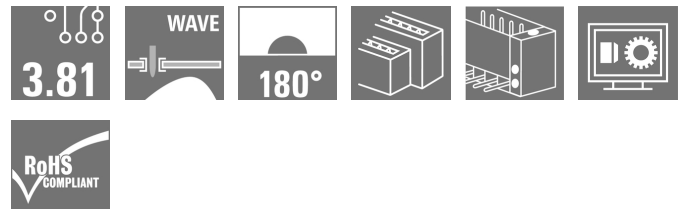


## OMNIMATE Signal - series BC/SC 3.81 SCD 3.81/18/180F 3.2SN BK BX

**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



Two-tier SCD pin header for wave soldering.

- It allows you to use two interfaces on only one surface and with only one step in the work flow.
- Outlet direction: 180° (standing).
- Connections at the same level and with 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	SCD 3.81/18/180F 3.2SN BK BX
Order No.	<a href="#">1030860000</a>
Version	PCB plug-in connector, male header, Flange, THT solder connection, 3.81 mm, Number of poles: 18, 180°, Solder pin length (l): 3.2 mm, tinned, black, Box
GTIN (EAN)	4032248759958
Qty.	50 pc(s).
Product data	IEC: 320 V / 17.5 A UL: 300 V / 10 A
Packaging	Box

Creation date May 1, 2020 8:30:11 AM CEST

## OMNIMATE Signal - series BC/SC 3.81 SCD 3.81/18/180F 3.2SN BK 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

## Technical data

### Dimensions and weights

Width	44.68 mm	Width (inches)	1.759 inch
Height	25.1 mm	Height (inches)	0.988 inch
Height of lowest version	21.9 mm	Depth	22.7 mm
Depth (inches)	0.894 inch	Net weight	16.765 g

### Environmental Product Compliance

REACH SVHC Lead 7439-92-1

### 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°		
Number of poles	18		
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	± 0.1 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	30.48 mm		
L1 in inches	1.2 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	≤ 5mΩ		
Can be coded	Yes		
Plugging cycles	25		
Plugging force/pole, max.	8 N		
Pulling force/pole, max.	5.5 N		
Tightening torque	Torque type	PCB, Screw flange	
	Usage information	Tightening torque	min. 0.15 Nm max. 0.2 Nm
		Recommended screw	Part number <a href="#">PTSC KA 2.2X4.5 WN1412</a>

**OMNIMATE Signal - series BC/SC 3.81  
SCD 3.81/18/180F 3.2SN BK 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

**Technical data****Material data**

Insulating material	PA GF	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 550	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.	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. number of poles (Tu=20°C)	17.5 A
Rated current, min. number of poles (Tu=40°C)	17 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 / CSA)	300 V	Rated current (Use group B / CSA)	11 A
-----------------------------------	-------	-----------------------------------	------

**Rated data acc. to UL 1059**

Institute (cURus)		Certificate No. (cURus)	E60693
Rated voltage (Use group B / UL 1059)	300 V	Rated voltage (Use group D / UL 1059)	300 V
Rated current (Use group B / UL 1059)	10 A	Rated current (Use group D / UL 1059)	10 A
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

**Packing**

Packaging	Box	VPE length	25 mm
VPE width	235 mm	VPE height	260 mm

**Classifications**

ETIM 6.0	EC002637	ETIM 7.0	EC002637
eClass 9.0	27-44-04-02	eClass 9.1	27-44-04-02
eClass 10.0	27-44-04-02		

**OMNIMATE Signal - series BC/SC 3.81  
SCD 3.81/18/180F 3.2SN BK 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

**Technical data****Notes**

Notes	<ul style="list-style-type: none"> <li>• Additional colours on request</li> <li>• Rated current related to rated cross-section &amp; min. No. of poles.</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>• 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>• For additional mechanical support for male connectors with screw flange (...F), we recommend an additional cable gland with fastening screws (sheet metal screw ISO 148 1-ST 2.2x4.5 C or ISO 7049-ST 2.2x4.5 C – see Accessories). Cable gland only permitted before soldering.</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



