Knürr Cable Management
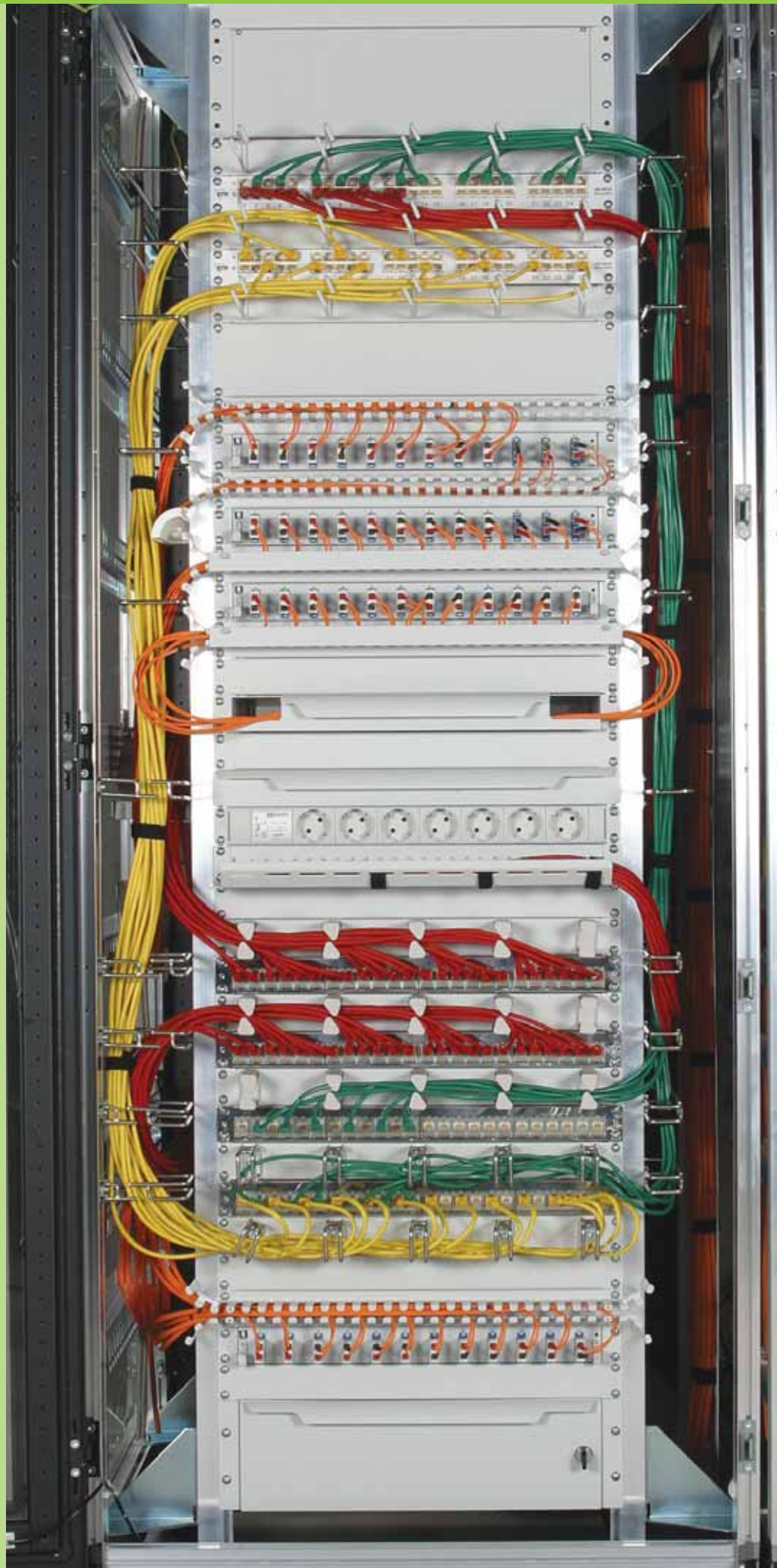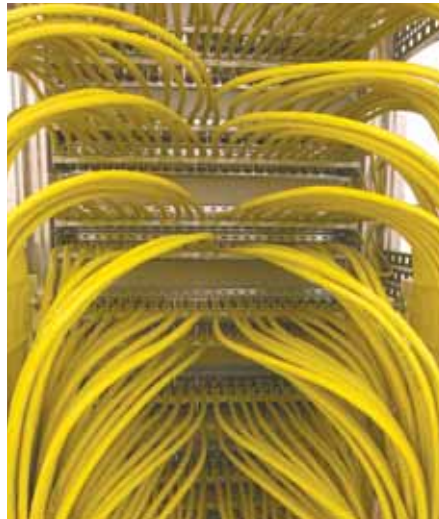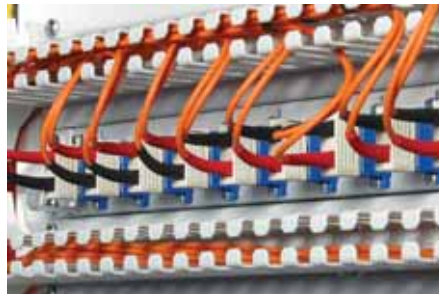### Strong points

It must be ensured when laying cables that every kind of mechanical stress is avoided.

MEC20064

MEC20074

MEC20086

MEC20058

MEC20084

LIG00021

■ **Bending load**
The bending radii may never be less than the values provided by the cable manufacturer in the respective data sheets. At points that bend too much, the electrical properties of the cable change and reduce the transmission bandwidths and ranges.
If manufacturer specifications are not available, then the following rule of thumb applies: With loose cabling, at least 15 times the external cable diameter and with fixed cabling, at least 10 times the external cable diameter.

■ **Buckling load**
The most extreme bending loads can cause the cable to break.

■ **Tensile load**
This is only determined by the copper cross-section of the conductor, as all other materials are too soft. The cable may not be stressed more than 50N/mm^2(Cu cross-section) as otherwise the conductors are stretched and the cross-section is reduced. If higher "pulling" forces are required, then cables with additional strain relief elements must be used.

■ **Compressive stress**
Compressive stress is caused by loads bearing down from above, fixed clamping or sharp cable kinking and must always be avoided, as otherwise the "loose" cable structure changes and the electrical transmission properties are impaired.

■ **Torque strains** (twisting)
These must never have an effect on the cable, as they drive the cable elements into one another and therefore impair the transmission properties.

Knürr Cable Management
Strong points

1 MEC20082

2 MEC20070

3 MEC20099

3 MEC20079

4 MEC20077

4 MEC20091

5 MEC20071

1 Different components for fiberglass and copper cables, especially the fastening options using Velcro strips and cable bundling using different colored strips, guarantee transparent cable management, which is the optimum starting situation for an intelligent expansion of the network and for the highest standard of service convenience.

2 With all cable management components, special attention has been paid to ensuring that fixing is possible with Velcro strip cable ties. Velcro cable ties not only guarantee a stress-free fixing of the cables, they can also be released at any time and re-used again and again. Velcro cable ties are also extremely helpful for the installation engineer in providing pinch-free cable bundling – and also because they are so quick to apply.

3 Excess cable lengths are stored separate from the patch fields, but in a position that is always easy to access. Copper cable excess can be stored separate from fiber glass excess within the Knürr rack systems: the copper cables on the side and the more sensitive fiberglass cables in an excess drawer at the front.

4 Some true multi-talents appear on closer examination of the individual products. The cable routing multi-functional brace, for example, not only provides the option of routing cables horizontally and vertically using Velcro ties or cable ties, but rather also allows numerous components to be mounted with screws and caged nuts. These caged nuts can also be shifted with room for play in a slot, so that every mounting dimension can be accommodated.

5 The prescribed radii are preset with the radial limiter. These components ensure that neither a reduction of the transmission bandwidths and ranges nor a cable break occur.

Type 1

MEC00110

Type 2

MEC20014

MEC20103 **Type 1**

MEC20104 **Type 2**

19" Cable Routing Board, 1 U

– For orderly cable routing
– For safe and secure cable routing of copper and fiberglass cables

■ **Material/Finish**
Type 1:
Front panel, sheet steel, 1.5 mm
Powder-coated, RAL 7035, light gray
Type 2:
Front panel: sheet steel 1.0 mm, powder-coated, RAL 7035 light gray

■ **Color**
Final digit of order number .1:
RAL 7035 light gray
Final digit of order number .8:
RAL 7021 dark gray

■ **External dimensions**
Cable routing:
Type 1: 55 x 22 mm, plastic
Type 2: 95 x 32 mm, steel

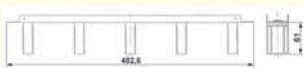■ **Supply schedule**
1 19" front panel
5 cable routers

■ **How supplied**
Preassembled

■ **Note**
Please also order front panel mounting material.

W	H	D	U	Model	Order no.	UP
483			1	Type 1	**05.040.111.1**	1 unit
483			1	Type 2	**01.117.144.1**	1 unit
483			1	Type 1	**05.040.111.8**	1 unit
483			1	Type 2	**01.117.144.8**	1 unit

MEC20041

MEC20102

MEC20076

19" Cable Routing Board, flexible, 1 U

– For orderly cable routing
– For safe and secure cable routing of copper and fiberglass cables

■ **Material/Finish**
Front panel, sheet steel, 1.5 mm
Powder-coated texture, RAL 7035
Jumpering bracket, round steel, d = 5 mm, zinc-passivated

■ **Color**
Final digit of order number .1:
RAL 7035 light gray
Final digit of order number .8:
RAL 7021 dark gray

■ **External dimensions**
Cable routers (a x b):
1 U: 82 x 43 mm
2 U: 102 x 82 mm

■ **Supply schedule**
1 front panel
5" cable routing boards

■ **How supplied**
Preassembled

■ **Note**
Please also order front panel mounting material.

W	H	D	U	Model	Order no.	UP
483			1	Type 1	**05.040.100.1**	1 unit
483			2	Type 2	**05.040.101.1**	1 unit
483			1	Type 1	**05.040.100.8**	1 unit
483			2	Type 2	**05.040.101.8**	1 unit

MEC20081

MEC20105

MEC20058

Fiber optic cable routing panel 1 U

– For orderly cable routing
– For safe and secure cable routing of fiber optic cables
– Optionally with cover panels to protect the cables and as labeling option

■ **Material/Finish**
Sheet steel, 1.5 mm
Powder-coated texture, RAL 7035

■ **Supply schedule**
1 19" cable routing panel

■ **How supplied**
In units

■ **Note**
Please also order front panel mounting material and cover.
Not suitable for rack widths 600 mm and 700 mm (asymmetric)!

W	H	D	U	Model	Order no.	UP
483			1	Cable routing panel	**05.040.050.1**	1 unit
				Accessories: Cover	**05.040.051.1**	1 unit

CUD00021

CUD00023

CUD00022

19" Blanking Panel Cable Port, threaded connection

– For orderly cable management in the rack internal space
– With edge protector

■ **Material**
Sheet steel, 1.0 mm

■ **Finish**
Final digit of order number .1:
Powder-coated, RAL 7035, light gray
Final digit of order number .8:
Powder-coated texture, RAL 7021 dark gray
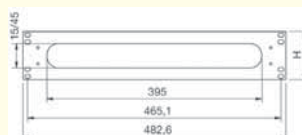
■ **Supply schedule**
6 19" blanking panel cable ports

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order front panel mounting material.

W	H	D	U	For rack type	Order no.	UP
483	44		1	Powder-coated	**01.103.231.1**	6 units
483	88		2	Powder-coated	**01.103.232.1**	3 units

MEC20091

MEC20078

Pos.2
Pos.1
Pos.3
MIR88001

Cable routing brace

– For mounting on the Miracel/Smaract basic rack and on the 19" extrusion
– For cable clamping using Velcro strips, cable ties
– For orderly cable management in the rack
– Two-sided installation
– For universal mounting option using caged nuts (all dimensions can be accommodated, as caged nuts are flexible)

■ **Material**
Sheet steel, 1.5 mm

■ **Finish**
Zinc-passivated

■ **Supply schedule**
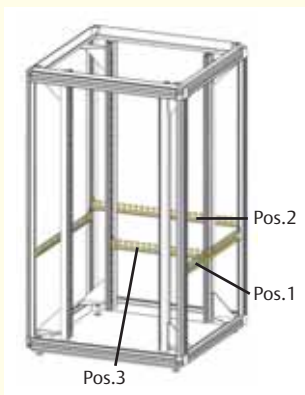4 cable routing braces
Mounting material

■ **How supplied**
In units

■ **Note**
If required, please also order Velcro strip.

W_{Rack}	H_{Rack}	D_{Rack}	L	Model	for rack type	Order no.		UP
		600	455	Pos. 1	Miracel	05.040.200.9		4 units
		800	655	Pos. 1	Miracel	05.040.201.9		4 units
		900	755	Pos. 1	Miracel	05.040.202.9		4 units
		1000	855	Pos. 1	Miracel	05.040.203.9		4 units
600			534	Pos. 2	Miracel/Smaract	05.040.213.9		4 units
800			734	Pos. 2	Miracel	05.040.214.9		4 units
			468	Pos. 3	Miracel/Smaract/DPR	05.040.215.9		4 units
		1055		Pos. 1	Miracel	05.040.205.9		4 units
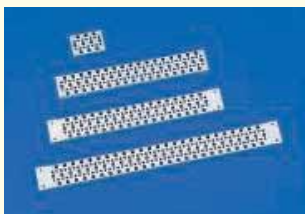
MIR00089

Multifunctional brace

– For routing cables with cable ties
– For universal mounting options
– Holes for mounting caged nuts
– Distance between two multifunctional braces can be variably selected using T-slot
– Installation on the extrusions of the rack frame or on the 19" extrusions, diagonal and lateral
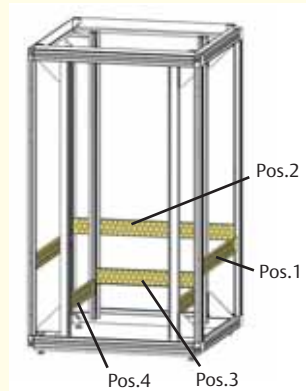
■ **Installation positions**
1 on the basic frame on the depth
2 on the basic frame on the width
3 on the 19" extrusions on the width
4 on the 19" extrusions on the depth

■ **Material**
Sheet steel, 1.5 mm

■ **Finish**
Zinc-passivated

Pos.2
Pos.1
Pos.4
Pos.3
MIR88003

■ **Finish**
Zinc-passivated

■ **Supply schedule**
4 multifunctional braces

■ **How supplied**
Flat-packed kit

W_{Rack}	D_{Rack}	d	Inst. position	for rack type	Order no.		UP
	600		1	Miracel	05.040.160.9		4 units
	800		1	Miracel	05.040.161.9		4 units
	900		1	Miracel	05.040.162.9		4 units
	1000		1	Miracel	05.040.163.9		4 units
	1100		1	Miracel	05.040.164.9		4 units
	1200		1	Miracel	05.040.165.9		4 units
600			2	Miracel/Smaract	05.040.173.9		4 units
700			2	Miracel			4 units
800			2	Miracel	05.040.174.9		4 units
			3	Miracel/Smaract/DPR	05.040.175.9		4 units
	600	365	4	Miracel/Smaract	05.040.168.9		4 units
	800	565	4	Miracel/Smaract	05.040.169.9		4 units
	600	440	4	Miracel/Smaract	05.040.170.9		4 units
	800	640	4	Miracel/Smaract	05.040.171.9		4 units
	900	740	4	Miracel/Smaract	05.040.172.9		4 units
	1000	740	4	Miracel/Smaract	05.040.172.9		4 units

MEC20045

MEC20074

Cascading

– For orderly cable management and cable clamping
– Can be expanded

■ **Material/Finish**
Base cover: Sheet steel, powder-coated texture
RAL 7035
Foam: Polyethylene, anthracite

■ **Supply schedule**
2 end plates with foam
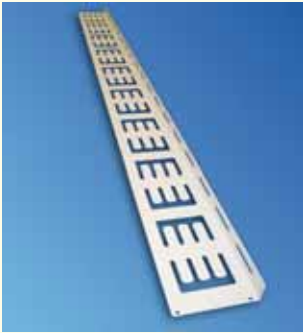3 plates with foam on both sides
Mounting material

■ **How supplied**
Flat-packed kit

W	H	D	Order no.	UP
			05.040.088.9	1 set

Cable Tray

MEC20088

MEC20067

– For orderly cable management in the Miracel rack
– Cable fixing possible using Velcro strips or cable ties
– Combination possible as L, U or T unit

■ **Material/Finish**
Sheet steel 1.5 mm, zinc passivated, powder-coated

■ **Color**
.1: RAL 7035 light gray
.8: RAL 7021 dark gray

■ **Dimensions**
L 150 x W 28 mm

■ **Supply schedule**
1 cable tray
Mounting material

■ **How supplied**
Flat-packed kit

■ **Note**
If required, please also order Velcro strip.

W	H	D	U	Model	Order no.	UP
			41	For rack type Miracel	**05.040.021.1**	1 set
			46	For rack type Miracel	**05.040.022.1**	1 set
			41	For rack type Miracel	**05.040.021.8**	1 set
			46	For rack type Miracel	**05.040.022.8**	1 set

C-Extrusion Rail

MIR00096

Pos.1
Pos.2

MIR88002

– For cable clamping using U-clamps or cable clamping bars
– Cable clamping closer to access (type 1)
– Suitable for use in conjunction with top cover with cable entry

■ **Material/Finish**
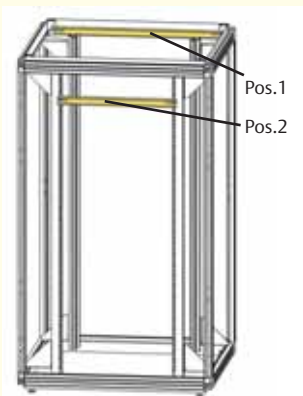Sheet steel, 1.5 mm, zinc-passivated

■ **Supply schedule**
1 C extrusion rail
Mounting material

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order U-clamps, cable clamping bars or threaded plates.

W	H	D	L	Model	Order no.	UP
600			482.5	Pos. 1: Miracel/Smaract	**05.040.080.0**	1 unit
800			682.5	Pos. 1: Miracel	**05.040.082.0**	1 unit
19			508	Pos. 2: Miracel/Smaract/	**01.110.719.9**	1 unit
				DoubleProRack		

MEC20136

Type 1

Type 1
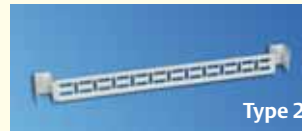
MEC20137

Type 2
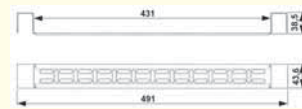
MEC20121

Type 2

MIR00094

Assembly Crossbar

– For cable management with Velcro strips
– Universal mounting option for installation accessories, socket strips, telecommunication installation units, mounting panels, etc.
– For side and cross installation

■ **Material/Finish**
Sheet steel 1.5 mm, powder-coated texture, RAL 7035

■ **Supply schedule**
1 assembly crossbar

■ **How supplied**
In units

■ **Note**
Please also order the appropriate mounting material.

W/d	H	D	U	w1	w2	X	Type	Model	Order no.	UP
19"			1	482	442.6	81.5	1	Pos. 2: Miracel/Smaract	**05.040.018.1**	1 unit
19"			1				2	Pos. 2: DoubleProRack	**05.040.019.1**	1 unit

Cable Clamping Bar

MEC00114

– For clipping to the C-shaped runner

■ **Material**
Polyamide, black

■ **Supply schedule**
1 set of 10 cable clamping bars

■ **How supplied**
Flat-packed kit

W	H	D	U	d	L	Model	Order no.	UP
							01.130.869.9	10 units

Dimensions in mm:
W = Width
H = Height
D = Depth
h = installation height
d = useful depth
L = length

U = standard height unit
  1 U = 44.45 mm
UP = unit of packaging
kg = weight

= Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound

Type 1

Type 2

MEC00113

Pos.1

Pos.3

Pos.2

MIR88004

C-Extrusion Rail

– For cable clamping using U-clamps or cable clamping bars
– Space-saving installation between the extrusions of the basic rack
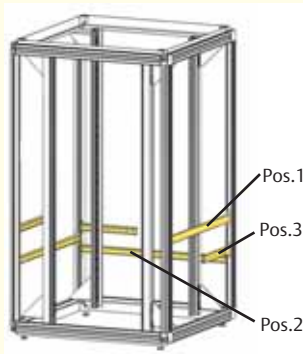– Two-sided installation

■ **Material**
Sheet steel, 1.5 mm, zinc-passivated

■ **Finish**
Zinc-passivated

■ **Supply schedule**
4 extrusion rails
Mounting material

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order U-clamps, cable clamping bars or threaded plates.

W_Rack	D_Rack	W_Rack	Inst. position	For rack type	Order no.	UP
	600		1	Miracel	**05.040.180.9**	4 units
	800		1	Miracel	**05.040.181.9**	4 units
	900		1	Miracel	**05.040.182.9**	4 units
	1000		1	Miracel	**05.040.183.9**	4 units
	1200		1	Miracel	**05.040.185.9**	4 units
			3	Miracel/Smaract	**05.040.195.9**	4 units
		800	2	Miracel/Smaract	**05.040.194.9**	4 units
		600	2	Miracel/Smaract	**05.040.193.9**	4 units

MIR20198
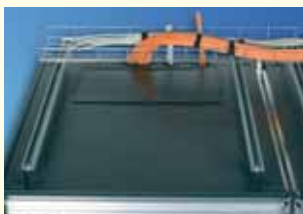

MEC20034

Top-mounting for cable tray

– Fixing cable trays with C extrusion rails
– Any position possible

■ **Material/Finish**
C extrusion rail: Sheet steel, zinc-passivated
Mounting bracket: Sheet steel, powdered RAL 7021

■ **Supply schedule**
2 C extrusion rails
4 mounting bracket
Mounting material

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order U-clamps, cable clamping bars or threaded plates.

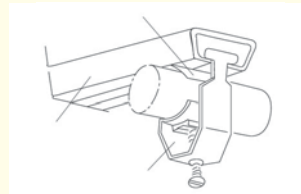| W	H	D_Rack	Order no.	UP
		800	**05.040.072.8**	1 set
		900	**05.040.073.8**	1 set
		1000	**05.040.074.8**	1 set
		1200	**05.040.076.8**	1 set

MIR00096

ELM00086

U-Clamp

– For strain relief and individual routing of cables and lines
– Clamping range, 8-64 mm

■ **Material**
Steel/plastic

■ **Supply schedule**
25 U-clamps
25 clamping saddles

■ **How supplied**
Flat-packed kit

W	H	D	U	d	L	Clamping range	Order no.	UP
						8-12 mm	**05.040.150.9**	1 unit
						12-16 mm	**05.040.151.9**	1 unit
						16-22 mm	**05.040.152.9**	1 unit
						22-28 mm	**05.040.154.9**	1 unit
						34-40 mm	**05.040.155.9**	1 unit
						46-52 mm	**05.040.157.9**	1 unit
						58-64 mm	**05.040.159.9**	1 unit

MEC20051

MEC20069

M5 Threaded Plate

– For use in conjunction with C extrusion rails

■ **Material/Finish**
Flat rolled steel, 4.0 mm, zinc-passivated

■ **Supply schedule**
20 threaded plates

■ **How supplied**
Flat-packed kit

W	H	D	L	Order no.	UP
				05.040.077.9	1 set

MEC20049

19" Cable Tray

- For orderly cable management in front of the 19" front
- Mounting on front panels possible
- Cable fixing possible using Velcro strips

■ **Material/Finish**
Sheet steel, 1.5 mm
Powder-coated texture, RAL 7035

■ **Supply schedule**
1 cable tray

MEC20063

- **How supplied**
  In units

- **Note**
  Please also order front panel mounting material and Velcro strip.

W	H	D	U	Model	Order no.	UP
483	100	1			**05.040.055.1** 1 unit	

MEC20042

MEC20119

Cable tray between the racks

- For orderly cable management between linked racks
- Fixing possible using Velcro strips

- **Material/Finish**
  Sheet steel, 1.5mm
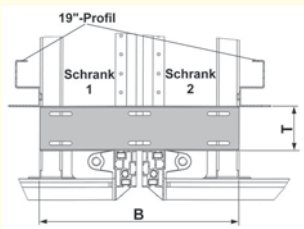 Powder-coated texture, RAL 7035

- **Supply schedule**
  1 cable tray
  Mounting material

- **How supplied**
  Flat-packed kit

- **Note**
  Please also order Velcro strip

W	H	D	U	Model	Order no.	UP
265	60				**05.040.058.1** 1 unit	

MEC20090

MEC20071

Radial limit

- Various mounting options available:
  - on the basic rack for cable clamping
  - on the 19" extrusion for cable routing and diverting
- For use in conjunction with C extrusion rails (also order threaded plates!)

- **Material/Finish**
  Sheet steel, 1.5mm, zinc-passivated

- **Supply schedule**
  1 radial limit
  Mounting material

- **How supplied**
  Flat-packed kit

W	H	D	L	Order no.	UP
290	87			**05.040.090.0** 1 set	

MEC20132

MEC20143

Radial Limit, 1 U

- For diverting the cables from the patch area vertically
- The cables can be fixed with Velcro strips
- Side use in conjunction with the cable duct is possible

- **Material/Finish**
  Sheet steel, 1.5mm,
  powder-coated texture, RAL 7035

- **Supply schedule**
  1 radial limit
  1 Mounting panel
  Mounting material

- **How supplied**
  Flat-packed kit

W	H	D	U	Model	Order no.	UP
85	32	1			**05.040.091.1**	1 set

MEC20135

MEC20151

CDuct, Side

- For orderly cable management
- For use in conjunction with the front panel, swivel
- Cable rerouting with radial limiter, 1 U (optional)

- **Material/Finish**
  Sheet steel, 1.5mm
  Powder-coated texture, RAL 7035

- **Supply schedule**
  1 cable duct
  Mounting material

- **How supplied**
  Flat-packed kit

W	H	D	U	Model	Order no.	UP
100	130	41			**05.040.023.1**	1 set

Dimensions in mm:	W = Width	U = standard height unit
	H = Height	1 U = 44.45 mm
	D = Depth	UP = unit of packaging
	h = installation height	kg = weight
	d = useful depth	
	L = length	= Express item
Conversion:	1 mm = 0.03937 inch	1 kg = 2.2046 pound

Knürr Cable Management

MEC20052

MEC20079

Excess Copper Cable Storage

– For storing excess copper cable lengths (or fiber optic cables)
– For orderly cable management in the Miracel rack
– Can be expanded

■ **Material/Finish**
Sheet steel, 1.5 mm, zinc-passivated

■ **Supply schedule**
1 excess cable holder
Mounting material

■ **How supplied**
Flat-packed kit

W	H	D	U	Model	Order no.	UP
				For rack type Miracel	**05.040.044.0**	1 set

MEC20047

MEC20099

Fiber Optic 19" Excess Cable Drawer, 1 U

– For storing excess fiber optic cable lengths
– Pull-out
– Cable fixing possible with Velcro strips

■ **Material/Finish**
Sheet steel, 1.5 mm
Powder-coated texture, RAL 7035

■ **Supply schedule**
1 main unit
1 drawer

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order front panel mounting material and Velcro strip.

W	H	D	Model	Order no.	UP
483	44	350		**05.040.047.1**	1 set

MEC20044

MEC20146

Excess Fiber Optic Cable Storage

– For orderly fiber optic cable management in the Miracel rack (from W 800 mm)
– For storing excess cable lengths

■ **Material/Finish**
Base cover: powder-coated texture, RAL 7035
Cable routing head: Polyamide, black

■ **Supply schedule**
1 base cover
1 cable routing head
Mounting material

■ **How supplied**
Flat-packed kit

W	H	D	U	Model	Order no.	UP
			2		**05.040.041.1**	1 set

MEC20038

MEC20072

Universal Jumpering Bracket

– Can be used for extrusion spacing (from front), 123 mm and 73 mm
– For orderly cable management
– Open version, no threading
– Mounting on the external side of the 19" extrusion
– Any installation position selectable

■ **Material**
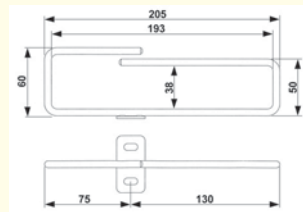Round steel, d = 6 mm

■ **Finish**
Zinc-passivated

■ **Supply schedule**
4 jumpering brackets

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order the appropriate mounting material.

MEC20106

W Rack	For rack type	Order no.	UP
From 800	Miracel	**05.040.220.9**	4 units

MEC20039

MEC20107 — **Type 1**

MEC20116 — **Type 2**

Square Jumpering Bracket

– For orderly cable management
– Open version, no threading
– Mounting on the external side of the 19" extrusion
– Any installation position selectable
– For large cable volumes

■ **Material**
Round steel, d = 6 mm

■ **Finish**
Zinc-passivated

■ **Supply schedule**
4 square jumpering brackets

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order the appropriate mounting material.
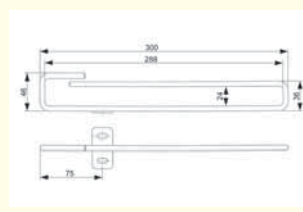
W Rack	Type	For rack type	Order no.	UP
From 800	Type 1	Miracel	**05.040.221.9**	4 units
From 700	Type 2	Miracel	**05.040.222.9**	4 units
600	Type 2	Smaract	**05.040.222.9**	4 units

MEC20185

Quick-Strip Velcro strip for T-slot mounting without tools

– Quick fixing without tools
– For bundling cables
– Can be released and used again
– For orderly cable management
– For fixing into T-slots at any position

■ **Material**
Polyethylene and Nylon
F.R.T., UL-94 HB

■ **Color**
Black

■ **Supply schedule**
10 Quick-Strip Velcro strips

■ **How supplied**
Flat-packed kit

W	H	D	U	d	L	For rack type	Order no.	UP
						Miracel	00.218.506.0	1 set

Quick-Clamp plastic jumpering bracket for T-slot mounting without tools

– Quick fixing without tools
– For orderly cable management
– Open version, no threading
– For fixing on T-slots at any position

■ **Material**
Nylon
F.R.T., UL-94 HB

■ **Color**
Black

■ **Supply schedule**
10 plastic jumpering brackets

■ **How supplied**
Flat-packed kit

W	H	D	U	d	L	For rack type	Order no.	UP
						Miracel	00.218.505.0	1 set

MEC20035

MEC20065

Jumpering Bracket, Flexible

– For flexible and orderly cable routing
– Any installation place and position selectable
– Open version, no threading

■ **Material**
Round steel, d = 5 mm

■ **Finish**
Zinc-passivated

■ **Supply schedule**
10 jumpering brackets
Mounting material

■ **How supplied**
Flat-packed kit

MEC20108

A	a	B	b	Model	Order no.	UP
82	72	43	33	Fig. 1	05.040.231.0	10 units
222	212	30	20	Fig. 3	05.040.232.0	10 units
102	92	82	72	Fig. 2	05.040.233.0	10 units

ELM00117

ELM00106

Square Jumpering Bracket

– For orderly cable management
– Open version, no threading
– Mounting on the external lateral T-slot of the 19" extrusion
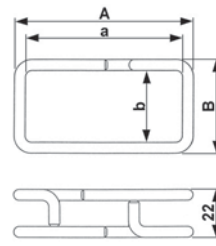– Any installation position selectable

■ **Material**
Round steel, d = 5 mm
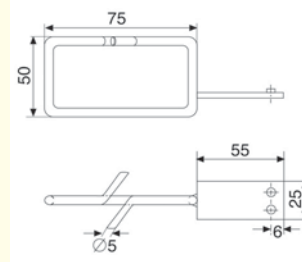
■ **Finish**
Zinc-passivated

■ **Supply schedule**
4 jumpering brackets

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order the appropriate mounting material.

For rack type	Order no.	UP
DoubleProRack	05.040.226.9	4 units

MIR00564

MEC00122

Jumpering Bracket

– For orderly cable management
– Open version, no threading

■ **Material/Finish**
Round steel, d = 5 mm

■ **Finish**
Zinc-passivated

■ **Supply schedule**
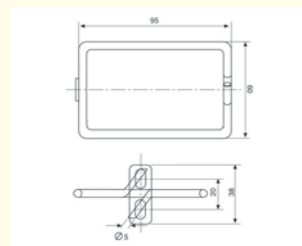4 jumpering brackets

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order the appropriate mounting material.
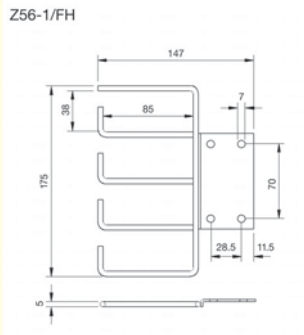
Model	Order

Jumper Tiebar

– Ideal for vertical routing and cable strain relief
– Open version, no threading
– Mounting on the external lateral T-slot of the 19" extrusion
– Any installation position selectable
– From rack width 600 mm

■ **Material/Finish**
Round steel, d = 5 mm, zinc-passivated

■ **Supply schedule**
2 jumper tiebars

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order the appropriate mounting material.

ELM00028

Z56-1/FH

ELM00029

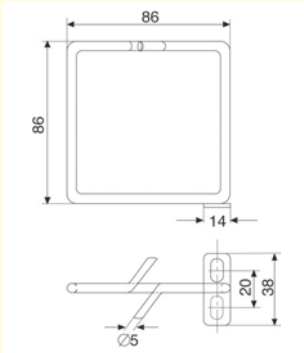| W	H	D	U	d	L	Model	Order no.	UP
							01.117.033.7	2 units

Jumpering Bracket, Square

MIR00183

– For orderly cable management
– Open version, no threading
– Mounting on the external lateral T-slot of the 19" extrusion
– Any installation position selectable
– From rack width 800 mm

■ **Finish**
Zinc-passivated, Zn 10c, white

■ **Supply schedule**
4 vertical jumpering brackets

■ **How supplied**
Flat-packed kit

ELM00057

W_{Rack}	Model	Order no.	UP
From 800	86x86	05.040.224.9	4 units

Jumpering Bracket, Vertical

MIR00566

– For orderly cable management
– Open version, no threading
– Mounting on the external side of the 19" extrusion and on the side on the rack T-slot
– Any installation position selectable
– For large cable volumes

■ **Material**
Round steel, d = 6 mm

■ **Finish**
Zinc-passivated

■ **Supply schedule**
4 vertical jumpering brackets

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order the appropriate mounting material.
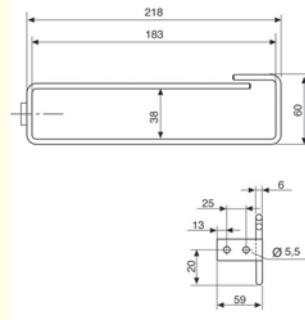
MEC00123

Model	Order no.	UP
218x60	05.040.223.9	4 units
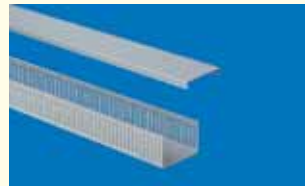
Cable Duct

ELM00004

– Ideal for orderly and covered cable management of jumper cables

■ **Material**
Hard PVC

■ **Finish**
Stone gray, RAL 7030

■ **Supply schedule**
1 jumper cable duct with cover
Mounting material

ELM00052

W	H	D	U	d	L	Model	Order no.	UP
					2000		01.117.098.3	1 units

Fiber Optic Cable Router

LIG00068

– For safe and orderly cable management of fiber optic cables
– With step-index extrusion of the slots to provide strain relief of the fiber optic cables
– Mounting on the external side of the 19" extrusion

■ **Material**
PA UL (94-VO)

■ **Supply schedule**
1 pair of fiber optic cable routers
Mounting material

LIG00021

Dimensions in mm: W = Width
H = Height
D = Depth
h = installation height
d = useful depth
L = length
U = standard height unit
1 U = 44.45 mm
UP = unit of packaging
kg = weight
= Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound

How supplied
Flat-packed kit

W	H	D	U	d	L	Model	Order no.	UP
							01.117.099.1	1 pair

ELM00025

Cable Routing Ring

– For orderly cable management
– Open version, no threading
– Mounting on the T-slots of the vertical extrusions
– Any installation position selectable

■ **Material/Finish**
PA 6, GF 15, black, UL 94-HB

■ **Supply schedule**
5 cable routing rings
Mounting material

■ **How supplied**
Flat-packed kit

W	H	D	U	d	L	Model	Order no.	UP
						54 x 118 mm	01.312.207.9	5 units

MEC20158

Cable Routing Set

– For orderly cable management
- Dimensions:
  Outside 61 mm x 42.5 mm,
  inside 52 mm x 23 mm

■ **Material/Finish**
Cable holder: PPO,
sim. RAL 7035 light gray
Soft rubber extrusion: EPDM,
sim. RAL 7021 dark gray

■ **Supply schedule**
10 cable routers

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order the appropriate mounting material.

