

Universal terminals OTL

According to IEC

1000V AC
1500V DC

According to UL

1000V AC/DC

Bimetal

(Al/Cu)

Class A



Universal terminals OTL are designed for copper and aluminium conductors. The terminals are suitable for all types of copper or aluminium conductors with cross-section up to 300 mm². Multiple copper wires can be placed to the universal terminals OTL blocks according to the respective terminal type (see Table of universal terminals OTL wiring connectivity on page 9). IP protection class for OTL terminals is IP20.



Certification and product safety

Universal terminals OTL undergo rigorous testing and certification to ensure compliance with industry standards. They are certified according to **EN 60947-7-1:2009** and **EN 61238-1:2003**, which establish requirements for terminal blocks and connectors for power cables.

EN 61238-1:2003 classifies connectors into two categories

Class A, which undergo heat cycle and short-circuit testing for electricity distribution and industrial networks.

Class B, which only undergo heat cycle testing and are suitable for networks with rapid overload or short-circuit protection.

Universal terminals OTL are certified as Class A connectors, making them suitable for most applications. When choosing a connector, it is essential to ensure it bears the CE marking and Class A certification symbol, such as the FI mark, for reliable and safe electrical connections.

Material classification according to UL 94 V-0 standard (vertical burning test)

Criteria Conditions	94 V-0	94 V-1	94 V-2
Total flaming combustion for each specimen	≤ 10 sec	≤ 30 sec	≤ 30 sec
Total flaming combustion for all 5 specimens of any set	≤ 50 sec	≤ 250 sec	≤ 250 sec
Flaming and glowing combustion for each specimen after second burner flame application	≤ 30 sec	≤ 60 sec	≤ 60 sec
Cotton ignited by flaming drips from any specimen	No	No	Yes

Universal terminals OTL wiring connectivity

In case of Aluminum wire, only one wire is allowed to connect per connection

Type	Conductor cross-section (mm²) / number of copper wires per connection																Tightening torque (Nm)	In (A) Al / Cu
	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300		
OTL 16	3 pcs	3 pcs	2 pcs	2 pcs	1 pcs	1 pcs											1,5 Nm (1,5 - 6 mm²) 7 Nm (10 - 16 mm²)	75 / 82
OTL 35																	3 Nm (2,5 - 16 mm²) 6 Nm (25 - 35 mm²)	120 / 135
OTL 35-2		3 pcs	3 pcs	3 pcs	3 pcs	2 pcs	1 pcs	1 pcs										
OTL 35-3X		3 pcs	3 pcs	3 pcs	3 pcs	2 pcs	1 pcs	1 pcs										
OTL 35-5X		3 pcs	3 pcs	3 pcs	3 pcs	2 pcs	1 pcs	1 pcs										
OTL 50																	1,5 Nm (1,5 - 2,5 mm²) 5 Nm (4 - 10 mm²) 10 Nm (16 - 50 mm²)	145 / 160
OTL 50-2	3 pcs	3 pcs	3 pcs	3 pcs	3 pcs	3 pcs	2 pcs	1 pcs	1 pcs									
OTL 50-3																		
OTL 95																	12 Nm (6 - 25 mm²) 22Nm (35 - 95 mm²)	220 / 245
OTL 95-2				3 pcs	3 pcs	3 pcs	3 pcs	2 pcs	1 pcs	1 pcs	1 pcs							
OTL 95-3				3 pcs	3 pcs	3 pcs	3 pcs	2 pcs	1 pcs	1 pcs	1 pcs							
OTL 150																	14 Nm (25 - 50 mm²) 30 Nm (70 - 150 mm²)	290 / 320
OTL 150-2							3 pcs	3 pcs	3 pcs	2 pcs	1 pcs	1 pcs	1 pcs					
OTL 150-3																		
OTL 240								3 pcs	3 pcs	3 pcs	2 pcs	2 pcs	1 pcs	1 pcs	1 pcs		26 Nm (35 - 120 mm²) 40 Nm (150 - 240 mm²)	380 / 425
OTL 240-2								3 pcs	3 pcs	3 pcs	2 pcs	2 pcs	1 pcs	1 pcs	1 pcs			
OTL 300-1											3 pcs	2 pcs	2 pcs	1 pcs	1 pcs	1 pcs	35 Nm (95-150 mm²) 60 Nm (185-300 mm²)	440 / 490
OTL 300-3											3 pcs	2 pcs	2 pcs	1 pcs	1 pcs	1 pcs		

