

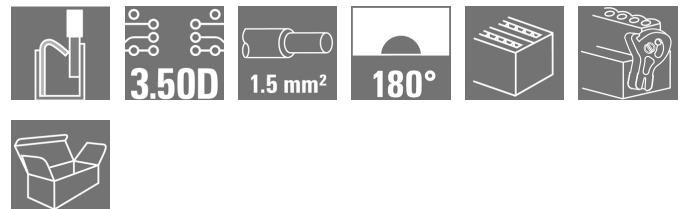
**B2CF 3.50/16/180LR AU RD BX SO****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Product image**

Similar to illustration

**Two-row female plug with PUSH IN spring connection**

- Simply insert the prepared wire - and you're done
- Intuitive to use because
- the wire-entry area and handling area are clearly separated
- Integrated push-buttons for opening the terminal point
- High component density because of low heights
- Optional: locking and releasing require no tools when using Weidmüller's release latch (LR) or release lever (LH)

**General ordering data**

|              |                                                                                                                                        |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Version      | PCB plug-in connector, female plug, 3.50 mm, Number of poles: 16, 180°, PUSH IN, Spring connection, Clamping range, max.: 1.5 mm², Box |
| Order No.    | <a href="#">2539140000</a>                                                                                                             |
| Type         | B2CF 3.50/16/180LR AU RD BX SO                                                                                                         |
| GTIN (EAN)   | 4050118550801                                                                                                                          |
| Qty.         | 54 pc(s).                                                                                                                              |
| Product data | IEC: 320 V / 13.4 A / 0.14 - 1.5 mm²<br>UL: 300 V / 9.5 A / AWG 26 - AWG 16                                                            |
| Packaging    | Box                                                                                                                                    |

Creation date April 16, 2021 12:10:21 AM CEST

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

|                |            |                 |            |
|----------------|------------|-----------------|------------|
| Depth          | 29.9 mm    | Depth (inches)  | 1.177 inch |
| Height         | 17.25 mm   | Height (inches) | 0.679 inch |
| Net weight     | 12.281 g   | Width           | 34.9 mm    |
| Width (inches) | 1.374 inch |                 |            |

**System Parameters**

|                                              |                                               |                                            |                     |
|----------------------------------------------|-----------------------------------------------|--------------------------------------------|---------------------|
| Product family                               | OMNIMATE Signal - series B2C/S2C 3.50 - 2-row | Type of connection                         | Field connection    |
| Wire connection method                       | PUSH IN, Spring connection                    | Pitch in mm (P)                            | 3.5 mm              |
| Pitch in inches (P)                          | 0.138 inch                                    | Conductor outlet direction                 | 180°                |
| Number of poles                              | 16                                            | L1 in mm                                   | 24.5 mm             |
| L1 in inches                                 | 0.965 inch                                    | Number of rows                             | 1                   |
| Pin series quantity                          | 2                                             | 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 | IP 20               |
| Can be coded                                 | Yes                                           | Stripping length                           | 10 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.                     | 5 N                                           |                                            |                     |

**Material data**

|                                       |             |                                       |                     |
|---------------------------------------|-------------|---------------------------------------|---------------------|
| Insulating material                   | PA 66 GF 30 | Colour                                | traffic red         |
| Colour chart (similar)                | RAL 3020    | Insulating material group             | II                  |
| Comparative Tracking Index (CTI)      | ≥ 600       | Insulation strength                   | ≥ 10 <sup>8</sup> Ω |
| UL 94 flammability rating             | V-0         | Contact material                      | Copper alloy        |
| Contact surface                       | Gold-plated | Layer structure of plug contact       | 2...5 µm Au         |
| Storage temperature, min.             | -40 °C      | Storage temperature, max.             | 70 °C               |
| Operating temperature, min.           | -50 °C      | Operating temperature, max.           | 120 °C              |
| Temperature range, installation, min. | -40 °C      | Temperature range, installation, max. | 120 °C              |

