

**OMNIMATE Signal - series BL/SL 5.08
SL-SMT 5.08HC/16/90G 3.2SN BK BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

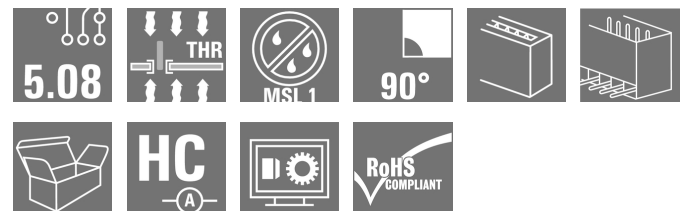
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www.weidmueller.com



Similar to illustration

High-temperature-resistant pin header, packed in box or tape. On tape, with 1.5 mm solder pin, optimised for automatic assembly. 3.2 mm solder pin suitable for reflow and wave soldering. The pin headers provide space for labelling and can be coded. HC = High Current.

General ordering data

| | |
|--------------|--|
| Type | SL-SMT 5.08HC/16/90G 3.2SN BK BX |
| Order No. | 1780320000 |
| Version | PCB plug-in connector, male header, closed side, THT/THR solder connection, 5.08 mm, Number of poles: 16, 90°, Solder pin length (l): 3.2 mm, tinned, black, Box |
| GTIN (EAN) | 4032248165643 |
| Qty. | 50 pc(s). |
| Product data | IEC: 400 V / 27.5 A UL: 300 V / 18.5 A |
| Packaging | Box |

Creation date May 3, 2020 1:30:15 PM CEST

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Technical data

Dimensions and weights

| | | | |
|--------------------------|------------|-----------------|------------|
| Width | 84.48 mm | Width (inches) | 3.326 inch |
| Height | 11.6 mm | Height (inches) | 0.457 inch |
| Height of lowest version | 8.4 mm | Depth | 12 mm |
| Depth (inches) | 0.472 inch | Net weight | 7.12 g |

System specifications

| | | | |
|----------------------------------|-------------------------------------|---|-----------------------|
| Product family | OMNIMATE Signal - series BL/SL 5.08 | Type of connection | Board connection |
| Mounting onto the PCB | THT/THR solder connection | Pitch in mm (P) | 5.08 mm |
| Pitch in inches (P) | 0.2 inch | Outgoing elbow | 90° |
| Number of poles | 16 | Number of solder pins per pole | 1 |
| Solder pin length (l) | 3.2 mm | Solder pin length tolerance | 0 / -0.3 mm |
| Tolerance of solder pin position | ± 0.20 mm | Solder pin dimensions | d = 1.2 mm, Octagonal |
| Solder eyelet hole diameter (D) | 1.5 mm | Solder eyelet hole diameter tolerance (D) | + 0,1 mm |
| L1 in mm | 76.2 mm | L1 in inches | 3 inch |
| Number of rows | 1 | Pin series quantity | 1 |
| Volume resistance | ≤ 5mΩ | Can be coded | Yes |
| Plugging cycles | 25 | Plugging force/pole, max. | 9 N |
| Pulling force/pole, max. | 7 N | | |

Material data

| | | | |
|---------------------------------------|----------------------------|---------------------------------------|----------------------------|
| Insulating material | LCP GF | Colour | black |
| Colour chart (similar) | RAL 9011 | Insulating material group | IIla |
| Comparative Tracking Index (CTI) | ≥ 175 | Insulation strength | ≥ 10 ⁸ Ω |
| Moisture Level (MSL) | 1 | UL 94 flammability rating | V-0 |
| GWIT | 930 °C | 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. | -30 °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) | 27.5 A |
| Rated current, max. number of poles (Tu=20°C) | 19 A | Rated current, min. number of poles (Tu=40°C) | 24 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 | | |

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Technical data
Rated data acc. to CSA

Institute (CSA)



Certificate No. (CSA)

200039-1176845

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

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) 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 length | 30 mm |
| VPE width | 130 mm | VPE height | 195 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

- Gold-plated contact surfaces on request
- Rated current related to rated cross-section & min. No. of poles.
- Diameter of solder eyelet $D = 1.4 + 0.1 \text{ mm}$
- Solder eyelet diameter $D = 1.5 + 0.1 \text{ mm}$, from 9 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.

