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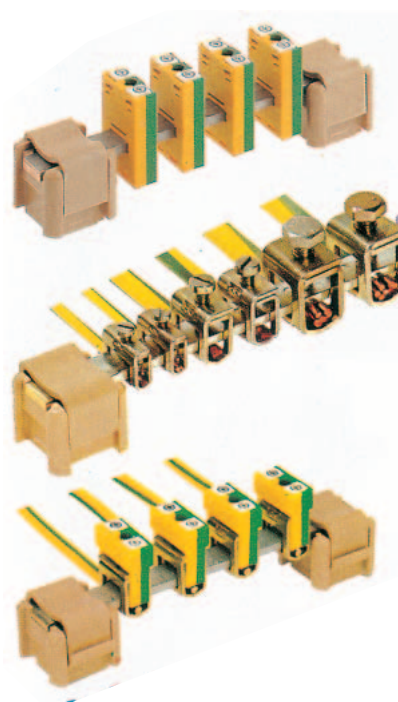
Busbar systems

Busbars

In switchgears and controls, it may be necessary to bring the neutral conductor and the protective conductor together at a central point. Busbars are available for this purpose and can be used for connecting a large number of conductors in a confined space (up to 70 conductors on a 1 m busbar). The conductors are connected by means of a pressure piece or tension clamp; the former does not entail bending the eyelets. A guide lug on the pressure piece engages in the busbar and holds the pressure piece firmly so that it cannot twist. The tension clamps can be pushed on the busbar and adjusted to the entire wiring in the system. The busbars can be used unperforated in any lengths. They are fixed using the SH busbar holder which can, for longer busbars, also be positioned between the tension clamps.

Tension clamps

(see page F.24 – F.25)



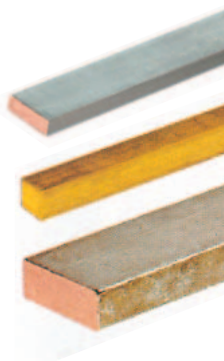
In order to bring together neutral conductors and protective conductors at a central point, it is advantageous to use ZB tension clamps together with 10 x 3 or 6 x 6 busbars. The tension clamps can be pushed onto the busbar and adjusted to the entire wiring in the system.

The tension clamp serves as the protective conductor connection and can be supplied with green/yellow insulating caps. These caps indicate the protective function and marking tags allow clear identification of each conductor.

If the tension clamps are used to connect neutral conductors, they can be marked with a blue insulating cap.

ZBE6 can also be swivelled onto the busbar retrospectively.

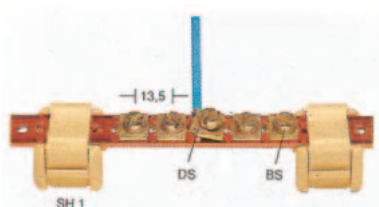
Busbars, unperforated



SSch

Type	Material	Cross-section	Length	Current carrying capacity	Qty	Order no.
SSch 10x3	Copper, tin-plated	10 x 3 mm	1 m	140 A	1	0348900000
SSch 10x3	Steel, galvanised	10 x 3 mm	1 m		1	0438000000
SSch 10x3	Brass, bright	10 x 3 mm	1 m	100 A	1	0259800000
SSch 6x6	Copper, tin-plated	6 x 6 mm	1 m	140 A	1	0571300000
SSch 6x6	Brass, bright	6 x 6 mm	1 m	100 A	1	0571200000
SSch 15x6	Copper, tin-plated	15 x 6 mm	1 m	265 A	1	0357400000

Busbars, perforated



NSch / ESch

Type	Material	Cross-section	Length	Power Rating	Qty	Order no.
NSch 15x2	Copper, bright	15 x 2 mm	1 m	80 A	1	0280200000
ESch 12x2	Steel, galvanised	12 x 2 mm	1 m		1	0280300000

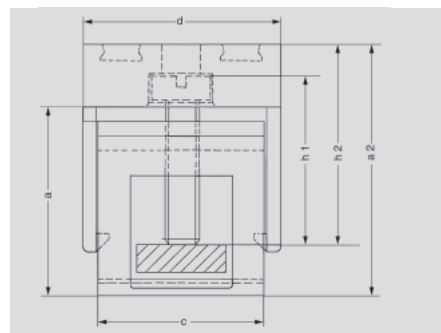
Pressure piece	Qty	Order no.
DKSUE	100	0280100000
Clamping screw	Qty	Order no.
BFSC M5x8	100	0296700000

Connection data NSch/ESch

Screw connection solid	0.5 ... 2.5 mm ²
Stripping length	9 mm
Cable lug connection	max. 16 mm ²
Max. current per connection	27 A

