

## Feed-through terminal block - BTO 5,5 - 3281139

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Feed-through terminal block, with an open screw shaft, nom. voltage: 690 V, nominal current: 41 A, connection method: Ring cable lug, number of connections: 2, width: 11 mm, color: black, mounting type: NS 35/7,5, NS 35/15

### Your advantages

- ✔ Maximum overview thanks to extensive marking and labeling of every terminal point
- ✔ Safety for users thanks to integrated shock protection
- ✔ Easy potential distribution with time-saving jumper system
- ✔ Convenient ring cable lug connection thanks to the screw connection principle with spring-guided screw; maintenance-free with integrated screw locking
- ✔ Reduction in logistics costs with the uniform CLIPLINE complete system accessories

### Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 50 pc   |
| GTIN         | <br>4 055626 406848 |
| GTIN         | 4055626406848   |

### Technical data

#### General

|  |                   |
|--|-------------------|
| Number of levels                       | 1                 |
| Number of connections                  | 2                 |
| Potentials                             | 1                 |
| Nominal cross section                  | 6 mm <sup>2</sup> |
| Color                                  | black             |
| Insulating material                    | PC                |
| Flammability rating according to UL 94 | V0                |
| Rated surge voltage                    | 8 kV              |
| Degree of pollution                    | 3                 |
| Overvoltage category                   | III               |
| Insulating material group              | IIIa              |

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## Technical data

### General

|   |  |
|---|--|
| Maximum power dissipation for nominal condition   | 1.02 W   |
| Maximum load current  | 41 A   |
| Nominal current $I_N$   | 41 A   |
| Nominal voltage $U_N$   | 690 V  |
| Open side panel   | Yes  |
| Ambient temperature (operation)   | -60 °C ... 85 °C   |
| Ambient temperature (storage/transport)   | -25 °C ... 55 °C (For a short time, not exceeding 24 h, -60 to +70 °C) |
| Permissible humidity (storage/transport)  | 30 % ... 70 %  |
| Ambient temperature (assembly)  | -5 °C ... 70 °C  |
| Ambient temperature (actuation)   | -5 °C ... 70 °C  |
| Shock protection test specification   | IEC 60529:2001-02  |
| Back of the hand protection   | guaranteed   |
| Finger protection   | guaranteed   |
| Result of surge voltage test  | Test passed  |
| Surge voltage test setpoint   | 9.8 kV   |
| Result of power-frequency withstand voltage test  | Test passed  |
| Power frequency withstand voltage setpoint  | 1.89 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  |
| Requirements, voltage drop  | ≤ 3.2 mV   |
| Result of temperature-rise test   | Test passed  |
| 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   |

### Dimensions

|                  |         |
|------------------|---------|
| Width            | 11 mm   |
| Length           | 50.2 mm |
| Height NS 35/7,5 | 41 mm   |
| Height NS 35/15  | 48.5 mm |

### Connection data

|                                  |   |
|----------------------------------|---|
| Connection method                | Ring cable lug  |
| Stripping length                 | The stripping length depends on the specification provided by the cable lug manufacturer. |
| Connection in acc. with standard | IEC 60947-7-1   |

## Feed-through terminal block - BTO 5,5 - 3281139

### Technical data

#### Connection data

|   |                      |
|---|----------------------|
| Cable lug connection according to standard  | DIN 46234:1980-03    |
| Min. cross section for cable lug connection | 0.14 mm <sup>2</sup> |
| Max. cross section for cable lug connection | 6 mm <sup>2</sup>    |
| AWG min                                     | 26                   |
| AWG max                                     | 10                   |
| Hole diameter, min.                         | 4.3 mm               |
| Cable lug width, max.                       | 9.8 mm               |
| Bolt diameter                               | 4 mm                 |
| Screw thread                                | M4                   |
| Tightening torque, min                      | 1.4 Nm               |
| Tightening torque max                       | 2 Nm                 |
| Connection in acc. with standard            | JIS 8207-7-1         |
| Cable lug connection according to standard  | JIS 8207-7-1         |
| Min. cross section for cable lug connection | 0.5 mm <sup>2</sup>  |
| Max. cross section for cable lug connection | 5.5 mm <sup>2</sup>  |
| Hole diameter, min.                         | 4.3 mm               |
| Cable lug width, max.                       | 9.8 mm               |
| Bolt diameter                               | 4 mm                 |
| Screw thread                                | M4                   |
| Tightening torque, min                      | 1.4 Nm               |
| Tightening torque max                       | 2 Nm                 |

