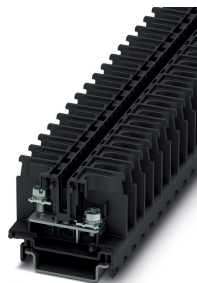


## Feed-through terminal block - BTO 3,5 - 3281114

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Feed-through terminal block, with an open screw shaft, nom. voltage: 690 V, nominal current: 32 A, connection method: Ring cable lug, number of connections: 2, width: 10 mm, color: black, mounting type: NS 35/7,5, NS 35/15

### Your advantages

- Easy potential distribution with time-saving jumper system
- Maximum overview thanks to extensive marking and labeling of every terminal point
- Safety for users thanks to integrated shock protection
- 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         |
| Minimum order quantity | 50 pc         |
| GTIN                   |               |
| GTIN                   | 4055626118086 |

### Technical data

#### General

|  |                   |
|--|-------------------|
| Number of levels                       | 1                 |
| Number of connections                  | 2                 |
| Potentials                             | 1                 |
| Nominal cross section                  | 4 mm <sup>2</sup> |
| Color                                  | black             |
| Insulating material                    | PC                |
| Flammability rating according to UL 94 | V0                |
| Rated surge voltage                    | 6 kV              |
| Degree of pollution                    | 3                 |

# Feed-through terminal block - BTO 3,5 - 3281114

## Technical data

### General

|   |  |
|---|--|
| Overvoltage category  | III  |
| Insulating material group   | IIIa   |
| Maximum load current  | 32 A   |
| Nominal current $I_N$   | 32 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   | 0.5 mm <sup>2</sup> / 0.3 kg                         |
|   | 4 mm <sup>2</sup> / 0.9 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 $\leq 45$ K                  |
| Short circuit stability result  | Test passed  |
| Conductor cross section short circuit testing   | 4 mm <sup>2</sup>                                    |
| Short-time current  | 0.48 kA  |
| Conductor cross section short circuit testing   | 3.5 mm <sup>2</sup>                                  |
| Short-time current  | 0.42 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 <sup>2</sup> ) <sup>2</sup> /Hz            |
| Acceleration  | 3.12g  |
| Test duration per axis  | 5 h  |
| Test directions   | X-, Y- and Z-axis                                    |

# Feed-through terminal block - BTO 3,5 - 3281114

## 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            | 10 mm   |
| Length           | 46 mm   |
| Height NS 35/7,5 | 38.2 mm |
| Height NS 35/15  | 45.7 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 <sup>2</sup>  |
| Max. cross section for cable lug connection | 4 mm <sup>2</sup>   |
| AWG min                                     | 26  |
| AWG max                                     | 10  |
| Hole diameter, min.                         | 4.3 mm  |
| Cable lug width, max.                       | 8.8 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 | 3.5 mm <sup>2</sup>   |
| Hole diameter, min.                         | 4.3 mm  |
| Cable lug width, max.                       | 8.8 mm  |
| Bolt diameter                               | 4 mm  |
| Screw thread                                | M4  |
| Tightening torque, min                      | 1.4 Nm  |
| Tightening torque max                       | 2 Nm  |

### Ambient conditions

# Feed-through terminal block - BTO 3,5 - 3281114

## 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

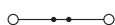
|  |               |
|--|---------------|
| Connection in acc. with standard       | IEC 60947-7-1 |
|  | JIS 8207-7-1  |
| Flammability rating according to UL 94 | V0            |

### Environmental Product Compliance

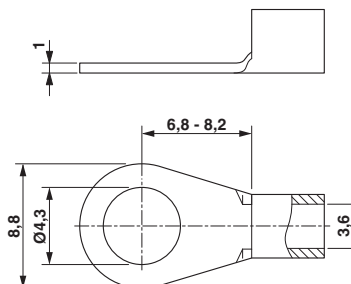
|            |   |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