Busbar systems

Clamping yoke, insulated



For 10 x 3 mm busbars



Connection cross-section:
 Solid 0.5 ... 6.0 mm²
 Flexible 0.5 ... 4.0 mm²
 Stranded -
 Clamping screw M 3
 Stripping length 16 mm

For swivelling on retrospectively



Connection cross-section:
 Solid 1.0 ... 10 mm²
 Flexible 1.5 ... 10 mm²
 Stranded -
 Clamping screw M 4
 Stripping length 19 mm

Also for busbar 10 x 5 mm available



Connection cross-section:
 Solid 1.5 ... 10 mm²
 Flexible 2.5 ... 10 mm²
 Stranded -
 Clamping screw M 4
 Stripping length 19 mm



Connection cross-section:
 Solid 2.5 ... 16 mm²
 Flexible 2.5 ... 16 mm²
 Stranded 16 ... 25 mm²
 Clamping screw M 4
 Stripping length 16 mm



Connection cross-section:
 Solid -
 Flexible 16 ... 35 mm²
 Stranded 16 ... 50 mm²
 Clamping screw M 6
 Stripping length 19 mm

For 6 x 6 mm busbars



Connection cross-section:
 Solid 0.5 ... 6.0 mm²
 flexible 0.5 ... 4.0 mm²
 Stranded -
 Clamping screw M 3
 Stripping length 16 mm



Connection cross-section:
 Solid 2.5 ... 16 mm²
 Flexible 2.5 ... 16 mm²
 Stranded 16 ... 25 mm²
 Clamping screw M 4
 Stripping length 12 mm

ZB / ZBE

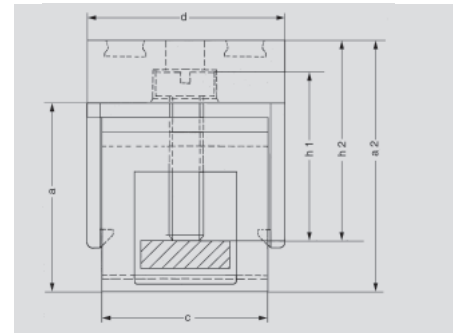
Type	Colour	Dimensions [mm]			Qty	Order no.
		a	width	c		
ZB 4, bright	-	11.7	5.6	16.0	50	0316500000
Insulating cap	Blue				50	0475480000
Insulating cap	Green/yellow				50	0475460000
ZBE 6, bright	-	19.5	8.2	19.5	50	0459500000
Insulating cap	Blue				50	0526080000
Insulating cap	Green/yellow				50	0526060000
ZB 10, bright	-	19.5	8.2	19.5	50	1261300000
ZB 16, bright	-	17.0	10.0	16.0	50	0316600000
Insulating cap	Blue				50	0502980000
Insulating cap	Green/yellow				50	0502960000
ZB 35, bright	-	21.0	14.4	18.4	20	0266500000
Insulating cap	Blue				50	0502780000
Insulating cap	Green/yellow				50	0502760000

ZB

Type	Colour	Dimensions [mm]			Qty	Order no.
		a	width	c		
ZB 4/6, bright	-	14.7	5.6	12.5	50	0556700000
Insulating cap	Blue				50	0565380000
ZB 16/6, bright	-	19.0	10.0	12.5	50	0556800000
Insulating cap	Blue				50	0565580000
Insulating cap	Green/yellow				50	0565560000

Busbar systems

Clamping yoke, insulated



For busbars 10 x 3 mm



Connection cross-section:
 Solid 0.5 ... 6.0 mm²
 Flexible 0.5 ... 4.0 mm²
 Stranded -
 Clamping screw M 3
 Stripping length 16 mm

For swivelling on retrospectively



Connection cross-section:
 Solid 1.0 ... 10 mm²
 Flexible 1.5 ... 10 mm²
 Stranded -
 Clamping screw M 4
 Stripping length 19 mm



Connection cross-section:
 Solid 2.5 ... 16 mm²
 Flexible 2.5 ... 16 mm²
 Stranded 16 ... 25 mm²
 Clamping screw M 4
 Stripping length 16 mm



Connection cross-section:
 Solid -
 Flexible 16 ... 35 mm²
 Stranded 16 ... 50 mm²
 Clamping screw M 6
 Stripping length 19 mm

Tension spring connection



Connection cross-section:
 Solid 0.5 ... 4.0 mm²
 Flexible 0.5 ... 2.5 mm²
 Stranded -
 Stripping length 10 mm

