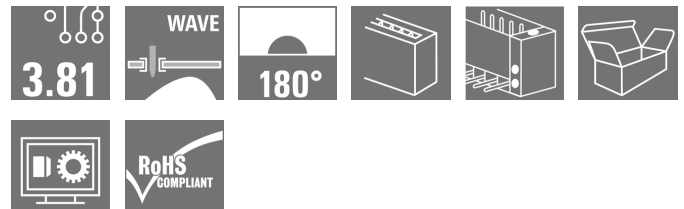


**OMNIMATE Signal - series BC/SC 3.81  
SC 3.81/06/180F 3.2SN BK BX**

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



The SC pin header has a perpendicular (standing) plugging direction in relation to the PCB. It is available in closed (G) and screw flange (F) versions. 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         | SC 3.81/06/180F 3.2SN BK BX                                                                                                                          |
| Order No.    | <a href="#">1793740000</a>                                                                                                                           |
| Version      | PCB plug-in connector, male header, Flange, THT solder connection, 3.81 mm, No. of poles: 6, 180°, Solder pin length (l): 3.2 mm, tinned, Black, Box |
| GTIN (EAN)   | 4032248230860                                                                                                                                        |
| Qty.         | 50 pc(s).                                                                                                                                            |
| Product data | IEC: 320 V / 17.5 A<br>UL: 300 V / 10 A                                                                                                              |
| Packaging    | Box                                                                                                                                                  |

# OMNIMATE Signal - series BC/SC 3.81

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## Technical data

### Dimensions and weights

|            |        |
|------------|--------|
| Net weight | 2.78 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                               | 180°                   |
| No. of poles                               | 6                                   | Number of solder pins per pole               | 1                      |
| Solder pin length (l)                      | 3.2 mm                              | Solder pin length tolerance                  | 0 / -0,02 mm           |
| Tolerance of solder pin position           | ± 0.1 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                                     | 19.05 mm               |
| L1 in inches                               | 0.75 inch                           | Number of rows                               | 1                      |
| Pin series quantity                        | 1                                   | 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                                | Black               |
| Colour chart (similar)                | RAL 9011 | 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)                                | 17.1 A                 | Rated current, min. no. of poles (Tu=40°C)                            | 17.5 A           |
| Rated current, max. no. of poles (Tu=40°C)                                | 17.1 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 |

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**Technical data****Rated data acc. to CSA**

Institute (CSA)



Certificate No. (CSA)

200039-1121690

Rated voltage (Use group B)

300 V

Rated current (use group B)

8 A

Reference to approval values

Specifications are maximum values, details - see approval certificate.

**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 3.0

EC001284

ETIM 4.0

EC002637

ETIM 5.0

EC002637

ETIM 6.0

EC002637

UNSPSC

30-21-18-10

eClass 5.1

27-26-07-04

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
- For additional mechanical support for male connectors with screw flange (...F), we recommend an additional cable gland with fastening screws (sheet metal screw ISO 1481-ST 2.2x4.5 C or ISO 7049-ST 2.2x4.5 C - see Accessories). Cable gland only permitted before soldering.
- 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

Creation date July 2, 2018 11:35:37 AM CEST

### OMNIMATE Signal - series BC/SC 3.81 SC 3.81/06/180F 3.2SN BK BX

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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](#)  
[FL BUILDING SAFETY EN](#)  
[FL APPL LED LIGHTING EN](#)  
[FL INDUSTR.CONTROLS EN](#)  
[FL MACHINE SAFETY EN](#)  
[FL HEATING ELECTR EN](#)  
[FL APPL INVERTER EN](#)  
[FL BASE STATION EN](#)  
[FL ELEVATOR EN](#)  
[FL POWER SUPPLY EN](#)  
[FL 72H SAMPLE SER EN](#)  
[PO OMNIMATE EN](#)

Engineering Data

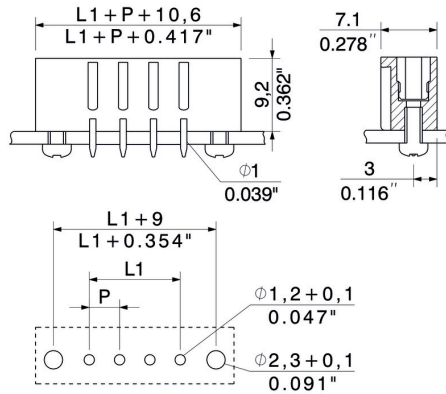
[EPLAN, WSCAD](#)

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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.

We reserve the right to make technical changes.