We recommend using cable end sleeves, when using fine-strand wires with following cross-sections (single-wire connections):

OTL 16: 1,5 mm²...6 mm²

OTL 35: 2,5 mm²...10 mm²

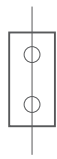
OTL 50: 1,5 mm²...16 mm²

OTL 95: 6 mm²...35 mm²

OTL 150: 25 mm²...70 mm²

OTL 240: 35 mm²...120 mm²

OTL 300: 95 mm²...150 mm²



OTL 16

OTL 35

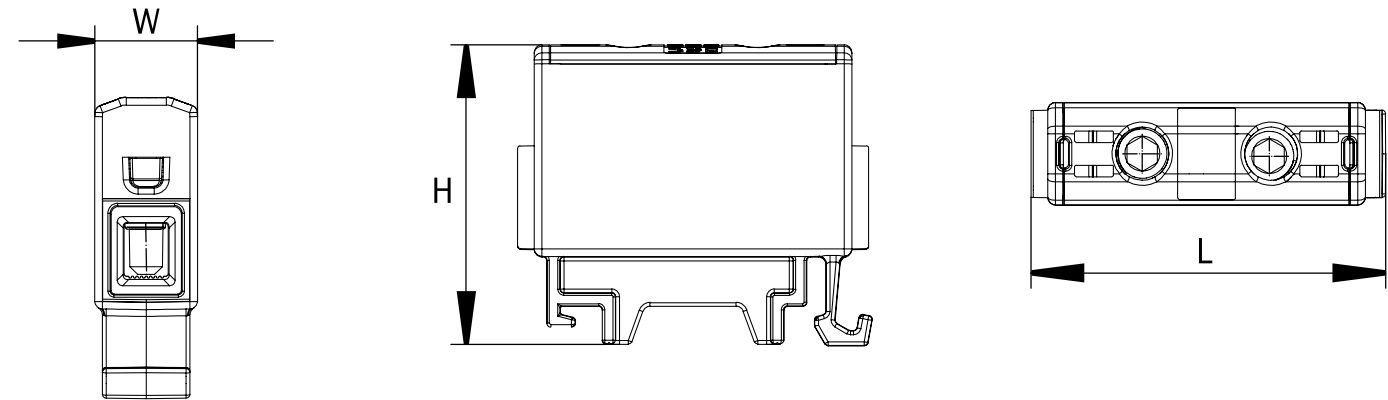
OTL 50

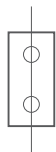
Grey		MAA1016A10	MAA1035A10	MAA1050A10
Blue		MAA1016B10	MAA1035B10	MAA1050B10
Yellow-green		MAA1016Y10	MAA1035Y10	MAA1050Y10
Red		MAA1016R10	MAA1035R10	MAA1050R10
Black		MAA1016S10	MAA1035S10	MAA1050S10

Technical data

Conductor cross-section Cu, Al (mm²)		1,5 - 16	2,5 - 35	1,5 - 50
Nominal voltage AC / DC (V)		1000 / 1500	1000 / 1500	1000 / 1500
Nominal voltage AC / DC (V)		1000	1000	1000
Nominal current (A)		82 (Cu) / 75 (Al)	135 (Cu) / 120 (Al)	160 (Cu) / 145 (Al)
Nominal current (A)		85 (Cu) / 65 (Al)	115 (Cu) / 90 (Al)	150 (Cu) / 120 (Al)
Width / Height / Length (mm)		13,5 / 39,5 / 45	16 / 40 / 45	18 / 43 / 50
Screw, hexagonal key		No. 4	No. 4	No. 5
Tightening torque (Nm)		1,5 Nm (1,5 mm²) 3,5 Nm (2,5 - 6 mm²) 7 Nm (10-16 mm²)	3 Nm (2,5 - 16 mm²) 6 Nm (25 - 35 mm²) -	1,5 Nm (1,5 - 2,5 mm²) 5 Nm (4 - 10 mm²) 10 Nm (16 - 50 mm²)
Mounting		DIN rail	DIN rail	DIN rail
Weight (g)		17	27	30
Package (pcs)		30	30	50 / 30

