC	
	PVLB1026067W2	1/4" Tube	12-24 VDC	
	PVLB1026067W1		24-120 VAC	
	PVLB102618W2	1/8" BSP	12-24 VDC	
	PVLB102618W1		24-120 VAC	
	PVLB102606W2	6mm Tube	12-24 VDC	
	PVLB102606W1		24-120 VAC	

Double Solenoid
4-Way, 3-Position APB

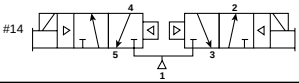


PVLB10				
	PVLB1076187W2	1/8" NPT	12-24 VDC	0.6 Cv
	PVLB1076187W1		24-120 VAC	
	PVLB1076067W2	1/4" Tube	12-24 VDC	
	PVLB1076067W1		24-120 VAC	
	PVLB107618W2	1/8" BSP	12-24 VDC	
	PVLB107618W1		24-120 VAC	
	PVLB107606W2	6mm Tube	12-24 VDC	
	PVLB107606W1		24-120 VAC	



PVLB10				
	PVLB1086187W2	1/8" NPT	12-24 VDC	0.6 Cv
	PVLB1086187W1		24-120 VAC	
	PVLB1086067W2	1/4" Tube	12-24 VDC	
	PVLB1086067W1		24-120 VAC	
	PVLB108618W2	1/8" BSP	12-24 VDC	
	PVLB108618W1		24-120 VAC	
	PVLB108606W2	6mm Tube	12-24 VDC	
	PVLB108606W1		24-120 VAC	

Double Solenoid
Dual 3/2 Normally Closed



PVLB10				
	PVLB1056187W2	1/8" NPT	12-24 VDC	0.6 Cv
	PVLB1056187W1		24-120 VAC	
	PVLB1056067W2	1/4" Tube	12-24 VDC	
	PVLB1056067W1		24-120 VAC	
	PVLB105618W2	1/8" BSP	12-24 VDC	
	PVLB105618W1		24-120 VAC	
	PVLB105606W2	6mm Tube	12-24 VDC	
	PVLB105606W1		24-120 VAC	

NOTES:

Solenoids sold separately on page 28.

Part Numbers Do Not include Solenoids.

Standard Part Numbers in Bold.

Parker Pneumatic

Parker Hannifin Corporation
Pneumatic Division
Richland, Michigan
www.parker.com/pneumatic

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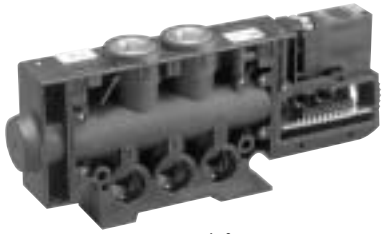
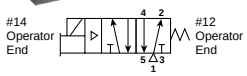
E

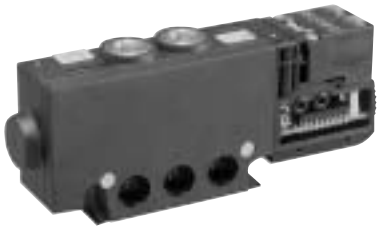
Single Solenoid
4-Way, 2-Position

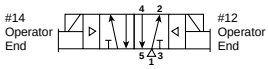




PVLC10				
	PVLC1016197W2	1/4" NPT	12-24 VDC	1.2 Cv
	PVLC1016197W1		24-120 VAC	
	PVLC1016097W2	3/8" Tube	12-24 VDC	
	PVLC1016097W1		24-120 VAC	
	PVLC101619W2	1/4" BSP	12-24 VDC	
	PVLC101619W1		24-120 VAC	
	PVLC101608W2	8mm Tube	12-24 VDC	
	PVLC101608W1		24-120 VAC	

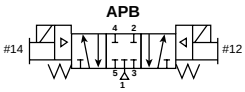
Double Solenoid
4-Way, 2-Position



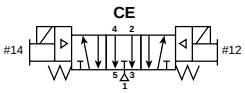


PVLC10				
	PVLC1026197W2	1/4" NPT	12-24 VDC	1.2 Cv
	PVLC1026197W1		24-120 VAC	
	PVLC1026097W2	3/8" Tube	12-24 VDC	
	PVLC1026097W1		24-120 VAC	
	PVLC102619W2	1/4" BSP	12-24 VDC	
	PVLC102619W1		24-120 VAC	
	PVLC102608W2	8mm Tube	12-24 VDC	
	PVLC102608W1		24-120 VAC	

Double Solenoid
4-Way, 3-Position APB

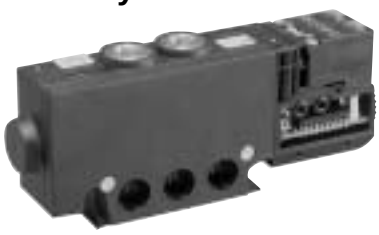


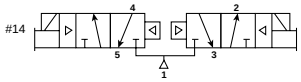
PVLC10				
	PVLC1076197W2	1/4" NPT	12-24 VDC	1.2 Cv
	PVLC1076197W1		24-120 VAC	
	PVLC1076097W2	3/8" Tube	12-24 VDC	
	PVLC1076097W1		24-120 VAC	
	PVLC107619W2	1/4" BSP	12-24 VDC	
	PVLC107619W1		24-120 VAC	
	PVLC107608W2	8mm Tube	12-24 VDC	
	PVLC107608W1		24-120 VAC	



PVLC10				
	PVLC1086197W2	1/4" NPT	12-24 VDC	1.2 Cv
	PVLC1086197W1		24-120 VAC	
	PVLC1086097W2	3/8" Tube	12-24 VDC	
	PVLC1086097W1		24-120 VAC	
	PVLC108619W2	1/4" BSP	12-24 VDC	
	PVLC108619W1		24-120 VAC	
	PVLC108608W2	8mm Tube	12-24 VDC	
	PVLC108608W1		24-120 VAC	

Double Solenoid
Dual 3/2 Normally Closed





PVLC10				
	PVLC1056197W2	1/4" NPT	12-24 VDC	1.2 Cv
	PVLC1056197W1		24-120 VAC	
	PVLC1056097W2	3/8" Tube	12-24 VDC	
	PVLC1056097W1		24-120 VAC	
	PVLC105619W2	1/4" BSP	12-24 VDC	
	PVLC105619W1		24-120 VAC	
	PVLC105608W2	8mm Tube	12-24 VDC	
	PVLC105608W1		24-120 VAC	

NOTES:

Solenoids sold separately on page 28.

Part Numbers Do Not include Solenoids.

Standard Part Numbers in Bold.

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Constructing a PVLB10 Stack

When constructing a stack, the following rules apply:

1. A stack must have a pneumatic and an electrical head / tail set.
2. A stack has a physical limit of 16 active modules (valves, feedback modules and output modules), regardless of whether they are double or single.
3. Single feedback and output modules must be stacked with single solenoid valves, and double feedback and output modules must be stacked with double solenoid valves.
4. Double and single modules can be combined in a stack with the use of a transition module. A stack order of double to single is recommended to maximize the number of possible addresses.

⚠ ***CAUTION:*** *If the application requires simultaneous operation of valves and / or external connection modules, see Technical Data page for operating limits.*

Addressing

Addresses are automatically assigned to each solenoid and each external connection based on its position in the stack. Addresses are numbered consecutively from top to bottom and left to right beginning at the top left of the stack with 0.

To find the total number of addresses that will be required for a stack, calculate the following for each type of module based on table below and total:

Addresses x Quantity of Units = Addresses Required

Type of Module	Addresses Assigned	Quantity In stack	Addresses Required
Double solenoid valve	2	x	=
Double feedback module	4	x	=
Double output module	4	x	=
Single solenoid valve	1	x	=
Single feedback module	2	x	=
Single output module	2	x	=
TOTAL ADDRESSES			=

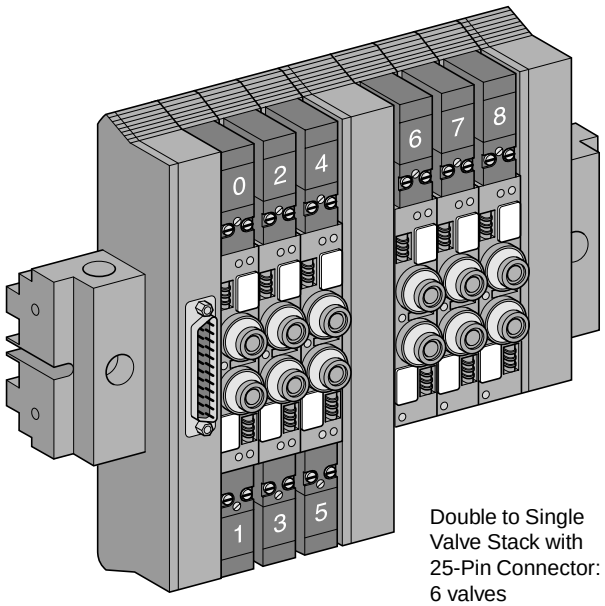
Electrical Connection

When selecting the electrical head / tail set, the following must be considered:

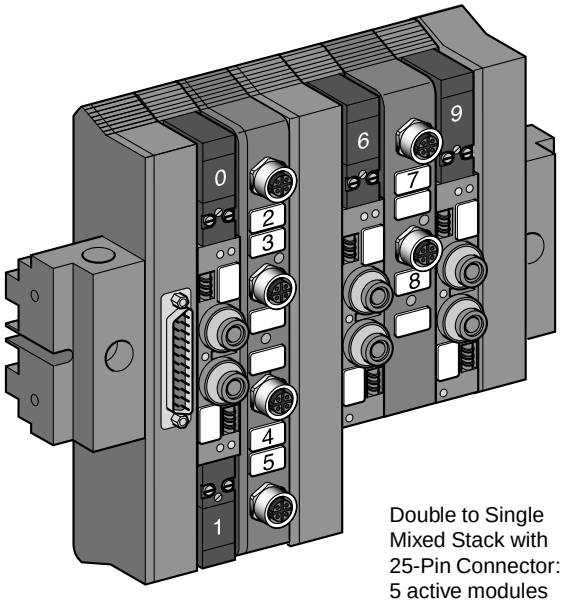
1. The size (double or single) of the electrical head piece must match that of the first module to its right.
2. The electrical connector must provide sufficient addresses for the stack.

The number of addresses possible with each type of head / tail set is shown in the following table. Based on the head type needed, select the connector that provides sufficient addresses for the stack.

PVLB10



Double to Single Valve Stack with 25-Pin Connector:
6 valves
9 addresses



Double to Single Mixed Stack with 25-Pin Connector:
5 active modules
10 addresses

Head Type	Connector	Possible Addresses
Single	25-Pin	16
Double	25-Pin	21
	35-Pin	32

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E

External Connection Modules

With 20-Pin intermodular system and 12mm (mini) connectors, these modules can be combined with valves and/or other modules. Feedback modules supply voltage to sensors and accept signals for communication back to the PLC. Feedback modules can be used for PNP or NPN sensors, indicator lights will only work on PNP sensors. Output modules allow connection and control of valves mounted externally from the stack.

Type	Size	Connections	Model Number
Feedback	Single	2 Inputs	**PVLB1E1302**
	Double	4 Inputs	**PVLB1E2304**
Output	Single	2 Outputs	**PVLB1S1302**
	Double	4 Outputs	**PVLB1S2304**

Double **Single**

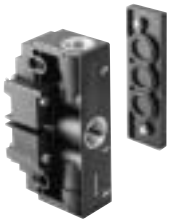
Head / Tail Sets

Pneumatic

Single air supply head / tail are used for shorter manifolds and dual air supply head / tail are used for longer manifolds.

Dual air supply head /tail sets contains 2 ported ends plus all hardware. Clamps to 35mm DIN rail. Removing 35mm hardware provides mounting holes for surface mounting. Single air supply head / tail sets clamp on one side only, Dual air supply head / tail sets clamp on both sides.

Type	Port Size	Model Number
Single Supply	1/4" NPT	**PVLB17197**
	1/4" BSP	PVLB1719
Double Supply	1/4" NPT	**PVLB17297**
	1/4" BSP	PVLB1729



Single Air Supply Head / Tail Set

Dual Air Supply Head / Tail Set

Pressure Isolating Disc

Description	Model Number
Sold in lots of 10.	PVLB1902

Electrical

For use with single size stacks. Provides electrical link between all functions in the stack and the PLC.

Size	Connector	Model Number
Single	Sub-D25 (male)	**PVLB191125**
Double	Sub-D25 (male)	**PVLB192125**
	35-Pin (male)	**PVLB192235**

Single Size Stacks

For use with dual size stacks. Provides electrical connection to PLC and transition between sizes.

Stack Order	Connector	Model Number
Double then Single	Sub-D25 (male)	**PVLB194125**
	35-Pin (male)	**PVLB194235**
Single then Double	Sub-D25 (male)	**PVLB193125**

Dual Size Stacks

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Output Version

P2SBA1BA40

Description	Model Number
Head Module for Single Solenoid Valves with ASI, 4-Outputs	**P2SBA1BA40**

Description	Model Number
Head Module for Single to Double or Double to Single Solenoid Valves with ASI, 4-Outputs (Includes Transition Module)	**P2SBA3BA40**

Description	Model Number
Head Module for Double Solenoid Valves with ASI, 4-Outputs	**P2SBA2BA40**

Description	Model Number
Auxiliary Head Module for Single Solenoid Valves with ASI, 4-Outputs	**P2SBA5BA40**

Description	Model Number
Auxiliary Head Module for Double Solenoid Valves with ASI, 4-Outputs	**P2SBA6BA40**

Notes: If application requires control of 16 single solenoid (24VDC) PVLB10 valves with ASI, select (1) P2SBA1BA40, (3) P2SBA5BA40 and the required pneumatic air supply Head / Tail Set.

If application requires control of 8 double solenoid (24VDC) PVLB10 valves with ASI, select (1) P2SBA3BA40, (3) P2SBA6BA40 and the required pneumatic air supply Head / Tail Set.

Input & Output Version

PVLBA3BA44

Description	Model Number
Head Module for Single Solenoid Valves with ASI, 4-Inputs and 4-Outputs	**PVLBA1BA44 - with M12 (Micro) Connection**
	PVLBA1BA44V - with Vampire Connection

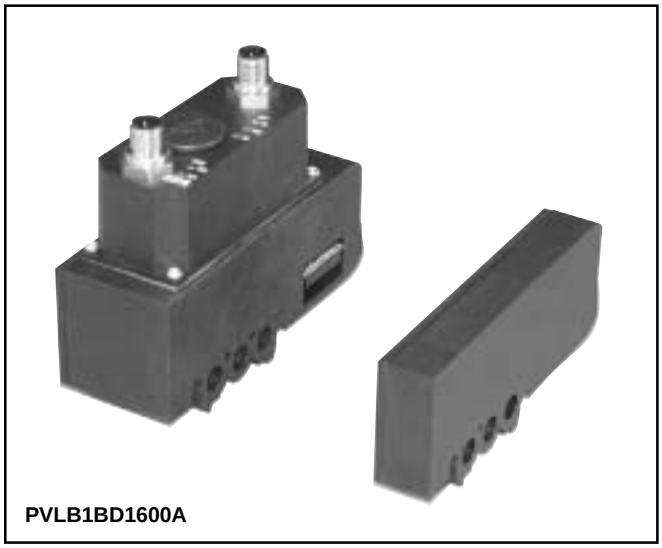
Description	Model Number
Head Module for Single to Double Solenoid Valves with ASI, 4-Inputs and 4-Outputs. Use this module for Double Solenoid Valves. (Includes Transition Module)	**PVLBA3BA44 - with M12 (Micro) Connection**
	PVLBA3BA44V - with Vampire Connection

Description	Model Number
Auxiliary Head Module with ASI, 4-Inputs and 4-Outputs	**PVLBA5BA44**

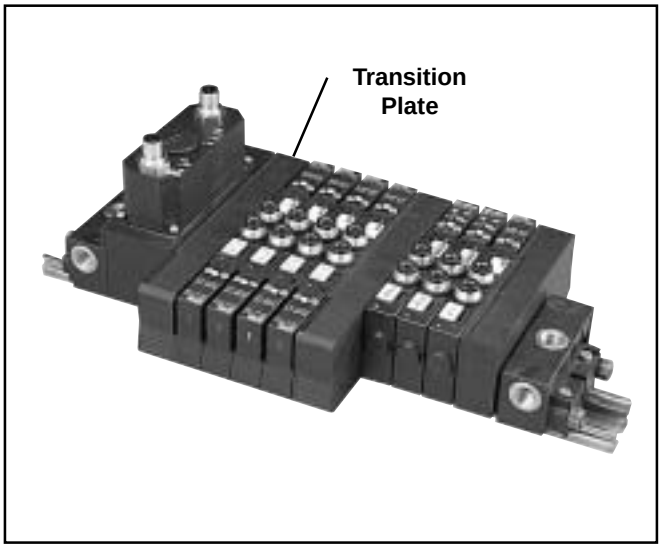
Notes: If application requires control of 16 single solenoid (24VDC) PVLB10 valves and 16 inputs (PNP), select (1) PVLBA1BA44, (3) PVLBA5BA44 and the required air supply module. 4 ASI nodes are consumed.

If application requires control of 8 double solenoid (24VDC) PVLB10 valves and 16 inputs (PNP), select (1) PVLBA3BA44, (3) PVLBA5BA44 and the required air supply module. 4 ASI nodes are consumed.

Bus and power connection is through 4-Pin Micro (M12) single key male connectors or Vampire connection. Input connection is through 4-Pin Micro (M12) single key female connectors.



PVLB1BD1600A



Description Head Module for PVLB10 with:	Model Number
DeviceNET (16-Outputs)	**PVLB1BD1600A**
Profibus-DP (16-Outputs)	**PVLB1BP1600A**
Interbus-S (16-Outputs)	**PVLB1BS1600A**

Notes: Maximum of 16 solenoids can be controlled through these modules.

These modules can be directly connected to single solenoid PVLB10 valves. A separate Transition Plate, PVLB1930, must be ordered to connect to double solenoid PVLB10 valves.

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Constructing a PVLC10 Stack

When constructing a stack, the following rules apply:

1. A stack must have a pneumatic and an electrical head / tail set.
2. A stack has a physical limit of 16 solenoids.
3. Single and double solenoid valves can be combined into one stack without any transition module.

⚠ ***CAUTION:*** *If the application requires simultaneous operation of valves and/or external connection modules, see Technical Data page for operating limits.*

Addressing

Addresses are automatically assigned to each solenoid and each external connection based on its position in the stack. Addresses are numbered consecutively from left to right beginning at the top left of the stack with 0.

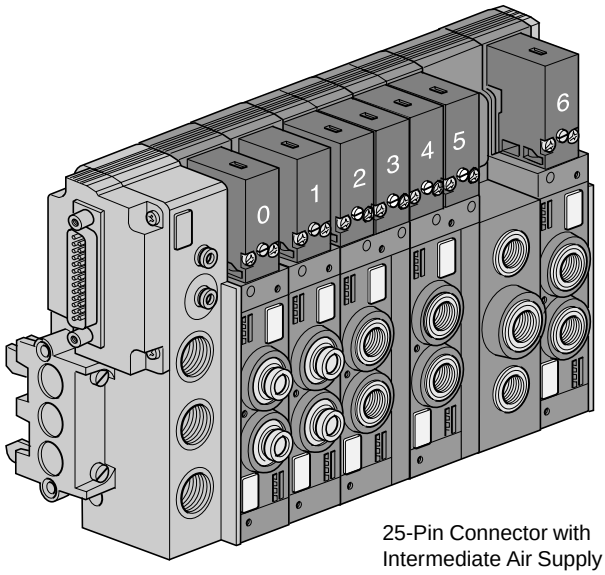
To find the total number of addresses that will be required for a stack, calculate the following for each type of module based on table below and total:

Addresses x Quantity of units = Addresses Required

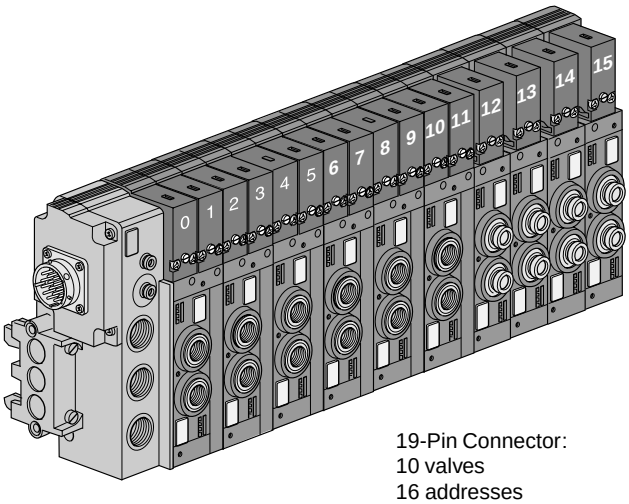
Type of Module	Addresses Assigned		Quantity In stack		Addresses Required
Double solenoid valve	2	x		=	
Single solenoid valve	1	x		=	
TOTAL ADDRESSES				=	

Head Type	Connector Possible Addresses
25-Pin	16
19-Pin	16

PVLC10



25-Pin Connector with Intermediate Air Supply Module:
5 valves
7 addresses



19-Pin Connector:
10 valves
16 addresses

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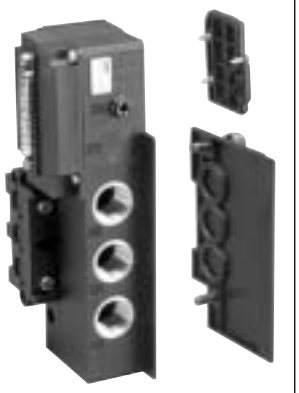
E

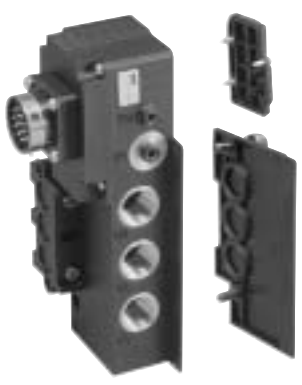
Head / Tail Sets

Electrical / Pneumatic

Port Size/Type	Connector	Model Number
3/8" NPT, Single	Sub-D, 25-Pin w/External Pilot (Px)	**PVLC27137D25A**
3/8" NPT, Single	Sub-D, 25-Pin w/o External Pilot (Px)	**PVLC17137D25A**
3/8" NPT, Single	Circular, 19-Pin w/External Pilot (Px)	**PVLC27137C19A**
3/8" NPT, Single	Circular, 19-Pin w/o External Pilot (Px)	**PVLC17137C19A**
3/8" BSP, Single	Sub-D, 25-Pin w/External Pilot (Px)	PVLC2713D25A
3/8" BSP, Single	Sub-D, 25-Pin w/o External Pilot (Px)	PVLC1713D25A
3/8" BSP, Single	Circular, 19-Pin w/External Pilot (Px)	PVLC2713C19A
3/8" BSP, Single	Circular, 19-Pin w/o External Pilot (Px)	PVLC1713C19A



Sub-D, 25-Pin



Circular, 19-Pin

Air Supply Modules

Tail Air Supply Module to be mounted at the end of the manifold for dual air supply for longer manifolds. Intermediate Air Supply Module used when multiple pressures are required on a manifold.

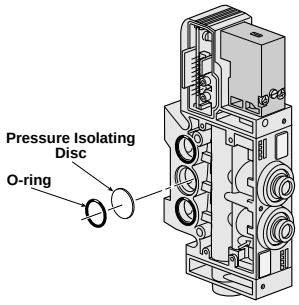
Port Size / Type	Tail Air Supply Module	Intermediate Air Supply Module
3/8" NPT	**PVULC2137**	**PVULC2137E**
3/8" BSP	PVULC213	PVULC213E

Tail Air Supply Module

Intermediate Air Supply Module

Pressure Isolating Disc

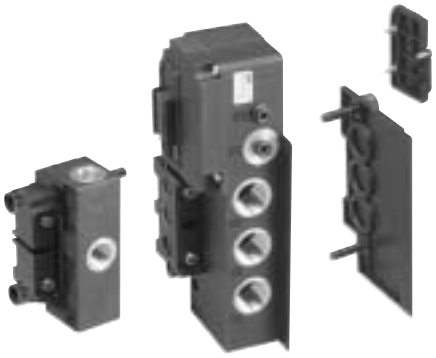
Description	Model Number
Sold in lots of 10	**PVLC1902**



Transition Kits

(PVLB10 to PVLC10)

Port Size / Type	Connector	Model Number
1/4" NPT to 3/8" NPT	Transition Kit with External Pilot (Px)	**PVLC27137B19**
1/4" NPT to 3/8" NPT	Transition Kit without External Pilot (Px)	**PVLC17137B19**
1/4" BSP to 3/8" BSP	Transition Kit with External Pilot (Px)	PVLC2713B19
1/4" BSP to 3/8" BSP	Transition Kit without External Pilot (Px)	PVLC1713B19



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Output Version

P2SBA5BA40

Description	Model Number
Head Module with ASI, 4-Outputs	**P2SBA1BA40**

Description	Model Number
Auxiliary Head Module with ASI, 4-Outputs	**P2SBA5BA40**

Note: If application requires control of 16 single or 8 double solenoid (24VDC) PVLC10 valves with ASI, select (1) P2SBA1B40, (3) P2SBA5BA40 and the required Air Supply Module. Bus and external power connection is through 4-Pin Micro (M12) single key male connectors.

Input & Output Version

PVLBA1BA44

Description	Model Number
Head Module with ASI 4-Inputs and 4-Outputs	**PVLBA1BA44 - with M12 (Micro) Connection**
	PVLBA1BA44V - With Vampire Connection

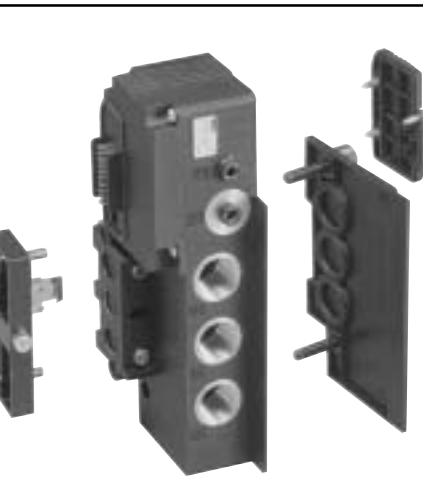
Description	Model Number
Auxiliary Head Module with ASI, 4-Inputs and 4-Outputs	**PVLBA5BA44**

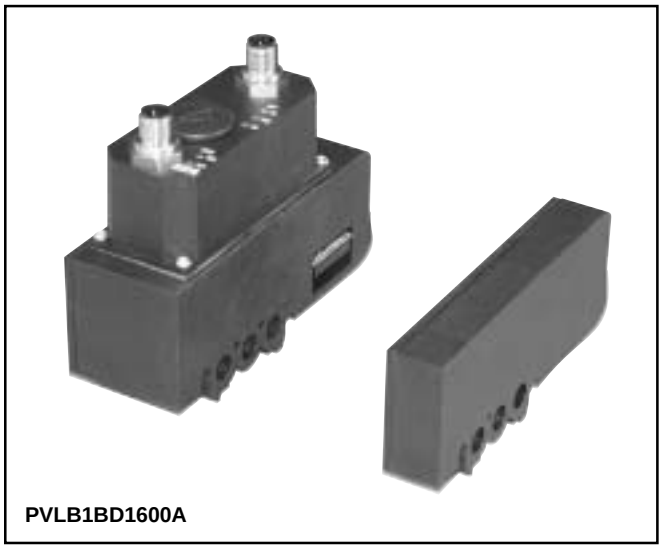
Note: If application requires control of 16 single or 8 double solenoid (24VDC) PVLC10 valves 16 inputs (PNP), select (1) PVLBA1BA44, (3) PVLBA5BA44 and the required Air Supply Module. 4 ASI nodes are consumed. Bus and external power connection is through 4-Pin Micro (M12) single key male connectors or Vampire connection. Input connection is through 4-Pin Micro (M12) single key female connectors.

Air Supply Module for Serial Bus Communication

This module is required when using a Bus Communication Head Module.

Port Size / Type	Description	Model Number
3/8" NPT	Air Supply Module with External Pilot (Px)	**PVLC27137B**
3/8" NPT	Air Supply Module without External Pilot (Px)	**PVLC17137B**
3/8" BSP	Air Supply Module with External Pilot (Px)	PVLC2713B
3/8" BSP	Air Supply Module without External Pilot (Px)	PVLC1713B





PVLB1BD1600A

Description Head Module for PVLC10 with:	Model Number
DeviceNET (16-Outputs)	**PVLB1BD1600A**
Profibus-DP (16-Outputs)	**PVLB1BP1600A**
Interbus-S (16-Outputs)	**PVLB1BS1600A**

Notes: Maximum of 16 solenoids can be controlled through these modules.

