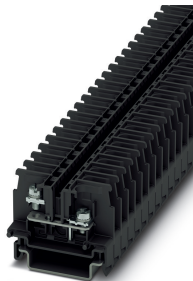


Feed-through terminal block - BTO 2,0 - 3281107

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Feed-through terminal block, with an open screw shaft, nom. voltage: 690 V, nominal current: 24 A, connection method: Ring cable lug, number of connections: 2, width: 8 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
- ✔ Convenient ring cable lug connection thanks to the screw connection principle with spring-guided screw; maintenance-free with integrated screw locking
- ✔ Easy potential distribution with time-saving jumper system
- ✔ Safety for users thanks to integrated shock protection
- ✔ Reduction in logistics costs with the uniform CLIPLINE complete system accessories



Key Commercial Data

| | |
|------------------------|---|
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| GTIN |  4 055626 118079 |
| GTIN | 4055626118079 |

Technical data

General

| | |
|--|---------------------|
| Number of levels | 1 |
| Number of connections | 2 |
| Potentials | 1 |
| Nominal cross section | 2.5 mm ² |
| Color | black |
| Insulating material | PC |
| Flammability rating according to UL 94 | V0 |
| Mounting type | NS 35/7,5 |
| Rated surge voltage | 6 kV |

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Technical data

General

| | |
|---|--|
| Degree of pollution | 3 |
| Overvoltage category | III |
| Insulating material group | IIIa |
| Maximum load current | 24 A |
| Nominal current I_N | 24 A |
| Nominal voltage U_N | 690 V |
| Open side panel | Yes |
| Shock protection test specification | DIN EN 50274 (VDE 0660-514):2002-11 |
| Back of the hand protection | guaranteed |
| Note regarding shock protection | Finger safety is only guaranteed with cover profile. |
| Result of surge voltage test | Test passed |
| 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 flexion and pull-out test | Test passed |
| Bending test rotation speed | 10 rpm |
| Bending test turns | 135 |
| Bending test conductor cross section/weight | 2.5 mm ² / 0.7 kg |
| Tensile test result | Test passed |
| Result of tight fit on support | Test passed |
| Tight fit on carrier | NS 35 |
| Setpoint | 1 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 | 2.5 mm ² |
| Short-time current | 0.3 kA |
| Conductor cross section short circuit testing | 2 mm ² |
| Short-time current | 0.24 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 spectrum | Service life test category 2, bogie-mounted |
| Test frequency | $f_1 = 5$ Hz to $f_2 = 250$ Hz |
| ASD level | 6.12 (m/s ²) ² /Hz |
| Acceleration | 3.12g |
| Test duration per axis | 5 h |
| Test directions | X-, Y- and Z-axis |

Feed-through terminal block - BTO 2,0 - 3281107

Technical data

General

| | |
|--|-------------------------------------|
| Shock test result | Test passed |
| Test specification, shock test | DIN EN 50155 (VDE 0115-200):2008-03 |
| Shock form | Half-sine |
| Acceleration | 30g |
| Shock duration | 18 ms |
| Number of shocks per direction | 3 |
| Test directions | X-, Y- and Z-axis (pos. and neg.) |
| Relative insulation material temperature index (Elec., UL 746 B) | 130 °C |

Dimensions

| | |
|------------------|---------|
| Width | 8 mm |
| Length | 42 mm |
| Height NS 35/7,5 | 33.5 mm |
| Height NS 35/15 | 41 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 |
| Cable lug connection according to standard | DIN 46234:1980-03 |
| Min. cross section for cable lug connection | 0.14 mm ² |
| Max. cross section for cable lug connection | 2.5 mm ² |
| AWG min | 26 |
| AWG max | 16 |
| Hole diameter, min. | 3.7 mm |
| Cable lug width, max. | 6.8 mm |
| Bolt diameter | 3.5 mm |
| Screw thread | M3,5 |
| Tightening torque, min | 1 Nm |
| Tightening torque max | 1.3 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 ² |
| Max. cross section for cable lug connection | 2 mm ² |
| Hole diameter, min. | 3.7 mm |
| Cable lug width, max. | 6.8 mm |
| Bolt diameter | 3.5 mm |
| Screw thread | M3,5 |
| Tightening torque, min | 1 Nm |
| Tightening torque max | 1.3 Nm |

Ambient conditions

Feed-through terminal block - BTO 2,0 - 3281107

Technical data

Ambient conditions

| | |
|--|---|
| Operating temperature | -60 °C ... 85 °C |
| Ambient temperature (storage/transport) | -25 °C ... 55 °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

