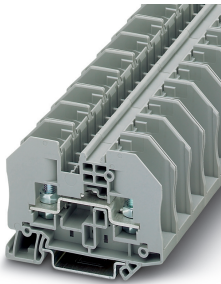


## Bolt connection terminal block - RTO 5 - 3049521

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Bolt connection terminal block, Note: the BE-RT... path extension is to be used for non-insulated cable lugs (see accessories)., nom. voltage: 1000 V, nominal current: 41 A, connection method: Bolt connection, number of connections: 2, width: 16.3 mm, color: gray, mounting type: NS 35/7,5, NS 35/15

### Your advantages

- ✓ Four bridge shafts per terminal block
- ✓ Terminal point always freely accessible



### Key Commercial Data

Packing unit	1 pc
Minimum order quantity	50 pc
GTIN	 4 046356 140829
GTIN	4046356140829
Weight per Piece (excluding packing)	30.550 g
Custom tariff number	85369010
Country of origin	China

### Technical data

#### General

Note	Note: the BE-RT... path extension is to be used for non-insulated cable lugs (see accessories).
Number of levels	1
Number of connections	2
Potentials	1
Nominal cross section	6 mm <sup>2</sup>
Color	gray

## Bolt connection terminal block - RTO 5 - 3049521

### Technical data

#### General

Insulating material	PA
Flammability rating according to UL 94	V0
Rated surge voltage	8 kV
Degree of pollution	3
Overvoltage category	III
Insulating material group	I
Maximum power dissipation for nominal condition	1.31 W
Maximum load current	41 A (with 6 mm <sup>2</sup> conductor cross section)
Nominal current I <sub>N</sub>	41 A
Nominal voltage U <sub>N</sub>	1000 V
Open side panel	Yes
Result of surge voltage test	Test passed
Result of power-frequency withstand voltage test	Test passed
Power frequency withstand voltage setpoint	2.2 kV
Result of the test for mechanical stability of terminal points (5 x conductor connection)	Test passed
Result of tight fit on support	Test passed
Tight fit on carrier	NS 35
Setpoint	5 N
Result of voltage-drop test	Test passed
Result of temperature-rise test	Test passed
Requirement temperature-rise test	Increase in temperature ≤ 45 K
Short circuit stability result	Test passed
Conductor cross section short circuit testing	6 mm <sup>2</sup>
Short-time current	0.72 kA
Result of thermal test	Test passed
Proof of thermal characteristics (needle flame) effective duration	30 s
Oscillation, broadband noise test result	Test passed
Test specification, oscillation, broadband noise	DIN EN 50155 (VDE 0115-200):2008-03
Test frequency	f <sub>1</sub> = 5 Hz to f <sub>2</sub> = 150 Hz
ASD level	1.857 (m/s <sup>2</sup> ) <sup>2</sup> /Hz
Acceleration	0,8 g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis
Shock test result	Test passed
Test specification, shock test	DIN EN 50155 (VDE 0115-200):2008-03
Shock form	Half-sine

## Bolt connection terminal block - RTO 5 - 3049521

### Technical data

#### General

Acceleration	5g
Shock duration	30 ms
Test directions	X-, Y- and Z-axis (pos. and neg.)
Relative insulation material temperature index (Elec., UL 746 B)	130 °C
Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21))	130 °C
Static insulating material application in cold	-60 °C
Surface flammability NFPA 130 (ASTM E 162)	passed
Specific optical density of smoke NFPA 130 (ASTM E 662)	passed
Calorimetric heat release NFPA 130 (ASTM E 1354)	28 MJ/kg
Smoke gas toxicity NFPA 130 (SMP 800C)	passed
Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R23	HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R26	HL 1 - HL 3

#### Dimensions

Width	16.3 mm
End cover width	2.2 mm
Length	66 mm
Height NS 35/7,5	49.9 mm
Height NS 35/15	57.4 mm

#### Connection data

Connection	1 level
Connection method	Bolt connection
Stripping length	The stripping length depends on the specification provided by the cable lug manufacturer.
Connection in acc. with standard	IEC 60947-7-1
Cable lug connection according to standard	DIN 46234:1980-03
Min. cross section for cable lug connection	0.5 mm <sup>2</sup>
Max. cross section for cable lug connection	6 mm <sup>2</sup>
AWG min	20
AWG max	10
Hole diameter, min.	5.3 mm
Cable lug width, max.	10 mm
Bolt diameter	5 mm
Screw thread	M5
Tightening torque, min	2.5 Nm
Tightening torque max	3 Nm

