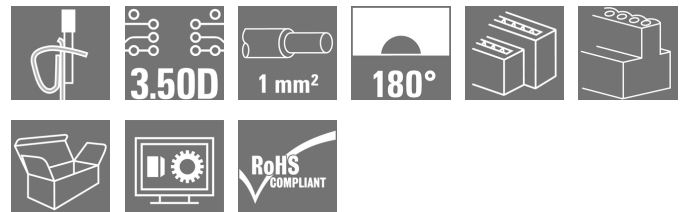


## OMNIMATE Signal - series B2L/S2L 3.50 - 2-row B2L 3.50/14/180 SN OR BX

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 26  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
www.weidmueller.com

### Product image



### Component density redefined: the future standard for signal connection

A maximum number of connections requiring minimum space - the double-row B2L sets the bar for field connections of typical sensor cables up to 1 mm<sup>2</sup> very high and closes the gap between "less space" and "more functions".

The result is a connection solution for standard industrial cables in 1.75 pitch - 30% smaller than equivalent solutions in 2.5 pitch, and with the 140% robustness of the 3.5 pitch

Dimensions: double the connection density with a 3.5mm pitch size

Connection system: tried and tested maintenance-free Weidmüller tension clamp connection

The basic application advantages:

Efficient: maximum component density on the PCB

Suitable for industrial use - minimum dimensions, maximum robustness

Process-optimised - automatic assembly and reflow soldering, fast connection

User-friendly - patented release lever for the easy release of larger numbers of poles

Application-oriented: easy labelling and reliable coding despite compact dimensions

Miniaturisation is more than just a larger number of functions within a smaller space:

Each reduction in size decreases space requirements and so reduces overall system costs for the end customer. Thus, Weidmüller fulfils a growing demand in the engineering and industrial automation sectors.

### General ordering data

|              |                                                                                                                                                  |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Type         | B2L 3.50/14/180 SN OR BX                                                                                                                         |
| Order No.    | <a href="#">1727600000</a>                                                                                                                       |
| Version      | PCB plug-in connector, female plug, 3.50 mm, Number of poles: 14, 180°, Tension-clamp connection, Clamping range, max. : 1 mm <sup>2</sup> , Box |
| GTIN (EAN)   | 4032248037735                                                                                                                                    |
| Qty.         | 72 pc(s).                                                                                                                                        |
| Product data | IEC: 200 V / 10.3 A / 0.2 - 1 mm <sup>2</sup><br>UL: 300 V / 10 A / AWG 28 - AWG 16                                                              |
| Packaging    | Box                                                                                                                                              |

Creation date May 31, 2020 5:14:47 AM CEST

# OMNIMATE Signal - series B2L/S2L 3.50 - 2-row

## B2L 3.50/14/180 SN OR BX

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 Klingenbergstraße 26  
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## Technical data

### Dimensions and weights

|            |         |                 |            |
|------------|---------|-----------------|------------|
| Width      | 24.5    | Width (inches)  | 0.965 inch |
| Height     | 15.7 mm | Height (inches) | 0.618 inch |
| Depth      | 20.8 mm | Depth (inches)  | 0.819 inch |
| Net weight | 8 g     |                 |            |

### 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                              | 14                                            | L1 in mm                                   | 21 mm             |
| L1 in inches                                 | 0.827 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                              | 25                                            | 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          | GWFI                                  | 960 °C              |
| Contact material                      | Copper alloy | Contact surface                       | tinned              |
| Storage temperature, min.             | -25 °C       | Storage temperature, max.             | 50 °C               |
| Max. relative humidity during storage | 70 %         | 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, min. | 0.14 mm <sup>2</sup> |
| w. plastic collar ferrule, DIN 46228 pt 4, max. | 0.34 mm <sup>2</sup> |
| w. wire end ferrule, DIN 46228 pt 1, min.       | 0.14 mm <sup>2</sup> |
| w. wire end ferrule, DIN 46228 pt 1, max.       | 0.34 mm <sup>2</sup> |

**OMNIMATE Signal - series B2L/S2L 3.50 - 2-row  
B2L 3.50/14/180 SN OR BX**

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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="#">HO.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="#">HO.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. |                              |                                |
| Max. clamping range | 1 mm <sup>2</sup>                                                                                                                                                      |                              |                                |