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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 SMT EN](#)
[FL DRIVES DE](#)
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[FL BUILDING SAFETY EN](#)
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[FL POWER SUPPLY EN](#)
[FL 72H SAMPLE SER EN](#)
[PO OMNIMATE EN](#)

Engineering Data

[EPLAN, WSCAD](#)

Engineering Data

[STEP](#)

White paper surface mount technology

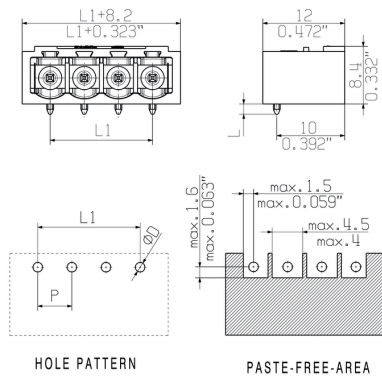
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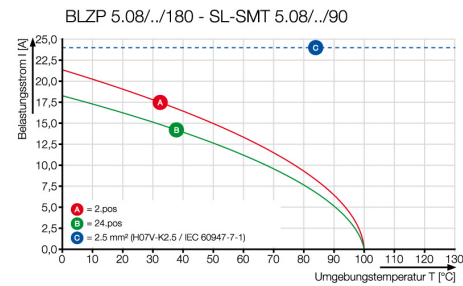
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Drawings

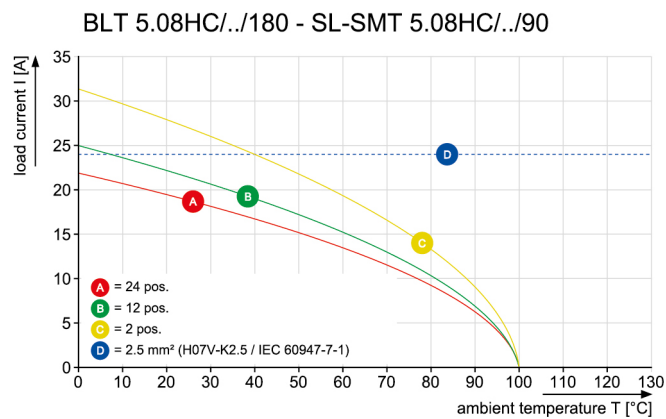
Dimensional drawing



Graph



Graph

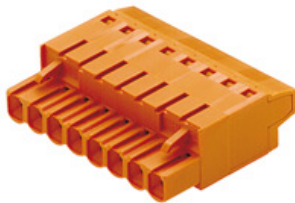


Safe power transmission Product benefits Proven properties



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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/16/180B SN O ... | Version | Product data | Packaging |
|------------|-----------------------------|--|---|-----------|
| Order No. | 1503260000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 27 A / 0.2 - 2.5 mm ² | Box |
| GTIN (EAN) | 4008190037697 | 180°, TOP connection, Clamping range, max. : 2.5 mm ² , Box | UL: 300 V / 17 A / AWG 26 - AWG 14 | |
| Qty. | 18 pc(s). | | | |

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Mating connector (fully pluggable)

BLC 5.08R



Female plugs with crimp wire connection system. The female plugs provide space for labelling and can be coded.

