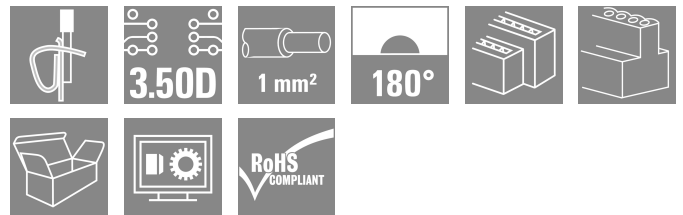
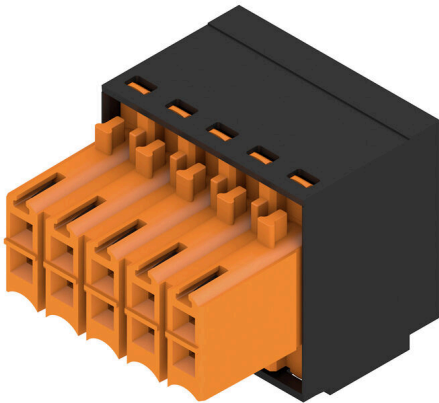


B2L 3.50/10/180QV5 SN BK BX

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
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Product image



Female connector with integral cross-connection and clear printing for uninterrupted relaying of potential at full current-carrying capacity with the maximum cable cross-section. The cross-connection is positioned vertically between the poles of rows directly on top of each other. Conductor connection with tension clamp system with straight outlet and 3.5 mm pitch. Flange and release lever available. Packed in cardboard box.

General ordering data

| | |
|--------------|---|
| Version | PCB plug-in connector, female plug, 3.50 mm, Number of poles: 10, 180°, Tension-clamp connection, Clamping range, max. : 1 mm², Box |
| Order No. | 1944610000 |
| Type | B2L 3.50/10/180QV5 SN BK BX |
| GTIN (EAN) | 4032248619542 |
| Qty. | 102 items |
| Product data | IEC: 200 V / 10.6 A / 0.2 - 1 mm² UL: 150 V / 7 A / AWG 28 - AWG 18 |
| Packaging | Box |

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Technical data**Approvals**

Approvals



| | |
|-----------------------|----------------------------|
| ROHS | Conform |
| UL File Number Search | UL Website |
| Certificate No. (UR) | E60693 |

Dimensions and weights

| | | | |
|------------|---------|-----------------|-------------|
| Depth | 20.6 mm | Depth (inches) | 0.811 inch |
| Height | 15.7 mm | Height (inches) | 0.6181 inch |
| Width | 17.5 mm | Width (inches) | 0.689 inch |
| Net weight | 5.12 g | | |

Environmental Product Compliance

| | |
|------------------------|-----------------------------|
| RoHS Compliance Status | Compliant without exemption |
| REACH SVHC | No SVHC above 0.1 wt% |

System Parameters

| | | | |
|--|---|--|------------------------------|
| Product family | OMNIMATE Signal - series B2L/S2L 3.50 - 2-row | Type of connection | Field connection |
| Wire connection method | Tension-clamp connection | Pitch in mm (P) | 3.50 mm |
| Pitch in inches (P) | 0.138 " | Conductor outlet direction | 180° |
| Number of poles | 10 | L1 in mm | 14.00 mm |
| L1 in inches | 0.551 " | Number of rows | 1 |
| Pin series quantity | 2 | Rated cross-section | 1 mm ² |
| Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch | Touch-safe protection acc. to DIN VDE 0470 | IP20 plugged/ IP10 unplugged |
| Protection degree | IP20, when fully mounted | Can be coded | Yes |
| Stripping length | 7 mm | Screwdriver blade | 0.4 x 2.5 |
| Screwdriver blade standard | DIN 5264 | Plugging cycles | 25 |
| Plugging force/pole, max. | 5 N | Pulling force/pole, max. | 4 N |

Material data

| | | | |
|---------------------------------------|----------|---------------------------------------|----------|
| Insulating material | PBT | Colour | black |
| Colour chart (similar) | RAL 9011 | Insulating material group | IIIa |
| Comparative Tracking Index (CTI) | ≥ 200 | Moisture Level (MSL) | |
| UL 94 flammability rating | V-0 | Contact material | Cu-alloy |
| Contact surface | tinned | Storage temperature, min. | -40 °C |
| Storage temperature, max. | 70 °C | Operating temperature, min. | -50 °C |
| Operating temperature, max. | 100 °C | Temperature range, installation, min. | -30 °C |
| Temperature range, installation, max. | 100 °C | | |