W	H	D	U	d	L	Model	Order no.	UP
						Threaded	05.040.113.9	10 units
		For cut-out 9.5 x 9.5 mm				Plug-in	05.040.112.9	10 units

MEC20048

Velcro strip (by the meter)

– For stress-free mounting and bundling of copper and fiber optic cables
– Velcro strip can be cut to any length required

■ **Material/Color**
Black: One Wrap Fastener
F.R.T., UL 94-V2
Blue: One Wrap Fastener

MEC20147

■ **Supply schedule**
1-meter or 25-meter Velcro strip

■ **How supplied**
By the meter

W	H	D	L	Model	Order no.	UP
16			1000	Black	05.040.060.9	1 meter
16			1000	Blue	05.040.061.9	1 meter
16			25000	Black	05.040.065.9	25 meters
16			25000	Blue	05.040.066.9	25 meters

MEC20025

Velcro Strip with Plastic Eyelet

– For mounting non-standard components
– For bundling cables

■ **Material/Color**
Polypropylene/Polyamide, black

■ **Supply schedule**
20 Velcro strips

■ **How supplied**
Flat-packed kit

W	H	D	L	Model	Order no.	UP
16			300		01.240.550.9	1 set

ELM00049

ELM00050

Cable Band Clip

– For orderly cable management
– For fixing cable harnesses and cables with large cross section
– Quick and easy mounting
– For clipping into T-slots at any position
– With detachable lock

■ **Material**
PA 6.6, black, UL 94-V0

■ **Supply schedule**
20

■ **How supplied**
Flat-packed kit
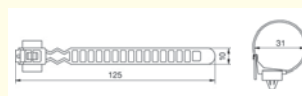
W	H	D	U	d	L	Model	Order no.	UP
							01.240.548.9	20 units

Dimensions in mm: W = Width
H = Height
D = Depth
h = installation height
d = useful depth
L = length

U = standard height unit
1 U = 44.45 mm
UP = unit of packaging
kg = weight
= Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound

Knürr Cable Management

MEC20017

ELM00024
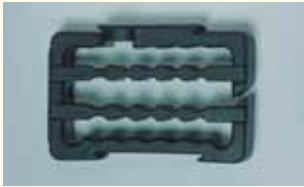
Cable Clamping Frame

– For orderly cable management
– Open version, no threading
– Cross-section for cable routing, variable with removable routing ribs
– Can be expanded by adding on further cable clamping frames
– Optional mounting: lengthwise or across the width

■ **Material**
Polypropylene, black

■ **Supply schedule**
1 cable clamping frame
Mounting material

■ **How supplied**
Flat-packed kit

W	H	D	U	d	L	Model	Order no.	UP
							01.113.153.9	1 units

MIR00086

MIR00182

Cable Clamping, Swing Frame

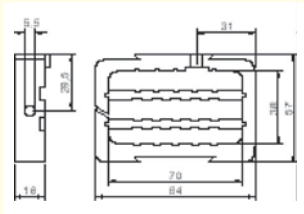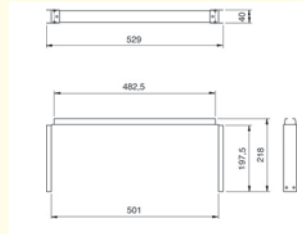– Absolutely recommended when using swing frame
– For cable strain relief
– For relief on plug-type connections
– Prevents damage to the cable braided shielding

■ **Supply schedule**
2 mounting bracket
1 extrusion rail
Mounting material

W	H	D	U	d	L	Model	Order no.	UP
							01.113.203.1	1 set

MEC20154

MEC88005

Cable Cantilever

– For easy mounting in rack/on the shelf; quick connecting to and disconnecting from shelf or rack with a spring clip
– Guarantees defined and kink-free cable management
– Minimum space requirement behind the pushed-in shelves, 40 mm

■ **Material/Finish**
Sheet steel, 1.5 mm, zinc-passivated

■ **Supply schedule**
1 cable cantilever
Mounting material

■ **How supplied**
Flat-packed kit
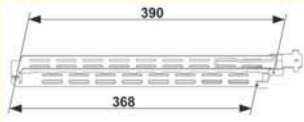
W	H	D	U	d	W x L	Type	Order no.	UP
						2-piece	05.040.096.0	1 unit

TEL00034

TEL00051

Cable Roller

– For 19" racks and enclosures
– Reduces the cable load on slot-in
– Orderly cabling
– Prevents cable-sagging

■ **Material**
Sheet steel, 1.5 mm

■ **Supply schedule**
1 cable roller
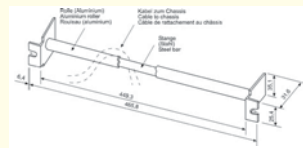
W	H	D	U	d	L	Model	Order no.	UP
							05.043.327.9	1 units

CUD00025

CUD00024

Cable Clamping Bracket / Earthing Bracket

– For 19" cable routing panel, 2 HU
– For strain relief of cables and plug-type connections with cable ties

■ **Material**
Sheet steel, 1.5 mm

■ **Finish**
Zinc-passivated, Zn 10c, white

■ **Supply schedule**
1 earthing bracket
Mounting material

W	H	D	U	d	L	Model	Order no.	UP
							01.117.035.7	1 units

MEC00451

MEC20018
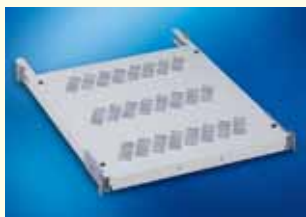
19" shelf, fixed

– Integrated fixing holes front and rear for handle or hinged cable routing
– With perforation to optimize air supply

■ **Material/Finish**
Sheet steel 1.0 mm, zinc-passivated, powder-coated texture

■ **Color**
Final digit of order number .1: RAL 7035 light gray
Final digit of order number .8: RAL 7021 dark gray

■ **Load rating**
500 N static per item

■ **Supply schedule**
2 mounting rails, incl. mounting bracket
1 shelf board
1 extension board (from L = 600)
Mounting material
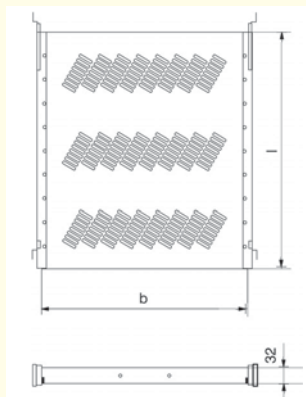
■ **How supplied**
Flat-packed kit

| W Rack	H Rack	D Rack	d	w x l	For rack type	Order no.		UP
		600	365	430 x 300	Miracel/Smaract LAN	01.102.001.1	🔶	1 unit
		600	440	430 x 300	Miracel/Smaract 19"	01.102.002.1	🔶	1 unit
		800	565	430 x 500	Miracel/Smaract LAN	01.102.003.1	🔶	1 unit
		800	565	430 x 500	Miracel/Smaract LAN	01.102.003.8		1 unit
		800	640	430 x 600	Miracel/Smaract 19"	01.102.004.1	🔶	1 unit
		800	640	430 x 600	Miracel/Smaract 19"	01.102.004.8		1 unit
		900	665	430 x 600	Miracel/Smaract LAN	01.102.004.1	🔶	1 unit
		900	665	430 x 600	Miracel/Smaract LAN	01.102.004.8		1 unit
		900	740	430 X 600	Miracel/Smaract 19" server	01.102.005.1	🔶	1 unit
		900	740	430 X 600	Miracel/Smaract 19" server	01.102.005.8	🔶	1 unit
		1000	740	430 x 600	Miracel 19" server	01.102.005.1	🔶	1 unit
		1000	740	430 x 600	Miracel 19" server	01.102.005.8	🔶	1 unit
600		600	530	515 x 500	Miracel LW 535	01.102.200.1		1 unit
700		600	530	615 x 500	Miracel LW 635	01.102.201.1		1 unit
800		600	530	715 x 500	Miracel LW 735	01.102.202.1		1 unit
600		800	730	515 x 700	Miracel LW 535	01.102.208.1		1 unit
700		800	730	615 x 700	Miracel LW 635	01.102.209.1		1 unit
800		800	730	715 x 700	Miracel LW 735	01.102.210.1		1 unit
600		900	830	515 x 800	Miracel LW 535	01.102.212.1		1 unit
800		900	830	715 x 800	Miracel LW 735	01.102.214.1		1 unit
600		600	535	515 x 500	Smaract LW 535	01.102.252.1		1 unit
600		800	735	515 x 700	Smaract LW 535	01.102.254.1		1 unit
600		900	835	515 x 800	Smaract LW 535	01.102.255.1		1 unit
		600	435	430 x 300	DoubleProRack with door	01.102.002.1	🔶	1 unit
		800	635	430 x 600	DoubleProRack with door	01.102.004.1	🔶	1 unit
		800	635	430 x 600	DoubleProRack with door	01.102.004.8		1 unit
		500	460	430 x 300	DoubleProRack no door	01.102.002.1	🔶	1 unit
		600	560	430 x 500	DoubleProRack no door	01.102.003.1	🔶	1 unit
		600	560	430 x 500	DoubleProRack no door	01.102.003.8		1 unit
		700	660	430 x 600	DoubleProRack no door	01.102.004.1	🔶	1 unit
		700	660	430 x 600	DoubleProRack no door	01.102.004.8		1 unit
		500	285	430 x 200	ConAct	01.102.000.1		1 unit
		600	385	430 x 300	ConAct	01.102.001.1	🔶	1 unit

MEC00452

MEC20019

19" shelf, part pull-out

– Integrated fixing holes front and rear for handle or hinged cable routing
– With perforation to optimize air supply
– Locking in pulled-out position (friction lock); easy conversion from form lock to friction lock with stop spring
– Quick separator for removing and disconnecting the shelf without tools
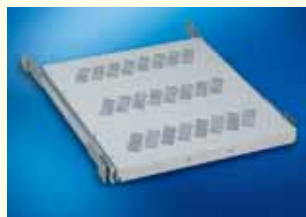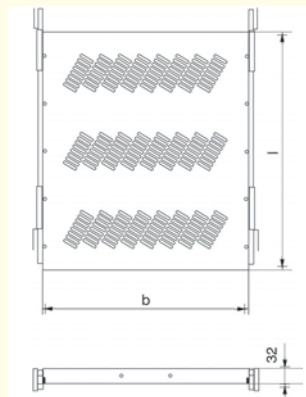
■ **Material/Finish**
Sheet steel 1.0 mm, zinc-passivated, powder-coated texture

■ **Color**
Final digit of order number .1: RAL 7035 light gray
Final digit of order number .8: RAL 7021 dark gray

■ **Load rating**
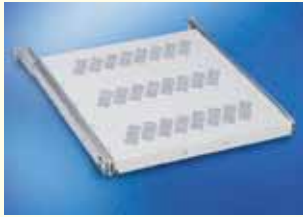500 N static per item

■ **Supply schedule**
1 pair of telescopic slides
1 shelf board
1 extension board (from L = 600)
Mounting material

■ **How supplied**
Flat-packed kit

W Rack	H Rack	D Rack	d	w x l	For rack type	Order no.		UP
		600	365	430 x 300	Miracel/Smaract LAN	01.102.010.1	🔶	1 unit
		600	440	430 x 300	Miracel/Smaract 19"	01.102.010.1	🔶	1 unit
		800	565	430 x 500	Miracel/Smaract LAN	01.102.011.1	🔶	1 unit
		800	565	430 x 500	Miracel/Smaract LAN	01.102.011.8		1 unit
		800	640	430 x 500	Miracel/Smaract 19"	01.102.011.1	🔶	1 unit
		800	640	430 x 500	Miracel/Smaract 19"	01.102.011.8		1 unit
		900	665	430 x 500	Miracel/Smaract LAN	01.102.011.1	🔶	1 unit
		900	665	430 x 500	Miracel/Smaract LAN	01.102.011.8		1 unit
		900	740	430 x 600	Miracel/Smaract 19" server	01.102.012.1	🔶	1 unit
		900	740	430 x 600	Miracel/Smaract 19" server	01.102.012.8		1 unit
		1000	740	430 x 600	Miracel 19" server	01.102.012.1	🔶	1 unit
		1000	740	430 x 600	Miracel 19" server	01.102.012.8		1 unit
600		600	530	515 x 500	Miracel LW 535	01.102.170.1		1 unit
700		600	530	615 x 500	Miracel LW 635	01.102.171.1		1 unit
800		600	530	715 x 500	Miracel LW 735	01.102.172.1		1 unit
600		800/ 900	730	515 x 600	Miracel LW 535	01.102.178.1		1 unit
700		800/ 900	730	615 x 600	Miracel LW 635	01.102.179.1		1 unit
800		800/ 900	730	715 x 600	Miracel LW 735	01.102.180.1		1 unit
		600	435	430 x 300	DoubleProRack with door	01.102.010.1	🔶	1 unit
		800	635	430 x 500	DoubleProRack with door	01.102.011.1	🔶	1 unit
		800	635	430 x 500	DoubleProRack with door	01.102.011.8		1 unit
		500	460	430 x 300	DoubleProRack no door	01.102.010.1	🔶	1 unit
		600	560	430 x 500	DoubleProRack no door	01.102.011.1	🔶	1 unit
		600	560	430 x 500	DoubleProRack no door	01.102.011.8		1 unit
		700	660	430 x 500	DoubleProRack no door	01.102.011.1	🔶	1 unit
		700	660	430 x 500	DoubleProRack no door	01.102.011.8		1 unit
		600	385	430 x 300	ConAct	01.102.010.1	🔶	1 unit
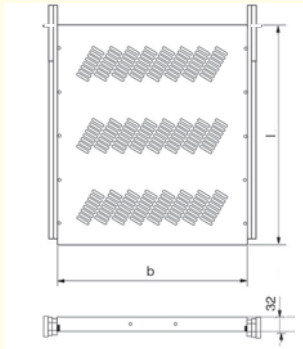
19" Shelf
Full pull-out

MEC00462

– Integrated fixing holes front and rear for handle or hinged cable routing
– With perforation to optimize air supply
– Locking in pulled-out position (friction lock); easy conversion with stop spring
– Quick separator for removing and disconnecting the shelf without tools

■ **Material/Finish**
Sheet steel 1.0 mm, zinc-passivated, powder-coated texture

■ **Color**
RAL 7035 light gray

■ **Load rating**
500 N static per item

■ **Supply schedule**
1 pair of telescopic slides
1 shelf board
1 extension board (from L = 600)
Mounting material

■ **How supplied**
Flat-packed kit

MEC20xxx

W Rack	H Rack	D Rack	U	d	w x l	For rack type	Order no.	UP
		600	365		430 x 300	Miracel/Smaract LAN	**01.102.160.1**	1 unit
		600	440		430 x 300	Miracel/Smaract 19"	**01.102.160.1**	1 unit
		800	565		430 x 500	Miracel/Smaract LAN	**01.102.161.1**	1 unit
		800	640		430 x 500	Miracel/Smaract 19"	**01.102.161.1**	1 unit
		900	665		430 x 500	Miracel/Smaract LAN	**01.102.161.1**	1 unit
		900	740		430 x 600	Miracel/Smaract	**01.102.162.1**	1 unit
						19" Server		
		1000	740		430 x 600	Miracel 19" server	**01.102.162.1**	1 unit
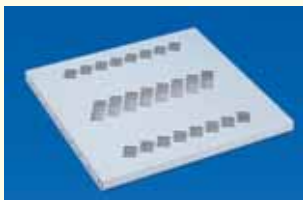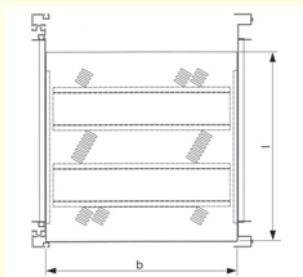
19" Heavy-Duty Shelf
Fixed

MEC00120

– Surface area with perforation
– Application as server or battery bottom cover

■ **Material/Finish**
Sheet steel 1.5 mm, zinc-passivated, powder-coated texture

■ **Color**
Final digit of order number .1:
RAL 7035 light gray
Final digit of order number .8:
RAL 7021 dark gray

■ **Load rating**
1000 N static for CW installation
1500 N static for 19" installation

■ **Supply schedule**
1 shelf, fixed, screwable
2 mounting braces
Mounting material

■ **How supplied**
Flat-packed kit

MEC20117

W Rack	H Rack	D Rack	U	d	w x l	For rack type	Order no.	UP
		800		565	467 x 460	Miracel/Smaract LAN	**01.131.473.1**	1 unit
		800		565	467 x 460	Miracel/Smaract LAN	**01.131.473.8**	1 unit
		800		640	467 x 460	Miracel/Smaract 19"	**01.131.475.1**	1 unit
		900		665	467 x 560	Miracel/Smaract LAN	**01.131.476.1**	1 unit
		900		740	467 x 560	Miracel/Smaract	**01.131.474.1**	1 unit
						19" Server		
		900		740	467 x 560	Miracel/Smaract	**01.131.474.8**	1 unit
						19" Server		
		1000		740	467 x 560	Miracel 19" server	**01.131.474.1**	1 unit
		1000		740	467 x 560	Miracel 19" server	**01.131.474.8**	1 unit
600	800			730	534 x 536	Miracel LW 535	**01.131.477.1**	1 unit
800	800			730	734 x 536	Miracel LW 735	**01.131.479.1**	1 unit
600	900			830	534 x 536	Miracel LW 535	**01.131.481.1**	1 unit
800	900			830	734 x 536	Miracel LW 735	**01.131.483.1**	1 unit
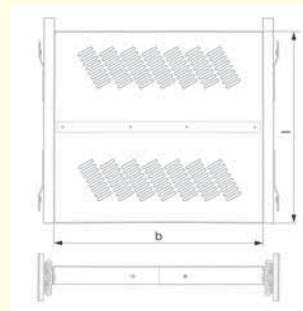
19" Heavy-Duty Shelf
Full pull-out

MEC20022

– With perforation to optimize air supply
– Locking in pushed-in and fully pulled out position
– Easy mounting with patented quick mounting system
– Application as server or battery bottom cover

■ **Material/Finish**
Sheet steel, 1.5 mm, powder-coated texture

■ **Color**
Final digit of order number .1:
RAL 7035 light gray
Final digit of order number .8:
RAL 7021 dark gray

■ **Load rating**
1200 N static

■ **Supply schedule**
1 pair of telescopic slides
1 shelf board
Mounting material

■ **How supplied**
Flat-packed kit

MEC20113

W Rack	H Rack	D Rack	U	d	w x l	For rack type	Order no.	UP
		800		565	412 x 560	Miracel/Smaract LAN	**01.102.031.1**	1 unit
		800		565	412 x 560	Miracel/Smaract LAN	**01.102.031.8**	1 unit
		800		640	412 x 560	Miracel/Smaract 19"	**01.102.031.1**	1 unit
		800		640	412 x 560	Miracel/Smaract 19"	**01.102.031.8**	1 unit
		900		665	412 x 660	Miracel/Smaract LAN	**01.102.032.1**	1 unit
		900		665	412 x 660	Miracel/Smaract LAN	**01.102.032.8**	1 unit
		900		740	412 x 660	Miracel/Smaract	**01.102.032.1**	1 unit
						19" Server		
		900		740	412 x 660	Miracel/Smaract	**01.102.032.8**	1 unit
						19" Server		
		1000		740	412 x 660	Miracel 19" server	**01.102.032.1**	1 unit
		1000		740	412 x 660	Miracel 19" server	**01.102.032.8**	1 unit
600	800			730	478 x 560	Miracel LW 535	**01.102.034.1**	1 unit
800	800			730	678 x 560	Miracel LW 735	**01.102.037.1**	1 unit
600	900			830	478 x 660	Miracel LW 535	**01.102.035.1**	1 unit
800	900			830	678 x 660	Miracel LW 735	**01.102.038.1**	1 unit
600	800			735	478 x 560	Smaract LW 535	**01.102.034.1**	1 unit
600	900			835	478 x 660	Smaract LW 535	**01.102.035.1**	1 unit
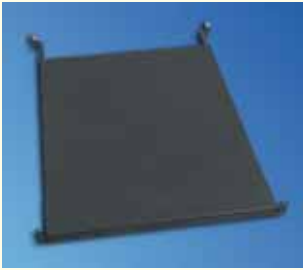
SUN20007

19" Quick-Fix Shelf Assembly without tools

– Quick and easy mounting without tools by hanging in 19" cut-outs
– Quick and easy fixing (one click) and removing (quarter turn) without tools
– Suitable for all racks and enclosures with 19" mounting hole extrusions (9.0 x 9.0 square holes)
– Depth-variable for use with different slot-in depths and special dimensions
– With perforation to optimize air supply

■ **Material**
  Sheet steel, 1.0 mm

■ **Finish**
  Final digit of order number .1:
    Powder-coated texture, RAL 7035, light gray
  Final digit of order number .8:
    Powder-coated texture, RAL 7021 dark gray

■ **Load rating**
  700 N static with even load distribution

■ **Supply schedule**
  19" Quick-Fix Shelf Mounting Material

■ **How supplied**
  Flat-packed kit

■ **Note**
  Cannot be used for 19" t-slot extrusions!

W	H	D	U	d	w x l	Order no.	UP
		600		365 - 500	430 x 300	**01.102.071.X**	1 unit
		800		565 - 740	430 x 500	**01.102.072.X**	1 unit

MEC20138

MEC20111

Handle

- Suitable for shelves and heavy-duty shelves
– With internal thread, M5

■ **Material**
  Die-cast aluminum consoles
  Handle extrusions of extruded aluminum
  Cap made of ABS UL 94 HB

■ **Finish:**
  Handle, powder-coated, gray-blue, RAL 5008/Cap, light gray, RAL7035

■ **Supply schedule**
  2 handles
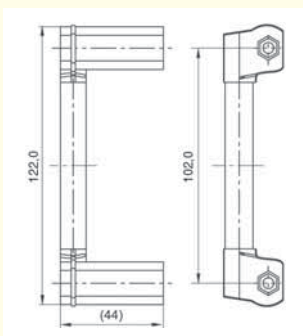
W	H	D	U	d	w x l	For rack type	Order no.	UP
							00.050.503.1	1 set

MEC20154
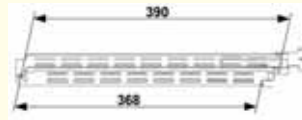
MEC88005

Cable Cantilever

– Swing-out from the rear, therefore free access to the rear side (only 3-piece)
– For easy mounting in rack/on the shelf; quick connecting to and disconnecting from shelf or rack with a spring clip
– Guarantees defined and kink-free cable management
– Minimum space requirement behind the pushed-in shelves, 40 mm

■ **Material/Finish**
  Sheet steel, 1.5 mm, zinc-passivated

■ **Supply schedule**
  1 cable cantilever
  Mounting material

■ **How supplied**
  Flat-packed kit

W	H	D	U	d w x l	Type	Order no.	UP
					2-piece	**05.040.096.0**	1 unit

Dimensions in mm: W = Width
H = Height
D = Depth
h = installation height
d = useful depth
L = length
CW = Clear width
U = standard height unit
1 U = 44.45 mm
UP = unit of packaging
kg = weight
= Express item

Conversion: 1 mm = 0.03937 inch 1 kg = 2.2046 pound

MIR00373

MIR00375

19" Shelf, 2 U
Fixed

– For installation in racks with fixed 19"
  installation on the front
– Quick and easy mounting on 19" extrusions
– Also for swing frame in the 19" rack and
  19" enclosure

■ **Finish/Color**
Powder-coated texture, RAL 7035
light gray

■ **Material**
Sheet steel, 1.5 mm

■ **Load rating**
200 N static

■ **Supply schedule**
1 shelf, fixed
Mounting material

■ **How supplied**
Flat-packed kit

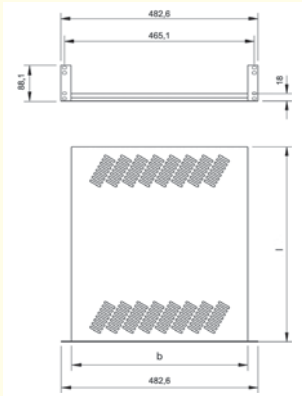| W	H	D	w x l	For rack type	Order no.		UP
482.6	88.1	600/800/900/1000	442 x 280	Miracel/Smaract	01.113.736.1	🔶	1 unit
482.6	88.1	600/800/900/1000	442 x 380	Miracel/Smaract	01.113.737.1	🔶	1 unit
482.6	88.1	500/600/800	442 x 280	DoubleProRack	01.113.736.1	🔶	1 unit
482.6	88.1	500/600/800	442 x 380	DoubleProRack	01.113.737.1	🔶	1 unit
482.6	88.1	400/500/600	442 x 280	ConAct	01.113.736.1	🔶	1 unit
482.6	88.1	500/600	442 x 380	ConAct	01.113.737.1	🔶	1 unit

MIR00102
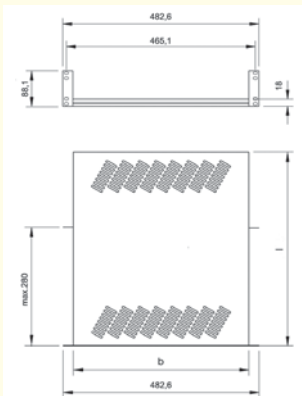

MIR00103

19" Shelf, 2 U
Adjustable

– For installation in racks with adjustable
  19" installation on the front
– Quick and easy mounting on 19" extru-
  sions
– Also for swing frame in the 19" rack and
  19" enclosure
– Adjustable in increments of 25 mm in
  the depth

■ **Material/Finish**
Sheet steel 1.5 mm, powder-coated
Texture

■ **Color**
RAL 7035 light gray

■ **Load rating**
200 N static

■ **How supplied**
Flat-packed kit

W	H	D	w x l	For rack type	Order no.	UP
482.6	88.1	600/800/900/1000	442 x 280	Miracel/Smaract	01.113.409.1	1 unit
482.6	88.1	600/800/900/1000	442 x 380	Miracel/Smaract	01.113.410.1	1 unit

W	H	D	w x l	For rack type	Order no.	UP
482.6	88.1	600/800/900/1000	442 x 480	Miracel/Smaract	01.113.411.1	1 unit
482.6	88.1	500/600/800	442 x 280	DoubleProRack	01.113.409.1	1 unit
482.6	88.1	500/600/800	442 x 380	DoubleProRack	01.113.410.1	1 unit
482.6	88.1	600/800	442 x 480	DoubleProRack	01.113.411.1	1 unit
482.6	88.1	400/500/600	442 x 280	ConAct	01.113.409.1	1 unit
482.6	88.1	500/600	442 x 380	ConAct	01.113.410.1	1 unit
482.6	88.1	600	442 x 480	ConAct	01.113.411.1	1 unit

SCH00058

SCH00054

19" Drawer
Installation on the front

– For installation on the front
  19" extrusions
– For storing service documents
– Quick and easy mounting

■ **Material/Finish**
Drawer, sheet steel 1.0 mm,
powder-coated texture
Telescopic slides, sendzimir zinc-coated

■ **Color**
Final digit of order number .1:
RAL 7035 light gray
Final digit of order number .8:
RAL 7021 dark gray

■ **Load rating**
150 N static

■ **Supply schedule**
1 19" drawer with lock, including key
1 pair of telescopic slides
Mounting material

■ **How supplied**
Preassembled
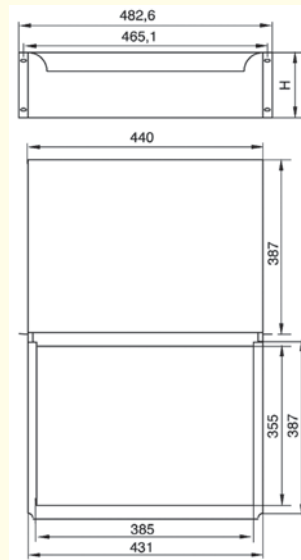
W	H	D	U	For rack type	Order no.		UP
482.6	43.6	600-1000	1	Miracel/Smaract/	01.113.926.1	🔶	1 unit
				DoubleProRack/ConAct			
482.6	88.1	600-1000	2	Miracel/Smaract/	01.113.927.1	🔶	1 unit
				DoubleProRack/ConAct			
482.6	88.1	600-1000	2	Miracel/Smaract/	01.113.927.8		1 unit
				DoubleProRack/ConAct			
482.6	132.5	600-1000	3	Miracel/Smaract/	01.113.928.1	🔶	1 unit
				DoubleProRack/ConAct			

Dimensions in mm: W = Width   U = standard height unit
H = Height   1 U = 44.45 mm
D = Depth   UP = unit of packaging
h = installation height kg = weight
d = useful depth WxL = Surface area
L = length
CW = Clear width   🔶 = Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound

19" Shelf, 1 U
Pull-out

MEC00118

MEC20118

– With handle
– Can also be used as writing board

■ **Material/Finish**
Shelf, sheet steel, 1.0 mm
Telescopic slide, cold rolled steel

■ **Finish/Color**
Powder-coated texture
RAL 7035 light gray

■ **Load rating**
200 N static

■ **Supply schedule**
1 shelf
1 pair of telescopic slides
Mounting material

■ **How supplied**
Preassembled

W	H	D Rack	U	d	w x l	For rack type	Order no.	UP
482.6	43.6	600	1	365	403 x 400	Miracel/Smaract LAN	02.045.149.1	1 unit
482.6	43.6	600	1	440	403 x 400	Miracel/Smaract 19"	02.045.149.1	1 unit
482.6	43.6	800	1	565	403 x 400	Miracel/Smaract LAN	02.045.149.1	1 unit
482.6	43.6	800	1	640	403 x 600	Miracel/Smaract 19"	02.045.147.1	1 unit
482.6	43.6	900	1	665	403 x 600	Miracel/Smaract LAN	02.045.147.1	1 unit
482.6	43.6	900	1	740	403 x 600	Miracel/	02.045.147.1	1 unit
						Smaract 19" Server		
482.6	43.6	1000	1	740	403 x 600	Miracel 19" Server	02.045.147.1	1 unit
482.6	43.6	600	1	435	403 x 400	DoubleProRack	02.045.149.1	1 unit
						With door		
482.6	43.6	800	1	635	403 x 600	DoubleProRack	02.045.147.1	1 unit
						With door		

19" Drawer with Lock
Mounting on 19"
installation, front and rear

SCH00057

483

403

SCH00053

– For mounting in racks with fixed
19"installation on the front and rear
– Full pull-out
– With lock

■ **Material/Finish**
Drawer, sheet steel 1.0 mm, powder-
coated texture
Telescopic slides, cold rolled steel,
sendzimir zinc-coated

■ **Color**
Drawer, RAL7035 light-gray

■ **Load rating**
1 U - 200 N static
2 U - 400 N static
3 U - 400 N static
4 U - 400 N static

■ **Supply schedule**
1 19" drawer with lock, including key
1 pair of telescopic slides
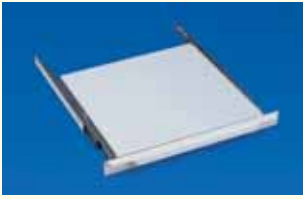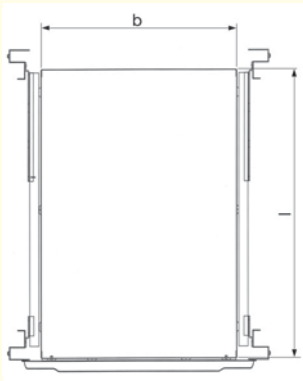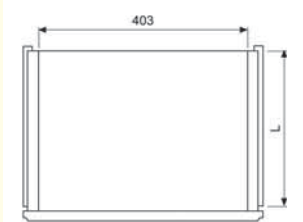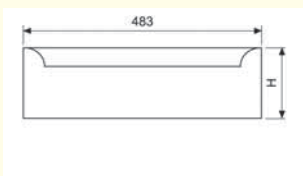Mounting material

■ **How supplied**
Preassembled

W	H	D	U	d	L	For rack type	Order no.	UP
482.6	43.6	600	1	365	400	Miracel/Smaract LAN	02.045.151.1	1 unit
482.6	43.6	600	1	440	400	Miracel/Smaract 19"	02.045.151.1	1 unit
482.6	87.1	600	2	440	400	Miracel/Smaract 19"	02.045.152.1	1 unit
482.6	131.5	600	3	440	400	Miracel/Smaract 19"	02.045.153.1	1 unit
482.6	176.0	600	4	440	400	Miracel/Smaract 19"	02.045.154.1	1 unit
482.6	43.6	800	1	565	400	Miracel/Smaract LAN	02.045.151.1	1 unit
482.6	87.1	800	2	565	400	Miracel/Smaract LAN	02.045.152.1	1 unit
482.6	131.5	800	3	565	400	Miracel/Smaract LAN	02.045.153.1	1 unit
482.6	176.0	800	4	565	400	Miracel/Smaract LAN	02.045.154.1	1 unit
482.6	43.6	800	1	640	600	Miracel/Smaract 19"	02.045.161.1	1 unit
482.6	43.6	900	1	665	600	Miracel/Smaract LAN	02.045.161.1	1 unit
482.6	87.1	900	2	665	600	Miracel/Smaract LAN	02.045.162.1	1 unit
482.6	131.5	900	3	665	600	Miracel/Smaract LAN	02.045.163.1	1 unit
482.6	176.0	900	4	665	600	Miracel/Smaract LAN	02.045.164.1	1 unit
482.6	43.6	900	1	740	600	Miracel/Smaract 19" server	02.045.161.1	1 unit
482.6	87.1	900	2	740	600	Miracel/Smaract 19" server	02.045.162.1	1 unit
482.6	131.5	900	3	740	600	Miracel/Smaract 19" server	02.045.163.1	1 unit
482.6	176.0	900	4	740	600	Miracel/Smaract 19" server	02.045.164.1	1 unit
482.6	43.6	1000	1	740	600	Miracel/Smaract 19" server	02.045.161.1	1 unit
482.6	87.1	1000	2	740	600	Miracel/Smaract 19" server	02.045.162.1	1 unit
482.6	131.5	1000	3	740	600	Miracel/Smaract 19" server	02.045.163.1	1 unit
482.6	176.0	1000	4	740	600	Miracel/Smaract 19" server	02.045.164.1	1 unit
482.6	43.6	600	1	435	400	DoubleProRack with door	02.045.151.1	1 unit
482.6	87.1	600	2	435	400	DoubleProRack with door	02.045.152.1	1 unit
482.6	131.5	600	3	435	400	DoubleProRack with door	02.045.153.1	1 unit
482.6	176.0	600	4	435	400	DoubleProRack with door	02.045.154.1	1 unit
482.6	43.6	800	1	635	600	DoubleProRack with door	02.045.161.1	1 unit
482.6	87.1	800	2	635	600	DoubleProRack with door	02.045.162.1	1 unit
482.6	131.5	800	3	635	600	DoubleProRack with door	02.045.163.1	1 unit
482.6	176.0	800	4	635	600	DoubleProRack with door	02.045.164.1	1 unit
482.6	43.6	500	1	460	400	DoubleProRack 19" no door	02.045.151.1	1 unit
482.6	87.1	500	2	460	400	DoubleProRack 19" no door	02.045.152.1	1 unit
482.6	131.5	500	3	460	400	DoubleProRack 19" no door	02.045.153.1	1 unit
482.6	176.0	500	4	460	400	DoubleProRack 19" no door	02.045.154.1	1 unit
482.6	43.6	600	1	560	400	DoubleProRack 19" no door	02.045.151.1	1 unit
482.6	87.1	600	2	560	400	DoubleProRack 19" no door	02.045.152.1	1 unit
482.6	131.5	600	3	560	400	DoubleProRack 19" no door	02.045.153.1	1 unit
482.6	176.0	600	4	560	400	DoubleProRack 19" no door	02.045.154.1	1 unit
482.6	43.6	700	1	660	600	DoubleProRack 19" no door	02.045.161.1	1 unit
482.6	87.1	700	2	660	600	DoubleProRack 19" no door	02.045.162.1	1 unit
482.6	131.5	700	3	660	600	DoubleProRack 19" no door	02.045.163.1	1 unit
482.6	176.0	700	4	660	600	DoubleProRack 19" no door	02.045.164.1	1 unit

Dimensions in mm:
W = Width
H = Height
D = Depth
h = installation height
d = useful depth
L = length
CW = Clear width

U = standard height unit
1 U = 44.45 mm
UP = unit of packaging
kg = weight
WxL = Surface area

= Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound

SCH00062

Writing board For 19" drawer with lock
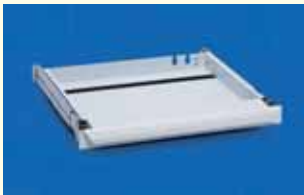
– For drawer depth 400 mm and 600 mm

■ **Material/Finish**
Sheet steel, 1.0 mm, powder-coated texture

■ **Color**
RAL 7035 light gray

■ **Supply schedule**
1 writing board
Mounting material

■ **How supplied**
Flat-packed kit

W	H	D	U	d L	For rack type	Order no.	UP
				400		**02.045.202.9**	1 unit
				600		**02.045.203.9**	1 unit

SCH00059

19" Keyboard Drawer 1 U For 19" keyboard

– With hand support
– With cable strain relief
– No telescopic slides locking

■ **Material**
Main unit, sheet steel, 1.0 mm
Front panel, sheet steel, 1.0 mm

■ **Finish/Color**
Powder-coated texture, RAL 7035 light gray

■ **Supply schedule**
1 19" keyboard drawer, 1 U
1 pair of telescopic slides
Velcro strip for keyboard fixing
Mounting material

■ **How supplied**
Preassembled
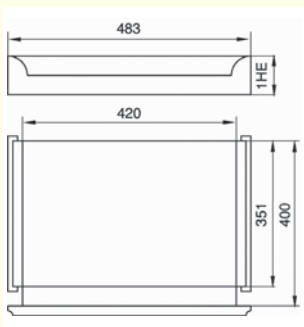
SCH00055

W	H	D_Rack	U	d	L	For rack type	Order no.	UP
482.6	43.6	600	1		440	Miracel/Smaract 19"	**02.011.101.1**	1 unit
482.6	43.6	800	1		565	Miracel/Smaract LAN	**02.011.101.1**	1 unit
482.6	43.6	800	1		640	Miracel/Smaract 19"	**02.011.101.1**	1 unit
482.6	43.6	900	1		665	Miracel/Smaract LAN	**02.011.101.1**	1 unit
482.6	43.6	900	1		740	Miracel/Smaract 19" Server	**02.011.101.1**	1 unit
482.6	43.6	1000	1		740	Miracel 19" Server	**02.011.101.1**	1 unit
482.6	43.6	600	1		435	DoubleProRack with door	**02.011.101.1**	1 unit
482.6	43.6	800	1		635	DoubleProRack with door	**02.011.101.1**	1 unit

VHP00155

19" Compact Keyboard IBM-compatible keyboard with trackball

– Suitable for keyboard drawer 01.136.378.1
– Flat keyboard with 84 keys and integrated trackball

■ **Electrical data**
- Power supply:

+ 5 V/DC max. 18 mA
- Mains cable (1.6 m) with tapping for two 6-pin mini DIN plugs (PS/2)
- For Windows 98/ME/NT/2000/XP

■ **Dimensions**
Length x width x height
370 x 138.5 x 20 mm

W	H	S	U	A1	A2	Pmax	Model	Order no.	UP
							German	**06.002.048.3**	1 unit

MEC20162

MEC20167

MEC20167

Chassis Rail Hang-on and screw-on

– For installation in 19" rack and enclosure
– Hang-on for quick and easy mounting
– Can also be screwed for heavier load ratings
– Can be screwed from inside (use in rack suites)
– Height setting possible for various main section heights

■ **Material/Finish**
Sheet steel, 2.0 mm
Zinc-passivated, blue chrome-plated

■ **Load rating**
1000 N max., with even distribution

■ **Supply schedule**
2 slot-in rails
Mounting material

■ **How supplied**
In pairs

■ **Note**
When selecting the slot-in rail, please note the chassis depth d of the rack or enclosure 4 19" extrusions are required for mounting

W	H	D_Rack	U	d	L	For rack type	Order no.	UP
		600		365	336	Miracel/Smaract	**01.103.051.0**	1 pair
		600		440	411	Miracel/Smaract	**01.103.052.0**	1 pair
		800		565	536	Miracel/Smaract	**01.103.053.0**	1 pair
		800		640	611	Miracel/Smaract	**01.103.054.0**	1 pair
		900		665	636	Miracel/Smaract	**01.103.055.0**	1 pair
		From900		740	711	Miracel/Smaract/CoolTherm	**01.103.056.0**	1 pair

MEC20169

Aluminum Chassis Rail Screw-on

– For installation in 19" rack and enclosure
– Can be screwed from inside (use in rack suites)
– Height setting possible for various main section heights

■ **Material/Finish**
Extruded aluminum, 1.4 mm, polished

■ **Load rating**
700 N max., with even load distribution

■ **Supply schedule**
2 slot-in rails
Mounting material

■ **How supplied**
In pairs

■ **Note**
When selecting the slot-in rail, please note the chassis depth d of the rack or enclosure 4 19" extrusions are required for mounting.