ZB / ZBE / ZF

Type	Colour	Dimensions [mm]				Qty	Order no.
		a2	width	d	h2		
ZB 4 G GN/GE	Green/yellow	27.0	7.6	19.7	15.5	50	0322160000
ZB 4 G BL	Blue	27.0	7.6	19.7	15.5	50	0322180000
ZB 4 G SW	Black	27.0	7.6	19.7	15.5	50	0322110000
ZB 4K GN/GE	Green/yellow	18.5	6.0	19.0	13.0	50	0475360000
ZB 4K BL	Blue	18.5	6.0	19.0	13.0	50	0475380000
ZBE 6K GN/GE	Green/yellow	27.0	8.0	22.5	23.0	50	0525960000
ZBE 6K BL	Blue	27.0	8.0	22.5	23.0	50	0525980000
ZBE 6K SW	Black	27.0	8.0	22.5	23.0	50	0525910000
ZB 16K GN/GE	Green/yellow	24.0	10.0	19.2	20.0	50	0502860000
ZB 16K BL	Blue	24.0	10.0	19.2	20.0	50	0502880000
ZB 16K SW	Black	24.0	10.0	19.2	20.0	50	0502810000
ZB 35K GN/GE	Green/yellow	25.0	14.4	32.0	20.5	20	0502660000
ZB 35K BL	Blue	25.0	14.4	32.0	20.5	20	0502680000
ZB 35K SW	Black	25.0	14.4	32.0	20.5	20	0502610000
ZF 4 S	Beige	22.0	6.1	24.5	-	50	1814680000
ZF 4 S BL	Blue	22.0	6.1	24.5	-	50	1814660000
ZF 4 S GN/GE	Green/yellow	22.0	6.1	24.5	-	50	1814670000

For 6 x 6 mm busbar



Connection cross-section:
 Solid 0.5 ... 6.0 mm²
 Flexible 0.5 ... 4.0 mm²
 Stranded -
 Clamping screw M 3
 Stripping length 16 mm



Connection cross-section:
 Solid 2.5 ... 16 mm²
 Flexible 2.5 ... 16 mm²
 Stranded 16 ... 25 mm²
 Clamping screw M 4
 Stripping length 12 mm

ZB

Type	Colour	Dimensions [mm]				Qty	Order no.
		a2	width	d	h2		
ZB 4/6K GN/GE	Green/yellow	21.2	6.0	25.0	14.0	50	0565460000
ZB 4/6K BL	Blue	21.2	6.0	25.0	14.0	50	0565480000
ZB 16/6K GN/GE	Green/yellow	26.0	9.7	25.0	20.0	50	0569660000
ZB 16/6K BL	Blue	26.0	9.7	25.0	20.0	50	0569680000

Mounting rails, profile rails, end holders

Both active and passive components and intelligent modules are mounted on mounting rails – a method which has proven its worth over the years. But it is only after the use of certain consumables – which are frequently not taken into consideration – that electrical installation is finally completed. In this chapter, users will find a range of mounting rails and profile rails for component installation together with end holders for holding and isolating the components. This guarantees firm installation and isolation. Weidmüller supplies components which show perfect functional compatibility.

Mounting rails are made of either steel, stainless steel, aluminium or copper, depending on the area of application.

Stainless steel

Stainless steel is a collective noun for all kinds of steel (alloys) which are smelted in a special process and have a high degree of purity. Stainless steel has much-enhanced resistance to corrosion. Weidmüller's stainless steel mounting rails have the following composition: X5 CrNi 18-10 stainless steel (i.e. ~ 18% chromium, ~ 10% nickel).

Aluminium

Aluminium is second only to copper in its electrical conductivity. One advantage is its light weight. Aluminium oxidises quickly in air; thus passivated, it offers excellent corrosion protection.

Copper

Copper, a heavy metal, has the best electrical conductivity of all metals used. As it is a soft metal, Weidmüller's mounting rails are 2.3 mm thick.

Steel

All steel versions are galvanised and also passivated with a chromate layer, differentiated into yellow (chromium VI) and blue chromate (chromium III). Blue chromating has been introduced because of future restrictions on chromium (VI) compounds.

All mounting rails are produced in 1 m and 2 m lengths.

A mounting rail can also be used as a protective conductor busbar. Weidmüller PE / earth terminals in the W series, Z series, I series, SAK and AKZ series comply with requirements stipulated in IEC 60 947-7-2. According to VDE 0100 part 540, for conductors with cross-sectional areas exceeding 10 mm², both protective and neutral conductors may be grouped together as a single category of conductors designated PEN.