General ordering data

| Type | BLC 5.08/16/180R BK BX | Version | Product data | Packaging |
|------------|----------------------------|---|------------------------------------|-----------|
| Order No. | 1712100000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 21 A | Box |
| GTIN (EAN) | 4008190935115 | 180°, Crimp connection, Clamping range, max. : 2.5 mm², Box | UL: 300 V / 10 A / AWG 26 - AWG 14 | |
| Qty. | 50 pc(s). | | | |
| Type | BLC 5.08/16/180R OR BX | Version | Product data | Packaging |
| Order No. | 1610630000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 21 A | Box |
| GTIN (EAN) | 4008190008253 | 180°, Crimp connection, Clamping range, max. : 2.5 mm², Box | UL: 300 V / 10 A / AWG 26 - AWG 14 | |
| Qty. | 50 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 5.08/16/180 4.5SN O ... | Version | Product data | Packaging |
|------------|-----------------------------|---|-------------------|-----------|
| Order No. | 1649050000 | PCB plug-in connector, female header, closed side, THT solder | IEC: 400 V / 23 A | Box |
| GTIN (EAN) | 4008190293536 | connection, 5.08 mm, Number of poles: 16, 180°, Solder pin length | UL: 300 V / 15 A | |
| Qty. | 50 pc(s). | (I): 4.5 mm, tinned, orange, Box | | |
| Type | BLL 5.08/16/180 4.5 SN ... | Version | Product data | Packaging |
| Order No. | 1649170000 | PCB plug-in connector, female header, closed side, THT solder | IEC: 400 V / 23 A | Box |
| GTIN (EAN) | 4008190293659 | connection, 5.08 mm, Number of poles: 16, 180°, Solder pin length | UL: 300 V / 15 A | |
| Qty. | 18 pc(s). | (I): 4.5 mm, tinned, black, Box | | |
| Type | BLL 5.08/16/180 3.2 SN ... | Version | Product data | Packaging |
| Order No. | 1648930000 | PCB plug-in connector, female header, closed side, THT solder | IEC: 400 V / 23 A | Box |
| GTIN (EAN) | 4008190293413 | connection, 5.08 mm, Number of poles: 16, 180°, Solder pin length | UL: 300 V / 15 A | |
| Qty. | 18 pc(s). | (I): 3.2 mm, tinned, orange, Box | | |

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Mating connector (fully pluggable)

BLF 5.08HC/270 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.

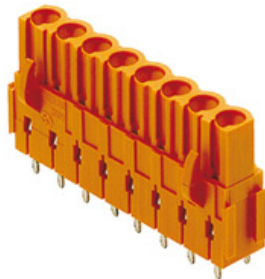
In terms of versatility, the BLF 5.08HC offers just as much as the version which served as a model:

- 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/16/270 SN BK ... | Version | Product data | Packaging |
|------------|-----------------------------|---|---|-----------|
| Order No. | 1982070000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 24 A / 0.2 - 2.5 mm ² | Box |
| GTIN (EAN) | 4032248685769 | 270°, PUSH IN, Spring connection, Clamping range, max. : 3.31 mm ² , UL: 300 V / 18.5 A / AWG 26 - AWG | | |
| Qty. | 18 pc(s). | Box | 12 | |
| Type | BLF 5.08HC/16/270 SN OR ... | Version | Product data | Packaging |
| Order No. | 1982840000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 24 A / 0.2 - 2.5 mm ² | Box |
| GTIN (EAN) | 4032248686933 | 270°, PUSH IN, Spring connection, Clamping range, max. : 3.31 mm ² , UL: 300 V / 18.5 A / AWG 26 - AWG | | |
| Qty. | 18 pc(s). | Box | 12 | |

BLL 5.08/180B



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

General ordering data

| Type | BLL 5.08/16/180B 3.2SN ... | Version | Product data | Packaging |
|------------|----------------------------|--|-------------------|-----------|
| Order No. | 1682870000 | PCB plug-in connector, female header, Dovetails for fixing blocks, THT | IEC: 400 V / 23 A | Box |
| GTIN (EAN) | 4008190474638 | solder connection, 5.08 mm, Number of poles: 16, 180°, Solder pin | UL: 300 V / 15 A | |
| Qty. | 18 pc(s). | length (l): 3.2 mm, tinned, orange, Box | | |

