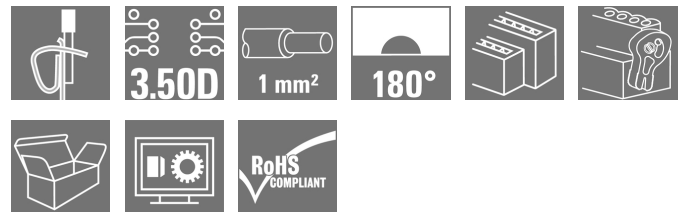


**B2L 3.50/20/180LH AU OR BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)

Female connectors with tension clamp connection system enable quick and simple wiring. These female header can be mounted side by side and therefore have a high connection density. The release lever simplifies the separation of the connection in confined spaces. The socket blocks provide space for labelling and can be coded.

**General ordering data**

|              |                                                                                                                                    |
|--------------|------------------------------------------------------------------------------------------------------------------------------------|
| Version      | PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20, 180°, Tension-clamp connection, Clamping range, max.: 1 mm², Box |
| Order No.    | <a href="#">1757760000</a>                                                                                                         |
| Type         | B2L 3.50/20/180LH AU OR BX                                                                                                         |
| GTIN (EAN)   | 4032248038961                                                                                                                      |
| Qty.         | 42 pc(s).                                                                                                                          |
| Product data | IEC: 250 V / 10.3 A / 0.2 - 1 mm²<br>UL: 300 V / 10 A / AWG 28 - AWG 16                                                            |
| Packaging    | Box                                                                                                                                |

Creation date March 25, 2021 3:32:58 AM CET

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

|                |            |                 |            |
|----------------|------------|-----------------|------------|
| Depth          | 20.6 mm    | Depth (inches)  | 0.811 inch |
| Height         | 15.7 mm    | Height (inches) | 0.618 inch |
| Net weight     | 5.857 g    | Width           | 41.3 mm    |
| Width (inches) | 1.626 inch |                 |            |

**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)                            | 3.5 mm            |
| Pitch in inches (P)                          | 0.138 inch                                    | Conductor outlet direction                 | 180°              |
| Number of poles                              | 20                                            | L1 in mm                                   | 31.5 mm           |
| L1 in inches                                 | 1.24 inch                                     | Number of rows                             | 1                 |
| Pin series quantity                          | 2                                             | Rated cross-section                        | 1 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 | IP 20             |
| Can be coded                                 | Yes                                           | Stripping length                           | 7 mm              |
| Screwdriver blade                            | 0.4 x 2.5                                     | Screwdriver blade standard                 | DIN 5264          |
| Plugging cycles                              | ≥ 200                                         | Plugging force/pole, max.                  | 5 N               |
| Pulling force/pole, max.                     | 4 N                                           |                                            |                   |

**Material data**

|                                       |             |                                       |                     |
|---------------------------------------|-------------|---------------------------------------|---------------------|
| Insulating material                   | PBT         | Colour                                | orange              |
| Colour chart (similar)                | RAL 2000    | Insulation strength                   | ≥ 10 <sup>8</sup> Ω |
| UL 94 flammability rating             | V-0         | Contact material                      | Copper alloy        |
| Contact surface                       | Gold-plated | 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 mm <sup>2</sup>    |
| Wire connection cross section AWG, min.                              | AWG 28               |
| Wire connection cross section AWG, max.                              | AWG 18               |
| Solid, min. H05(07) V-U                                              | 0.2 mm <sup>2</sup>  |
| Solid, max. H05(07) V-U                                              | 1 mm <sup>2</sup>    |
| Flexible, min. H05(07) V-K                                           | 0.2 mm <sup>2</sup>  |
| Flexible, max. H05(07) V-K                                           | 1 mm <sup>2</sup>    |
| w. plastic collar ferrule, DIN 46228 pt 4, 0.14 mm <sup>2</sup> min. |                      |
| w. plastic collar ferrule, DIN 46228 pt 4, 0.34 mm <sup>2</sup> max. |                      |
| w. wire end ferrule, DIN 46228 pt 1, 0.14 mm <sup>2</sup> min.       |                      |
| w. wire end ferrule, DIN 46228 pt 1, 0.34 mm <sup>2</sup> max.       |                      |

