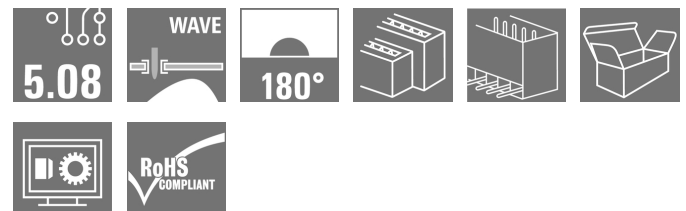


## OMNIMATE Signal - series BL/SL 5.08 SLD 5.08/20/180G 3.2SN OR BX

**Weidmüller Interface GmbH & Co. KG**  
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Similar to illustration

2-tier male header with parallel pin arrangement. The solder pin length is optimised for wave flow soldering. The pin headers provide space for labelling and can be coded.

### General ordering data

Type	SLD 5.08/20/180G 3.2SN OR BX
Order No.	<a href="#">1602470000</a>
Version	PCB plug-in connector, male header, closed side, THT solder connection, 5.08 mm, Number of poles: 20, 180°, Solder pin length (l): 3.2 mm, tinned, orange, Box
GTIN (EAN)	4008 190059958
Qty.	20 pc(s).
Product data	IEC: 400 V / 11 A UL: 300 V / 10 A
Packaging	Box

Creation date May 3, 2020 10:31:44 PM CEST

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

Width	52.76 mm	Width (inches)	2.077 inch
Height	25.2 mm	Height (inches)	0.992 inch
Height of lowest version	22 mm	Depth	28.5 mm
Depth (inches)	1.122 inch	Net weight	18.9 g

**System specifications**

Product family	OMNIMATE Signal - series BL/SL 5.08	Type of connection	Board connection
Mounting onto the PCB	THT solder connection	Pitch in mm (P)	5.08 mm
Pitch in inches (P)	0.2 inch	Outgoing elbow	180°
Number of poles	20	Number of solder pins per pole	1
Solder pin length (l)	3.2 mm	Solder pin length tolerance	+0.1 / -0.3 mm
Tolerance of solder pin position	± 0.15 mm	Solder pin dimensions	d = 1.2 mm, Octagonal
Solder pin dimensions = d tolerance	0 / -0.03 mm	Solder eyelet hole diameter (D)	1.3 mm
Solder eyelet hole diameter tolerance (D)+	0,1 mm	L1 in mm	45.72 mm
L1 in inches	1.8 inch	Number of rows	2
Pin series quantity	2	Touch-safe protection acc. to DIN VDE 57 106	Safe from back-of-hand touch
Volume resistance	≤ 5mΩ	Can be coded	Yes
Plugging cycles	25		

**Material data**

Insulating material	PBT	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	Insulation strength	≥ 10 <sup>8</sup> Ω
UL 94 flammability rating	V-0	GWFI	960 °C
Contact material	CuSn	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.	100 °C	Temperature range, installation, min.	-25 °C
Temperature range, installation, max.	100 °C		


**Rated data acc. to IEC**

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	11 A
Rated current, max. number of poles (Tu=20°C)	8.5 A	Rated current, min. number of poles (Tu=40°C)	9.5 A
Rated current, max. number of poles (Tu=40°C)	7 A	Rated voltage for surge voltage class / pollution degree II/2	400 V
Rated voltage for surge voltage class / pollution degree III/2	320 V	Rated voltage for surge voltage class / pollution degree III/3	250 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	4 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	4 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	4 kV	Short-time withstand current resistance	1 x 1s with 120 A


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

Institute (CSA)		Certificate No. (CSA)	200039-1121690
Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group D / CSA)	300 V
Rated current (Use group B / CSA)	10 A	Rated current (Use group D / CSA)	10 A
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

**Rated data acc. to UL 1059**

Institute (UR)		Certificate No. (UR)	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	35 mm
VPE width	145 mm	VPE height	240 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	30-21-18-10

**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>• Spacing between rows: see hole layout</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.