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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/16/225B SN ... | Version | Product data | Packaging |
|------------|----------------------------|---|---|-----------|
| Order No. | 1946120000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 17.5 A / 0.2 - 4 mm ² | Box |
| GTIN (EAN) | 4032248621699 | 225°, Clamping yoke connection, Clamping range, max.: 4 mm ² , Box | UL: 300 V / 15 A / AWG 26 - AWG 12 | |
| Qty. | 18 pc(s). | | | |
| Type | BLZP 5.08HC/16/225B SN ... | Version | Product data | Packaging |
| Order No. | 1945890000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 17.5 A / 0.2 - 4 mm ² | Box |
| GTIN (EAN) | 4032248621415 | 225°, Clamping yoke connection, Clamping range, max.: 4 mm ² , Box | UL: 300 V / 15 A / AWG 26 - AWG 12 | |
| Qty. | 18 pc(s). | | | |

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/16/90 SN OR ... | Version | Product data | Packaging |
|------------|-----------------------------|--|---|-----------|
| Order No. | 1948150000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 23 A / 0.2 - 4 mm ² | Box |
| GTIN (EAN) | 4032248624577 | 90°, Clamping yoke connection, Clamping range, max.: 4 mm ² , Box | UL: 300 V / 20 A / AWG 26 - AWG 12 | |
| Qty. | 18 pc(s). | | | |
| Type | BLZP 5.08HC/16/90 SN BK ... | Version | Product data | Packaging |
| Order No. | 1948380000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 23 A / 0.2 - 4 mm ² | Box |
| GTIN (EAN) | 4032248624904 | 90°, Clamping yoke connection, Clamping range, max.: 4 mm ² , Box | UL: 300 V / 20 A / AWG 26 - AWG 12 | |
| Qty. | 18 pc(s). | | | |

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Mating connector (fully pluggable)

BLF 5.08HC/90 SN



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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/16/90 SN OR ... | Version | Product data | Packaging |
|------------|----------------------------|--|---|-----------|
| Order No. | 1001670000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 24 A / 0.2 - 2.5 mm ² | Box |
| GTIN (EAN) | 4032248693474 | 90°, PUSH IN, Spring connection, Clamping range, max. : 3.31 mm ² , | UL: 300 V / 18.5 A / AWG 26 - AWG | |
| Qty. | 18 pc(s). | Box | 12 | |
| Type | BLF 5.08HC/16/90 SN BK ... | Version | Product data | Packaging |
| Order No. | 1000170001 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 24 A / 0.2 - 2.5 mm ² | Box |
| GTIN (EAN) | 4032248690121 | 90°, PUSH IN, Spring connection, Clamping range, max. : 3.31 mm ² , | UL: 300 V / 18.5 A / AWG 26 - AWG | |
| Qty. | 18 pc(s). | Box | 12 | |

BLZ 5.00/270



Female plugs with clamping-yoke screw for wire connection with 270° outlet direction. The female plugs provide space for labelling and can be coded.

General ordering data

| Type | BLZ 5.00/16/270 SN DKGN ... | Version | Product data | Packaging |
|------------|-----------------------------|---|---|-----------|
| Order No. | 1650030000 | PCB plug-in connector, female plug, 5.00 mm, Number of poles: 16, | IEC: 400 V / 15 A / 0.5 - 2.5 mm ² | Box |
| GTIN (EAN) | 4008190296612 | 270°, Clamping yoke connection, Clamping range, max. : 3.31 mm ² , | UL: 300 V / 10 A / AWG 26 - AWG 12 | |
| Qty. | 50 pc(s). | Box | | |

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Mating connector (fully pluggable)

BLZP 5.08HC/225 SN

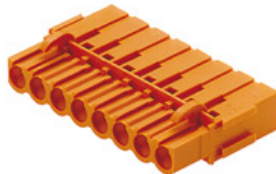


Clamping-yoke connection with right-angled (90° or 270°) or angled (225°) outlet direction. The female connectors provide space for labelling and can be coded. Fastened by means of a flange or release latch. They also provide an integrated plus/minus screw, protection against faulty insertion of the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

