

BLF 5.00HC/16/180F SN BK BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com**Product image**

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

General ordering data

Version	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 16, 180°, PUSH IN with actuator, Clamping range, max. : 3.31 mm², Box
Order No.	1017390000
Type	BLF 5.00HC/16/180F SN BK BX
GTIN (EAN)	4032248728138
Qty.	18 pc(s).
Product data	IEC: 400 V / 23 A / 0.2 - 2.5 mm² UL: 300 V / 18.5 A / AWG 26 - AWG 12
Packaging	Box

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Technical data**Dimensions and weights**

Depth	27.6 mm	Depth (inches)	1.087 inch
Height	14.2 mm	Height (inches)	0.559 inch
Width	85.1 mm	Width (inches)	3.35 inch
Net weight	32.94 g		

System Parameters

Product family	OMNIMATE Signal - series BL/SL 5.00		
Type of connection	Field connection		
Wire connection method	PUSH IN with actuator		
Pitch in mm (P)	5 mm		
Pitch in inches (P)	0.197 "		
Conductor outlet direction	180°		
Number of poles	16		
L1 in mm	75 mm		
L1 in inches	2.955 "		
Number of rows	1		
Pin series quantity	1		
Rated cross-section	2.5 mm ²		
Touch-safe protection acc. to DIN VDE 57 106	Safe from back-of-hand touch		
Touch-safe protection acc. to DIN VDE 0470	IP20 plugged/ IP10 unplugged		
Protection degree	IP20		
Volume resistance	≤5 mΩ		
Can be coded	Yes		
Stripping length	10 mm		
Screwdriver blade	0.6 x 3.5		
Screwdriver blade standard	DIN 5264		
Plugging cycles	25		
Plugging force/pole, max.	7 N		
Pulling force/pole, max.	5.5 N		
Tightening torque	Torque type	Screw flange	
	Usage information	Tightening torque	min. 0.2 Nm max. 0.25 Nm

Material data

Insulating material	PBT	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	UL 94 flammability rating	V-0
Contact material	Cu-alloy	Contact surface	tinned
Layer structure of plug contact	4...8 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.	-30 °C
Temperature range, installation, max.	100 °C		

Conductors suitable for connection

Clamping range, min.	0.13 mm ²
Clamping range, max.	3.31 mm ²
Wire connection cross section AWG, min.	AWG 26
Wire connection cross section AWG, max.	AWG 12

Creation date June 15, 2024 1:53:25 PM CEST

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Solid, min. H05(07) V-U	0.2 mm ²
Solid, max. H05(07) V-U	2.5 mm ²
Flexible, min. H05(07) V-K	0.2 mm ²
Flexible, max. H05(07) V-K	2.5 mm ²
w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm ² max.	
w. wire end ferrule, DIN 46228 pt 1, min.	0.25 mm ²
w. wire end ferrule, DIN 46228 pt 1, max.	2.5 mm ²
Plug gauge in accordance with EN 60999 a x b; ø	2.8 mm x 2.0 mm

Clampable conductor	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.5 mm ²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H0.5/16 OR	
		Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H0.5/10	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.75 mm ²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H0.75/16 W	
		Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H0.75/10	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1 mm ²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H1.0/16 D R	
		Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H1.0/10	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1.5 mm ²	
	wire end ferrule	Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H1.5/10	
		Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H1.5/16 R	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	2.5 mm ²	
	wire end ferrule	Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H2.5/10	

Reference text	The outside diameter of the plastic collar should not be larger than the pitch (P). Length of ferrules is to be chosen depending on the product and the rated voltage.
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Technical data

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	23 A
Rated current, max. number of poles (Tu=20°C)	18 A	Rated current, min. number of poles (Tu=40°C)	21 A
Rated current, max. number of poles (Tu=40°C)	16 A	Rated voltage for surge voltage class / pollution degree II/2	400 V
Rated voltage for surge voltage class / pollution degree III/2	320 V	Rated voltage for surge voltage class / pollution degree III/3	250 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	4 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	4 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	4 kV	Short-time withstand current resistance	3 x 1s with 120 A

