

## OMNIMATE Signal - series BC/SC 3.81 BCL-SMT 3.81/06/180 1.5SN BK BX

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### Product image



Similar to illustration

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.

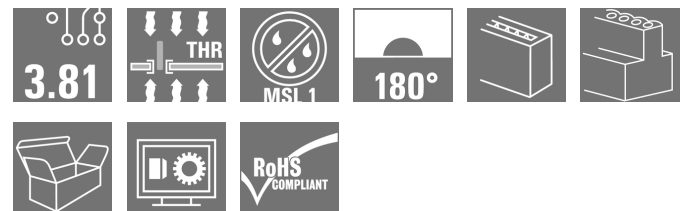
Two outlet directions give you a choice of position and thus more design flexibility.

- 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

Type	BCL-SMT 3.81/06/180 1.5SN BK BX
Order No.	<a href="#">1976550000</a>
Version	PCB plug-in connector, female header, closed side, THT/THR solder connection, 3.81 mm, Number of poles: 6, 180°, Solder pin length (l): 1.5 mm, tinned, black, Box
GTIN (EAN)	4032248679027
Qty.	50 pc(s).
Product data	IEC: 320 V / 17.5 A UL: 300 V / 10 A
Packaging	Box

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BCL-SMT 3.81/06/180 1.5SN BK BX**

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

Net weight	2.72 g
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**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	6	Number of solder pins per pole	2
Solder pin length (l)	1.5 mm	Solder pin length tolerance	0 / -0,02 mm
Tolerance of solder pin position	± 0.1 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	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	≤ 5mΩ
Can be coded	Yes	Plugging cycles	25
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	Insulation strength	≥ 10 <sup>8</sup> Ω
Moisture Level (MSL)	1	UL 94 flammability rating	V-0
GWIT	930 °C	GWFI	960 °C
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.	-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, 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

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## Technical data

### 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

### 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	22 mm
VPE width	118 mm	VPE height	135 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	UNSPSC	30-21-18-01

### Notes

Notes	<ul style="list-style-type: none"> <li>Rated current related to rated cross-section &amp; min. No. of poles.</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> </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

## Data sheet

### OMNIMATE Signal - series BC/SC 3.81 BCL-SMT 3.81/06/180 1.5SN BK BX

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## Technical data

### Downloads

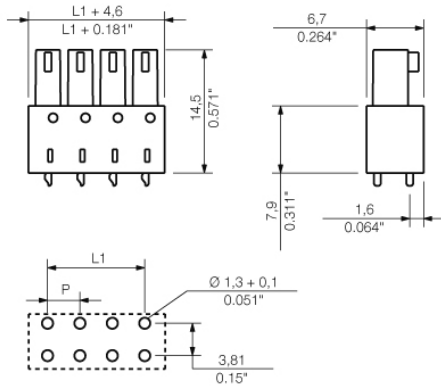
Approval/Certificate/Document of Conformity	<a href="#">Declaration of the Manufacturer</a>
Brochure/Catalogue	<a href="#">FL DRIVES EN</a> <a href="#">MB SMT EN</a> <a href="#">FL DRIVES DE</a> <a href="#">MB DEVICE MANUF. EN</a> <a href="#">CAT 2 PORTFOLIOGUIDE EN</a> <a href="#">FL BUILDING SAFETY 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>
White paper surface mount technology	<a href="#">Download Whitepaper</a>

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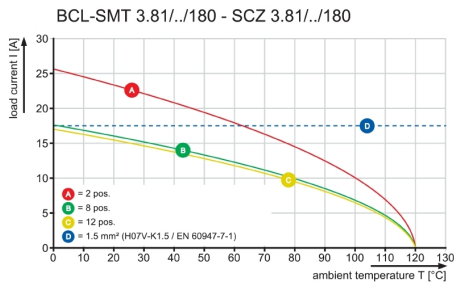
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**Drawings**

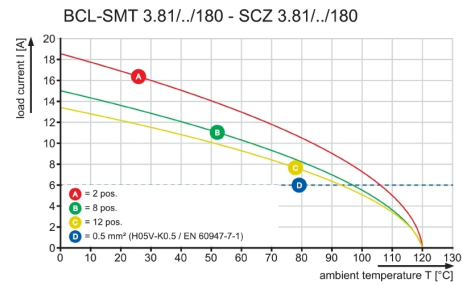
**Dimensional drawing**



**Graph**



**Graph**



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### Mating connector (fully pluggable)

#### SCDV 3.81/90G



Two-tier SCDV 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: 90° (recumbent)
- Connections at two offset levels and with open access to each row.
- 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	SCDV 3.81/12/90G 3.2SN ...	Version	Product data	Packaging
Order No.	<a href="#">1032470000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248771745	connection, 3.81 mm, Number of poles: 12, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, black, Box		
Type	SCDV 3.81/12/90G 3.2SN ...	Version	Product data	Packaging
Order No.	<a href="#">1032140000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248771448	connection, 3.81 mm, Number of poles: 12, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, orange, Box		
Type	SCDV 3.81/12/90G 3.2SN ...	Version	Product data	Packaging
Order No.	<a href="#">1032310000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248771592	connection, 3.81 mm, Number of poles: 12, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, Pale green, Box		

#### SC-SMT 3.81/270G



The SC-SMT pin header in 270°-outlet direction: the 270° angle exists between the plugging direction and the solder pin. The plugging direction is then parallel to the PCB. Sockets blocks, however, have an overhead plugging angle.