General ordering data

| Type | BLZP 5.08HC/16/225 SN B ... | Version | Product data | Packaging |
|------------|-----------------------------|--|---|-----------|
| Order No. | 1946700000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 17.5 A / 0.2 - 4 mm ² | Box |
| GTIN (EAN) | 4032248622474 | 225°, Clamping yoke connection, Clamping range, max. : 4 mm ² , Box | UL: 300 V / 15 A / AWG 26 - AWG 12 | |
| Qty. | 18 pc(s). | | | |
| Type | BLZP 5.08HC/16/225 SN O ... | Version | Product data | Packaging |
| Order No. | 1946390000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 17.5 A / 0.2 - 4 mm ² | Box |
| GTIN (EAN) | 4032248622160 | 225°, Clamping yoke connection, Clamping range, max. : 4 mm ² , Box | UL: 300 V / 15 A / AWG 26 - AWG 12 | |
| Qty. | 18 pc(s). | | | |

BLC 5.08BR



Female plugs with crimp wire connection system. The female plugs provide space for labelling and can be coded.

General ordering data

| Type | BLC 5.08/16/180BR BK BX | Version | Product data | Packaging |
|------------|----------------------------|--|------------------------------------|-----------|
| Order No. | 1712250000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 21 A | Box |
| GTIN (EAN) | 4008190935269 | 180°, Crimp connection, Clamping range, max. : 2.5 mm ² , Box | UL: 300 V / 10 A / AWG 26 - AWG 14 | |
| Qty. | 50 pc(s). | | | |
| Type | BLC 5.08/16/180BR OR BX | Version | Product data | Packaging |
| Order No. | 1649510000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 21 A | Box |
| GTIN (EAN) | 4008190294625 | 180°, Crimp connection, Clamping range, max. : 2.5 mm ² , Box | UL: 300 V / 10 A / AWG 26 - AWG 14 | |
| Qty. | 50 pc(s). | | | |

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Mating connector (fully pluggable)**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/16/180 SN OR ... | Version | Product data | Packaging |
|------------|-----------------------------|---|---|-----------|
| Order No. | 1013840000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 24 A / 0.2 - 2.5 mm ² | Box |
| GTIN (EAN) | 4032248721948 | 180°, PUSH IN, Spring connection, Clamping range, max. : 3.31 mm ² , UL: 300 V / 18.5 A / AWG 26 - AWG | | |
| Qty. | 18 pc(s). | Box | 12 | |
| Type | BLF 5.08HC/16/180 SN BK ... | Version | Product data | Packaging |
| Order No. | 1013580000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 24 A / 0.2 - 2.5 mm ² | Box |
| GTIN (EAN) | 4032248721726 | 180°, PUSH IN, Spring connection, Clamping range, max. : 3.31 mm ² , UL: 300 V / 18.5 A / AWG 26 - AWG | | |
| Qty. | 18 pc(s). | Box | 12 | |

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/16/180 SN B ... | Version | Product data | Packaging |
|------------|-----------------------------|--|---|-----------|
| Order No. | 1943950000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 23 A / 0.2 - 4 mm ² | Box |
| GTIN (EAN) | 4032248618095 | 180°, Clamping yoke connection, Clamping range, max. : 4 mm ² , Box | UL: 300 V / 20 A / AWG 26 - AWG 12 | |
| Qty. | 18 pc(s). | | | |
| Type | BLZP 5.08HC/16/180 SN O ... | Version | Product data | Packaging |
| Order No. | 1943720000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 23 A / 0.2 - 4 mm ² | Box |
| GTIN (EAN) | 4032248617739 | 180°, Clamping yoke connection, Clamping range, max. : 4 mm ² , Box | UL: 300 V / 20 A / AWG 26 - AWG 12 | |
| Qty. | 18 pc(s). | | | |

OMNIMATE Signal - series BL/SL 5.08 SL-SMT 5.08HC/16/90G 3.2SN BK BX

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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 | BL 5.08/16/90 3.2 SN O ... | Version | Product data | Packaging |
|------------|----------------------------|---|-------------------|-----------|
| Order No. | 1648450000 | PCB plug-in connector, female header, closed side, THT solder | IEC: 400 V / 23 A | Box |
| GTIN (EAN) | 4008190292928 | connection, 5.08 mm, Number of poles: 16, 90°, Solder pin length (l): | UL: 300 V / 15 A | |
| Qty. | 18 pc(s). | 3.2 mm, tinned, orange, Box | | |