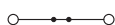
| | |
|--|---------------|
| Connection in acc. with standard | IEC 60947-7-1 |
| | JIS 8207-7-1 |
| Flammability rating according to UL 94 | V0 |

Environmental Product Compliance

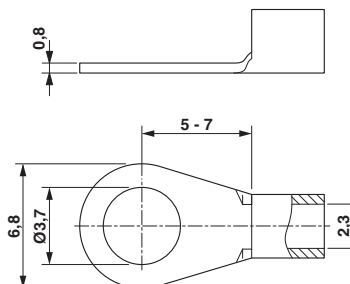
| | |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

Drawings

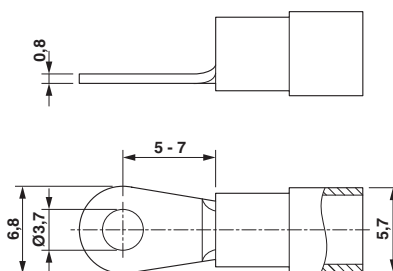
Circuit diagram



Dimensional drawing



Dimensional drawing



Classifications

eCl@ss

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

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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

Approvals

DNV GL / CSA / EAC / cULus Recognized

Ex Approvals

Approval details

| | | | |
|--------|---|---|------------|
| DNV GL |  | https://approvalfinder.dnvgl.com/ | TAE00001S2 |
|--------|---|---|------------|

Feed-through terminal block - BTO 2,0 - 3281107

Approvals

| | | | |
|----------------------------|--|---|-------|
| CSA | | http://www.csagroup.org/services-industries/product-listing/ | 13631 |
| | | B | C |
| Nominal voltage UN | | 600 V | 600 V |
| Nominal current IN | | 15 A | 15 A |
| mm ² /AWG/kcmil | | 26-14 | 26-14 |

| | | | |
|-----|--|--|--------------------------|
| EAC | | | RU C- DE.BL08.B.00541 |
|-----|--|--|--------------------------|

| | | | |
|----------------------------|--|---|--------|
| cULus Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | E60425 |
| | | B | C |
| Nominal voltage UN | | 600 V | 600 V |
| Nominal current IN | | 15 A | 15 A |
| mm ² /AWG/kcmil | | 26-14 | 26-14 |

Accessories

Accessories

Cover profile

Cover profile - AP-BTO 1,25 - 3281125



Cover profile, length: 46 mm, width: 1000 mm, height: 9.8 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 2,0 - 3281107

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

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

Feed-through terminal block - BTO 2,0 - 3281107

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

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

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

Feed-through terminal block - BTO 2,0 - 3281107

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

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

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

Feed-through terminal block - BTO 2,0 - 3281107

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

End cap - NS 35/15 CAP - 1206573



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

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

End cover

End cover - D-BT 1,25 - 3281120



End cover, length: 42 mm, width: 3.5 mm, height: 26 mm, color: black

Insulating sleeve

Insulating sleeve - MPS-IH WH - 0201663

Insulating sleeve, color: white



Feed-through terminal block - BTO 2,0 - 3281107

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 2,0 - 3281107

Accessories

Insulating sleeve - MPS-IH BK - 0201731

Insulating sleeve, color: black



Jumper

Plug-in bridge - FBS 2-3,5 - 3213014



Plug-in bridge, pitch: 3.5 mm, number of positions: 2, color: red

Plug-in bridge - FBS 2-3,5 BU - 3213086



Plug-in bridge, pitch: 3.5 mm, number of positions: 2, color: blue

Plug-in bridge - FBS 2-3,5 GY - 3213153



Plug-in bridge, pitch: 3.5 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

Partition plate

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Accessories

Spacer plate - DP PS-3,5 - 3031011



Spacer plate, length: 15.9 mm, width: 3.5 mm, height: 33.5 mm, number of positions: 1, color: red

Planning and marking software

Software - PROJECT COMPLETE - 1050453



Intuitive planning and marking software for configuring terminal strips and for professional marking of marking materials for terminal blocks, conductors, cables, devices, and systems. The software is available for download

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

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

Terminal marking

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

Feed-through terminal block - BTO 2,0 - 3281107

Accessories

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

Test plug terminal block

Test plugs - PS-3,5 - 3031010



Test plugs, Modular test plug, color: red

Test plugs - PS-3,5/E - 3031012



Test plugs, Individual test plug, color: red

Test plugs - MPS-MT - 0201744



Test plugs, with solder connection up to 1 mm² conductor cross section, color: gray

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