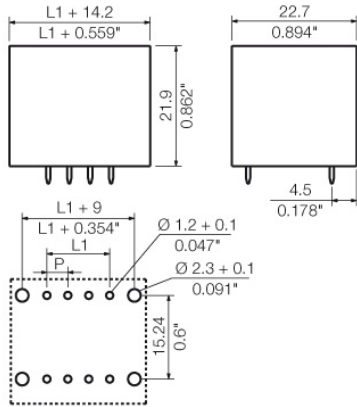
ROHS Conform

**Downloads**

Approval/Certificate/Document of Conformity	<a href="#">Declaration of the Manufacturer</a>
Brochure/Catalogue	<a href="#">FL DRIVES EN</a> <a href="#">MB DEVICE MANUF. EN</a> <a href="#">FL DRIVES DE</a> <a href="#">CAT 2 PORTFOLIOGUIDE EN</a> <a href="#">FL BUILDING SAFETY EN</a> <a href="#">FL APPL LED LIGHTING EN</a> <a href="#">FLIndustr.CONTROLS EN</a> <a href="#">FL MACHINE SAFETY EN</a> <a href="#">FL HEATING ELECTR EN</a> <a href="#">FL APPL INVERTER EN</a> <a href="#">FL_BASE_STATION_EN</a> <a href="#">FL ELEVATOR EN</a> <a href="#">FL POWER SUPPLY EN</a> <a href="#">FL 72H SAMPLE SER EN</a> <a href="#">PO OMNIMATE EN</a>
Engineering Data	<a href="#">EPLAN, WSCAD</a>
Engineering Data	<a href="#">STEP</a>
Product Change Notification	<a href="#">Change of packaging - DE</a> <a href="#">Change of packaging - EN</a>

**OMNIMATE Signal - series BC/SC 3.81  
SCD 3.81/18/180F 3.2SN BK 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

**Drawings****Dimensional drawing**

## OMNIMATE Signal - series BC/SC 3.81 SCD 3.81/18/180F 3.2SN BK 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

# Accessories

## Coding elements



### Only connects what is supposed to be connected: the right connection at the right place.

Coding elements and locking devices clearly assign connecting elements during the manufacturing process and operation

The coding elements and locking devices are inserted prior to assembly or during the cable assembly phase. The Weidmüller alternative: configure online using the variant configurator to precode prior to delivery.

Incorrect assembly on the circuit board and incorrect plugging of connecting elements is no longer possible. The advantage: no troubleshooting during manufacture and no operational errors by the user.

### General ordering data

Type	SC-SMT 3.81 KO GY BX	Version	Product data	Packaging
Order No.	<a href="#">1968900000</a>	PCB plug-in connector, Accessories, Coding element, grey, Number of		Box
GTIN (EAN)	4032248772865	poles: 6		
Qty.	100 pc(s).			

## Additional accessories



### No task is too small when creating the perfect solution.

Connections form just one part of the overall process. Small details are often the key to the perfect solution in applications where potentials are tested, grouped or even isolated.

A system is not a system without small but useful details:

- Test plugs - ensure reliable pick-up from diagnostic sockets
- Cross-connectors - ensure a stable electrical distribution contact directly at the connection
- Compartment partition elements - divide a large number of male connectors into several separate socket connector channels
- Locks and clips - optional vibration-resistant clip-on connection or mounting for male and female connectors