These modules can be directly connected to the Air Supply Modules PVLC27137B, PVLC17137B, PVLC2713B or PVLC1713B which has to be ordered separately.

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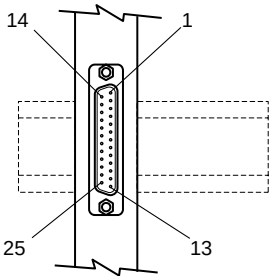
Sub-D, 25-Pin Single Size Head / Tail Set

Pin No.	Stack Address
13	0
25	1
12	2
24	3
11	4
23	5
10	6
22	7
9	8
21	9

Pin No.	Stack Address
8	10
20	11
7	12
19	13
6	14
18	15
5	Not Used
17	24V (feedback)(PVLB10)
4	0V (feedback)(PVLB10)
16	Common 0V



Sub-D, 25-Pin Double Size Head / Tail Set*

Pin No.	Stack Address
13	0
25	1
12	2
24	3
11	4
23	5
10	6
22	7
9	8
21	9
8	10
20	11
7	12

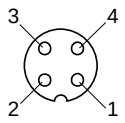
Pin No.	Stack Address
19	13
6	14
18	15
5	Not Used
17	24V (feedback)
4	0V (feedback)
16	Common 0V
3	16
15	17
2	18
14	19
1	20

Feedback Connector*

Pin No.	I/O
1	24 V (feedback)
2	–
3	0 V (feedback)
4	Input

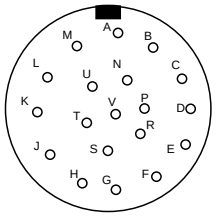
Output Connector*

Pin No.	I/O
1	–
2	–
3	Common 0V
4	Output



Notes: Solenoids are polarity sensitive. The common must be at 0V. Switching must be at the high potential.
* Available with PVLB10 Only

19-Pin Circular Connector†



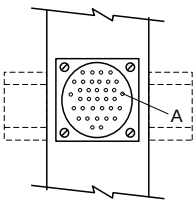
Pin No.	Stack Address
A	0
B	1
C	2
D	3
E	4
F	5
G	6
H	7
J	8
K	9
L	10
M	11
N	12
P	13
R	14
S	15
T	Common 0V
U	Not Used
V	Not Used

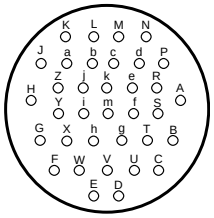
† Available with PVLC10 Only

Cylindrical, 35-Pin type "Trident Ringlock" Double Size Head / Tail Set*

Pin No.	Stack Address
A	0
B	1
C	2
D	3
E	4
F	5
G	6
H	7
J	8
K	9
L	10
M	11
N	12
P	13
R	14
S	15
T	16
U	17

Pin No.	Stack Address
V	18
W	19
X	20
Y	21
Z	22
a	23
b	24
c	25
d	26
e	27
f	28
g	29
h	30
i	31
j	Common 0V
k	0V (feedback)
m	24V (feedback)





* Available with PVLB10 only.

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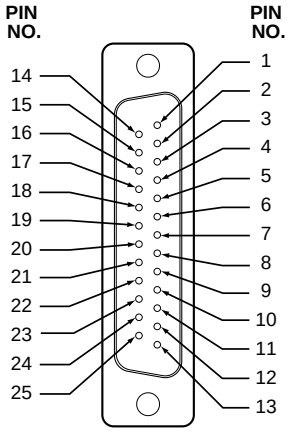
Pin Out Detail D-Sub, 25-Pin Connector



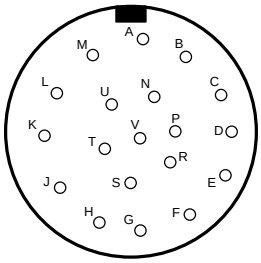
Output Solenoid No.	D-Sub, 25-Pin No.	IP65 Cable Colors
1	13	Green
2	25	Transparent
3	12	Dark Blue
4	24	Light Blue
5	11	Pink
6	23	Purple
7	10	Dark Green / Black
8	22	Yellow
9	9	Light Green / Black
10	21	Yellow / Black

Output Solenoid No.	D-Sub, 25-Pin No.	IP65 Cable Colors
11	8	Blue / Black
12	20	White / Black
13	7	Khaki
14	19	Orange
15	6	White
16	18	Grey
Not Used	5	Red / Black
Not Used	17	Red
Not Used	4	Brown
Valve Common	16	Black

Notes: Solenoids are polarity sensitive. The common must be at OV. Switching must be at the high potential.

Maximum 16 solenoid outputs with one valve (negative) common line on Pin 16.

19-Pin Circular Connector*



Output Solenoid No.	19-Pin Connector	IP65 Cable Colors
1	A	Pink / Brown
2	B	White / Green
3	C	White / Yellow
4	D	White / Grey
5	E	White / Pink
6	F	Brown / Green
7	G	Red / Blue
8	H	Grey / Pink
9	J	Brown / Yellow
10	K	Violet

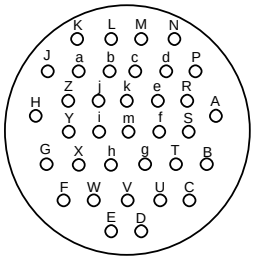
Output Solenoid No.	19-Pin Connector	IP65 Cable Colors
11	L	Blue
12	M	Pink
13	N	Grey
14	P	Yellow
15	R	White
16	S	Green
Valve Common	T	Black
Not Used	U	Brown
Not Used	V	Red

Notes: Solenoids are polarity sensitive. The common must be at OV. Switching must be at the high potential.

Maximum 16 solenoid outputs with one valve (negative) common line on Pin T.

* Available with PVLC10 Only.

35-Pin Circular Connector*



Output Solenoid No.	35-Pin Connector	IP65 Cable Colors
0	A	White / Brown
1	B	White / Green
2	C	White / Yellow
3	D	White / Grey
4	E	White / Pink
5	F	White / Blue
6	G	White / Red
7	H	White / Black
8	J	Brown / Yellow
9	K	Violet
10	L	Blue
11	M	Pink
12	N	Grey
13	P	Yellow
14	R	White
15	S	Green
16	T	Brown / Green
17	U	Brown / Grey

Output Solenoid No.	35-Pin Connector	IP65 Cable Colors
18	V	Brown / Pink
19	W	Brown / Blue
20	X	Brown / Red
21	Y	Brown / Black
22	Z	Green / Grey
23	a	Green / Pink
24	b	Green / Blue
25	c	Green / Red
26	d	Green / Black
27	e	Yellow / Grey
28	f	Yellow / Pink
29	g	Yellow / Blue
30	h	Yellow / Red
31	i	Yellow / Black
0 V valves	j	Black
0 V inputs	k	Brown
24 V inputs	m	Red

* Available with PVLB10 Only.

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PVLB10 & PVLC10 3-Pin, 15mm Solenoids

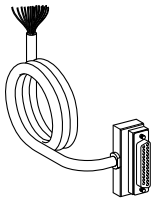
(8mm Pin Spacing) 1.2W/1.6VA.

Voltage	Override	
	Non-Locking	Locking
12VDC	**PS3441B45P**	**PS3441C45P**
24VDC	**PS3441B49P**	**PS3441C49P**
24V 50/60Hz	**PS3441B42P**	**PS3441C42P**
120V 60Hz	**PS3441B53P**	**PS3441C53P**

Cable with Female D-Sub, IP 65 Rated, 25-Pin Connector

P8L-MD25A5B	5 Meters / 16.40 Ft

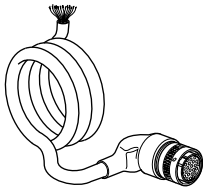
Connection to the control system is through 20 colored wires AWG 24, rated at 2.5 amp.



Cable with Female IP65 Rated, 19-Pin Connector

P8L-MC19A5	5 Meters / 16.40 Ft

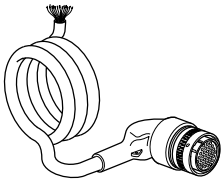
Connection to the control system is through 19 colored wires AWG 20, rated at 5 amp.



Cable with Female IP65 Rated, 35-Pin Connector

P8L-MC35A5	5 Meters / 16.40 Ft

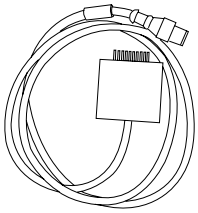
Connection to the control system is through 35 colored wires AWG 20, rated at 5 amp.



ASI Module Addressing Cables

P8B-AJACK	2 Meters / 6.56 Ft
Used to connect ASI Head Module for PVLB10 and PVLC10 to an ASI Programming Unit.	
P8L-MH02B1	1 Meter / 3.28 Ft
Used to program ASI Output Head and Auxilliary head modules.	

P8B-AJACK



P8L-MH02B1

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Operating Pressure Range:
Single Pilot ..... 45 to 150 PSI (311 to 1035 kPa)
Double Pilot ..... 30 to 150 PSI (207 to 1035 kPa)

Temperature Range (Ambient)
Operating 5° to 140°F (-15° to 60°C)
Storage -40° to 158°F (-40° to 70°C)

⚠ ***CAUTION:***
If it is possible that the ambient temperature may fall below freezing, the medium must be moisture free to prevent internal damage or unpredictable behavior.

Medium: Dry or lubricated air or inert gas

Medium Quality:
PVLA Dry air at 5 micron filtration
PVLB & PVLC Dry or lubricated air at 50 micron filtration

Materials:
Body ..... Glass filled polyamide
Seals ..... Polyurethane
Fittings ..... Brass

Mounting:
Inline Surface mount on flat surface
Stacking Mount on 35mm DIN rail or flat surface

Mounting Orientation: All positions

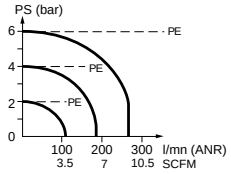
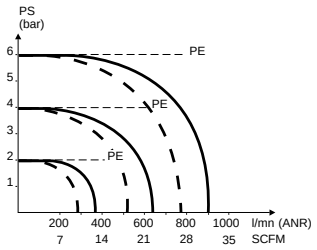
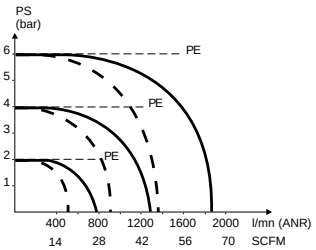
Manual Overrides: Locking or non-locking

Lubrication
Valves are pre-lubricated and may be operated with dry air. If lubrication is desired, use F442 oil.

Cycle Life: 30 million (dry air)

E

Specific Characteristics

Description		10-32 UNF (M5) Valves (PVLA)		1/8" Valves (PVLB) (PVLB10)		1/4" Valves (PVLC) (PVLC10)	
C_V		0.17		0.6		1.2	
Flow Rates —— Threaded connector – – – Instant tube fitting PE = input pressure PS = output pressure							
Port Sizes	Instant tube fitting	5/32" (4 mm)		1/4"		3/8"	
	Threaded	(M5)		1/8" Pipe		1/4" Pipe	
Maximum Valve Fitting Torque		.4 ft-lb (0.5Nm)		7.4 ft-lb (10Nm)		14.8 ft-lb (20Nm)	
Head/Tail Port Size / Max. Torque		1/8" Pipe / 7.4 ft-lb (10Nm)		1/4" Pipe / 14.8 ft-lb (20Nm)		3/8" Pipe / 40.6 ft-lb (55Nm)	
For Air Operated Valves:		**Single Acting**	**Double Acting**	**Single Acting**	**Double Acting**	**Single Acting**	**Double Acting**
Response Time (Input to Output)*		20 ms	15 ms	14 ms	8 ms	25 ms	11 ms
Pilot Pressure (@ 90 PSIG Inlet)		44 PSI	29 PSI	44 PSI	29 PSI	44 PSI	29 PSI
Depilot Pressure (@ 90 PSIG Inlet)		15 PSI	—	15 PSI	—	22 PSI	—
Maximum Operating Frequency		10 Hz	10 Hz	5 Hz	10 Hz	5 Hz	10 Hz
For Solenoid Operated Valves:		**Single Acting**	**Double Acting**	**Single Acting**	**Double Acting**	**Single Acting**	**Double Acting**
Response Time (Input to Output)*		25 ms	15 ms	22 ms	12 ms	39 ms	17 ms
Maximum Operating Frequency		5 Hz	10 Hz	5 Hz	10 Hz	5 Hz	10 Hz
Power Consumption Hold		DC = 0.9 Watt		DC = 1.2 Watt, AC = 1.6VA		DC = 1.2 Watt, AC = 1.6VA	
Power Consumption Inrush		DC = 0.9 Watt		DC = 1.2 Watt, AC = 3.5VA		DC = 1.2 Watt, AC = 3.5VA	
Voltage Tolerance		+5% to -10% rated voltage		+10% to -15% rated voltage @ 70° F (20° C)		+10% to -15% rated voltage @ 70° F (20° C)	
Standard Voltages		12 and 24 VDC		12 and 24 VDC 24 and 120 VAC		12 and 24 VDC 24 and 120 VAC	
Rated Insulation Voltage		660 Volts		1500 Volts		1500 Volts	
Protection Rating		NEMA 1 (IP40)		IP65		IP65	
Standards		ⓤL and NFC 79 300		ⓤL (except 240 VAC) and NFC 79 300			

* Valves tested with test chamber at 90 PSIG inlet pressure.

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Electrical Characteristics

Standard Voltages

Solenoid: DC = 12, 24 and 48
AC = 24V 50/60 Hz and 120V 60 Hz
Feedback module: 24VDC (designed for sourcing sensor)
Output module: 24VDC

Voltage Tolerance

+10% to -15% of rated voltage @ 70° F (20° C)

Power Consumption (Solenoid)

Hold: DC = 1.2W AC = 1.6VA
Inrush: DC = 1.2W AC = 3.5VA

Rated Currents (Solenoid)

Voltage	Holding Current	I_d (Drop-out Current)*
12VDC	100 mA	10 mA
24VDC	50 mA	5 mA
48VDC	25 mA	2.5 mA
24VAC	65 mA	22 mA
120VAC	13.3 mA	5 mA

* When using a programmable controller, be sure that the leakage current of the controller outputs is lower than the drop-out current value.

Maximum Allowable Currents

Stack = 1000 mA (1 Amp)
Output module = 1000 mA (1 Amp)
Feedback Module = 100 mA (supply + load)

Indication

By LED – one for each stack address

PVLB10 External Connection: Round connector M12

Protection Rating: IP65

⚠ Simultaneous Operation

Some applications require simultaneous use of devices during setup or operation. Under normal single device operation, reliability can be assured by staying within the stated "Maximum Allowable Currents". During simultaneous operation, however, the currents for each device must be added together with the total current not exceeding the 1000 mA (1 Amp) rating for the stack (example: only ten 12VDC solenoids can be operated simultaneously because their total accumulated current = 1000 mA). This is especially true for any connected external load when using the output module. While each output module is rated for 1000 mA, simultaneous operation of this load will reduce this rating. Calculate maximum available current for any externally connected load during simultaneous operation according to the following formula:

Available Current = 1,000 mA - simultaneous current*

* Add all solenoid currents based on system voltage and any other external load operating simultaneously.

Type of Device	Current Required		Quantity (simultaneous)		Current Used	
Solenoid	_____	mA(1) x	_____	=	_____	mA
External Load (2)	_____	mA(3) x	_____	=	_____	mA
Total Required Current				=	_____	mA(4)

(1) Depending on system voltage (see "Rated Currents").
(2) Feedback modules use a separate common so are not used for this calculation, but total feedback current cannot exceed 1000 mA (1 Amp).
(3) Depending on device connected to the output module. Use rated current (mA) for device or calculate: mA = Watts/Volts x 1000.
(4) Must not exceed 1000 mA (1 Amp).

ASI Bus Module Specifications

ASI Bus Supply Voltage:
29.5 to 31.6VDC

Bus and Power Connector on Head Module:
(M12) Micro 4-Pin Single Key Connector

Bus Connector Protection
Miswiring Protection

External Power Supply Voltage:
21.6 to 26.4VDC
(For solenoids only)

EMC Protection:
IEC 801-2 level 3
IEC 801-3 level 3
IEC 801-4 level 3

Identification Code:
8.F

Input Connector on Head Module
(M12) Micro 4-Pin Single Key Female Connector

Input Type:
PNP

Number of Inputs:
4 to 16 Max.

4 ASI nodes are used when controlling 16 outputs and 16 inputs.

Number of Outputs:
4 to 16 Max.

4 ASI nodes are used when controlling 16 outputs and 16 inputs.

Protection Level:
IP65 (Washdown)

Shock:
IEC 68-2-27 15g 11 ms

Short Circuit Protection:
Diagnostic by LED

Solenoid Supply Voltage:
21.6 to 26.4VDC

Storage Temperature:
-40°F to 158°F
(-40°C to 70°C)

Working Temperature:
32°F to 130°F
(0°C to 55°C),
Intermittent Duty
(60% Rating)

32°F to 104°F
(0°C to 40°C),
Continuous Duty
(100% Rating)

DeviceNET, Interbus-S and Profibus-DP Bus Module Specifications

Bus Connection on Head Module:

Interbus-S:
Connector M23 male 5-Pins (Bus IN)

Connector M23 female 5-Pins (Bus Out)

Profibus-DP:
Micro Connector (M12) male 5 pins (Bus IN)

Micro Connector (M12) female 5 pins (Bus Out)

DeviceNet:
Micro Connector M12 male 5 pins (Bus)

External Power Supply Voltage:
20.4 to 30VDC

Electrical Power Supply Connection on Head Module:
Micro Connector (M12) male 5 pins

Diagnostic Bus:
3 or 4 LED

Diagnostic Voltage:
2 LED

EMC Protection:
IEC 801-2 level 3
IEC 801-3 level 3
IEC 801-4 level 3

Number of Outputs:
16 Max. for DeviceNet, Interbus-S, Profibus-DP

Note: For Installation Instructions (V-382P) and EDS/GSD files, visit our website http://www. parker.com/pneumatic. Click on Solenoid/Air Operated Valves and then click on PVLB10 or PVLC10 Valves and finally click on Service/Maintenance.

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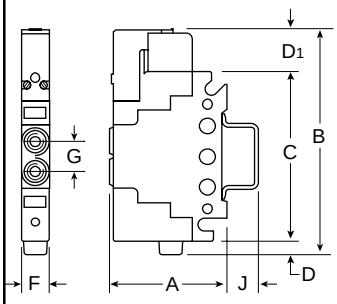
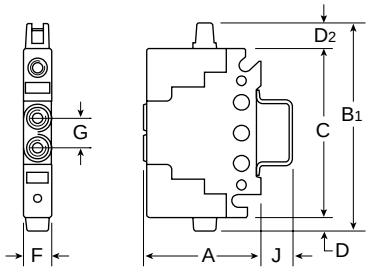
E

PVLA Valves

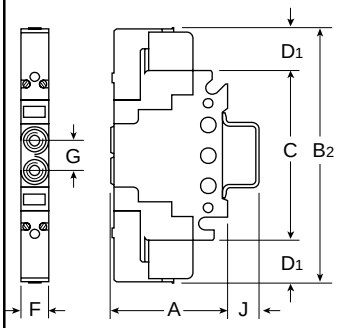
Single Solenoid



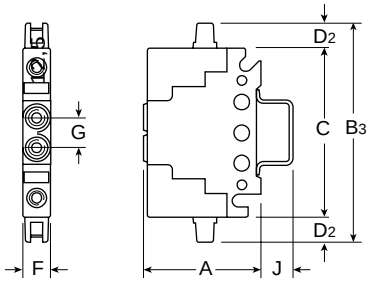
Single Remote Pilot



Double Solenoid



Double Remote Pilot



Dimensions

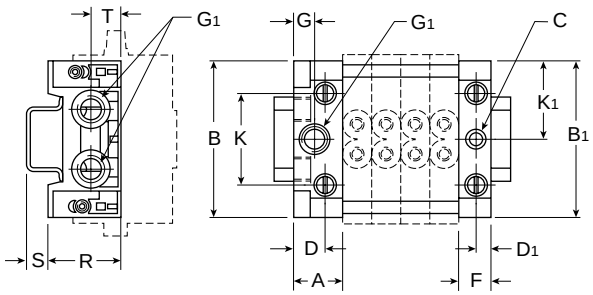
A (Inline M5)				1.91 (49)
A (Inline 5/32" Tube)				2.13 (54)
A (Stacking M5)				1.91 (49)
A (Stacking 5/32" Tube)				2.13 (53)
B 3.68 (94)	**B1** 3.37 (86)	**B2** 4.17 (106)	**B3** 3.54 (90)	**C** 2.76 (70)
D .22 (5.5)	**D1** .71 (18)	**D2** .39 (10)	**F** .48 (12.1)	**G** .49 (12.5)
J .51 (13)				

Inches (mm)

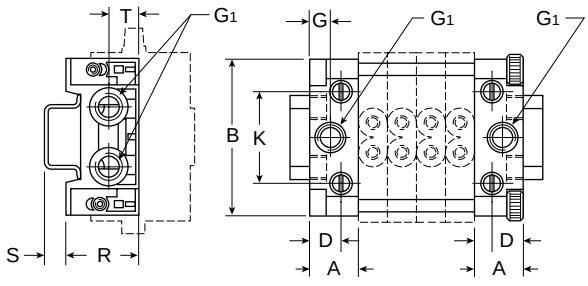
M5 or 5/32" (4mm) tube for main and pilot ports.

Stacking System – PVLA

Single Air Supply



Double Air Supply



Dimensions

A .79 (20)	**B** 2.56 (65)	**B1** 2.56 (65)	**C** .17 (4)	**D** .51 (13)
D1 .23 (6)	**F** .52 (13)	**G** .33 (9)	**G1** 1/8"	**K** 1.50 (38)
K1 1.50 (38)	**L** .53 (14)	**R** 1.18 (30)	**S** .35 (8.8)	**T** .49 (13)

Inches (mm)

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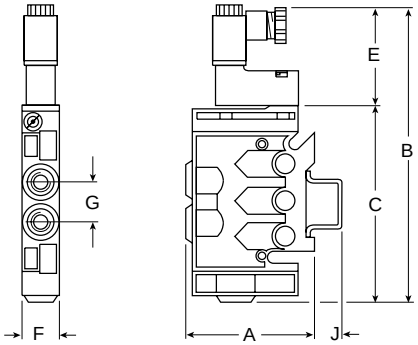
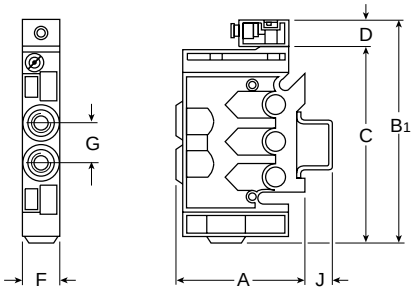
PVLB Valves

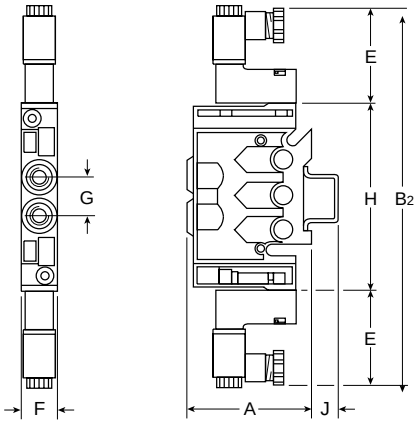
Single Solenoid



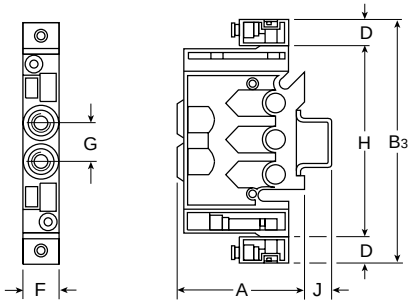
Single Remote Pilot



Double Solenoid



Double Remote Pilot



Dimensions

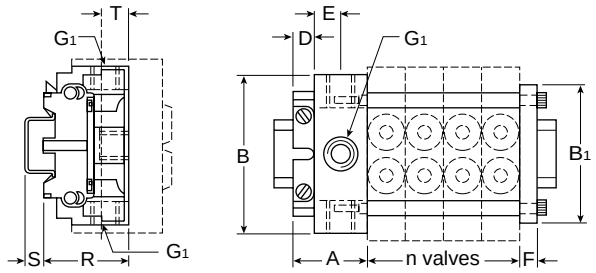
A (Inline Pipe)	2.40 (61)			
A (Inline Tube)	2.80 (71)			
A (Stacking Pipe)	2.40 (61)			
A (Stacking Tube)	2.68 (68)			
B 5.91 (150)	**B1** 4.25 (108)	**B2** 7.91 (201)	**B3** 4.60 (117)	**C** 3.74 (95)
D .51 (13)	**E** 2.17 (55)	**F** .71 (18)	**G** .79 (20)	**H** 3.58 (91)
J .47 (12)				

Inches (mm)

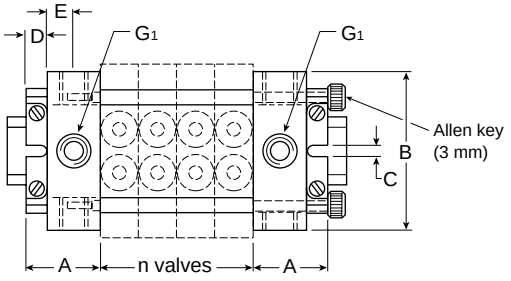
1/8" Pipe or 1/4" tube or 6mm tube for main ports.

Stacking System – PVLB

Single Air Supply



Double Air Supply



Dimensions

A 1.5 (38)	**B** 3.27 (83)	**B1** 2.76 (70)	**C*** .17 (4.2)	**D** .39 (10)
E .47 (12)	**F** .31 (8)	**G1** 1/4"	**R** 1.73 (44)	**S** .35 (9)
T .43 (11)	* Clearance for #6 screw.			

Inches (mm)

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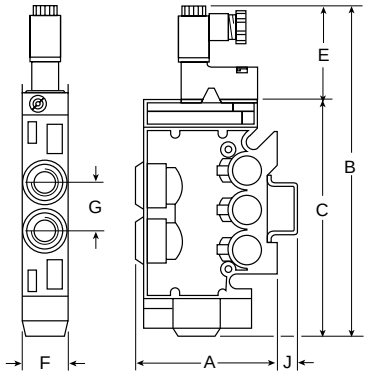
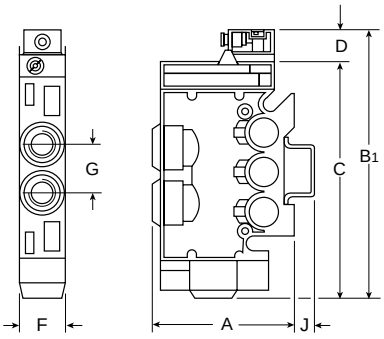
PVLC Valves

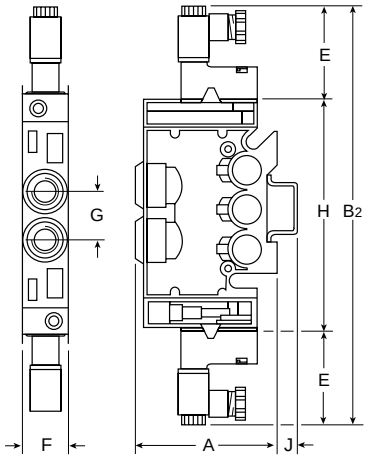
Single Solenoid



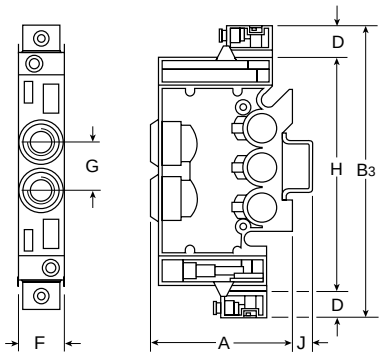
Single Remote Pilot



Double Solenoid



Double Remote Pilot



Dimensions

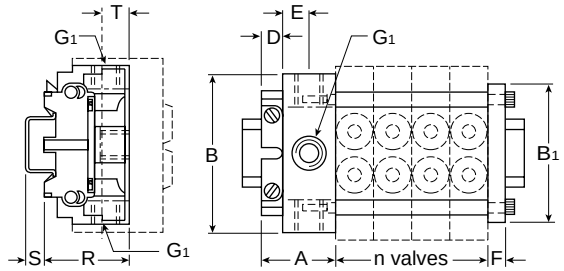
A (Inline Pipe)	2.87 (73)			
A (Inline Tube)	3.66 (93)			
A (Stacking Pipe)	2.87 (73)			
A (Stacking Tube)	3.27 (83)			
B 7.0 (178)	**B1** 5.35 (136)	**B2** 8.94 (227)	**B3** 5.62 (143)	**C** 4.84 (123)
D .51 (13)	**E** 2.17 (55)	**F** .98 (25)	**G** 1.00 (26)	**H** 4.61 (117)
J .43 (11)				

Inches (mm)

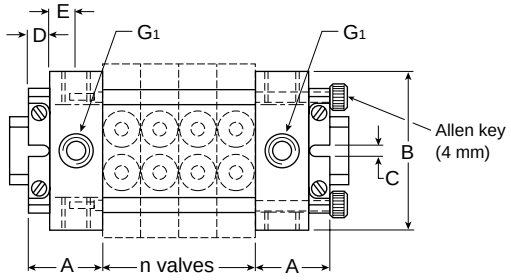
1/4" Pipe or 3/8" tube or 8mm tube for main ports.

