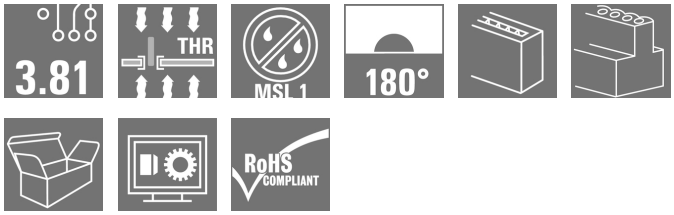
BCL-SMT 3.81/10/180 1.5SN BK BX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

Product image



The inverted BCL-SMT socket block for the PCB offers three significant advantages:
- The BCL-SMT offers touch-safe security on the PCB which makes it ideal for live, current-carrying outputs.
- The BCL-SMT widens the range of applications with board-to-board connections between component assemblies.
- The BCL-SMT is reflow-compatible and can be seamlessly integrated into the automatic assembly and soldering process.

Two outlet directions give you a choice of position and thus more design flexibility.
- 180° standing
- 90° recumbent

Two housing variants are available for the BCL-SMT:
- Without flange
- With inverted solder flange ("LFI", with nut)
- • Fastened to PCB without additional screw
  • Fastened with screw to the SCZ FI

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

General ordering data

Version	PCB plug-in connector, female header, closed side, THT/THR solder connection, 3.81 mm, Number of poles: 10, 180°, Solder pin length (l): 1.5 mm, tinned, black, Box
Order No.	1976610000
Type	BCL-SMT 3.81/10/180 1.5SN BK BX
GTIN (EAN)	4032248679065
Qty.	50 pc(s).
Product data	IEC: 320 V / 17.5 A UL: 300 V / 10 A
Packaging	Box

BCL-SMT 3.81/10/180 1.5SN BK BX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

Technical data

Dimensions and weights

Net weight	4.26 g

System specifications

Product family	OMNIMATE Signal - series BC/SC 3.81	Type of connection	Board connection
Mounting onto the PCB	THT/THR solder connection	Pitch in mm (P)	3.81 mm
Pitch in inches (P)	0.15 inch	Outgoing elbow	180°
Number of poles	10	Number of solder pins per pole	2
Solder pin length (l)	1.5 mm	Solder pin length tolerance	0 / -0,02 mm
Solder pin dimensions	d = 0.8 mm	Solder pin dimensions = d tolerance	+0,05 / -0,05 mm
Solder eyelet hole diameter (D)	1.2 mm	Solder eyelet hole diameter tolerance (D)	+ 0,1 mm
Outside diameter of solder pad	1.9 mm	Template aperture diameter	1.6 mm
L1 in mm	34.29 mm	L1 in inches	1.35 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	≤5 mΩ	Can be coded	Yes
Plugging force/pole, max.	9.5 N	Pulling force/pole, max.	6 N

Material data

Insulating material	LCP GF	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 175	Moisture Level (MSL)	1
UL 94 flammability rating	V-0	Contact material	Copper alloy
Contact surface	tinned	Layer structure of solder connection	1...3 µm Ni / 2...4 µm Sn matt
Layer structure of plug contact	1...3 µm Ni / 2...4 µm Sn matt	Storage temperature, min.	-40 °C
Storage temperature, max.	70 °C	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, max. number of poles (Tu=20°C)	15.4 A	Rated current, min. number of poles (Tu=40°C)	17.5 A
Rated current, max. number of poles (Tu=40°C)	13.8 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 voltage (Use group C / CSA)	50 V
Rated current (Use group B / CSA)	11 A	Rated current (Use group C / CSA)	11 A

BCL-SMT 3.81/10/180 1.5SN BK BX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

Technical data

Packing

Packaging	Box	VPE length	208 mm
VPE width	120 mm	VPE height	24 mm

Classifications

ETIM 6.0	EC002637	ETIM 7.0	EC002637
ETIM 8.0	EC002637	ECLASS 9.0	27-44-04-02
ECLASS 9.1	27-44-04-02	ECLASS 10.0	27-44-04-02
ECLASS 11.0	27-46-02-01	ECLASS 12.0	27-46-02-01

