

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26 D-32758 Detmold Germany

www.weidmueller.com

### **Product image**

























similar to illustration

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**

PCB plug-in connector, female plug, 5.08 mm, Number of poles: 24, 180°, TOP connection, Clamping range, max. : 2.5 mm², Box
<u>1504060000</u>
BLT 5.08HC/24/180B SN OR BX
4008190072971
12 pc(s).
IEC: 400 V / 27 A / 0.2 - 2.5 mm <sup>2</sup> UL: 300 V / 17 A / AWG 26 - AWG 14
Box

Creation date January 26, 2022 5:07:56 AM CET



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# **Technical data**

### **Dimensions and weights**

Depth	31.8 mm	Depth (inches)	1.252 inch
Height	12.2 mm	Height (inches)	0.48 inch
Width	123.94 mm	Width (inches)	4.88 inch
Net weight	75 g		

#### **System Parameters**

Product family	OMNIMATE Signal - series BL/SL 5.	08			
Type of connection	Field connection				
Wire connection method	TOP connection				
Pitch in mm (P)	5.08 mm				
Pitch in inches (P)	0.2 inch				
Conductor outlet direction	180°				
Number of poles	24				
L1 in mm	116.84 mm				
L1 in inches	4.6 inch				
Number of rows	1				
Pin series quantity	1				
Rated cross-section	2.5 mm <sup>2</sup>				
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch				
Protection degree	IP20				
Volume resistance	≤5 mΩ				
Can be coded	Yes				
Stripping length	13 mm				
Clamping screw	M 2.5				
Screwdriver blade	0.6 x 3.5				
Screwdriver blade standard	DIN 5264				
Plugging cycles	25				
Plugging force/pole, max.	8 N				
Pulling force/pole, max.	7 N				
Tightening torque	Torque type		Wire connection		
	Usage information		Tightening torque	min.	0.4 Nm
				max.	0.5 Nm

#### **Material data**

Insulating material	PBT	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	Illa
Comparative Tracking Index (CTI)	≥ 200	UL 94 flammability rating	V-0
Contact material	CuSn	Contact surface	tinned
Layer structure of plug contact	48 µm Sn hot-dip tinned	Storage temperature, min.	-40 °C
Storage temperature, max.	70 °C	Operating temperature, min.	-50 °C
Operating temperature, max.	100 °C	Temperature range, installation, min.	-25 ℃
Temperature range, installation, max.	100 °C		

#### **Conductors suitable for connection**

Clamping range, min.	0.13 mm <sup>2</sup>
Clamping range, max.	2.5 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 28
Wire connection cross section AWG, max.	AWG 14
Solid, min. H05(07) V-U	0.2 mm <sup>2</sup>

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Solid, max. H05(07) V-U	2.5 mm <sup>2</sup>		
Flexible, min. H05(07) V-K	0.2 mm <sup>2</sup>		
Flexible, max. H05(07) V-K	1.5 mm <sup>2</sup>		
v. plastic collar ferrule, DIN 46228 pt 4 nin.	4, 0.2 mm <sup>2</sup>		
v. plastic collar ferrule, DIN 46228 pt 4 nax.	4, 1.5 mm <sup>2</sup>		
v. wire end ferrule, DIN 46228 pt 1, nin.	0.2 mm <sup>2</sup>		
v. wire end ferrule, DIN 46228 pt 1, nax.	1.5 mm <sup>2</sup>		
Plug gauge in accordance with EN 60999 a x b; ø	2.4 mm x 1.5 mm ; 2.4 mm		
Clampable conductor	Cross-section for conductor connection	Туре	fine-wired
		nominal	0.5 mm <sup>2</sup>
	wire end ferrule	Stripping length	nominal 14 mm
		Recommended wire- end ferrule	H0,5/18 OR
	Cross-section for conductor connection	Туре	fine-wired
		nominal	1 mm <sup>2</sup>
	wire end ferrule	Stripping length	nominal 15 mm
		Recommended wire- end ferrule	H1,0/18 GE
	Cross-section for conductor connection	Туре	fine-wired
		nominal	1.5 mm <sup>2</sup>
	wire end ferrule	Stripping length	nominal 15 mm
		Recommended wire- end ferrule	H1,5/18D SW
		Stripping length	nominal 12 mm
		Recommended wire- end ferrule	H1,5/12
Reference text	The outside diameter of the plastic collar sho is to be chosen depending on the product an	• .	itch (P), Length of ferrule