Stacking System – PVLC

Single Air Supply



Double Air Supply



Dimensions

A 1.5 (38)	**B** 4.25 (108)	**B1** 3.94 (100)	**C*** .17 (4.2)	**D** .39 (10)
E .47 (12)	**F** .31 (8)	**G1** 3/8"	**R** 2.17 (55)	**S** .35 (9)
T .51 (13)	* Clearance for #6 screw.			

Inches (mm)

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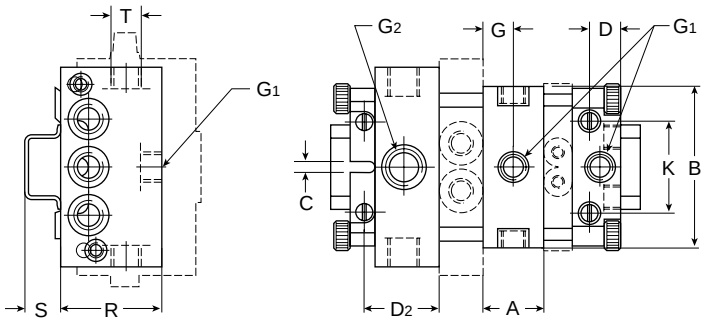
Transition Kits – PVLA & PVLB Valves

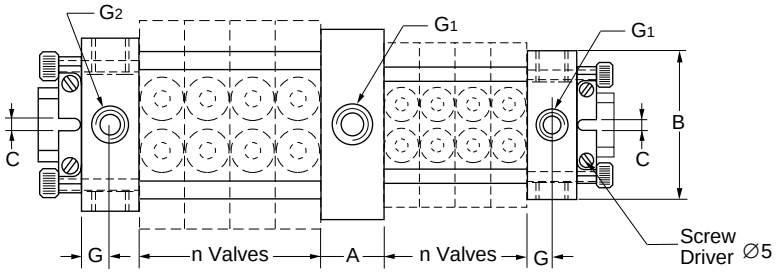


Dimensions

A .98 (25)	**B** 2.64 (67)	**C** .17 (4)	**D** .51 (13)	**D_2** 1.23 (31)
G .49 (13)	**G_1** 1/8"	**G_2** 1/4"	**K** 1.50 (38)	**R** 1.34 (34)
S .58 (15)	**T** .47 (12)			

Inches (mm)

Transition Kits – PVLB & PVLC Valves



Dimensions

A .98 (25)	**B** 3.94 (100)	**C** .17 (4)	**G** .47 (12)	**G_1** 1/4"
G_2 3/8"				

Inches (mm)

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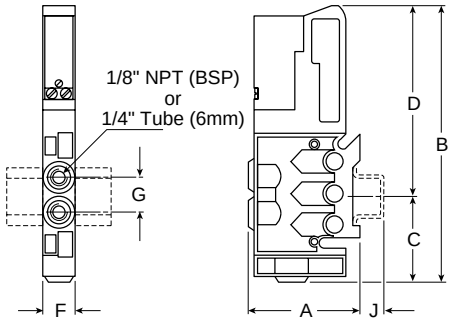
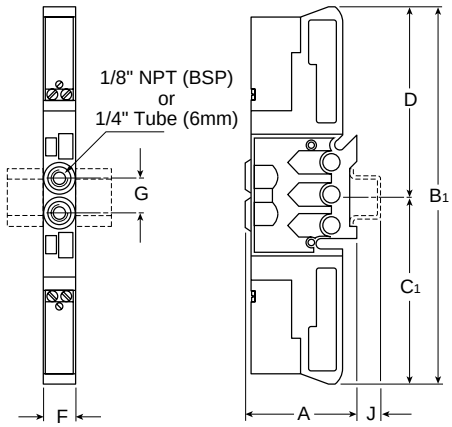
E

Single Solenoid



Double Solenoid



Dimensions

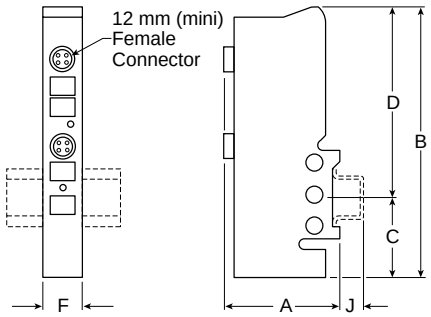
A (Inline Pipe)	2.87 (73)
A (Inline Tube)	3.66 (93)
A (Stacking Pipe)	2.87 (73)
A (Stacking Tube)	3.27 (83)

B	**B1**	**C**	**C1**	**D**
5.43 (138)	6.97 (177)	1.93 (49)	3.46 (88)	3.50 (89)
F	**G**	**J**		
.71 (18)	.79 (20)	.47 (12)		

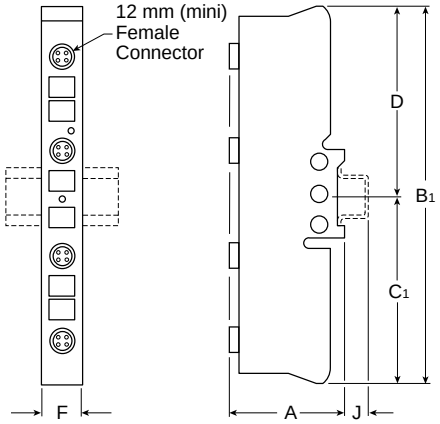
Inches (mm)

External Connection Modules

Single



Double

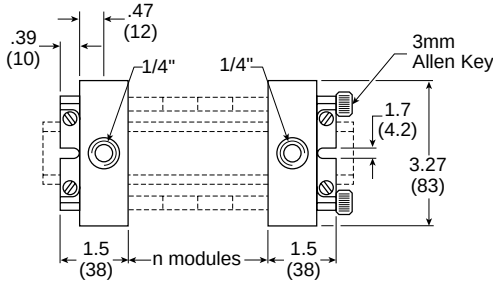


Dimensions

A	**B**	**B1**	**C**	**C1**
2.72 (69)	5.31 (135)	6.97 (177)	1.81 (46)	3.46 (88)
D	**F**	**J**		
3.50 (89)	.87 (22)	.47 (12)		

Inches (mm)

Pneumatic Head / Tail Set



To calculate stack length, add the width of the pneumatic and electrical head / tail sets plus (quantity x width) for each type of active module. Widths shown in inches (mm).

Module	Qty	Width	Total Width
Pneumatic head / tail set	1	x 3.00" (76) =	3.00" (76)
Electrical head / tail set:	1	x =	
Select 25-Pin head / tail		*1.73" (44)*	
or 25-Pin w/transition		*2.60" (66)*	
or 35-Pin head / tail		*2.76" (70)*	
or 35-Pin w/transition		*3.62" (92)*	
Valves		x .71" (18) =	
Feedback/output modules		x .87" (22) =	
TOTAL STACK LENGTH		=	

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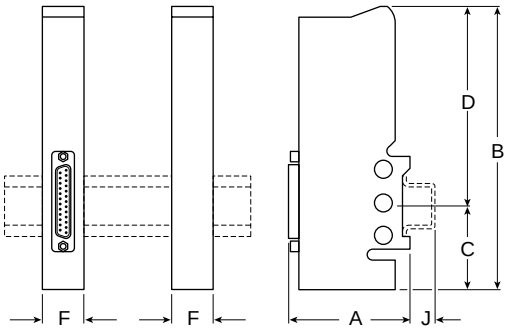
Electrical Head / Tail Sets*

Single Stack Sub-D, 25-Pin Connector



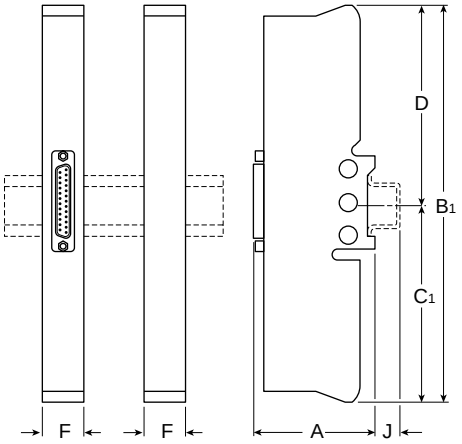
* When the stack contains both single and double modules, you must use a head / tail set that includes a size transition module (shown below).

Dimensions

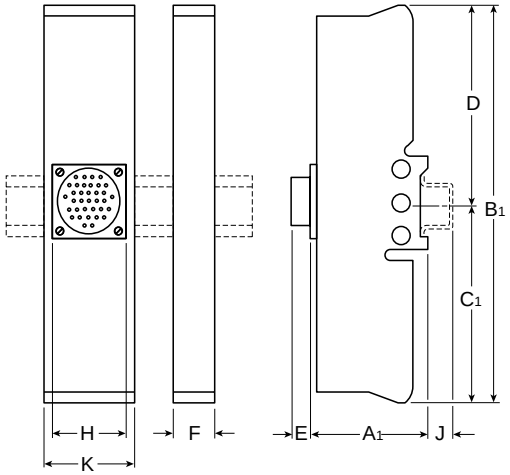
A	A_1	B	B_1	C
2.48 (63)	2.40 (60)	5.31 (135)	6.97 (177)	1.81 (46)
C_1	E	D	F	H
3.46 (88)	.39 (10)	3.50 (89)	.87 (22)	1.57 (40)
J	K			
.47 (12)	1.89 (48)			

Inches (mm)

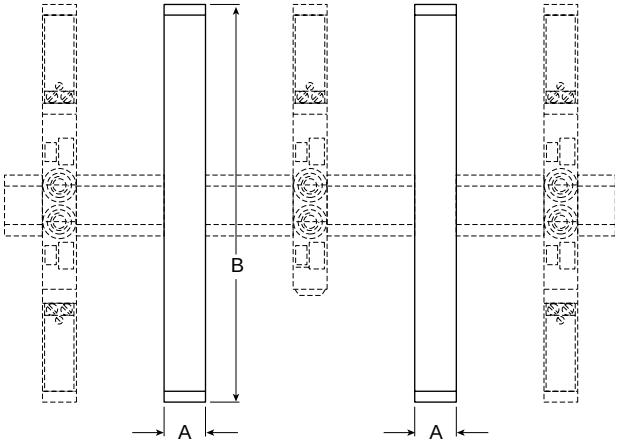
Double Stack Sub-D, 25-Pin Connector



Cylindrical 35-Pin Double Size Head / Tail Set



Size Transition Module



Dimensions

A	B			
.87 (22)	6.97 (177)			

Inches (mm)

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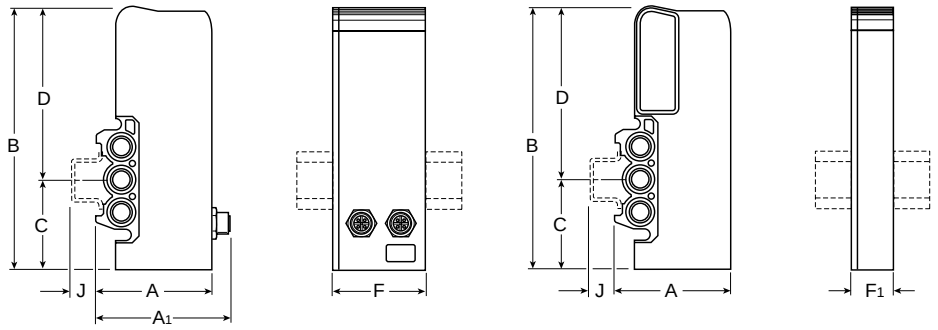
ASI Head Module, 4 Output Version (P2SBA1BA40 with Transition Module Shown)

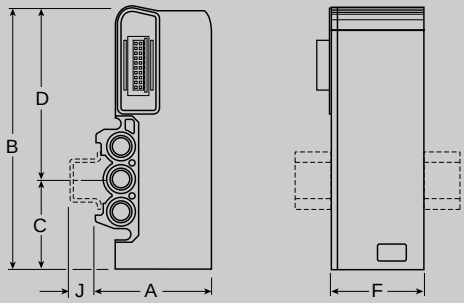


Dimensions

A	A1	B	C
2.31 (59)	3.03 (77)	5.25 (133)	1.75 (44)
D	**F**	**F1**	**J**
3.50 (89)	1.89 (48)	.87 (22)	.47 (12)

Inches (mm)

ASI Auxiliary Head Module, 4 Output Version (P2SBA5BA40 Shown)



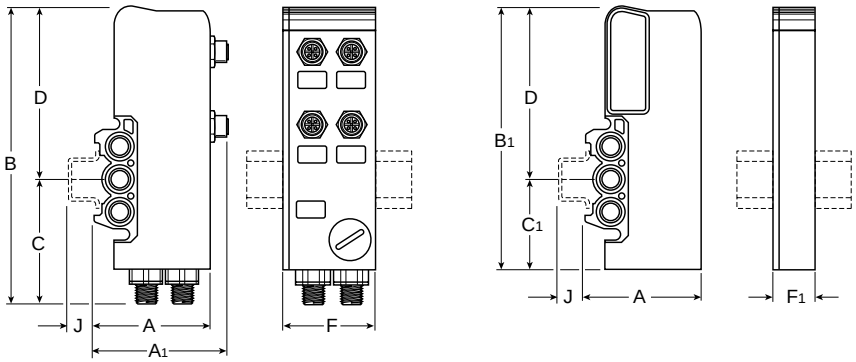
Dimensions

A	B	C	D
2.31 (59)	5.25 (133)	1.75 (44)	3.50 (89)
F	**J**		
1.89 (48)	.47 (12)		

Inches (mm)

ASI Head Module, 4 Input & 4 Output Version

(PVLBA1BA44 with Transition Module Shown)

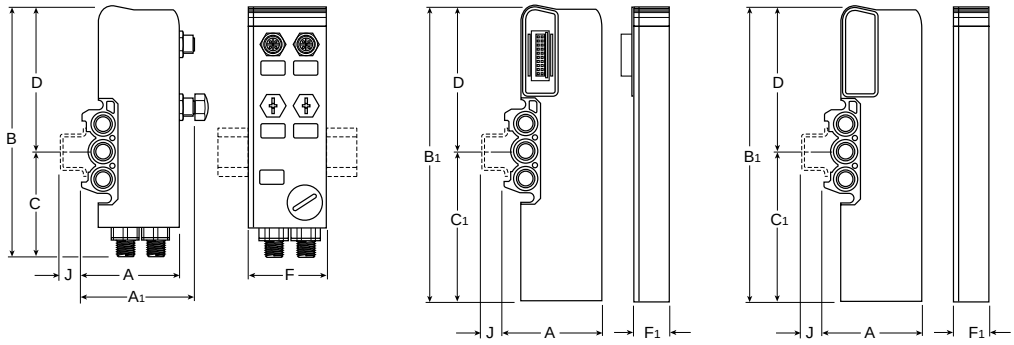


Dimensions

A	A1	B	B1
2.31 (59)	2.88 (73)	6.00 (153)	5.25 (133)
C	**C1**	**D**	**F**
2.50 (64)	1.75 (44)	3.50 (89)	1.89 (48)
F1	**J**		
.87 (22)	.47 (12)		

Inches (mm)

ASI Head Module for Single to Double Solenoid Valves, 4 Input and 4 Output Version (PVLBA3BA44 with Transition Modules Shown)



Dimensions

A	A1	B	B1
2.31 (59)	2.88 (73)	6.00 (153)	6.97 (177)
C	**C1**	**D**	**F**
2.50 (64)	3.47 (88)	3.50 (89)	1.89 (48)
F1	**J**		
.87 (22)	.47 (12)		

Inches (mm)

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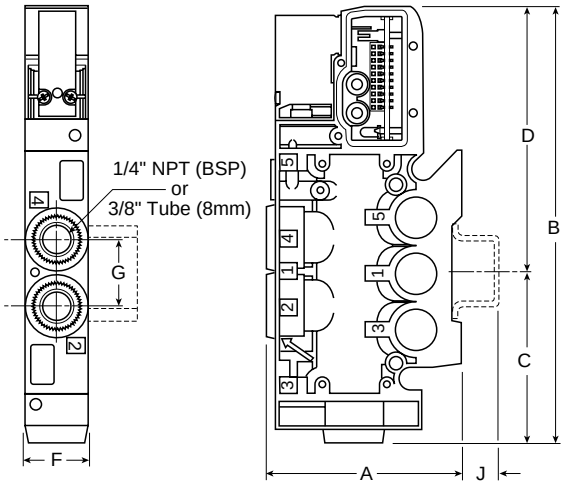
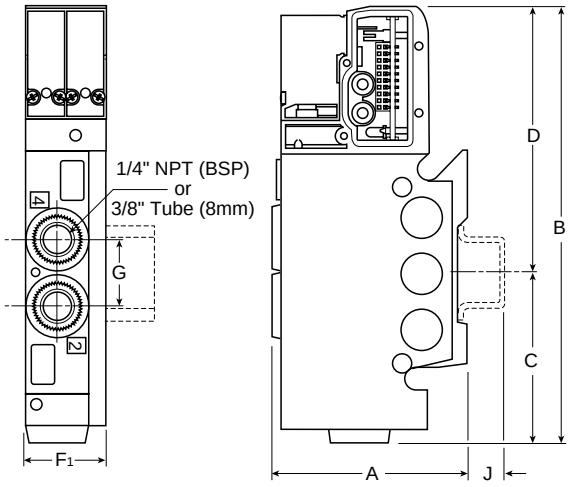
Single Solenoid



Double Solenoid

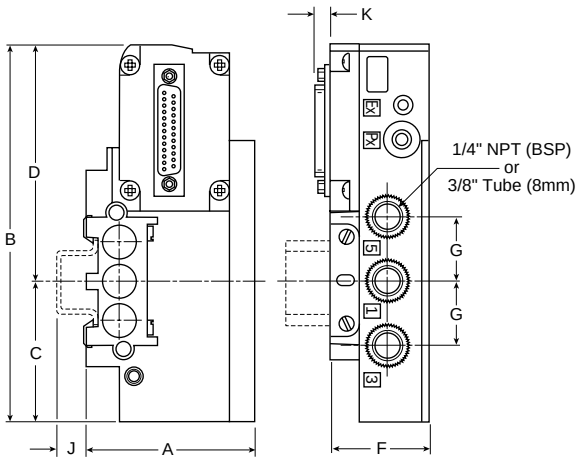


Dimensions

A (Inline Pipe)	2.87 (73)			
A (Inline Tube)	3.66 (93)			
A (Stacking Pipe)	2.87 (73)			
A (Stacking Tube)	3.27 (83)			
B 6.50 (165)	**C** 2.56 (65)	**D** 3.94 (100)	**F** 1.00 (25,3)	**F1** 1.31 (33,3)
G 1.00 (26)	**J** .47 (12)			

Inches (mm)

D-Sub, 25-Pin Connector

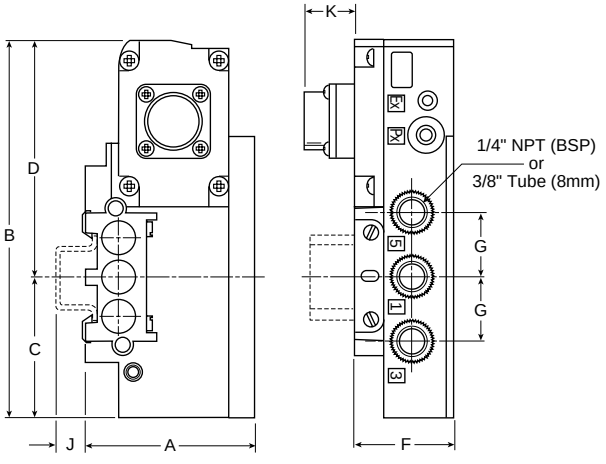


Dimensions

A 2.75 (70)	**B** 6.22 (158)	**C** 2.28 (58)	**D** 3.94 (100)	**F** 1.65 (42)
G 1.06 (27)	**J** .39 (10)	**K** .12 (3)		

Inches (mm)

Cylindrical Connector



Dimensions

A 2.75 (70)	**B** 6.22 (158)	**C** 2.28 (58)	**D** 3.94 (100)	**F** 1.65 (42)
G 1.06 (27)	**J** .39 (10)	**K** .30 (8)		

Inches (mm)

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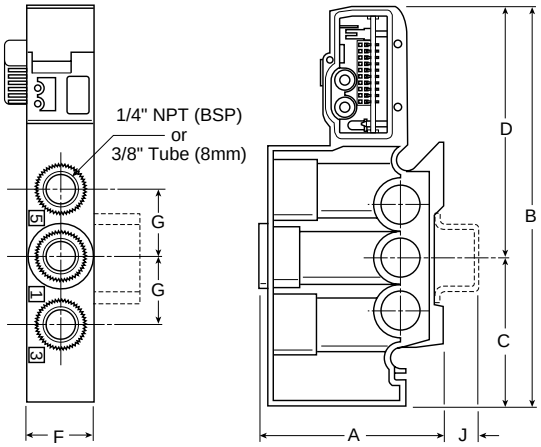
Intermediary Air Supply Module

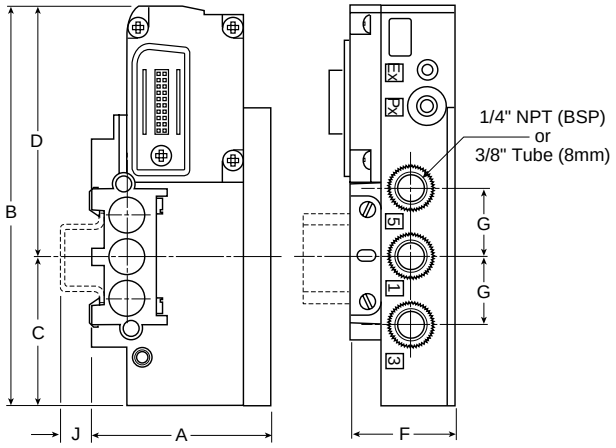


Dimensions

A	B	C	D	F
2.94 (75)	6.22 (158)	2.28 (58)	3.94 (100)	1.08 (28)
G	**J**			
1.06 (27)	.47 (12)			

Inches (mm)

Transfer Module



Dimensions

A	B	C	D	F
2.75 (70)	6.22 (158)	2.28 (58)	3.94 (100)	1.65 (42)
G	**J**			
1.06 (27)	.39 (10)			

Inches (mm)

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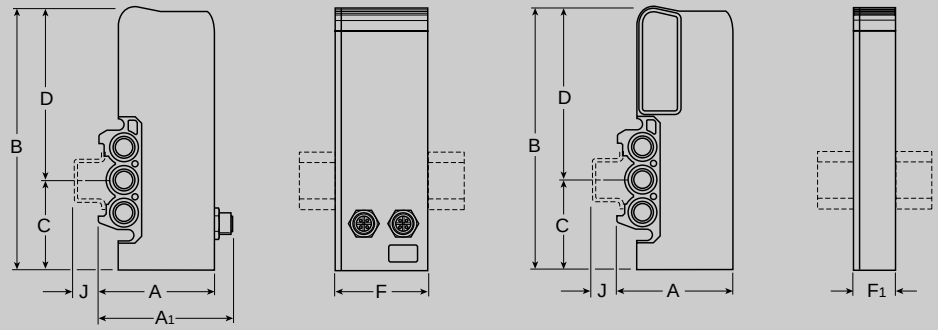
ASI Head Module, 4 Output Version (P2SBA1BA40 with Transition Module Shown)

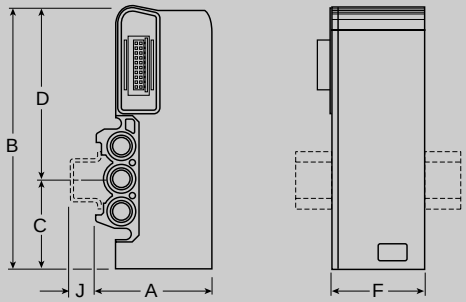


Dimensions

A	A1	B	C
2.31 (59)	3.03 (77)	5.25 (133)	1.75 (44)
D	**F**	**F1**	**J**
3.50 (89)	1.89 (48)	.87 (22)	.47 (12)

Inches (mm)

ASI Auxiliary Head Module, 4 Output Version (P2SBA5BA40 Shown)



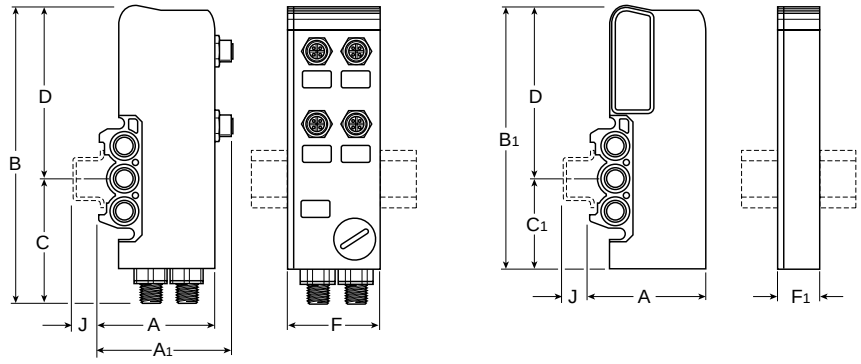
Dimensions

A	B	C	D
2.31 (59)	5.25 (133)	1.75 (44)	3.50 (89)
F	**J**		
1.89 (48)	.47 (12)		

Inches (mm)

ASI Head Module, 4 Input & 4 Output Version

(PVLBA1BA44 with Transition Module Shown)

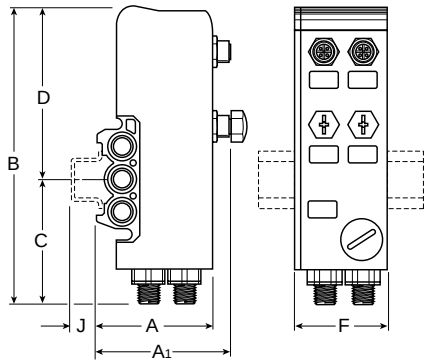


Dimensions

A	A1	B	B1
2.31 (59)	2.88 (73)	6.00 (153)	5.25 (133)
C	**C1**	**D**	**F**
2.50 (64)	1.75 (44)	3.50 (89)	1.89 (48)
F1	**J**		
.87 (22)	.47 (12)		

Inches (mm)

ASI Head Module for Single to Double Solenoid Valves, 4 Input and 4 Output Version (PVLBA3BA44 Shown)



Dimensions

A	A1	B	C
2.31 (59)	2.88 (73)	5.25 (133)	1.75 (44)
D	**F**	**J**	
3.50 (89)	1.89 (48)	.47 (12)	

Inches (mm)

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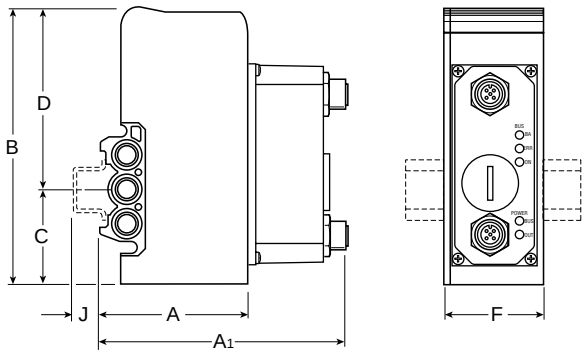
DeviceNET, Profibus-DP and Interbus-S Head Module



Dimensions

A	A1	B	C	D
2.94 (75)	4.38 (111)	5.25 (133)	1.75 (44)	3.50 (89)
F	**J**			
1.89 (480)	.47 (12)			

Inches (mm)

E

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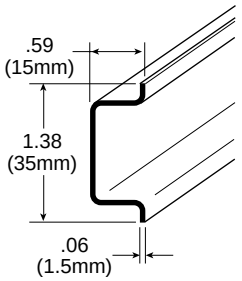
35mm DIN Rail

AM1DE200	6 Feet

Zinc chromated steel rail for easy mounting of stacks. DIN rail can be mounted to grids or other surfaces to allow snap in mounting of pneumatic and electrical components.