Dimensions





OTL 95

OTL 150

OTL 240

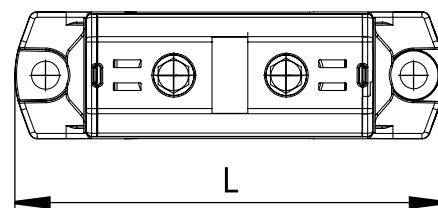
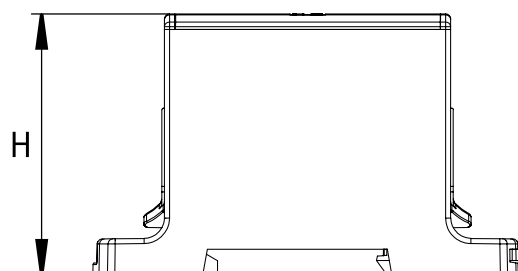
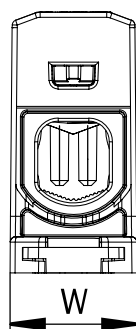
OTL 300

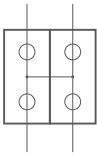
Grey	●	MAA1095A10	MAA1150A10	MAA1240A10	MAA1300A10
Blue	●	MAA1095B10	MAA1150B10	MAA1240B10	MAA1300B10
Yellow-green	●	MAA1095Y10	MAA1150Y10	MAA1240Y10	MAA1300Y10
Red	●	MAA1095R10	MAA1150R10	MAA1240R10	MAA1300R10
Black	●	MAA1095S10	MAA1150S10	MAA1240S10	MAA1300S10

Technical data

Conductor cross-section Cu, Al (mm ²)		6 - 95	25 - 150	35 - 240	95 - 300
Nominal voltage AC / DC (V)	IEC	1000 / 1500	1000 / 1500	1000 / 1500	1000 / 1500
Nominal voltage AC / DC (V)	UL	1000	1000	1000	
Nominal current (A)	IEC	245 (Cu) / 220 (Al)	320 (Cu) / 290 (Al)	425 (Cu) / 380 (Al)	490 (Cu) / 440 (Al)
Nominal current (A)	UL	230 (Cu) / 180 (Al)	285 (Cu) / 250 (Al)	380 (Cu) / 310 (Al)	-
Width / Height / Length (mm)		25 / 51 / 84	31 / 54 / 84	37 / 65 / 106	44 / 71 / 122
Screw, hexagonal key		No. 6	No. 6	No. 8	No. 8
Tightening torque (Nm)		12 Nm (6 - 25 mm ²) 22 Nm (35 - 95 mm ²) -	14 Nm (25 - 50 mm ²) 35 Nm (70 - 150 mm ²)	26 Nm (35 - 120 mm ²) 46 Nm (150 - 240 mm ²)	30 Nm (95 - 150 mm ²) 60 Nm (185 - 300 mm ²)
Mounting		DIN rail, screw	DIN rail, screw	DIN rail, screw	DIN rail, screw
Weight (g)		65	100	195	332
Package (pcs)		● 20 / ● ● ● ● ● 10	● 20 / ● ● ● ● ● 10	● 10 / ● ● ● ● ● 3	● 3 / ● ● ● ● ● 3

Dimensions





OTL 35-2



OTL 50-2



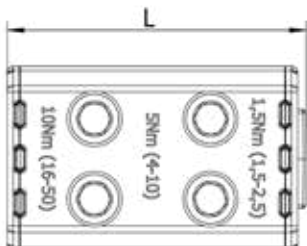
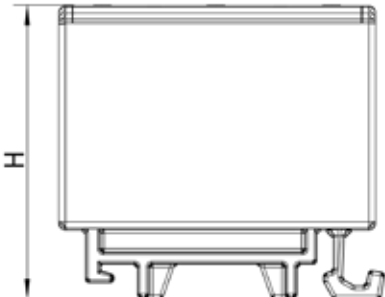
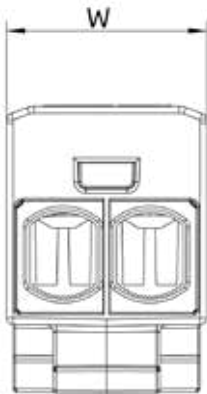
OTL 95-2

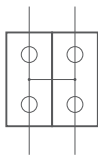
Grey		MAA2035A10	MAA2050A10	MAA2095A10
Blue		MAA2035B10	MAA2050B10	MAA2095B10
Yellow-green		MAA2035Y10	MAA2050Y10	MAA2095Y10
Red		MAA2035R10	MAA2050R10	MAA2095R10
Black		MAA2035S10	MAA2050S10	MAA2095S10