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**Technical data**

|                     |                                                                                                                                                                        |                              |                                |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------|
| Clampable conductor | Cross-section for conductor connection                                                                                                                                 | Type                         | fine-wired                     |
|                     |                                                                                                                                                                        | nominal                      | 0.14 mm <sup>2</sup>           |
|                     | wire end ferrule                                                                                                                                                       | Stripping length             | nominal 10 mm                  |
|                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H0.14/12 GR SV</a> |
|                     | Cross-section for conductor connection                                                                                                                                 | Type                         | fine-wired                     |
|                     |                                                                                                                                                                        | nominal                      | 0.25 mm <sup>2</sup>           |
|                     | wire end ferrule                                                                                                                                                       | Stripping length             | nominal 10 mm                  |
|                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H0.25/12 HBL</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. |                              |                                |

**Rated data acc. to IEC**

|                                                                           |                        |                                                                       |                  |
|---------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------|------------------|
| tested acc. to standard                                                   | IEC 60664-1, IEC 61984 | Rated current, min. number of poles (Tu=20°C)                         | 10.3 A           |
| Rated current, max. number of poles (Tu=20°C)                             | 8.7 A                  | Rated current, min. number of poles (Tu=40°C)                         | 8.9 A            |
| Rated current, max. number of poles (Tu=40°C)                             | 7.4 A                  | Rated voltage for surge voltage class / pollution degree II/2         | 250 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 | 2.5 kV                 | Short-time withstand current resistance                               | 3 x 1s with 77 A |

**Rated data acc. to CSA**

|                                   |                                                                                     |                                   |                |
|-----------------------------------|-------------------------------------------------------------------------------------|-----------------------------------|----------------|
| Institute (CSA)                   |  | Certificate No. (CSA)             | 200039-1488444 |
| Rated voltage (Use group B / CSA) | 300 V                                                                               | Rated current (Use group B / CSA) | 5 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)                        |  | Certificate No. (UR)                  | E60693 |
| Rated voltage (Use group B / UL 1059) | 300 V                                                                               | Rated voltage (Use group C / UL 1059) | 50 V   |
| Rated current (Use group B / UL 1059) | 10 A                                                                                | Rated current (Use group C / UL 1059) | 10 A   |
| Wire cross-section, AWG, min.         | AWG 28                                                                              | Wire cross-section, AWG, max.         | AWG 16 |
| Reference to approval values          | Specifications are maximum values, details - see approval certificate.              |                                       |        |

**Packing**

|           |       |            |       |
|-----------|-------|------------|-------|
| Packaging | Box   | VPE length | 27 mm |
| VPE width | 34 mm | VPE height | 41 mm |

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**Technical data****Classifications**

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC002638    | ETIM 7.0    | 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 |

**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 colours 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>• Wire end ferrule with plastic collar to DIN 46228/4</li> <li>• Wire end ferrule without plastic collar to DIN 46228/1</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>• Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months</li> </ul> |

**Approvals**

Approvals



|                       |         |
|-----------------------|---------|
| ROHS                  | Conform |
| UL File Number Search | E60693  |

**Downloads**

|                                             |                                                 |
|---------------------------------------------|-------------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">Declaration of the Manufacturer</a> |
| Engineering Data                            | <a href="#">EPLAN, WSCAD</a>                    |

## B2L 3.50/20/180LH AU OR BX

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# Drawings

## Dimensional drawing



## Graph



## Graph



## Graph

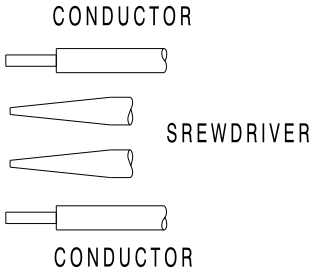


WEITERGABE SOWIE VERVIELFÄLTIGUNG DIESES DOKUMENTS, VERWERTUNG UND MITTEILUNG SEINES INHALTS SIND VERBOTEN, SOWEIT NICHT AUSDRUECKLICH GESTATTET.  
ZUWIDERHANDLUNGEN VERPFLICHTEN ZU SCHADENERSATZ. ALLE RECHTE FUER DEN FALL DER PATENT-, GEBRAUCHSMUSTER- ODER GESCHMACKSMUSTEREINTRAGUNG VORBEHALTEN.  
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WEIDMUELLER INTERFACE GmbH & Co.KG

MASSE OHNE TOLERANZ SIND KEINE PRUEFMASSE  
DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.