- More freedom when designing components and devices.
- A high component density when multiple PCBs are arranged in parallel within one housing
- The housing design is application-friendly because of the additional optional wire outlet direction.
- Available in closed (G) and screw flange (F) versions.
- Pin length of either 1.5 mm or 3.2 mm

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-SMT 3.81/06/270G 3.2 ...	Version	Product data	Packaging
Order No.	<a href="#">1036530000</a>	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248765126	connection, 3.81 mm, Number of poles: 6, 270°, Solder pin length (l):	UL: 300 V / 11 A	
Qty.	50 pc(s).	3.2 mm, tinned, black, Box		

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**Mating connector (fully pluggable)**

Type	SC-SMT 3.81/06/270G 1.5 ...	Version	Product data	Packaging
Order No.	<a href="#">1036870000</a>	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248765454	connection, 3.81 mm, Number of poles: 6, 270°, Solder pin length (l):	UL: 300 V / 11 A	
Qty.	50 pc(s).	1.5 mm, tinned, black, Box		
Type	SC-SMT 3.81/06/270G 1.5 ...	Version	Product data	Packaging
Order No.	<a href="#">1036690000</a>	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248765300	connection, 3.81 mm, Number of poles: 6, 270°, Solder pin length (l):	UL: 300 V / 11 A	
Qty.	50 pc(s).	1.5 mm, tinned, Pale green, Box		

**SC 3.81/90G**

The SC pin header has a parallel (recumbent) 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. They support a flood-light display and offer space for labelling and coding.

**General ordering data**

Type	SC 3.81/06/90G 3.2SN BK ...	Version	Product data	Packaging
Order No.	<a href="#">1793170000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248227662	connection, 3.81 mm, Number of poles: 6, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, black, Box		
Type	SC 3.81/06/90G 3.2SN OR ...	Version	Product data	Packaging
Order No.	<a href="#">1942100000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248655489	connection, 3.81 mm, Number of poles: 6, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, orange, Box		
Type	SC 3.81/06/90G 3.2SN GN ...	Version	Product data	Packaging
Order No.	<a href="#">1793280000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248227754	connection, 3.81 mm, Number of poles: 6, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, Pale green, Box		

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**Mating connector (fully pluggable)**
**SC 3.81/270G**


The SC pin header in 270°-outlet direction: the 270° angle exists between the plugging direction and the solder pin. The plugging direction is then parallel to the PCB. Sockets blocks, however, have an overhead plugging angle.

- More freedom when designing components and devices.
- A high component density when multiple PCBs are arranged in parallel within one housing
- The housing design is application-friendly because of the additional optional wire outlet direction.
- 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 3.81/06/270G 3.2SN B ...	Version	Product data	Packaging
Order No.	<a href="#">1037920000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248766468	connection, 3.81 mm, Number of poles: 6, 270°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, black, Box		
Type	SC 3.81/06/270G 3.2SN O ...	Version	Product data	Packaging
Order No.	<a href="#">1037540000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248766161	connection, 3.81 mm, Number of poles: 6, 270°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, orange, Box		
Type	SC 3.81/06/270G 3.2SN G ...	Version	Product data	Packaging
Order No.	<a href="#">1037730000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248766314	connection, 3.81 mm, Number of poles: 6, 270°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, Pale green, Box		

**SCDN-THR 3.81/90G**


Extra flat high-temperature-resistant two-tier SCDN-THR pin header for reflow 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-THR 3.81/12/90G 1.5...	Version	Product data	Packaging
Order No.	<a href="#">1039310000</a>	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248772636	connection, 3.81 mm, Number of poles: 12, 90°, Solder pin length (l):	UL: 300 V / 11 A	
Qty.	50 pc(s).	1.5 mm, tinned, black, Box		



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### Mating connector (fully pluggable)

Type	SCDN-THR 3.81/12/90G 3.2 ...	Version	Product data	Packaging
Order No.	<a href="#">1038990000</a>	PCB plug-in connector, male header, closed side, THT/THR solder connection, 3.81 mm, Number of poles: 12, 90°, Solder pin length (l): 3.2 mm, tinned, black, Box	IEC: 320 V / 17.5 A UL: 300 V / 11 A	Box
GTIN (EAN)	4032248772339			
Qty.	50 pc(s).			
Type	SCDN-THR 3.81/12/90G 1.5 ...	Version	Product data	Packaging
Order No.	<a href="#">1039150000</a>	PCB plug-in connector, male header, closed side, THT/THR solder connection, 3.81 mm, Number of poles: 12, 90°, Solder pin length (l): 1.5 mm, tinned, Pale green, Box	IEC: 320 V / 17.5 A UL: 300 V / 11 A	Box
GTIN (EAN)	4032248772483			
Qty.	50 pc(s).			

### SC-SMT 3.81/180G Tape



High-temperature-resistant pin header (SC-SMT 180G) in 3.81-mm pitch (0.15 inch)

- Plugging direction is perpendicular to PCB (standing)
- Closed (G) .
- Packed either in box (BX) or on anti-static roll (tape-on-reel, RL)
- Pin length of either 1.5 mm or 3.2 mm

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

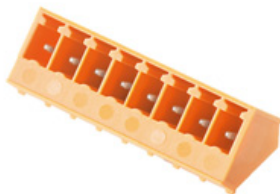
Type	SC-SMT 3.81/06/180G 1.5 ...	Version	Product data	Packaging
Order No.	<a href="#">1864310000</a>	PCB plug-in connector, male header, closed side, THT/THR solder connection, 3.81 mm, Number of poles: 6, 180°, Solder pin length (l): 1.5 mm, tinned, black, Tape	IEC: 320 V / 17.5 A UL: 300 V / 11 A	Tape
GTIN (EAN)	4032248429387			
Qty.	300 pc(s).			
Type	SC-SMT 3.81/06/180G 3.2 ...	Version	Product data	Packaging
Order No.	<a href="#">1863560000</a>	PCB plug-in connector, male header, closed side, THT/THR solder connection, 3.81 mm, Number of poles: 6, 180°, Solder pin length (l): 3.2 mm, tinned, black, Tape	IEC: 320 V / 17.5 A UL: 300 V / 11 A	Tape
GTIN (EAN)	4032248428601			
Qty.	300 pc(s).			