**Conductors suitable for connection**

|                                                                      |                      |
|----------------------------------------------------------------------|----------------------|
| Clamping range, min.                                                 | 0.14 mm <sup>2</sup> |
| Clamping range, max.                                                 | 1.5 mm <sup>2</sup>  |
| Solid, min. H05(07) V-U                                              | 0.14 mm <sup>2</sup> |
| Solid, max. H05(07) V-U                                              | 1.5 mm <sup>2</sup>  |
| Flexible, min. H05(07) V-K                                           | 0.14 mm <sup>2</sup> |
| Flexible, max. H05(07) V-K                                           | 1.5 mm <sup>2</sup>  |
| w. plastic collar ferrule, DIN 46228 pt 4, 0.14 mm <sup>2</sup> min. |                      |
| w. plastic collar ferrule, DIN 46228 pt 4, 1 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, 1.5 mm <sup>2</sup> max.        |                      |

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**Technical data**

|                     |                                        |                              |                            |       |
|---------------------|----------------------------------------|------------------------------|----------------------------|-------|
| Clampable conductor | Cross-section for conductor connection | Type                         | fine-wired                 |       |
|                     |                                        | nominal                      | 0.5 mm <sup>2</sup>        |       |
|                     | wire end ferrule                       | Stripping length             | nominal                    | 12 mm |
|                     |                                        | Recommended wire-end ferrule | <a href="#">H0.5/16 OR</a> |       |
|                     |                                        | Stripping length             | nominal                    | 10 mm |
|                     |                                        | Recommended wire-end ferrule | <a href="#">H0.5/10</a>    |       |
|                     | Cross-section for conductor connection | Type                         | fine-wired                 |       |
|                     |                                        | nominal                      | 0.75 mm <sup>2</sup>       |       |
|                     | wire end ferrule                       | Stripping length             | nominal                    | 14 mm |
|                     |                                        | Recommended wire-end ferrule | <a href="#">H0.75/18 W</a> |       |
|                     |                                        | Stripping length             | nominal                    | 10 mm |
|                     |                                        | Recommended wire-end ferrule | <a href="#">H0.75/10</a>   |       |
|                     | Cross-section for conductor connection | Type                         | fine-wired                 |       |
|                     |                                        | nominal                      | 1 mm <sup>2</sup>          |       |
|                     | wire end ferrule                       | Stripping length             | nominal                    | 15 mm |
|                     |                                        | Recommended wire-end ferrule | <a href="#">H1.0/18D R</a> |       |
|                     |                                        | Stripping length             | nominal                    | 10 mm |
|                     |                                        | Recommended wire-end ferrule | <a href="#">H1.0/10</a>    |       |
|                     | Cross-section for conductor connection | Type                         | fine-wired                 |       |
|                     |                                        | nominal                      | 1.5 mm <sup>2</sup>        |       |
|                     | wire end ferrule                       | Stripping length             | nominal                    | 10 mm |
|                     |                                        | Recommended wire-end ferrule | <a href="#">H1.5/10</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)                         | 13.4 A           |
| Rated current, max. number of poles (Tu=20°C)                             | 10 A                   | Rated current, min. number of poles (Tu=40°C)                         | 12 A             |
| Rated current, max. number of poles (Tu=40°C)                             | 9 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 80 A |

**Rated data acc. to CSA**

|                                   |        |                                   |        |
|-----------------------------------|--------|-----------------------------------|--------|
| Rated voltage (Use group B / CSA) | 300 V  | Rated voltage (Use group C / CSA) | 50 V   |
| Rated voltage (Use group D / CSA) | 300 V  | Rated current (Use group B / CSA) | 9.5 A  |
| Rated current (Use group C / CSA) | 9.5 A  | Rated current (Use group D / CSA) | 9.5 A  |
| Wire cross-section, AWG, min.     | AWG 26 | Wire cross-section, AWG, max.     | AWG 16 |

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**Technical data****Rated data acc. to UL 1059**

Rated voltage (Use group B / UL 1059) 300 V

Rated voltage (Use group C / UL 1059) 50 V

Rated voltage (Use group D / UL 1059) 300 V

Rated current (Use group B / UL 1059) 9.5 A

Rated current (Use group C / UL 1059) 9.5 A

Rated current (Use group D / UL 1059) 9.5 A

Wire cross-section, AWG, min. AWG 26

Wire cross-section, AWG, max. AWG 16

**Packing**

Packaging Box VPE length 338 mm

VPE width 130 mm VPE height 33 mm

**Type tests**

Test: Durability of markings

Standard

IEC 61984 section 6.2 and 7.3.2 / 10.11 taking pattern from IEC 60068-2-70 / 12.95

