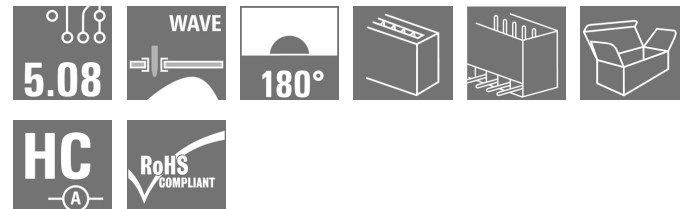
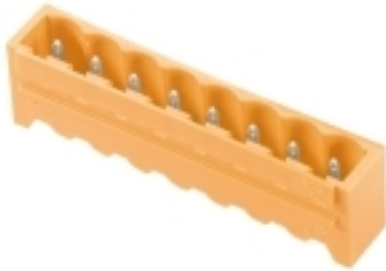


**OMNIMATE Signal - series BL/SL 5.08
SL 5.08HC/21/180G 3.2SN BK BX**

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Similar to illustration

Pin headers in glass-fibre-reinforced plastic with straight wire outlet; optimised for wave soldering. The flange variant (F) can be screwed onto the respective counter piece or the circuit board. There is no need for an extra screw to connect the circuit board when the solder flange (LF) version is used. This also protects the solder points from mechanical strain. All pin headers can be manually coded or ordered pre-coded. HC = High Current.

General ordering data

Type	SL 5.08HC/21/180G 3.2SN BK BX
Order No.	1149270000
Version	PCB plug-in connector, male header, closed side, THT solder connection, 5.08 mm, Number of poles: 21, 180°, Solder pin length (l): 3.2 mm, tinned, black, Box
GTIN (EAN)	4032248935024
Qty.	20 pc(s).
Product data	IEC: 400 V / 24 A UL: 300 V / 18.5 A
Packaging	Box

Creation date May 2, 2020 6:47:19 AM CEST

**OMNIMATE Signal - series BL/SL 5.08
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Technical data
Dimensions and weights

Width	109.88 mm	Width (inches)	4.326 inch
Height	15.2 mm	Height (inches)	0.598 inch
Height of lowest version	12 mm	Depth	8.5 mm
Depth (inches)	0.335 inch	Net weight	5.754 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	21	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	± 0.20 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	101.6 mm
L1 in inches	4 inch	Number of rows	1
Pin series quantity	1	Volume resistance	≤ 5mΩ
Can be coded	Yes	Plugging cycles	25
Plugging force/pole, max.	10 N	Pulling force/pole, max.	7.5 N

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 ⁸ Ω
UL 94 flammability rating	V-0	GWFI	960 °C
Contact material	CuMg	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)	24 A
Rated current, max. number of poles (Tu=20°C)	19 A	Rated current, min. number of poles (Tu=40°C)	21 A
Rated current, max. number of poles (Tu=40°C)	16.5 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		

Rated data acc. to CSA

Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group D / CSA)	300 V
Rated current (Use group B / CSA)	18.5 A	Rated current (Use group D / CSA)	18.5 A

Data sheet

**OMNIMATE Signal - series BL/SL 5.08
SL 5.08HC/21/180G 3.2SN BK BX**

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Technical data

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) 18.5 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 width 0

VPE length 0
VPE height 0

Classifications

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

ETIM 7.0 EC002637
eClass 9.1 27-44-04-02

Notes

- Notes
- Additional colours on request
 - Gold-plated contact surfaces on request
 - 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.

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 BL/SL 5.08
SL 5.08HC/21/180G 3.2SN BK BX**

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Technical data**Downloads**

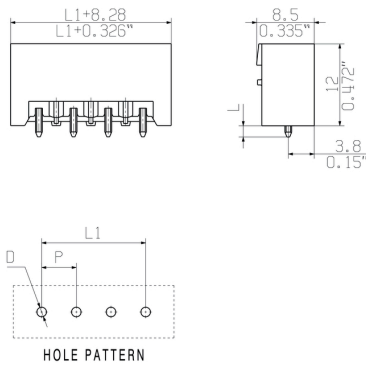
Approval/Certificate/Document of Conformity	CB Certificate CB Testreport Declaration of the Manufacturer
Brochure/Catalogue	FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE CAT 2 PORTFOLIOGUIDE EN FL BUILDING SAFETY EN FL APPL LED LIGHTING EN FLIndustr.CONTROLS EN FL MACHINE SAFETY EN FL HEATING ELECTR 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	STEP
Product Change Notification	EN - Change of packaging DE - Change of packaging