W Rack	H Rack	D Rack	U	d	L	For rack type	Order no.	UP
		600		365	336	Miracel/Smaract	**01.103.101.0**	1 pair
		600		440	411	Miracel/Smaract	**01.103.102.0**	1 pair
		800		565	536	Miracel/Smaract	**01.103.103.0**	1 pair
		800		640	611	Miracel/Smaract	**01.103.104.0**	1 pair
		800		665	636	Miracel/Smaract	**01.103.105.0**	1 pair
		From 900		740	711	Miracel/Smaract/CoolTherm	**01.103.106.0**	1 pair
		500		285	254	ConAct	**01.103.111.0**	1 pair
		600		385	354	ConAct	**01.103.112.0**	1 pair
		600		435	403	DoubleProRack with door	**01.103.118.0**	1 pair
		800		635	603	DoubleProRack with door	**01.103.119.0**	1 pair
		500		460	428	DoubleProRack no door	**01.103.122.0**	1 pair
		600		560	528	DoubleProRack no door	**01.103.123.0**	1 pair
		700		660	628	DoubleProRack no door	**01.103.124.0**	1 pair

MEC20163

MEC20166

Chassis runner, depth-variable Screw-on

– For installation in 19" rack and enclosure
– Depth-variable
– Can be screwed from inside (use in rack suites)
– Height setting possible for various main section heights

■ **Material/Finish**
Sheet steel, 1.25 mm
Zinc-passivated, blue chrome-plated

■ **Load rating**
200 N max., with even load distribution

■ **Supply schedule**
2 basic rails
2 extension rails
Mounting material

■ **How supplied**
In pairs

■ **Note**
When selecting the slot-in rail, please note the chassis depth d of the rack or enclosure 4 19" extrusions are required for mounting

W	H	D	U	d	For rack type	Order no.	UP
		600		365-440	Miracel/Smaract	**01.103.091.0**	1 pair
		800-1200		565-740	Miracel/Smaract	**01.103.092.0**	1 pair
		900-1200		740	CoolTherm	**01.103.092.0**	1 pair
		600		385	ConAct	**01.103.091.0**	1 pair
		500-600		435-460	DoubleProRack	**01.103.091.0**	1 pair
		600-800		560-660	DoubleProRack	**01.103.092.0**	1 pair

MEC20179

MEC20180

MEC20178

Quick-Fix 19" Blanking Panel Assembly without tools

– For covering free 19" spaces (cold-hot separation)
– Quick and easy assembly without tools (one click) and disassembly (quarter turn)
– Suitable for 9.5 x 9.5 square holes

■ **Material**
Sheet steel, 1.0 mm

■ **Finish**
Final digit of order number .1:
 Powder-coated texture, RAL7035, light gray
Final digit of order number .8:
 Powder-coated texture, RAL7021, dark gray

■ **Supply schedule**
X (see ON for quantity) Quick-Fix 19" Blanking Panel
Mounting material

■ **How supplied**
In sets (see ON for quantity); fixing clips pre-mounted

W	H	D	U	d	L	For rack type	Order no.	UP
482.6	43.6		1			Powder-coated	**01.103.301.X**	6 units
482.6	88.1		2			Powder-coated	**01.103.302.X**	3 units
482.6	132.5		3			Powder-coated	**01.103.303.X**	2 unit
482.6	265.9		6			Powder-coated	**01.103.306.X**	1 unit
482.6	399.2		9			Powder-coated	**01.103.309.X**	2 unit
482.6	932.6		21			Powder-coated	**01.103.321.X**	1 unit

MEC20181

MEC20178

Quick-Fix 19" blanking panel cable port Assembly without tools

– For orderly cable management in the rack internal space
– Quick and easy assembly without tools (one click) and disassembly (quarter turn)
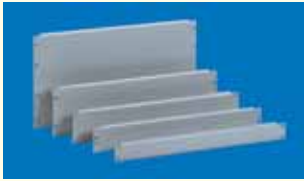– Suitable for 9.5 x 9.5 square holes

■ **Material**
Sheet steel, 1.0 mm

■ **Finish**
Final digit of order number .1:
 Powder-coated texture, RAL7035, light gray
Final digit of order number .8:
 Powder-coated texture, RAL7021, dark gray

■ **Supply schedule**
6 Quick-Fix 19" blanking panel cable ports
Mounting material

■ **How supplied**
In sets; fixing clips pre-mounted

W	H	D	U	d	L	For rack type	Order no.	UP
482.6	43.6		1			Powder-coated	**01.103.331.X**	6 units

Knürr System Accessories

CUD00005

CUD00004

Quick-Fix 19" Blanking Panel Screw-on

– For covering free 19" spaces (cold-hot separation)

■ **Material**
Sheet steel, 1.0 mm

■ **Finish**
Final digit of order number .1:
Powder-coated texture, RAL7035, light gray
Final digit of order number .8:
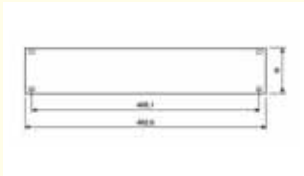Powder-coated texture, RAL7021, dark gray

■ **Supply schedule**
X (see ON for quantity) 19" Blanking Panel

■ **How supplied**
In sets (see ON for quantity)

■ **Note**
Please also order front panel mounting material!

W	H	D	U	d	L	For rack type	Order no.		UP
482.6	43.6		1			Powder-coated	01.103.201.X		6 units
482.6	88.1		2			Powder-coated	01.103.202.X		3 units
482.6	132.5		3			Powder-coated	01.103.203.X		2 units
482.6	265.9		6			Powder-coated	01.103.206.X		1 uni
482.6	399.2		9			Powder-coated	01.103.209.X		2 unit

LUF00217

MEC20110

19" Ventilation Front Panel

– For additional ventilation of 19" racks and 19" pedestals in accordance with IEC 297

■ **Material**
Aluminum

■ **Finish**
Final digit of order number .1:
Powder-coated, RAL 7035 light-gray
Final digit of order number .6:
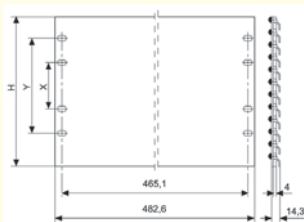colorless anodized E 6 / EV 1

■ **Supply schedule**
1 ventilation front panel

■ **How supplied**
In units

■ **Note**
Please also order front panel mounting material.

H	X	Y	U	Model	Order no.		UP
43.6	31.7	1		Powder-coated, RAL 7035	02.008.101.1		1 unit
43.6	31.7	1		Anodized	02.008.101.6		1 unit
132.5	57.1	3		Powder-coated, RAL 7035	02.008.103.1		1 unit
132.5	57.1	3		Anodized	02.008.103.6		1 unit

Dimensions in mm: W = Width
H = Height
D = Depth
h = installation height
d = useful depth
L = length
CW = Clear width

U = standard height unit
1 U = 44.45 mm
UP = unit of packaging
kg = weight
WxL = Surface area

= Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound

FR000005

MEC20109

19" front panel Aluminum 3 mm

■ **Material/Finish**
Final digit of order number .0:
AlMg3 - F23 polished with lamination sheet
Final digit of order number .1:
AlMg3 - F23, powder-coated, RAL 7035 light gray
Final digit of order number .6:
AlMg3 - F23 EB (anodize-enabled), anodized E6/EV1
Final digit of order number .8:
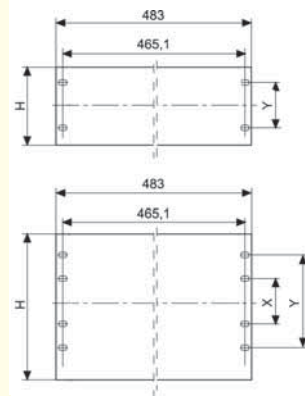AlMg3 - F23, powder-coated, RAL 7021 dark gray

■ **Supply schedule**
1 19" front panel

■ **How supplied**
In units

■ **Note**
Please also order front panel mounting material.

H	X	Y	U	Model	Order no.		UP
43.6		31.7	1	Polished	02.008.021.0		1 unit
88.1		76.2	2	Polished	02.008.022.0		1 unit
132.5		57.1	3	Polished	02.008.023.0		1 unit
177.0		101.6	4	Polished	02.008.024.0		1 unit
221.4		146.0	5	Polished	02.008.025.0		1 unit
265.9	76.2	190.4	6	Polished	02.008.026.0		1 unit
43.6		31.7	1	Powder-coated, RAL 7035	02.008.021.1		1 unit
88.1		76.2	2	Powder-coated, RAL 7035	02.008.022.1		1 unit
132.5		57.1	3	Powder-coated, RAL 7035	02.008.023.1		1 unit
177.0		101.6	4	Powder-coated, RAL 7035	02.008.024.1		1 unit
221.4		146.0	5	Powder-coated, RAL 7035	02.008.025.1		1 unit
265.9	76.2	190.4	6	Powder-coated, RAL 7035	02.008.026.1		1 unit
43.6		31.7	1	Powder-coated, RAL 7021	02.008.021.8		1 unit
88.1		76.2	2	Powder-coated, RAL 7021	02.008.022.8		1 unit
132.5		57.1	3	Powder-coated, RAL 7021	02.008.023.8		1 unit
43.6		31.7	1	Anodized	02.008.071.6		1 unit
88.1		76.2	2	Anodized	02.008.072.6		1 unit
132.5		57.1	3	Anodized	02.008.073.6		1 unit
177.0		101.6	4	Anodized	02.008.074.6		1 unit
221.4		146.0	5	Anodized	02.008.075.6		1 unit
265.9	76.2	190.4	6	Anodized	02.008.076.6		1 unit

FRO00007

19" Front Panel, Hinged

– With 19" adapter and hinge
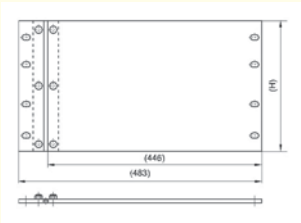
■ **Material**
Aluminum 3 mm

■ **Finish**
Anodized

■ **Supply schedule**
1 front panel, hinged
1 19" adapter
1 hinge

FR000006

How supplied
Flat-packed kit

Note
Please also order front panel mounting material.

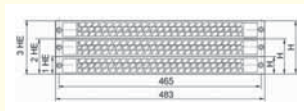| W	H	D	U	Model	Order no.	UP
			3	Anodized	**01.110.780.6**	1 unit
			6	Anodized	**01.110.781.6**	1 unit

LUF88006

LUF00093

19" Front Ventilation Panel

– For additional ventilation of 19" racks and 19" pedestals in acc. with IEC 297

Material/Color
Final digit of order number .1:
ABS (UL 94 V0), light gray RAL 7035
Final digit of order number .9:
ABS (UL 94 V0), dark gray RAL 9011

Supply schedule
1 front ventilation panel
2 connection holders

How supplied
Flat-packed kit

Note
Please also order front panel mounting material.

W	H	D	U	Model	Order no.	UP
483	43.6		1		**02.008.111.1**	1 unit
483	43.6		1		**02.008.111.9**	1 unit

MEC20144

MEC20149

Panel Filter
For 19" front ventilation panel

– For use in conjunction with the 19" front ventilation panel

Material/Color
Filter fibers and screen cloth

Supply schedule
1 panel filter
Mounting material

How supplied
Flat-packed kit

W	H	D	U	Model	Order no.	UP
			1		**02.008.131.9**	1 unit

MEC20027

Document Holder

– Self-adhesive; use 6 mm bore holes with higher stresses
– For DIN A4 documents

Material
High-impact PS

Color
Gray

Supply schedule
1 document holder

W	L	D	Order no.	UP
264	236	30	**05.016.045.0**	1 unit

Dimensions in mm:			
W = Width		U = standard height unit	
H = Height		1 U = 44.45 mm	
D = Depth		UP = unit of packaging	
h = installation height		kg = weight	
d = useful depth		WxL = Surface area	
L = length			
CW = Clear width		= Express item	
Conversion:	1 mm = 0.03937 inch	1 kg = 2.2046 pound	

Ball Bearing Telescopic Slide, BP-400-LR
Part pull-out

mL(N)	A	B	C	D	E	F	G	H	I	K	Order no. 1	UP
500	330	220.5	328	279.4		152.4	101.6		63.5	111.1	**05.043.613.7**	1 pair
460	356	245.5	354	304.8		177.8	101.6		88.9	111.1	**05.043.614.7**	1 pair
400	406	296.5	404	355.6		228.6	101.6		139.7	111.1	**05.043.616.7**	1 pair
490	457	330.5	455	406.4		203.2	101.6	101.6	88.9	111.1	**05.043.618.7**	1 pair
440	508	381.5	505	457.2		228.6	101.6	127	114.3	111.1	**05.043.620.7**	1 pair
410	533	407	531	482.6		241.3	101.6	139.7	127	111.1	**05.043.621.7**	1 pair
600	559	386.8	557	508	406.4	254	101.6	152.4	139.7	111.1	**05.043.622.7**	1 pair
540	610	437.7	608	558.8	457.2	279.4	101.6	177.8	165.1	111.1	**05.043.624.7**	1 pair
500	660	488.5	658	609.6	508	304.8	101.6	203.2	190.5	111.1	**05.043.626.7**	1 pair
600	711	500	709	660.4	558.8	330.2	101.6	228.6	215.6	111.1	**05.043.628.7**	1 pair

TEL00173
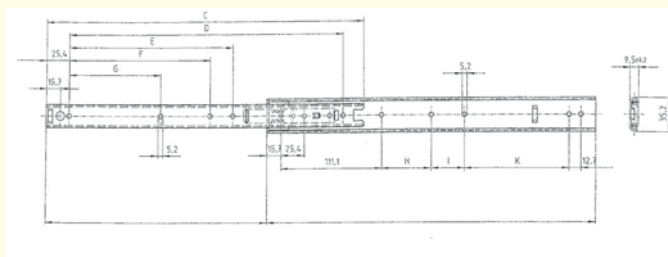
TEL20003

– 3/4 pull-out, two-part
– Locking in pulled-out position (friction lock)
– Quick mechanism for removing and connecting slot-in without tools

■ **Material**
Cold rolled steel

■ **Finish**
Sendizimir zinc-passivated

■ **Load rating**
400 - 600 N static per slide pair depending on length

■ **Supply schedule**
1 pair of telescopic slides

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order assembly set, order number 05.043.595.9

TEL20010

Stop Spring for Ball Bearing Telescopic Slides

– Quick and easy conversion from form lock to friction lock and vice versa
– Conversion also possible at any later stage

■ **Material**
Spring steel

■ **Supply schedule**
Set of 10 units

W	H	D	U	Model	Order no.	UP
				Form lock	**05.043.666.9**	10 unit
				Friction lock	**05.043.667.9**	10 unit

Dimensions in mm: W = Width U = standard height unit
H = Height 1 U = 44.45 mm
D = Depth UP = unit of packaging
h = installation height kg = weight
d = useful depth WxL = Surface area
L = length
CW = Clear width = Express item

Conversion: 1 mm = 0.03937 inch 1 kg = 2.2046 pound

Ball Bearing Telescopic Slide, BF-480-FLR
Full pull-out

mL(N)	A	B	C	D	E	F	G	H	I	K	Order no. 1	UP
455	356	381	354	323.9	311.2	298.5		200	0		**05.043.854.7**	1 pair
490	406	432.5	404	374.7	362	349.3		139.7	111.1		**05.043.856.7**	1 pair
495	457	483.5	455	425.5	412.8	400.1		212.7	190.5	111.1	**05.043.858.7**	1 pair
510	508	530.5	506	476.3	463.6	450.9	365.1	238.1	241.3	111.1	**05.043.860.7**	1 pair
510	559	584.5	557	527.1	514.4	501.7	415.9	263.5	292.1	111.1	**05.043.862.7**	1 pair
515	610	635.5	608	277.9	565.2	552.5	466.7	288.9	342.9	111.1	**05.043.864.7**	1 pair
520	660	686.5	658	628.7	616	603.3	517.5	314.3	393.7	111.1	**05.043.866.7**	1 pair
520	711	737.5	709	679.5	666.8	654.1	568.3	339.7	444.5	111.1	**05.043.868.7**	1 pair

TEL00173
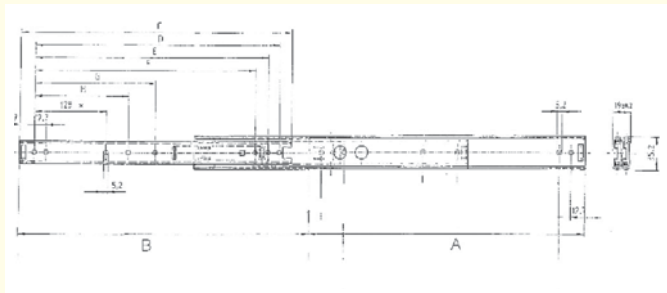
TEL20011

– Full pull-out, three-part
– Locking in pulled-out position (form lock)
– Quick mechanism for removing and connecting slot-in without tools

■ **Material**
Cold rolled steel

■ **Finish**
Sendizimir zinc-passivated

■ **Load rating**
455 - 520 N static per slide pair depending on length

■ **Supply schedule**
1 pair of telescopic slides

■ **How supplied**
Flat-packed kit

■ **Note**
Please also order assembly set, order number 05.043.595.9

TEL00012

Assembly set for Ball Bearing Slides

– For quick and easy assembly of telescopic slides, BP-400-LR and BF-480-FLR

■ **Material**
Zincorium plate, 1.5 mm

■ **Supply schedule**
4 mounting brackets Mounting material

■ **How supplied**
Flat-packed kit

W	H	D	U	Model	Order no.	UP
				Form lock	**05.043.595.9**	1 set

The right mounting set for every rack type

Miracel T-slot	Miracel Mount. holes	Miracel Server	Miracel Swing frame	Smaract T-slot	Smaract Mount. holes	Smaract Server	Double-ProRack T-slot	Double-ProRack Mount. holes	ConAct	Name	Order no.	UP
●				●						Mounting set T-slot, M5 wide	05.041.320.9	1 set
	●				●					Mounting set Mount. holes, M5/BI 1.5	05.041.321.9	1 set
		●	●			●				Mounting set Mount. holes M5/BI 2.5	05.041.325.9	1 set
							●			Mounting set dpr T-slot, M5 narrow	05.041.323.9	1 set
								●		Mounting set dpr Mount. holes, M5	05.041.322.9	1 set
									●	Mounting set ConAct M5	05.041.324.9	1 set

The right mounting set for front panel mounting
Model: Z-form screw

Miracel T-slot	Miracel Mount. holes	Miracel Server	Miracel Swing frame	Smaract T-slot	Smaract Mount. holes	Smaract Server	Double-ProRack T-slot	Double-ProRack Mount. holes	ConAct	Name	Order no.	UP
●				●						FP mounting set T-slot, M5 wide	05.041.335.9	1 set
	●				●				●	FP mounting set Mount. holes M5/BI 1.5	05.041.336.9	1 set
		●	●			●		●		FP mounting set Mount. holes M5/BI 2.5	05.041.337.9	1 set
							●			FP mounting set T-slot, M5 narrow	05.041.338.9	1 set

Model: Countersunk screw+rosette

Miracel T-slot	Miracel Mount. holes	Miracel Server	Miracel Swing frame	Smaract T-slot	Smaract Mount. holes	Smaract Server	Double-ProRack T-slot	Double-ProRack Mount. holes	ConAct	Name	Order no.	UP
●				●						FP mounting set T-slot, M5 wide	05.041.340.9	1 set
	●				●				●	FP mounting set Mount. holes M5/BI 1.5	05.041.341.9	1 set
		●	●			●		●		FP mounting set Mount. holes M5/BI 2.5	05.041.342.9	1 set
							●			FP mounting set T-slot, M5 narrow	05.041.343.9	1 set

Dimensions in mm:
W = Width
H = Height
D = Depth
h = installation height
d = useful depth
L = length

U = standard height unit
1 U = 44.45 mm
UP = unit of packaging
kg = weight

= Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound

The right accessories for every rack type

Miracel T-slot	Miracel Mount. holes	Miracel Server	Miracel Swing frame	Smaract T-slot	Smaract Mount. holes	Smaract Server	Double-ProRack T-slot	Double-ProRack Mount. holes	ConAct	Name	Order no.	UP
●				●						Spring nut M5 wide	**01.350.431.9**	1 set
					●					Spring nut M5 narrow	**05.041.503.9**	1 set
●				●						Spring nut M6	**01.350.405.9**	1 set
	●				●				●	Caged nut M5/BI 1.5	**05.041.513.7**	1 set
		●	●			●		●		Caged nut M5/BI 2.5	**05.041.518.7**	1 set
●				●			●			Oval head screw Z-form M5 x 10	**05.041.330.9**	1 set
	●	●	●		●	●		●	●	Oval head screw Z-form M5 x 16	**05.041.331.9**	1 set
●				●			●			Countersunk screw M5 x 12 + rosette	**05.041.203.9**	1 set
	●	●	●		●	●		●	●	Countersunk screw M5 x 16 + rosette	**05.041.290.9**	1 set

MIR00114

Mounting Tool for Caged Nut

– Makes clipping the caged nut into the extrusion easier

■ **Material**
Spring steel

■ **Supply schedule**
1 mounting tool

W	H	D	U	d	L	Model	Order no.	UP
							01.130.985.9 🔶	1 unit

Dimensions in mm:
W = Width
H = Height
D = Depth
h = installation height
d = useful depth
L = length

U = standard height unit
1 U = 44.45 mm
UP = unit of packaging
kg = weight
🔶 = Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound

MEC20125

T-Slot Mounting set, M5, Wide For Miracel®/ Smaract®

- For mounting 19" front panels and 19" components

■ **Supply schedule**
100 spring nuts M5, wide
100 oval head screws, Z-form, M5 x 10
20 caged nuts, M5 / plate, 1.5 mm
20 cylinder screws, M5 x 8

■ **How supplied**
Flat-packed kit

W	H	D	U	d	L	Model	Order no.	UP
							05.041.320.9	1 set

MEC20126

Mounting Holes Mounting Set, M5 / Plate, 1.5 mm For Miracel®/ Smaract®

– For mounting 19" front panels and 19" components

■ **Supply schedule**
100 caged nuts M5 / plate, 1.5 mm
100 oval head screws, Z form, M5 x 16
20 spring nuts, M5 wide
20 cylinder screws, M5 x 8

■ **How supplied**
Flat-packed kit

W	H	D	U	d	L	Model	Order no.	UP
							05.041.321.9	1 set

MEC20126

Mounting Holes-Server Extrusion Mounting Set M5 / Plate 2.5 mm for Miracel®/ Smaract®

– For mounting 19" front panels and 19" components

■ **Supply schedule**
100 caged nuts M5 / plate, 2.5 mm
100 oval head screws, Z form, M5 x 16
20 spring nuts, M5 wide
20 cylinder screws, M5 x 8

■ **How supplied**
Flat-packed kit

W	H	D	U	d	L	Model	Order no.	UP
							05.041.325.9	1 set

MEC20127

T-Slot Mounting set, M5, Narrow for DoubleProRack®

– For mounting 19" front panels and 19" components

■ **Supply schedule**
100 spring nuts, M5 narrow
20 oval head screws, Z-form, M5 x 10
50 cylinder screws, M5 x 10
30 oval head screws, Z-form, M5 x 8

■ **How supplied**
Flat-packed kit

W	H	D	U	d	L	Model	Order no.	UP
							05.041.323.9	1 set

MEC20126

Mounting Holes Mounting Set, M5 For DoubleProRack®

– For mounting 19" front panels and 19" components

■ **Supply schedule**
100 caged nuts M5 / plate, 2.5 mm
50 oval head screws, Z form, M5 x 16
40 spring nuts, M5 narrow
40 cylinder screws, M5 x 10

■ **How supplied**
Flat-packed kit

W	H	D	U	d	L	Model	Order no.	UP
							05.041.322.9	1 set

MEC20096

Mounting Holes Mounting Set, M5 For ConAct®

– For mounting 19" front panels and 19" components

■ **Supply schedule**
50 caged nuts M5 / plate, 1.5 mm
50 oval head screws, Z-form, M5 x 16
50 cylinder screws, M5 x 8
25 locking nuts, M5

■ **How supplied**
Flat-packed kit

W	H	D	U	d	L	Model	Order no.	UP
							05.041.324.9	1 set

Type 1

MEC20129

Type 2

MEC20130

Front panel mounting set, T-slot, M5 wide For Miracel®/ Smaract®

– For mounting 19" front panels and 19" components

■ **Supply schedule**
Type 1:
50 spring nuts, M5 wide
50 oval head screws, Z-form, M5 x 10
Type 2:
50 spring nuts, M5 wide
50 countersunk screws, M5 x 12
50 rosettes

■ **How supplied**
Flat-packed kit

W	H	D	U	d	L	Model	Order no.	UP
						Type 1: Z-form screw	05.041.335.9	1 set
						Type 2: Screw+rosette	05.041.340.9	1 set

Type 1

MEC20098

Front Panel Mounting Set, Mounting Holes, M5/Plate, 1.5 mm For Miracel®/ Smaract®/ ConAct®

– For mounting 19" front panels and 19" components

■ **Supply schedule**
Type 1:
50 caged nuts M5 / plate, 1.5 mm
50 oval head screws, Z-form, M5 x 16
Type 2:
50 caged nuts M5 /plate, 1.5 mm
50 countersunk screws, M5 x 16
50 rosettes

Type 2

MEC20097

- **How supplied**
  Flat-packed kit

W	H	D	U	d L	Model	Order no.	UP
					Type 1: Z-form screw	05.041.336.9	1 set
					Type 2: Screw+rosette	05.041.341.9	1 set

Type 1

MEC20098

Type 2

MEC20097

Front Panel Mounting Set, Mounting Holes, M5/Plate, 2.5 mm For Miracel®/Smaract®/DoubleProRack®

– For mounting 19" front panels and 19" components

- **Supply schedule**
  Type 1:
  50 caged nuts M5 / plate, 2.5 mm
  50 oval head screws, Z-form, M5 x 16
  Type 2:
  50 caged nuts M5 /plate, 2.5 mm
  50 countersunk screws, M5 x 16
  50 rosettes

- **How supplied**
  Flat-packed kit

W	H	D	U	d L	Model	Order no.	UP
					Type 1: Z-form screw	05.041.337.9	1 set
					Type 2: Screw+rosette	05.041.342.9	1 set

Type 1

MEC20129

Front Panel Mounting set, T-Slot, M5, Narrow For DoubleProRack®

– For mounting 19" front panels and 19" components

- **Supply schedule**
  Type 1:
  50 spring nuts, M5 narrow
  50 oval head screws, Z-form, M5 x 10
  Type 2:
  50 spring nuts, M5 narrow
  50 countersunk screws, M5 x 12
  50 rosettes

- **How supplied**
  Flat-packed kit

Type 2

MEC20130

W	H	D	U	d L	Model	Order no.	UP
					Type 1: Z-form screw	05.041.338.9	1 set
					Type 2: Screw+rosette	05.041.343.9	1 set

MEC00060

Spring Nut

– For clipping into T-slots at any position

Type 1: M5 wide for Miracel / Smaract
     T-nut size: 10 x 13 mm
Type 2: M5 narrow for DoubleProRack
     T-nut size: 8 x 13 mm
Type 3: M6 for Miracel / Smaract
     T-nut size: 10 x 13 mm

- **Supply schedule**
  50 spring nuts

- **How supplied**
  Flat-packed kit

W	H	D	U	d L	Model	Order no.	UP
					Type 1: M5 wide	01.350.431.9	1 set
					Type 2: M5 narrow	05.041.503.9	1 set
					Type 3: M6	01.350.405.9	1 set

MEC20139

Caged nut

– For clipping into extrusions with mounting holes

Type 1: Plate, 1.5 mm
     For Miracel / Smaract / ConAct / SoHo
Type 2: Plate, 2.5 mm
     For Miracel Server / Smaract Server / DoubleProRack mounting holes

- **Supply schedule**
  50 caged nuts

- **How supplied**
  Flat-packed kit

W	H	D	U	d L	Model	Order no.	UP
					M5: Type 1: Plate 1.5 mm	05.041.513.7	1 set
					M5: Type 2: Plate 2.5 mm	05.041.518.7	1 set
					M6: Type 1: Plate 1.5 mm	05.041.514.7	1 set
					M6: Type 2: Plate 2.5 mm	05.041.519.7	1 set

MEC20140

Oval Head Screw

– IEC DIN 967

- **Supply schedule**
  50 oval head screws, Z-form

- **How supplied**
  Flat-packed kit

W	H	D	U	d L	Model	Order no.	UP
					M5 x 10	05.041.330.9	1 set
					M5 x 16	05.041.331.9	1 set
					M6 x 10	05.041.332.9	1 set
					M6 x 16	05.041.333.9	1 set

MEC20141

Countersunk Screw + Rosette

– IEC DIN EN ISO 7047

- **Supply schedule**
  50 countersunk screws
  50 rosettes

- **How supplied**
  Flat-packed kit

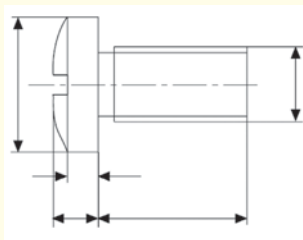| W	H	D	U	d L	Model	Order no.	UP
					M5 x 12	05.041.203.9	1 set
					M5 x 16	05.041.290.9	1 set

Oval Head Screw
Self-guiding

MEC80020

– DIN 7500
– Suitable for system accessories fixed on the inside of the 19" extrusions
– Suitable for 19" steel and 19" aluminum extrusions
– Easy screwing

■ **Supply schedule**
50 oval head screws, M6x10

■ **How supplied**
Flat-packed kit

W	H	D	U	d	L	Model	Order no.	UP
						M6 x 10	**05.041.334.9**	1 set

Oval Head Screw
With Phillips head

MEC00014

– IEC DIN EN ISO 7045

■ **Supply schedule**
1 set of 50 units

W	H	D	U	d	L	Model	Order no.	UP
					8	M 5 no washer	**05.041.611.8**	1 set
					12	M 4 no washer	**05.041.609.8**	1 set
					12	M 5 with washer	**05.041.613.8**	1 set
					16	M 5 with washer	**05.041.614.8**	1 set
					16	M 6 with washer	**05.041.616.8**	1 set
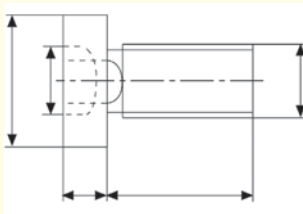
Cylinder Screw
With hexagon head

MEC00013

– IEC ISO 4762 (modified)

■ **Supply schedule**
1 set of 50 units

W	H	D	U	d	L	Model	Order no.	UP
					8	M 5	**05.041.574.8**	1 set
					8	M 5 microencapsulated	**05.041.575.9**	1 set
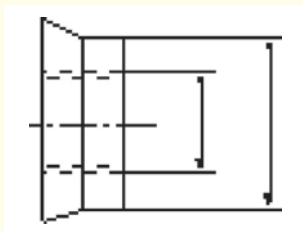
Tensiloc Nut

MEC20021

■ **Material**
Steel nickel-plated

■ **Supply schedule**
1 set of 50 units

W	H	D	U	d	L	Model	Order no.	UP
						M 5	**05.041.533.8**	1 set

Cable Entry Rail

HEI00234

Alternative to cable entry via brush strips when installing distributor box in open frames

■ **Material/ Finish**
Sheet steel, zinc-passivated

■ **Supply schedule**
1 cable routing panel
11 bushing sockets
Mounting material

W	H	D	Model	Order no.	UP
				03.013.386.1	1 unit

Luminestra
Rack Lighting

ELM00058

– Only for rack type Miracel W 700, W 800
– Mounting is made on the basic frame above the vertical extrusions
– With 13 watt fluorescent tube
– With on/off rocker switch
– With 2 m power supply lead and EURO plug
– Complete with mounting material
– Only with 123 mm front jumpering space

■ **Color**
White

■ **Supply schedule**
1 Luminestra rack lamp
2 mounting brackets
Mounting material

W	H	D	U	h	d	w	Model	Order no.	UP
70	20	555						**01.131.227.9**	1 unit

Compact Rack Lamp

ELM00135

■ **Features**
With magnetic mounting
Energy-saving lamp
Protective contact socket
On/off switch
3 m power supply lead
With cover panel

■ **Approval**
VDE, ICE

■ **Protection rating IP20**

■ **Technical data**
- Operating voltage 230 V / 50-60 Hz
- Lighting Compact fluorescent tube with integrated starter
- Power consumption: 11 W $\hat{=}$ 75 W bulb
- Light intensity: 900 Lm
- Interference suppression in acc. with VDE 0712, IEC 82
- Socket: 230 VAC / 16A
- Connections: 3-pole screw clamp 2.5 mm^2 with strain relief

W	H	D	U	h	d	w	Model	Order no.	UP
65	65	365						**01.131.465.9**	1 unit

HEI00379

1 Distribution Box

– For mounting installation technology DIN rail components, such as fuses, clamps, relays, etc.
– In the built-in status, the mounting level can be pulled out at the front, locked in position, and as a result, significantly simplifies the wiring of the individual components
  Not with "fixed installation" model
  On request: Delivered assembled and wired
  Further versions and models on request
– Installation space for up to 22 pieces of equipment with 18 mm width each
– Mounting of the TS35 DIN rail on several levels with simple plug-in connection
  Not with "fixed installation" version
– "Snap-in" mounting of DIN rail components
– Easy access to the protective earth and neutral conductor rails from the front
– Various positioning options prepared for N and PE rails
  Not with "fixed installation" version
– Cable entry at the rear via double brush strip (optionally via bushing sockets)
– Cable strain relief on the inside and therefore accessible from the front
– Labeling strips on the front, above and below the installation space
– Installation options for power distribution with 230 V AC, but also in the low voltage range (e.g. 48 V DC)
– 19" slot-in, 3 U, depth 150 mm

■ **Material/ Finish**
  - Covers, powder-coated texture, RAL 7035 light gray
  - Main unit, zinc-passivated sheet steel

■ **Supply schedule**
  1 distribution box
  Including N and PE rails, cable entry, cable strain relief, empty panel covers and earth set

■ **How supplied**
  Fully assembled

W	H	D	U	19"	Model	Order no.	UP
482.6	134	150	3	●	Pull-out	**03.013.385.1**	1 unit
482.6	134	150	3	●	Fixed installation	**03.013.470.1**	1 unit

HEI20282

ELM00137

Door Contact Switch

– On/off switch, 4 A, 230 V ~
– Activation with door opening and closing

■ **Supply schedule**
  1 door contact switch (not wired)
  1 mounting brackets
  Mounting material

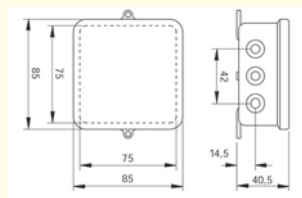| W	H	S	U	h	d	kg	Model	Order no.	UP
								01.110.722.9	1 unit

ELM00033

1 Cable Junction Box

– For 230V electro-installation on-site
– As fixed-location exchange point
– Quick and easy mounting

■ **Supply schedule**
  1 cable junction box

ELM00034

W	H	D	U	h	d	w	Model	Order no.	UP
								00.078.720.9	1 unit

ELM00128

Modular Terminal Box

– For 230V electro-installation on-site
– With series terminal, 8 x 4²
– Pg 11/16 entry
– IP 54

■ **Material**
  High-impact, fire-resistant polystyrene

■ **Supply schedule**
  1 modular terminal box
  4 Pg compression glands, Pg11

W	H	S	U	h	d	kg	Model	Order no.	UP
								01.117.521.9	1 unit

Dimensions in mm: W = Width
H = Height
D = Depth
h = installation height
d = useful depth
L = length

U = standard height unit
1 U = 44.45 mm
UP = unit of packaging
kg = weight
= Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound

1 Equipotential Bonding Bar

ELM00114

– For central earthing of all protective
  conductors
– With sealing cover
– Connection options:
– 1 x round conductor 8-10 mm Ø
– 1 x flat conductor up to 30 mm wide or
  round conductor 8-10 mm Ø
– 7 x single or several-wire conductors up
  to 16 mm² or fine wire conductor up to
  10 mm²

■ **Material**
  Base and cover, high-impact plastic
  Brass nickel-plated contact strip

■ **Supply schedule**
  1 equipotential bonding bar

W	H	S	U	h	d	kg	Model	Order no.	UP
								01.117.524.3	1 unit

Earthing Bar

ELM00068

– For safe earthing and equipotential
  bonding of equipment and installation
  components

■ **Material**
  Electrolyte copper, 9x9

■ **Supply schedule**
  1 earthing bar
  2 brackets
  Mounting material

W	H	S	U	h	d	kg	Model	Order no.	UP
			24				For DoubleProRack	01.240.546.9	1 unit
			21				For DoubleProRack	01.240.545.9	1 unit
			18				For DoubleProRack	01.240.544.9	1 unit
			15				For DoubleProRack	01.240.543.9	1 unit
			45				For Miracel	01.110.709.9	1 unit
			41				For Miracel	01.110.708.9	1 unit
			12				For Miracel	01.110.703.9	1 unit

Contact Clamp

DOP20016

– For safe and secure connection of equip-
  ment and installation components with
  the earthing bar
– For cables up to 25 mm²

■ **Supply schedule**
  20 contact clamps

W	H	S	U	h	d	kg	Model	Order no.	UP
								01.110.715.9	20 unit

Dimensions in mm: W = Width   U = standard height unit
                       H = Height   1 U = 44.45 mm
                       D = Depth   UP = unit of packaging
                       h = installation height kg = weight
                       d = useful depth
                       L = length   = Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound

Rack PDUs

Overview : Emerson Network Power Rack PDUs Europe

Merkmale	Knürr DI-Strip Basic Rack PDU®			Liebert MPH™ Managed Rack PDU		Liebert MPX™ Adaptive Rack PDU			
	Knürr DI-STRIP	Knürr DI-STRIP M	Knürr DI-STRIP RM	Liebert MPH Branch Monitored	Liebert MPH controlled	Liebert MPX Elementary	Liebert MPX Elementary Phase monitored	Liebert MPX Branch monitored	Liebert MPX Receptacle managed
Power distribution	•	•	•	•	•	•	•	•	•
Modular						•	•	•	•
Local display		Fixed	Fixed	Modular	Modular		Modular	Modular	Modular
Remote interface		•	•	•	•		•	•	•
Measuring on input level		•	•	•	•		•	•	•
Measuring per group				•	•			•	•
Measuring per output									•
Switching per output					•				•
Measuring parameters		A	A	A,V,W,KWh, Hz	A,V,W,KWh, Hz		A,V,W,KWh, Hz	A,V,W,KWh, VA, Hz, power factor	A,V,W,KWh, VA, Hz, power factor, crest factor
Input power	1ph + 3ph max 32A	1ph + 3ph max 32A	1ph + 3ph max 32A	1ph + 3ph max 32A	1ph + 3ph max 32A	1ph + 3ph max 63A	1ph + 3ph max 63A	1ph + 3ph max 63A	1ph + 3ph max 63A
Outputs	IEC C13&C19 Schuko Switzerland France	IEC C13&C19 Schuko Switzerland France	IEC C13&C19 Schuko Switzerland France	IEC C13&C19	IEC C13&C19	IEC C13&C19 Schuko	IEC C13&C19 Schuko	IEC C13&C19 Schuko	IEC C13&C19 Schuko
Different sensors can be connected				•	•		•	•	•

STROM — BUSINESS CONTINUITY

INFRASTRUKTURMANAGEMENT

STROM-KÜHLUNGS-INFRASTRUKTUR

All systems are RoHS compliant.