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### Mating connector (fully pluggable)

#### SC 3.81/135G



The SC pin header with 135° wire outlet direction: the 135° angle exists between the plugging direction and the solder pin. The wire outlet direction is then diagonal or 45° to the PCB.

- More freedom when designing components and devices.
- Easy access and a high component density when multiple interfaces are arranged in parallel within a single plugging area
- The housing design is application-friendly because of the additional optional wire outlet direction.
- 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 3.81/06/135G 3.2SN G ...	Version	Product data	Packaging
Order No.	<a href="#">1976060000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248684397	connection, 3.81 mm, Number of poles: 6, 135°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, Pale green, Box		
Type	SC 3.81/06/135G 3.2SN O ...	Version	Product data	Packaging
Order No.	<a href="#">1975880000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248684199	connection, 3.81 mm, Number of poles: 6, 135°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, orange, Box		
Type	SC 3.81/06/135G 3.2SN B ...	Version	Product data	Packaging
Order No.	<a href="#">1976460000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248683055	connection, 3.81 mm, Number of poles: 6, 135°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, black, Box		

#### SCD-THR 3.81/90G



High-temperature-resistant two-tier SCD-THR pin header for reflow soldering.

- It allows you to use two interfaces on only one surface and with only one step in the work flow.
- Outlet direction: 90° (recumbent)
- 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-THR 3.81/12/90G 1.5 ...	Version	Product data	Packaging
Order No.	<a href="#">1974070000</a>	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248683581	connection, 3.81 mm, Number of poles: 12, 90°, Solder pin length (l):	UL: 300 V / 11 A	
Qty.	50 pc(s).	1.5 mm, tinned, black, Box		

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**Mating connector (fully pluggable)**

Type	SCDV-THR 3.81/12/90G 3.2 ...	Version	Product data	Packaging
Order No.	<a href="#">1973770000</a>	PCB plug-in connector, male header, closed side, THT/THR solder connection, 3.81 mm, Number of poles: 12, 90°, Solder pin length (l): 3.2 mm, tinned, black, Box	IEC: 320 V / 17.5 A UL: 300 V / 11 A	Box
GTIN (EAN)	4032248683284			
Qty.	50 pc(s).			

**SCDV 3.81/180G**


Two-tier SCDV 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 two offset levels and open access to each row.
- 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	SCDV 3.81/12/180G 3.2SN ...	Version	Product data	Packaging
Order No.	<a href="#">1034860000</a>	PCB plug-in connector, male header, closed side, THT solder connection, 3.81 mm, Number of poles: 12, 180°, Solder pin length (l): 3.2 mm, tinned, black, Box	IEC: 320 V / 17.5 A UL: 300 V / 10 A	Box
GTIN (EAN)	4032248763658			
Qty.	50 pc(s).			
Type	SCDV 3.81/12/180G 3.2SN ...	Version	Product data	Packaging
Order No.	<a href="#">1034690000</a>	PCB plug-in connector, male header, closed side, THT solder connection, 3.81 mm, Number of poles: 12, 180°, Solder pin length (l): 3.2 mm, tinned, Pale green, Box	IEC: 320 V / 17.5 A UL: 300 V / 10 A	Box
GTIN (EAN)	4032248763504			
Qty.	50 pc(s).			
Type	SCDV 3.81/12/180G 3.2SN ...	Version	Product data	Packaging
Order No.	<a href="#">1034530000</a>	PCB plug-in connector, male header, closed side, THT solder connection, 3.81 mm, Number of poles: 12, 180°, Solder pin length (l): 3.2 mm, tinned, orange, Box	IEC: 320 V / 17.5 A UL: 300 V / 10 A	Box
GTIN (EAN)	4032248763351			
Qty.	50 pc(s).			

**SC-SMT 3.81/90G Tape**


High-temperature-resistant pin header (SC-SMT 90G) in 3.81-mm pitch (0.15 inch)

- Plugging direction parallel to PCB (recumbent)
- Closed (G)
- Packed either in box (BX) or on anti-static roll (tape-on-reel, RL)
- Pin length of either 1.5 mm or 3.2 mm

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**

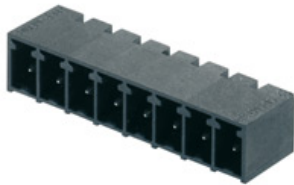
Type	SC-SMT 3.81/06/90G 1.5S ...	Version	Product data	Packaging
Order No.	<a href="#">1863180000</a>	PCB plug-in connector, male header, closed side, THT/THR solder connection, 3.81 mm, Number of poles: 6, 90°, Solder pin length (l): 1.5 mm, tinned, black, Tape	IEC: 320 V / 17.5 A UL: 300 V / 11 A	Tape
GTIN (EAN)	4032248428373			
Qty.	400 pc(s).			