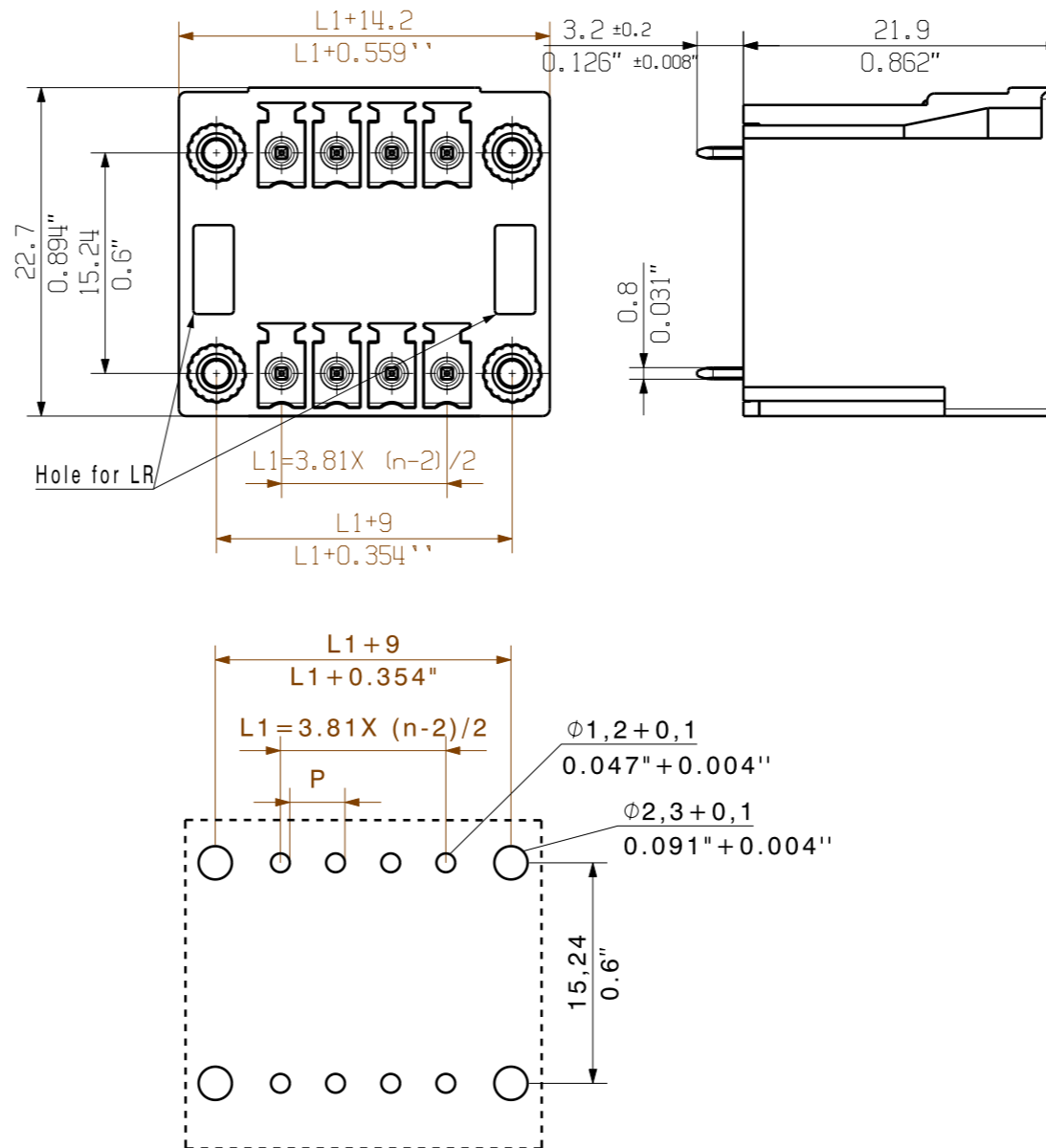
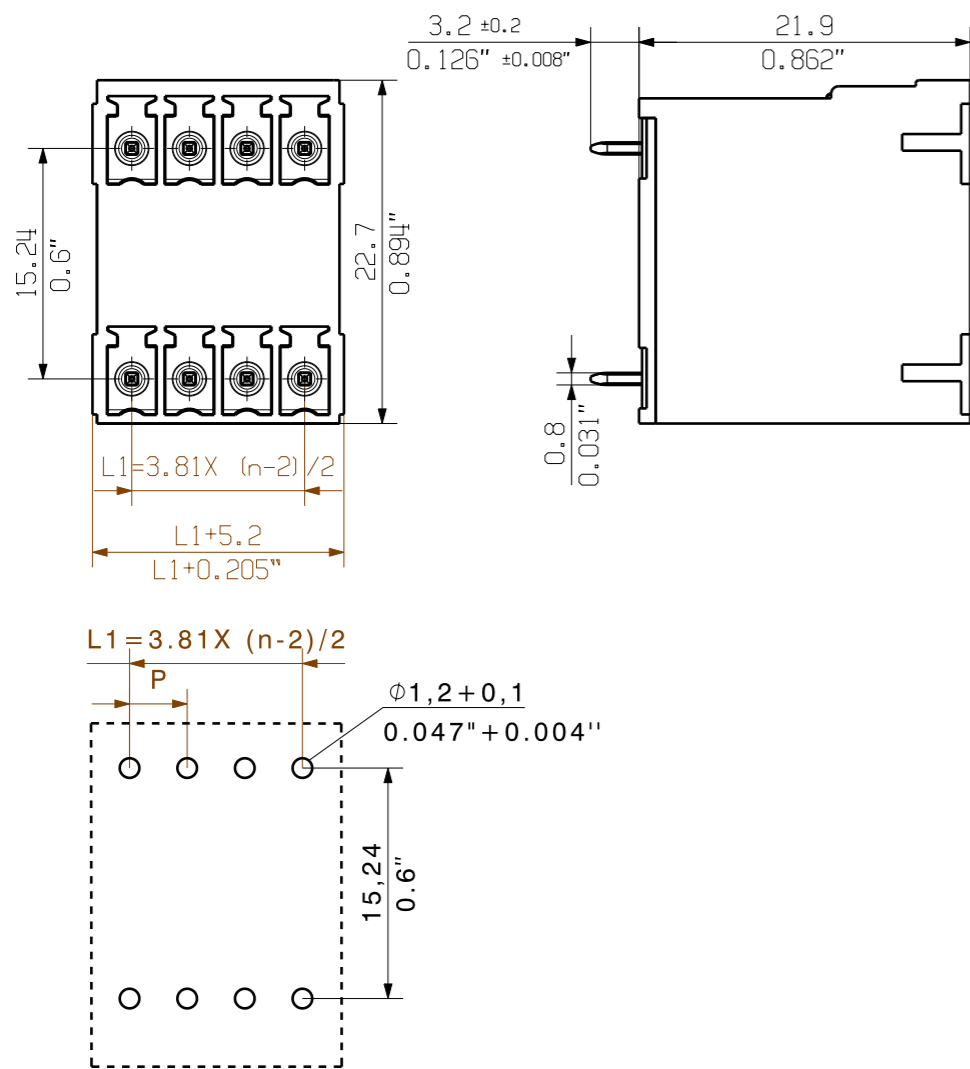
In tandem with the manufacturing process and application - more accessories = smaller workload