RoHS 2002/95/EC

www.knuerr.com

Liebert MPX™

The **Liebert MPX™** modular rack PDU system is particularly impressive with its maximum flexibility, highest possible availability and low operating costs. With the **Liebert MPX™** users can quickly and specifically react to new requirements for power supply and rack management. The **Liebert MPX™** gives users the ability to dimension their rack PDU system so that all current requirements are met first off. The system can then be flexibly adjusted later on when new requirements appear. The **Liebert MPX™** builds on a design that is based on a power supply/communication bus and on input/output modules.

The **Liebert MPX™** modular rack PDU consists of various modules. The foundation stone is a busbar, which is responsible for the power and communication distribution to the individual modules. The input power is routed via the MPX Power Entry Module (MPX PEM) to the MPX system. Different output modules (MPX Branch Receptacle Modules, MPX BRM) are available according to requirements. Four different lines can be set up depending on the equipment:

* **Liebert MPX™** Elementary
* **Liebert MPX™** Elementary Phase monitored
* **Liebert MPX™** Branch monitored
* **Liebert MPX™** Receptacle managed

These lines can also be mixed on a shared busbar, this being one of the exceptional features of the **Liebert MPX™**. Interfaces for the network communication, the sensors and/or the local display are provided by the Liebert Rack PDU Card (Liebert RPC) in the MPX PEM. The Liebert RPC Card enables connection to an optional RPC Basic Display Module (RPC BDM) to display the local status and alarms.

The **Liebert MPX™** is provided as a separate, loosely packaged module for on-site configuration by the user. The MPX was designed especially for quick and easy configuration and re-configuration. Preconfigured systems are also available when ordered as factory-installed Knürr rack enclosure systems.

Liebert MPX™
Strong points

■ **Highest possible security and availability with:**
  - Redundant control electronics power supply (with redundant tapping of various phase in the Power Entry Module)
  - Fixed databus on the busbar (making cable breaks a thing of the past)
  - With complete data tapping on the PEM (without any additional external monitoring devices)
  - Additional neutral conductor measurement
  - Crest factor measurement (mains quality evaluation, allowing power supply failures to be identified early on)

■ **Maximum flexibility and scalability with:**
  - Configuration of all modules according to their requirements (including input module)
  - "Hot-swappable" during running operation
  - Feed can be changed (single-phase up to three-phase, 16 up to 63 ampere)
  - Mobile display for reading all MPX™ data on the rack
  - Optical display of the slot space (easy server slot space identification at the push of a button)

■ **Ultimate high performance with:**
  - Power illustration up to 28 kVA per bar and 55°C ambient temperature
  - Only one IP address for up to 4 bars with 24 modules
  - Plug and play for numerous sensors

  - Extensive monitoring with a measuring accuracy of +/- 1% up to output level
  - Module and sensor autodetect function with operating software
  - Lowest possible MPX™ system power loss

■ **Perfect for blade servers and changing environments**
  Data centers work more and more with high performance blade servers and require more processor power on low rack space; cabling must be simplified; power consumption must be reduced.
  With the MPX™ the data center can quickly react to changes, which is why our product is the right choice for your infrastructure's administration.

Status display (RPC-BDM)
Can be easily positioned at the optimum spot for the individual rack; even functions outside the rack. This connected display can be mounted just as the user wishes.

Liebert MPX™ PRC - Power Distribution Unit/Communication Bus

- The MPX PRC is the foundation stone of the Liebert MPX PDU.
- Power and data transfer buses are integrated fixed over the entire length of the MPX PRC.
- The MPX BRMs (output modules) and the MPX PEM (power entry module) are fixed on the MPX PRC and depending on the type take care of the modules' power feed, output, monitoring and management.

■ Material/ Finish
Busbars housing: Aluminum
Busbars: Copper
Databus: Gilded

■ Dimensions
Width: 68 mm
Height: 24 mm

■ Color
Housing: aluminum

■ Approvals
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova GS

■ Load rating
Max. current intensity: 3 x 63 A
Nominal voltage (L-N / L-L): 230 / 400 Vac

■ Supply schedule
1 Liebert MPX™ PRC - Power Distribution Unit/Communication Bus
1 mounting set
Operating instructions

DOS20153

L	W	H	U	Model	Order no.	UP
1035	68	24	23	1 PEM (220mm) + 3 BRM	**MPXPRC-V1035XXX**	1 unit
1880	68	24	42	1 PEM (220/266mm) + 6 BRM	**MPXPRC-V1880XXX**	1 unit

Liebert MPX™ – Input Module/Power Supply

Elementary and Monitored type:
- The MPX PEM is fixed on the MPX PRC and provides the connection to the power supply.
- Cable is connected fixed, 3 m long
- With IEC60309 plug, 1Ph/N/PE 6h blue, 3Ph/N/PE 6h red

Monitored type:
- The MPX PEM provides the connection to the databus for the data communication.
- The MPX PEM has an installation slot into which the RPC-1000 communication card can be installed. (Not in the supply schedule)
- Provides the following measured values of the phase inputs: real power, current, voltage, frequency and consumption.
- Power alarm functions for the individual phases and their operating status are also supported.
- Further important features: Three displays inform the user about the current status of each individual input. An acoustic alarm is activated with specific overload conditions.

■ Material/ Finish
Housing: Aluminum
Cover: Sheet steel
Power contacts: Silvered
Databus contacts: Gilded (only Monitored type)

■ Dimensions
Width: 75 mm
Height: 65 mm
Cable: 3 m

■ Color
Housing: Aluminum/RAL 9011 black

■ Approvals
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova GS

■ Supply schedule
1 MPX PEM - Power Entry Module incl. connection cable
Operating instructions

DOS20153

L	W	H	U	Feed	Load rating	Type	Order no.	UP
220	75	65		Fixed	230Vac, max 32A	Elementary	**MPXPEM-EHAEXQ30**	1 unit
220	75	65		Fixed	230/400Vac, max 16A	Elementary	**MPXPEM-EHAEXT30**	1 unit
220	75	65		Fixed	230/400Vac, max 32A	Elementary	**MPXPEM-EHAEXR30**	1 unit
266	75	65		Fixed	230/400VacC, max 63A	Elementary	**MPXPEM-EHBEXZ30**	1 unit
220	75	65		Fixed	230Vac, max 32A	Monitored	**MPXPEM-EHAXXQ30**	1 unit
220	75	65		Fixed	230/400Vac, max 16A	Monitored	**MPXPEM-EHAXXT30**	1 unit
220	75	65		Fixed	230/400Vac, max 32A	Monitored	**MPXPEM-EHAXXR30**	1 unit
266	75	65		Fixed	230/400Vac, max 63A	Monitored	**MPXPEM-EHBXXZ30**	1 unit

DOS20153

Liebert MPX™ BRM - Output Module

- The MPX BRM takes care of the power distribution to the individual load
- Each module taps a phase; this is color-identified on the module.
- All modules are protected against overload with a 20A circuit breaker.
- Changing the modules during operation enables a user-defined installation, without having to shut down the Liebert MPX.
- Up to 3 BRM output modules can be installed on a 1035 mm PRC busbar; up to 6 BRM output modules can be installed on a 1880 mm PRC busbar.

Type E - Elementary:
- Module for power distribution via respective outputs

Type B – Branch monitored:
- Module for power distribution via respective outputs with measuring function on module level
- The MPX BRMs have an LED-ID indicator, which clearly identifies every module with a number.
- The modules are administered in the software
- Provides the following measured values: power, current, voltage, apparent power, kWh and power factor
- Power alarm functions and the operating status are supported

Type R – Receptacle managed:
- Module for power distribution via respective outputs with measuring function on module level and output level

- The MPX BRMs have an LED-ID indicator, which clearly identifies every module with a number.
- The modules are administered in the software
- Provides the following measured values: power, current, voltage, apparent power, kWh, frequency, power factor and crest factor
- Power alarm functions and the operating status are supported
- The individual outputs can be switched on and off remotely

■ **Material/ Finish**
Housing: Aluminum
Cover: Sheet steel
Power contacts: Silvered
Databus contacts: Gilded (only type B and R)

■ **Dimensions**
Width: 75 mm
Height: 65 mm

■ **Color**
Housing: Aluminum/RAL 9011 black

■ **Approvals**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova GS

■ **Supply schedule**
1 MPX™ BRM Output Module
Operating instructions

L	n	Outputs	Load rating per output	Phase tapping	Type	Order no.	UP
266	7	IEC320 Sheet F	10A	L1	E	**MPXBRM-EEBC7N1N**	1 unit
266	7	IEC320 Sheet F	10A	L2	E	**MPXBRM-EEBC7N2N**	1 unit
266	7	IEC320 Sheet F	10A	L3	E	**MPXBRM-EEBC7N3N**	1 unit
266	4	IEC320 Sheet J	16A	L1	E	**MPXBRM-EEBC4O1N**	1 unit
266	4	IEC320 Sheet J	16A	L2	E	**MPXBRM-EEBC4O2N**	1 unit
266	4	IEC320 Sheet J	16A	L3	E	**MPXBRM-EEBC4O3N**	1 unit
266	3	Schuko CEE 7/4	16A	L1	E	**MPXBRM-EEBC3P1N**	1 unit
266	3	Schuko CEE 7/4	16A	L2	E	**MPXBRM-EEBC3P2N**	1 unit
266	3	Schuko CEE 7/4	16A	L3	E	**MPXBRM-EEBC3P3N**	1 unit
266	6	IEC320 Sheet F	10A	L1	B	**MPXBRM-EBBC6N1N**	1 unit
266	6	IEC320 Sheet F	10A	L2	B	**MPXBRM-EBBC6N2N**	1 unit
266	6	IEC320 Sheet F	10A	L3	B	**MPXBRM-EBBC6N3N**	1 unit
266	4	IEC320 Sheet J	16A	L1	B	**MPXBRM-EBBC4O1N**	1 unit
266	4	IEC320 Sheet J	16A	L2	B	**MPXBRM-EBBC4O2N**	1 unit
266	4	IEC320 Sheet J	16A	L3	B	**MPXBRM-EBBC4O3N**	1 unit
266	3	Schuko CEE 7/4	16A	L1	B	**MPXBRM-EBBC3P1N**	1 unit
266	3	Schuko CEE 7/4	16A	L2	B	**MPXBRM-EBBC3P2N**	1 unit
266	3	Schuko CEE 7/4	16A	L3	B	**MPXBRM-EBBC3P3N**	1 unit
266	6	IEC320 Sheet F	10A	L1	R	**MPXBRM-ERBC6N1N**	1 unit
266	6	IEC320 Sheet F	10A	L2	R	**MPXBRM-ERBC6N2N**	1 unit
266	6	IEC320 Sheet F	10A	L3	R	**MPXBRM-ERBC6N3N**	1 unit
266	4	IEC320 Sheet J	16A	L1	R	**MPXBRM-ERBC4O1N**	1 unit
266	4	IEC320 Sheet J	16A	L2	R	**MPXBRM-ERBC4O2N**	1 unit
266	4	IEC320 Sheet J	16A	L3	R	**MPXBRM-ERBC4O3N**	1 unit
266	3	Schuko CEE 7/4	16A	L1	R	**MPXBRM-ERBC3P1N**	1 unit
266	3	Schuko CEE 7/4	16A	L2	R	**MPXBRM-ERBC3P2N**	1 unit
266	3	Schuko CEE 7/4	16A	L3	R	**MPXBRM-ERBC3P3N**	1 unit

DOS20153

Liebert RPC - 1000 Communication Card

- The Liebert RPC centralizes the Liebert MPX local and remote administration.
- Administration via web and SNMP for systems connected to the Ethernet.
- Also serves as the connection point for versatile support options and devices, such as the display module (RPC BDM), various sensors and connection to other Liebert MPX or Liebert MPH systems, for example.
- Has RJ-45 ports for all connections and does not require any special cabling.
- Supports 10 and 100 MBit Ethernet and provides on-site firmware upgrade.
- Installed in an MPX PEM (input module) slot.

■ **Technical data**
Interfaces:
- RJ-45 LAN port (10/100 MBit) – for connecting to the local network (LAN) via an Ethernet cable

- Expansion/administration port for local configuration using a computer/laptop, for setting up a link-up of several PDUs (Liebert MPX or MPH)
- Display port for connecting the RPC BDM (display module)
- External sensor port for connecting optional sensors

■ **Supported technologies:**
- Web support, provides Liebert MPX control and management. Authorized users can view status information via their network.
- SNMP support, provides Liebert MPX SNMP management.
- Easy integration into Liebert Nform, Avocent DSVIEW3 and Nagios

■ **Supply schedule**
1 RPC-1000 communication card
Operating instructions

L	W	H	U	Model	Order no.	UP
					RPC-1000	1 unit

DOS20153

Liebert RPC BDM - 1000 Display Module

- Provides the local display of the monitored data for all connected Liebert MPX and Liebert MPH systems.
- Operated with the aid of a navigation switch.
- Connected via a cable with the Liebert RPC, which provides the user the option of placing the displays where they can be easily read in accordance with the local space conditions.
- An individual display can be used for up to four Liebert MPX or Liebert MPH PDUs, which are connected to a PDU array.

■ **Note**
The Display Module is not required for operating the Liebert MPX or MPH, but it itself requires the Liebert RPC-1000 (communication card)

■ **Supply schedule**
1 RPCBDM-1000 Display Module
1 2m power supply lead
1 mounting set
Operating instructions

L	W	H	U	Model	Order no.	UP
					RPCBDM-1000	1 unit

DOS20153

Liebert MPX™/MPH™ Sensors

- The sensors are designed for tool-less installation in a Knürr Miracel Rack, but they can also be installed in any other rack.
- "Fixed" type sensors are fixed to a cable.
- "Modular" type sensors can be connected with the delivered cable.
- Are affixed to the RPC-1000 communication card
- Several sensors can be connected in rows (max. length: 20m)
- Are automatically displayed in the Liebert MPX/MPH software
- Temperature measuring range: 5-55°C

- Accuracy: +/- 0.5°C
- Humidity measuring range: 10 – 95%
- Accuracy: +/- 3.5%

Note
The sensors are not required for operating the Liebert MPX or MPH, but they require the Liebert RPC-1000 (communication card)

Supply schedule
1 sensor with connection cable
Operating instructions

Cable length	Type	Model	Order no.	UP
3660	Fixed	Single temp. sensor	SN-Z01	1 unit
5180	Fixed	Triple temp. sensor	SN-Z02	1 unit
5180	Fixed	Triple temp. sensor + single humidity	SN-Z03	1 unit
2000	Modular	Single temp. sensor	SN-T	1 unit
2000	Modular	Triple temp. sensor + single humidity	SN-TH	1 unit
2000	Modular	2 x door contact - input module*	SN-2D	1 unit
2000	Modular	3 x digital input	SN-3C	1 unit

* Suitable door contact switch: Order no.: 06.108.115.9

Order Numbers : Liebert MPX™ Europe

		Order number	MPX Elementary	MPX Elementary Phase monitored	MPX Branchmonitored	MPX Receptaclemanaged
Busbars	Length 1035	MPXPRC-V1035XXX	●	●	●	●
	Length 1880	MPXPRC-V1880XXX	●	●	●	●
Input modules	1ph 32A fixed	MPXPEM-EHAEXQ30	●			
		MPXPEM-EHAXXQ30		●	●	●
	3ph 16A fixed	MPXPEM-EHAEXT30	●			
		MPXPEM-EHAXXT30		●	●	●
	3ph 32A fixed	MPXPEM-EHAEXR30	●			
		MPXPEM-EHAXXR30		●	●	●
	3ph 63A fixed	MPXPEM-EHBEXZ30	●			
		MPXPEM-EHBXXZ30		●	●	●
Output modules: Elementary	IEC-C13 L1	MPXBRM-EEBC7N1N	●	●		
	IEC-C13 L2	MPXBRM-EEBC7N2N	●	●		
	IEC-C13 L3	MPXBRM-EEBC7N3N	●	●		
	IEC-C19 L1	MPXBRM-EEBC4O1N	●	●		
	IEC-C19 L2	MPXBRM-EEBC4O2N	●	●		
	IEC-C19 L3	MPXBRM-EEBC4O3N	●	●		
	Schuko L1	MPXBRM-EEBC3P1N	●	●		
	Schuko L2	MPXBRM-EEBC3P2N	●	●		
	Schuko L3	MPXBRM-EEBC3P3N	●	●		
Output modules: Branch monitored	IEC-C13 L1	MPXBRM-EBBC6N1N			●	
	IEC-C13 L2	MPXBRM-EBBC6N2N			●	
	IEC-C13 L3	MPXBRM-EBBC6N3N			●	
	IEC-C19 L1	MPXBRM-EBBC4O1N			●	
	IEC-C19 L2	MPXBRM-EBBC4O2N			●	
	IEC-C19 L3	MPXBRM-EBBC4O3N			●	
	Schuko L1	MPXBRM-EBBC3P1N			●	
	Schuko L2	MPXBRM-EBBC3P2N			●	
	Schuko L3	MPXBRM-EBBC3P3N			●	
Output modules: Receptacle managed	IEC-C13 L1	MPXBRM-ERBC6N1N				●
	IEC-C13 L2	MPXBRM-ERBC6N2N				●
	IEC-C13 L3	MPXBRM-ERBC6N3N				●
	IEC-C19 L1	MPXBRM-ERBC4O1N				●
	IEC-C19 L2	MPXBRM-ERBC4O2N				●
	IEC-C19 L3	MPXBRM-ERBC4O3N				●
	Schuko L1	MPXBRM-ERBC3P1N				●
	Schuko L2	MPXBRM-ERBC3P2N				●
	Schuko L3	MPXBRM-ERBC3P3N				●
Interface card		RPC-1000		●	●	●
Sensors	1xTemp.	SN-Z01		●	●	●
	3xTemp.	SN-Z02		●	●	●
	3xT. + 1xHum	SN-Z03		●	●	●
	1xTemp. Mod.	SN-T		●	●	●
	Temp/Hum Mod.	SN-TH		●	●	●
	2xDoor Mod.	SN-2D		●	●	●
	3xInput Mod.	SN-3C		●	●	●
Display ext.		RPCBDM-1000		●	●	●

Upgrade possible !

Different combinations possible !

Managed Rack-PDU

Liebert MPH™

The **Liebert MPH®** Managed Rack PDU is a power supply system with monitoring and control functions.

The **Liebert MPH®** monitors the current, voltage, kW and kWh of the individual input phases, as well as the current per group with the 32A variants. The individual outputs can be switched on and off remotely depending on the type. Limit values, alarms and status can be retrieved and set. The housing consists of a robust sheet steel enclosure, so that the PDU can be easily installed in a Knürr rack, or even into other enclosure systems. The Liebert MPH can be installed vertically or horizontally (19"), depending on the type. The PDU is delivered pre-installed with the same communication card (RPC-1000) as the Liebert MPX®. All Liebert MPX® external modules can therefore be connected (e.g. sensors, display module). Up to 4 MPX/MPH can be connected as rack PDU array to consolidate the user's IP connection and the device monitoring.

Liebert MPH™
Strong points

■ **Liebert MPH™**
 Control technology support
 The monitored electrical parameters include: effective power, current intensity, voltage and accumulated energy or consumption. Capacity-oriented current intensity threshold values enable detailed rack PDU alarm signals.

■ **Liebert MPH™:**
 - The benefit for your data center: Monitors electrical and environment parameters with threshold values and alarm management
 - Controls access to the socket power
 - Controls and administers individual sockets and/or groups of consumers and devices

 - Forecasts failure situations before they occur and actively administers connected devices for maximum operating time

■ **Liebert MPH™ benefits: Flexibility**
 - A local display can be easily mounted and adjusted to heavily equipped and changing rack environments
 - Mounting in 19" and 42 U rack environments
 - Form factor: vertical (0 U) and rack mounting
 - Compatible monitoring platform for Liebert MPH™ and Liebert MPX™ with seamless simultaneous operation
 - Individually positioned interface for input network cable

■ **Higher availability**
- Controls and administers individual sockets
- Forecasts overcurrent conditions before critical phase
- Switches off redundant devices with power failures to increase availability and backup power
- Extended overload protection in branch lines minimizes danger with cascaded PDU overload

■ **Extremely low operating costs**
- Comprehensive control technology in a cost-effective package
- The rack PDU array uses a shared IP address for up to four racks
- PDUs, making installation quicker and easier
- Energy and current measurement provides data for maximizing the data center's current and cooling infrastructure
- Energy efficient control technology for sockets

DOS20153

Liebert MPH™ Rack PDU

- The **Liebert MPH® Type M** is a monitored power distribution unit that monitors the phase inputs.
- Measured per phase are: power, current, voltage and consumption. The current is also monitored per group (only 32A model).
- The **Liebert MPH® Type C** can also switch the individual outputs on and off remotely.
- Integrated Liebert RPC-1000 communication card enables remote monitoring and maintenance of MPH units.
- The RPC-1000 enables the interconnection of several MPH or MPX units and connection of the Liebert MPH® with the Liebert MPX® units for monitoring and administration.
- The Liebert MPH® can be monitored directly on-site with the RPC BDM-1000, an optional display module that is connected directly with the communication card. The monitoring unit can be flexibly mounted on the rack.

■ **Material/ Finish**
Housing: Sheet steel extrusion

■ **Dimensions**
Width: 50 mm (vertical), 178 mm (19")
Height: 80 mm (vertical), 44 mm (19")

■ **Color**
Housing: RAL 7021 dark gray

■ **Approvals**
- CE label in accordance with Low Voltage Directive 2006/95/EC
- EMC Directive 2004/108/EC
- GS

■ **Supply schedule**
1 Liebert MPH® Socket Strip (PDU)
1 mounting brackets
Operating instructions

L	Type	Input values	Input plug	Outputs IEC320	Order no.	UP
438*	M	230Vac, 16A	IEC320-Sheet I	9xSheet F	**MPH-EBR09NXXO30**	1 unit
438*	M	230Vac, 32A	IEC60309 1ph/N/PE 6h	9xSheet F	**MPH-EBR09NXXQ30**	1 unit
1730	M	230Vac, 16A	IEC320-Sheet I	27xSheet F	**MPH-EBV27NXXO30**	1 unit
1730	M	230Vac, 16A	IEC320-Sheet I	21xSheet F/6xSheet J	**MPH-EBV27NOXO30**	1 unit
1730	M	230Vac, 32A	IEC60309 1ph/N/PE 6h	21xSheet F/6xSheet J	**MPH-EBV27NOXQ30**	1 unit
1730	M	230Vac, 32A	IEC60309 1ph/N/PE 6h	27xSheet F	**MPH-EBV27NXXQ30**	1 unit
1730	M	230/400Vac, 32A	IEC60309 3ph/N/PE 6h	27xSheet F	**MPH-EBV27NXXR30**	1 unit
1730	M	230/400Vac, 32A	IEC60309 3ph/N/PE 6h	21xSheet F/6xSheet J	**MPH-EBV27NOXR30**	1 unit
438*	C	230Vac, 16A	IEC320-Sheet I	9xSheet F	**MPH-ECR09NXXO30**	1 unit
438*	C	230Vac, 32A	IEC60309 1ph/N/PE 6h	9xSheet F	**MPH-ECR09NXXQ30**	1 unit
1730	C	230Vac, 16A	IEC320-Sheet I	27xSheet F	**MPH-ECV27NXXO30**	1 unit
1730	C	230Vac, 16A	IEC320-Sheet I	21xSheet F/6xSheet J	**MPH-ECV27NOXO30**	1 unit
1730	C	230Vac, 32A	IEC60309 1ph/N/PE 6h	21xSheet F/6xSheet J	**MPH-ECV27NOXQ30**	1 unit
1730	C	230Vac, 32A	IEC60309 1ph/N/PE 6h	27xSheet F	**MPH-ECV27NXXQ30**	1 unit
1730	C	230/400Vac, 32A	IEC60309 3ph/N/PE 6h	27xSheet F	**MPH-ECV27NXXR30**	1 unit
1730	C	230/400Vac, 32A	IEC60309 3ph/N/PE 6h	21xSheet F/ 6xSheet J	**MPH-ECV27NOXR30**	1 unit

* (19")

DOS20153

Liebert MPX™/MPH™ Sensors

- The sensors are designed for tool-less installation in a Knürr Miracel Rack, but they can also be installed in any other rack.
- "Fixed" type sensors are fixed to a cable.
- "Modular" type sensors can be connected with the delivered cable.
- Are affixed to the RPC-1000 communication card
- Several sensors can be connected in rows (max. length: 20m)
- Are automatically displayed in the Liebert MPX/MPH software
- Temperature measuring range: 5-55°C

- Accuracy: +/- 0.5°C
- Humidity measuring range: 10 – 95%
- Accuracy: +/- 3.5%

Note
The sensors are not required for operating the Liebert MPX or MPH, but they require the Liebert RPC-1000 (communication card)

Supply schedule
1 sensor with connection cable
Operating instructions

Cable length	Type	Model	Order no.	UP
3660	Fixed	Single temp. sensor	SN-Z01	1 unit
5180	Fixed	Triple temp. sensor	SN-Z02	1 unit
5180	Fixed	Triple temp. sensor + single humidity	SN-Z03	1 unit
2000	Modular	Single temp. sensor	SN-T	1 unit
2000	Modular	Triple temp. sensor + single humidity	SN-TH	1 unit
2000	Modular	2 x door contact - input module*	SN-2D	1 unit
2000	Modular	3 x digital input	SN-3C	1 unit

* Suitable door contact switch: Order no.: 06.108.115.9

DOS20153

Liebert RPC BDM - 1000 Display Module

- Provides the local display of the monitored data for all connected Liebert MPX and Liebert MPH systems.
- Operated with the aid of a navigation switch.
- Connected via a cable with the Liebert RPC, which provides the user the option of placing the displays where they can be easily read in accordance with the local space conditions.
- An individual display can be used for up to four Liebert MPX or Liebert MPH PDUs, which are connected to a PDU array.

Note
The Display Module is not required for operating the Liebert MPX or MPH, but it itself requires the Liebert RPC-1000 (communication card)

Supply schedule
1 RPCBDM-1000 Display Module
1 2m power supply lead
1 mounting set
Operating instructions

L	W	H	U	Model	Order no.	UP
					RPCBDM-1000	1 unit

Liebert MPX™
Adaptive Rack PDU

Liebert MPH™
Managed Rack PDU

Knürr DI-STRIP®
Basic Rack PDU

Basic Rack PDU

Knürr DI-STRIP®

Knürr's **Basic Rack PDU**s are the solution for every data center looking for robust, economical and flexible rack concepts.

The Knürr **DI-STRIP®** product family meets the power distribution requirements of many IT applications and other areas. Specially configured for the growing number of electronic components in network switching racks or server racks. Available with the most diverse accessories, such as circuit breakers, overvoltage protection, mains filter, master-slave function, emergency off button, fault current circuit breaker, local and remote power measurement, for example.

Knürr DI-STRIP® M:
The DI-STRIP M model monitors the input current per phase locally. An unbalanced load warning is also shown on the display with 3ph PDUs. The displays can be changed in 90° steps with a selector switch.

Knürr DI-STRIP® RM:
The DI-STRIP RM model monitors the input current per phase locally and remote. Unbalanced load warning and different threshold values can be set and remotely forwarded.

1 DOS00291

19''

1 U = 44.45 mm

465 mm

483 mm
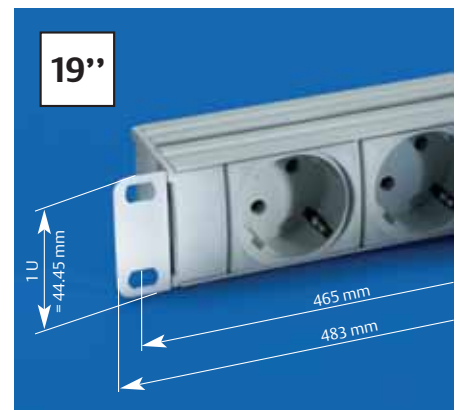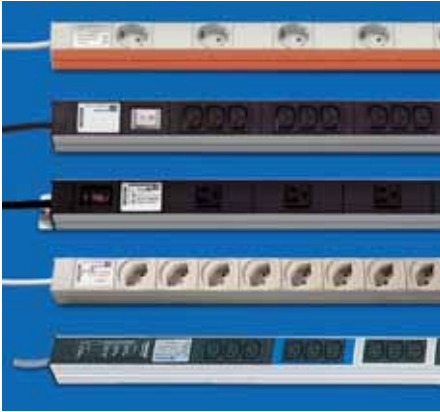
4 DOS00365

5 DOS00721

7 DOS00366

8 DOS20131

Knürr DI-STRIP®
Strong points

1 Robust!
Protects the plug panel with high casing edges.

2 Stability
High stability and torsional strength provided with closed sheet steel casing.

3 Electrical safety
Full power to all connected consumers with full-length brass busbar.
Shock hazard-proof and low contact resistance with double spring contacts.

4 19" installation
Optimum use of space with 19" installation:
- With low height – 1 U (44.45 mm)
- With 45° positioning of the sockets

5 International compatibility
Numerous standard products in accordance with international standards. Special models on request.

6 Flexibility
Plenty of room for movement with 2.5 m power supply cable. Flexibility provided by standard plug with dual earthing system.

7 Aesthetics
Appealing design with extruded casing and design side panels in visible area.

8 Cost-effective
Quick and easy mounting on the rack extrusion.

9 Universal
1 and 3-phase systems.

10 Modularity
Socket strip modules can be easily combined using plug-in connections.

10 Plug-in
Proven GST18 plug-in system for connecting socket strip modules.

11 Certifications
Global approvals and certifications are a quality feature.

9 DOS20134

9 DOS20134

10 DOS20142

10 DOS20144

	Standard DIN 49 440
DI-STRIP® Classic - Socket spacing: 100 mm - With/without switch	Page 2.25 DOS00402
DI-STRIP® Compact - Socket spacing: 50 mm - With/without switch	Page 2.26 **19"** DOS00401
DI-STRIP® Protector - User protection (FI) - Circuit breaker (LS) - User protection and circuit breaker (FI/LS) - Equipment protection (BladePower/PizzaPower)	Page 2.27 **19"** DOS00394
DI-STRIP® Protector Emergency STOP - User protection / circuit breaker (FI/LS) - With emergency stop switch	Page 2.28 **19"** DOS00455
DI-STRIP® Power Cleaner - Mains filter (MF)	Page 2.29 **19"** DOS00400
DI-STRIP® Safety Basic **DI-STRIP® Safety Standard** - Overvoltage protection	Page 2.30 **19"** DOS00397
DI-STRIP® Master Slave - Automatic consumer switching	Page 2.32 **19"** DOS00366
DI-STRIP® Combi - Automatic consumer switching with overvoltage protection and mains filter	Page 2.32 DOS00399
DI-STRIP® GST18 **Compact/Master Slave/Safety Basic/Safety Standard/IEC320** - Without cable for GST18 plug-in system (Wieland) **GST18 Accessories**	Page 2.34 DOS00679
DI-STRIP® M and **DI-STRIP® RM**	Page 2.18 DOS80015
DI-STRIP® HighPower	

Euro Plug System	UTE Standard	Swiss Standard	Three-Phase Current Plug-In System
	Page 2.41 DOS00402	Page 2.51 DOS00717	
Page 2.38 19'' DOS00457	Page 2.42 19'' DOS00401	Page 2.52 19'' DOS20074	Page 2.23 19'' DOS20121
Page 2.24 19'' DOS20155a	Page 2.43 19'' DOS20065	Page 2.53 DOS00719	Page 2.25 DOS20153a
	Page 2.44 19'' DOS20059		
Page 2.35 19'' DOS20108	Page 2.45 19'' DOS00400		
Page 2.35 19'' DOS20110	Page 2.46 19'' DOS00397	Page 2.53 19'' DOS00720	
	Page 2.48 19'' DOS00464		
	Page 2.49 DOS00399		
Page 2.35 DOS20112	Page 2.50 DOS00463		Page 2.36 DOS20103
Page 2.18 DOS80001			Page 2.23
Page 1.21 DOS80015			Page 2.21

DOS80002

Knürr DI-STRIP® RM

- Real RMS value display for the alternating current per phase
- LCD display rotation in 90° steps
- Display bright/dark switchover
- Warning display for unbalanced load
- Load changes signaling
- Automatic background light reduction

Data interface:
- The plug strip can be integrated into the network via an RJ45 plug.
- Access is possible without special software via a remote browser.
- Three variable limit values and a warning for unbalanced loads can be specified.
- The module enables access for up to 5 users or administrators; access is password-protected.
- The software displays the name and place of the PDU; this information can be entered by an administrator.
- The user can specify a static IP address or access using DHCP.
- Firmware updates can be made via a web browser.
- Supported protocols: HTTP, SNMP (Traps, SET, GET), Syslog

Material/ Finish
- PizzaPower model:
  Housing: Sheet steel, zinc-passivated, powder-coated
- Other models:
  Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
  Plastic parts: Vampamid 6 0024 VO (UL94), recyclable

Dimensions
Width: 84 mm (PizzaPower), 44.4 mm (others)
Height: 60 mm (PizzaPower), 44.4 mm (others)

Color
PizzaPower model:
Housing: RAL 9005 black
Other models:
Housing: RAL 7035 light gray
Plastic parts: RAL 7021 dark gray

Approvals
l in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- GS

Supply schedule
1 socket strip (PDU) with remote ampere meter
1 mounting brackets
Operating instructions

L	Type	Input values	Input plug	Outputs IEC60320			Order no.	UP
				Sheet F	Sheet J	Schuko		
733	DI-STRIP® Compact RM 8	230Vac, 16A	Schuko CEE 7/4			8	**03.307.008.1**	1 unit
1183	DI-STRIP® Compact RM 17	230Vac, 16A	Schuko CEE 7/4			17	**03.307.017.1**	1 unit
633	IEC320 RM9	230Vac, 16A	Schuko CEE 7/4	9			**03.607.009.1**	1 unit
933	IEC320 RM18	230Vac, 16A	Schuko CEE 7/4	18			**03.607.018.1**	1 unit
1133	DI-STRIP® TriplePower RM	230/400Vac, 16A	IEC60309 3ph/N/PE 6h	18			**03.607.825.1**	1 unit
1833	DI-STRIP® TriplePower RM	230/400Vac, 16A	IEC60309 3ph/N/PE 6h	45			**03.607.845.1**	1 unit
1233	DI-STRIP® TriplePower RM	230/400Vac, 16A	IEC60309 3ph/N/PE 6h	18	6		**03.607.824.1**	1 unit
1833	DI-STRIP® TriplePower RM	230/400Vac, 16A	IEC60309 3ph/N/PE 6h	36	6		**03.607.842.1**	1 unit
1111	DI-STRIP® PizzaPower® RM	230Vac, 32A	IEC60309 1ph/N/PE 6h	24			**03.637.023.1**	1 unit
871	DI-STRIP® PizzaPower® RM	230Vac, 32A	IEC60309 1ph/N/PE 6h	12	4		**03.637.016.1**	1 unit
1168	DI-STRIP® PizzaPower® RM	230Vac, 32A	IEC60309 1ph/N/PE 6h	21	4		**03.637.025.1**	1 unit
563	DI-STRIP® PizzaPower® RM	230/400Vac, 32A	IEC60309 3ph/N/PE 6h		6		**03.637.006.1**	1 unit
995	DI-STRIP® PizzaPower® RM	230/400Vac, 32A	IEC60309 3ph/N/PE 6h	6	12		**03.637.018.1**	1 unit
1022	DI-STRIP® PizzaPower® RM	230/400Vac, 32A	IEC60309 3ph/N/PE 6h	21			**03.637.021.1**	1 unit
1157	DI-STRIP® PizzaPower® RM	230/400Vac, 32A	IEC60309 3ph/N/PE 6h	18	6		**03.637.024.1**	1 unit
1751	DI-STRIP® PizzaPower® RM	230/400Vac, 32A	IEC60309 3ph/N/PE 6h	36	6		**03.637.042.1**	1 unit

DOS80002

Knürr DI-STRIP® M

- With big transparent LCD display
- Effective value display of alternating currents per phase (1-phase or 3-phase, depending on model)
- LCD display rotation in 90° steps
- Unbalanced-load warning display with 3-phase model
- Load changes signaling
- Automatic background light reduction
- Cable: 4m H05VV—F 5 G 4mm² (PizzaPower M)
- Cable: 2.5m H05VV-F 5 G 2.5mm² (Triple-Power M)
- Cable: 2.5m H05VV-F 3G 1.5mm² (DI-STRIP Compact M, DI-STRIP IEC320 M)

■ **Material/ Finish**
PizzaPower® model:
Housing: Sheet steel, zinc-passivated, powder-coated
Other models:
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable

■ **Approvals/certificates**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC: EN61326-1, EN61000-3-2, EN61000-3-3
- FCC Class B
- CSA NRTL (PizzaPower m, TriplePower M, IEC320 M)
- CB-Scheme (TriplePower M, DI-STRIP compact M, IEC320M, ampere meter GST18i)

■ **Color**
PizzaPower M model:
Housing: RAL 9005 black
Other models:
Housing: RAL 7035 light gray
Plastic parts: RAL 7021 dark gray

■ **Supply schedule**
1 socket strip with ampere meter
2 mounting brackets
2 19" mounting brackets (with 19" installation option)

■ **Note**
- Other models (e.g. Sheet J outputs) on request

L	Type	Input values	Input plug	Outputs IEC60320			Order no.	UP
				Sheet F	Sheet J	Schuko		
483	DI-STRIP® PizzaPower® M	230Vac, 32A	IEC60309 1ph/N/PE 6h	7			**03.636.007.1**	1 unit
933	DI-STRIP® PizzaPower® M	230/400Vac, 32A	IEC60309 3ph/N/PE 6h	21			**03.636.021.1**	1 unit
1033	DI-STRIP® TriplePower® M	230/400Vac, 16A	IEC60309 3ph/N/PE 6h	21			**03.606.821.1**	1 unit
1833	DI-STRIP® TriplePower® M	230/400Vac, 16A	IEC60309 3ph/N/PE 6h	45			**03.606.845.1**	1 unit
1133	DI-STRIP® TriplePower® M	230/400Vac, 16A	IEC60309 3ph/N/PE 6h	18	6		**03.606.824.1**	1 unit
1733	DI-STRIP® TriplePower® M	230/400Vac, 16A	IEC60309 3ph/N/PE 6h	36	6		**03.606.842.1**	1 unit
483	DI-STRIP® Compact M	230Vac, 32A	Schuko			6	**03.306.006.1**	1 unit
483	DI-STRIP® IEC320 M	230Vac, 16A	Schuko	9			**03.606.009.1**	1 unit
233	DI-STRIP® Ampere meter	230Vac, 16A	GST18				**03.606.200.1**	1 unit
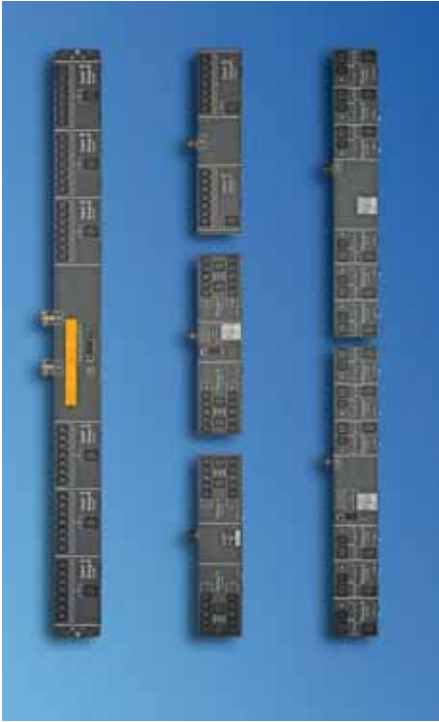
Knürr DI-STRIP®

HighPower®

The **Knürr DI-STRIP® HighPower** is a solution for every data center with high power requirements and low space in the rack. The special shape enables space-saving installation in the rack. This means free access to the servers, even with 600 mm wide racks. Maintenance of the servers (e.g. power supply changes) is possible at no further expense.