**OMNIMATE Signal - series BC/SC 3.81  
BCL-SMT 3.81/06/180 1.5SN BK BX**

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**Mating connector (fully pluggable)**

Type	SC-SMT 3.81/06/90G 3.2S ...	Version	Product data	Packaging
Order No.	<a href="#">1862880000</a>	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 17.5 A	Tape
GTIN (EAN)	4032248428014	connection, 3.81 mm, Number of poles: 6, 90°, Solder pin length (l):	UL: 300 V / 11 A	
Qty.	400 pc(s).	3.2 mm, tinned, black, Tape		

**SC-SMT 3.81/90G Box**


High-temperature-resistant pin header (SC-SMT 90G) in 3.81-mm pitch (0.15 inch)

- Plugging direction parallel to PCB (recumbent)
- Closed (G)
- Packed either in box (BX) or on anti-static roll (tape-on-reel, RL)
- Pin length of either 1.5 mm or 3.2 mm

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-SMT 3.81/06/90G 3.2S ...	Version	Product data	Packaging
Order No.	<a href="#">1862510000</a>	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248427642	connection, 3.81 mm, Number of poles: 6, 90°, Solder pin length (l):	UL: 300 V / 11 A	
Qty.	50 pc(s).	3.2 mm, tinned, black, Box		
Type	SC-SMT 3.81/06/90G 1.5S ...	Version	Product data	Packaging
Order No.	<a href="#">1863000000</a>	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248428106	connection, 3.81 mm, Number of poles: 6, 90°, Solder pin length (l):	UL: 300 V / 11 A	
Qty.	50 pc(s).	1.5 mm, tinned, black, Box		

**SCDV-THR 3.81/90G**


High-temperature-resistant two-tier SCDV-THR pin header for reflow soldering.

- It allows you to use two interfaces on only one surface and with only one step in the work flow.
- Outlet direction: 90° (recumbent)
- Connections at two offset levels and open access to each row.
- 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	SCDV-THR 3.81/12/90G 1.5S ...	Version	Product data	Packaging
Order No.	<a href="#">1033860000</a>	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248762750	connection, 3.81 mm, Number of poles: 12, 90°, Solder pin length (l):	UL: 300 V / 11 A	
Qty.	50 pc(s).	1.5 mm, tinned, black, Box		

## OMNIMATE Signal - series BC/SC 3.81 BCL-SMT 3.81/06/180 1.5SN BK BX

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### Mating connector (fully pluggable)

Type	SCDV-THR 3.81/12/90G 3. ...	Version	Product data	Packaging
Order No.	<a href="#">1033540000</a>	PCB plug-in connector, male header, closed side, THT/THR solder connection, 3.81 mm, Number of poles: 12, 90°, Solder pin length (l): 3.2 mm, tinned, black, Box	IEC: 320 V / 17.5 A UL: 300 V / 11 A	Box
GTIN (EAN)	4032248762453			
Qty.	50 pc(s).			
Type	SCDV-THR 3.81/12/90G 1. ...	Version	Product data	Packaging
Order No.	<a href="#">1033690000</a>	PCB plug-in connector, male header, closed side, THT/THR solder connection, 3.81 mm, Number of poles: 12, 90°, Solder pin length (l): 1.5 mm, tinned, Pale green, Box	IEC: 320 V / 17.5 A UL: 300 V / 11 A	Box
GTIN (EAN)	4032248762606			
Qty.	50 pc(s).			

### SCD-THR 3.81/180G



High-temperature-resistant two-tier SCD-THR pin header for reflow soldering.

- It allows you to use two interfaces on only one surface and with only one step in the work flow.
- Outlet direction: 90° (recumbent)
- 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-THR 3.81/12/180G 3. ...	Version	Product data	Packaging
Order No.	<a href="#">1030990000</a>	PCB plug-in connector, male header, closed side, THT/THR solder connection, 3.81 mm, Number of poles: 12, 180°, Solder pin length (l): 3.2 mm, tinned, black, Box	IEC: 320 V / 17.5 A UL: 300 V / 11 A	Box
GTIN (EAN)	4032248760077			
Qty.	50 pc(s).			
Type	SCD-THR 3.81/12/180G 1. ...	Version	Product data	Packaging
Order No.	<a href="#">1031340000</a>	PCB plug-in connector, male header, closed side, THT/THR solder connection, 3.81 mm, Number of poles: 12, 180°, Solder pin length (l): 1.5 mm, tinned, black, Box	IEC: 320 V / 17.5 A UL: 300 V / 11 A	Box
GTIN (EAN)	4032248760374			
Qty.	50 pc(s).			

### SC 3.81/180G



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 3.81/06/180G 3.2SN O ...	Version	Product data	Packaging
Order No.	<a href="#">1942880000</a>	PCB plug-in connector, male header, closed side, THT solder connection, 3.81 mm, Number of poles: 6, 180°, Solder pin length (l): 3.2 mm, tinned, orange, Box	IEC: 320 V / 17.5 A UL: 300 V / 10 A	Box
GTIN (EAN)	4032248654710			
Qty.	50 pc(s).			

**OMNIMATE Signal - series BC/SC 3.81  
BCL-SMT 3.81/06/180 1.5SN BK BX**

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**Mating connector (fully pluggable)**

Type	SC 3.81/06/180G 3.2SN B ...	Version	Product data	Packaging
Order No.	<a href="#">1793560000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248230488	connection, 3.81 mm, Number of poles: 6, 180°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, black, Box		
Type	SC 3.81/06/180G 3.2SN G ...	Version	Product data	Packaging
Order No.	<a href="#">1793650000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248230778	connection, 3.81 mm, Number of poles: 6, 180°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, Pale green, Box		