Test

mark of origin, type identification, pitch, type of material, date clock, approval marking UL, approval marking cULus

Evaluation

available

Test

durability

Evaluation

passed

Test: Misengagement (Non-interchangeability)

Standard

IEC 61984 section 6.3 and 6.9.1 / 10.11, IEC 60512-13-5 / 02.06

Test

180° turned without coding elements

Evaluation

passed

Test

180° turned with coding elements

Evaluation

passed

Test

visual examination

Evaluation

passed

Test: Clampable cross section

Standard

IEC 60999-1 section 7 and 9.1 / 11.99, IEC 60947-1 section 8.2.4.5.1 / 03.11

Conductor type

Type of conductor and conductor cross-section solid 0.14 mm<sup>2</sup>Type of conductor and conductor cross-section stranded 0.14 mm<sup>2</sup>Type of conductor and conductor cross-section solid 1.5 mm<sup>2</sup>Type of conductor and conductor cross-section stranded 1.5 mm<sup>2</sup>

Type of conductor and conductor cross-section AWG 26/1

Type of conductor and conductor cross-section AWG 26/19

Type of conductor and conductor cross-section AWG 16/1

Type of conductor and conductor cross-section AWG 16/19

Evaluation

passed

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**Technical data**

|                                                           |                |                                               |            |
|-----------------------------------------------------------|----------------|-----------------------------------------------|------------|
| Test for damage to and accidental loosening of conductors | Standard       | IEC 60999-1 section 9.4 / 11.99               |            |
|                                                           | Requirement    | 0.2 kg                                        |            |
|                                                           | Conductor type | Type of conductor and conductor cross-section | AWG 26/1   |
|                                                           |                | Type of conductor and conductor cross-section | AWG 26/19  |
|                                                           | Evaluation     | passed                                        |            |
|                                                           | Requirement    | 0.3 kg                                        |            |
|                                                           | Conductor type | Type of conductor and conductor cross-section | H05V-U0.75 |
|                                                           |                | Type of conductor and conductor cross-section | H05V-K0.75 |
|                                                           | Evaluation     | passed                                        |            |
|                                                           | Requirement    | 0.4 kg                                        |            |
|                                                           | Conductor type | Type of conductor and conductor cross-section | H07V-U1.5  |
|                                                           |                | Type of conductor and conductor cross-section | H07V-K1.5  |
|                                                           |                | Type of conductor and conductor cross-section | AWG 16/1   |
|                                                           |                | Type of conductor and conductor cross-section | AWG 16/19  |
|                                                           | Evaluation     | passed                                        |            |
| Pull-out test                                             | Standard       | IEC 60999-1 section 9.5 / 11.99               |            |
|                                                           | Requirement    | ≥10 N                                         |            |
|                                                           | Conductor type | Type of conductor and conductor cross-section | AWG 26/1   |
|                                                           |                | Type of conductor and conductor cross-section | AWG 26/19  |
|                                                           | Evaluation     | passed                                        |            |
|                                                           | Requirement    | ≥20 N                                         |            |
|                                                           | Conductor type | Type of conductor and conductor cross-section | H05V-U0.75 |
|                                                           |                | Type of conductor and conductor cross-section | H05V-K0.75 |
|                                                           | Evaluation     | passed                                        |            |
|                                                           | Requirement    | ≥40 N                                         |            |
|                                                           | Conductor type | Type of conductor and conductor cross-section | H07V-U1.5  |
|                                                           |                | Type of conductor and conductor cross-section | H07V-K1.5  |
|                                                           |                | Type of conductor and conductor cross-section | AWG 16/1   |
|                                                           |                | Type of conductor and conductor cross-section | AWG 16/19  |
|                                                           | Evaluation     | passed                                        |            |

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[www.weidmueller.com](http://www.weidmueller.com)**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>Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months</li></ul>                                                                                                                                                                     |