Conductors suitable for connection

| | |
|---|----------------------|
| Clamping range, min. | 0.08 mm ² |
| Clamping range, max. | 1 mm ² |
| Wire connection cross section AWG, min. | AWG 28 |
| Wire connection cross section AWG, max. | AWG 18 |

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| | |
|---|----------------------|
| Solid, min. H05(07) V-U | 0.2 mm ² |
| Solid, max. H05(07) V-U | 1 mm ² |
| Flexible, min. H05(07) V-K | 0.2 mm ² |
| Flexible, max. H05(07) V-K | 1 mm ² |
| w. plastic collar ferrule, DIN 46228 pt 4, min. | 0.14 mm ² |
| w. plastic collar ferrule, DIN 46228 pt 4, max. | 0.34 mm ² |
| w. wire end ferrule, DIN 46228 pt 1, min. | 0.14 mm ² |
| w. wire end ferrule, DIN 46228 pt 1, max. | 0.34 mm ² |

| | | | |
|---------------------|--|------------------------------|--------------------------------|
| Clampable conductor | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 0.14 mm ² |
| | wire end ferrule | Stripping length | nominal 10 mm |
| | | Recommended wire-end ferrule | H0,14/12 GR SV |
| Clampable conductor | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 0.25 mm ² |
| | wire end ferrule | Stripping length | nominal 10 mm |
| | | Recommended wire-end ferrule | H0,25/12 HBL |

Reference text The outside diameter of the plastic collar should not be larger than the pitch (P). Length of ferrules is to be chosen depending on the product and the rated voltage.

Rated data acc. to IEC

| | | | |
|---|------------------------|---|------------------|
| tested acc. to standard | IEC 60664-1, IEC 61984 | Rated current, min. number of poles (Tu=20°C) | 10.6 A |
| Rated current, max. number of poles (Tu=20°C) | 8.2 A | Rated current, min. number of poles (Tu=40°C) | 9.1 A |
| Rated current, max. number of poles (Tu=40°C) | 7 A | Rated voltage for surge voltage class / pollution degree II/2 | 200 V |
| Rated voltage for surge voltage class / pollution degree III/2 | 160 V | Rated voltage for surge voltage class / pollution degree III/3 | 80 V |
| Rated impulse voltage for surge voltage class/ pollution degree II/2 | 2.5 kV | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 2.5 kV |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 1.5 kV | Short-time withstand current resistance | 3 x 1s with 77 A |

Rated data acc. to CSA

| | | | |
|-----------------------------------|--|-----------------------------------|----------------|
| Institute (CSA) | CSA | Certificate No. (CSA) | 200039-1488444 |
| Rated voltage (Use group B / CSA) | 300 V | Rated current (Use group B / CSA) | 7 A |
| Wire cross-section, AWG, min. | AWG 28 | Wire cross-section, AWG, max. | AWG 18 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

Rated data acc. to UL 1059

| | | | |
|---------------------------------------|--|---------------------------------------|--------|
| Institute (UR) | UR | Certificate No. (UR) | E60693 |
| Rated voltage (Use group B / UL 1059) | 150 V | Rated voltage (Use group C / UL 1059) | 50 V |
| Rated current (Use group B / UL 1059) | 7 A | Rated current (Use group C / UL 1059) | 7 A |
| Wire cross-section, AWG, min. | AWG 28 | Wire cross-section, AWG, max. | AWG 18 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

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Technical data

Packing

| | | | |
|-----------|-----------|------------|-----------|
| Packaging | Box | VPE length | 350.00 mm |
| VPE width | 142.00 mm | VPE height | 31.00 mm |

Type tests

| | | | |
|---|---|--|------------------------------|
| Test: Durability of markings | Standard | DIN EN 61984 section 7.3.2 / 09.02 taking pattern from DIN EN 60068-2-70 / 07.96 | |
| | Test | mark of origin, type identification, rated cross-section, type of material | |
| | Evaluation | available | |
| | Test | durability | |
| Test: Misengagement (Non-interchangeability) | Standard | DIN EN 61984 section 6.3 and 6.9.1 / 09.02, DIN IEC 60512-7 section 5 / 05.94 | |
| | Test | 180° turned without coding elements | |
| | Evaluation | passed | |
| | Test | visual examination | |
| Test: Clampable cross section | Standard | DIN EN 60999-1 section 7 and 9.1 / 12.00, DIN EN 60947-1 section 8.2.4.5.1 / 12.02 | |
| | Conductor type | Type of conductor and conductor cross-section | solid 0.2 mm ² |
| | | Type of conductor and conductor cross-section | stranded 0.2 mm ² |
| | | Type of conductor and conductor cross-section | solid 1.0 mm ² |
| | | Type of conductor and conductor cross-section | stranded 1.0 mm ² |
| | | Type of conductor and conductor cross-section | AWG 28/1 |
| | | Type of conductor and conductor cross-section | AWG 28/19 |
| | | Type of conductor and conductor cross-section | AWG 18/1 |
| | | Type of conductor and conductor cross-section | AWG 18/19 |
| | Evaluation | passed | |
| Test for damage to and accidental loosening of conductors | Standard | DIN EN 60999-1 section 9.4 / 12.00 | |
| | Requirement | 0.2 kg | |
| | Conductor type | Type of conductor and conductor cross-section | AWG 28/1 |
| | | Type of conductor and conductor cross-section | AWG 28/19 |
| | Evaluation | passed | |
| | Requirement | 0.3 kg | |
| Conductor type | Type of conductor and conductor cross-section | solid 0.5 mm ² | |