DIE DEUTSCHE VERSION IST VERBINDLICH  
THE GERMAN VERSION IS BINDING



n=POLZAHL/NO OF POLES

P=RASTER/PITCH

SHOWN: B2L 3.50/08/180F

|    |      |          |      |          |      |          |      |          |
|----|------|----------|------|----------|------|----------|------|----------|
| 36 | 59,5 | 2,344    | 62,9 | 2,479    | 66,4 | 2,617    | 69,8 | 2,751    |
| 34 | 56,0 | 2,206    | 59,4 | 2,341    | 62,9 | 2,479    | 66,3 | 2,613    |
| 32 | 52,5 | 2,069    | 55,9 | 2,203    | 59,4 | 2,341    | 62,8 | 2,475    |
| 30 | 49,0 | 1,931    | 52,4 | 2,065    | 55,9 | 2,203    | 59,3 | 2,337    |
| 28 | 45,5 | 1,793    | 48,9 | 1,927    | 52,4 | 2,065    | 55,8 | 2,199    |
| 26 | 42,0 | 1,655    | 45,4 | 1,789    | 48,9 | 1,927    | 52,3 | 2,061    |
| 24 | 38,5 | 1,517    | 41,9 | 1,651    | 45,4 | 1,789    | 48,8 | 1,923    |
| 22 | 35,0 | 1,379    | 38,4 | 1,513    | 41,9 | 1,651    | 45,3 | 1,785    |
| 20 | 31,5 | 1,241    | 34,9 | 1,375    | 38,4 | 1,513    | 41,8 | 1,647    |
| 18 | 28,0 | 1,103    | 31,4 | 1,237    | 34,9 | 1,375    | 38,3 | 1,509    |
| 16 | 24,5 | 0,965    | 27,9 | 1,099    | 31,4 | 1,237    | 34,8 | 1,371    |
| 14 | 21,0 | 0,827    | 24,4 | 0,961    | 27,9 | 1,099    | 31,3 | 1,233    |
| 12 | 17,5 | 0,690    | 20,9 | 0,823    | 24,4 | 0,961    | 27,8 | 1,095    |
| 10 | 14,0 | 0,552    | 17,4 | 0,685    | 20,9 | 0,823    | 24,3 | 0,957    |
| 8  | 10,5 | 0,414    | 13,9 | 0,547    | 17,4 | 0,685    | 20,8 | 0,819    |
| 6  | 7,0  | 0,276    | 10,4 | 0,409    | 13,9 | 0,547    | 17,3 | 0,681    |
| 4  | 3,5  | 0,138    | 6,9  | 0,271    | 10,4 | 0,409    | 13,8 | 0,543    |
| n  | L1   | L1[inch] | L2   | L2[inch] | L3   | L3[inch] | L4   | L4[inch] |

For the mounting of PCBs, it should be noted that the rated data given in the catalogue relates only to the connection elements. The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to VDE 0110. The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller connectors are tested to the DIN VDE 0627 standard, and are valid for its field of application. Provided that the components are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

DIN ISO 2768-m

69611/5

25.04.13 HELIS\_MA

00

MODIFICATION

DRAWN

16.01.2012

HELIS\_MA

RESPONSIBLE

LANG\_T

SCALE: 2:1

CHECKED

22.05.2013

HECKERT\_M

SUPERSEDES: 26643/31

APPROVED

HECKERT\_M

CAT.NO.:.

**Weidmüller**

C 55622

02

DRAWING NO.

SHEET 02

OF 03

SHEETS

ISSUE NO.

7110

B2L 3.50/././180...

BUCHSENLEISTE

SOCKET BLOCK

PRODUCT FILE: B2L 3.50

