

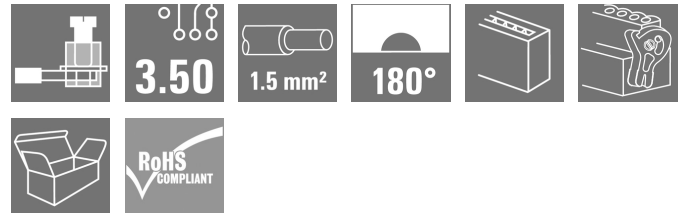
**BL 3.50/03/180LR SN BK BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Product image**

Female connectors with clamping yoke screw system for connecting conductors at 3.50 mm pitch. They provide space for labelling and can be coded.

**General ordering data**

|              |                                                                                                                                      |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Version      | PCB plug-in connector, female plug, 3.50 mm, Number of poles: 3, 180°, Clamping yoke connection, Clamping range, max. : 1.5 mm², Box |
| Order No.    | <a href="#">2441480000</a>                                                                                                           |
| Type         | BL 3.50/03/180LR SN BK BX                                                                                                            |
| GTIN (EAN)   | 4050118455816                                                                                                                        |
| Qty.         | 102 pc(s).                                                                                                                           |
| Product data | IEC: 320 V / 17 A / 0.2 - 1.5 mm²<br>UL: 300 V / 10 A / AWG 28 - AWG 14                                                              |
| Packaging    | Box                                                                                                                                  |

Creation date May 11, 2025 9:07:34 PM CEST

Catalogue status 26.04.2025 / We reserve the right to make technical changes.

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**Technical data****Dimensions and weights**

|            |         |                 |            |
|------------|---------|-----------------|------------|
| Depth      | 29.5 mm | Depth (inches)  | 1.161 inch |
| Height     | 14.9 mm | Height (inches) | 0.587 inch |
| Width      | 17 mm   | Width (inches)  | 0.669 inch |
| Net weight | 3.495 g |                 |            |

**System Parameters**

|                                              |                                     |                   |                                                |
|----------------------------------------------|-------------------------------------|-------------------|------------------------------------------------|
| Product family                               | OMNIMATE Signal - series BL/SL 3.50 |                   |                                                |
| Type of connection                           | Field connection                    |                   |                                                |
| Wire connection method                       | Clamping yoke connection            |                   |                                                |
| Pitch in mm (P)                              | 3.5 mm                              |                   |                                                |
| Pitch in inches (P)                          | 0.138 "                             |                   |                                                |
| Conductor outlet direction                   | 180°                                |                   |                                                |
| Number of poles                              | 3                                   |                   |                                                |
| L1 in mm                                     | 7 mm                                |                   |                                                |
| L1 in inches                                 | 0.276 "                             |                   |                                                |
| Number of rows                               | 1                                   |                   |                                                |
| Pin series quantity                          | 1                                   |                   |                                                |
| Rated cross-section                          | 1.5 mm <sup>2</sup>                 |                   |                                                |
| 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            |                   |                                                |
| Volume resistance                            | ≤5 mΩ                               |                   |                                                |
| Can be coded                                 | Yes                                 |                   |                                                |
| Stripping length                             | 6 mm                                |                   |                                                |
| Clamping screw                               | M 2                                 |                   |                                                |
| Screwdriver blade                            | 0.4 x 2.5                           |                   |                                                |
| Screwdriver blade standard                   | DIN 5264                            |                   |                                                |
| Plugging cycles                              | 25                                  |                   |                                                |
| Plugging force/pole, max.                    | 7 N                                 |                   |                                                |
| Pulling force/pole, max.                     | 5 N                                 |                   |                                                |
| Tightening torque                            | Torque type                         | Wire connection   |                                                |
|                                              | Usage information                   | Tightening torque | <div>min. 0.2 Nm</div> <div>max. 0.25 Nm</div> |