# Bolt connection terminal block - RTO 5 - 3049521

## Technical data

### Connection data

Cable lug connection according to standard	DIN 46237:1970-07
Min. cross section for cable lug connection	1 mm <sup>2</sup>
Max. cross section for cable lug connection	6 mm <sup>2</sup>
AWG min	16
AWG max	10
Hole diameter, min.	5.3 mm
Cable lug width, max.	10 mm
Bolt diameter	5 mm
Screw thread	M5
Tightening torque, min	2.5 Nm
Tightening torque max	3 Nm

### Ambient conditions

Operating temperature	-60 °C ... 105 °C (max. short-term operating temperature 130°C)
Ambient temperature (storage/transport)	-25 °C ... 60 °C (for a short time, not exceeding 24 h, -60 °C to +70 °C)
Permissible humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 70 °C
Ambient temperature (actuation)	-5 °C ... 70 °C

### Standards and Regulations

Connection in acc. with standard	CUL
	IEC 60947-7-1
Flammability rating according to UL 94	V0

### Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Drawings

### Circuit diagram



## Classifications

### eCl@ss

eCl@ss 10.0.1	27141120
eCl@ss 11.0	27141120
eCl@ss 4.0	27141100

## Bolt connection terminal block - RTO 5 - 3049521

### Classifications

#### eCl@ss

eCl@ss 4.1	27141100
eCl@ss 5.0	27141100
eCl@ss 5.1	27141100
eCl@ss 6.0	27141100
eCl@ss 7.0	27141120
eCl@ss 9.0	27141120

#### ETIM

ETIM 2.0	EC000897
ETIM 3.0	EC000897
ETIM 4.0	EC000897
ETIM 6.0	EC000897
ETIM 7.0	EC000897

#### UNSPSC

UNSPSC 6.01	30211811
UNSPSC 7.0901	39121410
UNSPSC 11	39121410
UNSPSC 12.01	39121410
UNSPSC 13.2	39121410
UNSPSC 18.0	39121410
UNSPSC 19.0	39121410
UNSPSC 20.0	39121410
UNSPSC 21.0	39121410

### Approvals

#### Approvals

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#### Approvals

UL Recognized / cUL Recognized / IECCE CB Scheme / VDE Zeichengenehmigung / cULus Recognized

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#### Ex Approvals


IECEX / EAC Ex / NEPSI / ATEX / CCC


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#### Approval details


## Bolt connection terminal block - RTO 5 - 3049521


### Approvals

UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 60425
	B	C	
Nominal voltage UN	600 V	600 V	
Nominal current IN	30 A	30 A	

cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 60425
	B	C	
Nominal voltage UN	600 V	600 V	
Nominal current IN	30 A	30 A	

IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	DE1-62814
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VDE Zeichengenehmigung		<a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a>	40022553
Nominal voltage UN	1000 V		
Nominal current IN	41 A		
mm <sup>2</sup> /AWG/kcmil	0.14-6		

cULus Recognized	
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### Accessories

Accessories

DIN rail

## Bolt connection terminal block - RTO 5 - 3049521

### Accessories

DIN rail perforated - NS 35/ 7,5 PERF 2000MM - 0801733



DIN rail perforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

---

DIN rail, unperforated - NS 35/ 7,5 UNPERF 2000MM - 0801681



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

---

DIN rail perforated - NS 35/ 7,5 WH PERF 2000MM - 1204119



DIN rail perforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, Galvanized, white passivated, length: 2000 mm, color: silver

---

DIN rail, unperforated - NS 35/ 7,5 WH UNPERF 2000MM - 1204122



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, Galvanized, white passivated, length: 2000 mm, color: silver

---

DIN rail, unperforated - NS 35/ 7,5 AL UNPERF 2000MM - 0801704



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Aluminum, uncoated, length: 2000 mm, color: silver

---

## Bolt connection terminal block - RTO 5 - 3049521

### Accessories

DIN rail perforated - NS 35/ 7,5 ZN PERF 2000MM - 1206421



DIN rail perforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, length: 2000 mm, color: silver

---

DIN rail, unperforated - NS 35/ 7,5 ZN UNPERF 2000MM - 1206434



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, length: 2000 mm, color: silver

---

DIN rail, unperforated - NS 35/ 7,5 CU UNPERF 2000MM - 0801762



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Copper, uncoated, length: 2000 mm, color: copper-colored

---

End cap - NS 35/ 7,5 CAP - 1206560



DIN rail end piece, for DIN rail NS 35/7.5

---

DIN rail perforated - NS 35/15 PERF 2000MM - 1201730



DIN rail perforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

---

## Bolt connection terminal block - RTO 5 - 3049521

### Accessories

DIN rail, unperforated - NS 35/15 UNPERF 2000MM - 1201714



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

---

DIN rail perforated - NS 35/15 WH PERF 2000MM - 0806602



DIN rail perforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, Galvanized, white passivated, length: 2000 mm, color: silver