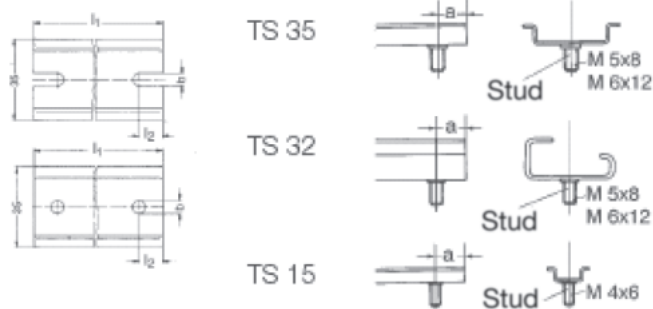
If a mounting rail is used as a PEN busbar, the following criteria must be observed:

- Only E-Cu or aluminium profiles are allowed
- Short-circuit currents and thermal rated currents must be taken into account
- The mounting rails are to be insulated as a contribution to protective insulation

All unperforated mounting rails can be provided with fixing holes (state dimensions b and l2).

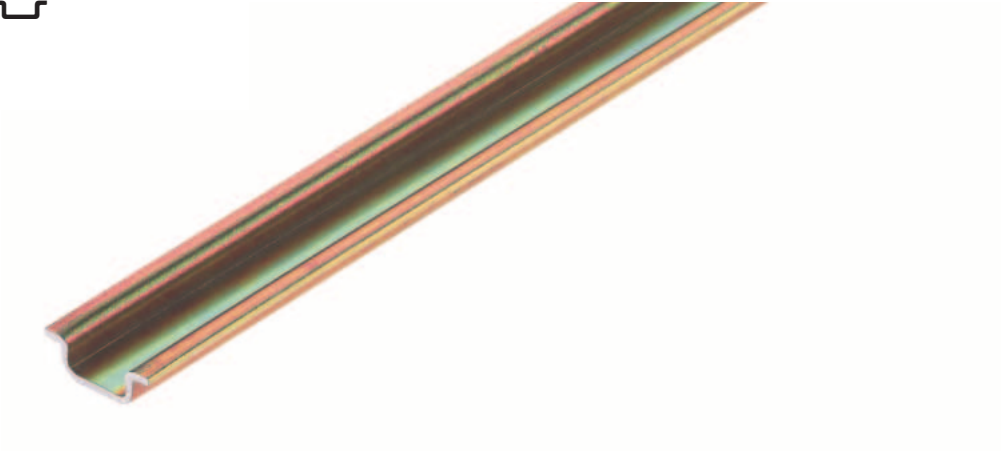
Possible diameters are 3.5 / 5.6 / 5.5 / 7 mm.

All unperforated steel rails can also be supplied with welded on steel studs (state dimension a and required studs).