**Material data**

|                                       |                            |                                       |        |
|---------------------------------------|----------------------------|---------------------------------------|--------|
| Insulating material                   | PBT                        | Colour                                | black  |
| Colour chart (similar)                | RAL 9011                   | Insulating material group             | IIIa   |
| Comparative Tracking Index (CTI)      | ≥ 200                      | UL 94 flammability rating             | V-0    |
| Contact material                      | Cu-alloy                   | Contact surface                       | tinned |
| Layer structure of plug contact       | 4...8 µm Sn hot-dip 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 <sup>2</sup> |
| Clamping range, max.                    | 1.5 mm <sup>2</sup>  |
| Wire connection cross section AWG, min. | AWG 28               |

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**Technical data**

|                                                                     |                                                                                                                                                                        |                              |                              |      |
|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------------------------|------|
| Wire connection cross section AWG, max.                             | AWG 14                                                                                                                                                                 |                              |                              |      |
| Solid, min. H05(07) V-U                                             | 0.2 mm <sup>2</sup>                                                                                                                                                    |                              |                              |      |
| Solid, max. H05(07) V-U                                             | 1.5 mm <sup>2</sup>                                                                                                                                                    |                              |                              |      |
| Flexible, min. H05(07) V-K                                          | 0.2 mm <sup>2</sup>                                                                                                                                                    |                              |                              |      |
| Flexible, max. H05(07) V-K                                          | 1.5 mm <sup>2</sup>                                                                                                                                                    |                              |                              |      |
| w. plastic collar ferrule, DIN 46228 pt 4, 0.2 mm <sup>2</sup> min. |                                                                                                                                                                        |                              |                              |      |
| w. plastic collar ferrule, DIN 46228 pt 4, 1.5 mm <sup>2</sup> max. |                                                                                                                                                                        |                              |                              |      |
| w. wire end ferrule, DIN 46228 pt 1, min.                           | 0.2 mm <sup>2</sup>                                                                                                                                                    |                              |                              |      |
| w. wire end ferrule, DIN 46228 pt 1, max.                           | 1.5 mm <sup>2</sup>                                                                                                                                                    |                              |                              |      |
| Plug gauge in accordance with EN 60999 a x b; ø                     | 2.4 mm x 1.5 mm                                                                                                                                                        |                              |                              |      |
| Clampable conductor                                                 | Cross-section for conductor connection                                                                                                                                 | Type                         | fine-wired                   |      |
|                                                                     |                                                                                                                                                                        | nominal                      | 0.5 mm <sup>2</sup>          |      |
|                                                                     | wire end ferrule                                                                                                                                                       | Stripping length             | nominal                      | 8 mm |
|                                                                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H0.5/12 OR</a>   |      |
|                                                                     |                                                                                                                                                                        | Stripping length             | nominal                      | 6 mm |
|                                                                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H0.5/6</a>       |      |
|                                                                     | Cross-section for conductor connection                                                                                                                                 | Type                         | fine-wired                   |      |
|                                                                     |                                                                                                                                                                        | nominal                      | 0.75 mm <sup>2</sup>         |      |
|                                                                     | wire end ferrule                                                                                                                                                       | Stripping length             | nominal                      | 8 mm |
|                                                                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H0.75/12 W</a>   |      |
|                                                                     |                                                                                                                                                                        | Stripping length             | nominal                      | 6 mm |
|                                                                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H0.75/6</a>      |      |
|                                                                     | Cross-section for conductor connection                                                                                                                                 | Type                         | fine-wired                   |      |
|                                                                     |                                                                                                                                                                        | nominal                      | 1 mm <sup>2</sup>            |      |
|                                                                     | wire end ferrule                                                                                                                                                       | Stripping length             | nominal                      | 8 mm |
|                                                                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H1.0/12 GE</a>   |      |
|                                                                     |                                                                                                                                                                        | Stripping length             | nominal                      | 6 mm |
|                                                                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H1.0/6</a>       |      |
|                                                                     | Cross-section for conductor connection                                                                                                                                 | Type                         | fine-wired                   |      |
|                                                                     |                                                                                                                                                                        | nominal                      | 0.25 mm <sup>2</sup>         |      |
|                                                                     | wire end ferrule                                                                                                                                                       | Stripping length             | nominal                      | 8 mm |
|                                                                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H0.25/10 HBL</a> |      |
|                                                                     |                                                                                                                                                                        | Stripping length             | nominal                      | 5 mm |
|                                                                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H0.25/5</a>      |      |
|                                                                     | Cross-section for conductor connection                                                                                                                                 | Type                         | fine-wired                   |      |
|                                                                     |                                                                                                                                                                        | nominal                      | 0.34 mm <sup>2</sup>         |      |
|                                                                     | wire end ferrule                                                                                                                                                       | Stripping length             | nominal                      | 8 mm |
|                                                                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H0.34/10 TK</a>  |      |
| 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. |                              |                              |      |