Technical data

Conductor cross-section Cu, Al (mm²)		2,5 - 35	1,5 - 50	6 - 95
Nominal voltage AC / DC (V)		1000 / 1500	1000 / 1500	1000 / 1500
Nominal voltage AC / DC (V)		1000	1000	1000
Nominal current (A)		135 (Cu) / 120 (Al)	320 (Cu) / 290 (Al)	245 (Cu) / 220 (Al)
Nominal current (A)		115 (Cu) / 90 (Al)	150 (Cu) / 120 (Al)	230 (Cu) / 180 (Al)
Width / Height / Length (mm)		27 / 40 / 46	30 / 43 / 49	42 / 51 / 84
Screw, hexagonal key		No. 4	No. 5	No. 6
Tightening torque (Nm)		3 Nm (2,5 - 16 mm²) 6 Nm (25 - 35 mm²) -	1,5 Nm (1,5 - 2,5 mm²) 5 Nm (4 - 10 mm²) 10 Nm (16 - 50 mm²)	12 Nm (6 - 25 mm²) 22 Nm (35 - 95 mm²) -
Mounting		DIN rail	DIN rail	DIN rail, screw
Weight (g)		44	90	125
Package (pcs)		18	15	30 / 15

Dimensions





OTL 150-2



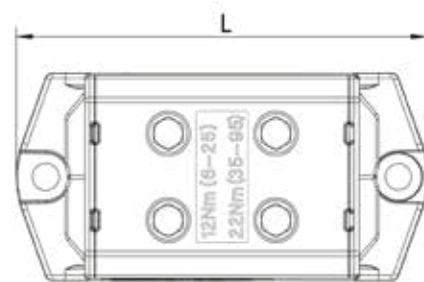
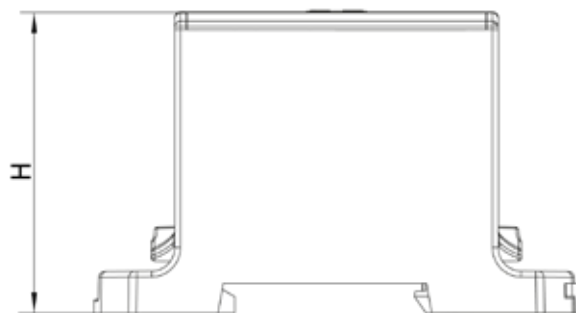
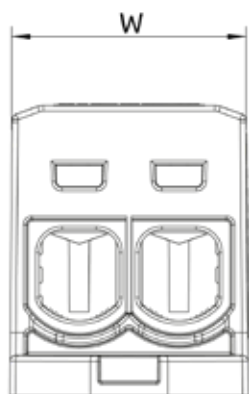
OTL 240-2

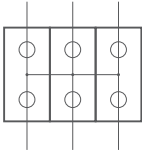
Grey	●	MAA2150A10	MAA2240A10
Blue	●	MAA2150B10	MAA2240B10
Yellow-green	●	MAA2150Y10	MAA2240Y10
Red	●	MAA2150R10	MAA2240R10
Black	●	MAA2150S10	MAA2240S10

Technical data

Conductor cross-section Cu, Al (mm²)		25 - 150	35 - 240
Nominal voltage AC / DC (V)		1000 / 1500	1000 / 1500
Nominal voltage AC / DC (V)		1000	1000
Nominal current (A)		320 (Cu) / 290 (Al)	425 (Cu) / 380 (Al)
Nominal current (A)		285 (Cu) / 250 (Al)	380 (Cu) / 310 (Al)
Width / Height / Length (mm)		51 / 54 / 84	60 / 65 / 106
Screw, hexagonal key		No. 6	No. 8
Tightening torque (Nm)		14 Nm (25 - 50 mm²) 30 Nm (70 - 150 mm²) -	26 Nm (35 - 120 mm²) 40 Nm (150 - 240 mm²) -
Mounting		DIN rail, screw	DIN rail, screw
Weight (g)		170	340
Package (pcs)		● 10 / ● ● ● ● 5	● 6 / ● ● ● ● 3

Dimensions





OTL 50-3



OTL 95-3



OTL 150-3



OTL 300-3

Grey		MAA3050A10	MAA3095A10	MAA3150A10	MAA3300A10
Blue		MAA3050B10	MAA3095B10	MAA3150B10	MAA3300B10
Yellow-green		MAA3050Y10	MAA3095Y10	MAA3150Y10	MAA3300Y10
Red		MAA3050R10	MAA3095R10	MAA3150R10	MAA3300R10
Black		MAA3050S10	MAA3095S10	MAA3150S10	MAA3300S10