E

Adapter Kits

Contains a size transition module and a replacement tail piece for field conversion to a combination stack.

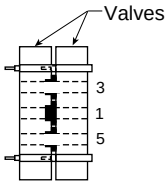
PVLB1940	Double then Single
PVLB1930	Single then Double

Pressure Isolation Kit

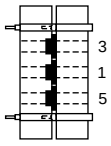
Series	Model Number	Kit includes:
PVLA	**PVLA1901**	3 Isolation Plugs, 2 Open Port Plugs and 2 Extended Cross Rods.
PVLB	**PVLB1901**	
PVLC	**PVLC1901**	
PVLB	**PVLB1902**	10 Isolation Discs
PVLC	**PVLC1902**	

Assembly Instructions

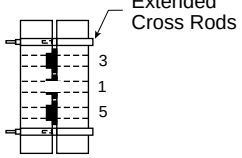
Example 1: Two different pressures P1 and P2 can supply the same bank of power valves, the exhausts remaining common.



Example 2: Complete isolation of the commons in the same bank of power valves: main pressure and exhaust commons.



Example 3: The exhaust commons can be isolated within the same bank of power valves, while the main pressure supply remains common.



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Seals and Gaskets

Series	O-Rings [1]	Gaskets [2]
PVLA	PPRV30	PPRL21
PVLB	PPRV23	PPRV20
PVLC	PPRV24	PPRV20

Series	O-Rings	3-Cell Gaskets [3]	Connector Gaskets [4]
PVLB10	PPRV23	PPRV41	PPRV38
PVLC10	PPRV24	PPRV41	PPRL36

Notes:

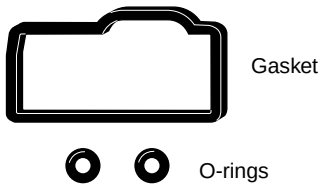
[1] O-rings seal between stackable valve bodies. Sold in set of 30.

[2] 3-cell gaskets seal between pilot and valve body. Sold as one set of 20 gaskets.

[3] 3-cell gaskets seal between solenoid pilot and valve body. Sold as one set of 50 gaskets.

[4] Connector gaskets provide protection for PC board and 20-Pin connector. PPRV38 sold as one set of 20 gaskets; PPRL36 sold as one set of 5 gaskets and 10 o-rings for Px and Ex.

PPRV23 PPRV20 PPRV41



PPRL36

Cross Rods

Series	Model Number
PVLA	PPRV31
PVLB	PPRV21
PVLC	PPRV22

Used in valve stack mounting.
Sold as 1 set of 10 cross rods.

DIN Rail Clip Assembly

PPRL09	Head / Tail Set – All Sizes

Assembly includes: clamp, screw, and spring.
Sold as 1 set of 20 each.

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Parker Pneumatic

Integrated Power Components

Flow Control Components

Section F

F

Parker Hannifin Corporation
Pneumatic Division
Richland, Michigan
www.parker.com/pneumatic

Control & Power, Inc. – 1.877.835.5274 – www.controlandpower.com

General Description

Flow Control – PWRA (metal), PWRE (Thermoplastic)

These rugged flow controllers enhance the performance of pneumatic cylinders by precise control of piston motion in both directions. They allow full inlet flow to the cylinder while providing fine adjustment of the exhaust flow.

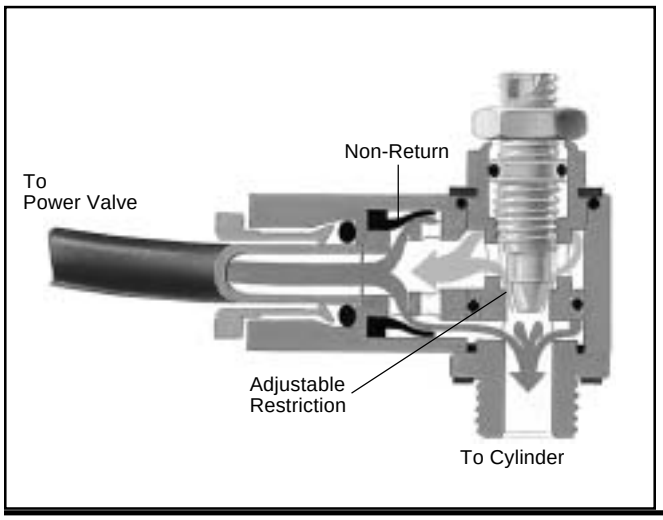
Right angle construction provides for convenient mounting where the cylinder is best controlled . . . at the cylinder port.

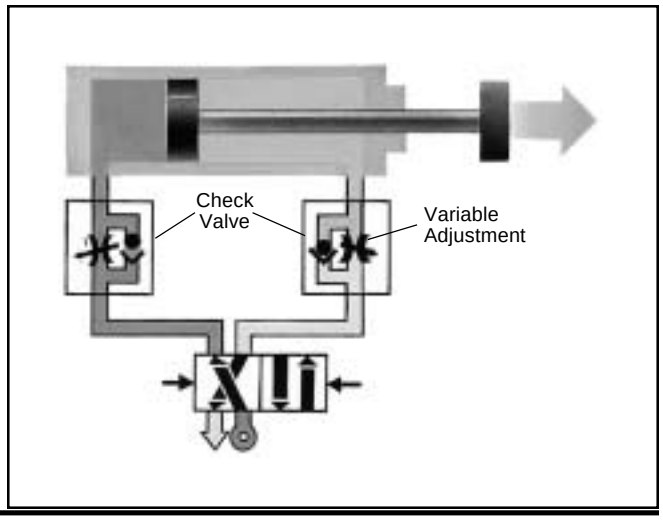
PWRA

The PWRA series is made of zinc alloy, built for rugged applications and is available in sizes ranging from 1/8" through 1/2" with cylinder port fittings in either NPT or BSP. Tubing connections are offered either as instant fittings (fractional or metric) or threaded fittings (NPT or BSP). To prevent unwanted drift due to shock or vibration, these devices are fitted with adjustment locking nuts.

PWRE

The PWRE series has a thermoplastic body with brass fittings giving lighter weight and lower profile than its metal counterpart to the left. These flow controls are supplied with instant tube fittings (fractional or metric) and NPT or BSP cylinder port fittings.





Parker Pneumatic

Parker Hannifin Corporation
Pneumatic Division
Richland, Michigan
www.parker.com/pneumatic

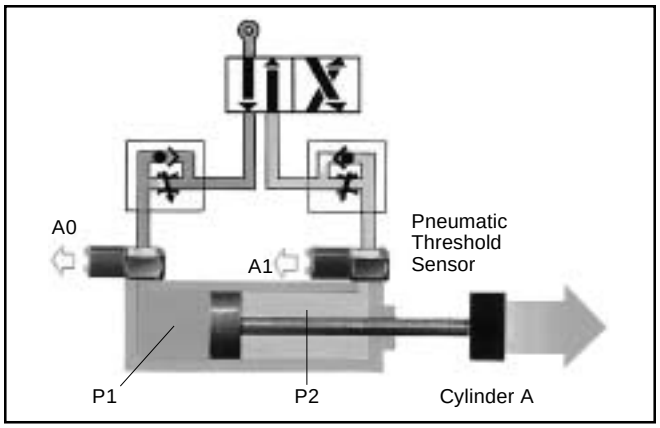
Control & Power, Inc. – 1.877.835.5274 – www.controlandpower.com

General Description

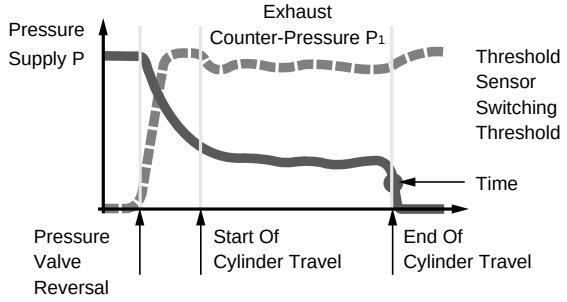
Threshold Sensors – PWS

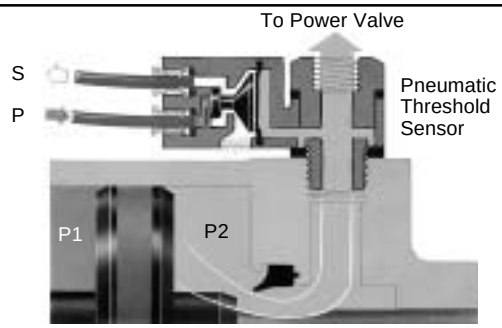
The plug-in threshold sensors provide feedback information on pneumatic cylinder status in one of three possible outputs . . . pneumatic, electric, or electronic. Mounted into the cylinder port, these devices monitor the back pressure of the cylinder's exhaust. When the cylinder's piston stops, the back pressure rapidly drops and the threshold sensor provides the desired output. Ideal for variable stroke applications such as robotics where other sensor type devices such as limit switches are impractical, these devices provide a signal whenever the cylinder stops motion.

The threshold sensor consists of two complementary sub assemblies (1) the banjo fitting and (2) the plug-in sensor element. In all cases, the sensor is easily plugged into the banjo fitting and locked in place with a spring clip. The banjo fitting is designed to accept (piggy backed) other functional fittings such as flow controls or blocking valves. Simply select the sensor based on the type feedback signal that best fits the application.



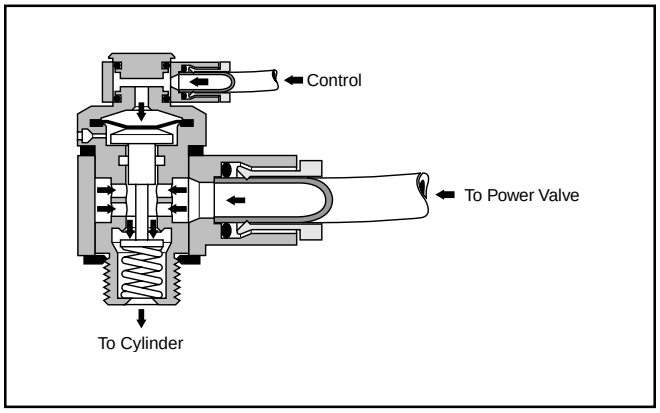
F

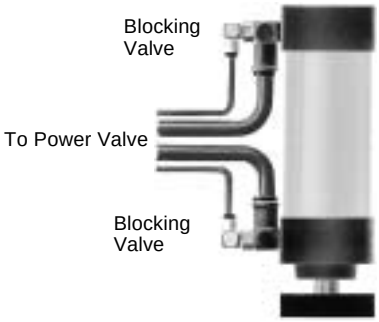


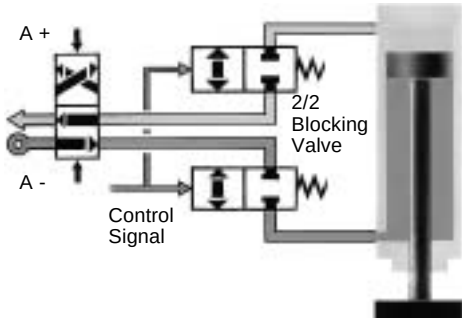


Blocking Valves

The blocking valve is a single acting spring return 2/2 valve in a fitting format. The device requires a pneumatic pilot signal to open, which allows free flow of air, gas or liquid to pass. As long as a pilot signal is present, the device will remain open. When the pilot signal is removed, the internal spring will close the blocking valve, bubble tight. The blocking valve is oil serviceable and rated to 150 PSI. These devices have two primary design uses: (1) to prevent unwanted gravity induced motion in cylinders during shut down procedures or during periods of lost supply pressure and (2) freezing the cylinder position by using a blocking valve at each end of the cylinder. Application needs such as tool or work piece protection, horizontal indexing or inspection stops are often satisfied by these devices.







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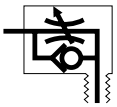
For Cylinder Mounting
(Can also be mounted in Threshold Sensor Banjo – see page 80)

With Instant Tube Fittings

PWRA3469

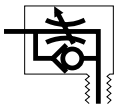
with Allen key adjustment and locknut

Symbol	BSP Cylinder Port Thread	BSP Connection for Tube	BSP Catalog Number	NPT Cylinder Port Thread	NPT Connection for Tube	NPT Catalog Number
	1/8"	6 mm	PWRA1468	1/8"	1/4"	PWRA3468
		8 mm	PWRA1488			
	1/4"	6 mm	PWRA1469	1/4"	1/4"	PWRA3469
	3/8"	8 mm	PWRA1483	3/8"	3/8"	PWRA3493
	1/2"	12 mm	PWRA1412	1/2"	1/2"	PWRA3412

With Threaded Tube Fittings

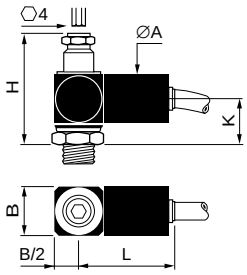
PWRA3833

with Allen key adjustment and locknut

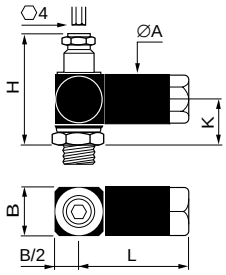
Symbol	BSP Cylinder Port Thread	BSP Connection for Tube	BSP Catalog Number	NPT Cylinder Port Thread	NPT Connection for Tube	NPT Catalog Number
	1/8"	1/8"	PWRA1888	1/8"	1/8"	PWRA3888
	1/4"	1/4"	PWRA1899	1/4"	1/4"	PWRA3899
	3/8"	3/8"	PWRA1833	3/8"	3/8"	PWRA3833
	1/2"	1/2"	PWRA1822	1/2"	1/2"	PWRA3822

Dimensions: Inches (mm)

PWRA14••/34••



PWRA18••/38••



	Adjustment*	Flow**	ØA	B	K	H	L
PWRA1468/3468	10	15.9	0.67" (17)	0.71" (18)	0.67" (17)	1.77" (45)	1.26" (32)
PWRA1488	14	23.0	0.87" (22)	0.83" (21)	0.83" (21)	2.17" (55)	1.54" (39)
PWRA1469/3469	14	26.5	0.87" (22)	0.83" (21)	0.83" (21)	2.17" (55)	1.54" (39)
PWRA1483/3493	14	61.8	1.06" (27)	1.10" (28)	1.02" (26)	2.36" (60)	1.97" (50)
PRWA1412/3412	20	97.1	1.22" (31)	1.30" (33)	1.38" (35)	3.03" (77)	2.60" (66)
PWRA1888/3888	10	15.9	0.67" (17)	0.71" (18)	0.67" (17)	1.77" (45)	1.44" (36.5)
PWRA1899/3899	14	31.8	0.87" (22)	0.83" (21)	0.83" (21)	2.17" (55)	.71" (43.5)
PWRA1833/3833	14	68.9	1.06" (27)	1.10" (28)	1.02" (26)	2.36" (60)	2.19" (55.5)
PWRA1822/3822	20	97.1	1.22" (31)	1.30" (33)	1.38" (35)	3.03" (77)	2.48" (63)

* Number of turns (4mm Allen key)
** SCFM at 90 PSI with screw closed

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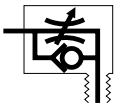
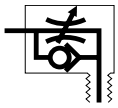
For Cylinder Mounting
(Can also be mounted in Threshold Sensor Banjo – see page 80)

With Instant Tube Fittings

with Allen key adjustment and fine thread friction locking

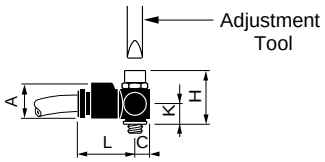
Symbol	BSP Thread Size Cylinder Port	BSP Connection for Tube	BSP Catalog Number	NPT Thread Size Cylinder Port	NPT Connection for Tube	NPT Catalog Number
	M5	4 mm	PWRE1445	10-32 UNF	5/32"	PWRE14457
					10-32 UNF	PWRE14557
	1/8"	4 mm	PWRE1448	1/8"	5/32"	PWRE14487
		6 mm	PWRE1468		1/4"	PWRE14687
	1/4"	6 mm	PWRE1469	1/4"	1/4"	PWRE14697
	3/8"	8mm	PWRE1483	3/8"	3/8"	PWRE14937
Reverse flow	M5	4 mm	PWRE1145	10-32 UNF	5/32"	PWRE11457
						


PWRE14457

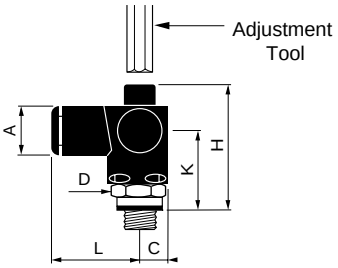

PWRE14697

Dimensions: Inches (mm)

PWRE1445•/1145•



PWRE14••



	Adjustment	# Turns	Flow*	ØA	C	⬡D	K	H	L
PWRE1445/14457 PWRE1145/11457 PWRE14557	3mm screwdriver	12	1.8	0.43" (11)	0.16" (4)	5/16" (8)"	"0.28" (7.2)	0.67" (17)	0.83" (21)
PWRE1448/14487	3mm Allen key	14	10.2	0.55" (14)	0.31" (8)	9/16" (14)	0.94" (23.8)	1.77" (45)	0.94" (24)
PWRE1468/14687	3mm Allen key	14	23.0	0.55" (14)	0.31" (8)	9/16" (14)	0.94" (23.8)	1.77" (45)	0.94" (24)
PWRE1469/14697	4mm Allen key	18	23.0	0.63" (16)	0.41" (10.5)	11/16" (17)	1.04" (26.5)	1.94" (49.3)	1.06" (27)
PWRE1483/14937	4mm Allen key	18	47.7	0.79" (20)	0.45" (11.5)	7/8" (22)	1.17" (29.8)	2.24" (56.8)	1.30" (33)

* SCFM at 90 PSI with screw closed

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For Cylinder Mounting

Plug-In Sensor for use with PWSB Banjo Sockets

Output Function	Output Connection	Output Characteristics		Catalog Number
Pneumatic	Instant 5/32"	Pneumatic		
	Fitting	3 SCFM @ 90 psi		PWSP111
Electrical	Cable 3 x 20 Gauge	SPDT Contact		
	Length 6 ft.	2.5 amp / 240 VAC – 5W/48V		PWSM1012
Electronic	Cable 3 x 28 Gauge	PNP Type		
	Length 6 ft.	10-30 VDC – 75 ma*	N/C	PWSE101
			N/O	PWSE111

* Voltage rating includes ripple.

Banjo Sockets for Plug-In Sensors*

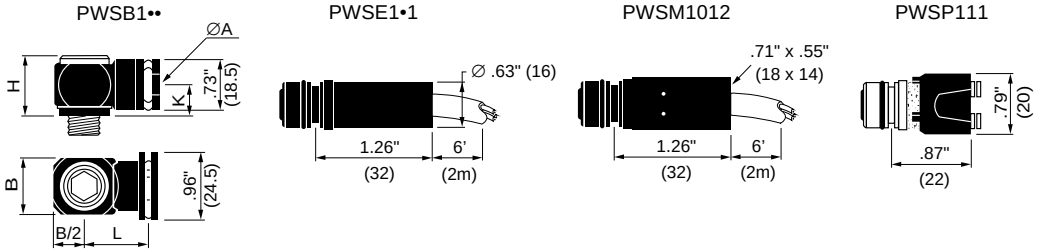
PWSB1997

BSP			NPT		
Male / Female Thread Connection**	Wrench Size	Catalog Number	Male / Female Thread Connection**	Wrench Size	Catalog Number
M5	8mm Hex Head	PWSB155	10-32 UNF	5/16" Hex Head	PWSB1557
1/8"	5mm Allen Key	PWSB188	1/8"	3/16" Allen Key	PWSB188
1/4"	8mm Allen Key	PWSB199	1/4"	5/16" Allen Key	PWSB1997
3/8"	10mm Allen Key	PWSB133	3/8"	3/8" Allen Key	PWSB1337
1/2"	12mm Allen Key	PWSB122	1/2"	1/2" Allen Key	PWSB1227

* With sensor locking clip.

** Male thread for cylinder port. Female thread for tube fitting, flow control or blocking valve.

Dimensions: Inches (mm)

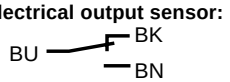


	ØA	B	K	H	L
PWSB155/1557	0.71" (18)	0.43" (11)	0.39" (10)	0.65" (16.5)	0.67" (17)
PWSB188/1887	0.71" (18)	0.63" (16)	0.39" (10)	0.79" (20)	0.79" (20)
PWSB199/1997	0.71" (18)	0.83" (21)	0.39" (10)	0.79" (20)	0.87" (22)
PWSB133/1337	0.71" (18)	1.10" (28)	0.47" (12)	0.87" (22)	0.98" (25)
PWSB122/1227	0.71" (18)	1.30" (33)	0.55" (14)	1.02" (26)	1.02" (26)

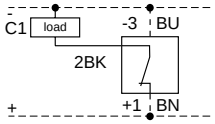
Operating Assembly and Connection

Pneumatic output sensor:
5/32" instant connection

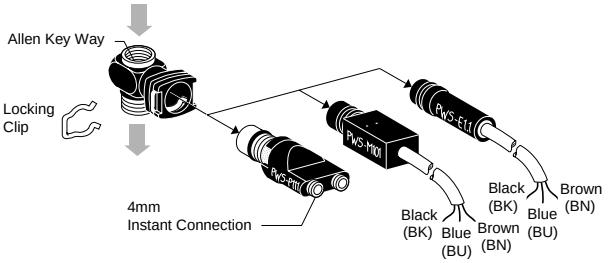
Electrical output sensor:



Electronic output sensor:



A plug-in back pressure sensor comprises two sub-assemblies: a banjo socket + a plug-in sensor



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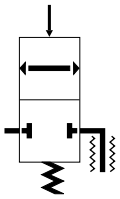
For Cylinder Mounting
(Can also be mounted in Threshold Sensor Banjo – see page 80)

With Instant Tube Fittings

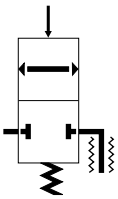
PWBA3469



Symbol	BSP Connection for Pilot	BSP Cylinder Port Thread (Male)	BSP Connection for Tube	BSP Catalog Number	NPT Connection for Pilot	NPT Cylinder Port Thread (Male)	NPT Connection for Tube	NPT Catalog Number
	4mm Tube	1/8"	6mm	PWBA1468	5/32" Tube	1/8"	1/4"	PWBA3468
		1/4"	6mm	PWBA1469		1/4"	1/4"	PWBA3469
		1/4"	8mm	PWBA1489				
		3/8"	8mm	PWBA1483		3/8"	3/8"	PWBA3493
		3/8"	10mm	PWBA1493				
		1/2"	12mm	PWBA1412		1/2"	1/2"	PWBA3412

With Threaded Connections and Tube Pilot Port

PWBA3833

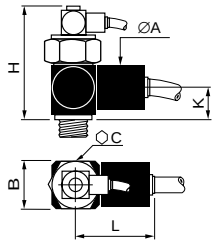


Symbol	BSP Connection for Pilot	BSP Cylinder Port Thread (Male)	BSP Connection from Valve (Female)	BSP Catalog Number	NPT Connection for Pilot	NPT Cylinder Port Thread (Male)	NPT Connection from Valve (Female)	NPT Catalog Number
	4mm Tube	1/8"	1/4"	PWBA1898	5/32" * Tube	1/8"	1/8"	PWBA3888
		1/4"	1/4"	PWBA1899		1/4"	1/4"	PWBA3899
	M5 Female	3/8"	3/8"	PWBA1833	5/32" * Tube	3/8"	3/8"	PWBA3833
		1/2"	1/2"	PWBA1822		1/2"	1/2"	PWBA3822

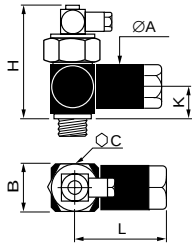
* Instant fitting

With Threaded Connections and Threaded Pilot Port

PWBA14/34

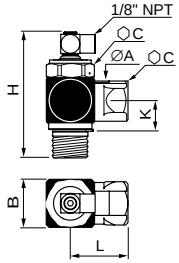


PWBA18/38



NPT Connection for Pilot (Female)	NPT Cylinder Port Thread (Male)	NPT Connection from Valve	NPT Catalog Number (Female)
1/8" pipe	1/8"	1/8"	PWBA38887
1/8" pipe	1/4"	1/4"	PWBA38997
1/8" pipe	3/8"	3/8"	PWBA38337
1/8" pipe	1/2"	1/2"	PWBA38227

PWBA38



Dimensions: Inches (mm)

	Flow*	ØA	B	C	K	H	L
PWBA1468/3468	14.8	0.86" (22)	0.82" (21)	0.94" (24)	0.53" (13.5)	2.32" (59)	1.54" (39)
PWBA1469/3469 PWBA1489	19.4	0.86" (22)	0.82" (21)	0.94" (24)	0.53" (13.5)	2.09" (53)	1.54" (39)
PWBA1483 PWBA1493/3493	45.9	1.06""(27)	1.10" (28)	0.94" (24)	0.55" (14)	2.09" (53)	1.98" (50)
PWBA1412/3412	81.2	1.22" (31)	1.30" (33)	1.30" (33)	0.94" (24)	2.59" (66)	2.59" (66)
PWBA1898/3888	14.8	0.86" (22)	0.82" (21)	0.94" (24)	0.53" (13.5)	2.32" (59)	1.71" (43.5)
PWBA1899/3899	19.4	0.86" (22)	0.82" (21)	0.94" (24)	0.53" (13.5)	2.09" (53)	1.71" (43.5)
PWBA1833/3833	45.9	1.06" (27)	1.10" (28)	0.94" (24)	0.55" (14)	2.09" (53)	2.18" (55)
PWBA1822/3822	81.2	1.22" (31)	1.30" (33)	1.30" (33)	0.94" (24)	2.59" (66)	2.47" (63)
PWBA38887	14.8	0.75" (19)	0.87" (22)	0.83" (21)	0.67" (17)	2.20" (56)	1.73" (44)
PWBA38997	19.4	0.75" (19)	0.87" (22)	0.83" (21)	0.67" (17)	2.20" (56)	1.73" (44)
PWBA38337	45.9	1.06" (27)	1.18" (30)	1.06" (27)	0.91" (23)	2.64" (67)	1.42" (36)
PWBA38227	81.2	1.06" (27)	1.18" (30)	1.06" (27)	0.91" (23)	2.64" (67)	1.42" (36)

*SCFM at 90 PSI

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General Characteristics

	PWRA Speed Control (Metal)	PWRE Speed Control (Plastic)	PWS Threshold Sensors	PWBA Blocking Valves
Operating Pressure	15 to 150 PSI	15 to 150 PSI	0 to 150 PSI	0 to 150 PSI
Permissible Fluids	Air or neutral gas, 50 µm filtration, lubricated or not			
Operating Temperature	5° to 140°F (-15° to 60°C)			
Storage Temperature	-40° to 160°F (-40° to 70°C)			
Flow	See page 76	See page 77	N/A	See page 79
Mechanical Life	N/A	N/A	10 Million	10 Million
Maximum Operating Frequency	N/A	N/A	10Hz	10Hz
Material: Body	Zinc alloy	Thermoplastic	Thermoplastic	Zinc alloy
Mounting Screw	Brass	Brass	Brass	Brass
Maximum Mounting Torque: 10-32 UNF and M5	88 inch pounds			
1/8"	70 inch pounds			
1/4"	105 inch pounds			
3/8"	265 inch pounds			
1/2"	310 inch pounds			
Adjustment	Allen Key	Allen Key	N/A	N/A
Adjustment Locking	Locknut	Friction Lock	N/A	N/A

Piloting and De-Piloting Pressure

Blocking Valve Sizes	Pilot with Operating Pressure of:			
	30 PSI	**60 PSI**	**90 PSI**	**120 PSI**
1/8" BSP or NPT	33 PSI	40 PSI	45 PSI	50 PSI
1/4" BSP or NPT	33 PSI	40 PSI	45 PSI	50 PSI
3/8" BSP or NPT	35 PSI	40 PSI	45 PSI	50 PSI
1/2" BSP or NPT	45 PSI	50 PSI	55 PSI	60 PSI
Blocking Valve Sizes	**Depilot with Operating Pressure of:**			
	30 PSI	**60 PSI**	**90 PSI**	**120 PSI**
1/8" BSP or NPT	20 PSI	25 PSI	30 PSI	34 PSI
1/4" BSP or NPT	20 PSI	25 PSI	30 PSI	34 PSI
3/8" BSP or NPT	20 PSI	25 PSI	30 PSI	34 PSI
1/2" BSP or NPT	25 PSI	30 PSI	34 PSI	40 PSI

Threshold Sensors	Pilot with Operating Pressure of 90 PSI	Depilot with Operating Pressure of 90 PSI
PWSP111	64 PSI	6 PSI
PWSM1012	15 PSI	9 PSI
PWSE101 and PWSE111	10 PSI	7 PSI

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Logic

Air Control Components

Section G

G

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Virtually all production machines using pneumatic actuators operate in a dedicated and repeatable sequence or cycle. The purpose of any control method is to insure that all steps of the machine's cycle occur as intended.