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| | | | |
|---------------|----------------|---|------------------------------|
| | | Type of conductor and conductor cross-section | stranded 0.5 mm ² |
| | Evaluation | passed | |
| | Requirement | 0.4 kg | |
| | Conductor type | Type of conductor and conductor cross-section | solid 1.0 mm ² |
| | | Type of conductor and conductor cross-section | stranded 1.0 mm ² |
| | | Type of conductor and conductor cross-section | AWG 18/1 |
| | | Type of conductor and conductor cross-section | AWG 18/19 |
| | Evaluation | passed | |
| Pull-out test | Standard | DIN EN 60999-1 section 9.4 / 12.00 | |
| | Requirement | ≥5 N | |
| | Conductor type | Type of conductor and conductor cross-section | AWG 28/1 |
| | | Type of conductor and conductor cross-section | AWG 28/19 |
| | Requirement | ≥20 N | |
| | Conductor type | Type of conductor and conductor cross-section | H05V-U0.5 |
| | | Type of conductor and conductor cross-section | H05V-K0.5 |
| | Requirement | ≥35 N | |
| | Conductor type | Type of conductor and conductor cross-section | H05V-U1 |
| | | Type of conductor and conductor cross-section | H05V-K1 |
| | | Type of conductor and conductor cross-section | AWG 18/1 |
| | | Type of conductor and conductor cross-section | AWG 18/19 |
| | Requirement | ≥30 N | |
| | Conductor type | Type of conductor and conductor cross-section | AWG 18/1 |
| | | Type of conductor and conductor cross-section | AWG 18/19 |

Important note

IPC conformity Conformity: The products are developed, manufactured and delivered according international recognized standards and norms and comply with the assured properties in the data sheet resp. fulfill decorative properties in accordance with IPC-A-610 "Class 2". Further claims on the products can be evaluated on request.

- Notes
- Additional variants on request
 - Gold-plated contact surfaces on request
 - Rated current related to rated cross-section & min. No. of poles.
 - Wire end ferrule with plastic collar to DIN 46228/4

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Technical data

- Wire end ferrule without plastic collar to DIN 46228/1
- P on drawing = pitch
- Rated data refer only to the component itself. Clearance and creepage distances to other components are to be designed in accordance with the relevant application standards.
- Crimp shape A for wire-end ferrules with crimping tools PZ 1,5 (order no. 9005990000) or PZ 6/5 (order no. 9011460000) for larger wire cross-sections recommended.
- In accordance with IEC 61984, OMNIMATE-connectors are connectors without breaking capacity (COC). During designated use, connectors are not allowed to be engaged or disengaged when live or under load
- Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 8.0 | EC002638 | ETIM 9.0 | EC002638 |
| ETIM 10.0 | EC002638 | ECLASS 14.0 | 27-46-02-02 |
| ECLASS 15.0 | 27-46-02-02 | | |

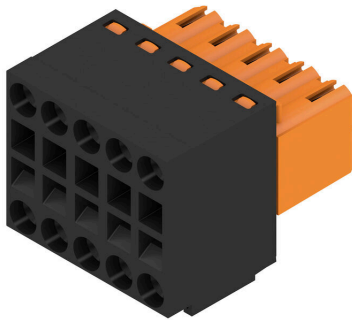
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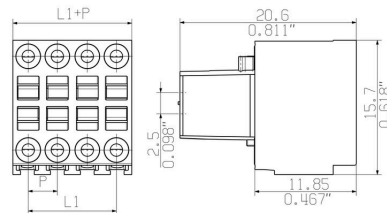
Drawings

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Product image



Dimensional drawing



Graph

