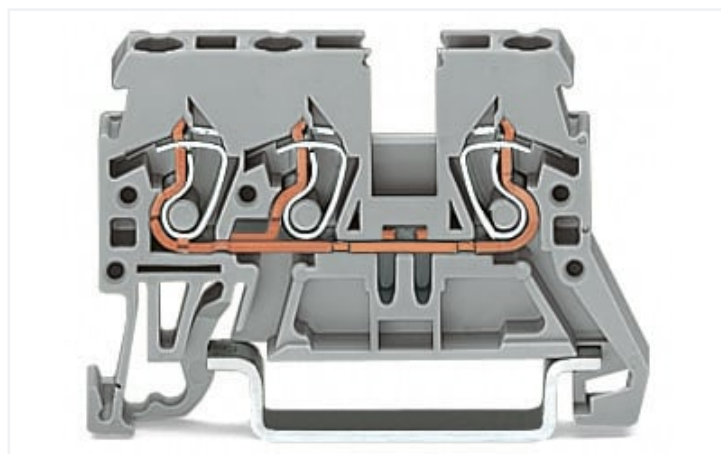
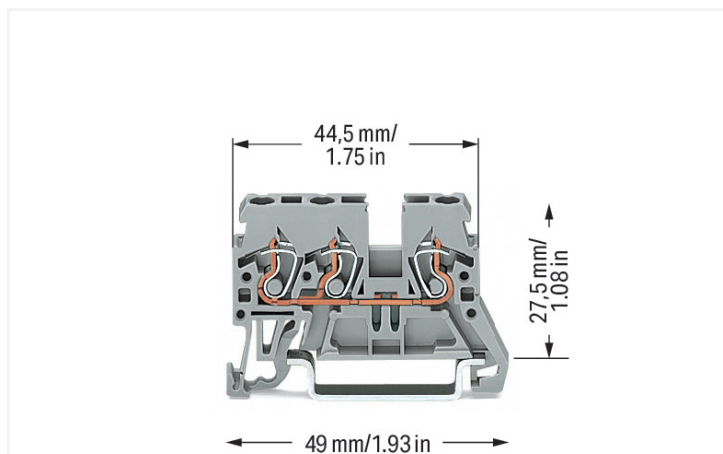


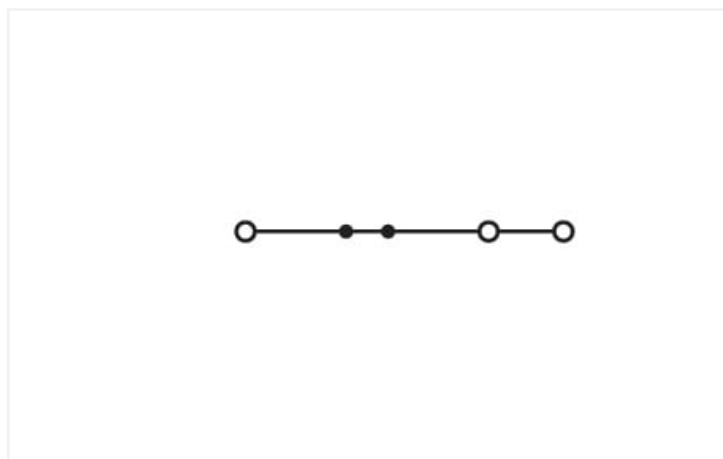
Data Sheet | Item Number: 870-681

3-conductor through terminal block; 2.5 mm²; lateral marker slots; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 2,50 mm²; gray

<https://www.wago.com/870-681>



Color: ■ gray



Similar to illustration

Notes

Safety information

Max. insulation diameter: 4.4 mm

Electrical data

Ratings per	IEC/EN 60947-7-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	500 V	-	-
Rated surge voltage	6 kV	-	-
Rated current	24 A	-	-

Power Loss

Power loss, per pole (potential)	0.7661 W
Rated current I_N for specified power loss	24 A
Resistance value for specified, current-dependent power loss	0.00133 Ω

Connection data

Connection points	3
Total number of potentials	1
Number of levels	1

Connection 1	
Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Connectable conductor materials	Copper
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 4 mm ² / 28 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.08 ... 1.5 mm ² / 28 ... 14 AWG
Strip length	6 ... 7 mm / 0.24 ... 0.28 inches
Wiring direction	Front-entry wiring

Physical data	
Width	5 mm / 0.197 inches
Height	49 mm / 1.929 inches
Depth from upper-edge of DIN-rail	27.5 mm / 1.083 inches