**Rated data acc. to IEC**

|                                                                           |                        |                                                                       |                  |
|---------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------|------------------|
| tested acc. to standard                                                   | IEC 60664-1, IEC 61984 |                                                                       |                  |
| Rated current, max. number of poles (Tu=20°C)                             | 8.7 A                  | Rated current, min. number of poles (Tu=20°C)                         | 10.3 A           |
| Rated current, max. number of poles (Tu=40°C)                             | 7.4 A                  | Rated current, min. number of poles (Tu=40°C)                         | 8.9 A            |
| Rated voltage for surge voltage class / pollution degree III/2            | 160 V                  | Rated voltage for surge voltage class / pollution degree II/2         | 200 V            |
| Rated impulse voltage for surge voltage class/ pollution degree II/2      | 2.5 kV                 | Rated voltage for surge voltage class / pollution degree III/3        | 80 V             |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 2.5 kV                 | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 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 | 30 mm  |
| VPE width | 135 mm | VPE height | 350 mm |

# OMNIMATE Signal - series B2L/S2L 3.50 - 2-row B2L 3.50/14/180 SN OR BX

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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 | UNSPSC     | 30-21-18-10 |

### Notes

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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>• 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.</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> </ul> |
| 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.                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### Approvals

Approvals



ROHS

Conform

### Downloads

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">Declaration of the Manufacturer</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Brochure/Catalogue                          | <a href="#">FL DRIVES EN</a><br><a href="#">MB DEVICE MANUF. EN</a><br><a href="#">FL DRIVES DE</a><br><a href="#">FL BUILDING SAFETY EN</a><br><a href="#">FL APPL LED LIGHTING EN</a><br><a href="#">FL INDUSTR. CONTROLS EN</a><br><a href="#">FL MACHINE SAFETY EN</a><br><a href="#">FL HEATING ELECTR EN</a><br><a href="#">FL APPL INVERTER EN</a><br><a href="#">FL BASE STATION EN</a><br><a href="#">FL ELEVATOR EN</a><br><a href="#">FL POWER SUPPLY EN</a><br><a href="#">FL 72H SAMPLE SER EN</a><br><a href="#">PO OMNIMATE EN</a> |
| Engineering Data                            | <a href="#">EPLAN, WSCAD</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Engineering Data                            | <a href="#">STEP</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

Creation date May 31, 2020 5:14:47 AM CEST

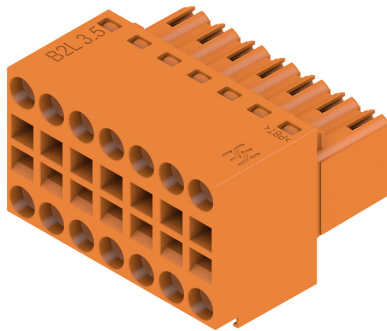
Catalogue status 15.05.2020 / We reserve the right to make technical changes.

## OMNIMATE Signal - series B2L/S2L 3.50 - 2-row B2L 3.50/14/180 SN OR BX

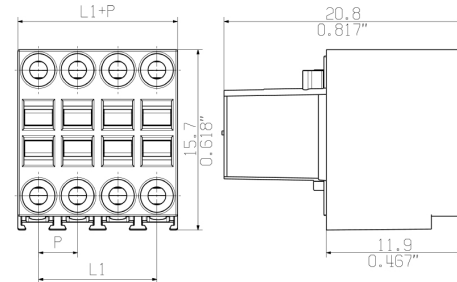
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# Drawings