**Downloads**

|                             |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------|
| Product Change Notification | <a href="#">Change of Material LR 3.50 - DE</a><br><a href="#">Change of Material LR 3.50 - EN</a> |
| Brochure/Catalogue          | <a href="#">Catalogues in PDF-format</a>                                                           |

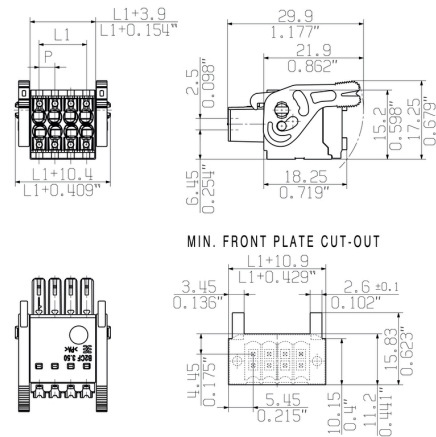
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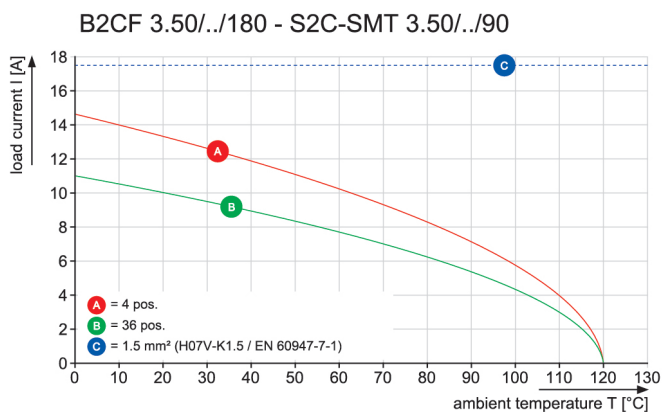
[www.weidmueller.com](http://www.weidmueller.com)

# Drawings

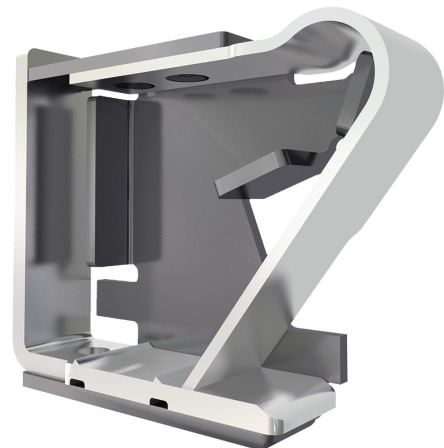
## Dimensional drawing



## Graph



## Product benefits



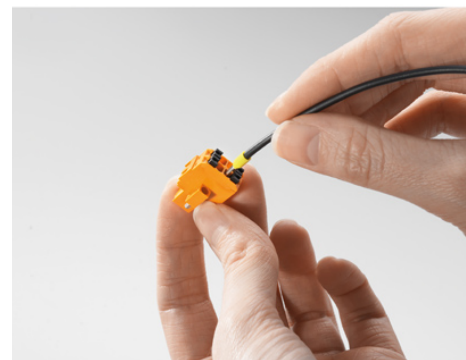
Solid PUSH IN contact  
Safe and durable

## Product benefits



Large connection cross-section  
Up to 1.5 mm possible with ease

## Product benefits



Fast PUSH IN connection  
Tool-free and touch-safe

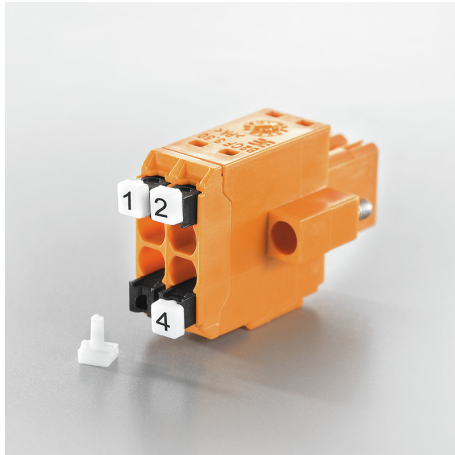
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# Drawings

## Product benefits



Clear marking  
Unique designation

## Example of use