**Data sheet**

**OMNIMATE Signal - series BL/SL 5.08  
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**Technical data**

**Approvals**

Approvals



ROHS

Conform

**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](#)
- [FLIndustr.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

[WSCAD](#)

Engineering Data

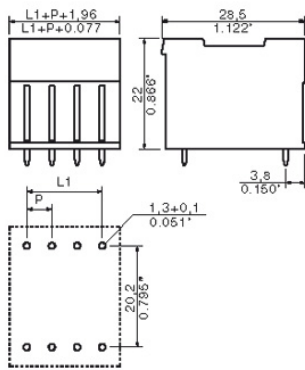
[STEP](#)

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**Drawings**

**Dimensional drawing**



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**Mating connector (conditionally pluggable)**

**BLT 5.08HC/180B**



Female plugs with TOP screw connection system for connecting wires with straight 180° outlet direction. The female connectors provide space for labelling and can be coded. HC = High Current.

**General ordering data**

Type	BLT 5.08HC/10/180B SN O ...	Version	Product data	Packaging
Order No.	<a href="#">1502660000</a>	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 10,	IEC: 400 V / 27 A / 0.2 - 2.5 mm <sup>2</sup>	Box
GTIN (EAN)	4008190158699	180°, TOP connection, Clamping range, max. : 2.5 mm <sup>2</sup> , Box	UL: 300 V / 17 A / AWG 26 - AWG 14	
Qty.	30 pc(s).			

**OMNIMATE Signal - series BL/SL 5.08  
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**Mating connector (fully pluggable)**
**BLZ 5.08/180**


Female plugs with clamping-yoke screw for wire connection with straight (180°) outlet direction. The female plugs provide space for labelling and can be coded.

**General ordering data**

Type	BLZ 5.08/10/180 SN DKG...	Version	Product data	Packaging
Order No.	<a href="#">1527250000</a>	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 10,	IEC: 400 V / 19 A / 0.2 - 2.5 mm <sup>2</sup>	Box
GTIN (EAN)	4008190017446	180°, Clamping yoke connection, Clamping range, max.: 3.31 mm <sup>2</sup> ,	UL: 300 V / 15 A / AWG 26 - AWG 12	
Qty.	50 pc(s).	Box		
Type	BLZ 5.08/10/180 SN OR B ...	Version	Product data	Packaging
Order No.	<a href="#">1688390000</a>	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 10,	IEC: 400 V / 19 A / 0.2 - 2.5 mm <sup>2</sup>	Box
GTIN (EAN)	4008190857684	180°, Clamping yoke connection, Clamping range, max.: 3.31 mm <sup>2</sup> ,	UL: 300 V / 15 A / AWG 26 - AWG 12	
Qty.	36 pc(s).	Box		

**BLL 5.08/180**


Female header for PCB mounting. The solder pin length is optimised for wave flow soldering.

**General ordering data**

Type	BLL 5.08/10/180 4.5 SN ...	Version	Product data	Packaging
Order No.	<a href="#">1646330000</a>	PCB plug-in connector, female header, closed side, THT solder	IEC: 400 V / 23 A	Box
GTIN (EAN)	4008190285678	connection, 5.08 mm, Number of poles: 10, 180°, Solder pin length	UL: 300 V / 15 A	
Qty.	36 pc(s).	(I): 4.5 mm, tinned, black, Box		

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**Mating connector (fully pluggable)**

**BLL 5.08/90**



Female header for PCB mounting. The solder pin length is optimised for wave flow soldering.

**General ordering data**

Type	BLL 5.08/10/90 4.5 SN B ...	Version	Product data	Packaging
Order No.	<a href="#">1646110000</a>	PCB plug-in connector, female header, closed side, THT solder	IEC: 400 V / 23 A	Box
GTIN (EAN)	4008190285456	connection, 5.08 mm, Number of poles: 10, 90°, Solder pin length (l):	UL: 300 V / 15 A	
Qty.	36 pc(s).	4.5 mm, tinned, black, Box		



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# 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	BLZ/SL KO BK BX	Version	Product data	Packaging
Order No.	<a href="#">1545710000</a>	PCB plug-in connector, Accessories, Coding element, black, Number		Box
GTIN (EAN)	4008190087142	of poles: 1		
Qty.	50 pc(s).			
Type	BLZ/SL KO OR BX	Version	Product data	Packaging
Order No.	<a href="#">1573010000</a>	PCB plug-in connector, Accessories, Coding element, orange, Number		Box
GTIN (EAN)	4008190048396	of poles: 1		
Qty.	100 pc(s).			