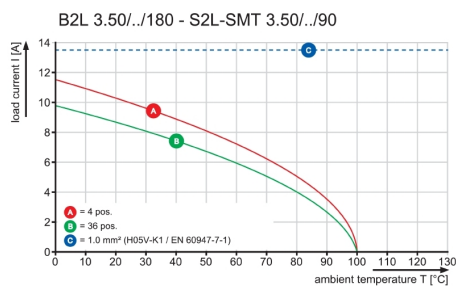
## Product image



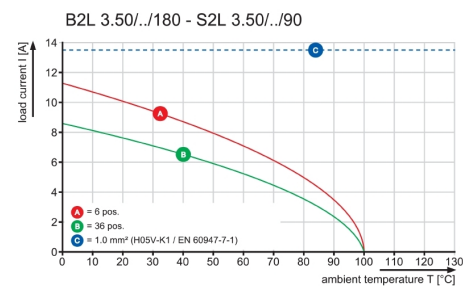
## Dimensional drawing



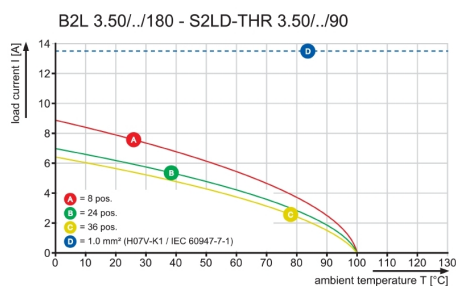
## Graph



## Graph



## Graph

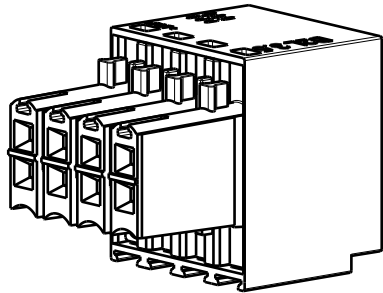
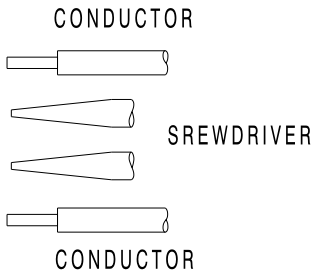
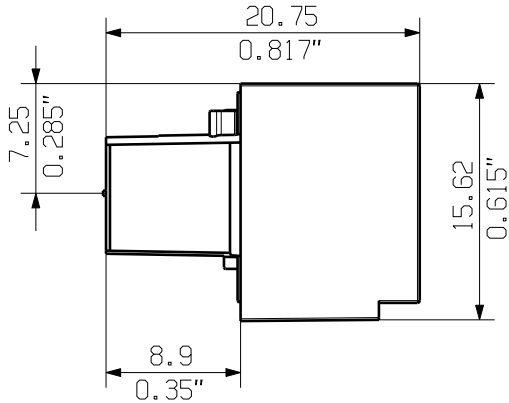
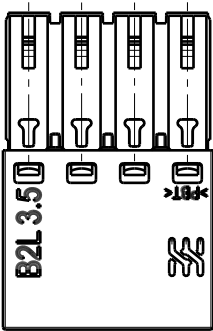
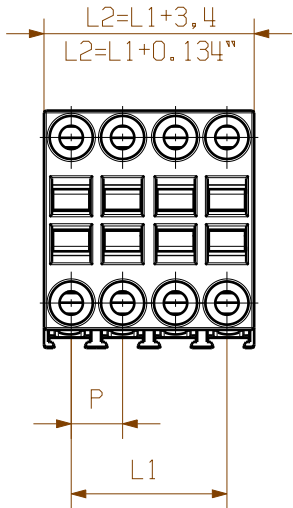


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WEIDMUELLER INTERFACE GmbH & Co.KG

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 3.50/08/180

|    |      |          |      |          |
|----|------|----------|------|----------|
| 36 | 59,5 | 2,344    | 62,9 | 2,479    |
| 34 | 56,0 | 2,206    | 59,4 | 2,341    |
| 32 | 52,5 | 2,069    | 55,9 | 2,203    |
| 30 | 49,0 | 1,931    | 52,4 | 2,065    |
| 28 | 45,5 | 1,793    | 48,9 | 1,927    |
| 26 | 42,0 | 1,655    | 45,4 | 1,789    |
| 24 | 38,5 | 1,517    | 41,9 | 1,651    |
| 22 | 35,0 | 1,379    | 38,4 | 1,513    |
| 20 | 31,5 | 1,241    | 34,9 | 1,375    |
| 18 | 28,0 | 1,103    | 31,4 | 1,237    |
| 16 | 24,5 | 0,965    | 27,9 | 1,099    |
| 14 | 21,0 | 0,827    | 24,4 | 0,961    |
| 12 | 17,5 | 0,690    | 20,9 | 0,823    |
| 10 | 14,0 | 0,552    | 17,4 | 0,685    |
| 8  | 10,5 | 0,414    | 13,9 | 0,547    |
| 6  | 7,0  | 0,276    | 10,4 | 0,409    |
| 4  | 3,5  | 0,138    | 6,9  | 0,271    |
| n  | L1   | L1(inch) | L2   | L2(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                  |            |              |                                                             | CAT.NO.: .                                                                            |  |
|                                                                                       | 69611/5<br>25.04.13 HELIS_MA 00 |            | MODIFICATION |                                                             |  |  |
|                                                                                       |                                 |            |              |                                                             |                                                                                       |  |
|  | DRAWN                           | 16.01.2012 | HELIS_MA     | <b>B2L 3.50/././180...</b><br>BUCHSENLEISTE<br>SOCKET BLOCK |                                                                                       |  |
|                                                                                       | RESPONSIBLE                     |            | LANG_T       |                                                             |                                                                                       |  |
|                                                                                       | CHECKED                         | 22.05.2013 | HECKERT_M    |                                                             |                                                                                       |  |
| SCALE: 2:1                                                                            | CHECKED                         |            | HECKERT_M    | PRODUCT FILE: B2L 3.50                                      |                                                                                       |  |
| SUPERSEDES: 26643/31                                                                  | APPROVED                        |            |              | 7110                                                        |                                                                                       |  |