### General ordering data

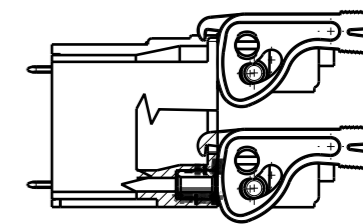
Type	PTSC KA 2.2X4.5 WN1412	Version	Product data
Order No.	<a href="#">1610740000</a>	PCB plug-in connector, Accessories, Mounting screw, Number of	
GTIN (EAN)	4008190039523	poles: 1	
Qty.	100 pc(s).		

04

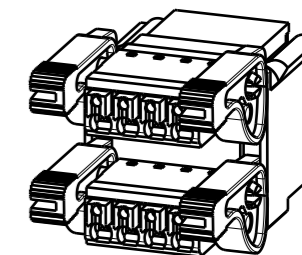
SCD 3.81/.../180G 3.2...



SCD 3.81/.../180F 3.2...  
WITH  
BCF 3.81/.../180 LR



SCD 3.81/.../180F 3.2...  
WITH  
BCF 3.81/.../180 LR  
M 1/1



NOTE:

n=NO OF POLES  
P=PITCH

KUNDENZEICHUNG  
CUSTOMER DRAWING

For the mounting of PCBs, it should be noted that the rated data stated here relates only to the PCB components alone.

The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to IEC 664 / VDE 0110.

The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller PCB components are tested to the DIN EN 61984 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.

16	57.15	2.250
15	53.34	2.100
14	49.53	1.950
13	45.72	1.800
12	41.91	1.650
11	38.10	1.500
10	34.29	1.350
9	30.48	1.200
8	26.67	1.050
7	22.86	0.900
6	19.05	0.750
5	15.24	0.600
4	11.43	0.450
3	7.62	0.300
2	3.81	0.150
n	L1 [mm]	L1 [inch]

GENERAL TOLERANCE: DIN ISO 2768-m		99958/4 06.03.18 MA_J		01		Cat.no.:	
RoHS COMPLIANT Max. nos.		Modification		Weidmüller		C 46286 04	
Scale: 5/1		Date		Name		Drawing no. Issue no.	
Supersedes: .		08.01.2009		GE_G		Sheet 01 of 02 sheets	
		14.03.2018		ZHOU_N		Product file: SCD 3.81	
		XU_S				7079	

SCD... 3.81/.../180...  
THR-LOETANSCHLUSS STIFTLISTE  
THR SOLDER CONNECTION PIN HEADER

The reproduction, distribution and utilization of this document as well as the communication of its contents to others without explicit authorization is prohibited. Offenders will be held liable for the payment of damages. Weidmüller exclusively reserves the right to file for patents, utility models or designs.

© Weidmüller Interface GmbH & Co. KG

## Recommended wave soldering profiles

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

### 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.