Mechanical data	
Design	horizontal type
Mounting type	DIN-35 rail
Marking level	Side marking

Material data	
Note (material data)	Information on material specifications can be found here
Color	gray
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.116 MJ
Weight	6 g

Environmental requirements	
Processing temperature	-35 ... +85 °C
Continuous operating temperature	-60 ... +105 °C

Commercial data	
eCl@ss 10.0	27-14-11-20
eCl@ss 9.0	27-14-11-20
ETIM 8.0	EC000897
ETIM 7.0	EC000897
PU (SPU)	100 pcs
Packaging type	Box
Country of origin	DE
GTIN	4045454094553
Customs tariff number	85369010000

Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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Approvals / Certificates

General approvals **Declarations of conformity and manufacturer's declarations**



Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	EN 60947	NTR NL 7468
CCA DEKRA Certification B.V.	EN 60947	2189801.01
cURus UL International Germany GmbH	UL 1059	E45172

Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications



Approval	Standard	Certificate Name
ABS American Bureau of Shipping	-	20-HG1941090-PDA
DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2
LR Lloyds Register	EN 60947	91/20112 (E9)

Downloads

Documentation

Additional Information		
Technical Section	pdf 2240.62 KB	↓

Bid Text			
870-681	19.02.2019	xml 3.26 KB	↓
870-681	31.05.2017	doc 24.50 KB	↓

CAD/CAE-Data

CAD data
2D/3D Models 870-681 ↓

CAE data
EPLAN Data Portal 870-681 ↓
WSCAD Universe 870-681 ↓
ZUKEN Portal 870-681 ↓

1 Compatible Products

1.1 Required Accessories

1.1.1 End plate

1.1.1.1 End plate



Item No.: 870-933

End and intermediate plate; 1 mm thick; gray

Item No.: 870-934

End and intermediate plate; 1 mm thick; orange

1.2 Optional Accessories

1.2.1 DIN-rail

1.2.1.1 Mounting accessories



Item No.: 210-196

Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored



Item No.: 210-198

Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-colored



Item No.: 210-508

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715; silver-colored



Item No.: 210-197

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored



Item No.: 210-506

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715; silver-colored



Item No.: 210-114

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored



Item No.: 210-118

Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored



Item No.: 210-115

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 18 mm; silver-colored



Item No.: 210-112

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 25 mm; silver-colored



Item No.: 210-504

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715; silver-colored



Item No.: 210-113

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored



Item No.: 210-505

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715; silver-colored

1.2.2 End plate

1.2.2.1 End plate



Item No.: 870-946













Separator plate; 1 mm thick; gray

Item No.: 870-947

Separator plate; 1 mm thick; orange




1.2.3 Ferrule

1.2.3.1 Ferrule

 Item No.: 216-321 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated; yellow	 Item No.: 216-131 Ferrule; Sleeve for 0.25 mm ² / AWG 24; uninsulated; electro-tin plated; silver-colored	 Item No.: 216-322 Ferrule; Sleeve for 0.34 mm ² / 22 AWG; insulated; electro-tin plated; light turquoise	 Item No.: 216-132 Ferrule; Sleeve for 0.34 mm ² / AWG 24; uninsulated; electro-tin plated
 Item No.: 216-221 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; white	 Item No.: 216-121 Ferrule; Sleeve for 0.5 mm ² / AWG 22; uninsulated; electro-tin plated; silver-colored	 Item No.: 216-222 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray	 Item No.: 216-122 Ferrule; Sleeve for 0.75 mm ² / AWG 20; uninsulated; electro-tin plated; silver-colored
 Item No.: 216-223 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red	 Item No.: 216-123 Ferrule; Sleeve for 1 mm ² / AWG 18; uninsulated; electro-tin plated; silver-colored	 Item No.: 216-224 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black	 Item No.: 216-124 Ferrule; Sleeve for 1.5 mm ² / AWG 16; uninsulated; electro-tin plated




1.2.4 Installation

1.2.4.1 Mounting accessories

 Item No.: 209-106 Mounting carrier; for isolated mounting on DIN 35 rails; gray	 Item No.: 249-117 Screwless end stop; 10 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray	 Item No.: 249-116 Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray
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1.2.5 Insulation stop

1.2.5.1 Insulation stop

 Item No.: 280-470 Insulation stop; 0.08 - 0.2 mm ² "s" (0.14 mm ² "f-st"); 5 pieces/strip; white	 Item No.: 280-471 Insulation stop; 0.25 - 0.5 mm ² ; 5 pieces/strip; light gray	 Item No.: 280-472 Insulation stop; 0.75 - 1 mm ² ; 5 pieces/strip; black
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1.2.6 Jumper