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	• Rated current related to rated cross-section & min. No. of poles. • P on drawing = pitch • 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. • Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

Approvals

Approvals	c US EAC
ROHS	Conform
UL File Number Search	UL Website
Certificate No. (cURus)	E60693

BCL-SMT 3.81/10/180 1.5SN BK BX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

Technical data

Downloads

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Engineering Data	CAD data – STEP
Engineering Data	EPLAN, WSCAD
Catalogues	Catalogues in PDF-format
Brochures	FL DRIVES EN MB SMT EN FL DRIVES DE MB DEVICE MANUF. 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 PO OMNIMATE EN
White paper surface mount technology	Download Whitepaper

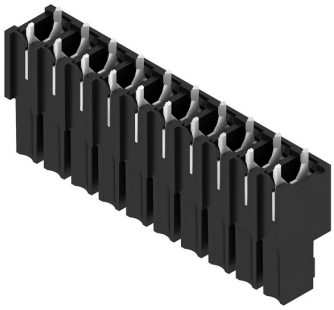
BCL-SMT 3.81/10/180 1.5SN BK BX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

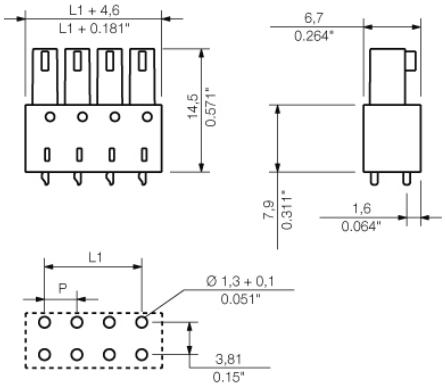
www.weidmueller.com

Drawings

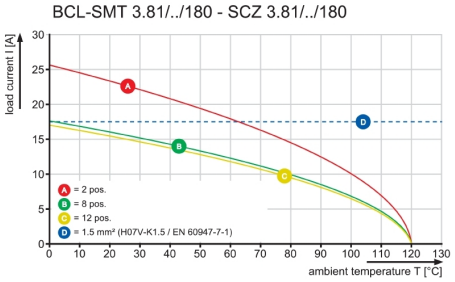
Product image



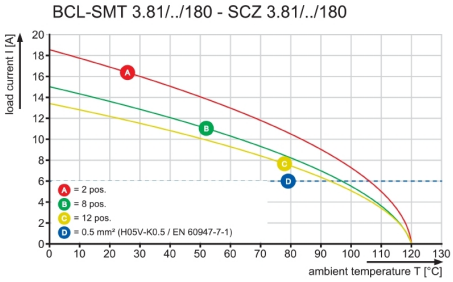
Dimensional drawing



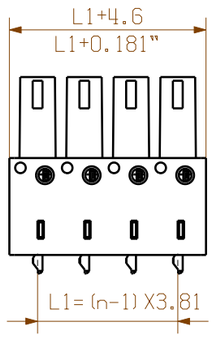
Graph

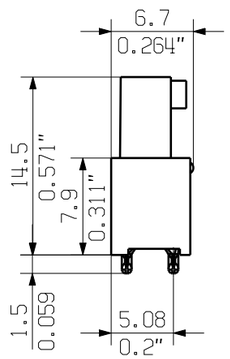


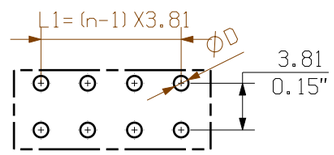
Graph

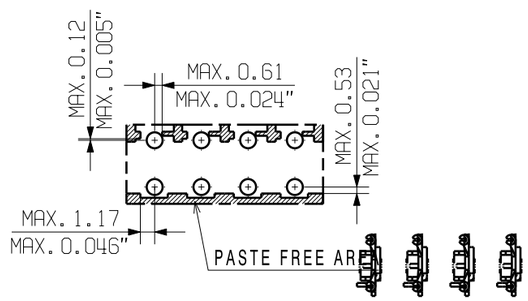


BCL-SMT 3.81/.../180 1.5...