**SCD 3.81/90G**


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: 90° (recumbent)
- 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 3.81/12/90G 3.2SN G ...	Version	Product data	Packaging
Order No.	<a href="#">1972990000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248682553	connection, 3.81 mm, Number of poles: 12, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, Pale green, Box		
Type	SCD 3.81/12/90G 3.2SN B ...	Version	Product data	Packaging
Order No.	<a href="#">1973140000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248682706	connection, 3.81 mm, Number of poles: 12, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, black, Box		
Type	SCD 3.81/12/90G 3.2SN O ...	Version	Product data	Packaging
Order No.	<a href="#">1972830000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248682409	connection, 3.81 mm, Number of poles: 12, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, orange, Box		

## OMNIMATE Signal - series BC/SC 3.81 BCL-SMT 3.81/06/180 1.5SN BK BX

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### Mating connector (fully pluggable)

#### SCD 3.81/180G



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 3.81/12/180G 3.2SN ...	Version	Product data	Packaging
Order No.	<a href="#">1029970000</a>	PCB plug-in connector, male header, closed side, THT solder connection, 3.81 mm, Number of poles: 12, 180°, Solder pin length (l): 3.2 mm, tinned, orange, Box	IEC: 320 V / 17.5 A UL: 300 V / 10 A	Box
GTIN (EAN)	4032248759071			
Qty.	50 pc(s).			
Type	SCD 3.81/12/180G 3.2SN ...	Version	Product data	Packaging
Order No.	<a href="#">1030310000</a>	PCB plug-in connector, male header, closed side, THT solder connection, 3.81 mm, Number of poles: 12, 180°, Solder pin length (l): 3.2 mm, tinned, black, Box	IEC: 320 V / 17.5 A UL: 300 V / 10 A	Box
GTIN (EAN)	4032248759477			
Qty.	50 pc(s).			
Type	SCD 3.81/12/180G 3.2SN ...	Version	Product data	Packaging
Order No.	<a href="#">1030140000</a>	PCB plug-in connector, male header, closed side, THT solder connection, 3.81 mm, Number of poles: 12, 180°, Solder pin length (l): 3.2 mm, tinned, Pale green, Box	IEC: 320 V / 17.5 A UL: 300 V / 10 A	Box
GTIN (EAN)	4032248759255			
Qty.	50 pc(s).			

#### SCDV-THR 3.81/180G



High-temperature-resistant two-tier SCDV-THR pin header for reflow soldering.

- It allows you to use two interfaces on only one surface and with only one step in the work flow.
- Outlet direction: 90° (recumbent)
- Connections at two offset levels and open access to each row.
- 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	SCDV-THR 3.81/12/180G 3 ...	Version	Product data	Packaging
Order No.	<a href="#">1035520000</a>	PCB plug-in connector, male header, closed side, THT/THR solder connection, 3.81 mm, Number of poles: 12, 180°, Solder pin length (l): 3.2 mm, tinned, black, Box	IEC: 320 V / 17.5 A UL: 300 V / 11 A	Box
GTIN (EAN)	4032248764273			
Qty.	50 pc(s).			
Type	SCDV-THR 3.81/12/180G 1 ...	Version	Product data	Packaging
Order No.	<a href="#">1035830000</a>	PCB plug-in connector, male header, closed side, THT/THR solder connection, 3.81 mm, Number of poles: 12, 180°, Solder pin length (l): 1.5 mm, tinned, black, Box	IEC: 320 V / 17.5 A UL: 300 V / 11 A	Box
GTIN (EAN)	4032248764525			
Qty.	50 pc(s).			

**OMNIMATE Signal - series BC/SC 3.81  
BCL-SMT 3.81/06/180 1.5SN BK BX**

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**Mating connector (fully pluggable)**

Type	SCDV-THR 3.81/12/180G 1 ...	Version	Product data	Packaging
Order No.	<a href="#">1035680000</a>	PCB plug-in connector, male header, closed side, THT/THR solder connection, 3.81 mm, Number of poles: 12, 180°, Solder pin length (l): 1.5 mm, tinned, Pale green, Box	IEC: 320 V / 17.5 A UL: 300 V / 11 A	Box
GTIN (EAN)	4032248764426			
Qty.	50 pc(s).			

**SC-SMT 3.81/135G**


The high-temperature-resistant SC-SMT pin header with 135° wire outlet direction: the 135° angle exists between the plugging direction and the solder pin. The wire outlet direction is then diagonal or 45° to the PCB.

- More freedom when designing components and devices.
- Easy access and a high component density when multiple interfaces are arranged in parallel within a single plugging area
- The housing design is application-friendly because of the additional optional wire outlet direction.
- Available as closed (G) and with solder flange (LF).
- Pin length of either 1.5 mm or 3.2 mm

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.

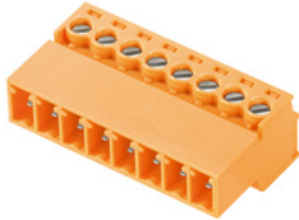
**General ordering data**

Type	SC-SMT 3.81/06/135G 1.5 ...	Version	Product data	Packaging
Order No.	<a href="#">1977970000</a>	PCB plug-in connector, male header, closed side, THT/THR solder connection, 3.81 mm, Number of poles: 6, 135°, Solder pin length (l): 1.5 mm, tinned, black, Box	IEC: 320 V / 17.5 A UL: 300 V / 11 A	Box
GTIN (EAN)	4032248685554			
Qty.	50 pc(s).			
Type	SC-SMT 3.81/06/135G 3.2 ...	Version	Product data	Packaging
Order No.	<a href="#">1977240000</a>	PCB plug-in connector, male header, closed side, THT/THR solder connection, 3.81 mm, Number of poles: 6, 135°, Solder pin length (l): 3.2 mm, tinned, black, Box	IEC: 320 V / 17.5 A UL: 300 V / 11 A	Box
GTIN (EAN)	4032248685257			
Qty.	50 pc(s).			