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**Technical data****Rated data acc. to IEC**

|                                                                           |                        |                                                                       |                   |
|---------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------|-------------------|
| tested acc. to standard                                                   | IEC 60664-1, IEC 61984 | Rated current, min. number of poles (Tu=20°C)                         | 17 A              |
| Rated current, max. number of poles (Tu=20°C)                             | 12 A                   | Rated current, min. number of poles (Tu=40°C)                         | 14.5 A            |
| Rated current, max. number of poles (Tu=40°C)                             | 10 A                   | Rated voltage for surge voltage class / pollution degree II/2         | 320 V             |
| Rated voltage for surge voltage class / pollution degree III/2            | 160 V                  | Rated voltage for surge voltage class / pollution degree III/3        | 160 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 | 2.5 kV                 | Short-time withstand current resistance                               | 3 x 1s with 100 A |

**Rated data acc. to CSA**

|                                   |        |                                   |        |
|-----------------------------------|--------|-----------------------------------|--------|
| Rated voltage (Use group B / CSA) | 300 V  | Rated voltage (Use group D / CSA) | 300 V  |
| Rated current (Use group B / CSA) | 10 A   | Rated current (Use group D / CSA) | 10 A   |
| Wire cross-section, AWG, min.     | AWG 28 | Wire cross-section, AWG, max.     | AWG 14 |

**Rated data acc. to UL 1059**

|                                       |                                                                                     |                                       |        |
|---------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|--------|
| Institute (UR)                        |  | Certificate No. (UR)                  | E60693 |
| Rated voltage (Use group B / UL 1059) | 300 V                                                                               | Rated voltage (Use group D / UL 1059) | 300 V  |
| Rated current (Use group B / UL 1059) | 10 A                                                                                | Rated current (Use group D / UL 1059) | 10 A   |
| Wire cross-section, AWG, min.         | AWG 28                                                                              | Wire cross-section, AWG, max.         | AWG 14 |
| Reference to approval values          | Specifications are maximum values, details - see approval certificate.              |                                       |        |

**Packing**

|           |        |            |        |
|-----------|--------|------------|--------|
| Packaging | Box    | VPE length | 338 mm |
| VPE width | 130 mm | VPE height | 33 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, approval marking SEV, approval marking CSA    |
|                                              | Evaluation | available                                                                          |
|                                              | Test       | durability                                                                         |
|                                              | Evaluation | passed                                                                             |
| Test: Misengagement (Non-interchangeability) | Standard   | DIN EN 61984 section 6.3 and 6.9.1 / 09.02, DIN IEC 60512 part 7 section 5 / 05.94 |
|                                              | Test       | 180° turned with coding elements                                                   |
|                                              | Evaluation | passed                                                                             |