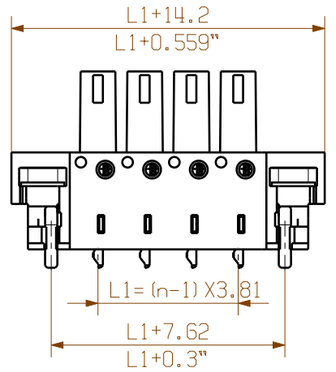


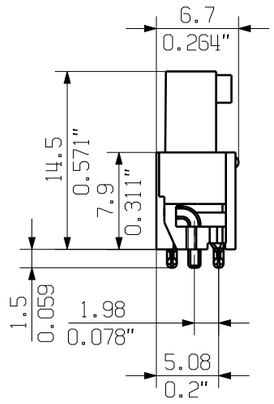


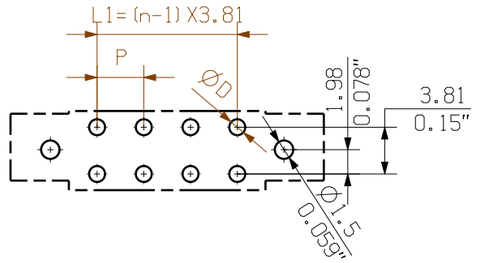


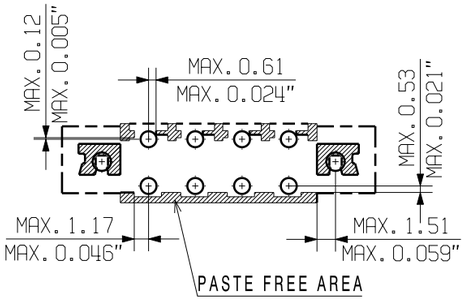


BCL-SMT 3.81/.../180LFI 1.5...









NOTE:

n=NO OF POLES
P=PITCH

KUNDENZEICHNUNG
CUSTOMER DRAWING

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]

For the mounting of PCBs, it should be noted that the rated data given in the catalogue relates only to the connection elements. The neccessary 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 connectors are used to the intended purpose, all requirements with respect to the occuring of electrical, mechanical, thermic and corrosive stress will be satisfied.

	62605/5 28.08.12 SHI_S	00	CAT.NO.: .
	MODIFICATION		Weidmüller
			C 40405 04
			DRAWING NO. ISSUE NO.
		DATE	NAME
	DRAWN	19.02.2008	SHI_S
SCALE: 2/1	RESPONSIBLE		XU_S
SUPERSEDES: .	CHECKED	29.08.2012	ZHOU_N
SUPERSEDED BY: .	APPROVED		XU_S

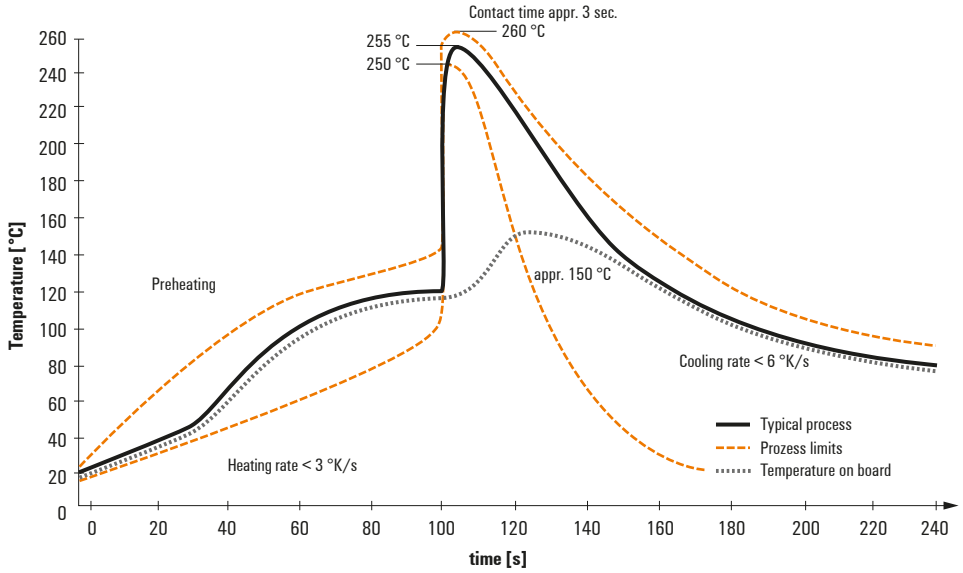
BCL-SMT 3.81/.../180...1.5...
LOETANSCHLUSS BUCHSENLEISTE
SOLDER CONNECTION SOCKET CONNECTOR
PRODUCT FILE: BCL-SMT 3.81 7084