The Knürr DI-STRIP® product family meets the power distribution requirements of many IT applications and other areas. Specially configured for the growing number of electronic components in network switching racks of server racks. The **DI-STRIP® HighPower** is available with and without remote power measurement (DI-STRIP® HighPower RM).
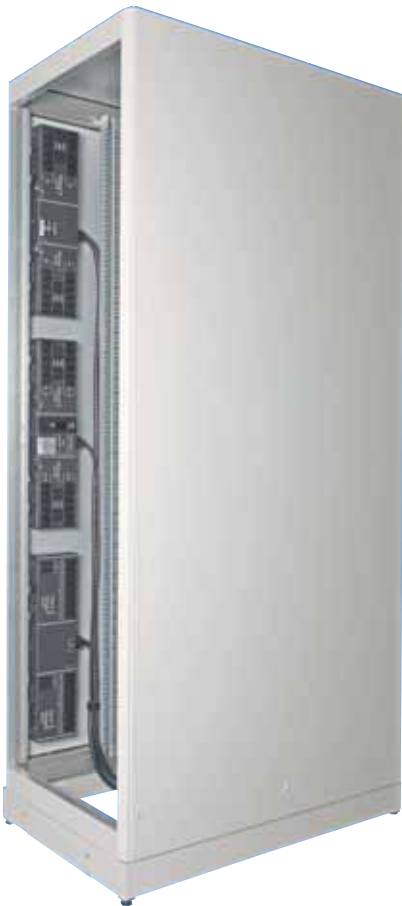
Knürr DI-STRIP® HighPower
Strong points

■ **Flexibility**
With or without remote power measurement. Easy expansion in the rack with tool-less installation. 3 m power cable for more spatial flexibility.
RM model
Current values can be read via a big transparent LCD display.
Rotating display in 90° steps; the display can always be read the same regardless of the installation direction.
The power measurement module can be integrated into different management programs via different protocols (SNMP, http, Syslog).

■ **High availability**
Meets the strictest EMC requirements with radiation and irradiation interference. Robust and stable with a closed sheet steel housing. Reliable, robust solution.

Extensive certification in acc. with international standard.
RM model:
Different threshold values can be flexibly specified; power values can therefore be monitored and load drops can be signaled.
With 3-phase PDUs the unbalanced load can be monitored, which means the neutral conductor is protected from overloads.

■ **Low operating costs**
Especially flat housing extrusion, providing full accessibility to the 19" level with 600 mm wide server racks. Server power supply changes are very quick and easy.
Quick and easy installation on the rack requires minimum space and shorter installation time.
RM model:
Automatic background light reduction extends the display's service life and reduces power loss.

DOS20153

Knürr DI-STRIP® HighPower

- Flat design provides access to the 19" level, even with 600 mm wide racks
– individual backup for outputs (groups with 10 A)
- Outputs divided into groups with max. 20 A per group
- Modular expansion in the rack with tool-less PDU installation

Additional function for HighPower RM type (remote metered)
- With big transparent LCD display
- Effective value display of alternating current
- LCD display rotation in 90° steps
- Display can be switched bright or dark
- Load changes signaling - Automatic background light reduction
- See DI-STRIP RM for technical description for data interface

■ **Material/ Finish**
Housing: Sheet steel, zinc-passivated, powder-coated

■ **Dimensions**
Width: 134 mm
Height: 47 mm
Cable: 3 m

■ **Color**
Housing: RAL 9005 black

■ **Approvals**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- GS

■ **Supply schedule**
1 socket strip (PDU)
1 integrated remote ampere meter (only HighPower RM)
2 mounting brackets
Operating instructions

L	Type	Input values	Input plug	Outputs IEC60320			Order no.	UP
				Sheet F	Sheet J	Schuko		
540	DI-STRIP® HighPower	230Vac, 32A	IEC60309 1ph/N/PE 6h	20	4		**03.632.100.8**	1 unit
850	DI-STRIP® HighPower	230/400Vac, 32A	IEC60309 3ph/N/PE 6h	6	12		**03.632.102.8**	1 unit
540	DI-STRIP® HighPower RM	230Vac, 32A	IEC60309 1ph/N/PE 6h	20	4		**03.632.200.8**	1 unit
850	DI-STRIP® HighPower RM	230/400Vac, 32A	IEC60309 3ph/N/PE 6h	6	12		**03.632.202.8**	1 unit

Three Phase Knürr DI-STRIP®

TriplePower®

The **TriplePower** ® name represents the performance of our latest development. The **DI-STRIP® TriplePower®** supplies network racks with three times the normal power. This requirement is generated by the increasingly higher packing densities and constantly rising energy requirements in racks, which are often caused by aptly named "Blade Servers" or 1 U "Pizza Servers", more than 40 of which can be integrated into a Knürr Miracel rack.

The **DI-STRIP® TriplePower®** uses a classic 3-phase feed with 3x16A, which it optimally distributes throughout the whole rack. The 23 U and 41 U standard lengths cover the entire rack height range of the Knürr Smaract² and Miracel rack families.

In the maximum configuration level, up to 48 users can be connected to a **DI-STRIP® TriplePower®** (Euro socket strip). With redundant feed, 96A can consequently be provided in a 19" rack with only two **DI-STRIP® TriplePower®**.

DOS20149

DOS20148

Dimensions in mm:

L	= Length	U	= standard height unit
S	= Switch	UP	= Unit of packaging
n	= Number of sockets		
F1	= Standard side de piece		
F2	= Design side piece		
19"	= Suitable for 19" installation		
Safe	= Child-safe,		

Replace **.x** with the number of your color combination:
.1 = RAL 7035, **.6** = RAL 7035/RAL 2003

1 DOS20131

2 DOS20147

Knürr DI-STRIP® TriplePower® Strong points

1 Cost-Effective
Quick and easy mounting on the rack extrusion.
Cost reduction in installation and wiring.

2 Supply
- 3x16A as standard
- Ideal for implementing redundancy (e.g. 96 A)

3 At a glance
Phase assignment color coding (L1, L2, L3).

4 Installation
Optimum distribution over the entire rack height
(standard: 23 U and 41 U).

Technical alternatives
- For 3-phase GST18 system (see page 2.36).

3 DOS20126
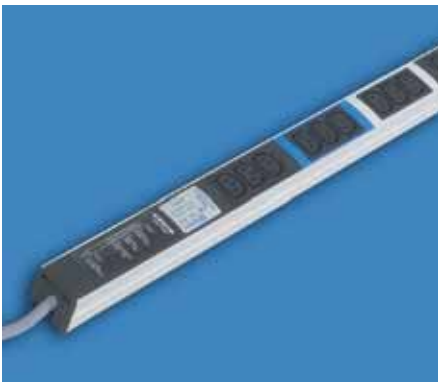
4 DOS20129

DOS20126

DI-STRIP® TriplePower® Euro Plug-In System, IEC 320
With cable

- Cable: H05VV-F 5 G 2.5 mm²
- Cable: 2.5 m (optional with IEC60309 plug, 3Ph/N/PE 6h)
- Easy mounting on the rack extrusion
- 3x16A feed as standard
- Ideal for implementing redundancy (e.g. 96 A with redundant feed)
- Unmistakable phase assignment color-coding
- Optimum distribution over the entire rack height (23 U and 41 U)
- Alternative for 3-phase GST18 system (see page 170)

Material/ Finish
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable

Dimensions
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)

Approvals/certificates
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- CSA NRTL/C

Color
Housing: RAL 7035 light gray
Plastic parts: RAL 7021 dark gray

Load rating
100-240/173-415 Vac
Input: 3x 16 A
Output: 10 A (Sheet F)
Output: 16 A (Sheet J)

Approval symbols for IEC 320 3-way Euro combinations
VDE, UR, CSA

Supply schedule
1 socket strip
2 mounting brackets

L	S	n	F1	19"	Input values	Input plug	Outputs IEC60320		Order no.		UP
							Sheet F	Sheet J			
1033	24	●			230/400Vac, 16A	IEC60309 3ph/N/PE 6h	24		**03.600.024.1**	🔧	1 unit
1833	48	●			230/400Vac, 16A	IEC60309 3ph/N/PE 6h	48		**03.600.048.1**	🔧	1 unit
1033	24	●			230/400Vac, 16A	Open end	24		**03.600.824.1**	🔧	1 unit
1833	48	●			230/400Vac, 16A	Open end	48		**03.600.848.1**	🔧	1 unit
1133	24	●			230/400Vac, 16A	IEC60309 3ph/N/PE 6h	18	6	**03.600.524.1**		1 unit
1733	42	●			230/400Vac, 16A	IEC60309 3ph/N/PE 6h	36	6	**03.600.542.1**		1 unit
483	6	●	●		230/400Vac, 16A	IEC60309 3ph/N/PE 6h		6	**03.600.506.1**		1 unit

Three Phase Knürr DI-STRIP®

BladePower®
PizzaPower®

A new generation of the power distribution units of the DI-STRIP® range now ensures even more power: **BladePower®** and **PizzaPower®** for fail-safe power supply distribution in network racks.

Increasingly higher packing densities and therefore constantly increasing energy requirements in server racks caused by blade servers or 1 U pizza servers will now be handled electrically.

Up to 35 kW dissipated heat can be removed from modern CoolTherm® server racks But how is the necessary power supplied into the rack, which can cause such power losses?

The PDUs (3x32 A) optimally distribute the required power over the entire rack, with connection of up to 21 consumers possible in the highest configuration level. 192 A can be supplied to the rack with redundant feed.

Knürr DI-STRIP® Strong points

■ **Cost-Effective**
Quick and easy installation on the server rack's extrusion.
Costs reduction with mounting and wiring.

■ **Supply**
- Single-phase 32 A and three-phase 32 A.
- 22 kVA
- Ideal for providing redundancy (e.g. 192 A)

■ **Crystal clear assignment**
Unmistakable phase assignment color-coding
(L1, L2, L3).

■ **Installation**
Optimum distribution of blade center and pizza server supply with easy power distribution unit (PDU) installation.

■ **Availability**
Prevention of "Single Point of Failure" with individual fusing.

■ **Certification**

CE   GS   CSA us

DOS20153

DOS20155

Knürr DI-STRIP® BladePower® Technical data

- EC 320 sockets (10 A and 16 A).
- Individually fused via thermal circuit breaker that can be reset in acc. with IEC 60934
- Cable: H05VV-F 5 G 4 mm²
- Cable: 4 m
- With IEC60309 plug, 1Ph/N/PE 6h blue, 3Ph/N/PE 6h red

■ **Material/ Finish**
Housing: Sheet steel, zinc passivated, powder-coated

■ **Dimensions**
Height: approx. 60 mm
Housing width: 84 mm

■ **Color**
Housing: RAL 9005 black

■ **Approvals**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova GS
- CSA NRTL/C (only without plug)

■ **Load rating**
100-240 / 173-415 Vac
Input: 1x32 A or 3x32 A
Output: 10 A / 16 A

■ **Supply schedule**
1 socket strip (PDU)
2 mounting brackets
1 19" mounting bracket (additional with 19" installation option)
Operating instructions

L	S	n	F1	19"	Plug	Model	Order no.		UP
375	5	●	●	●		BladePower® PDU 1x 32 A	**03.630.005.1**	⚡	1 unit
740	15	●		●		BladePower® PDU 3x 32 A	**03.630.015.1**	⚡	1 unit
375	5	●	●			BladePower® PDU 1x 32 A	**03.630.805.1**		1 unit
740	15	●				BladePower® PDU 3x 32 A	**03.630.815.1**		1 unit

Dimensions in mm: L = Length   U = standard height unit
S = Switch   UP = Unit of packaging
n = Number of sockets
F1 = Standard side   ⚡ = Express item
F2 = Design side
19" = Suitable for 19" installation
Safe= Child-safe,

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound
Replace **.x** with the number of your color combination:
.1 = RAL 7035, **.6** = RAL 7035/RAL 2003
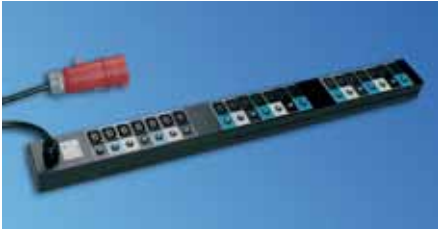
DOS20158

DOS20159

Knürr DI-STRIP® PizzaPower®
Technical data

- Individually fused via thermal circuit breaker that can be reset in acc. with IEC 60934
- Cable: H05VV-F 5 G 4 mm²
- Cable: 4 m
- With IEC60309 plug, 1Ph/N/PE 6h blue, 3Ph/N/PE 6h red

■ **Material/ Finish**
   Housing: Sheet steel, zinc passivated, powder-coated

■ **Dimensions**
   Height: approx. 60 mm
   Housing width: 84 mm
   Height with cable: approx. 176 mm

■ **Color**
   Housing: RAL 9005 black

■ **Approvals**
   - CE label in accordance with low voltage guideline 2006/95/EWG
   - EMC Directive 2004/108/EC
   - Innova GS
   - CSA NRTL/C (only without plug)

■ **Load rating**
   100-240 / 173-415 Vac
   Input: 1x32 A or 3x32 A
   Output: 10 A (Sheet F)
   Output: 16 A (Sheet J)

■ **Supply schedule**
   1 socket strip (PDU)
   2 mounting brackets
   1 19" mounting bracket (additional with 19 installation option)
   Operating instructions

L	S	n	F1	19"	Input values	Input plug	Outputs IEC60320		Order no.		UP
							Sheet F	Sheet J			
400	7	●			230Vac, 32A	IEC60309 1ph/N/PE 6h	7		**03.631.007.1**		1 unit
400	7	●			230Vac, 32A	Open end	7		**03.631.807.1**		1 unit
720	16	●			230Vac, 32A	IEC60309 1ph/N/PE 6h	12	4	**03.631.124.1**		1 unit
960	24	●			230Vac, 32A	IEC60309 1ph/N/PE 6h	24		**03.631.240.1**		1 unit
1017	25	●			230Vac, 32A	IEC60309 1ph/N/PE 6h	21	4	**03.631.214.1**		1 unit
933	21	●			230/400Vac, 32A	IEC60309 3ph/N/PE 6h	21		**03.631.021.1**		1 unit
933	21	●			230/400Vac, 32A	Open end	21		**03.631.821.1**		1 unit
408	6	●			230/400Vac, 32A	IEC60309 3ph/N/PE 6h		6	**03.631.006.1**		1 unit
939	21	●			230/400Vac, 32A	IEC60309 3ph/N/PE 6h	9	12	**03.631.912.1**		1 unit
1362	36	●			230/400Vac, 32A	IEC60309 3ph/N/PE 6h	36		**03.631.360.1**		1 unit
1002	24	●			230/400Vac, 32A	IEC60309 3ph/N/PE 6h	18	6	**03.631.186.1**		1 unit

DOS00403

DOS00260   With switch

DOS00261   Without switch

Knürr DI-STRIP® Classic
Standard DIN 49 440

- Optionally with lit switch, 2-pole switching
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Optionally with Euro plug, IEC320 for UPS application

■ **Material/ Finish**
   Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
   Plastic parts: Vampamid 6 0024 VO (UL94)
   Internal conductor: full-length busbar, brass

■ **Dimensions**
   Socket spacing: 24 mm 100 mm
   Height: 45.5 mm
   Housing width: 44.4 mm (= 1 U)
   Cable 2.5 m

■ **Approvals/certificates**
   - CE label in accordance with low voltage guideline 2006/95/EWG
   - EMC Directive 2004/108/EC
   - Innova-GS
   - CB-scheme
   - VDE

■ **Color**
   RAL 7035 light gray

■ **Load rating**
   100-240 Vac/16 A

■ **Supply schedule**
   1 socket strip
   2 mounting brackets

Dimensions in mm: L = Length   U = standard height unit
                      S = Switch   UP = Unit of packaging
                      n = Number of sockets
                      F1 = Standard side   = Express item
                      F2 = Design side
                      19"= Suitable for 19" installation
                      Safe= Child-safe,

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound
Replace **.x** with the number of your color combination:
.1 = RAL 7035, **.6** = RAL 7035/RAL 2003

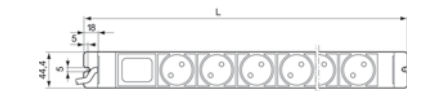| L	S	n	F1	F2	19"	Safe	Model	Order no.		UP
1783		17	●					**03.300.067.1**		1 unit
1383		13	●					**03.300.063.1**		1 unit
983		9	●					**03.300.059.1**		1 unit
583		5	●					**03.300.055.1**		1 unit
1733	●	16	●				With switch	03.302.066.1		1 unit
1333	●	12	●				With switch	03.302.062.1		1 unit
933	●	8	●				With switch	03.302.058.1		1 unit
533	●	4	●				With switch	03.302.054.1		1 unit

DOS00401 — With switch

DOS00262 — With switch

DOS20020 — Without switch

DOS20021 — With switch

DOS00263 — Without switch

Knürr DI-STRIP® Compact
Standard DIN 49 440

- Optionally with lit switch, 2-pole switching
- 19" installation option (with length 483 mm)
- 2 versions: Standard side panel or Design side panel
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded right angle plug
- Optionally with Euro plug, IEC320 for UPS applications

■ **Material/ Finish**
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

■ **Dimensions**
Socket spacing: 24 mm 50 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

■ **Approvals/certificates**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme
- VDE

■ **Color combination**
Final digit of order number .1:
RAL 7035 light gray
Final digit of order number .6:
Housing: RAL 2003 pastel orange
Plastic parts: RAL 7035 light gray

■ **Load rating**
100-240 Vac/16 A

■ **Supply schedule**
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
883		15	●					03.300.015.x	1 unit
732		11		●				03.300.111.x	1 unit
683		11	●					03.300.011.x	1 unit
532		7		●	●			03.301.107.x	1 unit
532		7		●				03.300.107.x	1 unit
483		7	●		●			03.300.007.x	1 unit
483		8	●		●			03.300.008.1	1 unit
382		4		●	●			03.301.104.x	1 unit
382		4		●				03.300.104.x	1 unit
333		4	●					03.300.004.x	1 unit
883	●	14	●				With switch	03.302.014.x	1 unit
732	●	10		●			With switch	03.302.110.x	1 unit
683	●	10	●				With switch	03.302.010.x	1 unit
532	●	6		●	●		With switch	03.303.106.x	1 unit
532	●	6		●			With switch	03.302.106.x	1 unit
483	●	6	●		●		With switch	03.302.006.x	1 unit
483		7	●		●		With switch	03.302.007.1	1 unit
382	●	3		●	●		With switch	03.303.103.x	1 unit
382	●	3		●			With switch	03.302.103.x	1 unit
333	●	3	●				With switch	03.302.003.x	1 unit

Knürr DI-STRIP® Compact UPS
Standard DIN 49 440

L	S	n	F1	19"	Input values	Input plug	Outputs Schuko CEE7/4	Order no.	UP
483		8	●	●	230Vac, 10A	ICE60320 Sheet E	8	03.300.308.1	1 unit
483		8	●	●	230Vac, 16A	ICE60320 Sheet I	8	03.300.408.1	1 unit

Dimensions in mm: L = Length U = standard height unit
S = Switch UP = Unit of packaging
n = Number of sockets
F1 = Standard side = Express item
F2 = Design side
19" = Suitable for 19" installation
Safe= Child-safe,

Conversion: 1 mm = 0.03937 inch 1 kg = 2.2046 pound
Replace **.x** with the number of your color combination:
.1 = RAL 7035, **.6** = RAL 7035/RAL 2003

DOS20065 With fault current circuit breaker
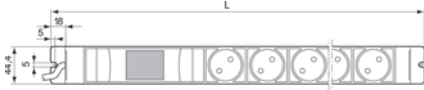
DOS00264 With fault current circuit breaker

Knürr DI-STRIP® Protector FI
Standard DIN 49 440

Protector FI
RCCB for user protection
- Protection with indirect contact as error protection by switching off with inadmissible high contact voltage through contact with electrical equipment
- Protection with direct contact as back-up protection
- Residual operating current I**g** = 10 mA for alternating and pulsating direct fault current
- 19" installation option (with length 483 mm)
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded right angle plug

Material/ Finish
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

Dimensions
Socket spacing: 24 mm 50 mm
Height: 78 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

Approvals/certificates
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

Color combination
Final digit of order number .1:
RAL 7035 light gray
Plastic parts: RAL 7035 light gray

Load rating
100-240 Vac/16 A

Supply schedule
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
883		13	●					**03.304.013.1**	1 unit
683		9	●					**03.304.009.1**	1 unit
483		5	●		●			**03.304.005.1**	1 unit

DOS00692 With circuit breaker

DOS00264 With circuit breaker

Knürr DI-STRIP® Protector LS
Standard DIN 49 440

Protector circuit breaker
- Circuit breaker for overload and short circuit
- Protects cables and feeds with rapid switching off with short circuit and defined delayed cutoff with overload
- Circuit breaker: 16 A
- Tripping characteristic, type B, 2-pole
- 19" installation option (with length 483 mm)
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded right angle plug

Material/ Finish
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

Dimensions
Socket spacing: 24 mm 50 mm
Height: 78 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

Approvals/certificates
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme
- VDE

Color combination
Final digit of order number .1:
RAL 7035 light gray
Plastic parts: RAL 7035 light gray

Load rating
100-240 Vac/16 A

Supply schedule
1 socket strip
2 mounting brackets

| L	S	n	F1	F2	19"	Safe	Model	Order no.	UP	
883		13	●						**03.308.013.1**	1 unit
683		9	●						**03.308.009.1**	1 unit
483		5	●		●				**03.308.005.1**	1 unit

Dimensions in mm:
L = Length
S = Switch
n = Number of sockets
F1 = Standard side
F2 = Design side
19" = Suitable for 19" installation
Safe= Child-safe,

U = standard height unit
UP = Unit of packaging

= Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound
Replace **.x** with the number of your color combination:
.1 = RAL 7035, **.6** = RAL 7035/RAL 2003

DOS00693
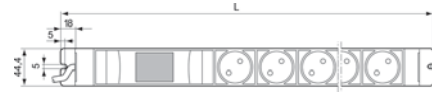
DOS00264

Knürr DI-STRIP® Protector FI / LS
Standard DIN 49 440

■ **Protector FI / LS**
- Fault current switch and circuit breaker
- Provides a combination of user, overload and short circuit protection
- Residual operating current I**g** = 30 mA for alternating and pulsating direct fault current
- Circuit breaker: 16 A
- Tripping characteristic, type B, 2-pole
- 19" installation option (with length 483 mm)
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm^2
- Molded right angle plug

■ **Material/ Finish**
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

■ **Dimensions**
Socket spacing: 24 mm 50 mm
Height: 78 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

■ **Approvals/certificates**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

■ **Color combination**
Final digit of order number .1:
RAL 7035 light gray
Plastic parts: RAL 7035 light gray

■ **Load rating**
100-240 Vac/16 A

■ **Supply schedule**
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
883		13	●					**03.310.013.1**	1 unit
683		9	●					**03.310.009.1**	1 unit
483		5	●		●			**03.310.005.1**	1 unit

DOS20059
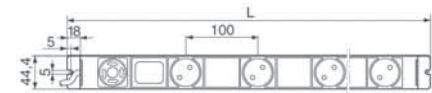
DOS00486

Classic with emergency stop switch

DOS00487
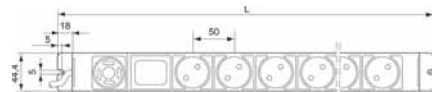
Protector with emergency stop switch

Knürr DI-STRIP® Protector Emergency STOP
Standard DIN 49 440

- With 2-pole emergency stop switch for user protection
- For protecting operating personnel
- For manual emergency switching off of the connected consumers
- Phase and neutral conductors are safely separated
- Switch must be specifically unlocked to restart
- 19" installation option (with length 483 mm)
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm^2
- Molded right angle plug

■ **Material/ Finish**
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

■ **Dimensions**
Socket spacing: 24 mm Classic: 100 mm, Compact: 50 mm

Height: 101 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

■ **Approvals/ certificates**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme
- VDE

■ **Color combinations**
Final digit of order number .1:
RAL 7035 light gray
Plastic parts: RAL 7035 light gray

■ **Load rating**
100-240 Vac/16 A

■ **Supply schedule**
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
683		10	●				Compact	**03.326.010.1**	1 unit
483		6	●		●		Compact	**03.326.006.1**	1 unit
1333		12	●				Classic	**03.326.062.1**	1 unit
933		8	●				Classic	**03.326.058.1**	1 unit

Dimensions in mm: L = Length
S = Switch
n = Number of sockets
F1 = Standard side
F2 = Design side
19" = Suitable for 19" installation
Safe= Child-safe,

U = standard height unit
UP = Unit of packaging

= Express item

Conversion: 1 mm = 0.03937 inch 1 kg = 2.2046 pound
Replace **.x** with the number of your color combination:
.1 = RAL 7035, **.6** = RAL 7035/RAL 2003

DOS00456
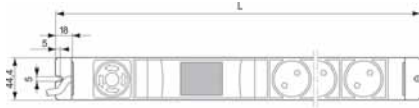
DOS00488

Knürr DI-STRIP® Protector Emergency Stop FI / LS
Standard DIN 49 440

- With 2-pole emergency stop switch for user protection
- For protecting operating personnel
- For manual emergency switching off of the connected consumers
- Phase and neutral conductors are safely separated
- Switch must be specifically unlocked to restart
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded right angle plug

■ **Material/ Finish**
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

■ **Dimensions**
Socket spacing: 24 mm Compact: 50 mm
Height: 101 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

■ **Approvals/certificates**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

■ **Color combinations**
Final digit of order number .1:
RAL 7035 light gray
Plastic parts: RAL 7035 light gray

■ **Additionally:**
With 2-pole fault current switch and circuit breaker
Provides a combination of user, overload and short circuit protection

■ **Load rating**
100-240Vac/16 A

■ **Supply schedule**
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
683		8	●					**03.328.008.1**	1 unit

DOS20061

DOS00266

Knürr DI-STRIP® Power Cleaner
Standard DIN 49 440

- High-frequency glitches are generally caused by switching processes in an operation from 100 kHz to 5MHz. This high-frequency rate overloads the mains frequency and affects adjacent electronic equipment. The mains filter attenuates this high-frequency rate.
- The attenuation behavior is harmonized with the typical interference spectrum.
- The mains filter works in both directions. This means that glitches from the equipment to the socket strip are also filtered from the mains.
- 19" installation option (with length 483 mm)
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded right angle plug

■ **Material/ Finish**
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

■ **Dimensions**
Socket spacing: 24 mm 50 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

■ **Approvals/certificates**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

■ **Color combination**
Final digit of order number .1:
RAL 7035 light gray
Final digit of order number .6:
Housing: RAL 2003 pastel orange
Plastic parts: RAL 7035 light gray

■ **Technical data**
Nominal voltage: max. 250 Vac, 50 Hz
Nominal current: max. 16 A
Filter in acc. with VDE 0565-3 (EN 60939-1)

■ **Supply schedule**
1 socket strip
2 mounting brackets
2 19" mounting bracket (additional with 19" installation option)

Dimensions in mm:
L = Length
S = Switch
n = Number of sockets
F1 = Standard side
F2 = Design side
19" = Suitable for 19" installation
Safe= Child-safe,
U = standard height unit
UP = Unit of packaging
= Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound
Replace **.x** with the number of your color combination:
.1 = RAL 7035, **.6** = RAL 7035/RAL 2003

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
883		13	●					**03.312.013.x**	1 unit
683		9	●					**03.312.009.x**	1 unit
483		5	●		●			**03.312.005.x**	1 unit

DOS20068   With overvoltage protection
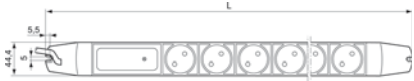
DOS00306   With overvoltage protection

DOS00270   With overvoltage protection

Knürr DI-STRIP® Safety Basic
Standard DIN 49 440

- For protecting against transient overvoltages from the mains, which, for example, are caused by switching machines on and off.
- With critical overvoltages the mains is separated.
- Once the safety arrester has been triggered the green function display goes out.
- The socket strip can then no longer be used. Send the socket strip to the manufacturer for the safety arrester to be replaced!
  The safety effect of the type 3 test category and requirements category "D" is to protect the equipment, i.e. precision protection.
  The protection devices of the test and requirements categories 1 and 2 and B and C must be pre-connected in the building installation to ensure optimum protection.
- 19" installation option (with length 483 mm)
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm^2
- Molded right angle plug

■ Material/ Finish
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

■ Dimensions
Socket spacing: 24 mm 50 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)

■ Approvals/certificates
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

■ Color combination
Final digit of order number .1:
RAL 7035 light gray
Final digit of order number .6:
Housing: RAL 2003 pastel orange
Plastic parts: RAL 7035 light gray

■ Technical data
Test category: Type 3
- In acc. with DIN EN 61643-11
Requirements class: D
- In acc. with VDE 0675-6
Mains voltage: 230 VAC
Nominal current: max. 16 A
Cut-off discharge current (8/20 μs): 10 kA
Response time: ‹ 25 ns
Protection level
(with 100 A varistor peak current):
- L with respect to N: ‹ 800 V
- L/N with respect to PE: ‹ 1500 V

■ Supply schedule
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
732	10			●				**03.316.110.1**	1 unit
683	10		●					**03.316.010.x**	1 unit
532	6			●	●			**03.317.106.1**	1 unit
532	6			●				**03.316.106.1**	1 unit
483	6		●		●			**03.316.006.x**	1 unit
432	4			●	●			**03.317.104.1**	1 unit
432	4			●				**03.316.104.1**	1 unit
383	4		●					**03.316.004.1**	1 unit

DOS20069 — With overvoltage protection and mains filter

DOS00307 — With overvoltage protection and mains filter

DOS00271

Knürr DI-STRIP® Safety Standard
Standard DIN 49 440

- The "Safety Standard" models consist of a combined overvoltage protection/mains filter element.
- For protecting against transient overvoltages from the mains, which, for example, are caused by switching machines on and off.
- With critical overvoltages the mains is separated.
- Once the safety arrester has been triggered the green function display goes out. The socket strip can then no longer be used. Send the socket strip to the manufacturer for the safety arrester to be replaced!
- The safety effect of the type 3 test category and requirements category "D" is to protect the equipment, i.e. precision protection. The protection devices of the test and requirements categories 1 and 2 and B and C must be preconnected in the building installation to ensure optimum protection.
- High-frequency glitches are generally caused by switching processes in an operation from 100 kHz to 5MHz.
- This high-frequency rate overloads the mains frequency and affects adjacent electronic equipment. The mains filter attenuates this high-frequency rate.
- The attenuation behavior is harmonized with the typical interference spectrum.
- 19" installation option (with length 483 mm)
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded right angle plug

Material/ Finish
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

Dimensions
Socket spacing: 24 mm 50 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

Approvals/certificates
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

Color combination
Final digit of order number .1:
RAL 7035 light gray
Final digit of order number .6:
Housing: RAL 2003 pastel orange
Plastic parts: RAL 7035 light gray

Technical data
Mains voltage: 230 VAC
Nominal current: max. 16 A
Cut-off discharge current (8/20 μs): 10 kA
Response time: ‹ 25 ns
Protection level
(with 100 A varistor peak current):
- L with respect to N: ‹ 800 V
- L/N with respect to PE: ‹ 1500 V
Overvoltage protection
- Test category: Type 3
  in acc. with DIN EN61643-11
- Feature class: D
  In acc. with VDE 0675-6
Mains filter
- In acc. with VDE 0565 (EN 60939)

Supply schedule
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.		UP
883	●	13	●				With switch	03.318.013.x		1 unit
732	●	9		●		●	With switch	03.319.109.x		1 unit
732	●	9		●			With switch	03.318.109.x		1 unit
683	●	9	●				With switch	03.318.009.x	🔶	1 unit
532	●	5		●		●	With switch	03.319.105.x		1 unit
532	●	5		●			With switch	03.318.105.x		1 unit
483	●	5	●		●		With switch	03.318.005.x	🔶	1 unit

Dimensions in mm:
L = Length
S = Switch
n = Number of sockets
F1 = Standard side
F2 = Design side
19"= Suitable for 19" installation
Safe= Child-safe,

U = standard height unit
UP = Unit of packaging

🔶 = Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound
Replace **.x** with the number of your color combination:
.1 = RAL 7035, **.6** = RAL 7035/RAL 2003

DOS20070 — With master-slave module

DOS00268 — With master-slave module

Knürr DI-STRIP® Master Slave
Standard DIN 49 440

- If the master equipment is switched, the slave sockets are also switched (together, with a short delay to the master). This means convenient switching on and off of several hard to access devices. Switching thresholds can be set from outside via potentiometer.
- Note:
  - The master equipment power consumption must be continuously above the switching-on threshold. When switching off the master equipment, the power consumption must fall below the switching-off threshold.
- 19" installation option (with length 483 mm)
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm^2
- Molded right angle plug

Material/ Finish
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

Dimensions
Socket spacing: 24 mm 50 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

Approvals/certificates
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

Color combination
Final digit of order number .1:
RAL 7035 light gray
Plastic parts: RAL 7035 light gray

Load rating
Max. 250 Vac/16 A

Technical data
Switching threshold setting range
On: 20 mA - 200 mA
(approx. 55 mA delivery status)
Off: 16 mA - 160 mA
(approx. 44 mA delivery status)
Switching delay: 550 ms +/- 20 %
Electronic module: 2-pole switching