#### Standards and Regulations

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

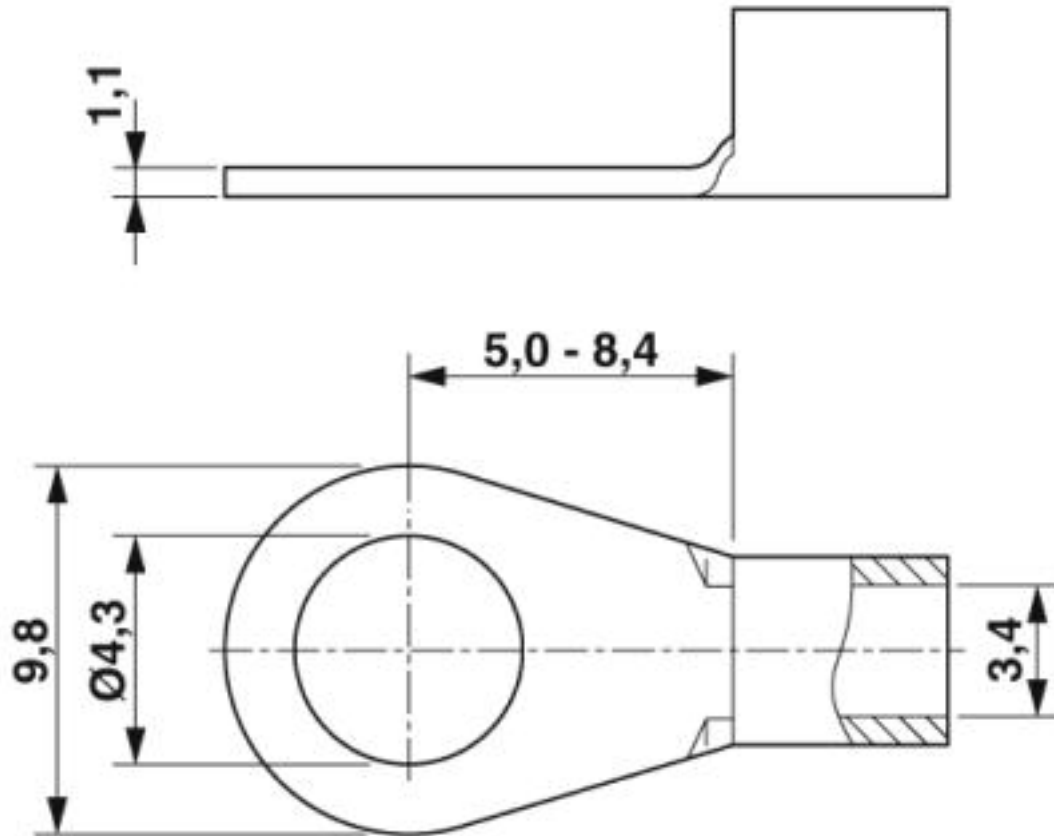
#### Environmental Product Compliance

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

### Drawings

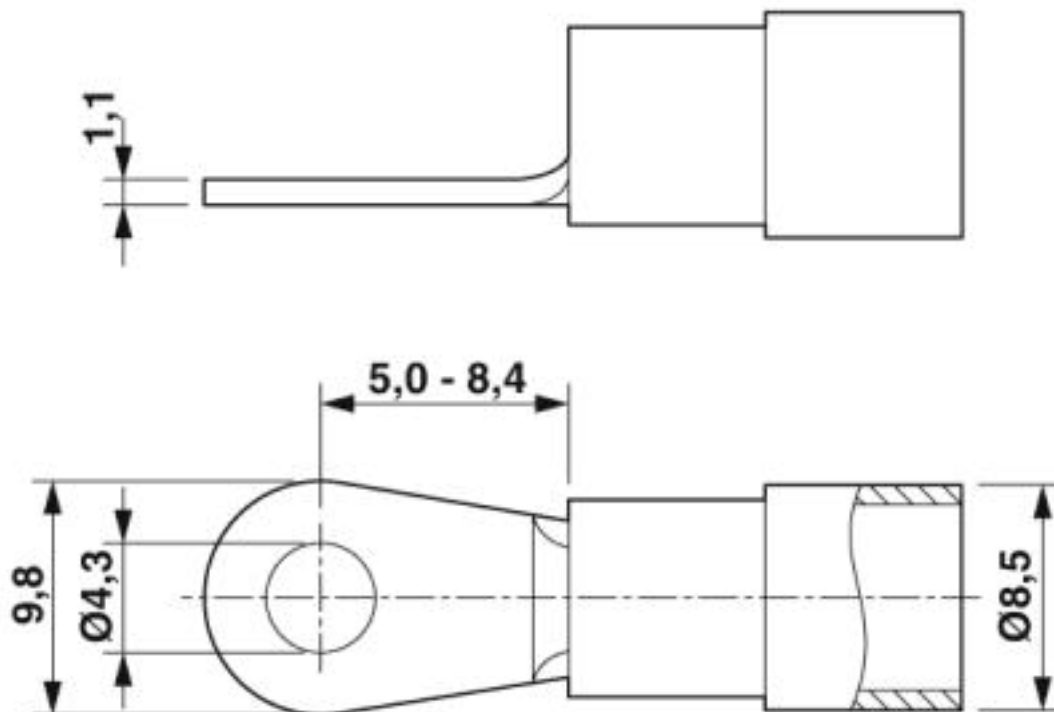
## Feed-through terminal block - BTO 5,5 - 3281139

Dimensional drawing



# Feed-through terminal block - BTO 5,5 - 3281139

Dimensional drawing



Circuit diagram



## Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27141120 |
| eCl@ss 4.0    | 27141120 |
| eCl@ss 4.1    | 27141120 |
| eCl@ss 5.0    | 27141120 |
| eCl@ss 5.1    | 27141120 |
| eCl@ss 6.0    | 27141100 |
| eCl@ss 7.0    | 27141120 |
| eCl@ss 8.0    | 27141120 |
| eCl@ss 9.0    | 27141120 |

ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC000897 |
| ETIM 3.0 | EC000897 |
| ETIM 4.0 | EC000897 |

# Feed-through terminal block - BTO 5,5 - 3281139

## Classifications

### ETIM

|          |          |
|----------|----------|
| ETIM 5.0 | 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


#### Approvals

CSA / UL Recognized / cUL Recognized / EAC / cULus Recognized

#### Ex Approvals

### Approval details


|                            |   |   |       |
|----------------------------|---|---|-------|
| CSA                        |  | <a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a> | 13631 |
|                            | B   | C   |       |
| Nominal voltage UN         | 600 V   | 600 V   |       |
| Nominal current IN         | 40 A  | 40 A  |       |
| mm <sup>2</sup> /AWG/kcmil | 24-8  | 24-8  |       |

|                    |   |   |              |
|--------------------|---|---|--------------|
| 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 | 40 A  | 40 A  |              |

## Feed-through terminal block - BTO 5,5 - 3281139

### Approvals

|                            | B    | C    |
|----------------------------|------|------|
| mm <sup>2</sup> /AWG/kcmil | 24-8 | 24-8 |

| 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  | 40 A  | 40 A  |
| mm <sup>2</sup> /AWG/kcmil  | 24-8  | 24-8  |

|   |                          |
|---|--------------------------|
| EAC  | RU C-<br>DE.BL08.B.00541 |
|---|--------------------------|

|   |
|---|
| cULus Recognized  |
|---|

### Accessories

#### Accessories

##### Cover profile

Cover profile - AP-BTO 5,5/14 - 3281151



Cover profile, width: 54.5 mm, height: 10.5 mm, material: PC, length: 1000 mm, color: transparent

#### DIN rail

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

## Feed-through terminal block - BTO 5,5 - 3281139

### Accessories

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

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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

---

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

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## Feed-through terminal block - BTO 5,5 - 3281139

### Accessories

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

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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

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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

---

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

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## Feed-through terminal block - BTO 5,5 - 3281139