Wave Solder Profile

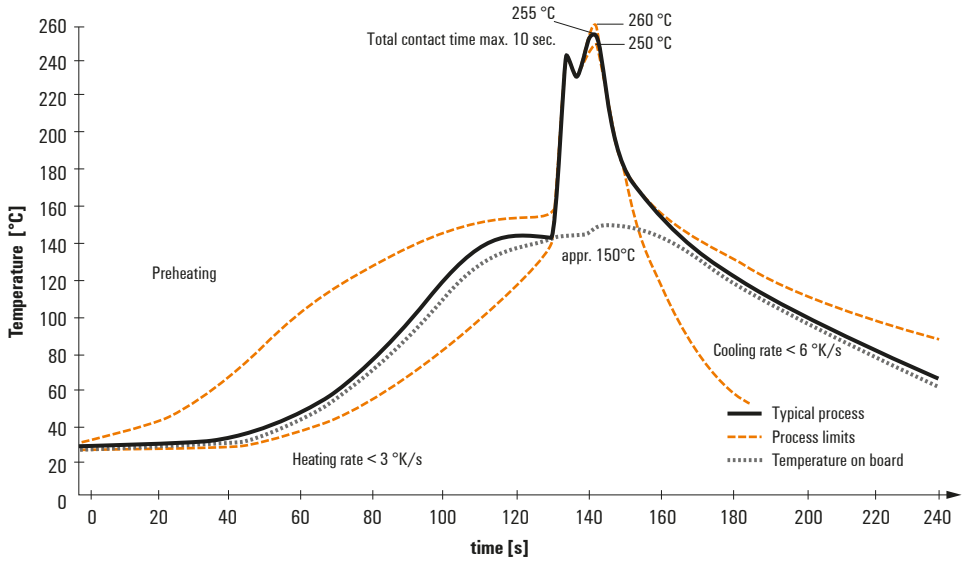
Recommended wave solderding profiles

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 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.