1.2.6.1 Jumper

 Item No.: 870-405/011-000	 Item No.: 870-407/011-000	 Item No.: 870-409/011-000	 Item No.: 870-406/020-000 Delta jumper; insulated; light gray
 Item No.: 870-410 Jumper; 10-way; insulated; light gray	 Item No.: 870-402 Jumper; 2-way; insulated; light gray	 Item No.: 870-403 Jumper; 3-way; insulated; light gray	 Item No.: 870-404 Jumper; 4-way; insulated; light gray
 Item No.: 870-405 Jumper; 5-way; insulated; light gray	 Item No.: 870-406 Jumper; 6-way; insulated; light gray	 Item No.: 870-407 Jumper; 7-way; insulated; light gray	 Item No.: 870-408 Jumper; 8-way; insulated; light gray
 Item No.: 870-409 Jumper; 9-way; insulated; light gray	 Item No.: 870-440 Jumper; from 1 to 10; insulated; light gray	 Item No.: 870-433 Jumper; from 1 to 3; insulated; light gray	 Item No.: 870-434 Jumper; from 1 to 4; insulated; light gray
 Item No.: 870-435 Jumper; from 1 to 5; insulated; light gray	 Item No.: 870-436 Jumper; from 1 to 6; insulated; light gray	 Item No.: 870-437 Jumper; from 1 to 7; insulated; light gray	 Item No.: 870-438 Jumper; from 1 to 8; insulated; light gray

1.2.6.1 Jumper



Item No.: 870-439
 Jumper; from 1 to 9; insulated; light gray

1.2.7 Marking

1.2.7.1 Group marker carrier



Item No.: 870-182
 Adaptor; gray



Item No.: 870-183
 Adaptor; gray



Item No.: 870-184
 Adaptor; gray

1.2.7.2 Marker

Item No.: 2009-145/000-006
 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue

Item No.: 2009-145/000-007
 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray

Item No.: 2009-145/000-023
 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green

Item No.: 2009-145/000-012
 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange

Item No.: 2009-145/000-005
 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red

Item No.: 2009-145/000-024
 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet

Item No.: 2009-145
 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

Item No.: 2009-145/000-002
 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow



Item No.: 248-501/000-006
 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue

Item No.: 248-501/000-007
 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray

Item No.: 248-501/000-023
 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green

Item No.: 248-501/000-017
 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green



Item No.: 248-501/000-012
 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange

Item No.: 248-501/000-005
 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red

Item No.: 248-501/000-024
 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet

Item No.: 248-501
 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white



Item No.: 248-501/000-002
 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow

Item No.: 793-5501/000-006
 WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; blue

Item No.: 793-5501/000-007
 WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; gray

Item No.: 793-5501/000-023
 WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; green



Item No.: 793-5501/000-017
 WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; light green

Item No.: 793-5501/000-012
 WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; orange

Item No.: 793-5501/000-005
 WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; red

Item No.: 793-5501/000-024
 WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; violet



Item No.: 793-5501
 WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white

Item No.: 793-5501/000-002
 WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; yellow

Item No.: 793-501/000-006
 WMB marking card; as card; not stretchable; plain; snap-on type; blue

Item No.: 793-501/000-007
 WMB marking card; as card; not stretchable; plain; snap-on type; gray



Item No.: 793-501/000-023
 WMB marking card; as card; not stretchable; plain; snap-on type; green

Item No.: 793-501/000-017
 WMB marking card; as card; not stretchable; plain; snap-on type; light green

Item No.: 793-501/000-012
 WMB marking card; as card; not stretchable; plain; snap-on type; orange

Item No.: 793-501/000-005
 WMB marking card; as card; not stretchable; plain; snap-on type; red



1.2.7.2 Marker



Item No.: 793-501/000-024
WMB marking card; as card; not stretchable; plain; snap-on type; violet

Item No.: 793-501
WMB marking card; as card; not stretchable; plain; snap-on type; white

Item No.: 793-501/000-002
WMB marking card; as card; not stretchable; plain; snap-on type; yellow

Item No.: 2009-115/000-006
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue



Item No.: 2009-115/000-007
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray

Item No.: 2009-115/000-023
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green

Item No.: 2009-115/000-017
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; light green

Item No.: 2009-115/000-012
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange



Item No.: 2009-115/000-024
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet

Item No.: 2009-115
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

Item No.: 2009-115/000-002
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow

1.2.7.3 Marking strip



Item No.: 709-196
Marking strips; for laser printer; translucent

Item No.: 709-177
Marking strips; on reel; 7.5 mm wide; not stretchable; plain; snap-on type; translucent

Item No.: 709-178
Marking strips; on reel; 7.5 mm wide; not stretchable; plain; snap-on type; white

1.2.8 Protective warning marker

1.2.8.1 Cover



Item No.: 280-405
Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow

1.2.9 Test and measurement

1.2.9.1 Testing accessories



Item No.: 870-427
Spacer module; modular; bridging commoned terminal blocks; gray

Item No.: 870-426
Tap-off module; modular; suitable for 870 Series terminal blocks with jumper slots in the current bar; gray

Item No.: 870-425
Tap-off module; with anti-rotation protection; modular; suitable for 870 Series terminal blocks with jumper slots in the current bar; gray

1.2.10 Tool

1.2.10.1 Operating tool



Item No.: 210-658

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured

Item No.: 210-720

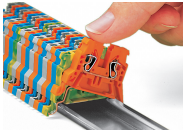
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Item No.: 210-657

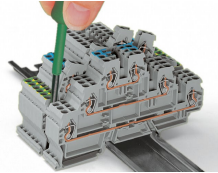
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured

Installation Notes

Installation

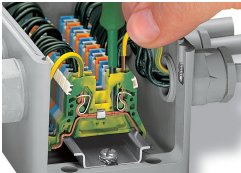


Snapping a rail-mount terminal block onto DIN-35 rail.



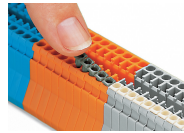
Removing a terminal block from the assembly.

Conductor termination



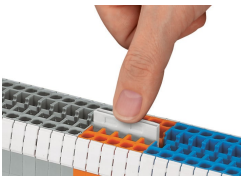
CAGE CLAMP® connection

Inserting a conductor via operating tool (0.08 ... 4 mm² "f-st").
With ferruled conductors, it is necessary to use a terminal block one size smaller than the conductor's nominal cross-section.

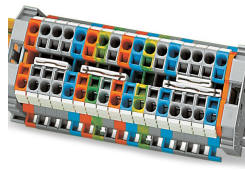


Inserting insulation stops into conductor entry holes of terminal strip.

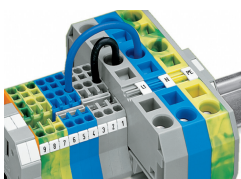
Commoning



Push jumper bars down firmly until fully inserted. When using multipole bars, push alternately on the right and then left side until installed.
Push-in type jumper bars 1-3-5-7 or 1-4-7 upon request

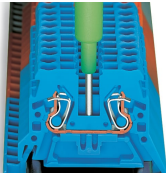


Commoning with push-in type jumper bars:
Two parallel jumper slots are accommodated in one terminal block.

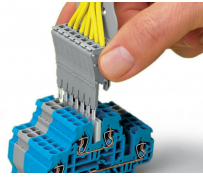


Commoning terminal blocks of different sizes via step-down jumpers.

Testing

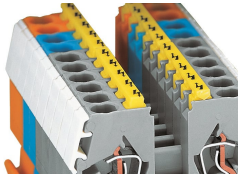


Testing with phase testing device, also possible with single-pole voltage tester.



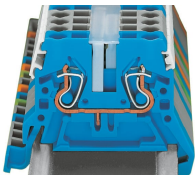
Testing is also possible using a pre-wired tap-off module assembly in the very same way as test plugs.

Cover

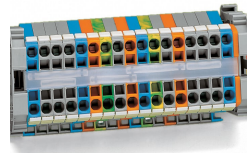


Protective warning markers (280-405), with a black high-voltage symbol

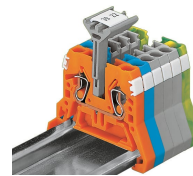
Marking



WMB markers in Mini-WSB marker slots
Translucent marking strip
Mini-WSB markers



Translucent marking strip (709-196) – jumpers below may be visible.



In addition to the plastic marker strips, group marker carriers are now available for the WMB and WSB marking systems. They can be mounted in parallel to a push-in type jumper bar via the open jumper contact slot. It is also very useful if the marker slots on the side of the terminal block are hidden. The carriers are available in the following widths: 5 mm (0.197 inch), 10 mm (0.394 inch) and 15 mm (0.591 inch).

Notice:

Group marker carriers are not suitable for ground conductor terminal blocks and double potential terminal blocks as they have no jumper contact slots.