The sequencer constitutes the backbone of a Telepneumatic control circuit. The sequencer's poppet design provides long life using only shop air.

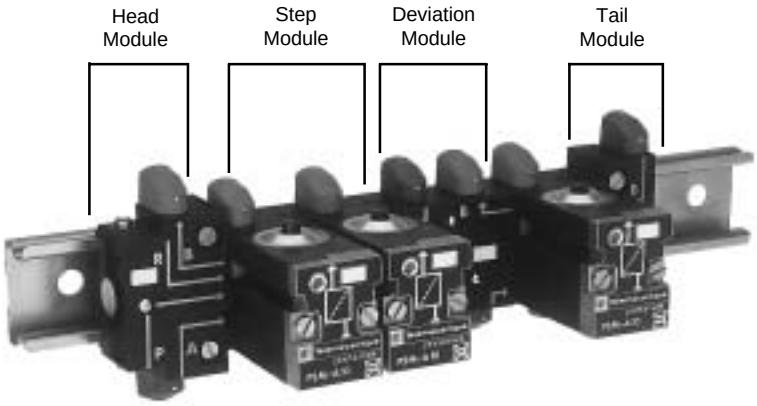
Since it is modular, the sequencer can easily be configured to any application cycle requirement. Logic elements and supporting relays provide for other application needs such as safety conditions, operating modes and time delays.

The Telepneumatic sequencer eliminates the need for solenoid operated valves.

COMPOSITION

A sequencer is comprised of a Number of step modules, each corresponding to a defined step in the machine's cycle according to the application requirements.

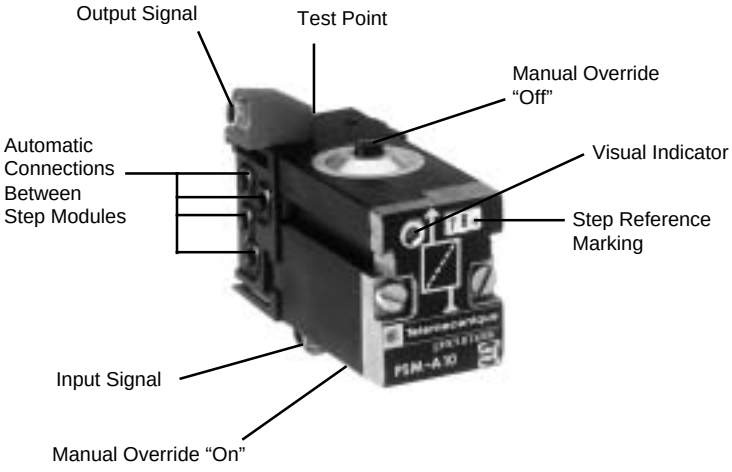
The head / tail module peforms the function of locking the easily stacked step modules to the 35 mm DIN rail while also supplying connection to the stack as follows: (1) supply pressure, (2) starting condition and (3) general and emergency resets. A deviation module is placed between step modules to provide for variation to the normal sequence of events such as skips, repeats, multi line cycles and resets.

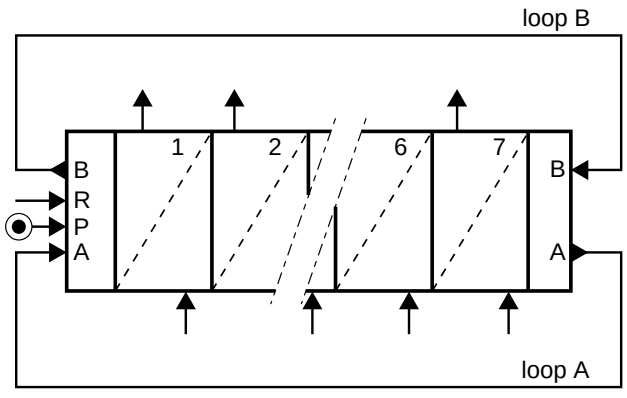


STEP MODULE

At the heart of the sequencer, the step module is the decision making element that will read the necessary inputs and provide output commands as needed. The step module consists of the following parts:

- Input/output via 5/32" instant swivels with test points
- Visual indicator, defining status
- Both on and off manual overrides
- Step reference marking to assist in sequence diagnostics
- Stackable subbase with special internal piping.





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GRAFCET

The use of a function flow diagram allows the designers of machine tool automation to organize application requirements in a simple sequential flow. The GRAFCET flow diagram becomes a snapshot of the machine's positions and conditions. This simplifies understanding and modification of the specific application.

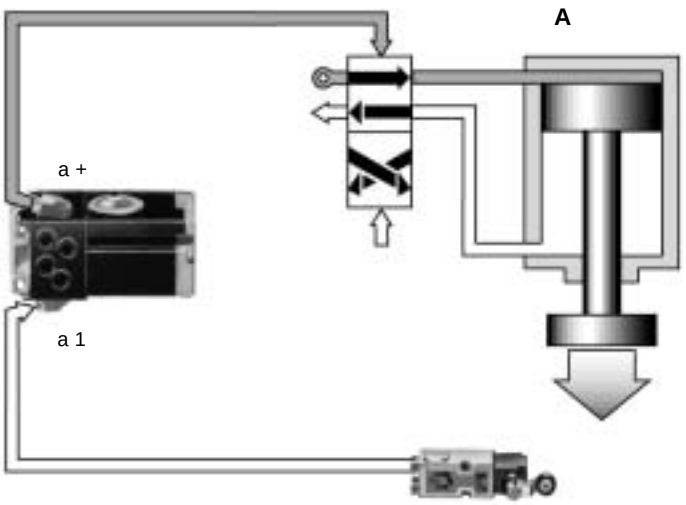
CONTROL LOOP

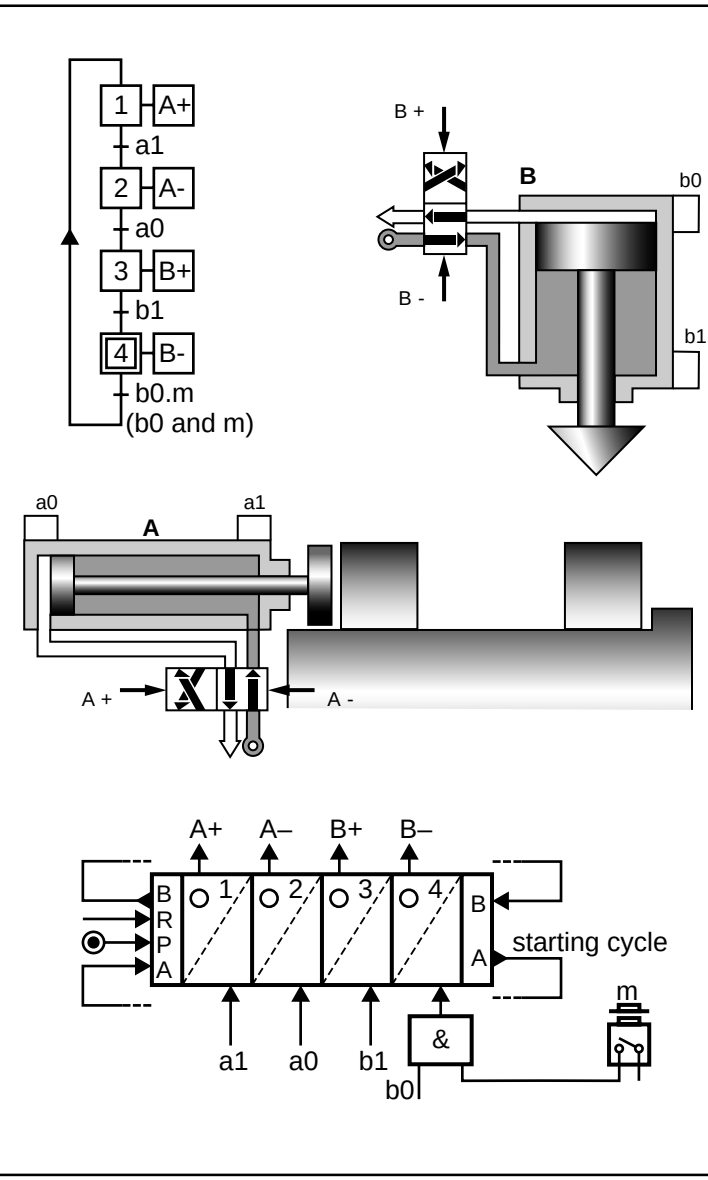
To understand the operating cycle, we first define each actuator motion in sequence. We will address each actuator with a letter starting with A. For a cylinder as shown to the right, the motion required is the extension of the cylinder. This action will now be known as A+. The "+" indicates the extension of a cylinder, or the turning of an actuator that is digital (on / off). When the cylinder reaches the end of its stroke, it will trigger a limit switch. This signal is an input (transition) that we call "a1". The "a" defines the actuator, and "1" defines its active state. This completes a step consisting of a command and a transition.

COMBINATION

We can now combine additional actuators and reciprocal motions to create a total control package. To the right are two actuators A and B. "A" is a transfer cylinder that will move parts into the workspace. "B" is a press that will form the parts.

The GRAFCET flow diagram in the upper left shows the required actions and the corresponding limit switch feedback signals to indicate the actions are complete. When the machine starts, the transfer (A) will extend (+), placing a part in the nest. Feedback (a1) states that the action is complete and initiates retraction (A-). Feedback (a0) confirms the action is complete and initiates the next motion. The press (B) will extend downward (+) until reaching the end of stroke sensor (b1) which confirms the action and initiates the final step that returns the press to its home condition (B-). The sensor (b0) confirms when (B) is home and signals end of cycle.





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IN-LINE MOUNTED LOGIC ELEMENTS

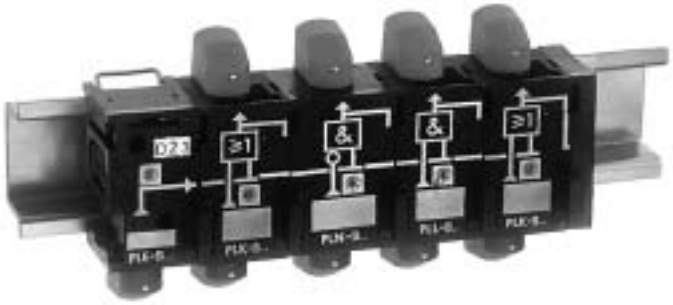
These logic elements can be either flush mounted on any flat surface, 35mm DIN rail mounted with the addition of a spring clip or hung from the tubing.
In-line elements are available in two logic statements: AND and OR.

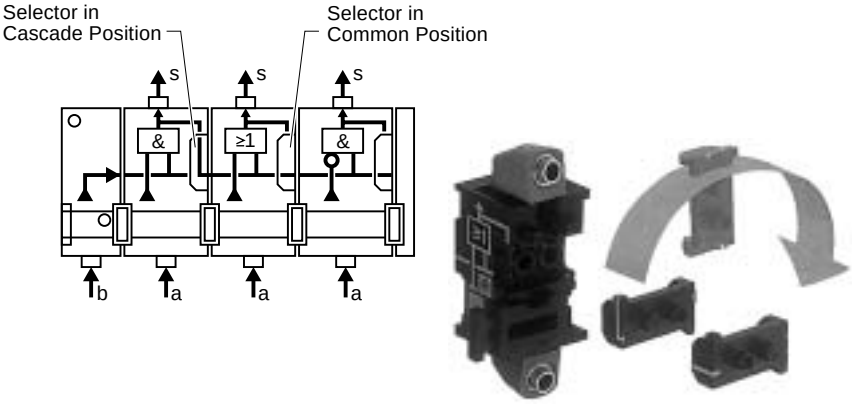
INTEGRATED LOGIC ELEMENTS

These elements can be combined with each other, allowing the creation of string statements in a compact footprint while reducing the piping required. There are three logic functions available in this configuration: AND, OR and NOT.

Each element is supplied with an integral locking key which allows each logic unit to lock to the next element to the right. In addition, each element includes a mode selector which enables the user to select either cascade (series) or common (parallel) cilrcuitry.

Cascade mode determines that the output of a logic element will feed the next downstream logic element, while the common mode feeds its supply to the next component. These units are designed for 35mm DIN rail mounting and are supplied with the internal piping diagram printed on the face of the device. This internal piping is field convertable.





SUBBASE MOUNTING LOGIC ELEMENTS

All logic devices are designed to mount on 3-port subbases. The 3-port subbase is available in two styles (common input and cascade input) and are manifoldable with each other as well as the 4-port subbases for relays. A stand alone 3-port (1/8" pipe) metal subbase is also available. There are 5 logic elements for subbase mounting: AND, OR, YES, NOT and THRESHOLD NOT.

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RELAYS

These components provide additional capability to the pneumatic logic system. Types available are: Time Delay, Memory, Amplifier, Sensor, Solenoid, and Pressure Switch (both pneumatic and electric). Depending on function, a 3 or 4-port subbase is used.

3-PORT SUBBASES

These stackable subbases are designed for the mounting of:
- logic devices
- timers
- bleed sensor relays
- threshold NOT relays
- E/P and P/E interfaces.

They are stackable with the 4-port subbases below and are available in common input or cascade input styles.

4-PORT SUBBASES

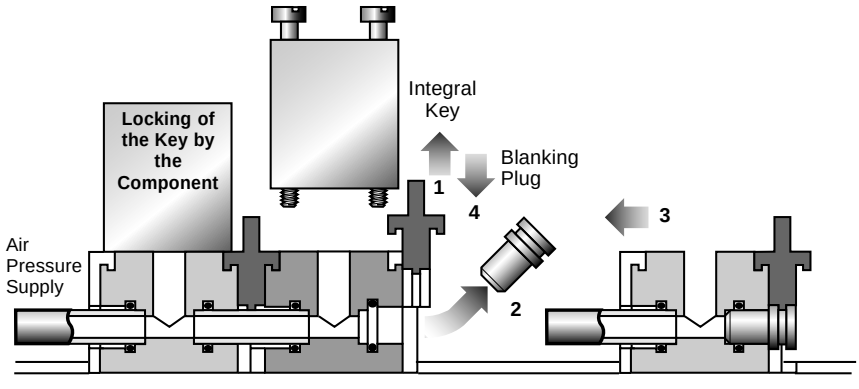
These stackable subbases are designed for the mounting of:
- memory relays
- amplifier relays for use with proximity sensors.

They are stackable with the 3-port subbases above.

STACK ASSEMBLY

The drawing to the right explains the procedure for asembling subbase mounted logic components and relays.

Note: The subbases are supplied with an integral key that must be pulled upward (1) to release the blanking plug (2). Now the downstream subbase can be positioned (3) then locked by returning the integral key back to its original position (4). After this process is complete, the relay or logic element are mounted on top.



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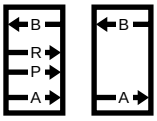
Step Module

PSMA10

Part Number	Description
PSMA10	With Manual Override, Less Base
PSMB10	Without Manual Override, Less Base
PSMA12	PSMA10 on PSBA12 Base
PSMB12	PSMB10 on PSBA12 Base

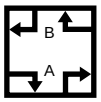
Head / Tail Set
(For 35mm DIN Rail Mounting)



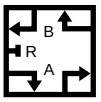
PSEA127

Part Number	Description
PSEA127	Required to assemble Modular Sequencer Provides Inlet & Signal Ports

Deviation Models



Standard

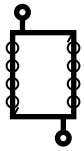


Blocked Port

PSDB12

Part Number	Description
PSDA12	**Standard:** - Parallel Sequences - Selection Sequences - Repeat Sequences - Skip Steps
PSDB12	**Blocked Port:** For the Remote Reinitialization of the Blocked Port

Step Module Subbase



PSBA12

Part Number	Description
PSBA12	For Mounting with PSM•10 Step Modules

Step Module Interlock

PSVA12

Part Number	Description
PSVA12	Mounted between the Subbase and the Step Module to Interrupt the Sequence if a Sensor Signal is Faulty.

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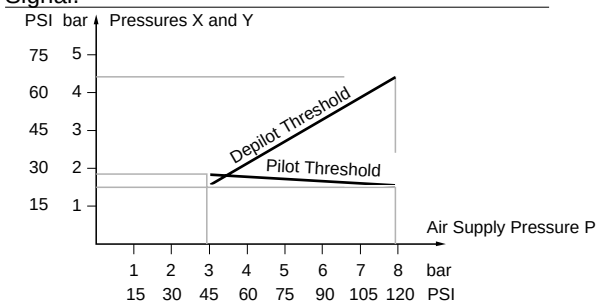
Pilot & Depilot Pressures

Reset Signal always takes priority over Set Signal.



G

Specifications

Air Quality
Standard Shop Air, Lubricated or Dry, 40 µm Filtration

Cv (kv)
0.14 (1.8)

Flow rate at 90 PSI (6 bar) in SCFM (l/mn ANR)
6.4 (180)

Function
3-Way, Double Air operated Valve with priority reset (Reset signal takes precedence over set signal).

Materials
- Body ..... Polyamide
- Poppet ..... Polyurethane
- Seals ..... Nitrile (Buna N)

Number of Operations with Dry Air at 90 PSI and 70°F – Frequency 1 Hz
10 Million

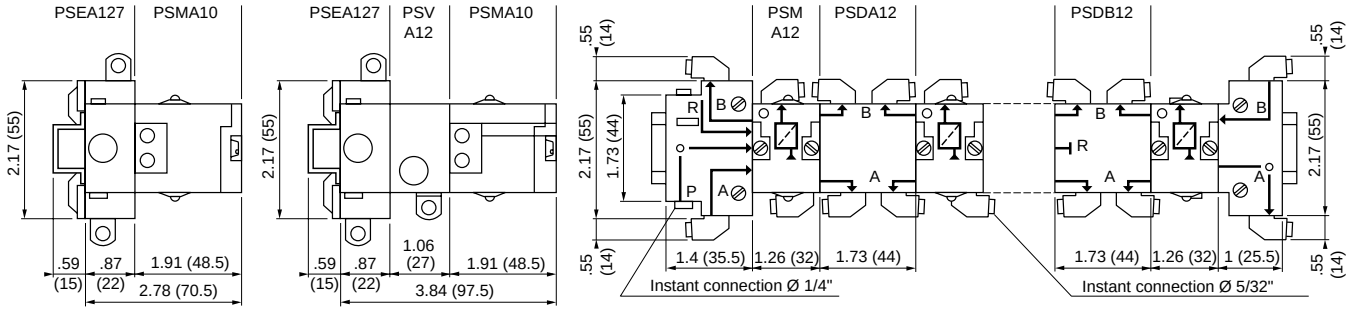
Operating Pressure
40 to 115 PSIG (3 to 8 bar)

Ports
PSEA127: Supply 1/4", All Others 5/32"
PSDA12, PSDB12, PSBA12, PSVA12: All 5/32
Use Semi- Rigid Nylon or Polyurethane Tube

Response Time
2 to 3 msec

Temperature
Operating
32°F to 122°F (0°C to +50°C)
Storage
-22°F to 140°F (-30°C to +60°C)

Dimensions



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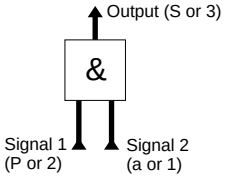
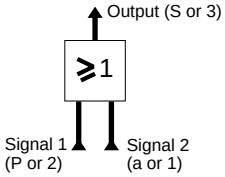
AND Element



PLLA11

Part Number	Description
PLLA11	5/32" Instant
PLLA15	10-32 UNF

OR Element



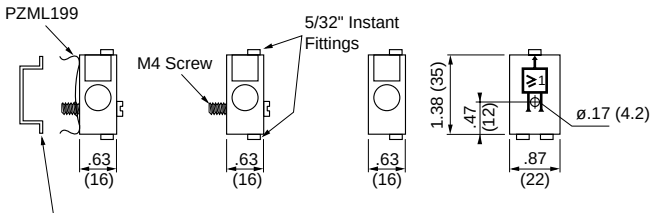
PLKA11

Part Number	Description
PLKA11	5/32" Instant
PLKA15	10-32 UNF

Mounting Clip Assembly

PZML199

Part Number	Description
PZML199	1 Set of 10 Clip Assemblies



Specifications

Air Quality
Standard Shop Air, Lubricated or Dry, 40 µm Filtration

Cv (kv)
0.14 (1.8)

Flow rate at 90 PSI (6 bar) in SCFM (l/mn ANR)
6.4 (180)

Materials
- Body ..... Polyamide
- Poppet ..... Polyurethane
- Seals ..... Nitrile (Buna N)

Mounting
Inline or 35mm DIN Rail

Number of Operations with Dry Air at 90 PSI and 70°F – Frequency 1 Hz
10 Million

Operating Positions
All Positions

Operating Pressure
40 to 115 PSIG (3 to 8 bar)

Ports
Standard: 5/32" Instant for Semi-Rigid Nylon or Polyurethane Tube
10-32 UNF Available

Response Time
2 to 3 msec

Temperature
Operating
32°F to 122°F (0°C to +50°C)
Storage
-22°F to 140°F (-30°C to +60°C)

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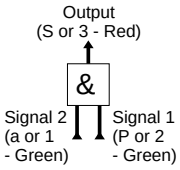
With 5/32" Instant Swivel Connections and Pressure Indicators

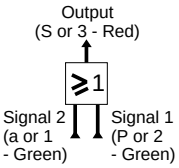
AND Element



PLLB12

Part Number	Description
PLLB12	With Integral Circuit Selector for Cascade or Common Mode Selection

OR Element

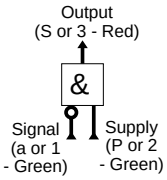


PLKB12

Part Number	Description
PLKB12	With Integral Circuit Selector for Cascade or Common Mode Selection

G

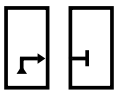
NOT Element

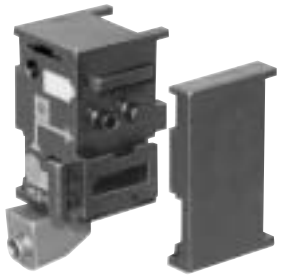


PLNB12

Part Number	Description
PLNB12	With Integral Circuit Selector for Cascade or Common Mode Selection

Head / Tail Plate Set





PLEB12

Part Number	Description
PLEB12	Mounts on DIN Rail, Required with Integrated Logic Elements to Complete Stack Assembly

Specifications

Air Quality
Standard Shop Air, Lubricated or Dry, 40 µm Filtration

Cv (kv)
0.14 (1.8)

Flow rate at 90 PSI (6 bar) in SCFM (l/mn ANR)
6.4 (180)

Materials
- Body ..... Polyamide
- Poppet ..... Polyurethane
- Seals ..... Nitrile (Buna N)

Mounting
Inline or 35 mm DIN Rail

Number of Operations with Dry Air at 90 PSI and 70°F – Frequency 1 Hz
10 Million

Operating Positions
All Positions

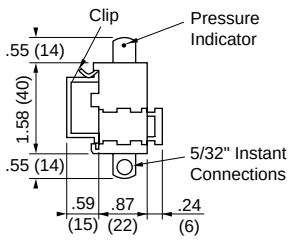
Operating Pressure
40 to 115 PSIG (3 to 8 bar)

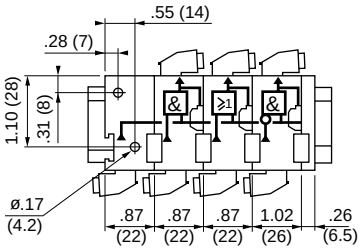
Ports
Standard: 5/32" Instant for Semi-Rigid Nylon or Polyurethane Tube
10-32 UNF Available

Response Time
2 to 3 msec

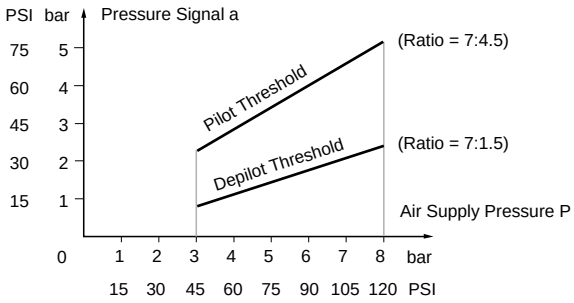
Temperature
Operating
32°F to 122°F (0°C to +50°C)
Storage
-22°F to 140°F (-30°C to +60°C)

Dimensions





PLN - NOT



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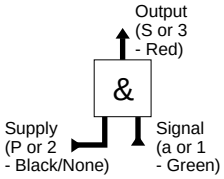
For Mounting On 3 Port Subbases

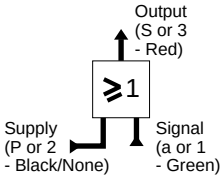
AND Element



PLLC10

Part Number	Description
PLLC10	Less Base

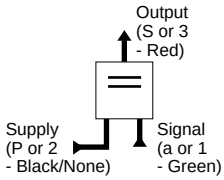
OR Element



PLKC10

Part Number	Description
PLKC10	Less Base

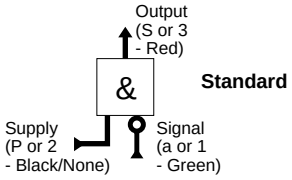
YES Element



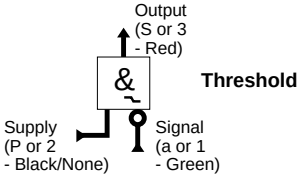
PLJC10

Part Number	Description
PLJC10	Less Base

NOT Elements



PLNC10

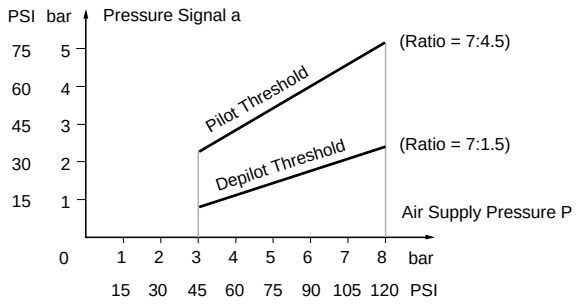


PLND10

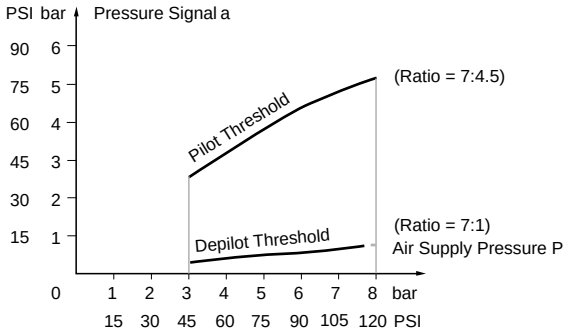
Part Number	Description
PLNC10	Less Base
PLNC12	PLNC10 on PZUA12 Subbase
PLND10	Less Base
PLND12	PLND10 on PZUA12 Subbase

Pilot and Depilot Pressures

PLN and PLJ - NOT and YES



PLND - Threshold NOT



G

Specifications

Air Quality
Standard Shop Air, Lubricated or Dry, 40 µm Filtration

Cv (kv)

PLNC, PLJC, PLL & PLK	PLND
0.14 (1.8)	0.08 (1.0) .14 (1.8)

Flow rate at 90 PSI (6 bar) in SCFM (l/mn ANR)

PLNC, PLJC, PLL & PLK	PLND
6.4 (180)	3.2 (90 6.4 (180)

Materials
- Body ..... Polyamide
- Poppet ..... Polyurethane
- Seals ..... Nitrile (Buna N)