---

DIN rail, unperforated - NS 35/15 WH UNPERF 2000MM - 1204135



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, Galvanized, white passivated, length: 2000 mm, color: silver

---

DIN rail, unperforated - NS 35/15 AL UNPERF 2000MM - 1201756



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Aluminum, uncoated, length: 2000 mm, color: silver

---

DIN rail perforated - NS 35/15 ZN PERF 2000MM - 1206599



DIN rail perforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, length: 2000 mm, color: silver

---

## Bolt connection terminal block - RTO 5 - 3049521

### Accessories

DIN rail, unperforated - NS 35/15 ZN UNPERF 2000MM - 1206586



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, length: 2000 mm, color: silver

---

DIN rail, unperforated - NS 35/15 CU UNPERF 2000MM - 1201895



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Copper, uncoated, length: 2000 mm, color: copper-colored

---

End cap - NS 35/15 CAP - 1206573



DIN rail end piece, for DIN rail NS 35/15

---

DIN rail, unperforated - NS 35/15-2,3 UNPERF 2000MM - 1201798



DIN rail, unperforated, Standard profile 2.3 mm, width: 35 mm, height: 15 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

---

End block

End clamp - CLIPFIX 35 - 3022218



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, width: 9.5 mm, color: gray

---

## Bolt connection terminal block - RTO 5 - 3049521

### Accessories

End clamp - CLIPFIX 35-5 - 3022276



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, with parking option for FBS...5, FBS...6, KSS 5, KSS 6, width: 5.15 mm, color: gray

End clamp - E/NS 35 N - 0800886



End clamp, width: 9.5 mm, color: gray

End clamp - E/UK - 1201442



End clamp, width: 9.5 mm, height: 35.3 mm, material: PA, length: 50.5 mm, Mounting on a DIN rail NS 32 or NS 35, color: gray

End clamp - E/UK 1 - 1201413



End clamps, for supporting the ends of double-level and three-level terminal blocks, width: 10 mm, color: gray

End cover

End cover - D-RT 3/5 - 3049097



End cover, length: 65 mm, width: 2.2 mm, height: 50.4 mm, color: gray

## Bolt connection terminal block - RTO 5 - 3049521

### Accessories

#### Insulating sleeve

Insulating sleeve - MPS-IH WH - 0201663

Insulating sleeve, color: white



Insulating sleeve - MPS-IH RD - 0201676

Insulating sleeve, color: red



Insulating sleeve - MPS-IH BU - 0201689

Insulating sleeve, color: blue



Insulating sleeve - MPS-IH YE - 0201692

Insulating sleeve, color: yellow



Insulating sleeve - MPS-IH GN - 0201702

Insulating sleeve, color: green



## Bolt connection terminal block - RTO 5 - 3049521

### Accessories

Insulating sleeve - MPS-IH GY - 0201728

Insulating sleeve, color: gray



Insulating sleeve - MPS-IH BK - 0201731

Insulating sleeve, color: black



### Jumper

Plug-in bridge - FBS 2-8 - 3030284



Plug-in bridge, pitch: 8.2 mm, width: 14.7 mm, number of positions: 2, color: red

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Plug-in bridge - FBS 3-8 - 3030297



Plug-in bridge, pitch: 8.2 mm, width: 22.9 mm, number of positions: 3, color: red

---

Plug-in bridge - FBS 4-8 - 3030307



Plug-in bridge, pitch: 8.2 mm, width: 31.1 mm, number of positions: 4, color: red

---

## Bolt connection terminal block - RTO 5 - 3049521

### Accessories

Plug-in bridge - FBS 5-8 - 3030310



Plug-in bridge, pitch: 8.2 mm, width: 39.3 mm, number of positions: 5, color: red

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Plug-in bridge - FBS 10-8 - 3030323



Plug-in bridge, pitch: 8.2 mm, width: 80.3 mm, number of positions: 10, color: red

---

Plug-in bridge - FBS 2-8 CT - 3033830



Plug-in bridge, pitch: 8.2 mm, width: 14.7 mm, number of positions: 2, color: orange

---

Plug-in bridge - FBS 3-8 CT - 3033831



Plug-in bridge, pitch: 8.2 mm, width: 22.9 mm, number of positions: 3, color: orange

---

Plug-in bridge - FBS 4-8 CT - 3033832



Plug-in bridge, pitch: 8.2 mm, width: 31.1 mm, number of positions: 4, color: orange

---

## Bolt connection terminal block - RTO 5 - 3049521

### Accessories

Plug-in bridge - FBS 10-8 CT - 3033833



Plug-in bridge, pitch: 8.2 mm, width: 80.3 mm, number of positions: 10, color: orange

---

Plug-in bridge - FBS 2-8 BU - 3032567



Plug-in bridge, pitch: 8.2 mm, width: 14.7 mm, number of positions: 2, color: blue

