

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26 D-32758 Detmold

Germany

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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.

Туре	SL-SMT 5.00HC/17/180G 3.2SN BK BX
Order No.	<u>1841310000</u>
Version	PCB plug-in connector, male header, closed side, THT/THR solder connection, 5.00 mm, Number of poles: 17, 180°, Solder pin length (I): 3.2 mm, tinned, Black, Box
GTIN (EAN)	4032248352210
Qty.	20 pc(s).
Product data	IEC: 400 V / 27.5 A UL: 300 V / 18.5 A
Packaging	Вох



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Technical data

Dimensions and weights

Width	88.2 mm	Width (inches)	3.472 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	7.65 g

System specifications

Product family	OMNIMATE Signal - series	Type of connection	
•	BL/SL 5.00	<i>,</i> .	Board connection
Mounting onto the PCB	THT/THR solder	Pitch in mm (P)	
	connection		5 mm
Pitch in inches (P)	0.197 inch	Outgoing elbow	180°
Number of poles	17	Number of solder pins per pole	1
Solder pin length (I)	3.2 mm	Solder pin length tolerance	+0.1 / -0.2 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)	1.5 mm
Solder eyelet hole diameter tolerance (D)+ 0,1 mm	L1 in mm	80 mm
L1 in inches	3.15 inch	Number of rows	1
Pin series quantity	1	Volume resistance	≤ 5mΩ
Can be coded	Yes	Plugging cycles	25
Plugging force/pole, max.	7 N	Pulling force/pole, max.	5.5 N

Material data

Insulating material	LCP GF	Colour	Black
Colour chart (similar)	RAL 9011	Insulating material group	Illa
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	Layer structure of plug contact	1-3 μm Ni / 2-4 μm Sn
	matt		matt
Storage temperature, min.	-25 °C	Storage temperature, max.	55 °C
Max. relative humidity during storage	80 %	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		Rated current, min. number of poles	
	IEC 60664-1, IEC 61984	(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	1071	Rated voltage for surge voltage class /	247
(Tu=40°C)	16.5 A	pollution degree II/2	400 V
Rated voltage for surge voltage class /		Rated voltage for surge voltage class /	
pollution degree III/2	320 V	pollution degree III/3	250 V
Rated impulse voltage for surge voltage		Rated impulse voltage for surge voltage	
class/ pollution degree II/2	4 kV	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)	SP.	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)	15 A	Rated current (Use group D / CSA)	15 A
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

4 = 4	D (001)	4- 4
	Rated current (Use group D / CSA)	15 A
Specifications are maximum values, details - see approval certificate.		
71	Certificate No. (UR)	E60693
300 V	Rated voltage (Use group D / UL 1059)	300 V
Specifications are maximum values, details - see approval certificate.		
		42 mm
70 mm	VPE height	168 mm
FC000007	ETIMA 7.0	FC000007
		EC002637
		27-44-04-02
Z	UNSPSC	30-21-18-10
-) 300 V) 18.5 A Specifications are maximum values, details -	Specifications are maximum values, details - see approval certificate. Certificate No. (UR) Rated voltage (Use group D / UL 1059) Rated current (Use group D / UL 1059) Specifications are maximum values, details - see approval certificate. Box VPE length VPE height EC002637 27-44-04-02 ETIM 7.0 eClass 9.1

eciass 10.0	27-44-04-02 UNSPSC	30-21-10-10
Notes		
Notes	Gold-plated contact surfaces on request	
	Rated current related to rated cross-section & min. No. of pol	les.
	• Diameter of solder eyelet D = 1.4+0.1mm	
	• Solder eyelet diameter D = 1.5 + 0.1 mm, from 9 poles	
	• P on drawing = pitch	
	Rated data refer only to the component itself. Clearance and be designed in accordance with the relevant application star	
IPC conformity	Conformity: The products are developed, manufactured and de standards and norms and comply with the assured properties i in accordance with IPC-A-610 "Class 2". Further claims on the	in the data sheet resp. fulfill decorative properties



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Technical data

Approval	s
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Approvals



ROHS Conform

Downloads	
Approval/Certificate/Document of	
Conformity	<u>Declaration of the Manufacturer</u>
Brochure/Catalogue	<u>FL DRIVES EN</u>
	MB SMT EN
	FL DRIVES DE
	MB DEVICE MANUF. EN
	CAT 2 PORTFOLIOGUIDE EN
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Engineering Data	<u>STEP</u>
White paper surface mount technology	Download Whitepaper



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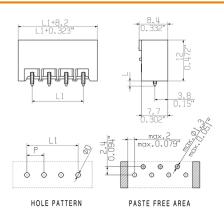
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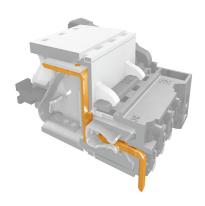
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Drawings