BLZ 5.00/180



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 5.00/16/180 SN DKGN ... | Version | Product data | Packaging |
|------------|-----------------------------|---|------------------------------------|-----------|
| Order No. | 1646960000 | PCB plug-in connector, female plug, 5.00 mm, Number of poles: 16, | IEC: 400 V / 19 A / 0.5 - 2.5 mm² | Box |
| GTIN (EAN) | 4008190288297 | 180°, Clamping yoke connection, Clamping range, max.: 3.31 mm², | UL: 300 V / 15 A / AWG 26 - AWG 12 | |
| Qty. | 50 pc(s). | Box | | |

**OMNIMATE Signal - series BL/SL 5.08
SL-SMT 5.08HC/16/90G 3.2SN BK BX**

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Mating connector (fully pluggable)
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/16/270 SN O ... | Version | Product data | Packaging |
|------------|-----------------------------|--|---|-----------|
| Order No. | 1948930000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 23 A / 0.2 - 4 mm ² | Box |
| GTIN (EAN) | 4032248626380 | 270°, Clamping yoke connection, Clamping range, max. : 4 mm ² , Box | UL: 300 V / 20 A / AWG 26 - AWG 12 | |
| Qty. | 18 pc(s). | | | |
| Type | BLZP 5.08HC/16/270 SN B ... | Version | Product data | Packaging |
| Order No. | 1949160000 | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 16, | IEC: 400 V / 23 A / 0.2 - 4 mm ² | Box |
| GTIN (EAN) | 4032248626618 | 270°, Clamping yoke connection, Clamping range, max. : 4 mm ² , Box | UL: 300 V / 20 A / AWG 26 - AWG 12 | |
| Qty. | 18 pc(s). | | | |

OMNIMATE Signal - series BL/SL 5.08 SL-SMT 5.08HC/16/90G 3.2SN BK BX

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Accessories

LED Light guides



Effective: the link between LED and front panel.

Floodlight indicators allow users to monitor the switching states without requiring a special design: optical plastic directs the light from standard LEDs around a bend into the connectors or through the front plate.

The fibre-optic elements are simply clipped behind the relevant 90° bend male connectors (90° outlet direction). Versions with different incoming light beam heights achieve maximum light efficiency for LEDs with different designs or heights.

The advantages compared to conventional solutions:

- No additional LED circuit board required behind the front panel
- No "long-legged" LEDs with separate mounting required
- Bent fibre-optic cable line for maximum light efficiency
- Uncomplicated front plate bore holes due to circular shape of outgoing light beam
- Easy to maintain correct clearance and creepage distance
- Can be partitioned for smaller pole numbers

The result: simplified manufacturing process, reduced costs and simplified design

General ordering data

| Type | SL FLA 3.8/1 | Version | Product data | Packaging |
|------------|----------------------------|---|--------------|-----------|
| Order No. | 1580110000 | PCB plug-in connector, Accessories, Flood-light display, Transparent, | | Box |
| GTIN (EAN) | 4008190050740 | Number of poles: 1 | | |
| Qty. | 100 pc(s). | | | |
| Type | SL FLA 2,3/1 | Version | Product data | Packaging |
| Order No. | 1636670000 | PCB plug-in connector, Accessories, Flood-light display, Transparent, | | Box |
| GTIN (EAN) | 4008190409975 | Number of poles: 1 | | |
| Qty. | 100 pc(s). | | | |
| Type | SL FLA 2,3/24 | Version | Product data | Packaging |
| Order No. | 1636680000 | PCB plug-in connector, Accessories, Flood-light display, Transparent, | | Box |
| GTIN (EAN) | 4008190409968 | Number of poles: 1 | | |
| Qty. | 10 pc(s). | | | |
| Type | SL FLA 3.8/24 | Version | Product data | |
| Order No. | 1595860000 | PCB plug-in connector, Accessories, Flood-light display, Transparent, | | |
| GTIN (EAN) | 4008190140892 | Number of poles: 1 | | |
| Qty. | 10 pc(s). | | | |
| Type | SL FLA 9.0/24 | Version | Product data | |
| Order No. | 1595870000 | PCB plug-in connector, Accessories, Flood-light display, Transparent, | | |
| GTIN (EAN) | 4008190079796 | Number of poles: 1 | | |
| Qty. | 10 pc(s). | | | |
| Type | SL FLA 9.0/1 | Version | Product data | Packaging |
| Order No. | 1580120000 | PCB plug-in connector, Accessories, Flood-light display, Transparent, | | Box |
| GTIN (EAN) | 4008190031909 | Number of poles: 1 | | |
| Qty. | 100 pc(s). | | | |