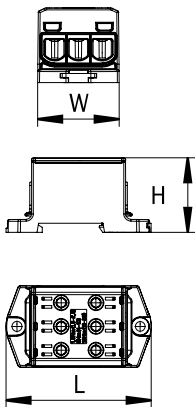
Technical data

Conductor cross-section Cu, Al (mm²)		1.5 - 50	6 - 95	25 - 150	95 - 300
Nominal voltage AC / DC (V)		1000 / 1500	1000 / 1500	1000 / 1500	1000 / 1500
Nominal voltage AC / DC (V)		1000	1000	1000	1000
Nominal current (A)		320 (Cu) / 290 (Al)	490 (Cu) / 440 (Al)	640 (Cu) / 500 (Al)	630 (Cu) / 630 (Al)
Nominal current (A)		150 (Cu) / 120 (Al)	230 (Cu) / 180 (Al)	285 (Cu) / 250 (Al)	-
Width / Height / Length (mm)		46 / 41 / 80	59 / 51 / 84	71 / 54 / 84	101 / 78 / 120
Screw, hexagonal key		No. 5	No. 6	No. 6	No. 8
Tightening torque (Nm)		1,5 Nm (1,5 - 2,5 mm²) 5 Nm (4 - 10 mm²) 10 Nm (16 - 50 mm²)	12 Nm (6 - 25 mm²) 22 Nm (35 - 95 mm²) -	14 Nm (25 - 50 mm²) 30 Nm (70 - 150 mm²) -	35 Nm (95 - 150 mm²) 45 Nm (180 - 300 mm²) -
Mounting		DIN rail, screw	DIN rail, screw	DIN rail, screw	DIN rail, screw
Weight (g)		109	178	246	730
Package (pcs)		20	6	6	1

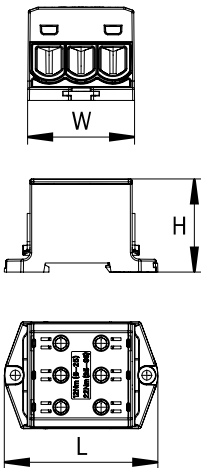
* Currents achievable by connecting multiple input cables.

Dimensions

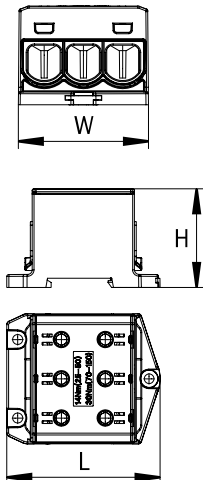
OTL 50-3



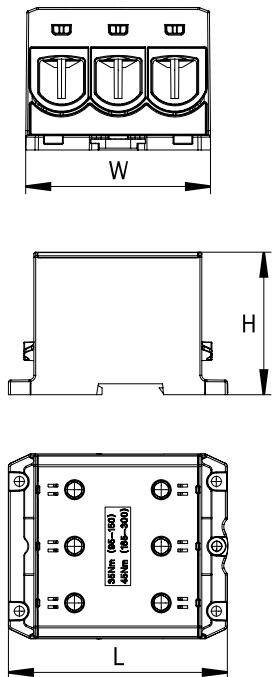
OTL 95-3

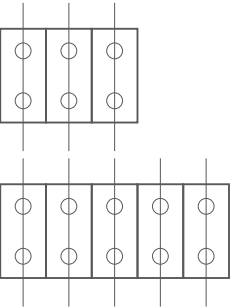


OTL 150-3



OTL 300-3





OTL 35-3X



OTL 50-3X



OTL 35-5X

Grey		MAA1335A10	MAA1350A10	-
Grey, Blue, Yellow-green	  	-	-	MAA5035A10
Yellow-green		-	-	-