**OMNIMATE Signal - series BL/SL 5.08
SL 5.08HC/21/180G 3.2SN BK BX**

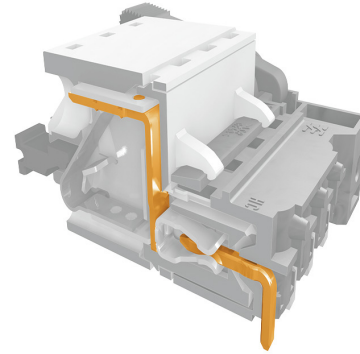
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Drawings

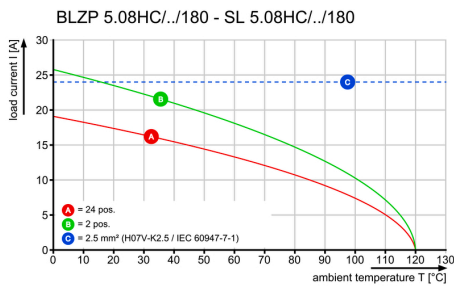
Dimensional drawing



Product benefits

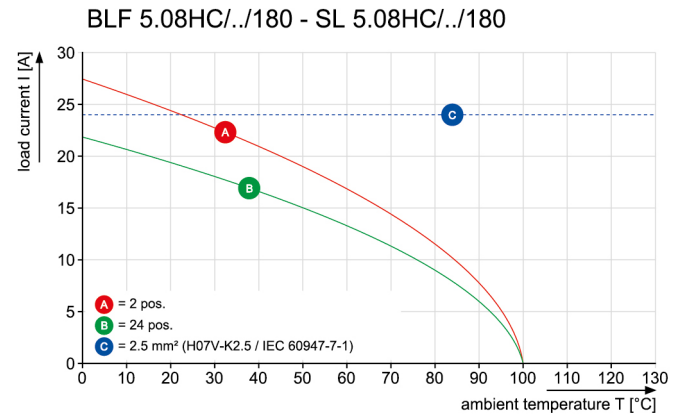


Graph

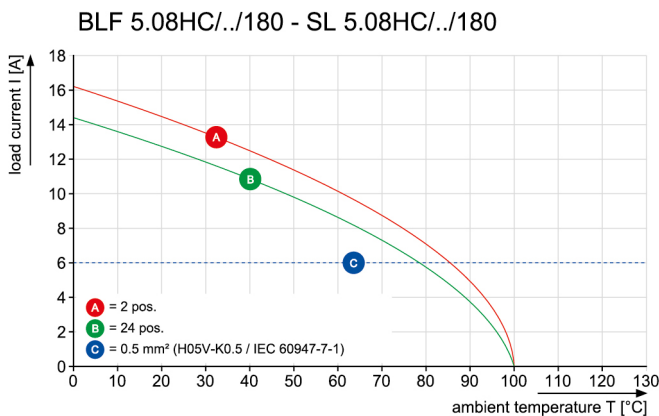


Graph

Safe power transmission
Proven properties



Graph



**OMNIMATE Signal - series BL/SL 5.08
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Mating connector (fully pluggable)**BLZP 5.08HC/225 SN**

Clamping-yoke connection with right-angled (90° or 270°) or angled (225°) outlet direction. The female connectors provide space for labelling and can be coded. Fastened by means of a flange or release latch. They also provide an integrated plus/minus screw, protection against faulty insertion of the wire, and they are delivered with open clamping yokes. HC = High Current.

General ordering data

Type	BLZP 5.08HC/21/225 SN O ...	Version	Product data	Packaging
Order No.	1946440000	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 21,	IEC: 400 V / 17.5 A / 0.2 - 4 mm ²	Box
GTIN (EAN)	4032248622214	225°, Clamping yoke connection, Clamping range, max. : 4 mm ² , Box	UL: 300 V / 15 A / AWG 26 - AWG 12	
Qty.	12 pc(s).			
Type	BLZP 5.08HC/21/225 SN B ...	Version	Product data	Packaging
Order No.	1946750000	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 21,	IEC: 400 V / 17.5 A / 0.2 - 4 mm ²	Box
GTIN (EAN)	4032248622528	225°, Clamping yoke connection, Clamping range, max. : 4 mm ² , Box	UL: 300 V / 15 A / AWG 26 - AWG 12	
Qty.	12 pc(s).			

BLF 5.08HC/180 SN

Just as reliable as the millionfold proven original and featuring innovative details:

The BLF 5.08HC PUSH IN version of the BLZP 5.08HC female connector is not only different in terms of connection system; it also has a more compact design. Weidmüller's innovative PUSH IN spring connection system stands for the future of easy and tool-free wire connection. HC = High Current.