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|                                                           |                |                                                                                    |  |
|-----------------------------------------------------------|----------------|------------------------------------------------------------------------------------|--|
| 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 / 12.99 |  |
|                                                           | Conductor type | Type of conductor and solid 0.2 mm <sup>2</sup> conductor cross-section            |  |
|                                                           |                | Type of conductor and stranded 0.2 mm <sup>2</sup> conductor cross-section         |  |
|                                                           |                | Type of conductor and solid 1.5 mm <sup>2</sup> conductor cross-section            |  |
|                                                           |                | Type of conductor and stranded 1.5 mm <sup>2</sup> conductor cross-section         |  |
|                                                           |                | Type of conductor and AWG 28/1 conductor cross-section                             |  |
|                                                           |                | Type of conductor and AWG 28/19 conductor cross-section                            |  |
|                                                           |                | Type of conductor and AWG 16/1 conductor cross-section                             |  |
|                                                           |                | Type of conductor and AWG 16/19 conductor cross-section                            |  |
|                                                           | 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 AWG 28/1 conductor cross-section                             |  |
|                                                           |                | Type of conductor and AWG 28/19 conductor cross-section                            |  |
|                                                           | Evaluation     | passed                                                                             |  |
|                                                           | Requirement    | 0.3 kg                                                                             |  |
|                                                           | Conductor type | Type of conductor and 2 × AWG 24/1 conductor cross-section                         |  |
|                                                           |                | Type of conductor and 2 × AWG 24/19 with wire end ferrule conductor cross-section  |  |
|                                                           | Evaluation     | passed                                                                             |  |
|                                                           | Requirement    | 0.4 kg                                                                             |  |
|                                                           | Conductor type | Type of conductor and solid 1.5 mm <sup>2</sup> conductor cross-section            |  |
|                                                           |                | Type of conductor and stranded 1.5 mm <sup>2</sup> conductor cross-section         |  |
|                                                           |                | Type of conductor and AWG 16/7 conductor cross-section                             |  |
|                                                           | Evaluation     | passed                                                                             |  |

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**Technical data**

|               |                |                                                            |
|---------------|----------------|------------------------------------------------------------|
| Pull-out test | Standard       | DIN EN 60999-1 section 9.5 / 12.00                         |
|               | Requirement    | ≥5 N                                                       |
|               | Conductor type | Type of conductor and AWG 28/1 conductor cross-section     |
|               |                | Type of conductor and AWG 28/19 conductor cross-section    |
|               | Evaluation     | passed                                                     |
|               | Requirement    | ≥10 N                                                      |
|               | Conductor type | Type of conductor and 2 × AWG 24/1 conductor cross-section |
|               |                | Type of conductor and 2 × AWG 24/19 with wire end ferrule  |
|               | Evaluation     | passed                                                     |
|               | Requirement    | ≥40 N                                                      |
|               | Conductor type | Type of conductor and H05V-U1.5 conductor cross-section    |
|               |                | Type of conductor and H05V-K1.5 conductor cross-section    |
|               |                | Type of conductor and AWG 16/7 conductor cross-section     |
|               | Evaluation     | passed                                                     |

**Classifications**

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC002638    | ETIM 7.0    | EC002638    |
| ETIM 8.0    | EC002638    | ETIM 9.0    | EC002638    |
| ETIM 10.0   | EC002638    | ECLASS 9.0  | 27-44-03-09 |
| ECLASS 9.1  | 27-44-03-09 | ECLASS 10.0 | 27-44-03-09 |
| ECLASS 11.0 | 27-46-02-02 | ECLASS 12.0 | 27-46-02-02 |
| ECLASS 13.0 | 27-46-02-02 | ECLASS 14.0 | 27-46-02-02 |
| ECLASS 15.0 | 27-46-02-02 |             |             |

Cradle to gate

0.029 kg CO<sub>2</sub>eq.**Environmental Product Compliance**

|                          |                                               |
|--------------------------|-----------------------------------------------|
| RoHS Compliance Status   | Compliant without exemption                   |
| REACH SVHC               | No SVHC above 0.1 wt%                         |
| Product Carbon Footprint | de.myview.objectmodel.impl.BlockImpl@444cb61d |

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**Technical data****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          | <ul style="list-style-type: none"> <li>• Additional variants on request</li> <li>• Gold-plated contact surfaces on request</li> <li>• Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>• Max. outer diameter of the conductor: 2.9 mm</li> <li>• Wire end ferrule without plastic collar to DIN 46228/1</li> <li>• Wire end ferrule with plastic collar to DIN 46228/4</li> <li>• P on drawing = pitch</li> <li>• 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.</li> <li>• 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</li> <li>• Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months</li> </ul> |