**OMNIMATE Signal - series BC/SC 3.81  
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**Mating connector (fully pluggable)****SCZ 3.81/180G**

The inverted SCZ pin plug with clamping-yoke screw connection is designed for straight wire connections in 3.81-mm pitch. It can be used in two ways:

- for wire-to-wire connections together with the BCZ
- as a mating plug for the touch-safe BCL socket block on the PCB.

The SCZ is available in four different versions:

- Without flange ("G", closed)
- With standard flange ("F", with socket nut)
- With inverted flange ("FI", with screw)
- and with Weidmüller's patented release latch for a tool-free, no-strain disconnect

The SCZ provides space for labelling and can be coded.

**General ordering data**

Type	SCZ 3.81/06/180G SN OR ...	Version	Product data	Packaging
Order No.	<a href="#">1969580000</a>	PCB plug-in connector, male plug, 3.81 mm, Number of poles: 6,	IEC: 320 V / 17.5 A / 0.2 - 1.5 mm <sup>2</sup>	Box
GTIN (EAN)	4032248679171	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm <sup>2</sup> ,	UL: 300 V / 10 A / AWG 28 - AWG 16	
Qty.	50 pc(s).	Box		
Type	SCZ 3.81/06/180G SN BK ...	Version	Product data	Packaging
Order No.	<a href="#">1970060000</a>	PCB plug-in connector, male plug, 3.81 mm, Number of poles: 6,	IEC: 320 V / 17.5 A / 0.2 - 1.5 mm <sup>2</sup>	Box
GTIN (EAN)	4032248679478	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm <sup>2</sup> ,	UL: 300 V / 10 A / AWG 28 - AWG 16	
Qty.	50 pc(s).	Box		
Type	SCZ 3.81/06/180G SN GN ...	Version	Product data	Packaging
Order No.	<a href="#">1969810000</a>	PCB plug-in connector, male plug, 3.81 mm, Number of poles: 6,	IEC: 320 V / 17.5 A / 0.2 - 1.5 mm <sup>2</sup>	Box
GTIN (EAN)	4032248679324	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm <sup>2</sup> ,	UL: 300 V / 10 A / AWG 28 - AWG 16	
Qty.	50 pc(s).	Box		

**SCDN 3.81/90G**

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 3.81/12/90G 3.2SN ...	Version	Product data	Packaging
Order No.	<a href="#">1040840000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248769698	connection, 3.81 mm, Number of poles: 12, 90°, Solder pin length (!):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, black, Box		

## OMNIMATE Signal - series BC/SC 3.81 BCL-SMT 3.81/06/180 1.5SN BK BX

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### Mating connector (fully pluggable)

Type	SCDN 3.81/12/90G 3.2SN ...	Version	Product data	Packaging
Order No.	<a href="#">1040450000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248769117	connection, 3.81 mm, Number of poles: 12, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, orange, Box		

Type	SCDN 3.81/12/90G 3.2SN ...	Version	Product data	Packaging
Order No.	<a href="#">1040670000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248769544	connection, 3.81 mm, Number of poles: 12, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, Pale green, Box		

### SC-SMT 3.81/180G Box



High-temperature-resistant pin header (SC-SMT 180G) in 3.81-mm pitch (0.15 inch)

- Plugging direction is perpendicular to PCB (standing)
- Closed (G) .
- Packed either in box (BX) or on anti-static roll (tape-on-reel, RL)
- Pin length of either 1.5 mm or 3.2 mm