Technical data

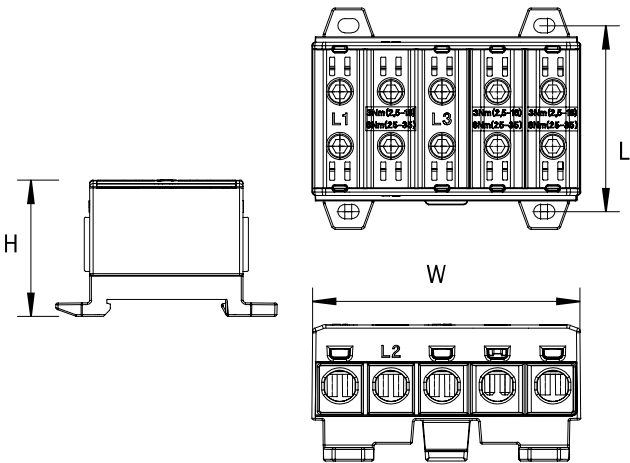
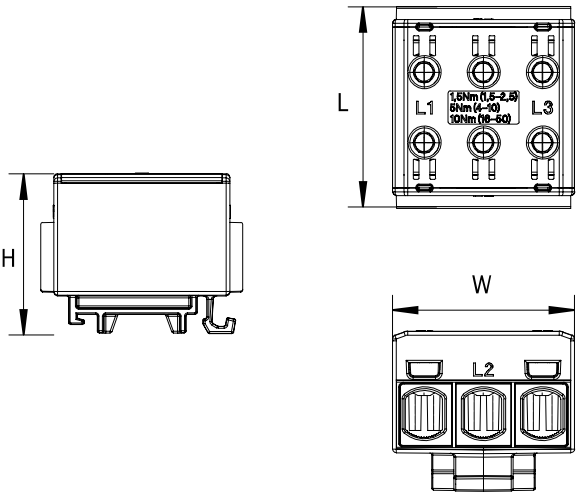
Conductor cross-section Cu, Al (mm²)	2,5 - 35	1,5 - 50	2,5 - 35
Nominal voltage AC / DC (V)	 1000 / 1500	1000 / 1500	1000 / 1500
Nominal voltage AC / DC (V)	 1000	1000	1000
Nominal current (A)	 3 x 135 (Cu) / 3 x 120 (Al)	3 x 160 (Cu) / 3 x 145 (Al)	5 x 135 (Cu) / 5 x 120 (Al)
Nominal current (A)	 3 x 115 (Cu) / 3 x 90 (Al)	3 x 150 (Cu) / 3 x 120 (Al)	5 x 115 (Cu) / 5 x 90 (Al)
Width / Height / Length (mm)	46 / 40 / 46	49 / 43 / 49	79 / 40 / 65
Screw, hexagonal key	No. 4	No. 5	No. 4
Tightening torque (Nm)	3 Nm (2,5 - 16 mm²) 6 Nm (25 - 35 mm²)	1,5 Nm (1,5 - 2,5 mm²) 5 Nm (4 - 10 mm²) 10 Nm (16 - 50 mm²)	3 Nm (2,5 - 16 mm²) 6 Nm (25 - 35 mm²)
Mounting	DIN rail	DIN rail	DIN rail, screw
Weight (g)	70	81	120
Package (pcs)	20	20	10

Dimensions

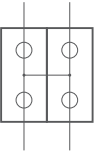
OTL 35-3X

OTL 50-3X

OTL 35-5X



The OTL-PEN universal series terminals are designed to create a point for dividing TN-C systems into TN-S.