### Rated data acc. to IEC

tested acc. to standard		Rated current, min. number of poles	
	IEC 60664-1, IEC 61984	(Tu=20°C)	27 A
Rated current, max. number of poles		Rated current, min. number of poles	
(Tu=20°C)	19 A	(Tu=40°C)	24 A
Rated current, max. number of poles		Rated voltage for surge voltage class /	
(Tu=40°C)	16 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		Short-time withstand current resistance	
class/ contamination degree III/3	4 kV		3 x 1s with 100 A



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# **Technical data**

#### Rated data acc. to CSA

Institute (CSA)	€P:	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)	15 A	Rated current (Use group D / CSA)	15 A
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 14
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

#### Rated data acc. to UL 1059

Institute (cURus)	
	C 774 US
Data divalta na /I la a musica D. / I II	I 10E0\ 200\/

Certificate No. (cURus)

Rated voltage (Use group B / UL 1059)	300 V	Rated
Rated current (Use group B / UL 1059)	17 A	Rated
Wire cross-section, AWG, min.	AWG 26	Wire
Reference to approval values	Specifications are maximum values, details - see approval certificate.	

	E60693
Rated voltage (Use group D / UL 1059)	300 V
Rated current (Use group D / UL 1059)	10 A
Wire cross-section, AWG, max.	AWG 14

## **Packing**

Packaging	Box	VPE length	352 mm
VPE width	135 mm	VPE height	38 mm

### Type tests

Test: Durability of markings	Standard	DIN EN 61984 section 7.3.2 / 09.02 taking pattern from DIN EN 60068-2-70 / 07.96
	Test	mark of origin, type of material, date clock
	Evaluation	available
	Test	durability
	Evaluation	passed
Test: Misengagement (Non- interchangeability)	Standard	DIN EN 61984 section 6.3 and 6.9.1 / 09.02, DIN EN 60512-13-5 / 11.06
	Test	180° turned with coding elements
	Evaluation	passed
	Test	visual examination
	Evaluation	passed



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# **Technical data**

Test: Clampable cross section	Standard	DIN EN 60999-1 section 7 and 9.1 / 12.00, I EN 60947-1 section 8.2.4.5.1 / 12.02
	Conductor type	Type of conductor solid 0.08 mm <sup>2</sup> and conductor cross-section
		Type of conductor stranded 0.08 mm <sup>2</sup> and conductor cross-section
		Type of conductor solid 2.5 mm <sup>2</sup> and conductor cross-section
		Type of conductor stranded 2.5 mm <sup>2</sup> and conductor cross-section
		Type of conductor AWG 26/1 and conductor cross-section
		Type of conductor AWG 26/19 and conductor cross-section
		Type of conductor AWG 14/1 and conductor cross-section
		Type of conductor AWG 14/19 and conductor cross-section
	Evaluation	passed
Test for damage to and accidental oosening of conductors	Standard	DIN EN 60999-1 section 9.4 / 12.00
	Requirement	0.2 kg
	Conductor type	Type of conductor AWG 28/1 and conductor cross-section
		Type of conductor AWG 26/19 and conductor cross-section
	Evaluation	passed
	Requirement	0.3 kg
	Conductor type	Type of conductor solid 0.5 mm <sup>2</sup> and conductor cross-section
		Type of conductor stranded 0.5 mm <sup>2</sup> and conductor cross-section
	Evaluation	passed
	Requirement	0.7 kg
	Conductor type	Type of conductor solid 2.5 mm <sup>2</sup> and conductor cross-section
		Type of conductor and conductor cross-section stranded 2.5 mm <sup>2</sup>
		Type of conductor AWG 14/1 and conductor cross-section
		Type of conductor AWG 14/19 and conductor cross-section
	Evaluation	passed