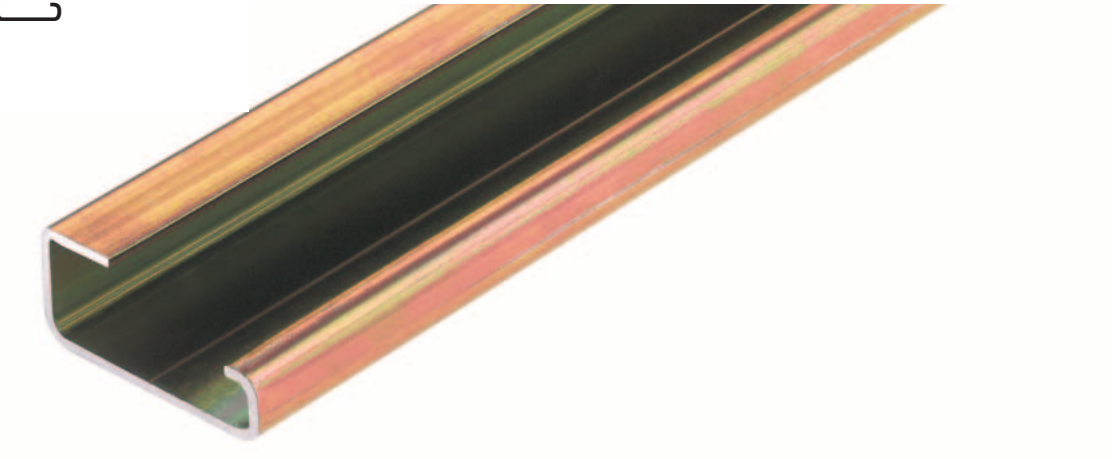


Mounting rails

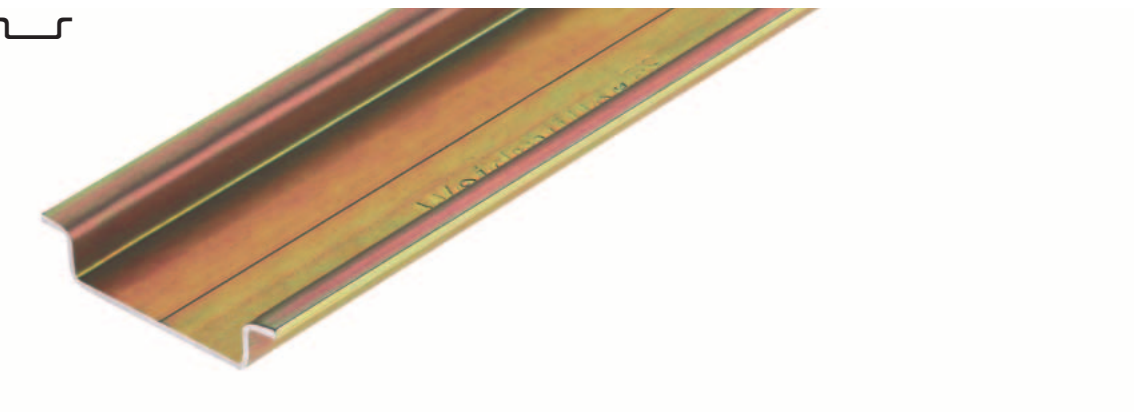
TS 15 



TS 32 



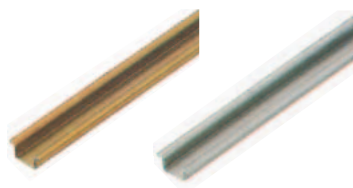
TS 35 



Mounting rail systems

TS15 mounting rail

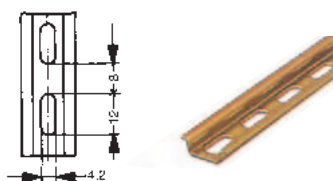
Unperforated



TS 15 x 5

Aluminium, bright	Short-circuit strength	Material thickness	Length	Qty	Order no.
TS 15x5 2M/AL/BK (max. tolerable rated current for PEN function = 76 A)	16 mm ²	1 mm	2 m	10 m	0134700000
Steel, galvanised / yellow passivated					
TS 15x5 2M/ST/ZN	10 mm ²	1 mm	2 m	2 m	0514200000
TS 15x5 1M/ST/ZN	10 mm ²	1 mm	1 m	10 m	0514210000

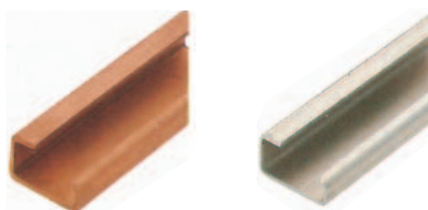
With slotted hole



Aluminium, bright	Short-circuit strength	Material thickness	Length	Qty	Order no.
TS 15x5/LL 2M/AL/BK (max. tolerable rated current for PEN function = 76 A)	16 mm ²	1 mm	2 m	2 m	0217900000
Steel, galvanised / yellow passivated					
TS 15x5/LL 2M/ST/ZN	10 mm ²	1 mm	2 m	2 m	0117500000
TS 15x5/LL 1M/ST/ZN	10 mm ²	1 mm	1 m	10 m	0117510000

TS 32 mounting rail

Unperforated



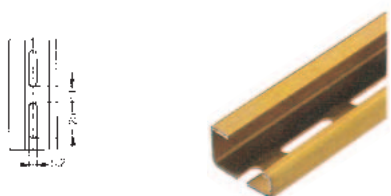
TS 32 x 15

Aluminium, bright	Short-circuit strength	Material thickness	Length	Qty	Order no.
TS 32X15 2M/AL/BK (max. tolerable rated current for PEN function = 192 A)	70 mm ²	1,5 mm	2 m	2 m	0169300000
Steel, galvanised / yellow passivated					
TS 32X15 2M/ST/ZN	35 mm ²	1,5 mm	2 m	2 m	0122800000
TS 32X15 1M/ST/ZN	35 mm ²	1,5 mm	1 m	10 m	0122810000

Copper, bright	Short-circuit strength	Material thickness	Length	Qty	Order no.
TS 32X16.2 2M/CU/BK (max. tolerable rated current for PEN function = 269 A)	120 mm ²	2,1 mm	2 m	2 m	0364300000