In terms of versatility, the BLF 5.08HC offers just as much as the version which served as a model:

- 3 tested-and-proven wire outlet directions provide the usual flexibility for application-specific design
- 4 flange variations and the patented release latch allow the locking concept to be based on the requirements of the user
- Use the BLF 5.08HC and SL 5.08HC plug combination to reach the max. rated specifications

General ordering data

Type	BLF 5.08HC/21/180 SN OR ...	Version	Product data	Packaging
Order No.	1013890000	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 21,	IEC: 400 V / 24 A / 0.2 - 2.5 mm ²	Box
GTIN (EAN)	4032248721993	180°, PUSH IN, Spring connection, Clamping range, max. : 3.31 mm ² , Box	UL: 300 V / 18.5 A / AWG 26 - AWG 12	
Qty.	12 pc(s).			
Type	BLF 5.08HC/21/180 SN BK ...	Version	Product data	Packaging
Order No.	1013640000	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 21,	IEC: 400 V / 24 A / 0.2 - 2.5 mm ²	Box
GTIN (EAN)	4032248721771	180°, PUSH IN, Spring connection, Clamping range, max. : 3.31 mm ² , Box	UL: 300 V / 18.5 A / AWG 26 - AWG 12	
Qty.	12 pc(s).			

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


Female plug with clamping-yoke screw system for connecting wires with straight (180°) outlet direction. The female connectors provide space for labelling and can be coded. Fastened by means of a flange or release latch. They also provide an integrated plus/minus screw, protection against faulty insertion of the wire, and they are delivered with open clamping yokes. HC = High Current.

General ordering data

Type	BLZP 5.08HC/21/180 SN O ...	Version	Product data	Packaging
Order No.	1943770000	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 21,	IEC: 400 V / 23 A / 0.2 - 4 mm ²	Box
GTIN (EAN)	4032248617784	180°, Clamping yoke connection, Clamping range, max. : 4 mm ² , Box	UL: 300 V / 20 A / AWG 26 - AWG 12	
Qty.	12 pc(s).			
Type	BLZP 5.08HC/21/180 SN B ...	Version	Product data	Packaging
Order No.	1944000000	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 21,	IEC: 400 V / 23 A / 0.2 - 4 mm ²	Box
GTIN (EAN)	4032248618187	180°, Clamping yoke connection, Clamping range, max. : 4 mm ² , Box	UL: 300 V / 20 A / AWG 26 - AWG 12	
Qty.	12 pc(s).			

BLL 5.08/180


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

General ordering data

Type	BLL 5.08/21/180 3.2 SN ...	Version	Product data	Packaging
Order No.	1648980000	PCB plug-in connector, female header, closed side, THT solder	IEC: 400 V / 23 A	Box
GTIN (EAN)	4008190293468	connection, 5.08 mm, Number of poles: 21, 180°, Solder pin length	UL: 300 V / 15 A	
Qty.	12 pc(s).	(I): 3.2 mm, tinned, orange, 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 5.08/21/90 3.2 SN O ...	Version	Product data	Packaging
Order No.	1648500000	PCB plug-in connector, female header, closed side, THT solder	IEC: 400 V / 23 A	Box
GTIN (EAN)	4008190292973	connection, 5.08 mm, Number of poles: 21, 90°, Solder pin length (l):	UL: 300 V / 15 A	
Qty.	12 pc(s).	3.2 mm, tinned, orange, Box		

BLL 5.08/180B



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

General ordering data

Type	BLL 5.08/21/180B 3.2SN ...	Version	Product data	Packaging
Order No.	1682920000	PCB plug-in connector, female header, Dovetails for fixing blocks, THT	IEC: 400 V / 23 A	Box
GTIN (EAN)	4008190474683	solder connection, 5.08 mm, Number of poles: 21, 180°, Solder pin	UL: 300 V / 15 A	
Qty.	12 pc(s).	length (l): 3.2 mm, tinned, orange, Box		

**OMNIMATE Signal - series BL/SL 5.08
SL 5.08HC/21/180G 3.2SN BK BX**

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Mating connector (fully pluggable)
BLZP 5.08HC/225B SN


Clamping-yoke connection with right-angled (90° or 270°) or angled (225°) outlet direction. The female connectors provide space for labelling and can be coded. Fastened by means of a flange or release latch. They also provide an integrated plus/minus screw, protection against faulty insertion of the wire, and they are delivered with open clamping yokes. HC = High Current.

General ordering data

Type	BLZP 5.08HC/21/225B SN ...	Version	Product data	Packaging
Order No.	1945940000	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 21,	IEC: 400 V / 17.5 A / 0.2 - 4 mm ²	Box
GTIN (EAN)	4032248621460	225°, Clamping yoke connection, Clamping range, max. : 4 mm ² , Box	UL: 300 V / 15 A / AWG 26 - AWG 12	
Qty.	12 pc(s).			
Type	BLZP 5.08HC/21/225B SN ...	Version	Product data	Packaging
Order No.	1946170000	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 21,	IEC: 400 V / 17.5 A / 0.2 - 4 mm ²	Box
GTIN (EAN)	4032248621743	225°, Clamping yoke connection, Clamping range, max. : 4 mm ² , Box	UL: 300 V / 15 A / AWG 26 - AWG 12	
Qty.	12 pc(s).			