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# **Technical data**

Pull-out test	Standard	DIN EN 60999-1 section 9.5 / 12.00
	Requirement	≥5 N
	Conductor type	Type of conductor AWG 28/1 and conductor cross-section
	Evaluation	passed
	Requirement	≥10 N
	Conductor type	Type of conductor AWG 26/19 and conductor cross-section
	Evaluation	passed
	Requirement	≥20 N
	Conductor type	Type of conductor solid 0.5 mm <sup>2</sup> and conductor cross-section
		Type of conductor stranded 0.5 mm <sup>2</sup> and conductor cross-section
	Evaluation	passed
	Requirement	≥40 N
	Conductor type	Type of conductor AWG 14/1 and conductor cross-section
		Type of conductor AWG 14/19 and conductor cross-section
	Evaluation	passed
	Requirement	≥50 N
	Conductor type	Type of conductor solid 2.5 mm <sup>2</sup> and conductor cross-section
		Type of conductor stranded 2.5 mm <sup>2</sup> and conductor cross-section
	Evaluation	passed

#### Classifications

ETIM 6.0	EC002638	ETIM 7.0	EC002638
ETIM 8.0	EC002638	ECLASS 9.0	27-44-03-09
ECLASS 9.1	27-44-03-09	ECLASS 10.0	27-44-03-09
ECLASS 11.0	27-46-02-02		



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# **Technical data**

#### Important note

important noto	
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.
Notes	Additional colours on request
	Gold-plated contact surfaces on request
	Rated current related to rated cross-section & min. No. of poles.
	Wire end ferrule without plastic collar to DIN 46228/1
	Wire end ferrule with plastic collar to DIN 46228/4
	• Crimp form A for wire end ferrules with PZ 6/5 crimping tool are recommended for the largest cable sizes.
	• P on drawing = pitch
	<ul> <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>

#### **Approvals**

Approvals	® c <b>S</b> LL us Ⅲ
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ROHS	Conform
UL File Number Search	E60693

#### **Downloads**

Approval/Certificate/Document of	CB Certificate
Conformity	CB Testreport
Engineering Data	CAD data – STEP
Catalogues	Catalogues in PDF-format
Brochures	FL DRIVES EN
	<u>FL DRIVES DE</u>



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# **Drawings**

### Graph

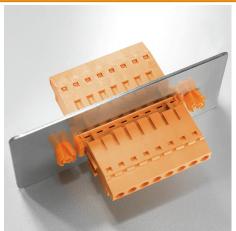
#### BLT 5.08HC/../180 - SL-SMT 5.08HC/../90 35 load current I [A] 30 25 15 10 B = 12 pos. = 2.5 mm² (H07V-K2.5 / IEC 60947-7-1) 40 50 60 100 110 120 130 80 90 ambient temperature T [°C]

### **Product benefits**



Lower assembly costs Secure in a matter of seconds

### **Product benefits**



Guaranteed secure fixing For wall thickness from 0.5 to 2 mm



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## **Accessories**

#### **Blocks for PCB mounting**





#### Minor component, major effect:

Clip-on attachment elements increase the mechanical resilience of the whole plug connection by

- securing the male connectors to the circuit board
- providing a vibration-proof connection between the sockets and the male connectors

Clip-on or pre-assembled - always the right solution:

- Hard-wearing, precise fitting dovetail joint
- Hard-wearing metal threaded inserts
- · Suitable for all outlet directions

Maximum stability, minimum effort:

- Extremely resilient for frequent fastening operations
- Complete set for easy selection

The result: soldering points, contacts and overall module are more resilient against mechanical stress such as vibrations and tensile loads.