OTL-PEN 50-2



OTL-PEN 95-2



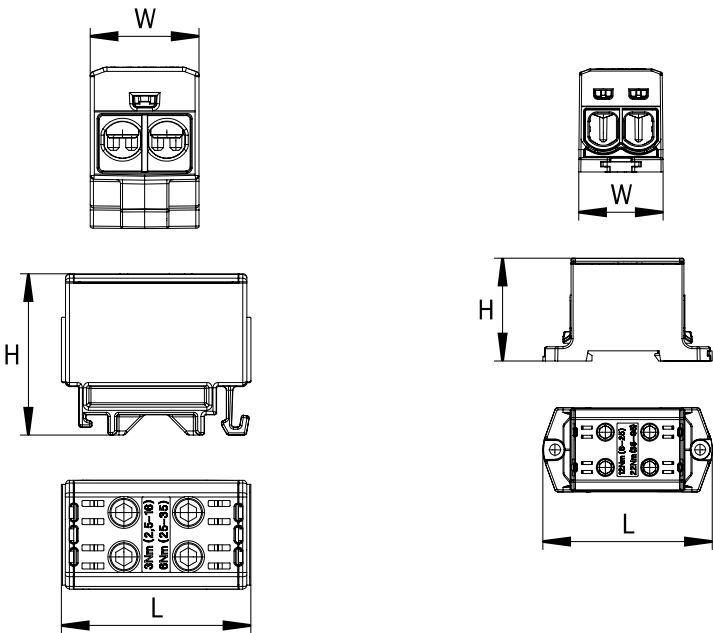
OTL-PEN 150-2



OTL-PEN 240-2

Yellow-green-blue		MAA2050P10	MAA2095P10	MAA2150P10	MAA2240P10
Technical data					
Conductor cross-section Cu, Al (mm²)		1,5 - 50	6 - 95	25 - 150	35 - 240
Nominal voltage AC / DC (V)		1000 / 1500	1000 / 1500	1000 / 1500	1000 / 1500
Nominal voltage AC / DC (V)		1000	1000	1000	1000
Nominal current (A)		320 (Cu) / 290 (Al)	245 (Cu) / 220 (Al)	320 (Cu) / 290 (Al)	425 (Cu) / 380 (Al)
Nominal current (A)		150 (Cu) / 120 (Al)	230 (Cu) / 180 (Al)	285 (Cu) / 250 (Al)	380 (Cu) / 310 (Al)
Width / Height / Length (mm)		30 / 43 / 49	42 / 51 / 84	51 / 54 / 84	60 / 65 / 106
Screw, hexagonal key		No. 5	No. 6	No. 6	No. 8
Tightening torque (Nm)		1,5 Nm (1,5 - 2,5 mm²) 5 Nm (4 - 10 mm²) 10 Nm (16 - 50 mm²)	12 Nm (6 - 25 mm²) 22 Nm (35 - 95 mm²) -	14 Nm (25 - 50 mm²) 30 Nm (70 - 150 mm²) -	26 Nm (35 - 120 mm²) 40 Nm (150 - 240 mm²) -
Mounting		DIN rail	DIN rail, screw	DIN rail, screw	DIN rail, screw
Weight (g)		90	125	170	340
Package (pcs)		15	18	5	3

Dimensions



Protective plastic covers are accessories for universal terminals OTL used for blanking unused connection space or maintaining IP20 protection class with smaller wire cross-section. They are offered for OTL 50, OTL 95, OTL 150, 240 and OTL 300 series.

Finger guard
OTL 50Finger guard
OTL 95Finger guard
OTL 150Finger guard
OTL 240Finger guard
OTL 300

Grey	MAA0050A10	MAA0095A10	MAA0150A10	MAA0240A10	MAA0300A10
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Technical data

Width / Height / Length (mm)	14 / 31,5 / 10	18,3 / 45 / 10	22 / 47,5 / 10	28 / 57,5 / 10	32 / 57,5 / 10
Material	PA 66	PA 66	PA 66	PA 66	PA 66
Weight (g)	0,8	1,4	1,7	2,7	3,2
Package (pcs)	100	100	100	100	100

* Compatible with the new OTL terminals 1500 V DC

Contact grease SR-1

Contact grease SR-1 is a lubrication grease and rust inhibitor designed for electrical connectors. It can be used both indoors and outdoors.

Materials

- Lithium thickened grease, containing antioxidants and corrosion inhibitors

Warning: prolonged or repeated skin contact may irritate the skin and produce dermatitis.

Advantages

- Good protection against both copper and steel corrosion
- Prevention of oxidation of aluminium surfaces
- Reduction of transition resistance while used with wire brush