BLZP 5.08HC/270 SN


Female plugs with clamping-yoke connection for connecting wires with a right-angle (90° or 270°) outlet direction. The female connectors provide space for labelling and can be coded. Fastened by means of a flange or release latch. They also provide an integrated plus/minus screw, protection against faulty insertion of the wire, and they are delivered with open clamping yokes. HC = High Current.

General ordering data

Type	BLZP 5.08HC/21/270 SN O ...	Version	Product data	Packaging
Order No.	1948980000	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 21,	IEC: 400 V / 23 A / 0.2 - 4 mm ²	Box
GTIN (EAN)	4032248626434	270°, Clamping yoke connection, Clamping range, max. : 4 mm ² , Box	UL: 300 V / 20 A / AWG 26 - AWG 12	
Qty.	12 pc(s).			
Type	BLZP 5.08HC/21/270 SN B ...	Version	Product data	Packaging
Order No.	1949210000	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 21,	IEC: 400 V / 23 A / 0.2 - 4 mm ²	Box
GTIN (EAN)	4032248626663	270°, Clamping yoke connection, Clamping range, max. : 4 mm ² , Box	UL: 300 V / 20 A / AWG 26 - AWG 12	
Qty.	12 pc(s).			

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Mating connector (fully pluggable)
BLZP 5.08HC/90 SN


Female plugs with clamping-yoke connection for connecting wires with a right-angle (90° or 270°) outlet direction. The female connectors provide space for labelling and can be coded. Fastened by means of a flange or release latch. They also provide an integrated plus/minus screw, protection against faulty insertion of the wire, and they are delivered with open clamping yokes. HC = High Current.

General ordering data

Type	BLZP 5.08HC/21/90 SN OR ...	Version	Product data	Packaging
Order No.	1948200000	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 21,	IEC: 400 V / 23 A / 0.2 - 4 mm ²	Box
GTIN (EAN)	4032248624720	90°, Clamping yoke connection, Clamping range, max. : 4 mm ² , Box	UL: 300 V / 20 A / AWG 26 - AWG 12	
Qty.	12 pc(s).			
Type	BLZP 5.08HC/21/90 SN BK ...	Version	Product data	Packaging
Order No.	1948430000	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 21,	IEC: 400 V / 23 A / 0.2 - 4 mm ²	Box
GTIN (EAN)	4032248624959	90°, Clamping yoke connection, Clamping range, max. : 4 mm ² , Box	UL: 300 V / 20 A / AWG 26 - AWG 12	
Qty.	12 pc(s).			

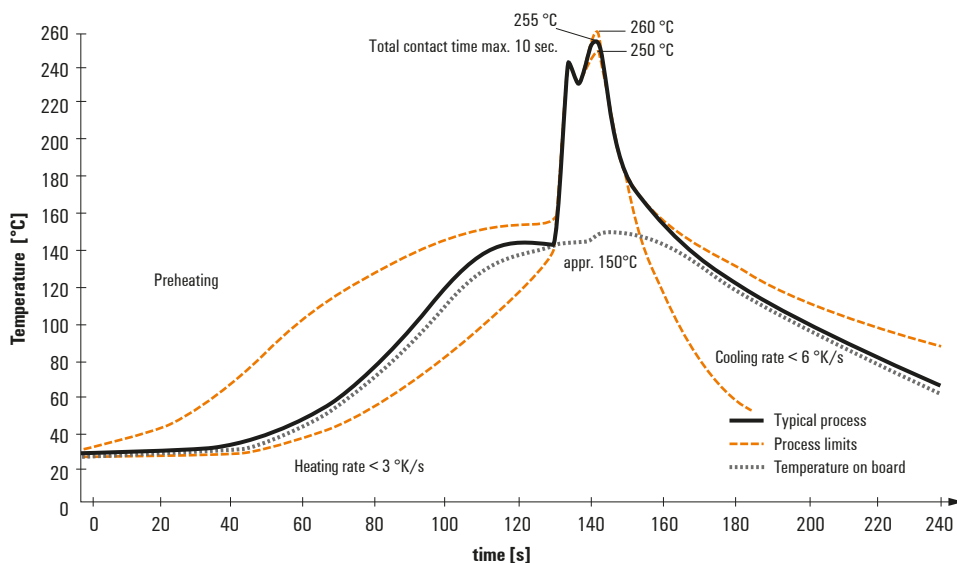
Recommended wave soldering profiles

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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.