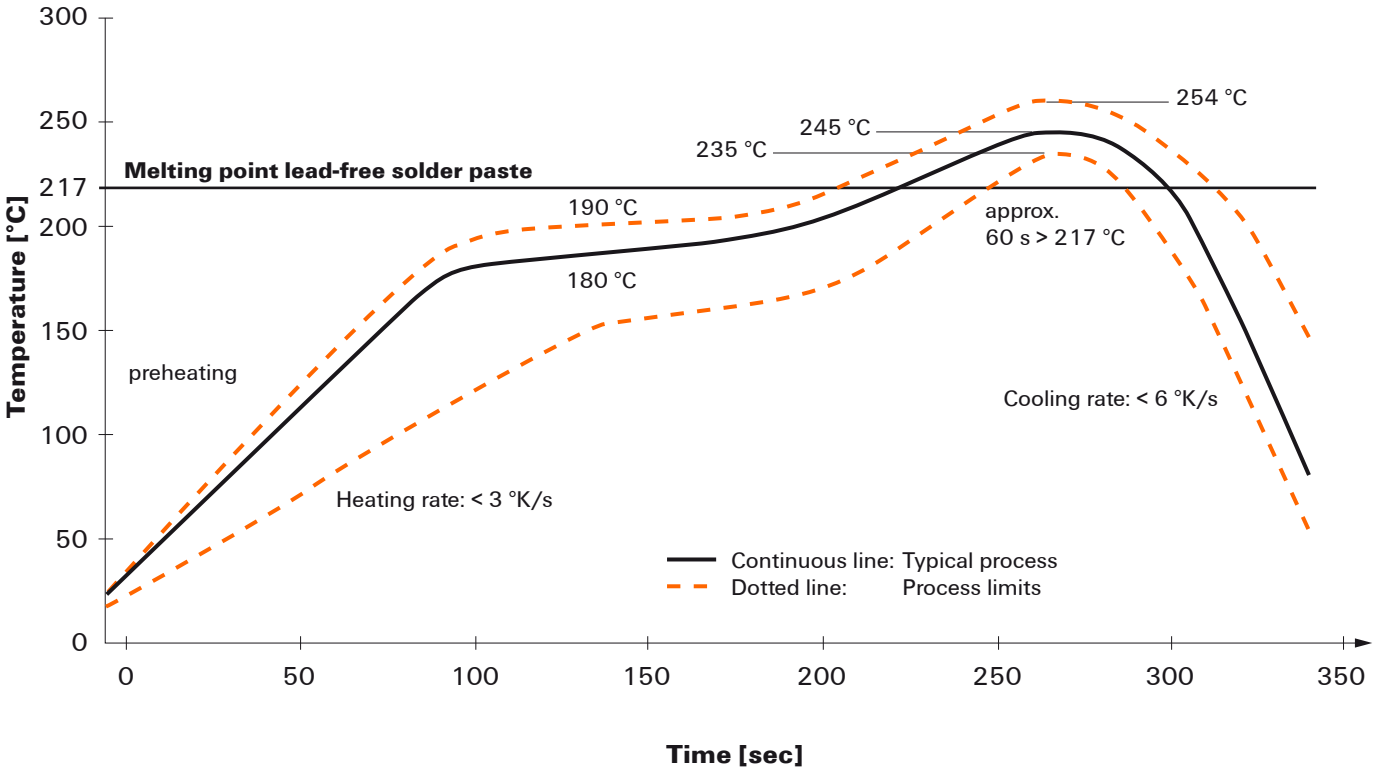
When choosing a suitable profile for your application, the following factors also need to be considered:
- PCB thickness
- Proportion of Cu in the layers
- Single/double-sided assembly
- Product range
- Heating and cooling rates

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.

Reflow Solder Profile

Recommended reflow soldering profile

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



Reflow soldering profile

The perfect soldering profile for SMT Surface Mount Technology is one the most exiting question in SMT production. But there are more than one correct answer: The diagram of temperature-on-time is related to processing features of solder paste and to maximum load of components.

We have to consider the following parameters:
- Time for pre heating
- Maximum temperature
- Time above melting point
- Time for cooling
- Maximum heating rate
- Maximum cooling rate

We recommend a typical solder profile with associated process limits. With preheating components and board are prepared smoothly for the solder phase. Heating rate is typically ≤ +3K/s. In parallel the solder paste is ‚activated'. The time above melting point of 217°C the paste gets liquid and components and boards begin to connect. The maximum temperature of 245°C to 254°C should stay between 10 and 40 seconds. In the cooling phase at ≥ -6K/s solder is cured. Board and components cool down while avoiding cold cracks.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Terminal Block Interface Modules ***category:***

Click to view products by Weidmuller ***manufacturer:***

Other Similar products are found below :

GCN1MX25B DIN-50P-01 DIN-68H-01 DIN-96DI-01 FLKM-2I/O TB ML 3P ST D5.08 5601749 5541962 1776613-1 GCN1-004A MINI MCR-2-PTB UM 25-D 9SUB/B/FRONT/Q MINI MCR-2-RTD-UI-PT MINI MCR-2-UI-REL-PT MINI MCR-2-POT-UI-PT MINI MCR-2-F-UI-PT MACX MCR-VAC 5775235 ADAM-3956-BE 7760054354 UM 45-D50SUB/B/ZFKDS MCR-SLP-1/5-UI-0 TB-6231-01 5541234 410-261 5521322 2902003 208BR 5604835 2281678 2294490 2302913 2304445 2311344 2314260 2314273 2316311 2316312 2316372 2319427 2321981 2904286 2904289 2903910 2688093 2701518 2701540 2701505 2701507 2701528