Stainless steel, bright	Short-circuit strength	Material thickness	Length	Qty	Order no.
TS 32X15 2M/CRN	35 mm ²	1,5 mm	2 m	2 m	0293220000

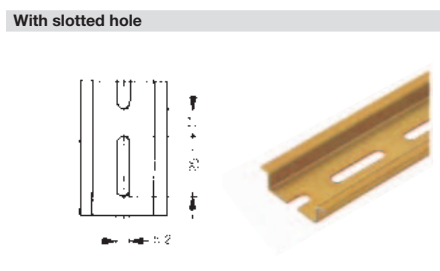
With slotted hole



Steel, galvanised / yellow passivated	Short-circuit strength	Material thickness	Length	Qty	Order no.
TS 32X15/LL 2M/ST/ZN	35 mm ²	1,5 mm	2 m	2 m	0514400000
TS 32X15/LL 1M/ST/ZN	35 mm ²	1,5 mm	1 m	10 m	0514410000

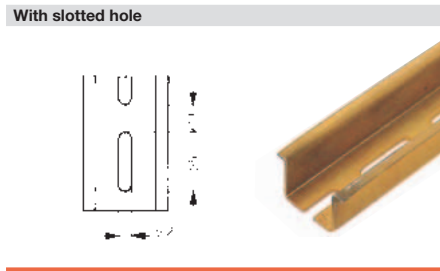
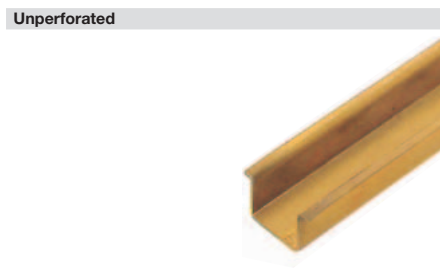
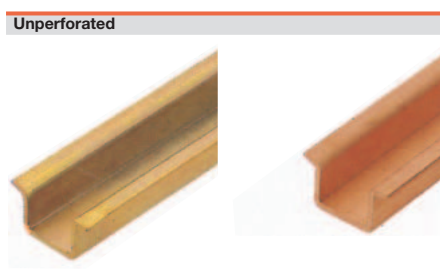
Mounting rail systems

TS 35 mounting rail



TS 35 x 7,5

Material	Short-circuit strength	Material thickness	Length	Qty	Order no.
Aluminium, bright					
TS 35X7.5 2M/AL/BK	35 mm ²	1 mm	2 m	2 m	0330800000
(max. tolerable rated current for PEN function = 125 A)					
Steel, galvanised / yellow passivated					
TS 35X7.5 2M/ST/ZN	16 mm ²	1 mm	2 m	2 m	0383400000
TS 35X7.5 1M/ST/ZN	16 mm ²	1 mm	1 m	10 m	0383410000
Stainless steel, bright					
TS 35X7.5 2M/CRN	16 mm ²	1 mm	2 m	2 m	1747350000
Steel, galvanised / yellow passivated					
TS 35X7.5/LL 2M/ST/ZN	16 mm ²	1 mm	2 m	2 m	0514500000
TS 35X7.5/LL 1M/ST/ZN	16 mm ²	1 mm	1 m	10 m	0514510000
Steel, galvanised / blue passivated					
TS 35X7.5/LL 2M/ST/ZN /WS/BL	16 mm ²	1 mm	2 m	2 m	0514580000



TS 35 x 15

Material	Short-circuit strength	Material thickness	Length	Qty	Order no.
Copper, bright					
TS 35X15/2.3 2M/CU/BK	150 mm ²	2.3 mm	2 m	2 m	0270100000
(max. tolerable rated current for PEN function = 309 A)					
Steel, galvanised / yellow passivated					
TS 35X15/2.3 2M/ST/ZN	50 mm ²	2.3 mm	2 m	2 m	0498000000
Aluminium, bright					
TS 35X15/2.3 2M/AL/BK	70 mm ²	2.3 mm	2 m	2 m	1848290000
(max. tolerable rated current for PEN function = 192 A)					
Steel, galvanised / yellow passivated					
TS 35X15 2M/ST/ZN	25 mm ²	1.5 mm	2 m	2 m	0236400000
TS 35X15 1M/ST/ZN	25 mm ²	1.5 mm	1 m	10 m	0236410000
Steel, galvanised / yellow passivated					
TS 35X15/LL 2M/ST/ZN	25 mm ²	1.5 mm	2 m	2 m	0236500000
TS 35X15/LL 1M/ST/ZN	25 mm ²	1.5 mm	1 m	10 m	0236510000