Mounting
3-Port Subbase

Number of Operations with Dry Air at 90 PSI and 70°F – Frequency 1 Hz

	PLND
PLL & PLK	PLNC / PLJC
100 Million	10 Million

Operating Positions
All Positions

Operating Pressure
40 to 115 PSIG (3 to 8 bar)

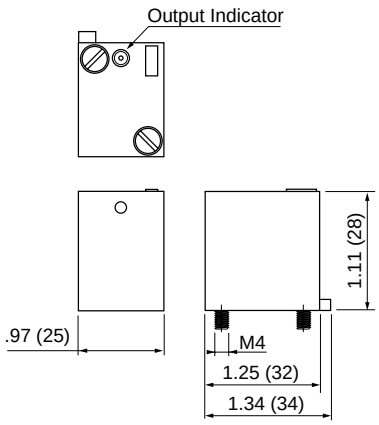
Ports
Standard: 5/32" Instant for Semi-Rigid Nylon or Polyurethane Tube
10-32 UNF Available

Response Time
2 to 3 msec

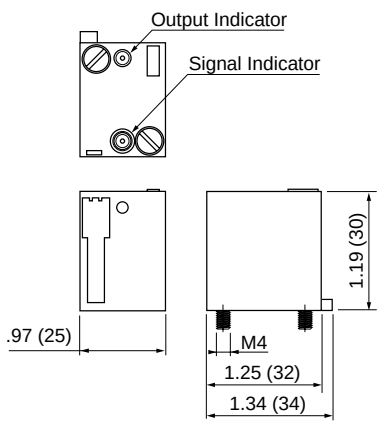
Temperature
Operating
32°F to 122°F (0°C to +50°C)
Storage
-22°F to 140°F (-30°C to +60°C)

Dimensions

PLKC10, PLLC10



PLNC10, PLND10, PLJC10



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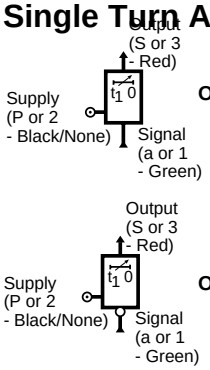
Time Delay Relays

For Mounting On Any 2* or 3-Port Subbase
Using Atmospheric Air for Control
Single Turn Adjustment

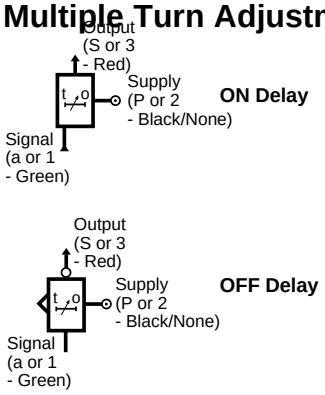


PRTA10

Part Number	Description	
PRTE10	ON Delay	0.1 to 3 s
PRTA10	ON Delay	0.1 to 30 s
PRTB10	ON Delay	10 to 180 s
PRTF10	OFF Delay	0.1 to 3 s
PRTC10	OFF Delay	0.1 to 30 s
PRTD10	OFF Delay	10 to 180 s
PRTA12	PRTE10 on PZUA12 Subbase	
LA9D901	Tamperproof Cap	

Time Delay Relays

For Mounting On Any 2* or 3-Port Subbase
Using Pressurized Air for Control
Multiple Turn Adjustment



LTY10/3

Part Number	Description	
LTY10/0	ON Delay	0.18 to 1.8
LTY10/1	ON Delay	0.40 to 3.0
LTY10/2	ON Delay	1.0 to 10.0
LTY10/3	ON Delay	5.0 to 40.0
LTY/EXT	ON Delay	Variable
LTN10/0	OFF Delay	0.14 to 1.4
LTN10/1	OFF Delay	0.25 to 2.0
LTN10/2	OFF Delay	0.50 to 6.0
LTN10/3	OFF Delay	2.50 to 25.0
LTN/EXT	OFF Delay	Variable

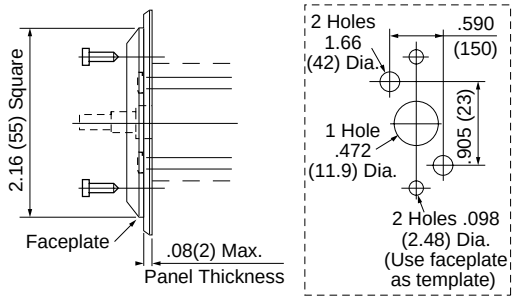
LTY / EXT and LTN / EXT
These units are the same as a standard LTY10/3 and LTN10/3 with an additional volume added to the body, and has a time delay of 45 to 80 seconds as shipped. A barbed fitting (.129" 3.3mm diameter) on the side of the timer allows connection of an external volume to increase the time delay. See specifications for how to determine the amount of volume necessary.

LTY / LTN Accessories

LT10/C

LT10/A

Part Number	Description
LT10/PAN	Panel Mounting Adapter Kit
LT10/C	Tamperproof Kit
LT10/A	Counting Dial Kit



Panel Cutout Detail

*Function Must Be Checked.

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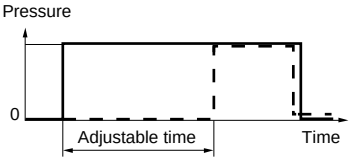
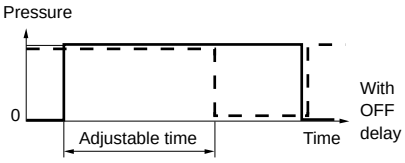
Function

PRTE
PRTA
PRTB
LTY10



PRTF
PRTC
PRTD
LTN10



Key:
Control signal a
Output signal S - - - - - -

Specifications

Air Quality - PRT
Standard Shop Air, Lubricated or Dry, 40 µm Filtration

Air Quality - LTY/LTN
Standard Shop Air, Dry, 20 µm Filtration

Cv (kv) - PRT
0.14 (1.8)

Cv (kv) - LTY, LTN
0.19 (2.4)

Filter - PRT
a-PPRL23
Vent - PPRL20

Filter - LTY, LTN
35 Micron Internal Filter fitted to Signal Port 1

Flow rate at 90 PSI (6 bar) in SCFM (l/mn ANR) - PRT
6.4 (180)

Flow rate at 90 PSI (6 bar) in SCFM (l/mn ANR) - LTY, LTN
9.3 (262)

Interchangable 50 µm Filter (PRT Only)
a (Input) PPRL23
Input Cylinder PPRL20

Materials
- Body ..... Polyamide
- Poppet ..... Polyurethane
- Seals ..... Nitrile (Buna N)

Mounting
2 or 3-Port Subbase

Number of Operations with Dry Air at 90 PSI and 70°F – Frequency 1 Hz
10 Million

Operating Positions
All

Operating Pressure
40 to 115 PSIG (3 to 8 bar)

Repeatability - PRT
±5% / 5 Operations

Response Time - PRT
2 to 3 msec

Response Time - LTY,LTN
Typical Reset Time less than 100msec

Temperature
Operating
32°F to 122°F (0°C to +50°C)
Storage
-22°F to 140°F (-30°C to +60°C)

LTY / EXT

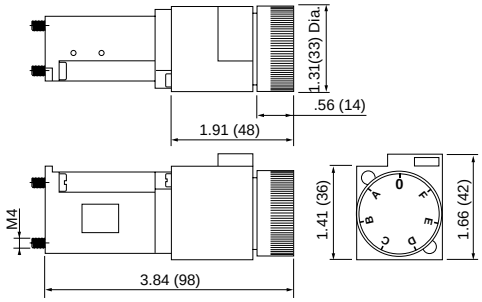
The time delay per unit volume is 295 sec/in^3 at 80 psig (18 sec/cc at 5.5 bar).
The volume of the timer as shipped is .305 in^3 (5 cc).

Example: Required 10-minute time delay at 80 psig (5.5 bar).

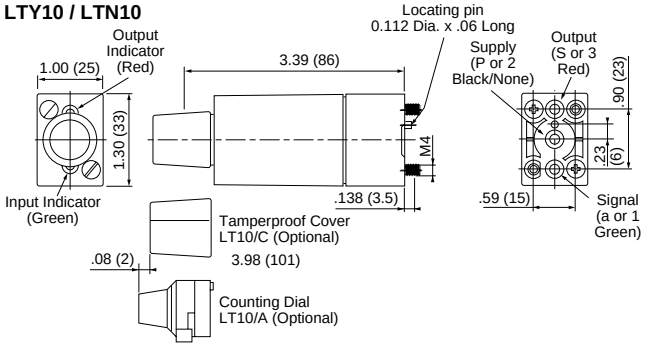
Total volume will be 10 min x 60 sec/min x 1 in^3/295 sec = 2.03 in^3 (10x60/18 = 33 cc).
The additional volume that will be required will be 2.03 - .305 = 1.725 in^3 (33-5 = 28 cc).

Dimensions

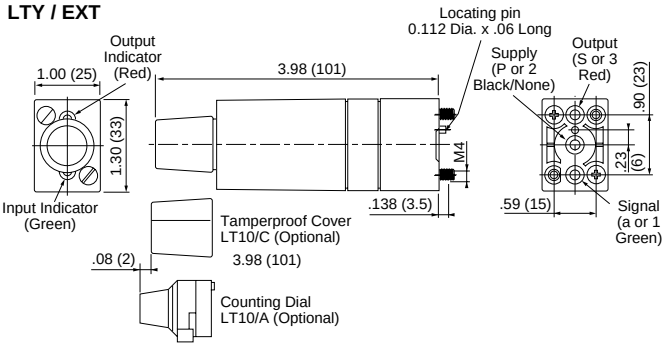
PRT•10



LTY10 / LTN10



LTY / EXT



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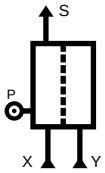
Memory Relay
Without Subbase
For Mounting On 4-Port Modular Subbase



PLMA10

Part Number	Description
PLMA10	3-Way Double Air Pilot Operated Valve. Reset Signal Y Always Has Priority Over Set Signal X. With Manual Override
PLMA12	PLMA10 on PZUB12 Subbase

Specifications

Air Quality
Standard Shop Air, Lubricated or Dry, 40 µm Filtration

Cv (kv)
0.14 (1.8)

Flow rate at 90 PSI (6 bar) in SCFM (l/mn ANR)
6.4 (180)

Materials
- Body ..... Polyamide
- Poppet ..... Polyurethane
- Seals ..... Nitrile (Buna N)

Mounting
4-Ported Subbase

Number of Operations with Dry Air at 90 PSI and 70°F – Frequency 1 Hz
10 Million

Operating Positions
All

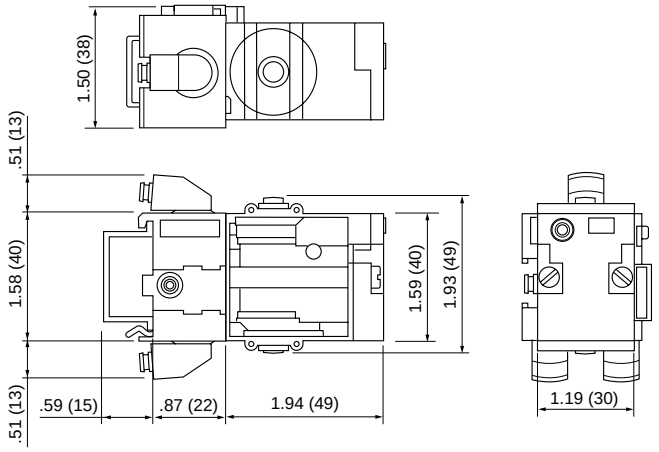
Operating Pressure
40 to 115 PSIG (3 to 8 bar)

Response Time
2 to 3 msec

Temperature
Operating
32°F to 122°F (0°C to +50°C)
Storage
-22°F to 140°F (-30°C to +60°C

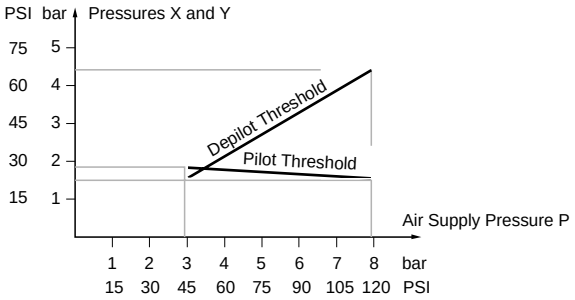
Dimensions

PLMA12



Pilot & Depilot Pressures

Reset Signal Y always takes priority over Set Signal X.



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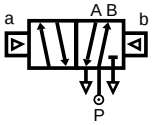
4-Way Valve Unit

For Mounting On 5-Ported Subbase

Part Number	Description
LPMEM10	4-Way Double Air Pilot Operated Valve. 2-Position, Dual Exhaust Ports



LPMEM10

G

Specifications

Air Quality
Standard Shop Air, Lubricated or Dry, 40 µm Filtration

Flow
8.5 SCFM at 100 PSIG

Function
When pilot pressure is applied, the valve shifts and remains in position until an opposing signal is applied and the initiating signal is lost. This creates a “memory” or latching function.

Materials
- Body ..... Polyamide
- Poppet ..... Polyurethane
- Seals ..... Nitrile (Buna N)

Minimum Pilot Pressure
30 PSIG

Mounting Base
BAC7P10, BIC7P10

Mounting
5-Ported Subbase

Operating Pressure
30 to 115 PSIG (2 to 8 bar)

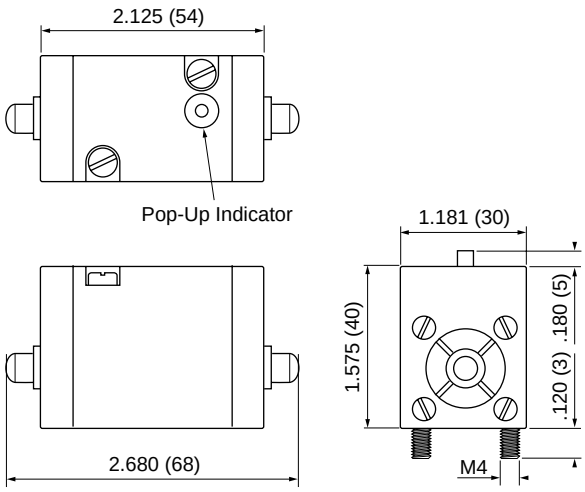
Operating Positions
All

Ports
“a” and “b” ..... Pilot Ports
A and B ..... Output Ports
Single Supply Port
Dual Exhaust Ports

Temperature
Operating
32°F to 122°F (0°C to +50°C)
Storage
-22°F to 140°F (-30°C to +60°C)

Dimensions

(Not including Mounting Base)



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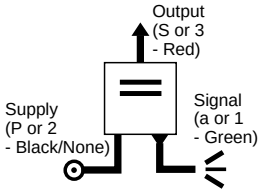
Sensor Relay

For Mounting On Any 3-Port Base

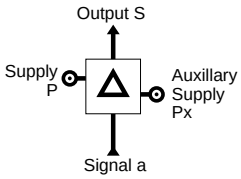


PRFA10

Part Number	Description
PRFA10	Provides a supply to a bleed sensor* and generates an output signal when operated. *See Bleed Sensors in Sensing Section
PRFA12	PRFA10 on PZUA12 Subbase

Amplifier Relay

For Mounting On 4-Port Base



PRDA10

Part Number	Description
PRDA10	With Manual Override — Amplifies the low pressure signal coming from a fluidic proximity sensor* to a usable level. * See Fluidic Proximity Sensors in Sensing
PRDA12	PRDA10 on PZUB12 Subbase

Specifications

Air Quality
Standard Shop Air, Lubricated or Dry, 40 µm Filtration

Cv (kv)
0.14 (1.8)

Flow rate at 90 PSI (6 bar) in SCFM (l/mn ANR)
6.4 (180)

Function
3-Way Normally Closed
NNP
Yes

Materials
- Body ..... Polyamide
- Poppet ..... Polyurethane
- Seals ..... Nitrile (Buna N)

Mounting
Sensor: 3-Ported Subbase
Amplifier: 4-Ported Subbase

Nozzle Consumption
0.00487ft³/PSI Min
(2 l/bar - Min ANR)
LFAY10/1 - 0.04 l/s (0.08 SCFM)

Nozzle Ø (Of Sensor)
1/32" (3mm)

Number of Operations with Dry Air at 90 PSI and 70°F – Frequency 1 Hz
10 Million

Operating Positions
All

Operating Pressure
40 to 115 PSIG (3 to 8 bar)

Response Time
2 to 3 msec

Temperature
Operating
32°F to 122°F (0°C to +50°C)
Storage
-22°F to 140°F (-30°C to +60°C)

PRD - Amplifier Relay Only

Air Signal Pressure (a)
.007 to .03 PSI (0.5 to 2 mbar)

Auxiliary Supply Pressure (Px)
1.5 to 3 PSI (100 to 200 mbar)

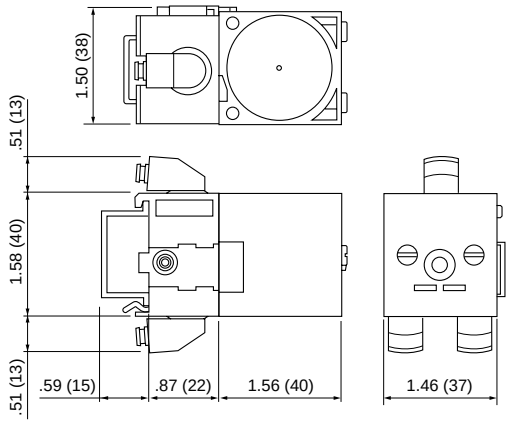
Consumption
At 1.5 PSI (100mbar) with a
= 0: 0.1 SCFM (3Nl/mn)

Maximum Operating Frequency
10 Hz

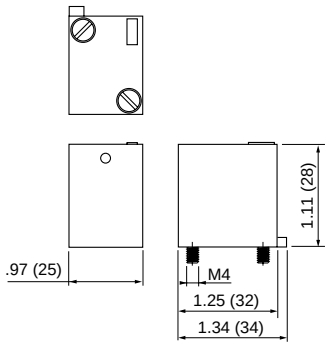
Manual Control
PRDA

Dimensions

PRDA12



PRFA10



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Signal Amplifier Relay

For Mounting On Any 3-Port Subbase

Sensitive Amplifier

Standard Amplifier

LFAY10/1

Part Number	Description	
LFAY10/0	Sensitive Amplifier .15 to 5.00 PSIG (.01 to .34 bar)	A low pressure signal at Port 1 allows a higher pressure signal to pass from Port 2 to Port 3
LFAY10/1	Standard Amplifier 1.10 to 115 PSIG (.08 to 8 bar)	

Specifications

Air Quality
Standard Shop Air, Lubricated or Dry, 40 µm Filtration

Cv (kv)
0.19 (2.4)

Flow rate at 90 PSI (6 bar) in SCFM (l/mn ANR)
9.3 (262)

Function
3-Way Normally Closed
NNP
Yes

Materials
- Body ..... Acetal
- Poppet ..... Acetal
- Seals ..... Buna N (Nitrile)

Mounting
3-Ported Subbase

Nozzle Consumption
LFAY10/0 - 0.7 l/s (0.15 SCFM)
LFAY10/1 - 0.04 l/s (0.08 SCFM)

Nozzle Ø (Of Sensor)
.007" (0.18mm)

Number of Operations with Dry Air at 90 PSI and 70°F – Frequency 1 Hz
10 Million

Operating Positions
All

Operating Pressure
30 to 115 PSIG (2 to 8 bar)

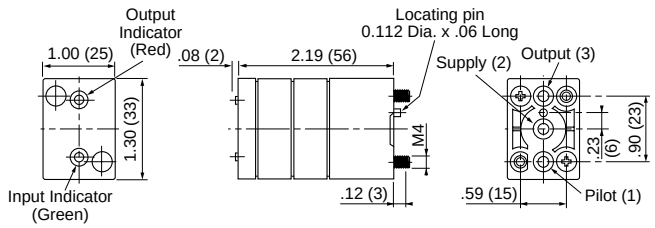
Pressure Signal Range
LFAY10/0 - .15 to 5.00 PSIG (.01 to .34 bar)
LFAY10/1 - 1.10 to 115 PSIG (.08 to 8 bar)

Response Time
Typical Reset Time less than 100ms

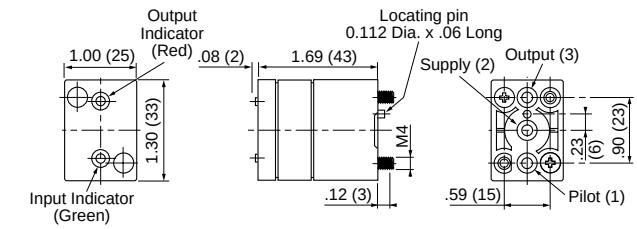
Temperature
Operating
32°F to 122°F (0°C to +50°C)
Storage
-22°F to 140°F (-30°C to +60°C)

Dimensions

LFAY10/0



LFAY10/1



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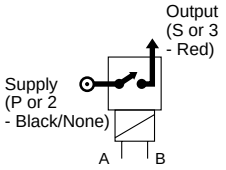
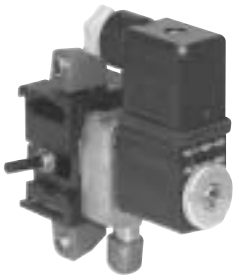
Solenoid Relay

With PZUA12 Subbase



With manual override and plug-in DIN connector 22 x 30 mm (43650 Form B Industrial)



PRSA121B

Part Number	Description	
PRSA121B	24VAC 50/60 Hz	6VA
PRSA121F	120VAC 60 Hz	6VA
PRSA122B	24VDC	5W

Solenoid Coil

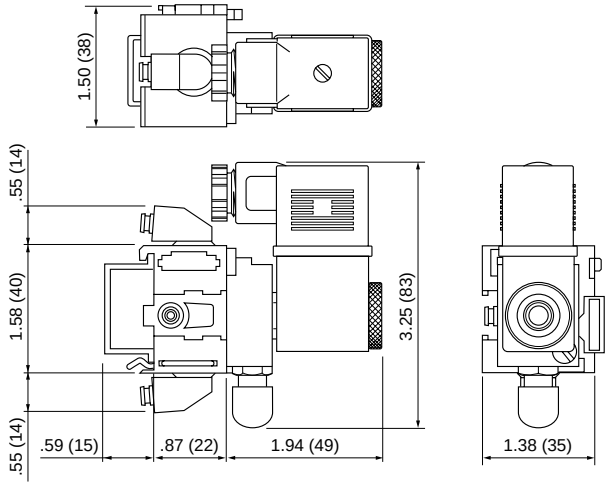
With Plunger and Plug-in DIN Connector (22 x 30mm)

PVAF10●●

Part Number	Description	
PVAF102B	24VDC	5W
PVAF102E	48VDC	5W
PVAF101B	24VAC 50/60 Hz	6VA
PVAF101E	48VAC 50/60 Hz	6VA
PVAF101F	120VAC 60 Hz	6VA
PVAF101M	240VAC 60 Hz	6VA

Dimensions

PRSA121B



Coil Mount

For Mounting On Any 2 or 3-Port Subbase

PRSD10

Part Number	Description
PRSD10	For mounting the Solenoid Coil and Plunger on a 3-Port Subbase With Manual Override

Specifications

Air Quality
Standard Shop Air, Lubricated or Dry, 40 µm Filtration

Consumption
Direct Current: Holding = 5 W
Alternating Current: Holding = 6 VA; Inrush = 20 VA

Cv (kv)
0.05 (0.65)

Degree of Protection
IP 65

Electrical Connection
Plug-in Connector, 22-30 mm, Ø 9 mm Cable Entry, Terminal Capacity 1.5 mm²

Flow rate at 90 PSI (6 bar) in SCFM (l/mn ANR)
2.1 (60)

Manual Control
Yes

Materials
- Body ..... Polyamide
- Poppet ..... Polyurethane
- Seals ..... Nitrile (Buna N)

Mounting
3-Ported Subbase

Number of Operations with Dry Air at 90 PSI and 70°F – Frequency 1 Hz
10 Million

Operating Positions
All Positions

Operating Pressure
40 to 115 PSIG (3 to 8 bar)

Rated Insulation Voltage
660V AC or DC

Duty Rating
100 %

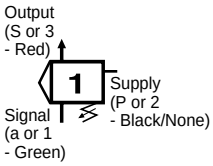
Response Time
8 to 12 msec

Standard Voltages
24 VDC; 48 VDC ; 24 VAC ; 48 VAC; 120 VAC; 240 VAC

Temperature
Operating
32°F to 122°F (0°C to +50°C)
Storage
-22°F to 140°F (-30°C to +60°C)

Pneumatic Pressure Level Switch Without Subbase

For Mounting On Any 3-Port Base



LAA*10/1

Part Number	Description
LAAY10/1	Senses Change in Rising Pressure from a Adjustable Level and Provides a Pneumatic Output
LAAN10/1	Senses Change in Falling Pressure from a Adjustable Level and Provides a Pneumatic Output

G

Specifications

Air Quality
Standard Shop Air, Lubricated or Dry, 40 µm Filtration

Cv (kv)
0.19 (2.4)

Flow rate at 90 PSI (6 bar) in SCFM (l/mn ANR)
9.3 (262)

Materials
- Body ..... Polyamide
- Poppet ..... Polyurethane
- Seals ..... Nitrile (Buna N)

Mounting
3-Ported Subbase

Number of Operations with Dry Air at 90 PSI and 70°F – Frequency 1 Hz
10 Million

Operating Positions
All Positions

Operating Pressure
115 PSIG Max. (8 bar)

Pilot Pressure
Adjustable 7 to 130 PSI (0.5 to 8 bar)

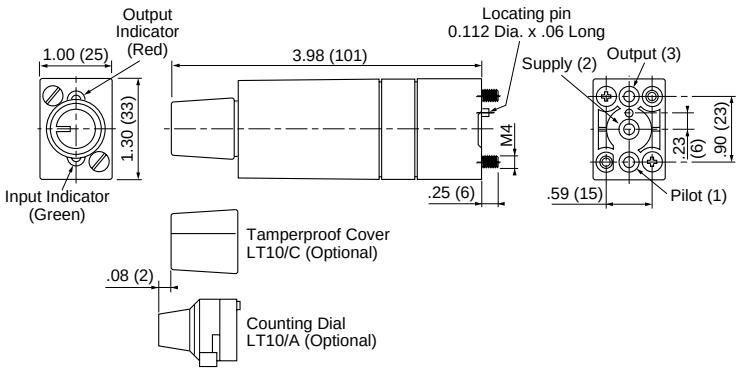
Switching Differential (On Off)
<5PSI (<0.34 bar)

Temperature
Operating
32°F to 122°F (0°C to +50°C)
Storage
-22°F to 140°F (-30°C to +60°C)

Typical Bleed Rate
0.08 SCFM (2.1 l/min)

Dimensions

LAAY10/1, LAAN10/1



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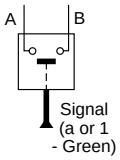
Parker Pneumatic

Parker Hannifin Corporation
Pneumatic Division
Richland, Michigan
www.parker.com/pneumatic

Pressure Switch Without Subbase

For Mounting On Any 2 or 3-Port Base

Part Number	Description
PREA10	With Manual Override and Plug-in DIN Connector 22 x 30 mm
PREA12	PREA10 on PZUA12 Subbase



PREA10

Specifications

Air Quality
Standard Shop Air, Lubricated or Dry, 40 µm Filtration

Degree of Protection
IP 65

Depilot Pressure
30 to 37 PSI (2 to 2.6 bar)

Electrical Characteristics
N.O. (NNP) Contact, 5A / 660V

Electrical Connection
Plug-in Connector, 22-30 mm,
Ø 9 mm Cable Entry,
Terminal Capacity 1,5 mm²

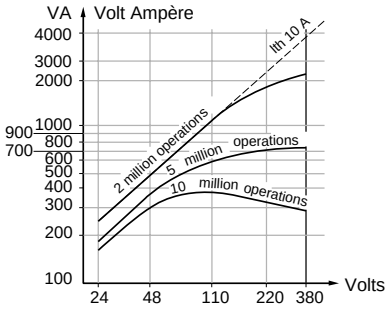
Function
NO Contact

Insulation Voltage Rating
660V AC or DC

Materials
- Body ..... Polyamide
- Poppet ..... Polyurethane
- Seals ..... Nitrile (Buna N)