## Drawings

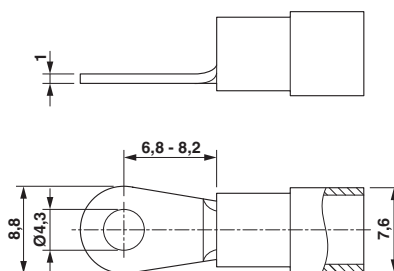
Circuit diagram



Dimensional drawing



Dimensional drawing



## Classifications

### eCl@ss

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

# Feed-through terminal block - BTO 3,5 - 3281114

## 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 / UL Recognized / cUL Recognized / EAC / UL Recognized

#### Ex Approvals

### Approval details

|        |   |   |            |
|--------|---|---|------------|
| DNV GL |  | <a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a> | TAE00001S2 |
|--------|---|---|------------|

# Feed-through terminal block - BTO 3,5 - 3281114

## Approvals

|                            |  |   |       |
|----------------------------|--|---|-------|
| 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         |  | 30 A  | 30 A  |
| mm <sup>2</sup> /AWG/kcmil |  | 26-10   | 26-10 |

|               |  |   |              |
|---------------|--|---|--------------|
| 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 |
|---------------|--|---|--------------|

|                            |  |   |              |
|----------------------------|--|---|--------------|
| 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         |
| mm <sup>2</sup> /AWG/kcmil |  | 26-12   | 26-12        |

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

|                            |  |   |              |
|----------------------------|--|---|--------------|
| 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         |
| mm <sup>2</sup> /AWG/kcmil |  | 26-12   | 26-12        |

## Accessories

### Accessories

#### Bridge

Wire bridge - FBSW 2-5/250MM - 3030172

Wire bridge, length: 250 mm, width: 5.1 mm, number of positions: 1, color: red/black



## Feed-through terminal block - BTO 3,5 - 3281114

### Accessories

---

#### Wire bridge - FBSW 2-5/60MM - 3030170



Wire bridge, length: 60 mm, width: 5.1 mm, number of positions: 1, color: red/black

---

#### Wire bridge - FBSW 2-5/110MM - 3030171



Wire bridge, length: 110 mm, width: 5.1 mm, number of positions: 1, color: red/black

---

### Cover profile

#### Cover profile - AP-BTO 3,5 - 3281127



Cover profile, length: 50 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

---

#### 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

---

## Feed-through terminal block - BTO 3,5 - 3281114

### Accessories

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

---

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

---



## Feed-through terminal block - BTO 3,5 - 3281114

### Accessories

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

---

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

---

## Feed-through terminal block - BTO 3,5 - 3281114

### Accessories

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

---

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

---

## Feed-through terminal block - BTO 3,5 - 3281114

### Accessories

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 3,5 - 3281121



End cover, length: 46 mm, width: 3.5 mm, height: 30.7 mm, color: black

---

### Insulating sleeve

Insulating sleeve - MPS-IH WH - 0201663

Insulating sleeve, color: white



Insulating sleeve - MPS-IH RD - 0201676

Insulating sleeve, color: red



## Feed-through terminal block - BTO 3,5 - 3281114

### Accessories

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



Insulating sleeve - MPS-IH BK - 0201731

Insulating sleeve, color: black



### Jumper

## Feed-through terminal block - BTO 3,5 - 3281114

### Accessories

Plug-in bridge - FBS 2-5 - 3030161



Plug-in bridge, pitch: 5.2 mm, length: 22.7 mm, width: 9 mm, number of positions: 2, color: red

---

Plug-in bridge - FBS 2-5 BU - 3036877



Plug-in bridge, pitch: 5.2 mm, number of positions: 2, color: blue

---

Plug-in bridge - FBS 2-5 GY - 3038969



Plug-in bridge, pitch: 5.2 mm, number of positions: 2, color: gray

---

Plug-in bridge - FBS 2-5 GN - 3032143



Plug-in bridge, pitch: 5.2 mm, number of positions: 2, color: green

---

Plug-in bridge - FBSR 2-5 - 3033702



Plug-in bridge, pitch: 5.2 mm, number of positions: 2, color: red

---

Labeled terminal marker

## Feed-through terminal block - BTO 3,5 - 3281114

### Accessories

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

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

---

### 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

## Feed-through terminal block - BTO 3,5 - 3281114

### 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

---

#### 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-5 - 3030983



Test plugs, Modular test plug, color: red

---

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



Test plugs, color: red

## Feed-through terminal block - BTO 3,5 - 3281114

### Accessories

Test plugs - MPS-MT - 0201744



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

---

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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