Supply schedule
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
683		9	●					**03.314.009.1**	1 unit
483		5	●	●				**03.314.005.1**	1 unit

DOS00325

With master-slave overvoltage
protection and mains filter

DOS00272

DOS00273

With master-slave overvoltage
protection and mains filter

Knürr DI-STRIP® Combi
Standard DIN 49 440

- Master-slave with overvoltage protection and mains filter
- Automatic consumer switching
- Combines Master Slave (page 7.16) and Safety Standard functions (Page 7.15)
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded right angle plug

■ **Material/ Finish**
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

■ **Dimensions**
Socket spacing: 24 mm 50 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

■ **Approvals/certificates**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

■ **Color combination**
Final digit of order number .1:
RAL 7035 light gray
Plastic parts: RAL 7035 light gray

■ **Technical data**
Overvoltage protection and mains filter:
Mains voltage: max. 250 Vac
Nominal current: 16 A
Requirements class: D (precision protection in acc. with VDE 0675)
Surge current resistance (8/20 µs wave): max. 10 kA
Protection level (1.5/50 µs wave): ‹ 1500 V (L + N against PE)
Master-slave function:
Switching threshold setting range
On: 20 mA - 200 mA
(approx. 55 mA delivery status)
Off: 16 mA - 160 mA
(approx. 44 mA delivery status)
Switching delay: 550 ms +/- 20 %
Electronic module: 2-pole switching

■ **Supply schedule**
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
782	9			●				03.320.109.1	1 unit
733	9		●					03.320.009.1	1 unit
582	5			●	●			03.321.105.1	1 unit
582	5			●				03.320.105.1	1 unit
533	5		●					03.320.005.1	1 unit

Dimensions in mm: L = Length   U = standard height unit
S = Switch   UP = Unit of packaging
n = Number of sockets
F1 = Standard side   = Express item
F2 = Design side
19"= Suitable for 19" installation
Safe= Child-safe,

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound
Replace **.x** with the number of your color combination:
.1 = RAL 7035, **.6** = RAL 7035/RAL 2003

DOS20060

DOS00663

DOS20045   With switch

DOS20046   Without switch

Knürr DI-STRIP® GST18 Plug System (Wieland) Compact
Standard DIN 49 440

- Quick and efficient plug connection system
- Plug-in electro-installation in place of conventional wiring
- Speed:
  - With easy pre-configured element plugging together
- Flexibility:
  - With cable (cable length)
- Rational:
  - Easy socket strip swap-out, without costly cabling
- Safety:
  - Faulty installations are ruled out with plug system
- Space-saving:
  - Use of protection and switching functions can be extended with further cabling without and plug space loss (max. load rating 16 A)

Material/ Finish
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

Dimensions
Socket spacing: 24 mm 50 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)

Approvals/certificates
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme
- VDE

Color combination
Final digit of order number .1:
RAL 7035 light gray
Plastic parts: RAL 7035 light gray

Load rating
100-240 Vac/16 A

Supply schedule
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
583	●	6	●				With switch	03.302.206.1	1 unit
433	●	3	●				With switch	03.302.203.1	1 unit
533		7	●					03.300.207.1	1 unit
383		4	●					03.300.204.1	1 unit

DOS20072

Knürr DI-STRIP® Safety Basic
with GST18 plug system

- With overvoltage protection
- Technical description, see page 164

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
433		4						03.316.204.1	1 unit

DOS20073

Knürr DI-STRIP® Safety Standard
with GST18 plug system

- With overvoltage protection, with integrated mains filter and lit switch
- Technical description, see page 165

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
583		5						03.318.205.1	1 unit

DOS00464

Knürr DI-STRIP® Master Slave
with GST18 plug system

- Technical description, see page 166

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
533		5						03.314.205.1	1 unit

DOS20112

DOS20107   Input

DOS20106   Output for
                                 further cabling

Knürr DI-STRIP® Euro Socket System, IEC 320
with GST18 plug system

- With 3-way Euro combinations of IEC 320 sockets
- Without fusing

■ **Material/ Finish**
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable

■ **Dimensions**
Socket spacing: 24 mm 24 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)

■ **Approvals/certificates**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CSA NRTL/C
- CB-scheme

■ **Color**
Housing: RAL 7035 light gray
Plastic parts: RAL 7021 dark gray

■ **Load rating**
100-240 Vac/10 A

■ **Approval symbols for IEC 320 3-way Euro combinations**
VDE, UR, CSA

■ **Supply schedule**
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
383		6	●					**03.600.206.1**	1 unit

DOS20110

Knürr DI-STRIP® Safety Basic Euro Socket System IEC 320
with GST18 plug system

- With overvoltage protection
- Technical description, see page 164

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
483		6						**03.616.206.1**	1 unit

DOS20109

Knürr DI-STRIP® Safety Standard
with GST18 plug system

- With overvoltage protection with integrated mains filter
- Technical description, see page 165

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP	
483		6							**03.618.206.1**	1 unit

DOS20108

Knürr DI-STRIP® Power Cleaner
with GST18 plug system

- Technical description, see page 163

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
483		6						**03.612.206.1**	1 unit

Dimensions in mm: L = Length   U = standard height unit
S = Switch   UP = Unit of packaging
n = Number of sockets
F1 = Standard side   = Express item
F2 = Design side
19"= Suitable for 19" installation
Safe= Child-safe,

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound
Replace .**x** with the number of your color combination:
.1 = RAL 7035, **.6** = RAL 7035/RAL 2003

3-phase in rack with GST18
Strong points

1 DOS20147

2 DOS20132

3 DOS20142
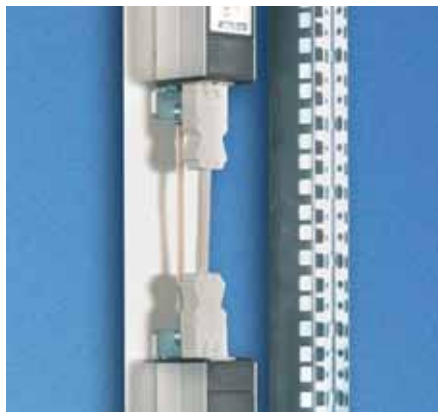
3 DOS20135

1 Requirement
Constantly increasing energy requirements in the rack caused by high packing densities (e.g. 1 U Pizza Servers, Blade Servers, etc.)

2 Solution
3-phase distributor with GST18 plug system, e.g. 96 A and more with redundant feed

3 Benefits
- Modularity
- Plug-in capability (no wiring required)
- Expandability
- Cascadability
- Easy provision of redundancies / UPS secured circuits
- Combination of DIN Schuko and IEC320, for example
- Installation position freely selectable
- Good alternative for 3-phase DI-STRIP Triple Power (see page 156)

DOS20104

Power Supply Cable, 3-Phase
Accessories for GST 18 plug system

- GST 18 socket for connecting GST18i5 distributor block with 3 phases
- 5-pole (L1, L2, L3, N, PE) 250/400 V ~
- Cable: HO5VV-F 5G 2.5 mm²

Color
Black

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
2000								**04.000.048.0**	1 unit

DOS20103

GST18i5 Distributor Block, 3-phase

- For individual connection at the customer
- Modular plug-in connection
- 3 phase distribution on various socket strips
- Including mounting panel

Color
Black

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
								04.000.038.9	1 unit

DOS00467

Power Supply Cable, 1-Phase
Accessories for GST 18 plug system

- Mains plug CEE/VII - GST18 socket (Wieland)
- Cable - H05VV-F3G 1.5 mm²

Color
White

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
2000								**04.000.040.0**	1 unit
5000								**04.000.041.0**	1 unit

DOS00469

DOS20105

Connection Cable
Accessories for GST 18 plug system

- GST 18 plug
- GST 18 plug
- Cable - H05VV-F3G 1.5 mm²

Color
For color coding circuits (e.g.UPS)

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
200							White	**04.000.042.0**	1 unit
200							Black	**04.000.042.9**	1 unit
500							White	**04.000.037.0**	1 unit
500							Black	**04.000.037.9**	1 unit
1000							White	**04.000.044.0**	1 unit
1000							Black	**04.000.044.9**	1 unit
5000							White	**04.000.045.0**	1 unit

DOS00471

GST18 Socket Part

- With screw terminal for cross-section1.5-2.5 mm²
  with cable strain relief
- For individual connection at the customer

Color
White

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
								04.000.046.0	1 unit

DOS00470

GST18 Plug Part

- With screw terminal for cross-section1.5-2.5 mm²
  with cable strain relief
- For individual, further cabling at the customer

Color
White

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
								04.000.047.0	1 unit

DOS20062
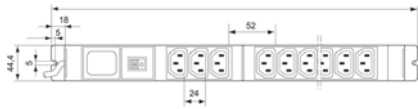
DOS00498
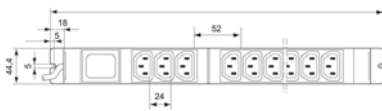
DOS20042

Knürr DI-STRIP® Euro Socket System, IEC 320
With cable and right angle plug

- Optionally with lit switch, 2-pole switching
- 19" installation option
- With Euro combinations of IEC 320 sockets Sheet F and Sheet J
- Cable: H05VV-F 3G 1.5 mm²
- Cable: 2.5 m
- Without fusing

■ **Material/ Finish**
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable

■ **Dimensions**
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)

■ **Approvals/certificates**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

■ **Color**
Housing: RAL 7035 light gray
Plastic parts: RAL 7021 dark gray

■ **Load rating**
250 Vac/10 A, Sheet F
250 Vac/16 A, Sheet J

■ **Approval symbols for IEC 320 3-way Euro combinations**
VDE, UR, CSA

■ **Supply schedule**
1 socket strip
2 mounting brackets

L	S	n	F1	19"	Input values	Input plug	Outputs Sheet F	Sheet J	Order no.	UP	
333		6	●		230Vac, 16A	Schuko CEE7	6		**03.600.006.1**		1 unit
483	●	9	●	●	230Vac, 16A	Schuko CEE7	9		**03.602.009.1**		1 unit
483		12	●	●	230Vac, 10A	IEC60320 Sheet E	12		**03.600.312.1**		1 unit
783		18	●		230Vac, 16A	IEC60320 Sheet I	15	3	**03.600.418.1**		1 unit
783		18	●		230Vac, 16A	IEC60309 1ph/N/PE 6h	15	3	**03.600.518.1**		1 unit

DOS00458
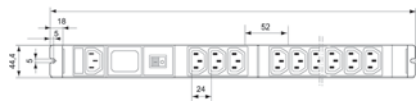
DOS20041   With switch
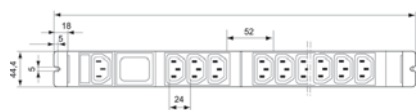
DOS20040   Without switch

Knürr DI-STRIP® Euro Socket System, IEC 320
Euro input in plug panel

- With fine-wire fuse 10A
- Optionally with lit switch, 2-pole switching
- 19" installation option
- With 3-way Euro combinations of IEC 320 sockets

■ **Material/ Finish**
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable

■ **Dimensions**
Socket spacing: 24 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)

■ **Approvals/certificates**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC

- Innova-GS
- CSA NRTL/C
- CB-scheme

■ **Color**
Housing: RAL 7035 light gray
Plastic parts: RAL 7021 dark gray

■ **Load rating**
100-240 Vac
Input: (DC max. 10 A)
Output: (DC max. 10 A)

■ **Approval symbols for IEC 320 3-way Euro combinations**
VDE, UR, CSA

■ **Supply schedule**
1 socket strip
2 mounting brackets

Dimensions in mm:
L = Length
S = Switch
n = Number of sockets
F1 = Standard side
F2 = Design side
19" = Suitable for 19" installation
Safe = Child-safe,

U = standard height unit
UP = Unit of packaging

= Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound
Replace **.x** with the number of your color combination:
.1 = RAL 7035, **.6** = RAL 7035/RAL 2003

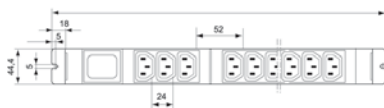| L	S	n	F1	F2	19"	Safe	Model	Order no.	UP	
383		6	●					**03.622.006.1**		1 unit
483		9	●		●			**03.622.009.1**		1 unit
433	●	6	●				With switch	**03.624.006.1**		1 unit

DOS00460

DOS00461
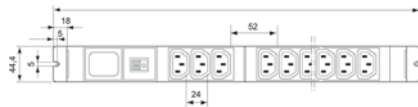
DOS20043   With switch

DOS20044   Without switch

Knürr DI-STRIP® Euro Socket System, IEC 320
Euro input on side panel

- With fine-wire fuse 10A
- Optionally with lit switch, 2-pole switching
- 19" installation option
- With 3-way Euro combinations of IEC 320 sockets

■ **Material/ Finish**
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable

■ **Dimensions**
Socket spacing: 24 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)

■ **Approvals/certificates**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CSA NRTL/C
- CB-scheme

■ **Color**
Housing: RAL 7035 light gray
Plastic parts: RAL 7021 dark gray

■ **Load rating**
100-240 Vac
Input: (DC max. 10 A)
Output: (DC max. 10 A)

■ **Approval symbols for IEC 320 3-way Euro combinations**
VDE, UR, CSA

■ **Supply schedule**
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
333		6	●					**03.622.706.1**	1 unit
433		9	●					**03.622.709.1**	1 unit
383	●	6	●				With switch	**03.624.706.1**	1 unit
483	●	9	●				With switch	**03.624.709.1**	1 unit

DOS20102

Knürr DI-STRIP® Euro Plug System, IEC 320
With cable and right angle plug

- With thermal overload protection, 10 A (can be reset)
- With lit switch, 1-pole switching
- 19" installation option
- With 2 5-way Euro combinations of IEC 320 sockets
- Cable: H05VV-F 3G 2.5 mm²
- Cable: approx. 5 m
- Molded right angle plug, CEE7/VII, optional blue 16 A-6h (2P+PE) CEE17 plug

■ **Material/ Finish**
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable

■ **Dimensions**
Socket spacing: 24 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)

■ **Approvals/certificates**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

■ **Color**
Housing: RAL 7035 light gray
Plastic parts: RAL 7021 dark gray

■ **Load rating**
250 Vac/10 A

■ **Approval symbols for IEC 320 5-way Euro combinations**
UR, CSA, VDE

■ **Supply schedule**
1 socket strip
2 mounting brackets

Dimensions in mm: L = Length   U = standard height unit
S = Switch   UP = Unit of packaging
n = Number of sockets
F1 = Standard side   = Express item
F2 = Design side
19" = Suitable for 19" installation
Safe = Child-safe,

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound
Replace **.x** with the number of your color combination:
.1 = RAL 7035, **.6** = RAL 7035/RAL 2003

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
483	●	10	●		●		With switch	**03.632.010.1**	1 unit

DOS00076

Mains cable for Euro socket strip
For DIN 49 440 and French/Belgian standard

- Mains plug CEE/VII - Euro socket IEC 320
- Cable
- H05VV-F 3G 1 mm²

■ **Mains voltage**
250 VAC

■ **Nominal current**
10 A

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
2000								**04.000.054.9**	1 unit
6000								**04.000.053.9**	1 unit

DOS00077

Mains cable for Euro socket strip
For Swiss standard

- Mains plug: Type 12 - Euro socket IEC320
- Cable
- H05VV-F 3G 1 mm²

■ **Mains voltage**
250 VAC

■ **Nominal current**
10 A

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
2000								**04.000.055.9**	1 unit

DOS00078

Mains cable for Euro socket strip
For British standard

- Mains plug: Type BS 1363 - Euro socket IEC 320
- Cable
- H05VV-F 3G 1 mm²

■ **Mains voltage**
250 VAC

■ **Nominal current**
10 A

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
2000								**04.000.056.9**	1 unit

DOS00519

Euro Connection Cable

- Mains plug: IEC 320 - Euro socket IEC320
- Cable
- H05VV-F 3G 1 mm²
- USA: SJT AWG18 with USA approval

■ **Mains voltage**
250 VAC

■ **Nominal current**
10 A

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
900							EU	**04.000.051.9**	1 unit
900							USA	**04.000.052.9**	1 unit

Dimensions in mm: L   = Length   U   = standard height unit
                        S   = Switch   UP = Unit of packaging
                        n   = Number of sockets
                        F1 = Standard side   = Express item
                        F2 = Design side
                        19" = Suitable for 19" installation
                        Safe= Child-safe,

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound
Replace **.x** with the number of your color combination:
.1 = RAL 7035, **.6** = RAL 7035/RAL 2003

DOS20018

DOS20019

Knürr DI-STRIP® Classic
Standard CEE 7-V (UTE) / France

- Optionally with lit switch, 2-pole switching
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded right angle plug

Material/ Finish
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

Dimensions
Socket spacing: 24 mm 100 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

Approvals/certificates
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

Color combination
Final digit of order number .1:
RAL 7035 light gray
Final digit of order number .6:
Housing: RAL 2003 pastel orange
Plastic parts: RAL 7035 light gray

Load rating
100-240 Vac/16 A

Supply schedule
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
1783		17	●			●		**03.400.067.x**	1 unit
1383		13	●			●		**03.400.063.x**	1 unit
983		9	●			●		**03.400.059.x**	1 unit
583		5	●			●		**03.400.055.x**	1 unit
1733	●	16	●			●	With switch	**03.402.066.x**	1 unit
1333	●	12	●			●	With switch	**03.402.062.x**	1 unit
933	●	8	●			●	With switch	**03.402.058.x**	1 unit
533	●	4	●			●	With switch	**03.402.054.x**	1 unit

Dimensions in mm:
L = Length
S = Switch
n = Number of sockets
F1 = Standard side
F2 = Design side
19" = Suitable for 19" installation
Safe = Child-safe,
U = standard height unit
UP = Unit of packaging
= Express item

Conversion: 1 mm = 0.03937 inch 1 kg = 2.2046 pound
Replace **.x** with the number of your color combination:
.1 = RAL 7035, **.6** = RAL 7035/RAL 2003

DOS20023 — With switch

DOS20022 — Without switch

DOS20025 — With switch

DOS20024 — Without switch
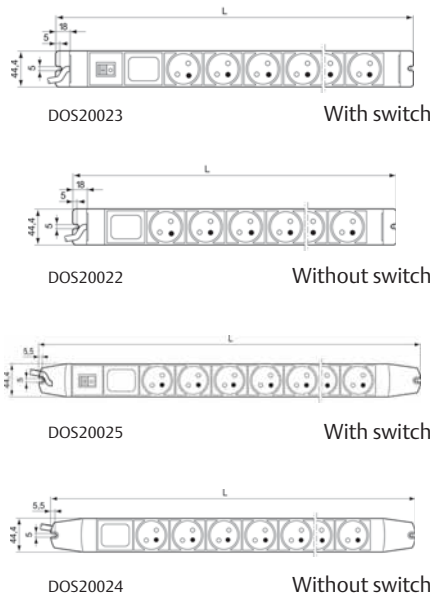
Knürr DI-STRIP® Compact
Standard CEE 7-V (UTE) / France

- Optionally with lit switch, 2-pole switching
- 19" installation option (with length 483 mm)
- 2 versions: Standard side panel or Design side panel
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded right angle plug

Material/ Finish
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

Dimensions
Socket spacing: 24 mm 50 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

Approvals/certificates
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

Color combination
Final digit of order number .1:
RAL 7035 light gray
Final digit of order number .6:
Housing: RAL 2003 pastel orange
Plastic parts: RAL 7035 light gray

Load rating
100-240 Vac/16 A

Supply schedule
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
883		15	●			●		**03.400.015.x**	1 unit
732		11		●		●		**03.400.111.x**	1 unit
683		11	●			●		**03.400.011.x**	1 unit
532		7		●		●		**03.400.107.x**	1 unit
483		7	●		●	●		**03.400.007.x** 🅖	1 unit
382		4		●		●		**03.400.104.x**	1 unit
333		4	●			●		**03.400.004.x**	1 unit
883	●	14	●			●	With switch	**03.402.014.x**	1 unit
732	●	10		●		●	With switch	**03.402.110.x**	1 unit
683	●	10	●			●	With switch	**03.402.010.x** 🅖	1 unit
532	●	6		●		●	With switch	**03.402.106.x**	1 unit
483	●	6	●		●	●	With switch	**03.402.006.x** 🅖	1 unit
382	●	3		●		●	With switch	**03.402.103.x**	1 unit
333	●	3	●			●	With switch	**03.402.003.x**	1 unit

Dimensions in mm: L = Length   U = standard height unit
S = Switch   UP = Unit of packaging
n = Number of sockets
F1 = Standard side   🅖 = Express item
F2 = Design side
19" = Suitable for 19" installation
Safe = Child-safe,

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound
Replace **.x** with the number of your color combination:
.1 = RAL 7035, **.6** = RAL 7035/RAL 2003
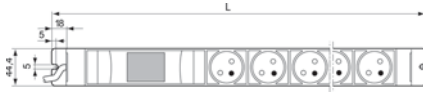
DOS20026

Knürr DI-STRIP® Protector FI
Standard CEE 7-V (UTE) / France

Protector FI
RCCB for user protection
- Protection with indirect contact as error
  protection by switching off with inadmissible
  high contact voltage through contact with
  electrical equipment
- Protection with direct contact as back-up
  protection
- Residual operating current I**g** = 10 mA for
  alternating and pulsating direct fault current
- 19" installation option (with length 483 mm)
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm^2
- Molded right angle plug

Material/ Finish
Housing: closed sheet steel extrusion, zinc-
passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94),
recyclable
Internal conductor: full-length busbar, brass

Dimensions
Socket spacing: 24 mm 50 mm
Height: 78 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

Approvals/certificates
- CE label in accordance with low voltage
  guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

Color combination
Final digit of order number .1:
RAL 7035 light gray
Plastic parts: RAL 7035 light gray

Load rating
100-240 Vac/16 A

Supply schedule
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
883		13	●			❖		**03.404.013.1**	1 unit
683		9	●			●		**03.404.009.1**	1 unit
483		5	●		●	●		**03.404.005.1**	1 unit
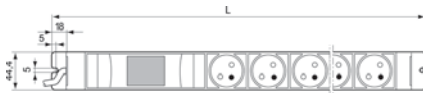
DOS20026

Knürr DI-STRIP® Protector LS
Standard CEE 7-V (UTE) / France

Protector circuit breaker
- Circuit breaker for overload and short circuit
- Protects cables and feeds with rapid
  switching off with short circuit and defined
  delayed cutoff with overload
- Circuit breaker: 16 A
- Tripping characteristic, type B, 2-pole
- 19" installation option (with length 483 mm)
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm^2
- Molded right angle plug

Material/ Finish
Housing: closed sheet steel extrusion, zinc-
passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94),
recyclable
Internal conductor: full-length busbar, brass

Dimensions
Socket spacing: 24 mm 50 mm
Height: 78 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

Approvals/certificates
- CE label in accordance with low voltage
  guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

Color combination
Final digit of order number .1:
RAL 7035 light gray
Plastic parts: RAL 7035 light gray

Load rating
100-240 Vac/16 A

Supply schedule
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
883		13	●			●		**03.408.013.1**	1 unit
683		9	●			●		**03.408.009.1**	1 unit
483		5	●		●	●		**03.408.005.1**	1 unit

Dimensions in mm:
L = Length
S = Switch
n = Number of sockets
F1 = Standard side
F2 = Design side
19"= Suitable for 19" installation
Safe= Child-safe,

U = standard height unit
UP = Unit of packaging

= Express item

Conversion: 1 mm = 0.03937 inch 1 kg = 2.2046 pound
Replace **.x** with the number of your color combination:
.1 = RAL 7035, **.6** = RAL 7035/RAL 2003

DOS 20026

Knürr DI-STRIP® Protector FI / LS
Standard CEE 7-V (UTE) / France

■ **Protector FI / LS**
- Fault current switch and circuit breaker
- Provides a combination of user, overload and short circuit protection
- Residual operating current I**g** = 30 mA for alternating and pulsating direct fault current
- Circuit breaker: 16 A
- Tripping characteristic, type B, 2-pole
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded right angle plug

■ **Material/ Finish**
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

■ **Dimensions**
Socket spacing: 24 mm 50 mm
Height: 78 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

■ **Approvals/certificates**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

■ **Color combination**
Final digit of order number .1:
RAL 7035 light gray
Plastic parts: RAL 7035 light gray

■ **Load rating**
100-240 Vac/16 A

■ **Supply schedule**
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
883		13	●			●		**03.410.013.1**	1 unit
683		9	●			●		**03.410.009.1**	1 unit
483		5	●		●	●		**03.410.005.1**	1 unit
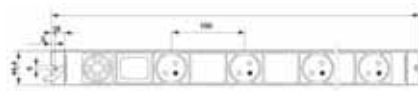
DOS20027 — Classic with emergency stop switch
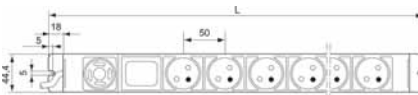
DOS20028 — Compact with emergency stop switch

Knürr DI-STRIP® Protector Emergency STOP
Standard CEE 7-V (UTE) / France

- With 2-pole emergency stop switch for user protection
- For protecting operating personnel
- For manual emergency switching off of the connected consumers
- Phase and neutral conductors are safely separated
- Switch must be specifically unlocked to restart
- 19" installation option (with length 483 mm)
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded right angle plug

■ **Material/ Finish**
Housing: closed sheet steel extrusion , zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

■ **Dimensions**
Socket spacing: 24 mm Classic: 100 mm, Compact: 50 mm
Height: 101 mm

Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

■ **Approvals/certificates**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

■ **Color combinations**
Final digit of order number .1:
RAL 7035 light gray
Plastic parts: RAL 7035 light gray

■ **Load rating**
100-240 Vac/16 A

■ **Supply schedule**
1 socket strip
2 mounting brackets
2 19" mounting bracket (additional with 19" installation option)

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
683		10	●			●	Compact	**03.426.010.1**	1 unit
483		6	●		●	●	Compact	**03.426.006.1**	1 unit
1333		12	●			●	Classic	**03.426.062.1**	1 unit
933		8	●			●	Classic	**03.426.058.1**	1 unit

DOS20029   With emergency Off switch and FI/LS circuit breaker

Knürr DI-STRIP® Protector Emergency Stop FI / LS
Standard CEE 7-V (UTE) / France

- With 2-pole emergency stop switch for user protection
- For protecting operating personnel
- For manual emergency switching off of the connected consumers
- Phase and neutral conductors are safely separated
- Switch must be specifically unlocked to restart
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded right angle plug

Material/ Finish
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

Dimensions
Socket spacing: 24 mm Compact: 50 mm
Height: 101 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

Approvals/certificates
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

Color combinations
Final digit of order number .1:
RAL 7035 light gray
Plastic parts: RAL 7035 light gray

Additionally:
With 2-pole fault current switch and circuit breaker
Provides a combination of user, overload and short circuit protection

Load rating
100-240Vac/16 A

Supply schedule
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
683		8	●			●		03.428.008.1	1 unit

DOS20030   With mains filter

Knürr DI-STRIP® Power Cleaner
Standard CEE 7-V (UTE) / France

- High-frequency glitches are generally caused by switching processes in an operation from 100 kHz to 5MHz. This high-frequency rate overloads the mains frequency and affects adjacent electronic equipment. The mains filter attenuates this high-frequency rate.
- The attenuation behavior is harmonized with the typical interference spectrum.
- The mains filter works in both directions. This means that glitches from the equipment to the socket strip are also filtered from the mains.
- 19" installation option (with length 483 mm)
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded right angle plug

Material/ Finish
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

Dimensions
Socket spacing: 24 mm 50 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)

Approvals/certificates
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

Color combination
Final digit of order number .1:
RAL 7035 light gray
Final digit of order number .6:
Housing: RAL 2003 pastel orange
Plastic parts: RAL 7035 light gray

Load rating
Nominal voltage: max. 250 Vac, 50 Hz
Nominal current: max. 16 A

Supply schedule
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
883		13	●			●		03.412.013.x	1 unit
683		9	●			●		03.412.009.x	1 unit
483		5	●		●	●		03.412.005.x	1 unit

DOS20031
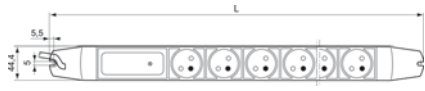
DOS20032

Knürr DI-STRIP® Safety Basic
Standard CEE 7-V (UTE) / France

- For protecting against transient overvoltages from the mains, which, for example, are caused by switching machines on and off.
- With critical overvoltages the mains is separated.
- Once the safety arrester has been triggered the green function display goes out. The socket strip can then no longer be used. Send the socket strip to the manufacturer for the safety arrester to be replaced!
- The safety effect of the type 3 test category and requirements category "D" is to protect the equipment, i.e. precision protection.
- The protection devices of the test and requirements categories 1 and 2 and B and C must be preconnected in the building installation to ensure optimum protection.
- 19" installation option (with length 483 mm)
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded right angle plug

Material/ Finish
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

Dimensions
Socket spacing: 24 mm 50 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)

Approvals/certificates
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

Color
Final digit of order number .1:
RAL 7035 light gray

Technical data
Test category: Type 3
- In acc. with DIN EN 61643-11
Requirements class: D
- In acc. with VDE 0675-6
Mains voltage: 230 VAC
Nominal current: max. 16 A
Cut-off discharge current (8/20 μs): 10 kA
Response time: ‹ 25 ns
Protection level
(with 100 A varistor peak current):
- L with respect to N: ‹ 800 V
- L/N with respect to PE: ‹ 1500 V

Supply schedule
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
732		10		●		●		**03.416.110.1**	1 unit
683		10	●			●		**03.416.010.1**	1 unit
532		6		●		●		**03.416.106.1**	1 unit
483		6	●		●	●		**03.416.006.1**	1 unit
432		4		●		●		**03.416.104.1**	1 unit
383		4	●			●		**03.416.004.1**	1 unit
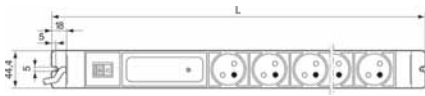
DOS20033   With overvoltage protection and mains filter
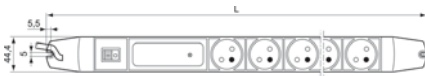
DOS20034   With overvoltage protection and mains filter

Knürr DI-STRIP® Safety Standard
Standard CEE 7-V (UTE) / France

- The "Safety Standard" models consist of a combined overvoltage protection/mains filter element.
- For protecting against transient overvoltages from the mains, which, for example, are caused by switching machines on and off.
- With critical overvoltages the mains is separated.
- Once the safety arrester has been triggered the green function display goes out. The socket strip can then no longer be used. Send the socket strip to the manufacturer for the safety arrester to be replaced!
- The safety effect of the type 3 test category and requirements category "D" is to protect the equipment, i.e. precision protection.
- The protection devices of the test and requirements categories 1 and 2 and B and C must be preconnected in the building installation to ensure optimum protection.
- High-frequency glitches are generally caused by switching processes in an operation from 100 kHz to 5MHz.
- This high-frequency rate overloads the mains frequency and affects adjacent electronic equipment. The mains filter attenuates this high-frequency rate.
- The attenuation behavior is harmonized with the typical interference spectrum.
- 19" installation option (with length 483 mm)
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded right angle plug

■ **Material/ Finish**
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

■ **Dimensions**
Socket spacing: 24 mm 50 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

■ **Approvals/certificates**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

■ **Color combination**
Final digit of order number .1:
RAL 7035 light gray
Final digit of order number .6:
Housing: RAL 2003 pastel orange
Plastic parts: RAL 7035 light gray

■ **Technical data**
Mains voltage: 230 VAC
Nominal current: max. 16 A
Cut-off discharge current (8/20 μs): 10 kA
Response time: ‹ 25 ns
Protection level
(with 100 A varistor peak current):
- L with respect to N: ‹ 800 V
- L/N with respect to PE: ‹ 1500 V
Overvoltage protection
Requirements class: D
- In acc. with VDE 0675-6
Mains filter
- In acc. with VDE 0565 (EN 60939)

■ **Supply schedule**
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
883	●	13	●			●	With switch	03.418.013.x	1 unit
732	●	9		●		●	With switch	03.418.109.x	1 unit
683	●	9	●			●	With switch	03.418.009.x	1 unit
532	●	5		●		●	With switch	03.418.105.x	1 unit
483	●	5	●		●	●	With switch	03.418.005.x	1 unit

DOS20035   With master-slave module

Knürr DI-STRIP® Master Slave
Standard CEE 7-V (UTE) / France

- If the master equipment is switched, the slave sockets are also switched (together, with a short delay to the master). This means convenient switching on and off of several hard to access devices. Switching thresholds can be set from outside via potentiometer.
- Note:
  - The master equipment power consumption must be continuously above the switching-on threshold. When switching off the master equipment, the power consumption must fall below the switching-off threshold.
- 19" installation option (with length 483 mm)
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded right angle plug

■ **Material/ Finish**
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

■ **Dimensions**
Socket spacing: 24 mm 50 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

■ **Approvals/certificates**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

■ **Color combination**
Final digit of order number .1:
RAL 7035 light gray
Plastic parts: RAL 7035 light gray

■ **Load rating**
Max. 250 Vac/16 A

■ **Technical data**
Switching threshold setting range
On: 20 mA - 200 mA
(approx. 55 mA delivery status)
Off: 16 mA - 160 mA
(approx. 44 mA delivery status)
Switching delay: 550 ms +/- 20 %
Electronic module: 2-pole switching

■ **Supply schedule**
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
683	9	●				●		**03.414.009.1**	1 unit
483	5	●		●	●			**03.414.005.1**	1 unit

DOS20037

Master-slave,
overvoltage protection
and mains filter
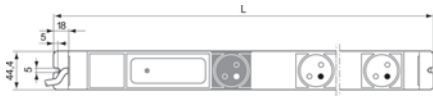
DOS20036

Master-slave,
overvoltage protection
and mains filter

Knürr DI-STRIP® Combi
Standard CEE 7-V (UTE) / France

- Master-slave with overvoltage protection and
  mains filter
- Automatic consumer switching
- Combines Master-Slave (page 7.32) and Safety
  Standard (page 7.31) functions
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded right angle plug

■ **Material/ Finish**
   Housing: closed sheet steel extrusion, zinc-
   passivated, powder-coated texture
   Plastic parts: Vampamid 6 0024 VO (UL94),
   recyclable
   Internal conductor: full-length busbar, brass

■ **Dimensions**
   Socket spacing: 24 mm 50 mm
   Height: 45.5 mm
   Housing width: 44.4 mm (= 1 U)
   Cable 2.5 m

■ **Approvals/certificates**
   - CE label in accordance with low voltage
     guideline 2006/95/EWG
   - EMC Directive 2004/108/EC
   - Innova-GS
   - CB-scheme

■ **Color combination**
   Final digit of order number .1:
   RAL 7035 light gray
   Plastic parts: RAL 7035 light gray

■ **Technical data**
   Overvoltage protection and mains filter:
   Mains voltage: max. 250 Vac
   Nominal current: 16 A
   Requirements class: D (precision protection
   in acc. with VDE 0675)
   Surge current resistance (8/20 μs wave):
   max. 10 kA
   Protection level (1.5/50 μs wave): ‹ 1500 V
   (L + N against PE)
   Master-slave function:
   Switching threshold setting range
   On: 20 mA - 200 mA
   (approx. 55 mA delivery status)
   Off: 16 mA - 160 mA
   (approx. 44 mA delivery status)
   Switching delay: 550 ms +/- 20 %
   Electronic module: 2-pole switching

■ **Supply schedule**
   1 socket strip
   2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
782		9		●		●		03.420.109.1	1 unit
733		9	●			●		03.420.009.1	1 unit
582		5		●		●		03.420.105.1	1 unit
533		5	●			●		03.420.005.1	1 unit

Dimensions in mm: L = Length U = standard height unit
 S = Switch UP = Unit of packaging
 n = Number of sockets
 F1 = Standard side = Express item
 F2 = Design side
 19" = Suitable for 19" installation
 Safe = Child-safe,

Conversion: 1 mm = 0.03937 inch 1 kg = 2.2046 pound
Replace **.x** with the number of your color combination:
.1 = RAL 7035, **.6** = RAL 7035/RAL 2003

DOS20048

GST 18 with switch

DOS20047 GST 18 without switch

Knürr DI-STRIP® Compact GST 18 Plug System (Wieland)
Standard CEE 7-V (UTE) / France

- Quick and efficient plug connection system
- Plug-in electro-installation in place of conventional wiring
- Speed:
  - With easy pre-configured element plugging together
- Flexibility:
  - With cable (cable length)
- Rational:
  - Easy socket strip swap-out, without costly cabling
- Safety:
  - Faulty installations are ruled out with plug system
- Space-saving:
  - Use of protection and switching functions can be extended with further cabling without and plug space loss (max. load rating 16 A)

■ **Material/ Finish**
  Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
  Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
  Internal conductor: full-length busbar, brass

■ **Dimensions**
  Socket spacing: 24 mm 50 mm
  Height: 45.5 mm
  Housing width: 44.4 mm (= 1 U)

■ **Approvals/certificates**
  - CE label in accordance with low voltage guideline 2006/95/EWG
  - EMC Directive 2004/108/EC
  - Innova-GS
  - CB-scheme

■ **Color combination**
  Final digit of order number .1:
  RAL 7035 light gray
  Plastic parts: RAL 7035 light gray

■ **Load rating**
  100-240 Vac/16 A

■ **Supply schedule**
  1 socket strip
  2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
583	●	6	●			●	With switch	**03.402.206.1**	1 unit
433	●	3	●			●	With switch	**03.402.203.1**	1 unit
533		7	●			●		**03.400.207.1**	1 unit
383		4	●			●		**03.400.204.1**	1 unit

DOS20051

Knürr DI-STRIP® Safety Basic
with GST18 plug system / France

- With overvoltage protection
- Technical description, see page 180

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
433		4				●		**03.416.204.1**	1 unit

DOS20052

Knürr DI-STRIP® Safety Standard
with GST18 plug system

- With overvoltage protection, with integrated mains filter and lit switch
- Technical description, see page 181

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
583		5				●		**03.418.205.1**	1 unit

DOS20054

Knürr DI-STRIP® Master Slave
with GST18 plug system

- Technical description, see page 182

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
533		5				●		**03.414.205.1**	1 unit

Knürr DI-STRIP® Classic
Standard CH SEV 1011

DOS00717

DOS00664   Classic with switch

DOS00665   Classic without switch

- With/without switch, socket spacing, 100 mm
- Optionally with lit switch, 2-pole switching
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded plug

Material/ Finish
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

Dimensions
Socket spacing: 24 mm 100 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

Approvals/certificates
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

Color combination
Final digit of order number .1:
RAL 7035 light gray
Final digit of order number .6:
Housing: RAL 2003 pastel orange
Plastic parts: RAL 7035 light gray

Load rating
100-240 Vac/10 A

Supply schedule
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
1783		17	●					**03.700.067.x**	1 unit
1383		13	●					**03.700.063.x**	1 unit
983		9	●					**03.700.059.x**	1 unit
583		5	●					**03.700.055.x**	1 unit
1733	●	16	●				With switch	**03.702.066.x**	1 unit
1333	●	12	●				With switch	**03.702.062.x**	1 unit
933	●	8	●				With switch	**03.702.058.x**	1 unit
533	●	4	●				With switch	**03.702.054.x**	1 unit

DOS20074

DOS00666

DOS20038

DOS20039

DOS00667

Knürr DI-STRIP® Compact
Standard CH SEV 1011

- Optionally with lit switch, 2-pole switching
- 19" installation option (with length 483 mm)
- 2 models, standard side or design side
- Socket rotation: 45º
- Cable: H05VV-F 3G 1.5 mm²
- Molded plug

Material/ Finish
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

Dimensions
Socket spacing: 24 mm 50 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

Approvals/certificates
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

Color combination
Final digit of order number .1:
RAL 7035 light gray
Plastic parts: RAL 7035 light gray

Load rating
100-240 Vac/10 A

Supply schedule
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
883		15	●					**03.700.015.1**	1 unit
732		11		●				**03.700.111.1**	1 unit
683		11	●					**03.700.011.1**	1 unit
532		7		●				**03.700.107.1**	1 unit
483		7	●		●			**03.700.007.1**	1 unit
382		4		●				**03.700.104.1**	1 unit
333		4	●					**03.700.004.1**	1 unit
732	●	10		●			With switch	**03.702.110.1**	1 unit
683	●	10	●				With switch	**03.702.010.1**	1 unit
532	●	6		●			With switch	**03.702.106.1**	1 unit
483	●	6	●		●		With switch	**03.702.006.1**	1 unit
382	●	3		●			With switch	**03.702.103.1**	1 unit
333	●	3	●				With switch	**03.702.003.1**	1 unit

Dimensions in mm: L = Length   U = standard height unit
S = Switch   UP = Unit of packaging
n = Number of sockets
F1 = Standard side   = Express item
F2 = Design side
19" = Suitable for 19" installation
Safe= Child-safe,

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound
Replace **.x** with the number of your color combination:
.1 = RAL 7035, **.6** = RAL 7035/RAL 2003

DOS00719

DOS00668

Knürr DI-STRIP® Protector FI/LS
Standard CH SEV 1011

■ **Protector FI/ LS**
- Fault current switch and circuit breaker
- Provides a combination of user, overload and short circuit protection
- Residual operating current I**g** = 30 mA for alternating and pulsating direct fault current
- Circuit breaker: 10 A
- Tripping characteristic, type B, 2-pole

- 19" installation option (with length 483 mm)
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded right angle plug

■ **Material/ Finish**
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

■ **Dimensions**
Socket spacing: 24 mm 50 mm
Height: 78 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 m

■ **Approvals/certificates**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

■ **Color combination**
Final digit of order number .1:
RAL 7035 light gray
Plastic parts: RAL 7035 light gray

■ **Load rating**
100-240 Vac/10 A

■ **Supply schedule**
1 socket strip
2 mounting brackets

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
683		9	●					**03.710.009.1**	1 unit
483		5	●		●			**03.710.005.1**	1 unit

DOS00720

DOS00669   With overvoltage protection and mains filter

Knürr DI-STRIP® Safety Standard
Standard CH SEV 1011

- With overvoltage protection and integrated mains filter
- With lit switch, 2-pole switching
- 19" installation option (with length 483 mm)
- Socket rotation: 45°
- Cable: H05VV-F 3G 1.5 mm²
- Molded plug

■ **Material/ Finish**
Housing: closed sheet steel extrusion, zinc-passivated, powder-coated texture
Plastic parts: Vampamid 6 0024 VO (UL94), recyclable
Internal conductor: full-length busbar, brass

■ **Dimensions**
Socket spacing: 24 mm 50 mm
Height: 45.5 mm
Housing width: 44.4 mm (= 1 U)
Cable 2.5 mm

■ **Approvals/certificates**
- CE label in accordance with low voltage guideline 2006/95/EWG
- EMC Directive 2004/108/EC
- Innova-GS
- CB-scheme

■ **Color combination**
Final digit of order number .1:
RAL 7035 light gray
Plastic parts: RAL 7035 light gray

■ **Description and technical data**
(See page 165)
Nominal current: 10 A

■ **Supply schedule**
1 socket strip
2 mounting brackets
2 19" mounting brackets (additional with 19" installation option)

L	S	n	F1	F2	19"	Safe	Model	Order no.	UP
683	●	9	●				With switch	**03.718.009.1**	1 unit
483	●	5	●		●		With switch	**03.718.005.1**	1 unit

Dimensions in mm:
L = Length
S = Switch
n = Number of sockets
F1 = Standard side
F2 = Design side
19" = Suitable for 19" installation
Safe = Child-safe,

U = standard height unit
UP = Unit of packaging

= Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound
Replace **.x** with the number of your color combination:
.1 = RAL 7035, **.6** = RAL 7035/RAL 2003

Knürr PowerTrans®

Power Distribution Rack

Central connection unit for power supplies for individual server racks.