**Approvals**

Approvals



|                       |                                                                                                                                                                             |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approvals MAMID       | <a href="https://mdcop.weidmueller.com/mediadelivery/rendition/900_319262/-T1z1mm-S800/">https://mdcop.weidmueller.com/mediadelivery/rendition/900_319262/-T1z1mm-S800/</a> |
| ROHS                  | Conform                                                                                                                                                                     |
| UL File Number Search | UL Website                                                                                                                                                                  |
| Certificate No. (UR)  | E60693                                                                                                                                                                      |

**Downloads**

|                             |                                                                                                                                                                                                                                     |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Engineering Data            | <a href="#">CAD data – STEP</a>                                                                                                                                                                                                     |
| Product Change Notification | <a href="#">PCN_2017_088_PL30X_BL_35_Lock_Release_lever_EN</a><br><a href="#">PCN_2017_088_PL30X_PCN_BL_35_Loeseriegel_DE</a><br><a href="#">Change of Material LR 3.50 - DE</a><br><a href="#">Change of Material LR 3.50 - EN</a> |
| Catalogues                  | <a href="#">Catalogues in PDF-format</a>                                                                                                                                                                                            |
| Brochures                   | <a href="#">FL DRIVES EN</a><br><a href="#">FL DRIVES DE</a>                                                                                                                                                                        |

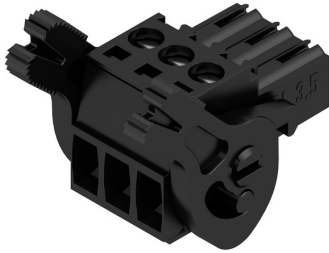
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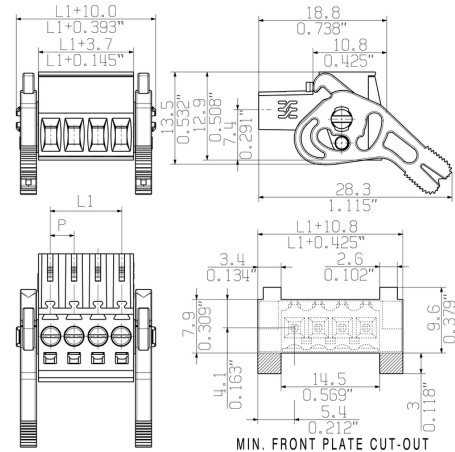
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## Drawings

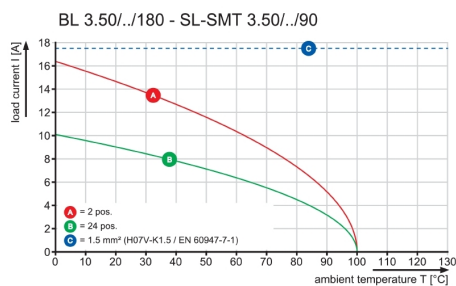
## Product image



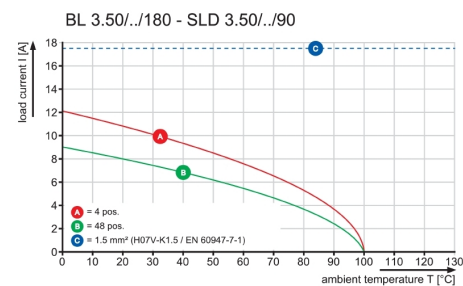
## Dimensional drawing



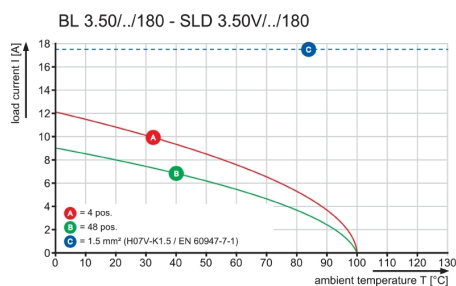
## Graph



## Graph



## Graph



## Graph