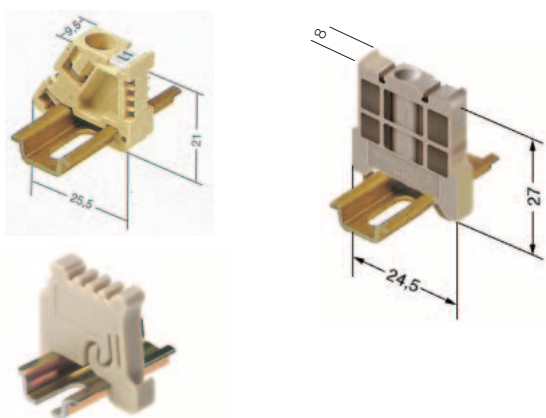
TSK 35 x 15

Material	Length	Qty	Order no.
PVC RAL 7035			
TSK 35X15 2M PVC/GR	2 m	2 m	0514300000

Mounting rail systems

End holders

For TS 15 mounting rail

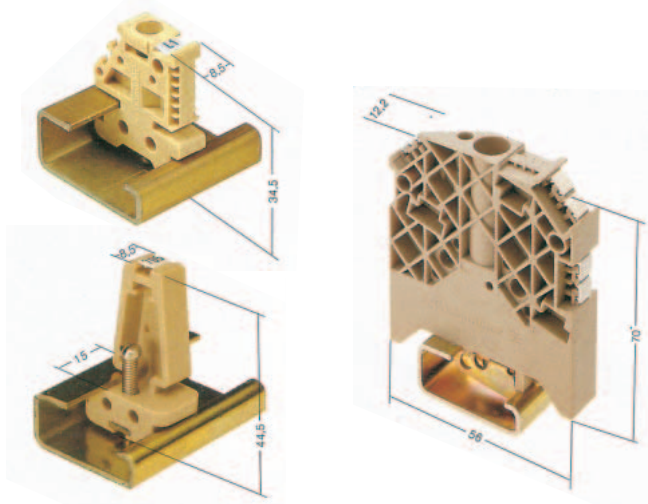


Polyamide 66, screwable	Colour	Torque	Qty	Order no.
EWK AKA 2.5	Beige	0.4 Nm	50	0348660000
EW 15	Beige	0.4 Nm	50	0382860000

Polyamide with fibreglass, screwable	Colour	Torque	Qty	Order no.
EW 15/2	Dark beige	0.4 Nm	50	1071900000

Polyamide 66, screwless	Colour	Torque	Qty	Order no.
ZEW 15	Beige	-	20	7920340000

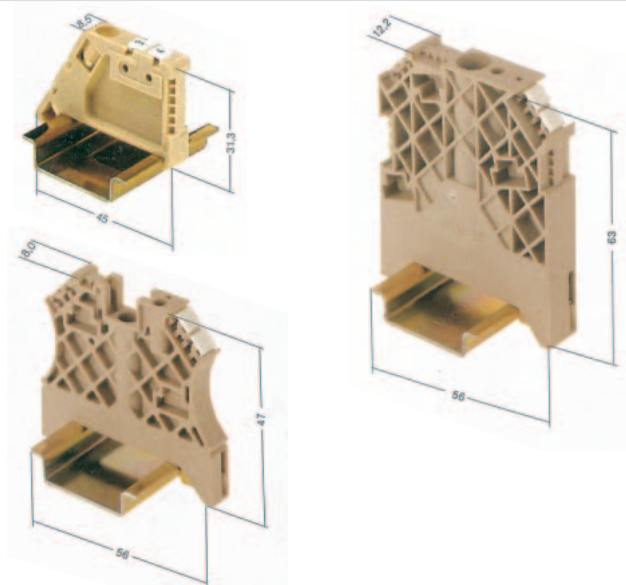
For mounting rail TS 32



Polyamide 66, screwable	Colour	Torque	Qty	Order no.
EWK 2	Beige	1.2 Nm	50	0199360000
EWK 1 TS 32 M4X18	Beige	1.2 Nm	50	0206160000
EWK 1 ALT	Beige	0.6 Nm	50	0495160000

Polyamide with fibreglass, screwable	Colour	Torque	Qty	Order no.
WEW 32/1	Dark beige	0.9 Nm	50	1067600000

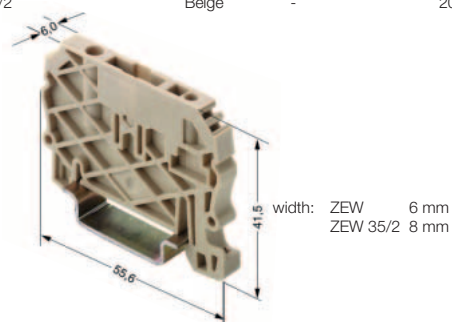
For mounting rail TS 35



Polyamide 66, screwable	Colour	Torque	Qty	Order no.
EW 35 GR	Grey	0.5 Nm	50	0383530000
EW 35	Beige	0.5 Nm	50	0383560000