Dimensional drawing



Product benefits



Safe power transmission **Product benefits** Proven properties





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Mating connector (fully pluggable)

BLZP 5.00HC/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. The 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

Туре	BLZP 5.00HC/17/180 SN B	Version	Product data	Packaging
Order No.	<u>1955420000</u>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 17,	IEC: 400 V / 23 A / 0.2 - 4 mm ²	Box
GTIN (EAN)	4032248633906	180°, Clamping yoke connection, Clamping range, max. : 4 mm², Box	UL: 300 V / 20 A / AWG 26 - AWG 12	2
Qty.	18 pc(s).			
•	1 1 7			
Туре	BLZP 5.00HC/17/180 SN O	Version	Product data	Packaging
	,	Version PCB plug-in connector, female plug, 5.00 mm, Number of poles: 17,		Packaging Box
Туре	BLZP 5.00HC/17/180 SN O		IEC: 400 V / 23 A / 0.2 - 4 mm ²	Box

BLZP 5.00HC/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.

Туре	BLZP 5.00HC/17/90 SN OR	Version	Product data	Packaging
Order No.	<u>1957910000</u>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 17,	IEC: 400 V / 23 A / 0.2 - 4 mm ²	Box
GTIN (EAN)	4032248637010	90°, Clamping yoke connection, Clamping range, max. : 4 mm², Box	UL: 300 V / 20 A / AWG 26 - AWG 12	2
Qty.	18 pc(s).			
Туре	BLZP 5.00HC/17/90 SN BK	Version	Product data	Packaging
Type Order No.	BLZP 5.00HC/17/90 SN BK 1958460000	Version PCB plug-in connector, female plug, 5.00 mm, Number of poles: 17,	Product data IEC: 400 V / 23 A / 0.2 - 4 mm ²	Packaging Box
	, ,			Вох



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Mating connector (fully pluggable)

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

Туре	BLZ 5.00/17/180 SN DKGN	Version	Product data	Packaging
Order No.	1646970000	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 17,	IEC: 400 V / 19 A / 0.5 - 2.5 mm ²	Box
GTIN (EAN)	4008190288310	$180^{\circ}\text{, Clamping yoke connection, Clamping range, max.}: 3.31 \text{mm}^{2}\text{,}$	² , UL: 300 V / 15 A / AWG 26 - AWG 12	
Qty.	20 pc(s).	Box		

BLF 5.00HC/90 SN



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

The BLF 5.00HC PUSH IN version of the BLZ 5.00HC female connector features a new connection system and 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 5.00HC offers just as much as the older versions:

- 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

Туре	BLF 5.00HC/17/90 SN BK	Version	Product data	Packaging
Order No.	1979420000	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 17,	IEC: 400 V / 24 A / 0.2 - 2.5 mm ²	Box
GTIN (EAN)	4032248674626	90°, PUSH IN, Tension-clamp connection, Clamping range, max.: 3.31 UL: 300 V / 18.5 A / AWG 26 - AWG		
Qty.	18 pc(s).	mm², Box	12	
Туре	BLF 5.00HC/17/90 SN OR	Version	Product data	Packaging
Order No.	<u>1980320000</u>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 17,	IEC: 400 V / 24 A / 0.2 - 2.5 mm ²	Box
GTIN (EAN)	4032248675401	90°, PUSH IN, Tension-clamp connection, Clamping range, max. : 3.31 UL: 300 V / 18.5 A / AWG 26 - AWG		
Qty.	18 pc(s).	mm², Box	12	



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Mating connector (fully pluggable)

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

Туре	BLZ 5.00/17/270 SN DKGN	Version	Product data	Packaging
Order No.	<u>1650040000</u>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 17,	IEC: 400 V / 15 A / 0.5 - 2.5 mm ²	Box
GTIN (EAN)	4008190296629	$270^{\circ}\text{, Clamping yoke connection, Clamping range, max.}: 3.31 \text{mm}^{2}\text{,}$	² , UL: 300 V / 10 A / AWG 26 - AWG 12	
Qty.	20 pc(s).	Box		

BLF 5.00HC/180 SN



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

The BLF 5.00HC PUSH IN version of the BLZ 5.00HC female connector features a new connection system and 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 5.00HC offers just as much as the older versions:

- 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

Туре	BLF 5.00HC/17/180 SN BK	Version	Product data	Packaging
Order No.	<u>1017840000</u>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 17,	IEC: 400 V / 23 A / 0.2 - 2.5 mm ²	Box
GTIN (EAN)	4032248728695	180°, PUSH IN, Tension-clamp connection, Clamping range, max. :	UL: 300 V / 18.5 A / AWG 26 - AWG	
Qty.	18 pc(s).	3.31 mm², Box	12	
Туре	BLF 5.00HC/17/180 SN OR	Version	Product data	Packaging
Order No.	1018040000	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 17,	IEC: 400 V / 23 A / 0.2 - 2.5 mm ²	Box
GTIN (EAN)	4032248728527	180°, PUSH IN, Tension-clamp connection, Clamping range, max. :	UL: 300 V / 18.5 A / AWG 26 - AWG	
Qty.	18 pc(s).	3.31 mm ² , Box	12	



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Mating connector (fully pluggable)

BLZP 5.00HC/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.