Rated data acc. to CSA

Institute (CSA)		Certificate No. (CSA)	200039-1121690
Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group D / CSA)	300 V
Rated current (Use group B / CSA)	10 A	Rated current (Use group D / CSA)	10 A
Wire cross-section, AWG, min.	AWG 12	Wire cross-section, AWG, max.	AWG 26
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

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
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 12
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	350 mm
VPE width	135 mm	VPE height	30 mm

Type tests

Test: Durability of markings	Standard	IEC 61984 section 6.2 and 7.3.2 / 10.08 taking pattern from IEC 60068-2-70 / 12.95
	Test	mark of origin, type identification, pitch, type of material, date clock
	Evaluation	available
	Test	durability
	Evaluation	passed

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Test: Misengagement (Non-interchangeability)	Standard	IEC 61984 section 6.3 and 6.9.1 / 10.08, IEC 60512-13-5 / 02.06
	Test	180° turned with coding elements
	Evaluation	passed
	Test	visual examination
	Evaluation	passed
Test: Clampable cross section	Standard	IEC 60999-1 section 7 and 9.1 / 11.99, IEC 60947-1 section 8.2.4.5.1 / 06.07
	Conductor type	Type of conductor and solid 0.2 mm ² conductor cross-section
		Type of conductor and stranded 0.2 mm ² conductor cross-section
		Type of conductor and solid 2.5 mm ² conductor cross-section
		Type of conductor and stranded 2.5 mm ² conductor cross-section
		Type of conductor and AWG 26/1 conductor cross-section
		Type of conductor and AWG 26/19 conductor cross-section
		Type of conductor and AWG 14/1 conductor cross-section
		Type of conductor and AWG 14/19 conductor cross-section
	Evaluation	passed

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Technical data

Test for damage to and accidental loosening of conductors	Standard	IEC 60999-1 section 9.4 / 11.99
	Requirement	0.2 kg
	Conductor type	Type of conductor and AWG 26/1 conductor cross-section
		Type of conductor and AWG 26/19 conductor cross-section
	Evaluation	passed
	Requirement	0.3 kg
	Conductor type	Type of conductor and H05V-U0.5 conductor cross-section
		Type of conductor and H05V-K0.5 conductor cross-section
	Evaluation	passed
	Requirement	0.7 kg
Pull-out test	Conductor type	Type of conductor and H07V-U2.5 conductor cross-section
		Type of conductor and H07V-K2.5 conductor cross-section
	Conductor type	Type of conductor and AWG 14/1 conductor cross-section
		Type of conductor and AWG 14/19 conductor cross-section
	Evaluation	passed
	Standard	IEC 60999-1 section 9.5 / 11.99
	Requirement	≥10 N
	Conductor type	Type of conductor and AWG 26/1 conductor cross-section
		Type of conductor and AWG 26/19 conductor cross-section
	Evaluation	passed
	Conductor type	Type of conductor and H05V-U0.5 conductor cross-section
		Type of conductor and H05V-K0.5 conductor cross-section
	Evaluation	passed
	Requirement	≥20 N
	Conductor type	Type of conductor and H07V-U2.5 conductor cross-section
		Type of conductor and H07V-K2.5 conductor cross-section
	Conductor type	Type of conductor and AWG 14/1 conductor cross-section
		Type of conductor and AWG 14/19 conductor cross-section
	Evaluation	passed
	Requirement	≥50 N
	Conductor type	Type of conductor and H07V-U2.5 conductor cross-section
		Type of conductor and H07V-K2.5 conductor cross-section
	Conductor type	Type of conductor and AWG 14/1 conductor cross-section
		Type of conductor and AWG 14/19 conductor cross-section
	Evaluation	passed
	Requirement	≥50 N
	Conductor type	Type of conductor and H07V-U2.5 conductor cross-section
		Type of conductor and H07V-K2.5 conductor cross-section
	Conductor type	Type of conductor and AWG 14/1 conductor cross-section
		Type of conductor and AWG 14/19 conductor cross-section
	Evaluation	passed

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www.weidmueller.com**Technical data****Classifications**

ETIM 6.0	EC002638	ETIM 7.0	EC002638
ETIM 8.0	EC002638	ETIM 9.0	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
ECLASS 12.0	27-46-02-02	ECLASS 13.0	27-46-02-02