---

Plug-in bridge - FBS 3-8 BU - 3032570



Plug-in bridge, pitch: 8.2 mm, width: 22.9 mm, number of positions: 3, color: blue

---

Plug-in bridge - FBS 4-8 BU - 3032583



Plug-in bridge, pitch: 8.2 mm, width: 31.1 mm, number of positions: 4, color: blue

---

Plug-in bridge - FBS 5-8 BU - 3032596



Plug-in bridge, pitch: 8.2 mm, width: 39.3 mm, number of positions: 5, color: blue

---

## Bolt connection terminal block - RTO 5 - 3049521

### Accessories

Plug-in bridge - FBS 6-8 BU - 3032677



Plug-in bridge, pitch: 8.2 mm, width: 47.5 mm, number of positions: 6, color: blue

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Plug-in bridge - FBS 10-8 BU - 3032606



Plug-in bridge, pitch: 8.2 mm, width: 80.3 mm, number of positions: 10, color: blue

---

### Labeled terminal marker

Zack marker strip - ZB 16 CUS - 0827463



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 16 mm, lettering field size: 10.5 x 16 mm, Number of individual labels: 5

---

Zack marker strip - ZB 16,LGS:L1-N,PE - 0827462



Zack marker strip, Strip, white, labeled, printed horizontally: L1, L2, L3, N, PE, mounting type: snap into tall marker groove, for terminal block width: 16.3 mm, lettering field size: 10.5 x 16.25 mm, Number of individual labels: 5

---

Marker for terminal blocks - UC-TM 16 CUS - 0824621



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 16 mm, lettering field size: 15.45 x 10.5 mm, Number of individual labels: 32

---

## Bolt connection terminal block - RTO 5 - 3049521

### Accessories

#### Marker for terminal blocks - UCT-TM 16 CUS - 0829637



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 16 mm, lettering field size: 14.8 x 9.6 mm, Number of individual labels: 18

---

#### Zack marker strip - ZB 16,3 CUS - 0824946



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 16.3 mm, lettering field size: 10.5 x 16.25 mm, Number of individual labels: 5

---

#### Partition plate

##### Partition plate - TPNS-UK - 0706647



Partition plate, length: 80 mm, width: 2 mm, height: 70 mm, color: gray

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#### Spacer plate - DP PS-8 - 3036741



Spacer plate, length: 22.4 mm, width: 8.2 mm, height: 29 mm, number of positions: 1, color: red

---

#### Protective cap

##### Path extension - BE-RT 3/5 - 3049819



Path extension, color: gray

## Bolt connection terminal block - RTO 5 - 3049521

### Accessories

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#### Short-circuit connector

Short-circuit connector - FBSRH 2-8 - 3033802



Short-circuit connector, pitch: 8.2 mm, width: 14.7 mm, number of positions: 2, color: red

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Short-circuit connector - FBSRH 3-8 - 3033803



Short-circuit connector, pitch: 8.2 mm, width: 22.9 mm, number of positions: 3, color: red

---

Short-circuit connector - FBSRH 4-8 - 3033804



Short-circuit connector, pitch: 8.2 mm, width: 31.1 mm, number of positions: 4, color: red

---

#### Socket spanner

Tool - SHN 8 - 1209868



Socket wrench, wrench size 8 mm

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#### Terminal marking

## Bolt connection terminal block - RTO 5 - 3049521

### Accessories

#### Zack marker strip - ZB 16:UNPRINTED - 0827461



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 16 mm, lettering field size: 16 x 10.5 mm, Number of individual labels: 50

#### Marker for terminal blocks - UC-TM 16 - 0819217



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 16 mm, lettering field size: 15.45 x 10.5 mm, Number of individual labels: 32

#### Marker for terminal blocks - UCT-TM 16 - 0829146



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snap into tall marker groove, for terminal block width: 16 mm, lettering field size: 14.8 x 9.6 mm, Number of individual labels: 18

#### Zack marker strip - ZB 16,3:UNPRINTED - 0820222



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 16.3 mm, lettering field size: 10.5 x 16.25 mm, Number of individual labels: 5

### Test plug terminal block

#### Test plugs - MPS-MT - 0201744



Test plugs, with solder connection up to 1 mm<sup>2</sup> conductor cross section, color: gray

## Bolt connection terminal block - RTO 5 - 3049521

### Accessories

Test plugs - PS-8 - 3031005



Test plugs, Modular test plug, color: red

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Test plugs - PS-8/2,3MM RD - 3048564



Test plugs, color: red

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Test socket

Test adapter - PAI-4-N GY - 3032871



4 mm test adapter, for terminal blocks with 5.2 mm, 6.2 mm and 8.2 mm pitch

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