Maximum Operating Frequency
10 Hz

Mechanical Life



Mounting
2 or 3-Ported Subbase

Nominal Current Rating
10 A

Number of Operations with Dry Air at 90 PSI and 70°F – Frequency 1 Hz
10 Million

Operating Positions
All Positions

Operating Pressure
115 PSIG Max. (8 bar)

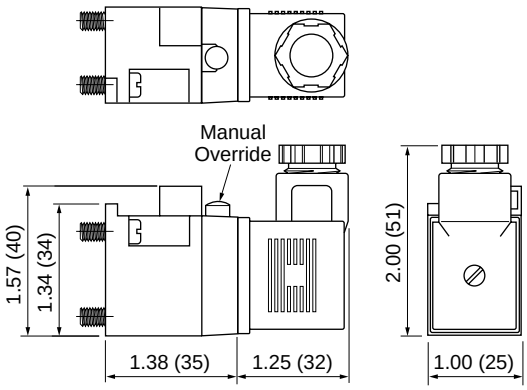
Response Time
2 to 3 msec

Temperature
Operating
32°F to 122°F (0°C to +50°C)
Storage
-22°F to 140°F (-30°C to +60°C)

Trip Pressure
32 to 40 PSI (2.2 to 3 bar)

Dimensions

PREA10



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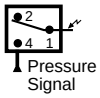
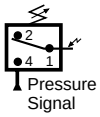
Line Mounted Pressure Switch

(Includes Manual Override and Visual Indicator)



Fixed



Adjustable

PS1P1091

Part Number	Description	
	Electrical	Pneumatic
PS1P1081	1SPDT Contact 5A / 250V	20PSI Fixed Switching Pressure
PS1P1091	1SPDT Contact 5A / 250V	30-75 PSI Adjustable Switching Pressure

G

Specifications

Adjustable Trip Pressure
30 to 75 PSI (2 to 5 bar)

Air Quality
Standard Shop Air, Lubricated or Dry, 40 µm Filtration

Degree of Protection
IP 40

Electrical Connections
Screw Terminals

Fixed Trip Pressure
≥20 PSI (1.3 bar)

Function
SPDT Contacts

Insulation Voltage Rating
250V AC or DC

Materials
- Body ..... Polyamide
- Poppet..... Polyurethane
- Seals ..... Nitrile (Buna N)

Maximum Operating Frequency
10 Hz

Mounting
Inline or 35 mm DIN Rail

Nominal Current Rating
5 A

Number of Operations with Dry Air at 90 PSI and 70°F – Frequency 1 Hz
10 Million

Operating Positions
All Positions

Operating Pressure
115 PSIG Max. (8 bar)

Ports
5/32" Instant for Semi- Rigid Nylon or Polyurethane Tube

Response Time
2 to 3 msec

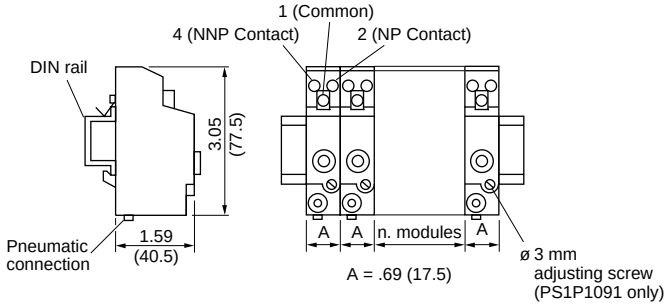
Temperature
Operating
32°F to 122°F (0°C to +50°C)
Storage
-22°F to 140°F (-30°C to +60°C)

Electrical Life

Type of Circuit

		AC (Switching Capacity in VA)					DC (Switching Capacity in W)				
		12V	24V	48V	120V	220V	12V	24V	48V	110V	220V
For 1 Million Operations	AC	15	25	56	115	140	17	24	37	50	54
	DC	54	86	190	370	440	42	58	88	115	105
For 2 Million Operations	AC	-	-	-	-	-	10	14	25	40	23
	DC	-	-	-	-	-	30	43	70	100	90
For 5 Million Operations	AC	8	10	14	19	21	-	-	-	-	-
	DC	21	35	82	160	200	-	-	-	-	-

Dimensions



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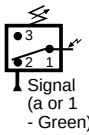
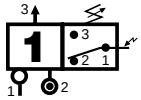
With Electrical, Electrical & Pneumatic and Pneumatic Output

Electrical Pressure Switch Without Subbase

For Mounting On Any 2 or 3-Port Base



LPS10/2, LPS10/3



LNOTPS10

LPS10/*

Part Number	Description
LPS10/2	1.5 to 30 PSIG Adjustable Senses Presence of Air Pressure to provide Electrical Switching
LPS10/3	10 to 100 PSIG Adjustable Senses Presence of Air Pressure to provide Electrical Switching
LNOTPS10	Senses Absence of Air Pressure, Provides Electrical and Pneumatic Switching

Units supplied with 3 crimp-on electrical terminals with insulators.

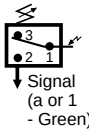
Electrical Characteristics

5A / 250V, 1 N.O. or 1 N.C. (SPDT) Contact

Terminal Number	Description	
	LPS10	**LNOTPS**
1	Common	Common
2	Normally Passing	Normally Non-Passing
3	Normally Non-Passing	Normally Passing

Vacuum Switch

For Mounting On Any 2 or 3-Port Base



LPSV10

Part Number	Description
LPSV10	Senses Presence of Vacuum

Units supplied with 3 crimp-on electrical terminals with insulators.

Electrical Characteristics

5A / 250V, 1 N.O. or 1 N.C. (SPDT) Contact

Terminal Number	Description
1	Common
2	Normally Non-Passing
3	Normally Passing

Cable

7097J03711

Part Number	Description
7097J03711	Optional for LPS10 / LPSV

Terminal Number	Wire Color
1	Brown
2	Blue
3	Black

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Specifications
LPS & LPSV

Air Quality
Standard Shop Air, Lubricated or Dry, 40 µm Filtration

Degree of Protection
IP40 with Molded Connector

Depilot Pressure
Differential less than 25% of maximum range

Electrical Connection
Spade Connectors or Molded Cable

Function
SPDT Contacts (NO or NC)

Insulation Voltage Rating
250V AC or DC

Materials
- Body ..... Polyamide
- Poppet ..... Acetal
- Seals ..... Nitrile (Buna N)

Maximum Operating Frequency
2 Hz

Mechanical Life
10 Million Operations

Mounting
2 or 3-Port Subbase

Number of Operations with Dry Air at 90 PSI and 70°F – Frequency 1 Hz
10 Million

Operating Positions
All Positions

Operating Pressure
115 PSIG (8 bar Max.)

Rated Current
5A (3A with 7097J03711 Cable)

Temperature
Operating
32°F to 122°F (0°C to +50°C)
Storage
-22°F to 140°F (-30°C to +60°C)

Trip Pressure
LPS10/2 - 1.5 to 30 PSI (0.1 to 2 bar Adjustable
LPS10/3 - 10 to 100 PSI (0.7 to 7 bar Adjustable

G

Specifications
LNOTPS

Air Quality
Standard Shop Air, Lubricated or Dry, 40 µm Filtration

Cv
0.19 (2.4)

Degree of Protection
IP40 with Molded Connector

Depilot Pressure
7% of Supply Pressure

Electrical Connection
Spade Connectors or Molded Cable

Flow rate at 90 PSI (6 bar) in SCFM (l/mn ANR)
9.3 (262)

Function
SPDT Contacts (NO or NC)

Insulation Voltage Rating
250V AC or DC

Materials
- Body ..... Polyamide
- Poppet ..... Acetal
- Seals ..... Nitrile (Buna N)

Mechanical Life
10 Million Operations

Mounting
3-Ported Subbase

Number of Operations with Dry Air at 90 PSI and 70°F – Frequency 1 Hz
10 Million

Operating Positions
All Positions

Operating Pressure
40 to115 PSIG (3 to 8 bar)

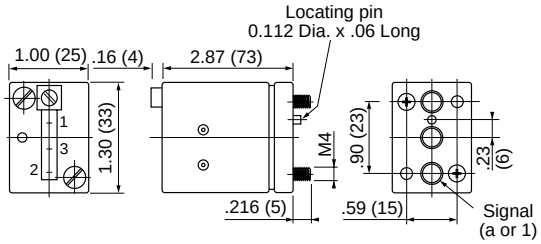
Rated Current
5A (3A with 7097J03711 Cable)

Temperature
Operating
32°F to 122°F (0°C to +50°C)
Storage
-22°F to 140°F (-30°C to +60°C)

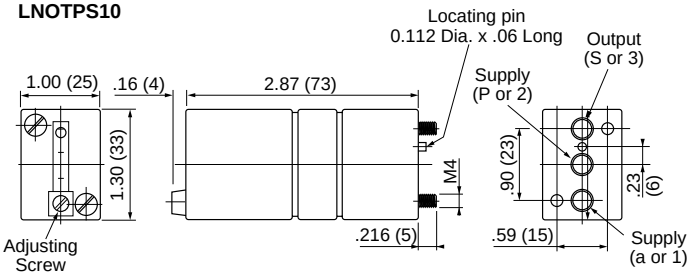
Trip Pressure
36% of Supply Pressure

Dimensions

LPS10 / LPSV10



LNOTPS10



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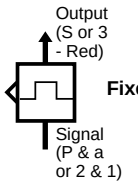
Fixed Pulse Unit*

Mounts On Any 2-Port Base (3-Port base may be used if Inlet and Signal Ports are externally connected or by using LT10/ POL Pulse Conversion Kit)



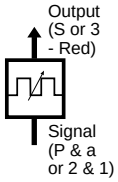
Fixed Time Duration

LFPUL10/1

Part Number	Description
LFPUL10/0.5	0.5 Second Pulse Provides a short duration Pneumatic Pulse when a Pneumatic Signal is applied.
LFPUL10/1	1.0 Second Pulse Provides a short duration Pneumatic Pulse when a Pneumatic Signal is applied.

Variable Pulse Unit*

Mounts On Any 2-Port Base (3-Port base may be used if Inlet and Signal Ports are externally connected or by using LT10/ PUL Pulse Conversion Kit)



Variable Pulse

LPG10/1

Part Number	Description
LPG10/1	Pulse every 1 to 10 Seconds Provides continuous pulses which are user set for pulse frequency.

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Specifications
LFPUL

Air Quality
Standard Shop Air, Lubricated or Dry, 20 µm Filtration

Connections
Subbase

Cv (kv)
0.19 (2.4)

Flow rate at 90 PSI (6 bar) in SCFM (l/mn ANR)
9.3 (262)

Materials
- Body ..... Polyamide
- Poppet ..... Acetal
- Seals ..... Nitrile (Buna N)

Mounting
All Positions

Number of Operations with Dry Air at 90 PSI and 70°F – Frequency 1 Hz
10 Million

Off Time
LFPUL10/0.5 - 0.5 Secs ±15%
LFPUL10/1 - 1.0 Secs ±15%

Operating Positions
All Positions

Operating Pressure
30 to 115 PSIG (2 to 8 bar)

Reset Time
LFPUL10/0.5 - <3 Seconds
LFPUL10/1 - <8 Seconds

Temperature
Operating
32°F to 122°F (0°C to +50°C)
Storage
-22°F to 140°F (-30°C to +60°C)

G

Specifications
LPG

Air Quality
Standard Shop Air, Lubricated or Dry, 20 µm Filtration

Connections
Subbase

Cv (kv)
0.19 (2.4)

Flow rate at 90 PSI (6 bar) in SCFM (l/mn ANR)
4.5 (171)

Frequency Range
0.1 to 1 Hz

Frequency Variation
-5% at 30 PSI (2 bar)
+5% at 115 PSI (8 bar)
-refered to setting at 80 PSI (5.5 bar)

Materials
- Body ..... Polyamide
- Poppet ..... Acetal
- Seals ..... Nitrile (Buna N)

Mounting
2 or 3-Port Subbase

Number of Operations with Dry Air at 90 PSI and 70°F – Frequency 1 Hz
10 Million

Off Time
88% of Cycle Time

On Time
12% of Cycle Time

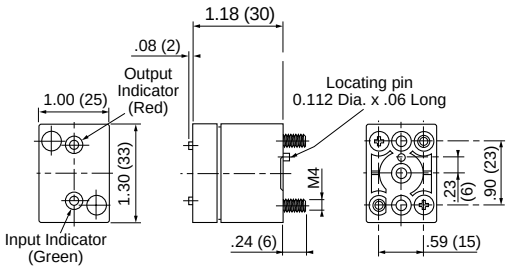
Operating Positions
All Positions

Operating Pressure
30 to 115 PSIG (2 to 8 bar)

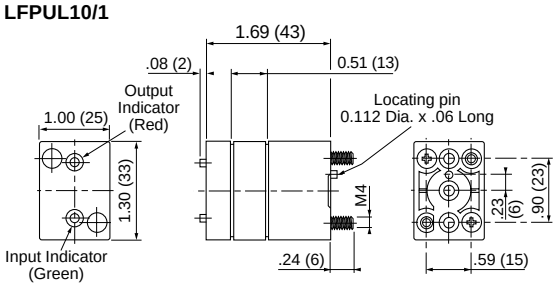
Temperature
Operating
32°F to 122°F (0°C to +50°C)
Storage
-22°F to 140°F (-30°C to +60°C)

Dimensions

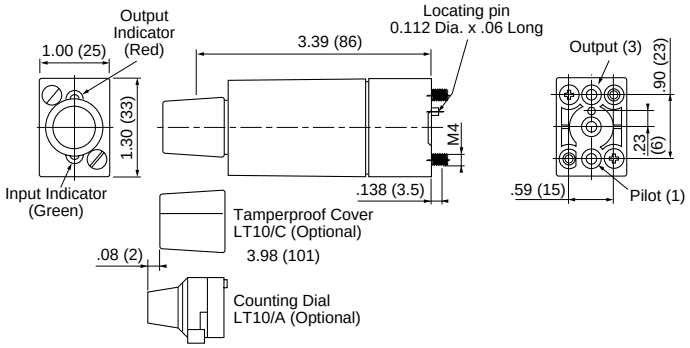
LFPUL10/0.5



LFPUL10/1



LPG10/•



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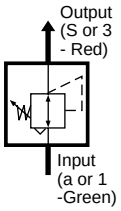
Air Regulator

Mounts On Any 2 or 3-Port Base



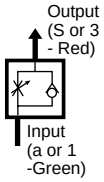
Pressure Control

PRD3P10

Part Number	Description
PRD3P10	Regulate Air Pressure Unit is Base Mounted

Flow Control

Mounts On Any 2 or 3-Port Base



Flow Control

LT1M10

Part Number	Description
LT1M10	Fine Adjustable Restrictor Full Reverse Flow (Grey Knob)
FR3P10	Course Adjustable Restrictor Full Reverse Flow (Black Knob)

Specifications

Air Quality
Standard Shop Air, Lubricated or Dry, 40 µm Filtration

Control Range
LT1M10 - 0.002 to 0.1 SCFM
FR3P10 - 0.020 to 3.0 SCFM

Flow rate at 90 PSI (6 bar) in SCFM (l/mn ANR) - PRD3
5.2 (147)

Flow rate at 90 PSI (6 bar) in SCFM (l/mn ANR) - LT1M, FR3P
Max Reverse Flow - 3 SCFM

Materials - PRD3
- Body ..... Anodized Aluminum
- Seals ..... Nitrile (Buna N)

Materials - LT1M, FR3P
- Body ..... Polyamide
- Poppet ..... Acetal
- Seals ..... Nitrile (Buna N)

Mounting
2 or 3-Ported Subbase

Operating Positions
All Positions

Operating Pressure - PRD3
120 PSI (8.5 bar Max.)

Operating Pressure - LT1M, FR3P
30 to 115 PSI (2 to 8 bar)

Pneumatic Characteristics - PRD3
120 PSI Maximum Pressure
7 to 105 PSI Reduction Range
6 SCFM Flow at 85 PSI

Port 1 - Not Used
Port 2 - Air Supply
Port 3 - Reduced Output Pressure

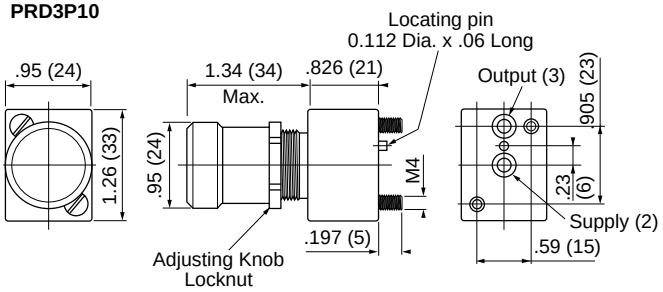
Pneumatic Characteristics - LT1M
30 to115 PSIG Pressure Range
0 to 0.1 Flow at 100 PSIG
(Port 1 to Port 3)
5 SCFM Max. Reverse Flow
(Port 3 to Port 1)

Pneumatic Characteristics - FR3P
30 to115 PSIG Pressure Range
0.2 to 3.0 Flow at 100 PSIG
(Port 1 to Port 3)
5 SCFM Max. Reverse Flow
(Port 3 to Port 1)

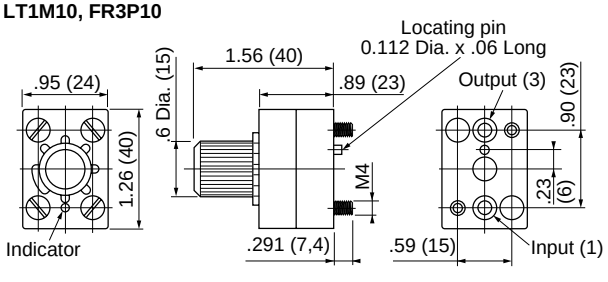
Temperature
Operating
32°F to 122°F (0°C to +50°C)
Storage
-22°F to 140°F (-30°C to +60°C)

Dimensions

PRD3P10



LT1M10, FR3P10



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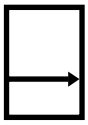
For Mounting Logic Elements And Relays

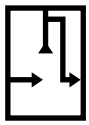
3-Port Subbases

With 5/32" Instant Swivel Connections, Pressure Indicators and Integral Lock for Stacking



Common Input

PZUA12



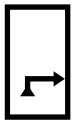
Cascade

PZUC12

Part Number	Description
PZUA12	Common Input
PZUC12	Cascade

Entry Module

With Integral Lock for Stacking



PZUE12

Part Number	Description
PZUE12	Relay Entry Module (Used with PZUA12, PZUB12 and PZUC12 Bases

4-Port Subbases

With 5/32" Instant Swivel Connections, Pressure Indicators and Integral Lock for Stacking

PZUB12

Part Number	Description
PZUB12	Common Input

G

Specifications

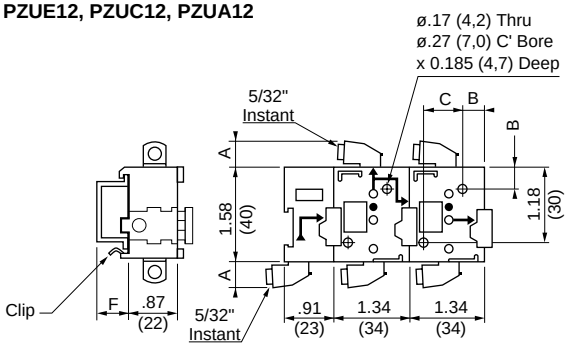
Materials
Polyamide and Brass

Ports
5/32" Instant for Semi- Rigid Nylon or Polyurethane Tube

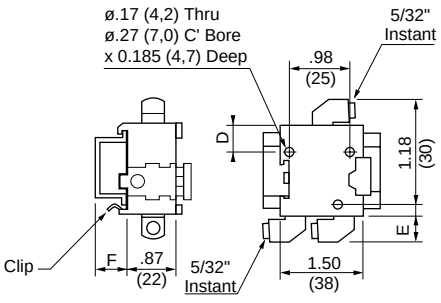
Notes:
1. Can be used as individual units or in stacking assemblies.
2. May be DIN rail mounted using spring clip or surface mounted using 2 socket head cap screws.
3. PZUA12, PZUB12 and PZUC12 can be mounted together in the same assembly.
4. Units interconnect with 5/32" Tube. For replacement use 1" (25mm), 5/32" semi-rigid nylon or polyurethane.

Dimensions

PZUE12, PZUC12, PZUA12



PZUB12



	inch	mm
A	.55	14
B	.39	10
C	.59	15
D	.47	12
E	.20	5
F	.59	15

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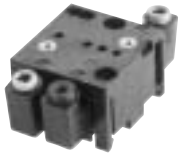
Independent Bases

BNC3P10

BPB3P10



BIC3P10

BIC7P10

Part Number	Description	# of Ports
BNC3P10	1/8" NPT, Individual Mount	3
BPB3P10	5/32" Instant Fitting*, Machine Mount	3
BIC3P10	5/32" Instant Fitting*, DIN Rail Mount	3
BIC7P10	5/32" Instant Swivel Fitting*, DIN Rail Mount for LPMEM10	5

***** Use Semi- Rigid Nylon or Polyurethane Tube

Independent 2-Port Pulse Bases

BNC3P20

BPB3P20

Part Number	Description
BNC3P20	1/8" NPT, Port 1 and 2 Common
BPB3P20	5/32" Instant Fitting*, Machine Mount, Port 1 and 2 Common

***** Use Semi- Rigid Nylon or Polyurethane Tube

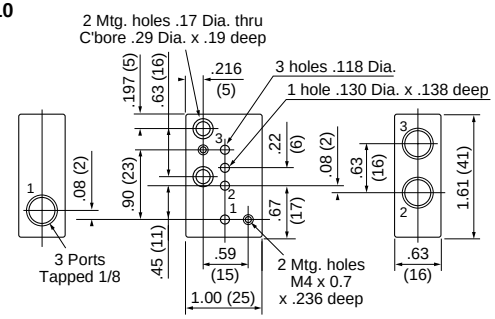
Specifications

Materials

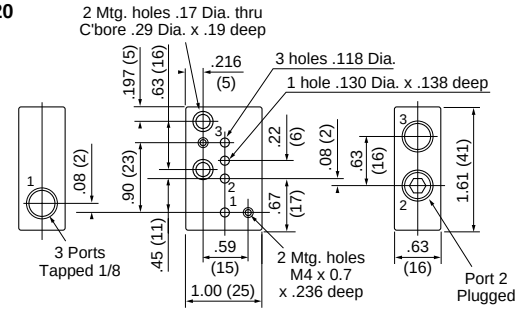
BIC Units ..... Polyamide and Brass
BNC Units ..... Plated Zinc
BPB Units ..... Aluminium

Dimensions

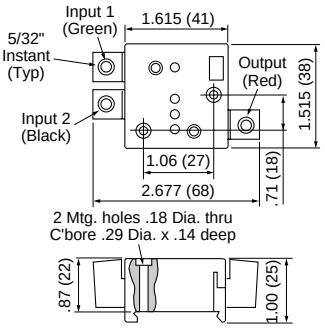
BNC3P10



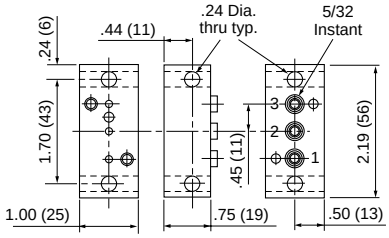
BNC3P20



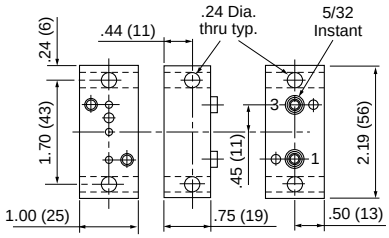
BIC3P10



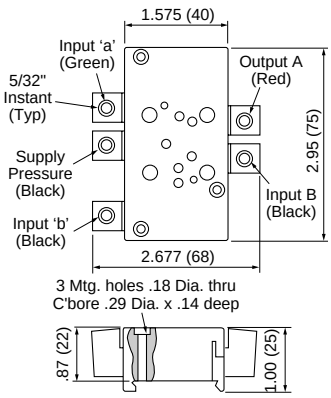
BPB3P10



BPB3P20



BIC7P10



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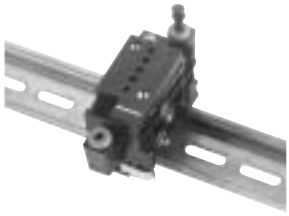
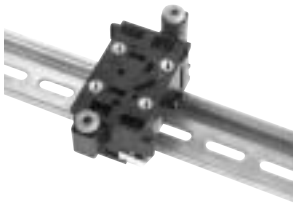
Polylog Manifold Mounting Base



BAC3P10



BAC7P10

Part Number	Description
BAC3P10*	3-Port Modular Base, 5/32" Instant Swivel Fitting, DIN Rail Mount
BAESP20	End Plate Kit 2 Pieces - Supply Base and Output Base
BAC7P10*	5/32" Instant DIN Rail Base, 5-Port Modular Base For LPMEM10. Use with BAESP20 End Plates

* BAC3P10 and BAC7P10 can be assembled in the same manifold assembly

G

Conversion Kits

LT10/PUL

P1•23P10

Pulse Conversion Kit

Part Number	Description
LT10/PUL	Converts a 3-Port Base into a 2-Port Base - Combines Ports P and a or 1 and 2

Unit ships with (2) 40mm long screws for use with LTY, LTN, LPG and LFPUL10/0.5. For additional screws, see Spare Parts at the end of this Section.

Port Inverter

Part Number	Description
P1123P10	Inverts Ports 1 or a and 2 or P
P1233P10	Inverts Ports 2 or P and 3 or S

Includes threaded screw extensions.

Specifications

Materials

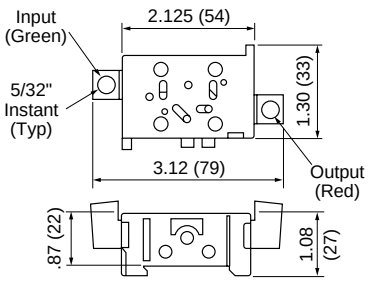
Polyamide and Brass

Ports

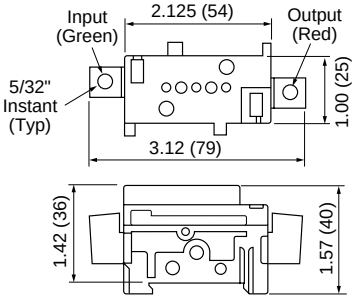
All are 5/32" Instant except for supply on BAESP20 which is 1/4" Instant. Use Semi- Rigid Nylon or Polyurethane Tube

Dimensions

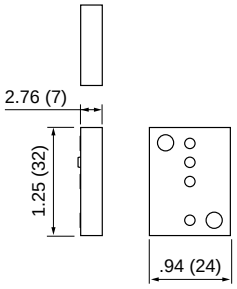
BAC3P10



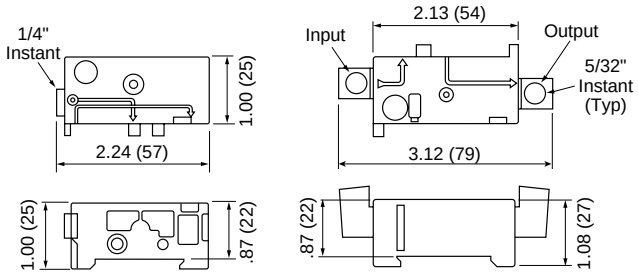
BAC7P10



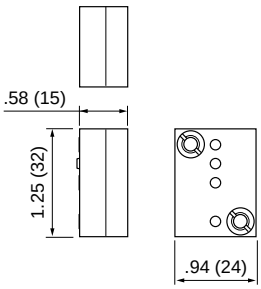
LT10/PUL



BAESP20



PI123P10, PI223P10



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Base Usage - Shows which components can be mounted with which base types.