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Accessories

| Type | SL FLA 1.5/1 | Version | Product data | Packaging |
|------------|----------------------------|---|--------------|-----------|
| Order No. | 1580100000 | PCB plug-in connector, Accessories, Flood-light display, Transparent, | | Box |
| GTIN (EAN) | 4008190152475 | Number of poles: 1 | | |
| Qty. | 100 pc(s). | | | |
| Type | SL FLA 1.5/24 | Version | Product data | |
| Order No. | 1595850000 | PCB plug-in connector, Accessories, Flood-light display, Transparent, | | |
| GTIN (EAN) | 4008190092573 | Number of poles: 1 | | |
| Qty. | 10 pc(s). | | | |

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

OMNIMATE Signal - series BL/SL 5.08 SL-SMT 5.08HC/16/90G 3.2SN BK BX

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Accessories

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

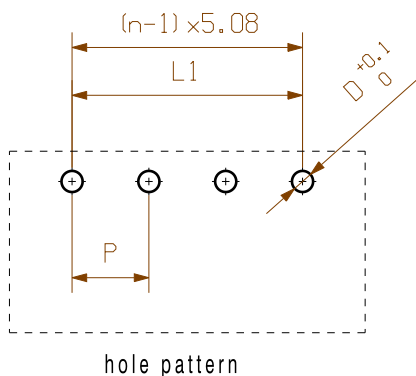
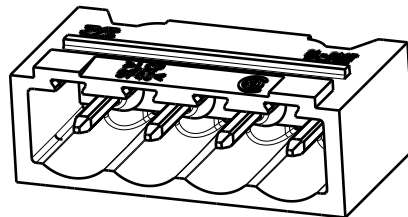
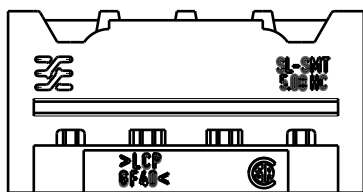
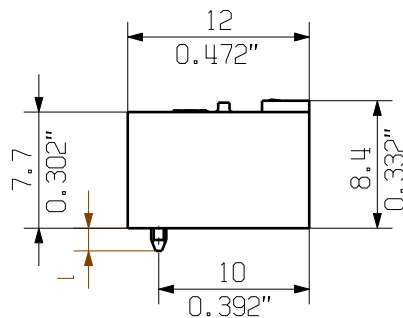
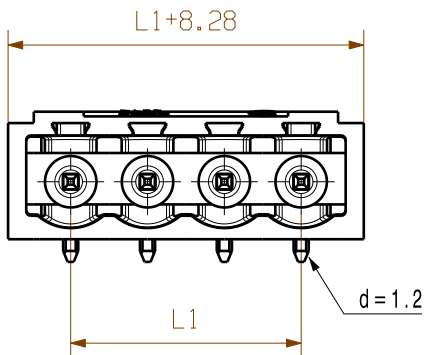
| Type | SL AT SW | Version | Product data | Packaging |
|------------|----------------------------|--|--------------|-----------|
| Order No. | 1770240000 | PCB plug-in connector, Accessories, Spacer, black, Number of poles: 1 | | Box |
| GTIN (EAN) | 4032248117710 | | | |
| Qty. | 100 pc(s). | | | |
| Type | SL AT OR | Version | Product data | Packaging |
| Order No. | 1598300000 | PCB plug-in connector, Accessories, Spacer, orange, Number of poles: 1 | | Box |
| GTIN (EAN) | 4008190189266 | | | |
| Qty. | 100 pc(s). | | | |

