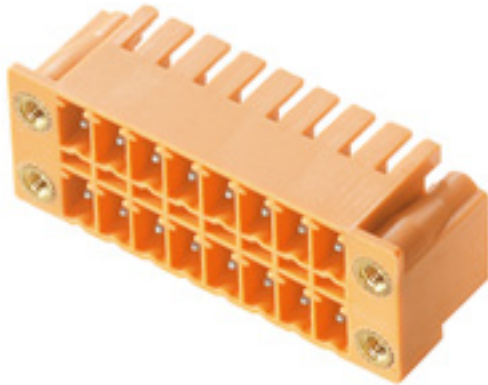


## OMNIMATE Signal - series BC/SC 3.81 SCDN 3.81/20/90F 3.2SN OR BX

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 16  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
www.weidmueller.com



Extra flat two-tier SCDN pin header for wave soldering.

- Two compact interfaces are used with the flat BCF 3.81 (PUSH IN) socket block.
- Available as 90° (recumbent).
- Connections on a single level, allowing access that is flush over the front board.
- Space for labelling and coding
- Packed in cardboard box.

Weidmüller's 3.81-mm-pitch (0.15 inch) plug-in connectors are compatible with the layouts of standard connectors and offer space for labelling and coding.

### General ordering data

|              |   |
|--------------|---|
| Type         | SCDN 3.81/20/90F 3.2SN OR BX  |
| Order No.    | <a href="#">1041040000</a>  |
| Version      | PCB plug-in connector, male header, Flange, THT solder connection, 3.81 mm, No. of poles: 20, 90°, Solder pin length (l): 3.2 mm, tinned, Orange, Box |
| GTIN (EAN)   | 4032248769889   |
| Qty.         | 50 pc(s).   |
| Product data | IEC: 320 V / 17.5 A<br>UL: 300 V / 10 A   |
| Packaging    | Box   |

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

Net weight 8.02 g

**System specifications**

| Product family                             | OMNIMATE Signal - series BC/SC 3.81 | Type of connection                           | Board connection       |
|--|-------------------------------------|--|------------------------|
| Mounting onto the PCB                      | THT solder connection               | Pitch in mm (P)                              | 3.81 mm                |
| Pitch in inches (P)                        | 0.15 inch                           | Outgoing elbow                               | 90°                    |
| No. of poles                               | 20                                  | Number of solder pins per pole               | 1                      |
| Solder pin length (l)                      | 3.2 mm                              | Solder pin length tolerance                  | +0,02 / -0,02 mm       |
| Tolerance of solder pin position           | ± 0.15 mm                           | Solder pin dimensions                        | d = 1.0 mm, Octagonal  |
| Solder pin dimensions = d tolerance        | 0 / -0,03 mm                        | Solder eyelet hole diameter (D)              | 1.2 mm                 |
| Solder eyelet hole diameter tolerance (D)  | + 0,1 mm                            | L1 in mm                                     | 34.29 mm               |
| L1 in inches                               | 1.35 inch                           | Number of rows                               | 2                      |
| Pin series quantity                        | 2                                   | Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch |
| Touch-safe protection acc. to DIN VDE 0470 | IP 20                               | Volume resistance                            | 6.00 mΩ                |
| Can be coded                               | Yes                                 | Plugging cycles                              | 25                     |
| Packaging                                  | Box                                 |  |                        |

**Material data**

| Insulating material                   | PA GF    | Colour                                | Orange              |
|---------------------------------------|----------|---------------------------------------|---------------------|
| Colour chart (similar)                | RAL 2000 | Insulating material group             | II                  |
| CTI                                   | ≥ 550    | Insulation resistance                 | ≥ 10 <sup>8</sup> Ω |
| UL 94 flammability rating             | V-0      | Contact material                      | Copper alloy        |
| Contact surface                       | tinned   | Storage temperature, min.             | -25 °C              |
| Storage temperature, max.             | 55 °C    | Max. relative humidity during storage | 80 %                |
| Operating temperature, min.           | -50 °C   | Operating temperature, max.           | 120 °C              |
| Temperature range, installation, min. | -25 °C   | Temperature range, installation, max. | 120 °C              |

**Rated data acc. to IEC**

|   |                        |   |                  |
|---|------------------------|---|------------------|
| tested acc. to standard   | IEC 60664-1, IEC 61984 | Rated current, min. no. of poles (Tu=20°C)                            | 17.5 A           |
| Rated current, max. no. of poles (Tu=20°C)                                | 13.2 A                 | Rated current, min. no. of poles (Tu=40°C)                            | 17 A             |
| Rated current, max. no. of poles (Tu=40°C)                                | 12.2 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 76 A |

**Rated data acc. to CSA**

|                             |       |                             |       |
|-----------------------------|-------|-----------------------------|-------|
| Rated voltage (Use group B) | 300 V | Rated voltage (use group D) | 300 V |
| Rated current (use group B) | 11 A  | Rated current (use group D) | 11 A  |

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**Technical data**

**Rated data acc. to UL 1059**

Institute (cURus)



Certificate No. (cURus)

E60693

|                              |  |                             |       |
|------------------------------|--|-----------------------------|-------|
| Rated voltage (use group B)  | 300 V  | Rated voltage (use group D) | 300 V |
| Rated current (use group B)  | 10 A   | Rated current (use group D) | 10 A  |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. |                             |       |

**Classifications**

|            |             |            |             |
|------------|-------------|------------|-------------|
| ETIM 4.0   | EC002637    | ETIM 5.0   | EC002637    |
| ETIM 6.0   | EC002637    | eClass 6.2 | 27-26-07-04 |
| eClass 7.1 | 27-44-04-02 | eClass 8.1 | 27-44-04-02 |
| eClass 9.0 | 27-44-04-02 | eClass 9.1 | 27-44-04-02 |

**Notes**

Notes

- Additional colours on request
- Rated current related to rated cross-section & min. No. of poles.
- 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.
- P on drawing = pitch

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

**Data sheet****OMNIMATE Signal - series BC/SC 3.81  
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**Technical data****Downloads**

Approval/Certificate/Document of  
Conformity

[Declaration of the Manufacturer](#)

Brochure/Catalogue

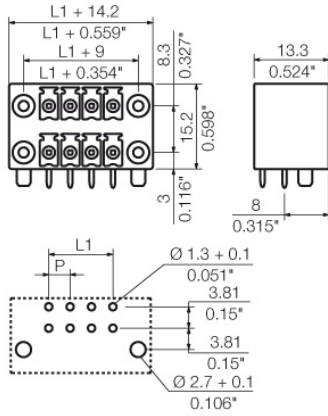
[FL DRIVES EN](#)  
[MB DEVICE MANUF. EN](#)  
[FL DRIVES DE](#)  
[CAT 2 PORTFOLIOGUIDE EN](#)  
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[PO OMNIMATE EN](#)

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**Drawings**

**Dimensional drawing**



## Recommended wave soldering profiles

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### Single Wave:



### Double Wave:



### Wave soldering profiles

Wired connection elements should be processed in accordance with the DIN EN 61760-1 standard. We have included two recommendations for practical wave soldering profiles, with which Weidmüller PCB terminals and connectors are qualified.

When choosing a suitable profile for your application, the following factors also need to be considered:

- PCB thickness
- Proportion of Cu in the layers
- Single/double-sided assembly
- Product range
- Heating and cooling rates

The single and double wave profiles each indicate the recommended operating range, including the maximum soldering temperature of 260°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.