Power Distribution Rack

PowerTrans®

The **Knürr PowerTrans®** Rack is the interface between the low voltage feed and the Power Distribution Unit (PDU) of the **Knürr DI-STRIP®** family, as well as other Emerson Network Power PDUs for supplying servers and further IT devices.

The power distribution is performed in the individual plug-in units and therefore no longer has to be installed fixed in the building. Up to 8 plug-in units can be integrated. Each plug-in unit is supplied with an A and B feed (redundancy). With max. 250 A/phase loads of up to 329 kVA can be supplied from just one single rack.

**Knürr PowerTrans®
Strong points**

1 Equipping and installation
The outputs on the plug-in units can be flexibly configured according to customer requirements via various plug connections, type CEE and GST 18. (e.g. BladePower® or PizzaPower®, DI-STRIP® TriplePower®, and flexible distribution with the GST18i5 distributor block, 3-phase).

2 Two 3-phase feeds
- Feed A and feed B both three-phase with max. 250A/phase L1, L2, L3, N, PE
- Ideal for providing feed redundancies

3 Cable routing
Convenient cable routing from above and below.

4 Costs-conscious
Only the main feed on the rack must be installed by an electrician. The individual plug-in units and the PDUs can be connected per Plug & Play installation, thereby allowing later extensions to be performed cost-effectively.

1 MIR20388

2 MIR20390

3 MIR20391

4 MIR20386

MIR20377

Knürr PowerTrans®
19" Power Distribution Rack

– Feed of 2 separate 3-phase 400V mains, L1, L2, L3, N, PE
– Each with a 250A circuit breaker in the input
– Distribution to the individual plugs via busbars and contact-safe plug-in connections
– Up to 8 slot-in units with A feed and B feed are possible

■ **Material / Finish**
- Basic rack, extruded aluminum, polished
- Corner piece, die-cast aluminum, polished
- Glass infill front door, single safety glass panel, 4mm
- Covers, zinc-passivated sheet steel, powder-coated texture

■ **Color**
RAL 7021 dark gray

■ **Supply schedule**
1 rack with covers and front door
1 plinth for cable entry on the side and rear with leveling feet (0-25mm)
2 plinth trims for front and rear, with vent slots and fixing for filter mat
2 plinth trims, closed
1 set of busbars, safe from contact for A feed and B feed
2 circuit breakers with max. 250 A
16 power supply plugs for the slot-in units wired on the busbars
5 multifunctional braces with jumper bracket
2 19" T-slot extrusions
16 chassis rails
1 complete earthing set
1 complete locking set

■ **How supplied**
Assembled

W	H	D	U	h	d	kg	Model	Order no.	UP
800	2120	1000						**03.014.501.8**	1 unit

MIR20383

MIR20382

Knürr PowerTrans® 19" Chassis

– 19" slot-in housing
– Width   19"
– Height 3 U
– Depth   480 mm
– Color: RAL 7021 dark gray
– 2 separate 3-phase inputs with max. 63A phase current
– Outputs acc. to variants 1-4

■ **Variant 1 Plug-in**
- 2 protected 3-phase outputs, 230V/400V 32A via IEC60309 socket, 3Ph/N/PE 6h, red
- Suitable for connecting 2 PizzaPower 3-phase (03.631.021.1) or 2 BladePower 3-phase (03.630.015.1)

■ **Variant 2 Plug-in**
- 4 protected 1-phase outputs, 230V 32A via IEC60309 socket, 1Ph/N/PE 6h, blue
- Suitable for connecting 4 PizzaPower 1-phase (03.631.007.1) or 4 BladePower 1-phase (03.630.005.1)

■ **Variant 3 Plug-in**
- 6 protected 1-phase outputs 230V/400V 16A via GST18i5 Euro installed socket, 3Ph
- Suitable for connecting GST18i5 distributor block, 3-phase (04.000.038.9, for flexible distribution to 1-phase socket strips) as well as connecting a TriplePower 3-phase (03.600.024.1 or 03.600.048.1)

■ **Variant 4 Plug-in**
- Empty housing
- For customer-specific equipping

■ **How supplied**
Assembled

W	H	D	U	Model	Order no.	UP
19"		479	3	Variant 1	**03.014.003.8**	1 unit
19"		479	3	Variant 2	**03.014.002.8**	1 unit
19"		479	3	Variant 3	**03.014.001.8**	1 unit
19"		479	3	Variant 4	**03.014.000.8**	1 unit

... multifunctional use

Connection example for 3-phase (32 A) power distribution in data centers with blade servers and pizza servers.

Socket strip connection cable length can be freely selected (max. 20 m).

3-phase variant: BladePower® and PizzaPower®

Connection example for 1-phase (32 A) power distribution in data centers with blade servers and pizza servers.

Socket strip connection cable length can be freely selected (max. 20 m).

1-phase variant: BladePower® and PizzaPower®

Connection example for 1-phase and 3-phase (16 A) power distribution in network racks.

Socket strip connection cable length can be freely selected (max. 20 m).

1-phase and 3-phase variant: DISTRIP® and TriplePower®

UPS

**Uninterruptible
Power Supply**

Tower Solutions • 19" Slot-In • Large Scale Systems

UPS

The right technical solution for every requirement.

UPS20082

Uninterruptible Power Supplies
Strong points

■ **Safety:**
High-grade online and line interactive technology guarantees safe and uniterruptible operation of your systems.

■ **Efficiency:**
The 19" modules provide high performance on minimum installation space with compact construction and modular setup.

■ **Investment security:**
Our solutions grow with your requirements, can be flexibly used and are easily expanded.

■ **Central UPS systems**
Higher power classes, 10 kVA to 4800 kVA, with installation and maintenance on request.

■ **Modularity:**
The individual components of this range can be combined according to requirements and consequently produce specifically defined solutions.

■ **User-friendliness**
Comprehensive displays and interactive interfaces for external analysis of status messages provide the user with current system information at all times.

■ **Highest possible protection**
Online UPS systems provide the highest possible protection against the 10 most frequent mains disturbances.

Line-InterActive / PowerSure PSI XR
IEC 62040-3 VI-SS-313

Eingang
Filter
elektronischer Umschalter
Ausgang
Umrichter
Batterie
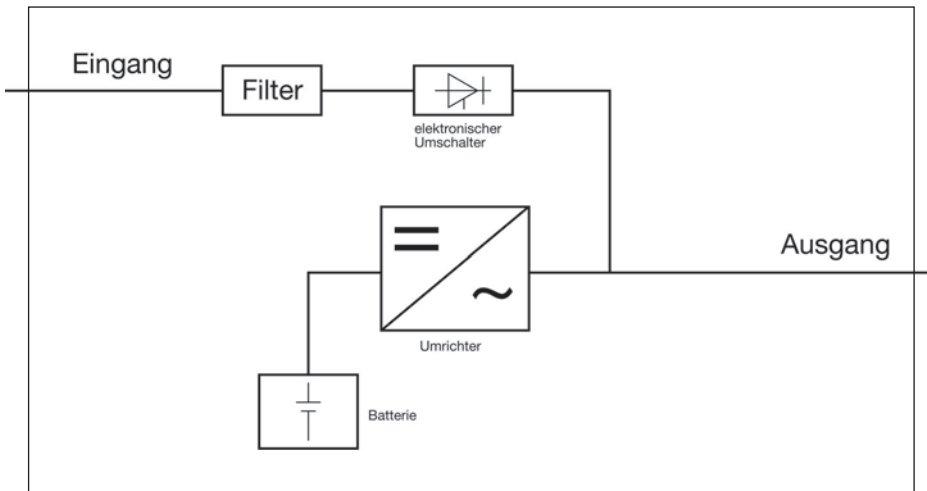
UPS20085

The line interactive UPS model uses an inverter in inverse operation to recharge the battery with stable mains supply.
If the mains power supply fails, then the working direction changes and the battery powers the inverter.
Because the transducer constantly monitors the mains input, it can react quicker to failures and correct voltage breaks.
The transducer connected upstream from the consumer has a specific filtering effect against mains disturbances. This technology is highly recommendable for uninterruptible power supplies for many applications, particularly with regard to PC requirements.

Power Quality Systems

Liebert PSI XR

Protection in rack and tower use for networks, telecommunications and servers
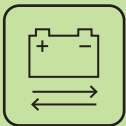
Hot-swappable batteries

AVR
Line-InterActive Design

Universal communication options

Extendable bridging times

Professional desktop PCs

Switches, hubs, routers & bridges

Data center facilities

Telecommunication switchgear units

Liebert® PSI-XR
High-performance rack & tower UPS system for network protection

The **Liebert PSI-XR** is a compact UPS system with line-interactive technology, which was specially designed for IT applications, such as network racks and small data centers, for example.

The Liebert PSI-XR's flexible design allows the unit to be configured as a standalone tower and rack installation over 2 U.
The Liebert PSI-XR is available as both 230-V and 120-V model in four different power classes.

The UPS is especially impressive with its innovative line-interactive design and automatic voltage regulation. This protects against voltage fluctuations by increasing or reducing the power supply to the level required by the connected devices. The UPS system also ensures longer battery service life, as the devices are supplied for as long as possible via the mains.

■ **Liebert PSI-XR standard equipment Flexibility:**
- Six or seven battery backed-up outputs
- Configurable input voltage range
- Free swivel display panel
- Automatic frequency scanning
- Several communication options (serial, USB, SNMP and contact closure)

■ **Higher availability**
- Data cable overvoltage protection
- UPS system status early warning system
- Fully automatic battery test
- Lightning and overvoltage protection
- Remote emergency stop
- Hot-swappable batteries the user can change
- Sufficient battery run time under full charge with power failures for proper shut down of the connected equipment

■ **Lowest possible TCO (Total Cost of Ownership)**
- 0.9 power factor for more power for the protected devices and energy-efficient operation
- Wide input voltage range
- Reduced installation input (costs and time)
- Standard two year warranty

■ **Ideal for:**
- PCs
- Networked workstations
- Servers
- Network racks
- Big network peripheries
- VoIP

PSI XR 2U Rack version   PSI XR 2U Tower version

Liebert® PSI XR specifications

Model	PS1000RT3-230XR	PS1500RT3-230XR	PS2200RT3-230XR	PS3000RT3-230XR
Power data				
VA	1000VA	1500VA	2200VA	3000VA
W	900W	1350W	1980W	2700W
Dimensions and weight				
Device (WxDxH mm)	440 x 490.5 x 88	440 x 490.5 x 88	440 x 700.5 x 88	440 x 700.5 x 88
Shipping size (WxDxH mm)	560 x 612 x 228	560 x 612 x 228	560 x 821 x 228	560 x 821 x 228
Weight - device (kg)	25	28	42	46
Shipping weight (kg)	29	32	47	51
Input parameters				
Frequency	220			
Voltage range without battery operation	165 to 300 VAC (configurable)			
Frequency range	45 - 65 Hz, (± 0.5 Hz)			
Input connection	IEC320-C14	IEC320-C14	IEC320-C20	IEC320-C20
Output parameters				
Output connections	(6) IEC320-C13	(6) IEC320-C13	(6) IEC320-C13 (1) IEC320-C19	(6) IEC320-C13 (1) IEC320-C19
Voltage (Normal Mode)	220/230/240 VAC (configurable)			
Voltage (Battery Mode)	220/230/240 VAC (configurable); ± 5% before low-battery warning			
Transfer Time	4-6 ms typical			
On-Battery Waveform	Sine wave			
Overload Warning	›100%			
Battery Parameters				
Type	Valve-regulated, nonspillable, lead acid			
Quantity x Voltage x Rating	4 x 12 x 7.2	4 x 12 x 9	8 x 12 x 7.2	8 x 12 x 9
Recharge Time	5 hours to 90% of rated capacity, after full discharge into resistive load			
Battery Backup Time				
Environmental				
Operating/ Storage Temperature, °C	0 to 40 / -15 to 40			
Relative Humidity	0% to 90%, non-condensing			
Operating Altitude	Up to 3000m at 35° without derating			
Audible Noise	‹ 40 dBA, internal fan(s) Off; ‹ 45 dBA, internal fan(s) On			
Agency				
Safety	IEC 62040-1-1			
EMC	IEC/EN/AS 62040-2 2nd Ed Class A			
Transportation	ISTA Procedure 1A Certification			
Warranty	2 years standard (+ 1 year warranty extension available)			
Packaging	User Manual on CD, Software CD, DB9 Serial cable, USB Cable, Tower Stands, Rack-Handles w/mounting hardware, Safety Instruction Sheet, Environment protection sheet, REPO mate socket, (2) IEC output cables for 1000/1500 VA and (3) IEC output cables for 2200/3000 VA, for PS 2200/3000; (1) "Shucko" CEE 7/7 to IEC-320-C19 input cord and (1) UK plug to IEC-320-C19 input cord			
Order no.	**06.099.027.1**	**06.099.028.1**	**06.099.029.1**	**06.099.030.1**
Order no. SNMP Card	**06.099.022.1**			

Liebert® PSI XR Battery Cabinet Specifications

Model	PSRT3-24VBXR	PSRT3-48VBXR
Used w/UPS Model	PS1000RT3-230XR / PS1500RT3-230XR	PS2200RT3-230XR / PS3000RT3-230XR
Dimensions, W x D x H, mm		
Unit / Shipping	440 x 490.5 x 88 / 560 x 675 x 228	
Weight, kg		
Unit / Shipping	29 / 33	
Batteries		
Type	Valve-regulated, nonspillable, lead acid	
Quantity x Voltage x Rating	8 x 12 x 7.2	8 x 12 x 7.2
Battery Manufacturer	CSB, YUASA or Equivalent	
Environmental		
Operating / Storage Temperature, °C	0 to 40 / -15 to 40	
Relative Humidity	0% to 90%, non-condensing	
Maximum Operating Altitude	3000m at 35° without derating	
Agency		
Safety / Emissions	IEC/EN/AS 62040-1-1 / IEC/EN/AS 62040-2 2nd Ed Class A	
Transportation	ISTA Procedure 1A Certification	
Order no.	**06.099.034.1**	**06.099.035.1**

Battery runtime chart (runtimes in minutes; with fully charged batteries; ambient temperature 25 °C)

Number of batteries	PS1000RT3-230XR	PS1500RT3-230XR	PS2200RT3-230XR	PS3000RT3-230XR
Internal Battery (half/full load)	15 / 6	13 / 5	14 / 5	13 / 5
1 Cabinet (half/full load)	73 /31	55 / 18	45 / 15	31 / 12
2 Cabinet (half/full load)	129 / 65	95 / 46	67 / 29	56 / 18
3 Cabinet (half/full load)	181 / 96	131 / 64	95 / 48	73 / 31
4 Cabinet (half/full load)	233 / 124	167 / 82	143 / 72	95 / 47
5 Cabinet (half/full load)	285 / 151	203 / 106	167 / 84	113 / 56
6 Cabinet (half/full load)	336 / 179	239 / 124	191 / 102	131 / 65

Although much time and effort went into ensuring that this brochure is accurate and complete, the Liebert Corporation does not accept responsibility for its content and does not accept any form of liability for damages that may result from the use of this information, nor does it accept responsibility for errors or omissions.

Emerson Network Power™
Leading global provider of
Business-Critical Continuity™ solutions.

- Alternating Current
- Connectivity
- Direct Current
- Integrated Computing
- Embedded Power
- Monitoring
- Outside Plant
- Power Switching and Regulation
- Precision Cooling
- Racks and Integrated Enclosure
- Services
- Overvoltage Protection

Emerson Network Power.com

Liebert® PSI
High performance rack & tower UPS system for network protection

The Liebert PSI is a compact UPS system with line-interactive technology, which was specially designed for IT applications, such as network racks and small data centers, for example.

The Liebert PSI's flexible design allows the unit to be configured as a stand-alone tower and rack installation over 2 U.
The Liebert PSI-XR is available as both 230-V and 120-V model in four different power classes.

The UPS is especially impressive with its innovative line-interactive design and automatic voltage regulation. This protects against voltage fluctuations by increasing or reducing the power supply to the level required by the connected devices. The UPS system also ensures longer battery service life, as the devices are supplied for as long as possible via the mains.

Flexibility:
- Battery backed-up outputs
- Configurable input voltage range
- Free swivel display panel
- Automatic frequency scanning
- Rack runner rails
- Several communication options
- Contact closure, USB and SNMP

Higher availability
- Data cable overvoltage protection
- UPS system status early warning system
- Up to five minutes battery runtime with power failures (fully charged)
- Fully automatic battery test
- Overvoltage protection
- Remote emergency stop
- Hot-swappable batteries

Lowest possible TCO (Total Cost of Ownership)
- Power factor 0.9
- Wide input voltage range
- Reduced installation input (costs and time)
- Warranty

Ideal for:
- PCs
- Networked workstations
- Servers
- Network racks
- Big network peripheries
- VoIP

PSI 2U Rack version   PSI 2U Tower version

Liebert® PSI specifications

Model	PS750RT3-230	PS1000RT3-230	PS1500RT3-230	PS2200RT3-230	PS3000RT3-230
Power Rating	750VA/675W	1000VA/900W	1500VA/1350W	2200VA/1980W	3000VA/2700W
Dimensions, W x D x H - mm					
Unit		440 x 412 x 88		446 x 657 x 88	
Shipping		560 x 595 x 228		560 x 776 x 228	
Weight - kg					
Unit	15	19.4	20.9	33.8	37.2
Shipping	18.2	22.6	24.1	38.3	41.5
Input AC Parameters					
Surge Protection			220J		
Voltage Range Without Battery Operation			165-300, Configurable		
Frequency Range			45-65Hz, (+ 0.5Hz)		
Input Socket		IEC-320-C14		IEC-320-C20	
Output Receptacles		(8) IEC-320-C13		(8) IEC-320-C13 - (1) IEC-320-C19	
Voltage, Normal Mode		220/230/240 VAC, Configurable, +10%			
Voltage, Battery Mode		220/230/240 VAC, Configurable; +5% Before Low Battery Warning			
Transfer Time			4-6 ms, Typical		
Waveform			Sine wave		
Overload Warning			› 100%		
Battery Parameters					
Type		Valve-Regulated, Nonspillable, Lead Acid			
Quantity x Voltage x Ah	2 x 12 x 7.2	3 x 12 x 7.2	3 x 12 x 9	6 x 12 x 7.2	6 x 12 x 9
Backup Time			See Load Autonomy table below		
Recharge Time		5 hours to 90% of rated capacity, after full discharge into resistive load			
Environmental					
Operating Temperature			0°C to 40°C (32°F to 104°F)		
Storage Temperature			-15° to 40°C (5°F to 104°F)		
Relative Humidity			0% to 90%, non-condensing		
Operating Altitude		Up to 3000m (10,000 ft.) at 35°C (95°F) without derating			
Audible Noise			‹ 45 dBA		
Agency					
Safety			IEC/FN/AS 62040-1-1		
Surge			IEC/FN/AS 61000-4-2		
ESD			IEC/FN/AS 61000-4-3		
Susceptibility			IEC/FN/AS 61000-4-4		
Electrical Fast Transient			IEC/EN/AS 62040-2 2nd Ed class A		
Emissions			IEC/FN/AS 61000-4-6		
Conducted Immunity			IEC/EN/AS 61000-3-2		
Harmonics			IEC/FN/AS 61000-4-6		
Transportation			ISTA Procedure 1A Certification		
Environmental			ROHS compliant		
Warranty		2 years standard (+1 year warranty extension available)			
Packaging		Multi-Language User Manual on CD, Liebert Multi inkk. Software on CD, Contact Closure (MI 9P9S) Cable USB Cable, Tower Stand, Mounting Hardware, Rack-Mount-Handles, Fixed Mounting Rails, FPO Connector, Input Power Cord. 2200/3000 only: 2- (1) Schuko to IEC-320-C19 and (1) UKplug to IEC-320-C19 input cord. IEC Output Cable, 750/1000/1500 only: 2 - (2) IEC-320-C13, IEC Output Cable, 2200/3000 only: 3 - (3) IEC-320-C13			
Order no.	06.099.061.1	06.099.062.1	06.099.063.1	06.099.064.1	06.099.065.1
Order no. SNMP Card			06.099.022.1		

Load Autonomy - Liebert PSI 750VA-3000VA

Load %	750VA	1000VA	1500VA	2200VA	3000VA
10	84	93	76	82	76
20	45	47	32	44	32
30	25	26	17	19	17
40	15	15	12	14	12
Internal Battery 50	11	12	9	11	9
60	9	9	7	9	7
70	7	7	5	7	5
80	5	6	4	5	4
90	4	5	3	4	3
100	4	4	3	3	3

Note: All run times are in minutes, assume fully charged batteries and are typical at 25°C (77°F) with resistive loads.

Technical support
Always at your disposal: Our commitment to your business, provided by our technical support in five languages (English, Spanish, French, Italian, German).
Free: **00-80011554499**
Subject to a charge: **+39 02 98250222**
liebert.upstech@emerson.com

PSI00-FLY-EN-1209-01

Emerson Network Power™
Leading global provider of *Business-Critical Continuity™ solutions.*

- ■ AC Power
- ■ Connectivity
- ■ DC Power
- ■ Integrated Computing
- ■ Embedded Power
- ■ Infrastructure Management & Monitoring
- ■ Outside Plant
- ■ Power Switching and Regulation
- ■ Precision Cooling
- ■ Racks and Integrated Enclosure
- ■ Services
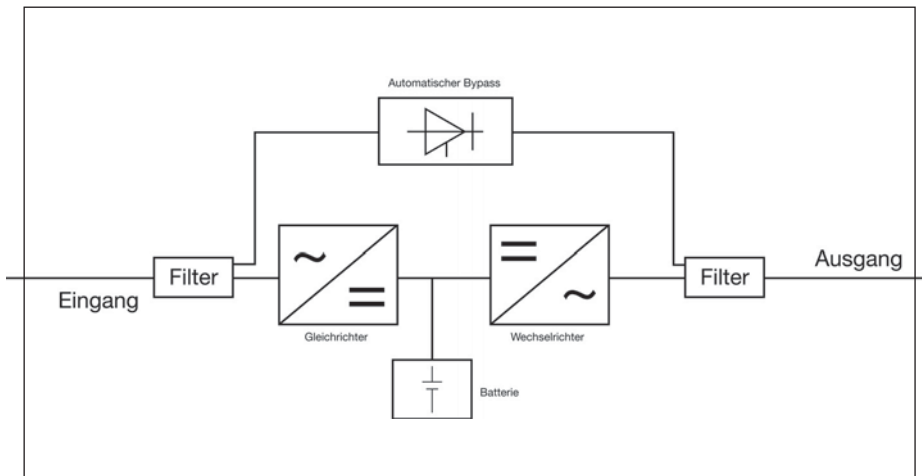- ■ Overvoltage Protection

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Online / GXT2 and GXT3
IEC 62040-3 VFI-SS-111

USV20086

On-line UPS systems have the advantage of effectively filtering out spikes and drop outs by converting alternating voltage into direct voltage and back into alternating voltage.

Our online UPS systems are series equipped with interfaces, so that unattended computers can be specifically powered down automatically and powered up again after the mains supply has returned.

If faults occur in the system itself due to battery aging processes, an automatic by-pass switch ensures bridging and direct connection to the mains without interruption.
The user is acoustically and optically informed about defective functions and power failures.

The accumulator takes over from the rectifier without any interruption when there is a mains failure and provides the necessary energy for a certain length of time. On-line systems provide high levels of security and are particularly recommended for high-grade and sensitive consumers.

Systems for quality power

GXT2 and GXT3

True Online Power
Full energy for your company
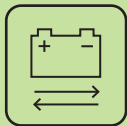
Hot-swap batteries	Online technology	Diverse communication options	Extendable back-up times
Professional PC workstations	Small hubs, routers & bridges	Data center	Telecom equipment

Liebert® GXT3, 700VA - 3000VA Model
Reliable online UPS protection in compact 2 U package

The **Liebert GXT3** is a true online UPS, which continuously supplies the IT equipment with quality alternating current. No interruption with changeover to batteries. They protect devices from almost all power supply faults – be they caused by power failures, voltage spikes, voltage drops or whatever other faults. The UPS is available as rack and tower version.

One of the most economical and reliable UPS systems in its class: the Liebert GXT2 is the industry leader in terms of dimensions, performance and reliability.

The 0.9 power factor ensures more power for protected devices and more energy-efficient operation.

The optionally available MicroPOD Output Distribution And Maintenance Bypass Module guarantees operation – even during planned UPS maintenance work.

Flexibility:
- Up to six battery backed-up outputs
- Free swivel display panel
- Automatic frequency scanning
- Installation flexibility:
- Several communication options (SNMP/WEB & USB)
- Compatible with Liebert MultiLink, Liebert Nform, Liebert Multiport and the Liebert Intellislot Relay Interface card

Higher availability
- Advance early warning of UPS system status
- 4-8 minutes of battery backup time at full load
- Scalable runtime
- Full sequenced battery testing
- User replaceable hot swappable batteries

Lowest possible TCO (Total Cost of Ownership)
- Power factor 0,9
- Wide input voltage range
- Intelligent fan operation
- Efficient operation
- Warranty

Ideal for:
- PCs
- Networked workstations
- Servers
- Network racks
- Big network peripheries
- VoIP

The Liebert GXT3 can be configured for rack or tower installation. The LED display swivels and can be easily read in all positions.

The Liebert GXT3 has internal batteries and can also supply up to four external battery racks (2 U).

Liebert® GTX3, 700VA-3000VA Model specifications

Model	GXT3-700RT230	GXT3-1000RT230	GXT3-1500RT230	GXT3-2000RT230	GXT3-3000RT230
Power Rating	700VA/630W	1000VA/900W	1500VA/1350W	2000VA/1800W	3000VA/2700W
Dimensions, W x D x H - mm					
Unit	497 x 430 x 85		497 x 430 x 85		602 x 430 x 85
Shipping	617 x 570 x 262		617 x 570 x 262		717 x 570 x 262
Weight - kg					
Unit	16.8	16.8	23.2	28	32
Shipping	20	20	26	24	28
Input AC Parameters					
Voltage Range Without Battery Operation	230VAC nominal; variable based on output load				
Frequency Range	40Hz - 70Hz; Auto Sensing				
Input Socket	IEC-320-C14	IEC-320-C14	IEC-320-C14	IEC-320-C20	IEC-320-C20
Output Sockets	(6) IEC-320-C13	(6) IEC-320-C13	(6) IEC-320-C13	(6) IEC-320-C13	(6) IEC-320-C13
				(1) IEC-320-C19	(1) IEC-320-C19
Voltage	220/230/240 VAC (user configurable) +3%				
Waveform	Sine wave				
Battery Parameters					
Type	Valve-Regulated, Nonspillable, Lead Acid				
Quantity x Voltage x Rating	4 x 12V x 5,0Ah		4 x 12V x 7,2Ah	4 x 12V x 9,0Ah	6 x 12V x 9,0Ah
Recharge Time	3 hours to 90% capacity after full discharge with 100% load till UPS auto-shutdown (Internal Batteries Only)				
Battery Backup Time	See table below				
Environmental					
Operating	0°C to 40°C (32°F to 104°F)				
Storage Temperature	-15° to 50°C (5°F to 122°F)				
Relative Humidity	0% RH to 90% RH, non-condensing				
Operating Altitude	Up to 3000m (10,000 ft.) at 40°C (104°F) without derating				
Audible Noise			‹ 45 dBA max at. 1 meter		
	‹ 46 dBA, at 1 meter 3.2ft from the rear		3.2ft front and side	‹ 48 dBA max. at 1 meter 3.2ft front and side	
	‹ 46 dBA, at 1 meter 3.2ft from the front or sides		‹ 46 dBA, at 1 meter	‹ 48 dBA, at 1 meter 3.2ft rear	
			3.2ft rear		
Agency					
Safety	IEC/FN/AS 62040-1-2008				
RFI/FMI	IEC/FN/AS 62040-2 2nd Fd=CISPR22 Class A				
Surge Immunity	IEC 62040-2 2nd Fd				
Transportation	ISTA Procedure 1A				
Compliance					
Order no.	06.099.070.1	06.099.071.1	06.099.072.1	06.099.073.1	06.099.075.1
Order no. SNMP Card			06.099.039.1		
Order no. Relay Card			06.099.037.1		
Bundles	06.099.170.1*	06.099.171.1*	06.099.172.1*	06.099.173.1*	06.099.175.1*

Liebert® GXT3 Battery Cabinet Specifications

Model	GXT3-700RT230	GXT3-1000RT230	GXT3-1500RT230	GXT3-2000RT230	GXT3-3000RT230
Used w/UPS Model		GXT3-48VBATT			GXT3-VBATT
Dimensions, W x D x H - mm					
Unit		497 x 430 x 85			602 x 430 x 85
Shipping		617 x 570 x 262			717 x 570 x 262
Weight - kg					
Unit		32			42
Shipping		35			46
Batteries					
Type		Valve-regulated, nonspillable, lead acid			
Quantity x Voltage x Rating		2 x 4 x 12V x 9.0Ah			2 x 6 x 12V x 9.0Ah
Environmental					
Operating / Storage Temperature, °C		0°C to 40°C (32°F to 104°F) / -15°C to +40°C (19°F to 104°F)			
Relative Humidity		0% to 95%, non-condensing			
Maximum Operating Altitude		Up to 3000m (10,000 ft.) at 104°F (40°C) without derating			
Agency					
Safety / Emissions		EC/EN/AS 62040-1-1:2008 / FCC Part 15, Class A=CISPR22 Class B			
Transportation		ISTA Procedure 1A			
Order no.		06.099.074.1			06.099.076.1
Order no. Bundles		06.099.174.1*			06.099.176.1*

*incl. 19" installation set

Battery runtime chart (runtimes in minutes; with fully charged batteries; ambient temperature 25 °C)

Number of batteries	700VA	1000VA	1500VA	2000VA	3000VA
Internal Battery (full load)	6	4	4	4	4
Internal Battery + 1 External Cabinet (full load)	50	27	24	15	18
Internatl Battery + 2 External Battery Cabinets (full load)	82	58	48	29	44
Internatl Battery + 3 External Battery Cabinets (full load)	116	78	82	45	62
Internatl Battery + 4 External Battery Cabinets (full load)	140	109	100	64	84

Technical support

Always at your disposal: Our commitment to your business, provided by our technical support in five languages (English, Spanish, French, Italian, German).
Free: **00-80011554499**
Subject to a charge: **+39 02 98250222**
liebert.upstech@emerson.com

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GXT3M-FLY-EN-0210-01

Emerson Network Power™

Leading global provider of *Business-Critical Continuity™ solutions.*

- AC Power
- Connectivity
- DC Power
- Integrated Computing
- Embedded Power
- Infrastructure Management & Monitoring
- Outside Plant
- Power Switching and Regulation
- Precision Cooling
- Racks and Integrated Enclosure
- Services
- Overvoltage Protection

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USV20097

True-Online-Power – Full energy for your company

This is an individually configurable high-performance UPS with proven reliability, equipped with internal hot-swap batteries and extendable back-up time in the compact rack and tower design.

The functions and flexibility of the **GXT2** make this UPS the optimum solution for your server or data centers, and for networks and telecom systems that require a reliable, uninterrupted supply with quality power.

As a true online (continuous transducer) UPS, in addition to power factor correction, frequency conversion and unlimited extension options for external batteries, the **GXT2** also provides automatic and manual internal bypass functions, as well as an optional external maintenance bypass. The Liebert **GXT2** has all the functions required to protect company-critical equipment against all power supply problems.