Standards

- DIN 51502 K2K-30
- ISO 6743 ISO-L-XCCHA2

Contact grease SR-1 250 ml

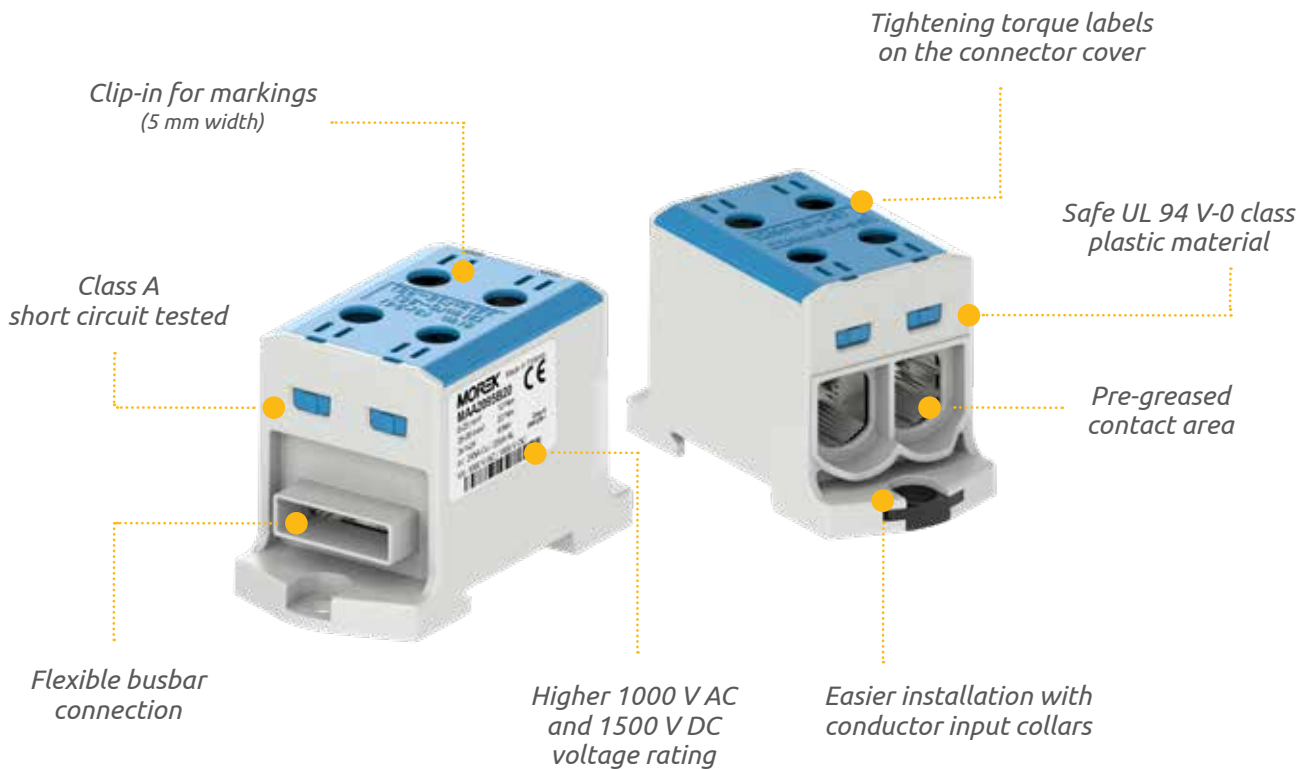
**SR-1**

Contact grease SR-1 250ml	MYA0001A10
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Technical data

Base oil viscosity / cSt at 40 °C	112
Base oil viscosity / cSt at 100 °C	10
Dropping point / °C	>180
Temperature range / °C	-30 to 110
Thickener	Lithium
SKF Emcor WWO distilled water / ISO 11007mod	0-0
Copper corrosion 24h / 100 °C / ASTM D4048	1b
Water resistance / DIN 51807 / 1	0-90
Oil separation 168h / 40 °C / IP121	6%

OTL terminals for flexible busbars are designed for connection of copper (bare or tinned) flexible busbars to copper or aluminium cable, with cable cross-sections of up to 300 mm² and flexible busbar dimensions of up to 6x1x40 mm. The terminals retain all the benefits of OTL terminals, including 1500V DC rating, UL94 V0 class plastic, Class A certification and many others!



Certification and product safety

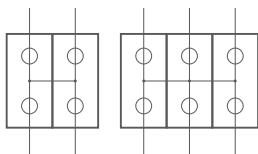
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OTL 95-2B



OTL 300-3B

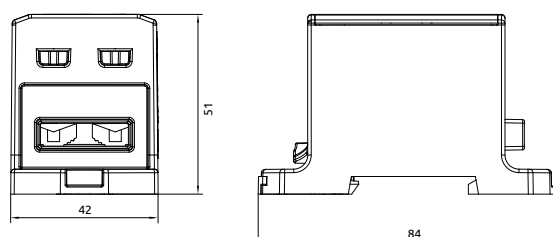
Grey	●	MAA2095A20	MAA3300A20
Blue	●	MAA2095B20	MAA3300B20
Yellow-green	●	MAA2095Y20	MAA3300Y20

Technical data

Conductor cross-section Cu, Al (mm ²)	6 - 95	95 - 300
Busbar cross-section, Cu (mm ²)	3x1x24	3x1x32 - 6x1x40
Nominal voltage AC / DC (V)	 1000 / 1500	1000 / 1500
Nominal current (A)	245 (Cu) / 220 (Al)	630 (Cu) / 630 (Al)
Width / Height / Length (mm)	42 / 51 / 84	101 / 78 / 120
Screw, hexagonal key	No. 6	No. 6, No. 8
Tightening torque (Nm)	12 Nm (6 - 25 mm ²) 22 Nm (35 - 95 mm ²) 8 Nm (3x1x24 mm)	35 Nm (95 - 150 mm ²) 45 Nm (180 - 300 mm ²) 15 Nm (3x1x32 - 6x1x40 mm)
Mounting	DIN rail, screw	DIN rail, screw
Weight (g)	125	499
Package (pcs)	15	1

Dimensions

OTL 95-2B



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