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

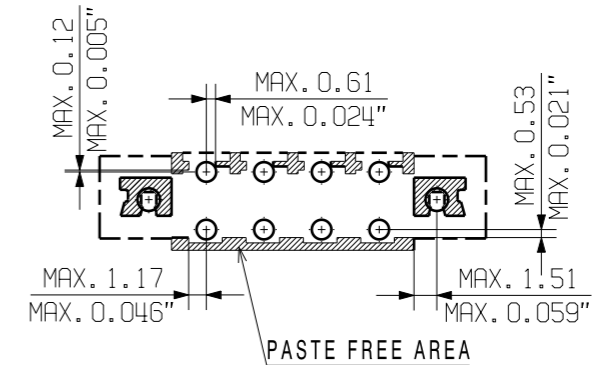
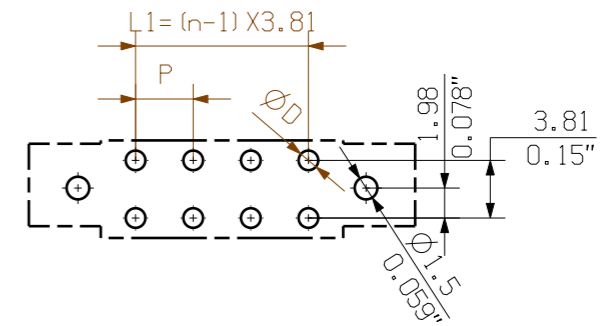
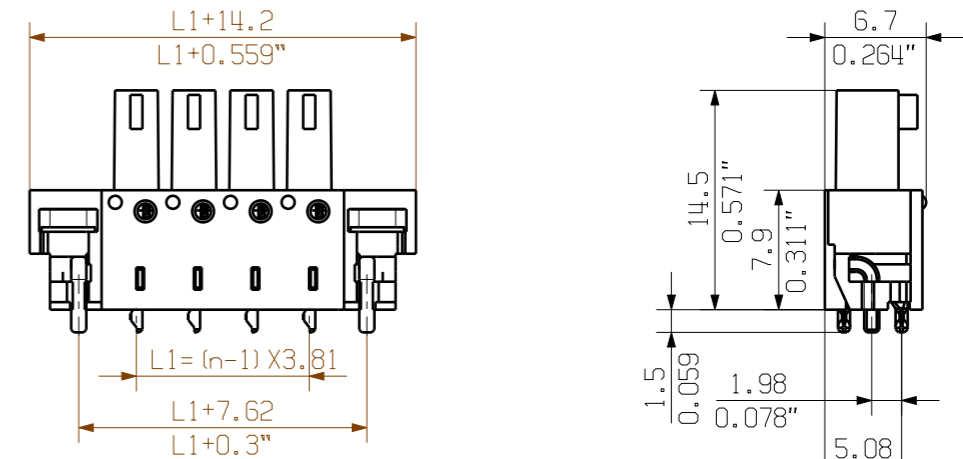
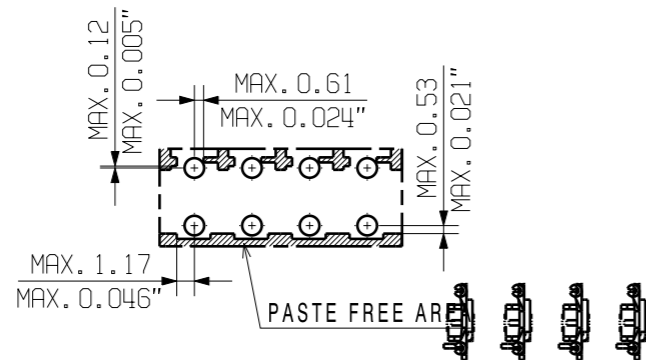
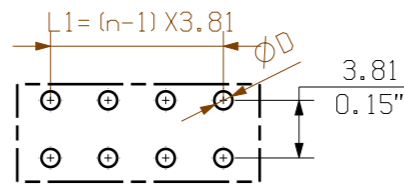
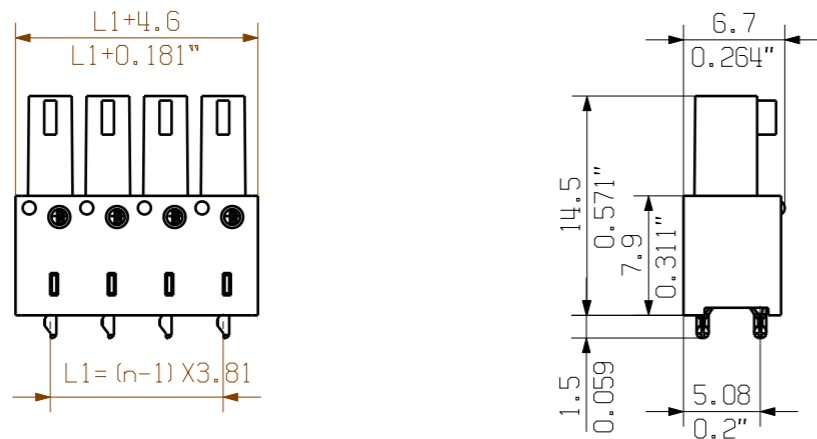
Type	SC-SMT 3.81/06/180G 1.5 ...	Version	Product data	Packaging
Order No.	<a href="#">1863830000</a>	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248428946	connection, 3.81 mm, Number of poles: 6, 180°, Solder pin length (l):	UL: 300 V / 11 A	
Qty.	50 pc(s).	1.5 mm, tinned, black, Box		

Type	SC-SMT 3.81/06/180G 3.2 ...	Version	Product data	Packaging
Order No.	<a href="#">1863020000</a>	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 17.5 A	Box
GTIN (EAN)	4032248428151	connection, 3.81 mm, Number of poles: 6, 180°, Solder pin length (l):	UL: 300 V / 11 A	
Qty.	50 pc(s).	3.2 mm, tinned, black, Box		

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

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



NOTE:

n=NO OF POLES  
P=PITCH

KUNDENZEICHNUNG  
CUSTOMER DRAWING

For the mounting of PCBs, it should be noted that the rated data given in the catalogue relates only to the connection elements. The necessary 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 occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

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]

		CAT.NO.: .	
62605/5 28.08.12 SHI_S 00		<b>Weidmüller</b>	
MODIFICATION		<b>C 40405</b> 04	
		DRAWING NO. ISSUE NO.	
	DATE	NAME	
DRAWN	19.02.2008	SHI_S	
RESPONSIBLE		XU_S	
SUPERSEDES: -	CHECKED	29.08.2012 ZHOU_N	
SUPERSEDED BY: .	APPROVED	XU_S	
		<b>BCL-SMT 3.81/.../180...1.5...</b>	
		LOETANSCHLUSS BUCHSENLEISTE	
		SOLDER CONNECTION SOCKET CONNECTOR	
		PRODUCT FILE: BCL-SMT 3.81	7084

WEITERGABE SOWIE VERVIELFÄLTIGUNG DIESES DOKUMENTS, VERWERTUNG UND MITTEILUNG SEINES INHALTS SIND VERBOTEN, SOWEIT NICHT AUSDRUECKLICH GESTATTET.  
 ZUWIDERHANDLUNGEN VERPFLICHTEN ZU SCHADENSERSATZ. ALLE RECHTE FUER DEN FALL DER PATENT-, GEBRAUCHSMUSTER- ODER GESCHMACKSMUSTERREINTRAGUNG VORBEHALTEN.  
 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. ALL RIGHTS RESERVED IN THE EVENT OF THE GRANT OF A PATENT, UTILITY MODEL OR DESIGN.