### Accessories

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

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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

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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

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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

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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

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## Feed-through terminal block - BTO 5,5 - 3281139

### Accessories

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

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End cap - NS 35/15 CAP - 1206573



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

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End block

End clamp - E/NS 35 N BK - 0804271



End clamp, width: 9.5 mm, height: 32.8 mm, material: PA, length: 48.6 mm, color: black

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End cover

End cover - D-BT 5,5 - 3281145



End cover, length: 50 mm, width: 3.5 mm, height: 33.6 mm, color: black

---

Insulating sleeve

Insulating sleeve - MPS-IH WH - 0201663

Insulating sleeve, color: white



## Feed-through terminal block - BTO 5,5 - 3281139

### Accessories

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



Insulating sleeve - MPS-IH GY - 0201728

Insulating sleeve, color: gray



## Feed-through terminal block - BTO 5,5 - 3281139

### Accessories

Insulating sleeve - MPS-IH BK - 0201731

Insulating sleeve, color: black



### Jumper

Plug-in bridge - FBS 2-6 - 3030336



Plug-in bridge, pitch: 6.2 mm, width: 10.7 mm, number of positions: 2, color: red

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Plug-in bridge - FBS 2-6 BU - 3036932



Plug-in bridge, pitch: 6.2 mm, width: 10.7 mm, number of positions: 2, color: blue

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Plug-in bridge - FBS 2-6 GY - 3032237



Plug-in bridge, pitch: 6.2 mm, width: 10.7 mm, number of positions: 2, color: gray

---

### Labeled terminal marker

Marker for terminal blocks - TMT 6 R CUS - 0824488



Marker for terminal blocks, can be ordered: by line, white, labeled according to customer specifications, mounting type: snap into universal marker groove, snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 6.35 x 6.15 mm

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### Partition plate

## Feed-through terminal block - BTO 5,5 - 3281139

### Accessories

Spacer plate - DP PS-5 - 3036725



Spacer plate, length: 22.4 mm, width: 5.2 mm, height: 29 mm, number of positions: 1, color: red

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### Planning and marking software

Software - CLIP-PROJECT ADVANCED - 5146040



Multilingual software for convenient configuration of Phoenix Contact products on standard DIN rails.

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Software - CLIP-PROJECT PROFESSIONAL - 5146053



Multilingual software for terminal strip configuration. A marking module enables the professional marking of markers and labels for identifying terminal blocks, conductors and cables, and devices.

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### Screwdriver tools

Philips screwdriver - SF-PH 2-100 - 1212560



Screwdriver, PH crosshead (lasered), uninsulated, size: PH 2 x 100, 2-component grip, with non-slip grip

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Philips screwdriver - SF-PH 2-100 S-VDE - 1212694



Screwdriver, crosshead PH (lasered), insulated, size: PH 2 x 100, 2-component handle, with non-slip grip

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### Terminal marking

## Feed-through terminal block - BTO 5,5 - 3281139

### Accessories

#### Marker for terminal blocks - TMT 6 R - 0816498



Marker for terminal blocks, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK S1.1, perforated, mounting type: snap into universal marker groove, snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 6.35 x 6.15 mm, Number of individual labels: 16000

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#### Marker for terminal blocks - TMT (EX9,5)R - 0828295



Marker for terminal blocks, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: snap into universal marker groove, snap into tall marker groove, for terminal block width: 50000 mm, lettering field size: 9.5 x 50000 mm, Number of individual labels: 1

---

#### Marker for terminal blocks - US-TM 100 - 0829255



Marker for terminal blocks, Card, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snap into universal marker groove, lettering field size: 104 x 9.8 mm, Number of individual labels: 13

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### Test plug terminal block

#### Test plugs - PS-5 - 3030983



Test plugs, Modular test plug, color: red

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#### Test plugs - PS-5/2,3MM RD - 3038723



Test plugs, color: red

## Feed-through terminal block - BTO 5,5 - 3281139

### Accessories

Test plugs - MPS-MT - 0201744



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

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### Test socket

Test adapter - PAI-4 - 3030925



Test adapter, for 4 mm test plug and terminal blocks with 4.2 mm ... 8.2 mm pitch, color: gray

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