## Additional accessories



**No task is too small when creating the perfect solution.** br />

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	SL AT OR	Version	Product data	Packaging
Order No.	<a href="#">1598300000</a>	PCB plug-in connector, Accessories, Spacer, orange, Number of poles:		Box
GTIN (EAN)	4008190189266	1		
Qty.	100 pc(s).			

**Data sheet**

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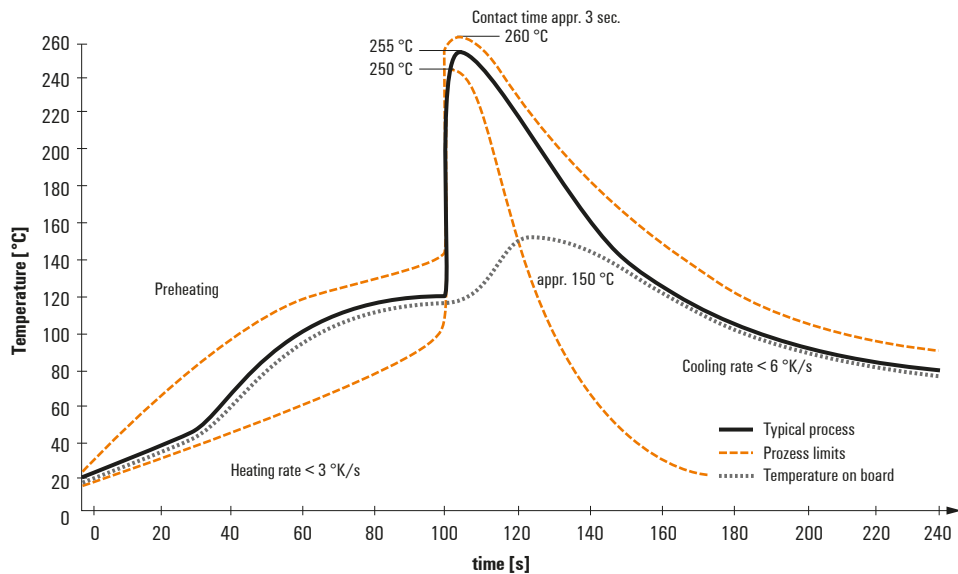
**Accessories**

Type	SL AT SW	Version	Product data	Packaging
Order No.	<a href="#">1770240000</a>	PCB plug-in connector, Accessories, Spacer, black, Number of poles: 1		Box
GTIN (EAN)	4032248117710			
Qty.	100 pc(s).			

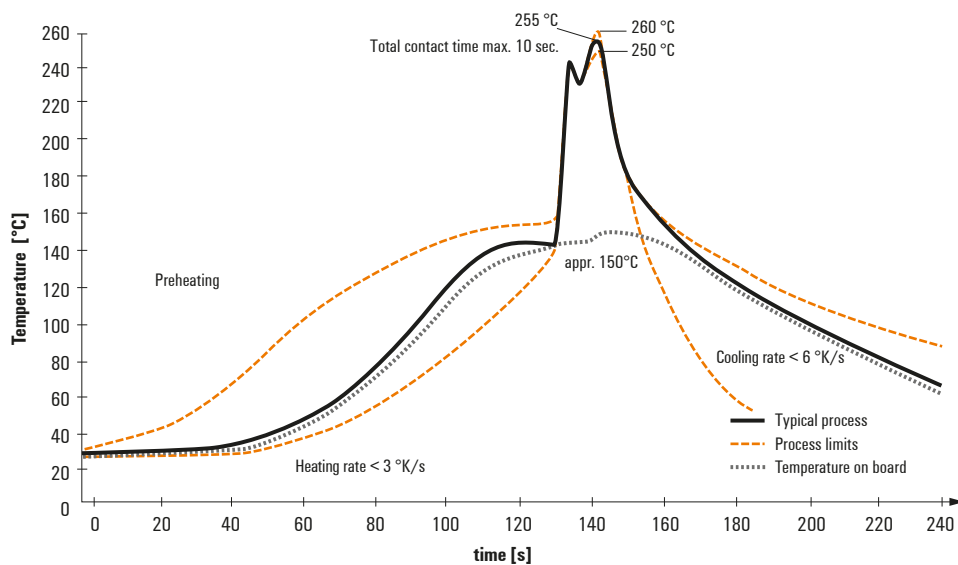
## Recommended wave soldering profiles

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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.