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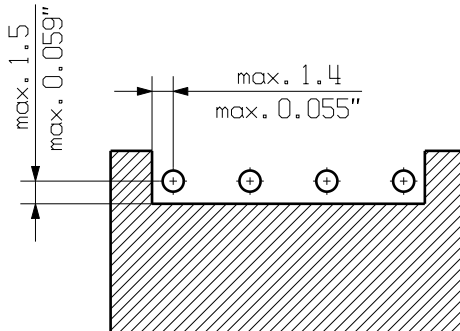
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Dimensions without tolerances are no check dimensions

The English version is binding



hole pattern



paste-free-area

D = 1.4/0.055" or 1.5/0.059" (REFLOW SOLDERING)
RECOMMENDATION FOR AUTOMATIC ASSEMBLY
(1.4mm FOR n=2...8 / 1.5mm for n=9...24)

n = Polzahl / no of poles
P = Raster / pitch

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

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

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

Weidmüller PCB components are tested to the DIN EN 61984 standard, and are valid for its field of application. Provided that the components are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

shown: SL-SMT 5.08HC/04/90G

| | | | |
|--------------|-----------|-----------|--------------|
| 24 | 116.84 | 4.600 | +/- 0.2 |
| 23 | 111.76 | 4.400 | |
| 22 | 106.68 | 4.200 | |
| 21 | 101.60 | 4.000 | |
| 20 | 96.52 | 3.800 | |
| 19 | 91.44 | 3.600 | +/- 0.15 |
| 18 | 86.36 | 3.400 | |
| 17 | 81.28 | 3.200 | |
| 16 | 76.20 | 3.000 | |
| 15 | 71.12 | 2.800 | |
| 14 | 66.04 | 2.600 | +/- 0.1 |
| 13 | 60.96 | 2.400 | |
| 12 | 55.88 | 2.200 | |
| 11 | 50.80 | 2.000 | |
| 10 | 45.72 | 1.800 | |
| 9 | 40.64 | 1.600 | +/- 0.1 |
| 8 | 35.56 | 1.400 | |
| 7 | 30.48 | 1.200 | |
| 6 | 25.40 | 1.000 | |
| 5 | 20.32 | 0.800 | |
| 4 | 15.24 | 0.600 | +/- 0.1 |
| 3 | 10.16 | 0.400 | |
| 2 | 5.08 | 0.200 | |
| 1 | tolerance | | |
| no. of poles | | | |
| L1 [mm] | | L1 [inch] | tolerance L1 |

| | | | | | | | |
|---------------------------|----------------|-------------|----------------------------------|----------|------------|-----------------------------|--|
| | DIN ISO 2768-m | | 106339/4 30.07.18 HERTEL_S 00 | | Cat.no.: . | | |
| | Modification | | Date | | Name | | |
| | | Drawn | 29.11.2007 | HELIS_MA | | | |
| | | Responsible | | HERTEL_S | | | |
| | | Checked | 01.08.2018 | KOCH_JG | | | |
| Supersedes: . | | Approved | | LANG_T | | | |
| | | | | | | 2 33262 31 | |
| | | | | | | Drawing no. Issue no. | |
| Sheet 02 of 04 sheets | | | | | | SL-SMT 5.08HC/.../90... | |
| | | | | | | STIFTELEISTE MALE HEADER | |
| Product file: SL-SMT 5.08 | | | | | | 7280 | |

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.

We reserve the right to make technical changes.

Recommended reflow soldering profile

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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 $\leq +3\text{K/s}$. 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 $\geq -6\text{K/s}$ solder is cured. Board and components cool down while avoiding cold cracks.