Constant of Contrag Cata					
Туре	BLZP 5.00HC/17/270 SN 0	Version	Product data	Packaging	
Order No.	<u>1958730000</u>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 17,	IEC: 400 V / 23 A / 0.2 - 4 mm ²	Box	
GTIN (EAN)	4032248637560	$90^{\circ}\text{, Clamping yoke connection, Clamping range, max.}:4~\text{mm}^2\text{, Box}$	UL: 300 V / 20 A / AWG 26 - AWG 12	2	
Qty.	18 pc(s).				
Туре	BLZP 5.00HC/17/270 SN B	Version	Product data	Packaging	
Type Order No.	BLZP 5.00HC/17/270 SN B 1958950000	Version PCB plug-in connector, female plug, 5.00 mm, Number of poles: 17,	Product data IEC: 400 V / 23 A / 0.2 - 4 mm ²	Packaging Box	
				Box	



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Coding elements

Accessories



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

Туре	BLZ/SL KO OR BX	Version	Product data	Packaging
Order No.	<u>1573010000</u>	PCB plug-in connector, Accessories, Coding element, orange, Number	r	Box
GTIN (EAN)	4008190048396	of poles: 1		
Qty.	100 pc(s).			
Туре	BLZ/SL KO BK BX	Version	Product data	Packaging
Order No.	<u>1545710000</u>	PCB plug-in connector, Accessories, Coding element, Black, Number		Вох
GTIN (EAN)	4008190087142	of poles: 1		
Qty.	50 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 clipon connection or mounting for male and female connectors

In tandem with the manufacturing process and application - more accessories = smaller workload

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



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Accessories

Туре	SL AT SW	Version	Product data	Packaging
Order No.	<u>1770240000</u>	PCB plug-in connector, Accessories, Spacer, Black, Number of poles:	1	Box
GTIN (EAN)	4032248117710			
Qty.	100 pc(s).			

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Dimensions without tolerances are no check dimensions

For the mounting of PCBs, it should be noted to rated data stated here relates only to the PCB calone.

alone.
The neccessary creepage and clearance paths observed in connection with the respective app accordance to IEC 664 / VDE 0110.

The current-carrying capacity and pitch toleran be determined according to DIN IEC 326 part 3

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



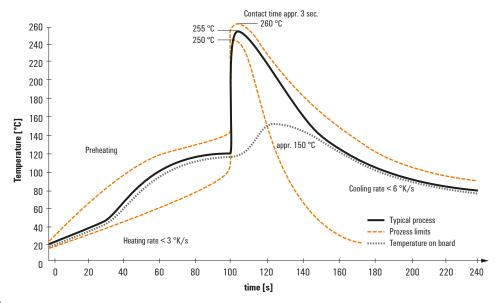
Recommended wave solderding profiles

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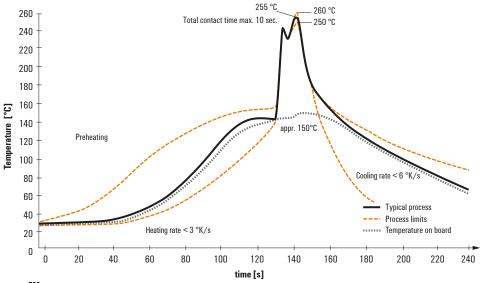
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Single Wave:



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.

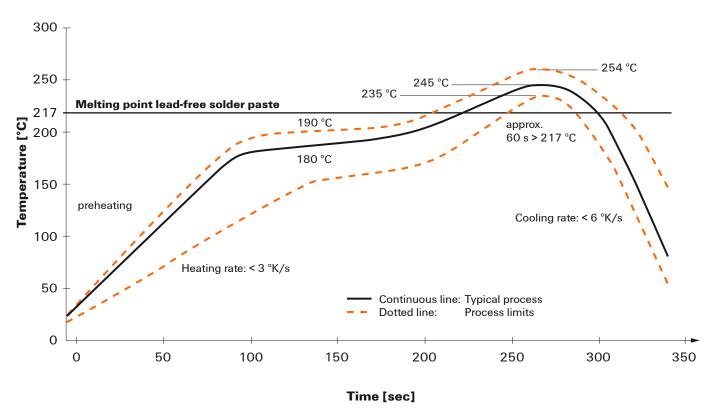


Recommended reflow soldering profile

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

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