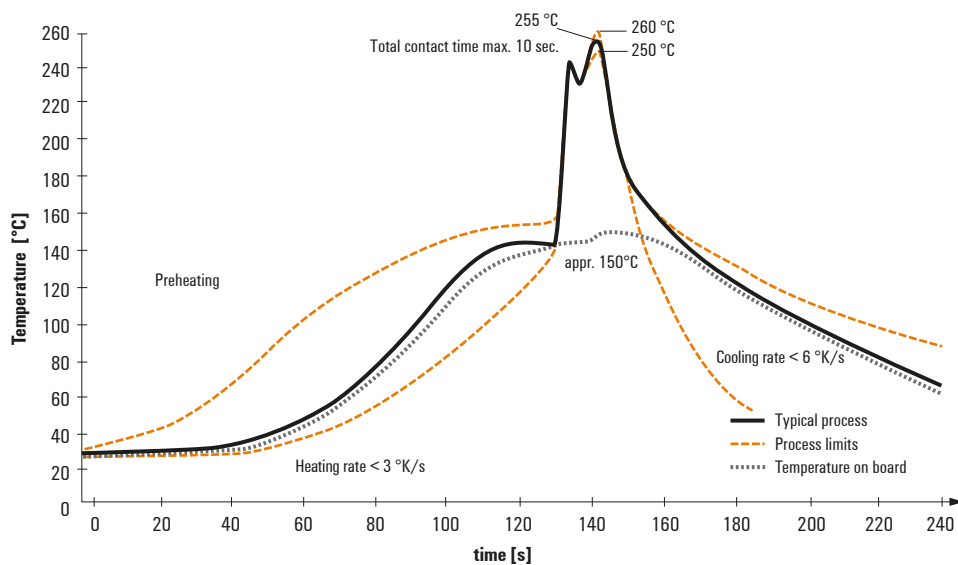
## Recommended wave soldering profiles

**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.

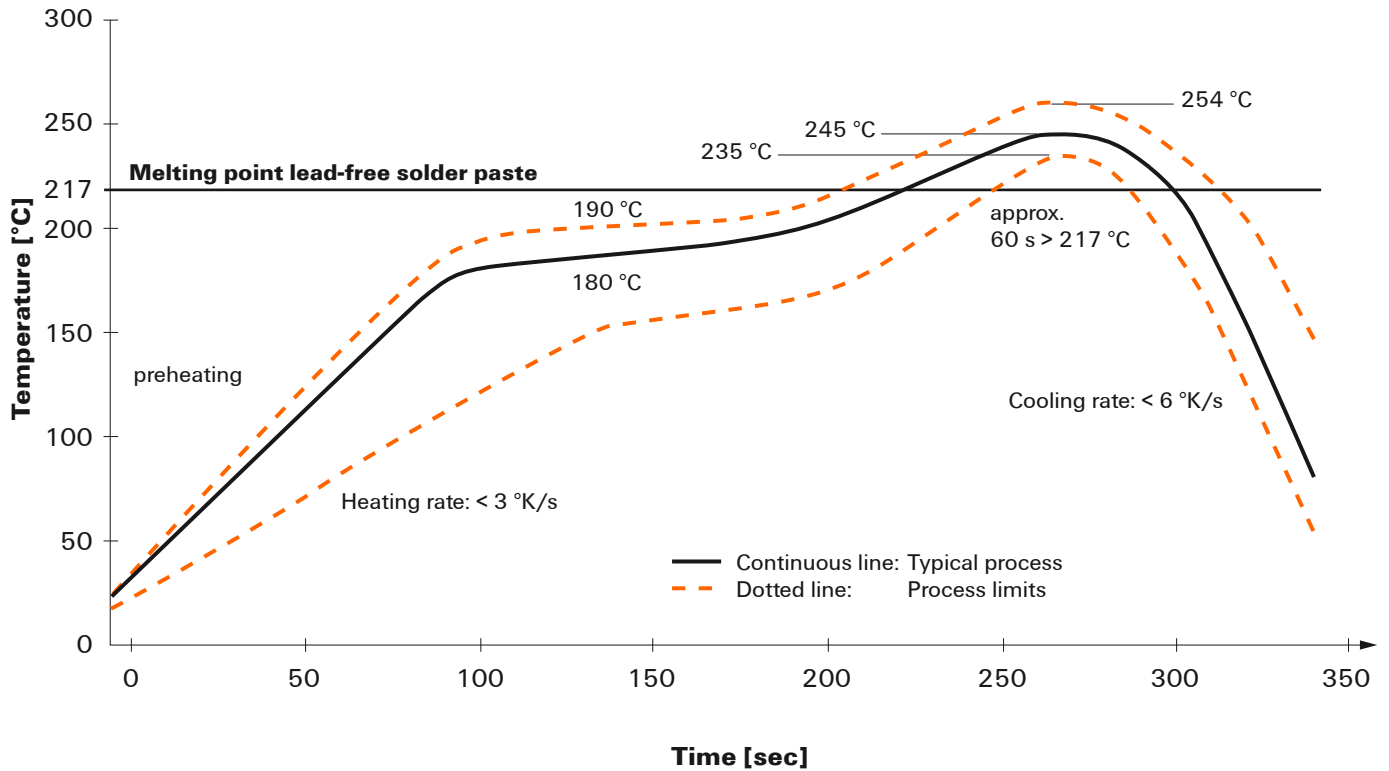
When choosing a suitable profile for your application, the following factors also need to be considered:

- 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.

## Recommended reflow soldering profile

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 16  
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### 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  $\leq +3K/s$ . 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  $\geq -6K/s$  solder is cured. Board and components cool down while avoiding cold cracks.