Areas of application

- LAN and WAN servers
- Cluster network components: hubs, routers, bridges
- Remote telecommunication units
- Internal telecommunication systems
- Voicemail and e-mail servers
- Test and diagnostics systems
- Engineering network servers
- Protection of industrial, microprocessor-controlled equipment
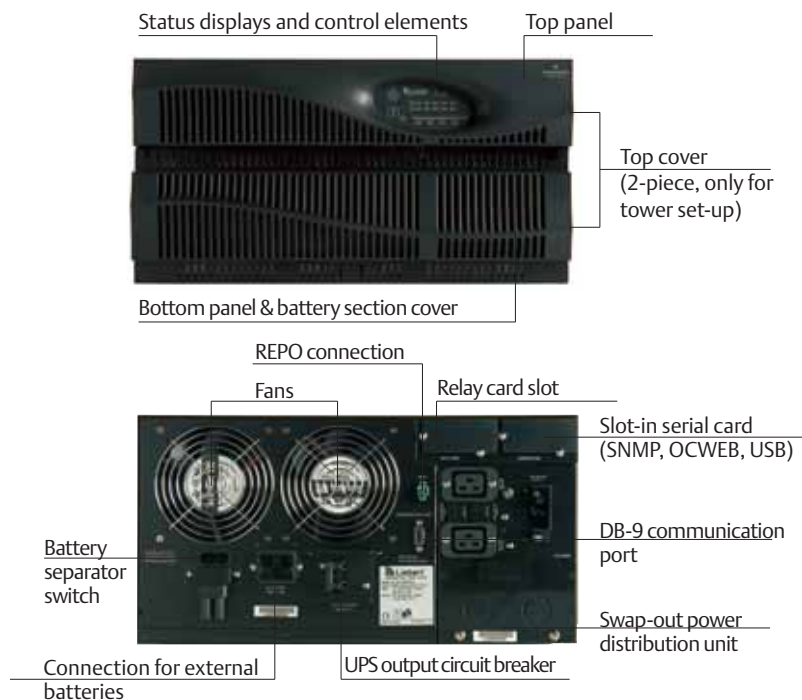- Company-critical equipment

Most important benefits

- Online VFI technology with sine wave output
- Extendable battery options for long back-up times
- Communication via USB, serial ports and networks
- Input with power factor correction
- Highly-sensitive early warning-shut down via MultiLink software
- At least five minutes battery-supported operation
- Settings, voltage and frequency according to individual configuration
- Hot-swappable - user can change batteries
- Cold start via battery
- UPS remote monitoring via SNMP/Web card
- Optional bypass rack for easy maintenance

True-Online-Power – Full energy for your company

Status displays and control elements — Top panel

Top cover
(2-piece, only for
tower set-up)

Bottom panel & battery section cover

REPO connection

Fans

Relay card slot

Slot-in serial card
(SNMP, OCWEB, USB)

Battery
separator
switch

DB-9 communication
port

Swap-out power
distribution unit

Connection for external
batteries

UPS output circuit breaker

GXT2 rack model (version show: 5U, 4500-6000VA)

Most important benefits

There is no switchover time with a continuous transducer UPS.
If the mains power fails, the critical load is fed seamlessly by the GXT2.

For optimum usage the GXT2 can be adapted to your requirements with a specially developed software package. The GXT2 is available in the power classes 700, 1000, 4500 and 6000 VA. Batteries that the user can swap out ensure low maintenance operation. And you will find all of this in one of the most economical UPS systems in this class.

Quality power

The Liebert GXT2 is a "True Online" power source. Whatever the quality of the inbound mains power, the clean sine wave output meets the highest requirements of your equipment. In contrast to other UPS technologies, the GXT2 is equipped to overcome all potential power supply problems.

- Spikes and transient overvoltages
- EMI and RFI faults
- Voltage drops and undervoltages
- Harmonic waves
- Power factor corrected loads
- Power failures

Integrated reliability

The GXT2 is configured in all areas for maximum reliability. It consequently has functions that you will search in vain to find with other systems in the same price class:

- Power factor corrected loads:
  The GXT2 maintains stable output voltage, even with power factor-corrected consumers, which are so typical for modern IT environments.

- Frequency conversion:
  For 60Hz input/50Hz output or 50Hz input/ 60Hz output without any power losses.

- Unlimited connection options for external batteries:
  Any amount of 2U/4U battery racks can be connected to achieve additional back-up times.

- Internal automatic and manual bypass:
  Guarantees uninterrupted switchover of the power supply for maintenance purposes.

- Optional maintenance bypass and output:
  Power distributor: Enables problem-free installations and safe routine maintenance on the UPS or connected devices.

Communication for power supply monitoring and control

The GXT2 provides an extensive range of communication options that correspond with the control and monitoring requirements of modern network and server systems.

Intellislot® SNMP/Web Card

For extended UPS communication and control the Intellislot SNMP/Web Card provides your GXT2 with extensive SNMP and web management. You consequently achieve a high degree of flexibility, as you can monitor and control your UPS within the network.
This adapter can also be easily configured for a standard SNMP implementation, and can be easily and efficiently shut down using MultiLink shutdown software from Liebert without any personal monitoring.

The SNMP/Web card monitors a wide range of UPS information so that the user can monitor and control the GXT2 via the network with a standard web browser and SNMP connection

Intellislot USB Adapter (USB CARD)

This card, which can be used during running operation, provides a USB interface for Microsoft Windows 2000 and XP Power Management, and consequently enables the problem-free and orderly shutdown of the connected consumers, without having to install additional software. An approx. 2 meter cable is included in the supply schedule.

Intellislot Multiport Kit (Multiport4)

The Multiport4 Card can also be used during running operation, and splits the UPS contact signals into 4 separate contact closure sets, which enable the communication with the MultiLink shutdown software on four servers simultaneously.

Intellislot Interface Kit for Relay Contacts (Relaycard-Int)

This kit provides 4 voltage-free relay contact signals for the states: "Battery operation", "Low battery charge", "Bypass operation" and "General alarm signal". This card can be installed during running operation via a DB25F port.
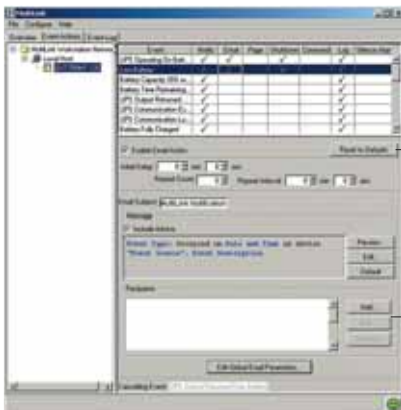
MultiLink™ Shutdown Software

The GXT2 UPS system can be used in combination with the Liebert MultiLink Shutdown software for the orderly shutdown of your IT system. This package switches off all standard operating systems smoothly and controlled when the UPS batteries require charging.

The MultiLink automated shutdown software has the critical task here of protecting all information for an IT system or a network. It is available in two versions: for individual applications and for several systems within a network, even with multiple used operating systems. During power failures that last for longer periods, MultiLink automatically shuts down the computer operating systems smoothly and controlled when the UPS batteries have run low by a defined point. MultiLink is configured to inform the users automatically.
Alarm signals can be sent to alpha-numerical pagers or can appear directly as pop-up messages on the user's monitor. MultiLink can be configured for both inband and out-of-band operation. Sending alarm and status signals via a network can significantly reduce the costs of cabling and installation.
As an alternative to this it is possible to lay communication cables between the individual computer systems in case a network cabling is too problematic or expensive.

Automatic system and graphic messages can be configured for each UPS event.

The configuration details appear in the lower window section when event and message type are selected.

Technical Data [Liebert GXT2 tower/rack version]

Model	GXT2-4500RT230	GXT2-6000RT230
Power data		
VA	4500	6000
W	3150	4200
Dimensions and weight		
Device (WxDxH mm)	221 (5 U) x 547 x 430	
Shipping size (WxDxH mm)	560 x 690 x 500	
Weight - device (kg)	67	67
Shipping weight (kg)	76.5	76.5
Input parameters		
Frequency	220/230/240 VAC user-definable; 40-70Hz	
Voltage range without battery operation	176-276VAC	
Frequency range	40-70Hz (self-detecting)	
Input connection	Fixed-wired	
Output parameters		
Output connections	Fixed-wired + (2) IEC320-C19	
Wave form and frequency	Sine wave; 50 or 60Hz nominal (50Hz specified)	
Overload warning	>200% for 96 milliseconds; 131 - 199% for 2 seconds; 112 - 129% for 10 seconds with switchover	
Battery parameters		
Type	VRLA, leak-proof, flame-retardant	
Authorized manufacturer	Yuasa / REW 28-12 FR	
Number/battery blocks	20 x 12V x 5Ah	
Backup time		
Half charge (minutes)	24	17
Full charge (minutes)	10	7
Charge time	3 hours up to 90%	
Batteries, other functions	Hot-swap batteries; deep-discharge protection; black start (without mains)	
Battery test	Automatic, user-configurable, 7-28 days	
Further data		
Noise generation	< 55ddB	
Op. temp./height above sea level	0-40°C; 0-3000m	
Communication	Serial RS232 standard port, USB adapter compatible with WIN2000, XP, Apple OS, relay card and SNMP/Web card optional	
Delivery includes	User's manual, MultiLink Software-CD; MultiLink serial cable, 3m; rack mounting handles; data carrier with configuration program	
Additional components	Input/output distributor PD-CEHDWR input/output distributor with maintenance bypass, PD-CEHDWRBYP	
Warranty	2 years	
Standards & requirements		
Safety	EMC directives, Design, EMI/EMC, Transport	
Additional batteries		
Models	GXT2-240VBATT	
Device (WxDxH mm)	176 (4 U) x 522 x 430	
Shipping size (WxDxH mm)	560 x 690 x 455	
Weight - device (kg)	65	
Shipping weight (kg)	76	
Number/battery blocks	20 x 12V x 9.0Ah	
Authorized manufacturer	Yuasa / REW 45-12 FR	
Extended back-up time*		
1 battery module (full/half charge)	31 / 70	21 / 49
2 battery modules (full/half charge)	54 / 120	38 / 85
3 battery modules (full/half charge)	80 / 164	55 / 123
4 battery modules (full/half charge)	106 / 208	75 / 156
Order no. UPS	**06.099.013.1**	**06.099.014.1**
Order no. UPS Set	**06.099.113.1***	**06.099.114.1***
Order no. Battery Module	06.099.017.1	
Order no. Battery Module +19" Installation Set	06.099.117.1	
Order no. SNMP Card	06.099.039.1	
Order no. Relay Card	06.099.037.1	

*UPS set incl. SNMP card + install. set

GXT2 4500 - 6000 in rack and tower version

Systems for quality power

GXT2 10000R230

For applications with extreme heat density

Liebert GXT2 10000R230

Uninterruptible power supply in compact design for environments with extremely high heat densities

Benefits

- Online VFI technology with sine wave output
- Parallel configuration for power increase or providing redundancy
- Extendable battery options for long back-up times
- Communication via USB, serial ports and networks
- Input with power factor correction
- Highly-sensitive early warning-shut down via MultiLink software
- Settings, voltage and frequency according to individual configuration
- Hot-swappable - user can change batteries
- Cold start via battery
- UPS remote monitoring via SNMP/Web card
- Compact design in 3 U + 3 U format
- Available as configuration of 1, 2, or 3 units to provide full power or as 1+1, 2+1 or 1+2 redundancy

Applications

- Blade Server
- Pizza Box Server (1 U)
- LAN and WAN network server
- Cluster network components: hubs, routers, bridges
- Voice over IP (VoIP) switch and router
- Internal telecommunication systems
- Voicemail and e-mail servers
- Test and diagnostics systems
- Protection of industrial, microprocessor-controlled equipment
- Company-critical equipment

With its compact format (6 U) and special features, which are among the best in their class, the new Liebert **GXT2** 10kVA from Emerson Network Power is the ideal solution for reliably supplying blade servers, pizza box servers, Voice over IP equipment and other data center and network systems in standard 19-inch racks with power.

Its redundant configuration option makes the Liebert **GXT2** 10kVA a modular and scalable solution that adjusts perfectly to your requirements. Utilize the 1+1 or 2+1 configuration with up to 20kVA to produce clean power for your applications and an additional 10kVA as reserve, or operate three modules parallel for loads of up to 30kVA.

This is an individually configurable high-performance UPS with proven reliability, equipped with internal hot-swap batteries and extendable back-up time in the compact rack and tower design. The Liebert **GXT2** 10kVA Rack Version is part of the Emerson Network Power Adaptive system solution for precision thermal management and uninterruptible power supply and was developed for the Liebert X-treme solutions.
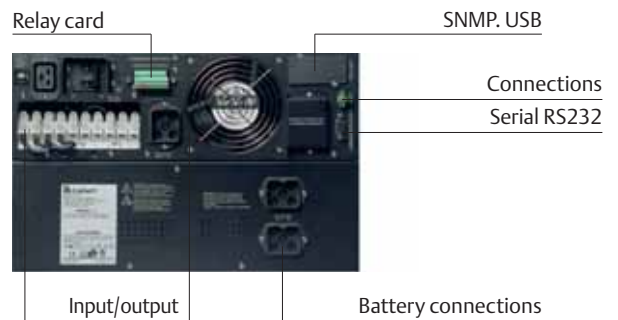
Technical data [Liebert GXT2]

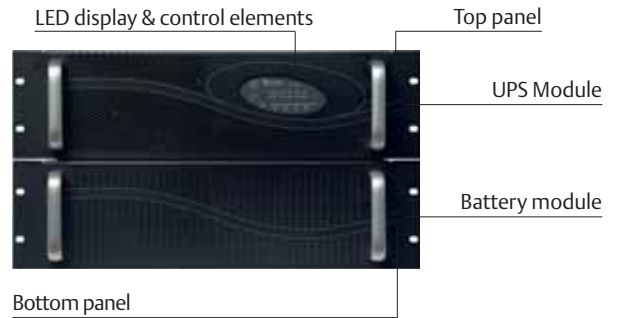| Model	GXT2-10000R230
Power data	
VA	10000
W	7000
Dimensions and weight	
Device (WxDxH mm)	410x630x130x (3 U)
Shipping dimensions (WxDxH mm)	
Weight - device (kg)	27 (UPS without batteries)
Protective range	IP20
Color	RAL 9005, black
Input parameters	
Frequency	50/60 Hz (automatic detection)
Voltage	230V L-N single-phase L, N,G
Voltage range without battery operation	176-276V
Frequency range	±5%
Input power factor and THDI	0.97 - <5%
Input-output connections	Fixed wired
Wave form	Sine wave
Overload warning	125% - 1 minute, 150% - 10s, 300% - 2s
Short circuit current (A) for 5 cycles	160A peak value
Level of efficiency	92%
Noise generation	<55dBA
Operating temperature	0 - 40°C (with battery) -25 - +55°C (without battery)
Relative humidity	0 - 90% non-condensing
Communication interface optional	Serial RS232D89, relay card, SNMP/Web
Battery extension, external	
Model	GXT2-240RVBATT
Dimensions (WxDxH mm)	410x630x130x (3 U)
Weight (kg)	67
Extended back-up time	
1/2/3/4 batteries (full charge)	6/16/26/36
1/2/3/4 batteries (half charge)	13/35/60/90
Number of batt. (/ battery blocks	Yuasa: NPW 45-12 / REW 45-12 (20x12V / 45W / 9Ah)
Battery test	Automatic, configurable, 7-28 days
Warranty, standards and approvals	
Warranty	2 years
Standards and approvals	CE conformity marking
Safety	IEC / EN 62040-1-1
	CE Low Voltage Directive 73/23/EEC
EMI / EMC	IEC / EN 62040-2 - Class A
	CE EMC Directive 89/336/EEC
Design	IEC 62040-3 VFI-SS-111
Transport	ISTA Level 1A
Order no. UPS + 19" Installation Set	**06.099.016.1**
Order no. UPS Set*	**06.099.116.1**
Order no. Battery Module +19" Installation Set	**06.099.019.1**
Order no. SNMP Card	**06.099.039.1**
Order no. Relay Card	**06.099.037.1**

* incl. Battery Module + SNMP Card + 19" Installation Set

The approximate discharge times are given in minutes and for 25°C with resistive load. Although much time and effort went into ensuring that this brochure is accurate and complete, Emerson Network Power does not accept responsibility for its content and does not accept any form of liability for damages that may result from the use of this printed information, nor does it accept responsibility for errors or omissions. All rights reserved worldwide. Changes possible without prior notice. All names and/or entered trademarks are the property of the respective owner.

LED display & control elements — Top panel — UPS Module — Battery module — Bottom panel

Relay card — SNMP. USB — Connections — Serial RS232 — Input/output — Battery connections

GXT2 10000R230

Knürr
RMS Compact II®

Knürr RMS Compact II®

Damage prevention with checks and controls

System and network management requirements mean the systems' ambient conditions must be monitored. Reliability and system availability are indispensable. Compliance with the required ambient parameters is extremely important for the fault-free operation of high-grade components.

Inadmissible fluctuations in temperature or humidity often cause hardware defects. Constant automatic monitoring of these parameters is therefore a basic requirement for ensuring properly functioning operability. With the rack monitoring systems offered by Knürr, this information can be recorded and forwarded directly to a higher-level management system, e.g. Nagios light form.

This recording is not, however, sufficient to ward off damages. For short response times when faults occur, it is helpful if the monitoring system can perform actions automatically (e.g. activate additional fans).

When defined incidents occur, the Knürr RMS Compact II® can immediately send a message as an 'SNMP trap' to the management system or directly as an e-mail to a technician or an SMS gateway.

Rapid fault-finding and removal is extremely valuable! The ability to connect additional sensors to monitoring systems not only allows racks to be monitored – so too can complete rooms or building sections. All important environmental parameters of a system can consequently be recorded and evaluated in a simple and straightforward way.
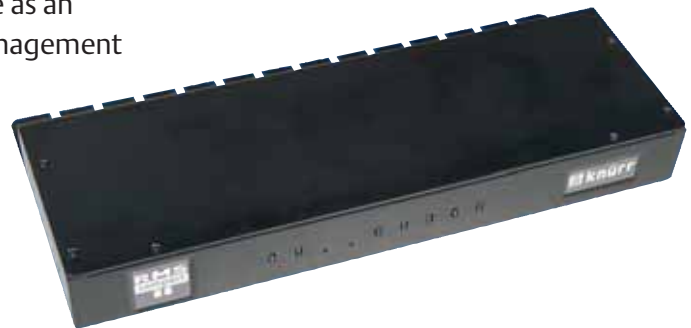
The advantages of Knürr's modern rack monitoring system:

- Guarantees fault-free operation
- Detects disturbances early
- Logs incidents
- Makes service assignments easier with automatic monitoring
- Activates countermeasures in the event of a fault
- Central control of consumables (filters, paper, toner, meter readings, inspection intervals, etc.)
- Connection of up to 12 sensors in any arrangement

Knürr RMS Compact II®
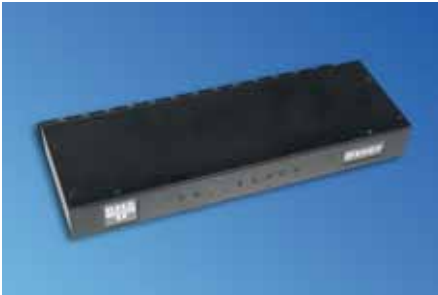
RMS20013

RMS20015

■ Description
- Compact construction - Zero unit solution (for mounting outside the 19" installation area)
- 19" installation with adapter bracket
- Safe clamping of all connected cables with integrated cable clamping bracket
- Cost-effective orderly installation with Plug & Play concept
- Convenient cabling with RJ45 sensor
- TCP/IP connection via Ethernet (10/100 Base T)
- Configuration via SNMP and web browser
- Web access is password-protected and optionally encrypted (https)
- 3 different user levels
- Freely programmable filter system (boolean logic) for implementing all alarm conditions
- Compatible with standard network management systems – HPOpenView, Cabletron Spectrum, Castlerock, IBM Netview, IBM Tivoli, MG-Soft, Compaq Insight Manager, SUN NetManager, etc.
- Sensors for monitoring all current environmental influences (optional)
- Internal power supply for sensor equipment (no additional power supply necessary)
- Alarms via LEDs, relay, network management or e-mail (SMTP)
- Syslog support for continuous external data storage
- System time balancing with NTP servers

■ Technical data
- 12 universally usable sensor inputs for temperature sensors, humidity sensors, digital (on/off) or analog sensors (0...10V)
- 3 digital outputs (2 x relay, max. 3A at 230VAC, 1x 750mA at 48VDC)
- Power supply: 100 – 240 VAC
- Operating voltage: 12VDC

■ Approvals
- CE Symbol in acc. with Low Voltage Directive 73/23/EEC, EMC directive 89/336/EEC

■ Color
- RAL 7021 dark gray

■ Supply schedule
1 Knürr RMS Compact II
1 power supply
2 19" mounting brackets
1 power supply mounting bracket
1 CD ROM (with manual, MIB file)

■ How supplied
- Flat-packed kit

W	H	D	Model	Order no.	UP
350	42	170	RMS Compact II®	06.108.200.8	1 set

LUF20069   RMS compact-specific

ECO Temperature Sensor

■ Description
- Insensitive to disturbances
- No additional power supply required
- Standard cable length, 4 m
- The sensor does not have to be recalibrated

■ Technical data
- Temperature measuring range, 0-60ºC
- Accuracy: +/- 5%

■ Supply schedule
1 sensor
1 mounting kit

W	H	D	U	h	d	kg	Model	Order no.	UP
							ECO	06.108.220.9	1 unit

RMS20019   (similar to picture)
RMS compact-specific

Humidity sensor

■ Description
- Insensitive to disturbances
- No additional power supply required
- The sensor does not have to be recalibrated

■ Technical data
- Humidity measuring range, 30-90%
- Accuracy: +/- 5%

■ Supply schedule
1 sensor with RJ45 port
1 mounting kit

Order no.	UP
06.108.212.9	1 unit

RMS20005

Smoke Detector

■ Description
- Optical smoke detector with VdS approval
- For early fire detection with smoke emission
- Power supply provided via RMS compact
- Standard cable length, 4 m

■ Technical data
- Operates between -20°C and +75°C

■ Supply schedule
1 sensor with 4 m connection cable
1 mounting kit

W	H	D	Model	Order no.	UP
Ø 90	75			06.108.211.9	1 unit

AC Voltage Monitoring

RMS20033

■ **Description**
- Monitors the AC power supply via an IEC Euro connector
- Signals status via an integrated signal cable to the RMS Compact

■ **Technical data**

Monitored AC voltage:	230 V AC 50/60 HZ
Connections:	IEC plug, RJ45 socket

■ **Supply schedule**
1 sensor
1 mounting kit

W	H	D	U	h	d	kg	Model	Order no.	UP
								06.108.222.9	1 unit

Door Contact Sensor

RMS20006

■ **Description**
- Magnet bridge sensor, works on every magnetic conductive material (no special mating part required)
- Can also be used for monitoring side panels and roof
- Standard cable length, 4 m

■ **Technical data**
- Operates between -20°C and +70°C
- Switching voltage, max. 200 VDC
- Switching current, max. 500mA

■ **Supply schedule**
1 sensor with 4 m connection cable
1 mounting kit

W	H	D	Model	Order no.	UP
				06.108.215.9	1 unit

Fan speed sensor

RMS20032

■ **Description**
- No additional power supply required
- Automatic detection as analog sensor
- Does not have to be recalibrated
- Offset and alarm parameters can be set in RMS

■ **Technical data**
- Measuring range: 0 to 0.8 l/s
- Non-linear measurement, values table:
  < 0 m/s < 1 V
  0 m/s 1 V
  1 m/s 1.7 V
  2 m/s 2.9 V
  3 m/s 4.1 V
  4 m/s 5 V (6 V max.)

■ **Supply schedule**
1 sensor with 4 m connection cable
1 mounting kit

W	H	D	U	h	d	kg	Model	Order no.	UP
20	39	9						06.108.218.9	1 unit

Water sensor

RMS20031

■ **Description**
- Detects presence of water

■ **Technical data**
- Operating voltage: max. 24 VDC

■ **Supply schedule**
1 sensor with 2 m connection cable
1 mounting bracket

W	H	D	U	h	d	kg	Model	Order no.	UP
								06.108.217.9	1 unit

Vibration Sensor

RMS20019

■ **Description**
- Detects vibrations
- Theft protection
- Reset possible via Viewer software

■ **Supply schedule**
1 sensor with 4 m connection cable

W	H	D	U	h	d	kg	Model	Order no.	UP
								06.108.213.9	1 unit

Passive Infrared Movement Sensor

RMS20032

■ **Description**
- Room monitoring with the latest state-of-the-art technology

■ **Technical data**

- VdS approval	Classes A + B
- Volumetric lens range	2 - 16 m
- Long lens range	29 - 50 m
- Curtain lens range	17 - 30 m

- Manipulation monitoring
- Digital fault evaluation
- Corner or wall mounting

■ **Supply schedule**
1 sensor with 4 m connection cable
1 mounting kit

W	H	D	U	h	d	kg	Model	Order no.	UP
								06.108.214.9	1 unit

Dimensions in mm:
W = Width
H = Height
D = Depth
h = installation height
d = useful depth
L = length

U = standard height unit
1 U = 44.45 mm
UP = unit of packaging
kg = weight

= Express item

Conversion: 1 mm = 0.03937 inch   1 kg = 2.2046 pound

Liebert Nform™

Monitoring Software

Liebert Nform™

Increased reliability and energy efficiency with Emerson Network Power Monitoring solutions

Data centers are becoming more and more important in modern companies and today's society. The requirements for increasingly better IT infrastructures rise rapidly as a result. Demands are made here for the highest possible performance with very high efficiency at the same time. These requirements appear difficult to meet because alone the server cooling in many data centers uses up as much energy as the operation itself.

An integrated monitoring is needed to increase profitability while also reducing costs, especially with increasing complexity.

Liebert Nform™ helps to meet these requirements:

What is Liebert Nform™?
• Liebert Nform™ is a DC monitoring software especially for Liebert infrastructure systems with trend analysis function, alarm management and results notification.

What can Nform™ do?
• Liebert Nform™ provides uniform monitoring interface and therefore an overview of the operative status of a large number of devices, such as:
 - PDUs: Liebert MPX®, Liebert MPH®, Knürr DI-STRIP® RM
• Uninterruptible Power Supplies
• Water-cooled racks, such as:
  - Knürr CoolLoop®, Knürr CoolTherm®
• Thermal equipment
• Environmental monitoring systems, such as
  - Knürr RMS Compact II®

What are the customer benefits?
- Liebert Nform™ is an easy to install and use management suite that does not require complicated adjustments.
- The integration of all infrastructure components, from PDUs to RMS compact II right through to water-cooled server racks is very easy, despite the high number of monitoring data points.
- Liebert Nform™ supports a whole range of state-of-the-art features:
  - Dashboard: The system has a configurable start page on which various graphics transparently illustrate the status.
  - Separable window content for transparent presentation on several monitors
  - Trending enables the storage and graphic presentation of historical data
  - Optional automatic device actions if an error occurs; application execution, setting device parameters (e.g. cooling), shutting down servers and much more.
  - Internationalization enables installation in various languages
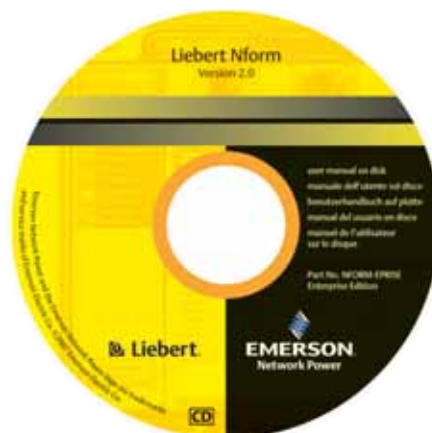
RMS20013

Liebert Nform™

Liebert Nform™ – Software

Function Order no.	Express Edition 06.108.502.0	Standard Edition 06.108.504.0	Enterprise Edition 06.108.506.0
Number of remote management stations	Unlimited	Unlimited	Unlimited
Users and groups	Unlimited	Unlimited	Unlimited
Supported operating systems	Windows XP, Windows 2003/08 Server, Windows Vista	Windows XP, Windows 2003/08 Server, Windows Vista	Windows XP, Windows 2003/08 Server, Windows Vista
Internationalization	✔	✔	✔
Automated device searches	✔	✔	✔
Data logger	✔	✔	✔
SQL monitoring	Only Nform-internal database	Only Nform-internal database	Nform-internal and Microsoft SQL
Configured dashboard	✔	✔	✔
Data and alarm export	✔	✔	✔
Online help	✔	✔	✔
Real-time monitoring and control			
Regular device query	✔	✔	✔
Number of delivered device licenses	30	30*	100*
UPS/PDU web card integration	✔	✔	✔
Maximum number of devices	30	4800	Unlimited
Open architecture – 3rd party SNMP monitoring	✔	✔	✔
Supported devices	All Liebert UPS, Power and Cooling systems that support SNMP	All Liebert UPS, Power and Cooling systems that support SNMP	All Liebert UPS, Power and Cooling systems that support SNMP
Parametered data logging	✔	✔	✔
Setpoint climate control	Yes	Yes	Yes
Alarms and actions			
Mform window goes to the front	✔	✔	✔
Sound is played	✔	✔	✔
Standard actions			
E-mail message	✔	✔	✔
Execute external commands	✔	✔	✔
Write file	✔	✔	✔
MultiLink Shutdown Clients			Unlimited including
Set Data on Event			✔
Get Data Graph on Event			✔
Software services	Access to technical information, software support website, 24-hour tele-support software updates, tool for device integration		
Number of supported device licenses	30	30*	100*
First year	incl.	inc.	incl.
1 year	**06.108.531.0**	**06.108.534.0**	**06.108.537.0**
3 years	**06.108.532.0**	**06.108.535.0**	**06.108.538.0**
5 years	**06.108.533.0**	**06.108.536.0**	**06.108.539.0**

* Upgrades available!

Upgrades			
to Nform 4.0	✖	**06.108.505.0**	**06.108.505.0**

Upgrades and software services			
Higher number of monitored devices	Order no. for device license	Order no. for software services: Access to technical information, software support website, 24-hour tele-support, software updates, tool for device integration	
		1 year 3 years 5 years	

Higher number of monitored devices	Order no. for device license	1 year	3 years	5 years
30	**06.108.513.0**	**06.108.540.0**	**06.108.541.0**	**06.108.542.0**
100	**06.108.521.0**	**06.108.543.0**	**06.108.546.0**	**06.108.545.0**
500	**06.108.525.0**	**06.108.546.0**	**06.108.547.0**	**06.108.548.0**

Knürr @Lock®

Knürr @Lock®

MIR20107

Problems with locking systems

■ **Unauthorized access**
  - By own employees
  - By external companies
  - Uncontrolled access
  - Decentralized access authorizations
  - Key problem
  - Loss of key
  - Single key system
  - Many different keys

The mechanical/electro-mechanical comparison

■ **Cylinder lock systems**
  + Simple technical version
  + Cost-effective with individual locking
  + No power supply required
  - Easily duplicated
  - Replacement (among other factors) problematic
  - Code conversion expensive with locking systems
  - Key-connected, which means transferable with key hand-over (theft)
  - Logging and monitoring very expensive/time-consuming

■ **Electronic systems**
  + Various locking options
  + Opening permission possible without a key being required
  + Opening permission can be granted/withdrawn almost immediately
  + Lock control / logging possible
  + Remote opening per PC / Internet / mobile phone / SMS
  + Expandable and easy code conversion lock system
  - Power supply required

Locking solutions
Control components to choose from

■ **Electronic locking systems**

■ **Mechanical combination lock**

■ **Standard locking with half-cylinder**

MIR20113

MIR20285

MIR20134

MIR00423

Modules
Control components for electronic locking systems

■ **Transponder**

■ **Network (server)**

Interlocking: security with multi-point interlocking mechanism

Decentralized rack suite

MIR20102

- Each rack/each door can be opened separately – via own address

■ **Access authorization administration**

■ **Access monitoring**

■ **Locking mechanism control**

■ **Access logging**

Knürr @Lock®

Embedded solution

MIR20099

- Network
- LAN
- WAN
- Internet

- ■ Administration
- ■ Monitoring
- ■ Logging
- ■ Remote access

Individual Locking / Stand-Alone Solution

MIR20094

- ■ Access authorization administration
- ■ Monitored access
- ■ Locking mechanism control
- ■ Access logging

Knürr @Lock®
Strong points

■ The very small and modular design means that no additional space or greater installation depths are required in the rack.

■ Contacts for emergency power supply that can be activated externally using trade standard batteries are integrated into each swing handle.

■ An integrated light-emitting diode signals with different colors to inform whether or not the current access is authorized.

■ Each device of the series can be networked with the other devices, which results in numerous possible combinations and options.

■ Every opening process can be logged in the network. Existing network structures can be used for networking.

MIR20109

Knürr @ Lock® Swing Handle
Security for racks in the data and networking area

– Conventional keys are replaced by electro-mechanical locking components.
– A servomotor pulls the retaining awl back and releases the handle.
– Actively opening the door is, however, made with the hand as before.
– Easy exchange of the swing handle with later installation using unchanged installation opening.
– Intended for standardized installation openings of conventional swing handle.
– Can be quickly and easily upgraded to locking system.
– Convenient administration of access authorizations.

■ **@Lock Swing Handle, HID/IP**
- The swing handle opens after a registered transponder card has been read.
- With the HID variant, the communication between swing handle and PC runs via a junction box and a server.
- The IP swing handle, by contrast, is configured via an IP address and is connected directly via the network to the PC.
- Up to 2,048 HID cards per swing handle can be configured using a registered master card.
- Configuration of the cards via the network is also possible with the included software.

■ **Technical data**
@Lock Swing Handle, HID
(optional IP remote connection)
- 100...240VAC, power supply not included in the supply schedule
- Operation with 12VDC/40mA (max. 430mA)
- Multi-color status – LED
- Real-time clock
- Network communication is made via external server (gateway)
- Up to 250 handles can be administered per server (IP address)

MIR20284

■ **@Lock Swing Handle, HID/IP**
- 100...240VAC, power supply not included in the supply schedule
- Operation with 12VDC/40mA (max. 430mA)
- Multi-color status – LED
- Real-time clock
- Network communication with cabled connection via integrated Ethernet 10/100 Base T

■ **Function**
- Opens after reading a registered card
- Memory for 32 time segments
- Memory for 2,048 cards per handle
- Integrated logbook for 500 events
- Result-related communication
- 125 kHz transponder with unique code (HID 26 bit system)

■ **Supply schedule**
@Lock Swing Handle, HID
1 swing handle, HID
1 reader
1 reader connection cable
1 network node, CX2001
1 network cable, CN2001

■ **Supply schedule**
@Lock Swing Handle, IP
1 swing handle, IP
1 reader
1 reader connection cable
1 data CD

Knürr @Lock®

MIR20283

Knürr @Lock® Server

The @Lock Server is the interface between the HID swing handles connected via the RS485 cable and the network connected via X-Port. It is used for intermediary storage of results and tasks and can administer up to 250 users (swing handle).
The @Lock Server has an integrated real-time clock, which is buffered when power fails for up to 1 hour.

■ **Technical data**
- Power supply: via an external plug-in power supply, 12V (DC)
- Nominal current: 80mA (DC)
- Max. power consumption: 200mA (DC)

- Main board Interface: RS 485 - Cable (A, B, GND, +12V) max. length to the next gateway, 5m
- Network interface: X-Port, RJ34 plug, 8-pin
- Storage space for tasks: max. 10 x 250 tasks
- Storage space for events: max. 100 events
- Max. number swing handles: 250
- Integ. real-time clock: with buffering of up to 60min at 25°C

MIR20282

Knürr @Lock® Software "Administration Suite 2.0"

The @Lock software is the user interface for controlling and configuring the @Lock Swing Handle. Using this software, the administrator can create access codes and HID cards and assign users. The handle can be controlled in real-time from the software platform. All actions that are directly related with the swing handles are stored in an SQL database (e.g. opening, closing, granted accesses and accesses rejected on the basis of non-authorization).

■ **Technical data**
- MS-Windows 2000/NT etc.
- SQL database
- TCP/IP network connection to the swing handles
- The number of handles and gateways is only restricted by the capacity of the computer
- Communication with swing handle via server (gateways) or directly with @Lock Swing Handle, IP

■ **Functions/applications**
- Client-server-based administration program for the @Lock system
- Requires max. 3-4 seconds for a status update
- Administration of users and rights
- Administration of HID cards, opening of active keys and access codes, closing, activation or deactivation of swing handles
- Observation of authorized and unauthorized access attempts
- Recording of all events connected with swing handles
- Central observation of swing handle
- Combination of all swing handles and servers
- Events recording
- Optional web interface
- Supports Sarbanes/Oxley and HIPPA requirements

Knürr @Lock® Desktop Reader

The transponder cards are read into the administration software using the desktop reader. This enables the later configuration of the access media in the system (lock plan creation). The desktop reader is connected via the RS-232 interface with the PC on which the administration software is installed. The transponder card is inserted in the read-out unit for reading the transponder ID. The reading process can then be initiated in the administration software by hitting a key.

MIR20281

■ **Technical data**
- Power supply: 12V +- 10%
  (DC max. 400mA)
  via low voltage socket
- Nominal current: 80mA (DC)
- RS232 interface: RS 232 cable (RXD, TXD, GND, Reader present, PC present), 38,400 Baud
- Connection cable: (reader – read-out unit) 8-pin, 250 cm, UL stranded wire, AWG 26

Model	Order no.	UP
@Lock Server HID	**01.180.011.9**	1 unit
@Lock Swing Handle HID	**01.180.022.9**	1 unit
@Lock Swing Handle IP	**01.180.023.9**	1 unit
@Lock Administration Suite 2.0	**01.180.048.9**	1 unit
@Lock Desktop Reader HID	**01.180.028.9**	1 unit
@Lock Transponder Card	**01.180.040.9**	1 unit
Power Supply, PMI 2001EU	**01.180.035.9**	1 unit
Power Supply, PMI 2001UK	**01.180.036.9**	1 unit
Power Supply, PMI 2001US	**01.180.037.9**	1 unit
Power Supply, PMI 2001 Japan	**01.180.038.9**	1 unit
Power Supply, PMI 2001 Australia	**01.180.039.9**	1 unit

Combi Lock
Security and flexibility realized mechanically

– This additional lock, the aptly named "Override", produces a combination swing handle with particularly special advantages.
– Innovative combination swing handle with two activation options
– Independent opening and closing of the swing handle via combination or cylinder lock
– Can be used for right and left closing doors

MIR20095

■ **Installation**
In the standard installation opening of the Miracel rack doors. Quick mounting with plug-in connections and screw fittings.

■ **Technical data**
- Cylinder lock
- Combination lock can be individually set with 3 digits
- Independent activation

■ **Supply schedule**
1 swing handle with combi lock
1 mounting material set

Model	Order no.	UP
Combi Lock	**01.137.013.9**	1 unit

Dimensions in mm: W = Width U = standard height unit
H = Height 1 U = 44.45 mm
D = Depth UP = unit of packaging
h = installation height kg = weight
d = useful depth
L = length = Express item

Conversion: 1 mm = 0.03937 inch 1 kg = 2.2046 pound