#### **General ordering data**

Туре	SLA BB11R OR	Version	Product data	Packaging
Order No.	1604120000	PCB plug-in connector, Accessories, Mounting block, orange, Nu	ımber	Box
GTIN (EAN)	4008190182977	of poles: 1		
Qty.	20 pc(s).			
Туре	BBDF BK	Version	Product data	Packaging
Order No.	1307580000	PCB plug-in connector, Accessories, Mounting block, black		Box
GTIN (EAN)	4050118109764			
Qty.	100 pc(s).			
Туре	SLA BB6R SW	Version	Product data	Packaging
Order No.	1723520000	PCB plug-in connector, Accessories, Mounting block, black, Num	nber of	Box
GTIN (EAN)	4008190366070	poles: 1		
Qty.	20 pc(s).			
Туре	SLA BB11R SW	Version	Product data	Packaging
Order No.	1692340000	PCB plug-in connector, Accessories, Mounting block, black, Num	nber of	Вох
GTIN (EAN)	4008190864965	poles: 1		
Qty.	20 pc(s).			
Туре	SLA BB5R OR	Version	Product data	Packaging
Order No.	1723460000	PCB plug-in connector, Accessories, Mounting block, orange, Nu	ımber	Box
GTIN (EAN)	4008190366018	of poles: 1		
Qty.	20 pc(s).			
Туре	SLA BB2R SW	Version	Product data	Packaging
Order No.	1723490000	PCB plug-in connector, Accessories, Mounting block, black, Num	nber of	Box
GTIN (EAN)	4008190366049	poles: 1		
Qty.	20 pc(s).			
Туре	SLA BB12R SW	Version	Product data	Packaging
Order No.	1626880000	PCB plug-in connector, Accessories, Mounting block, black, Num	nber of	Box
GTIN (EAN)	4008190198213	poles: 1		
Qty.	100 pc(s).			



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## Accessories

Туре	SLA BB12R OR	Version	Product data	Packaging
Order No.	1593450000	PCB plug-in connector, Accessories, Mounting block, orange, Number	er	Box
GTIN (EAN)	4008190122164	of poles: 1		
Qty.	100 pc(s).			
Туре	SLA BB1R OR	Version	Product data	Packaging
Order No.	1723430000	PCB plug-in connector, Accessories, Mounting block, orange, Number	er	Box
GTIN (EAN)	4008190365981	of poles: 1		
Qty.	20 pc(s).			
Туре	SLA BB5R SW	Version	Product data	Packaging
Order No.	<u>1723510000</u>	PCB plug-in connector, Accessories, Mounting block, black, Number	of	Box
GTIN (EAN)	4008190366063	poles: 1		
Qty.	20 pc(s).			
Туре	BBDF OR	Version	Product data	Packaging
Order No.	1307570000	PCB plug-in connector, Accessories, Mounting block, orange		Box
GTIN (EAN)	4050118109566			
Qty.	100 pc(s).			
Туре	SLA BB6R OR	Version	Product data	Packaging
Order No.	<u>1723470000</u>	PCB plug-in connector, Accessories, Mounting block, orange, Number	er	Box
GTIN (EAN)	4008190366025	of poles: 1		
Qty.	20 pc(s).			
Туре	SLA BB1R SW	Version	Product data	Packaging
Order No.	<u>1723480000</u>	PCB plug-in connector, Accessories, Mounting block, black, Number	of	Box
GTIN (EAN)	4008190366032	poles: 1		
Qty.	20 pc(s).			
Туре	SLA BB2R OR	Version	Product data	Packaging
Order No.	1723440000	PCB plug-in connector, Accessories, Mounting block, orange, Number	er	Box
GTIN (EAN)	4008190365998	of poles: 1		
Qty.	20 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**

Туре	BLZ/SL KO BK BX	Version	Product data	Packaging
Order No.	<u>1545710000</u>	PCB plug-in connector, Accessories, Coding element, black, Number		Box
GTIN (EAN)	4008190087142	of poles: 1		
Qty.	50 pc(s).			



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## **Accessories**

Туре	BLZ/SL KO OR BX	Version	Product data	Packaging
Order No.	<u>1573010000</u>	PCB plug-in connector, Accessories, Coding element, orange, Numbe	r	Box
GTIN (EAN)	4008190048396	of poles: 1		
Qty.	100 pc(s).			

#### Strain reliefs



# For frequent load changes: the "trailer coupling" for plug-in connectors.

The strain relief can do more than just relieve the strain on conductors:

Simply clip onto the plug and

- bundle conductors
- guide cables
- use as a connection and disconnection aid

No damage to the connecting points, clear, tidy wiring and easy to handle.

User advantages: permanent heavy-duty connections for harsh industrial environments and convenient operation ensure improved system availability.

### **General ordering data**

Туре	BLAT ZE04 OR BX	Version	Product data	Packaging
Order No.	<u>1577980000</u>	PCB plug-in connector, Accessories, Strain relief, orange, Number of		Box
GTIN (EAN)	4008190078249	poles: 4		
Qty.	50 pc(s).			

# **Mouser Electronics**

**Authorized Distributor** 

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

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