Polyamide with fibreglass, screwable	Colour	Torque	Qty	Order no.
WEW 35/1	Dark beige	1.2 Nm	50	1059000000
WEW-35/2	Dark beige	0.5 Nm	100	1061200000

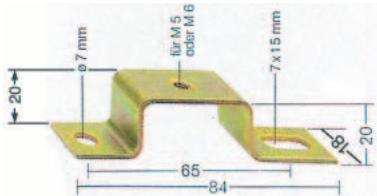
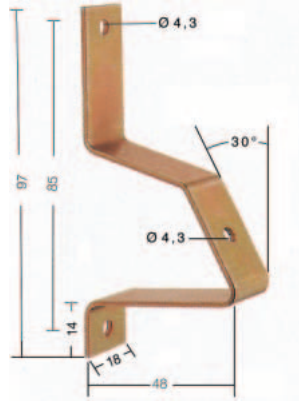
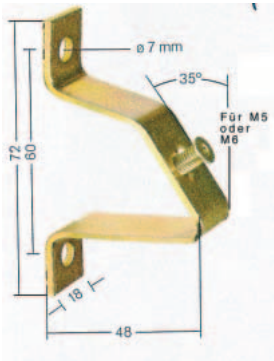
Polyamide 66, screwless	Colour	Torque	Qty	Order no.
ZEW	Beige	-	20	9540000000
ZEW 35/2	Beige	-	20	8630740000



Mounting rail systems

Mounting rail supports / Mounting feet

Mounting rail supports



	Thread	Qty	Order no.
TSTW 5/M5	M5	10	0178100000
TSTW 5/M5 verzinkt	M5	10	1779100000
TSTW 6/M6	M6	10	0164000000
TSTW D 4.3	Hole \varnothing 4,3 mm	10	1610110000

Mounting rail supports of type **TSTW** are used for angled fixing of mounting rails at an angle of 35°.

TST 2/M5	M5	10	1286600000
TST 2/M6	M6	10	0101700000

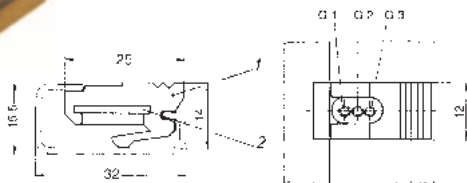
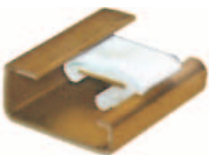
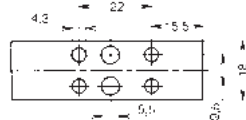
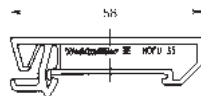
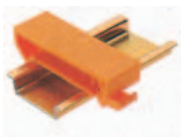
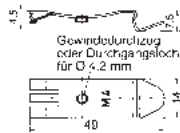
The **TST** mounting rail support is used for assembly of mounting rails in a frame or over a cut-out

Fixing screws

FKSC M5x8 \varnothing 9	50	0295900000
FKSC M6x8 \varnothing 9	50	0642600000
FKSC M6x12 \varnothing 9	50	0353500000

Weidmüller supplies fixing screws with hexagonal sockets and a very low head for the mounting rail supports so that the terminals can also be fitted over the screw.

Mounting feet



Clip-on foot, steel for TS 35	Thread	Qty	Order no.
FM 4	M4	40	0687900000
FM 5	M5	40	0636800000
FM 6	M6	40	0636900000
FM 4.2	Hole \varnothing 4,2 mm	40	1724580000

Assembly foot, PA orange for TS 35

MOFU 35/LO/1	With holes	20	0646260000
MOFU 35		20	0495660000

Sliding nut for TS 34

		Colour	
MB M3/M5	M3 and M5	Cream	20 0503500000
MB M5/M3	M5 and M3	Black	20 0553400000
MB M6/M4	M6 and M4	Grey	20 0334900000

The sliding nut for the RS 32 mounting rail has two threaded holes for screws M3 + M5 / M6 + M4 / M5 + M3. It is used to fasten components which cannot be slotted directly onto the TS 32, in particular the smaller TS 15 top hat rail.

This enables, for example, mini-terminals to be snapped onto the TS 15 first, and this rail is then fastened together with the terminals to the TS 32 using the sliding nut.