Element	Part No.	Base Description / Part Number					
		Type	2-Port	3-Port	4-Port	5-Port	6-Port
		Stacking		PZUA12	PZUB12	BAC7P10	PSBA12
		Stacking		PZUC12			
		Stacking		BAC3P10			
		Inline	BNC3P20	BNC3P10		BIC7P10	
		Inline	BPB3P20	BPB3P10			
		Inline		BIC3P10			
Step Module							
Step Module w/Overrides	PSMA10						X
Step Module w/o Overrides	PSMB10						X
Logic							
AND	PLLC10			X			
OR	PLKC10			X			
YES	PLJC10			X			
NOT	PLNC10			X			
Threshold NOT	PLND10			X			
Relays							
Sensor	PRFA10			X			
Solenoid	PRSA10		X	X			
Signal Amplifier	LFAY10			X			
Electric Pressure Switch	PREA10		X	X			
E/P Pressure Switch	LNOTPS10			X			
Electric Pressure Switch	LPS10		X	X			
Vacuum/Electric	LPSV10		X	X			
Pneumatic/Pneumatic	LAAY10			X			
Pneumatic/Pneumatic	LAAN10			X			
Timers							
Timer (NNP) Relay	PRTA10		X*	X			
Timer (NNP) Relay	PRTB10		X*	X			
Timer (NNP) Relay	PRTE10		X*	X			
Timer (NP) Relay	PRTC10		X*	X			
Timer (NP) Relay	PRTD10		X*	X			
Timer (NP) Relay	PRTF10		X*	X			
Timer (NNP) Relay	LTY10		X*	X			
Timer (NP) Relay	LTN10		X*	X			
Other Relays							
Memory Relay	PLMA10				X		
Amplifer Relay	PRDA10				X		
Valves							
4-Way Valve	LPMEM10					X	
Pulse Generators							
Pulse Generator Fixed	LPG10		X	X**			
Pulse Generator Variable	LFPUL		X	X**			
Accessories							
Air Pressure Regulator	PRD3P10		X	X			
Flow Control (Fine)	LT1M10		X	X			
Flow Control (Single Turn)	FR3P10		X	X			

* Functionality must be checked

** Must be used with LT10/PUL

Port	Label		Color
Supply	P	2	Black/None
Signal	a	1	Green
Output	S	3	Red

	Entry Module	End Plate	Head / Tail
Used With Base	PZUE12	BAE3SP20	PSEA127
	PZUA12	BAC3P10	PSBA12
	PZUC12	BAC7P10	
	PZUB12		

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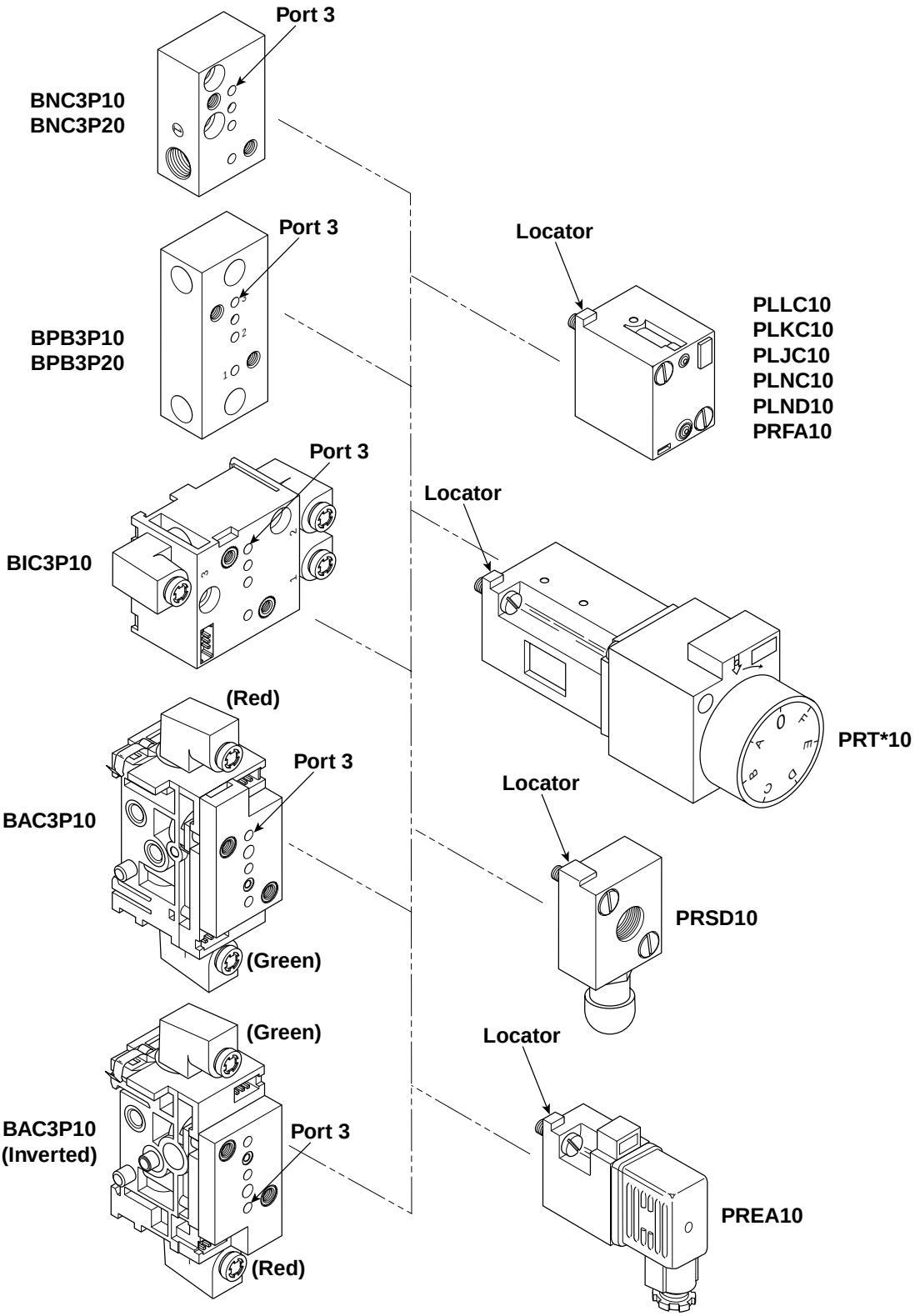
⚠ **CAUTION:** The logic and relay units shown on the right can be improperly assembled to the bases shown on the left. For proper assembly, the locators shown should be oriented towards port 3 on the subbases.



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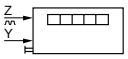
With 5/32" Instant Straight Connections

Totalizing Counters

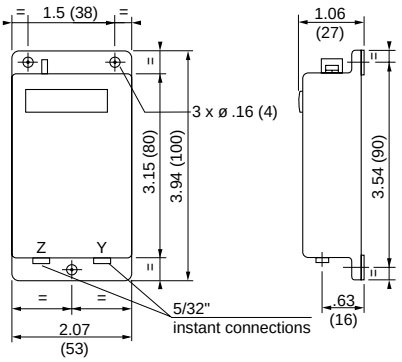


PCTA11

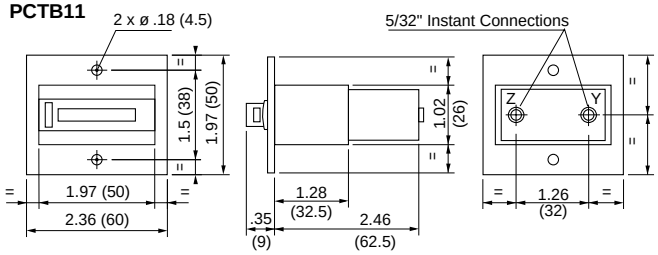
PCTB11

Part Number	Description
PCTA11	0 to 999,999 Surface Mount
PCTB11	0 to 99,999 Panel Mount with 60 x 50 mm Bezel *(Lockable cover available, see below)*

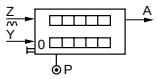
PCTA11



PCTB11



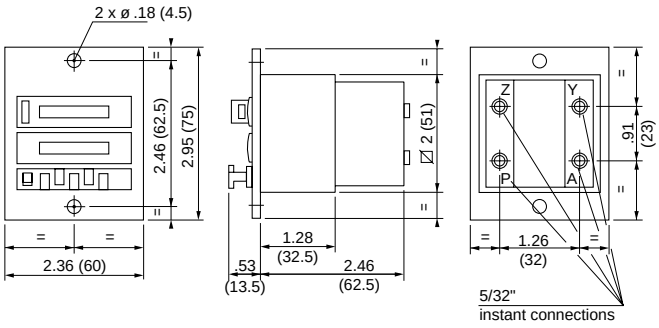
Predetermined Counters



PCPA11

Part Number	Description
PCPA11	0 to 99,999 Panel Mount with 60 x 75 mm Bezel *(Lockable cover available, see below)*

PCPA11

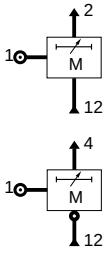


Lockable Cover

PXCA1

Part Number	Description
PXCA1	For 60 x 50 mm Bezel
PXCB1	For 60 x 75 mm Bezel

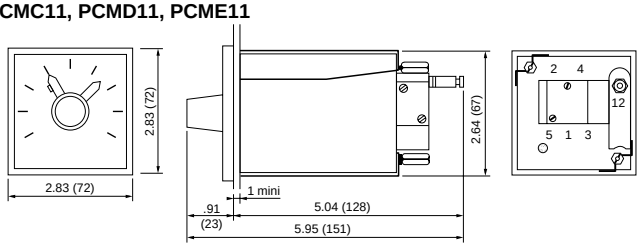
Timers with Calibrated Dial



PCMC11

Part Number	Description
PCMC11	3 to 100 Seconds, With Reset
PCMD11	0.3 to 10 Minutes, With Reset
PCME11	3 to 100 Minutes, With Reset

PCMC11, PCMD11, PCME11



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Specifications

	PCTA	PCTB	PCPA	PCMC, PCMD & PCME
Connections	Standard: 5/32" Instant for Semi-rigid Tube (Nylon and Polyurethane).			
Degree of Protection	—	IP55 with Lockable Cover	IP55 with Lockable Cover	—
Function	—	—	NNP or NP	NNP
Maximum Operating Frequency	20 Hz with Mark / Space Ratio of 1/1		—	—
Mechanical Life (Number of operations) with Dry Air at 90 PSI and 70°F – Frequency 1 Hz	10 Million			10 Million
Mounting	Surface Mount	Panel Mount	Panel Mount	Panel Mount
Operating Positions	All Positions	All Positions	All Positions	All Positions
Operating Pressure	40 to 130 PSI (3 to 9 bar)			40 to 130 PSI (3 to 9 bar)
Operating Temperature	32°F to 140°F (0°C to 60°C)			32°F to 122°F (0°C to +50°C)
Pneumatic Reset Time	150 ms	150 ms	150 ms	200 ms
Setting Accuracy	—	—	—	—
Storage Temperature	-40°F to 160°F (-40°C to 70°C)			-22°F to 140°F (-30°C to +60°C)
Timing Accuracy	—	—	—	± 2%
Type of Air	Dry with 40 µm Filtration			Dry with 5 µm Filtration

Operating Characteristics

PCTA11 and PCTB11	Count and display the Number of impluses received. Pulse input at Port Z. Pneumatic reset at Port Y.
PCPA11	Supplies a signal at A when the preselected Number of pulses has been reached. The required Number of impulses is preselected using the keys associated with the lower display, which remains unchanged during counting. The pulses to be counted are applied to Port Z. Signal A is given as soon as the two displays show the same value. Port Y is used to reset the counter with a single pulse. (1)
PCMC11, PCMD11 and PCME11	The required time is preselected directly on the dial, by moving the preselection pointer to the required position. Timing starts when a signal appears at 12. This signal must be maintained continuously until the output signal appears at 2. Signal 2 is given at the end of the timing period. The output signal is “on delay” if connected to 2 and “off delay” if connected to 4. The timer is reset by breaking the command signal at 12. Units have constant bleed rate of 0.14 SCFM @ 72 PSIG (4Nl/min @ 5 bar)

(1) **Note:** “Output” may not be used as the reset signal.

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For Modular Sequencer and Logic Elements

Gaskets For Step Module and Interlock Module

PPRL01

Part Number	Base Component	Description
PPRL01	PSMA12 PSMB12 PSVA12 PSBA12	1 Set of 10 Flat Gaskets

Head And Tail Module Rail Clamping Components

PPRL09

Part Number	Base Component	Description
PPRL09	PSEA12	1 Set Comprising Of: - 20 Hooks - 20 Screws - 20 Springs

O-rings For Sequencer Components and Combinable Logic Elements

PPRL11

Part Number	Base Component	Description
PPRL11	PLEB12 PLKB12 PLLB12 PLNB12 PSMA12 PSMB12 PSDA12 PSDB12 PSBA12	1 Set of 100 O-rings For Use With Subbases

Locks & Circuit Selectors

For Combinable Logic Relays

PPRL06

PPRL10

Part Number	Base Component	Description
PPRL06	PLEB12 PLKB12 PLLB12 PLNB12	1 Set of 50 Intermodule Locks
PPRL10	PSMA12 PSMB12 PSDA12	1 Set of 50 Circuit Selectors For Cascade or “Common Input”

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For Logic Elements, Subbases and Relays

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O-rings For Subbase Mounted Logic Relays

PPRL04

Part Number	Base Component	Description
PPRL04	PLJC10 PLKC10 PLLC10 PLNC10 PSND10 PRT••• PRFA10	1 Set of 100 O-rings: - 10 O-rings For Port WithFilter - 90 O-rings For Port Without Filter
91500/1007	LTY LTN LAAY LAAN LPS10 LNOTPS10 LT1M10 FR3P10 LFPUL LPG10 PRD3P	1 O-ring

Flat Gaskets For 4-Port Subbases

PPRL02

Part Number	Base Component	Description
PPRL02	PRDA12 PLMA12 PZUB12	1 Set of 10 Flat Gaskets

Subbase Plugs For 3 or 4-Port Subbases

PPRL05

Part Number	Base Component	Description
PPRL05	PZUA12 PZUB12 PZUC12	1 Set of 50 Subbase Plugs

Intermodule Locks For 3 or 4-Port Subbases

PPRL07

Part Number	Base Component	Description
PPRL07	PZUA12 PZUB12 PZUC12	1 Set of 50 Intermodule Locks

Mylar Diaphragms For Amplifier Relays

Part Number	Base Component	Description
PPRL08	PRDA10 PRDA12	1 Set of 10 Mylar Diaphragms

Note: To obtain 1 set of 10 Mylar Diaphragms for PRDA10, order 1 of PPRL08.

Filters

PPRL23

Part Number	Base Component	Description
PPRL20	PRT•••	1 Set of 20 50µm Input Filters
PPRL23	PRT•••	1 Set of 20 50µm Filters

G

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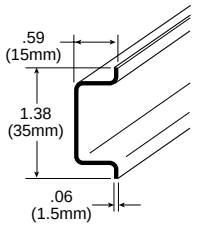
DIN Rail

Part Number	Description
AM1DE200	6 Foot Rail Length



Base Mounted Component Screws M4 x 0.7 With 7mm Head Diameter

Part Number	Element	Screw Length	Replacement Part Number	For Use With LT10/PUL
FR3P10	Flow Control	25 mm	K05M11040025	—
LAAN10	Pneumatic/Pneumatic	45 mm	K05M11040045	—
LAAY10	Pneumatic/Pneumatic	45 mm	K05M11040045	—
LFAY10/0	Signal Amplifier	55mm	K05M11040055	—
LFAY10/1	Signal Amplifier	45 mm	K05M11040045	—
LFPUL10/0.5	Pulse Generator fixed	30 mm	K05M11040030	K05M11040040
LFPUL10/1	Pulse Generator fixed	45 mm	K05M11040045	K05M11040055
LNOTPS10	E/P Pressure Switch	70mm	K05M11040070	—
LPG10	Pulse Generator Variable	30 mm	K05M11040030	K05M11040040
LPMEM10	4-Way Valve	40 mm	K05M11040040	—
LPS10	Electric Pressure Switch	40 mm	K05M11040040	—
LPSV10	Vacuum/Electric	40 mm	K05M11040040	—
LT1M10	Flow Control	25 mm	K05M11040025	—
LTN10	Timer (NP) Relay	30 mm	K05M11040030	K05M11040040
LTY10	Timer (NNP) Relay	30 mm	K05M11040030	K05M11040040
PLJC10	YES	31 mm	K05M11040032F	—
PLKC10	OR	31 mm	K05M11040032F	—
PLLC10	AND	31 mm	K05M11040032F	—
PLMA10	Memory Relay	50 mm	K05M11040050	—
PLNC10	NOT	31 mm	K05M11040032F	—
PLND10	Threshold NOT	31 mm	K05M11040032F	—
PRD3P10	Air Pressure Regulator	22.5 mm	K05M11040025	—
PRDA10	Amplifer Relay	45 mm	K05M11040045	—
PREA10	Electric Pressure Switch	12 mm	K05M11040012	—
PRFA10	Sensor	31 mm	K05M11040032F	—
PRSA10	Solenoid	18 mm	K05M11040020	—
PRTA10	Timer (NNP) Relay	12 mm	K05M11040012	K05M11040020
PRTB10	Timer (NNP) Relay	12 mm	K05M11040012	K05M11040020
PRTC10	Timer (NP) Relay	12 mm	K05M11040012	K05M11040020
PRTD10	Timer (NP) Relay	12 mm	K05M11040012	K05M11040020
PRTE10	Timer (NNP) Relay	12 mm	K05M11040012	K05M11040020
PRTF10	Timer (NP) Relay	12 mm	K05M11040012	K05M11040020
PSMA10	Step Module w/Overrides	50 mm	K05M11040050	—
PSMB10	Step Module w/o Overrides	50 mm	K05M11040050	—

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Accessories

Section H

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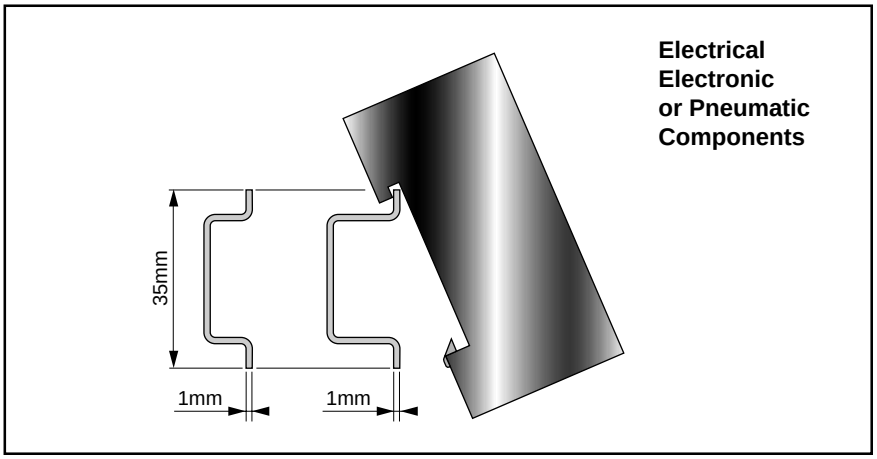
MOUNTING ON DIN RAIL

Suitable for various uses, the rails shown on the right all are conform to standards NF, DIN, EN: width 35 mm, latching groove thickness 1mm.
They are therefore suitable for the simple clip-on mounting of all standard components.

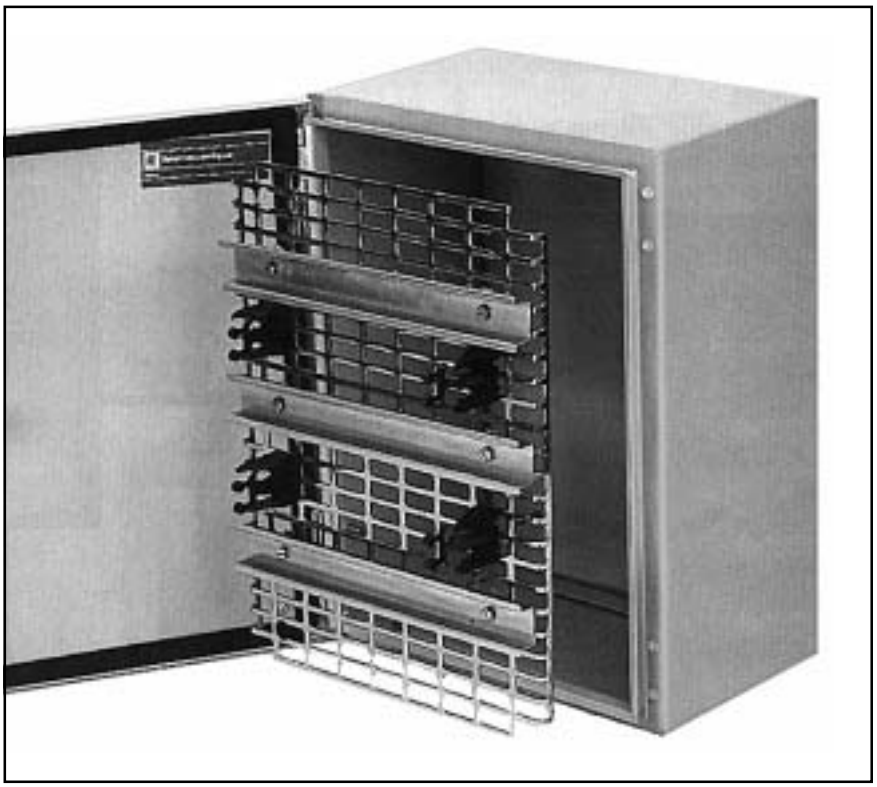


Electrical Electronic or Pneumatic Components

MOUNTING IN ENCLOSURE

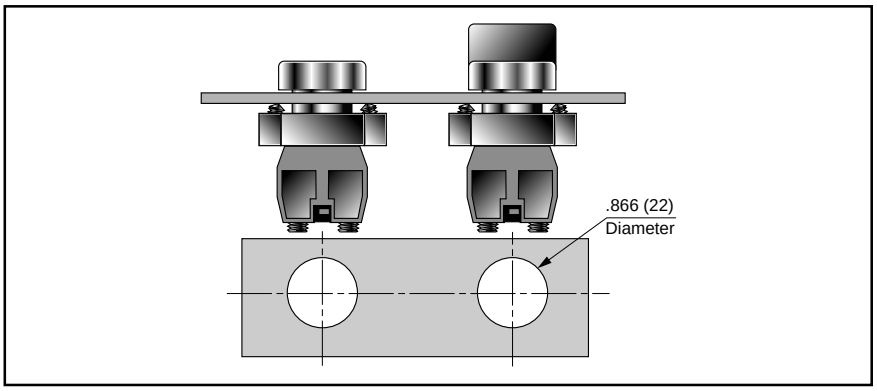
When pneumatic components generated humid exhausts, they had to be separated from electrical components, and a special pneumatics enclosure was necessary.
Now that the exhaust is captured and/or the air is dry, it has become more economical to locate the electro-mechanical, electronic, and pneumatic components in the same enclosure: the assembly is more compact, the connections are shorter, the component positions and their referencing are more logical, thus facilitating any interventions.

The Grid System
Very familiar to electricians, the system includes the enclosures, the mounting plates, the rails and all the installation and wiring accessories for the three technologies: electromechanical, electronic and pneumatic.



MOUNTING IN A CONTROL STATION

The pneumatic push-buttons presented have the same operating heads as electrical push-buttons.
Because of this, their installation in control panels or control stations is exactly the same :
- same mounting centers;
- same cutout Ø.



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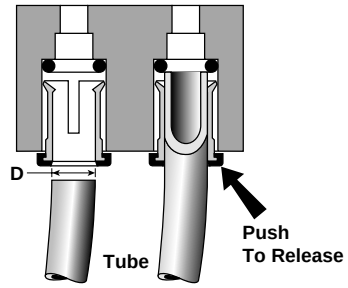
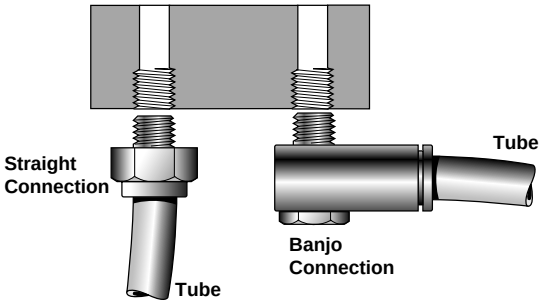
PNEUMATIC CONNECTIONS

The flexible pneumatic tubes are connected without preparation, by simply pushing into the component connection. Disconnection is also instant. One push on the external collet unlocks the tube.



Pneumatic Component with Incorporated Instant Connections

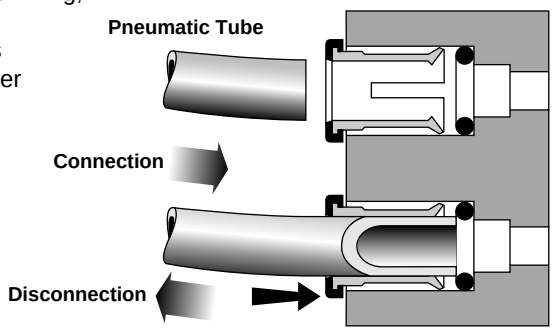


Pneumatic Component with Threaded Port

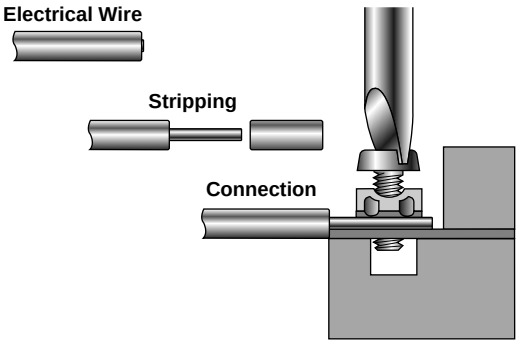
H

COMPARISON :
In comparison with current electrical wiring, connection and disconnection is simpler and faster with pneumatic tubing.

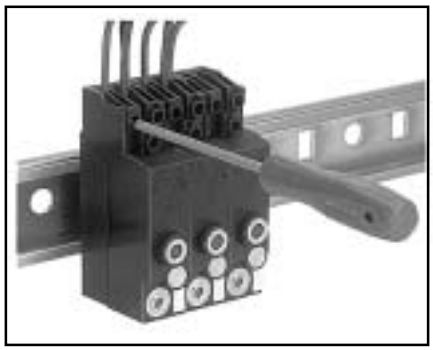
Pneumatic connections



Electrical connections

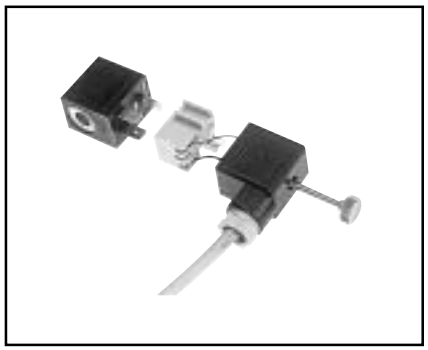


ELECTRICAL CONNECTIONS



On Modular Interfaces

Designed to be mounted in an enclosure, electro-pneumatic or pneumo-electric interfaces are all connected by screw terminals, as are industrial electrical or electronic components.



Plug-In Connectors

When it is necessary to mount the components outside the enclosure, the solenoid valves are fitted with a protected plug-in connector (IP65).

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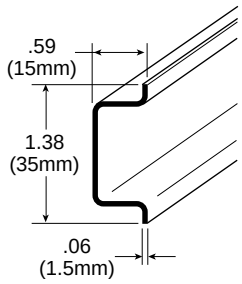
Mounting Rail



AM1DE200

Part Number	Length	Description
AM1DE200	6 Feet	Zinc Chromated Steel 1.5mm Thick To DIN EN 50022

Mounting Accessories

AZ1CA04

Part Number	Height Inches (mm)	Description
AZ1CA04	1/2" (12)	DIN Rail Brackets Spacer
AZ1CA029123	3/4" (20)	Sold In Sets Of Four (4)

AF1EA51

Part Number	Thread Size	Description
AF1EA51	10-24 (ØM5)	Clip On Nut Sold In Sets Of 100

Clip-On Terminal Blocks for DIN Rail Mounting

PZCB2268

Part Number	Thread Size	Description
HS3PK4	5/32" (4)	4 Ports
PZCB2268	1/4" (6)	2 Ports

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Multiple Tubing

PZTM472

Part Number	Number of Tubes (Color)	Sleeve Ø Inch (mm)	Tube Ø Inch (mm)
P6T-MC04N04-025	4 (Green, Red Blue, Clear)	1/2" (12)	5/32" (4)
P6T-MC04N07-025	7 (Green, Red Black, Gray, Blue, Clear, Yellow	5/8" (15)	

Spiral Conduit For Tubing Bundles

PZTX05

Part Number	Minimum Bundle Ø	Maximum Bundle Ø	Description
PZTX05	3/8" (10)	1-5/8" (40	For Bundling Tubes and Cables Sold In Rolls Of 80'

Clip-On Tubing Clamp For Pre-slotted Mounting Plate

AK2LA34

Part Number	Description
AK2LA34	Sold In Sets Of Ten (10)

Tools

PZCM994

PZCM888

Part Number	Tube Size	Description
PZCM994	5/32" (4)	Tube Disconnecting Tool
PZCM996	1/4" (6)	
PZCM888	—	Tube Cutter

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Notes

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