Important note

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	<ul style="list-style-type: none"> • Additional variants 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 • P on drawing = pitch • Crimping shape "A" for wire end ferrules with PZ 6/5 crimping tool recommended. • The test point can only be used as potential-pickup point. • In accordance with IEC 61984, OMNIMATE-connectors are connectors without breaking capacity (COC). During designated use, connectors are not allowed to be engaged or disengaged when live or under load • Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months

Approvals

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate No. (cURus)	E60693

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www.weidmueller.com**Technical data****Downloads**Approval/Certificate/Document of Con-
formity[Declaration of the Manufacturer](#)

Engineering Data

[CAD data – STEP](#)

Catalogues

[Catalogues in PDF-format](#)

Brochures

[FL DRIVES EN](#)[MB DEVICE MANUF. EN](#)[FL DRIVES DE](#)[FL BUILDING SAFETY EN](#)[FL APPL LED LIGHTING EN](#)[FL INDUSTR.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](#)[PO OMNIMATE EN](#)

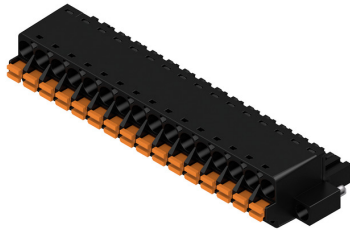
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Drawings

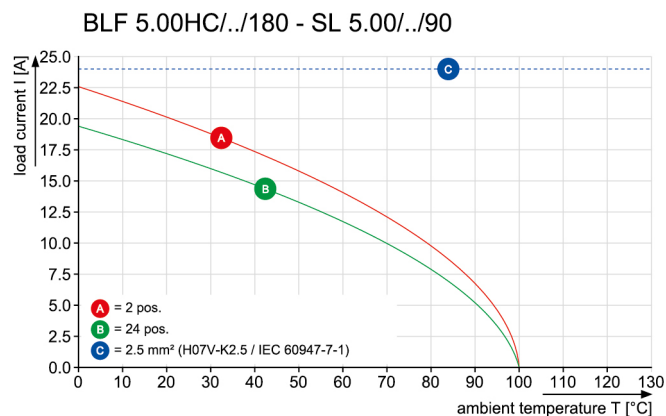
Product image



Dimensional drawing



Graph



Graph



Uncompromising functionality
High vibration resistance

Product benefits



Uncompromising functionality
High vibration resistance

Product benefits



Solid PUSH IN contact
Safe and durable

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www.weidmueller.com**Accessories****Slotted screwdriver**

VDE insulated slot-head screwdriver, SDI DIN 7437, ISO 2380/2, drive output acc. to DIN 5264, ISO 2380/1. SoftFinish grip

General ordering data

Type	SDIS 0.6X3.5X100	Version
Order No.	9008390000	Screwdriver, Screwdriver
GTIN (EAN)	4032248056354	
Qty.	1 pc(s).	

Slotted screwdriver

Slotted screwdriver with rounded blade SD DIN 5265, ISO 2380/2, output to DIN 5264, ISO 2380/1. ChromTop tip, SoftFinish grip

General ordering data

Type	SDS 0.6X3.5X100	Version
Order No.	9008330000	Screwdriver, Screwdriver
GTIN (EAN)	4032248056286	
Qty.	1 pc(s).	

Type	SDS 0.6X3.5X200	Version
Order No.	9010110000	Screwdriver, Screwdriver
GTIN (EAN)	4032248300754	
Qty.	1 pc(s).	

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www.weidmueller.com**Accessories****Coding elements****Only connects what is supposed to be connected:
the right connection at the right place.**

Coding elements and locking devices clearly assign connecting elements during the manufacturing process and operation

The coding elements and locking devices are inserted prior to assembly or during the cable assembly phase. The Weidmüller alternative: configure online using the variant configurator to precode prior to delivery.

Incorrect assembly on the circuit board and incorrect plugging of connecting elements is no longer possible. The advantage: no troubleshooting during manufacture and no operational errors by the user.

General ordering data

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

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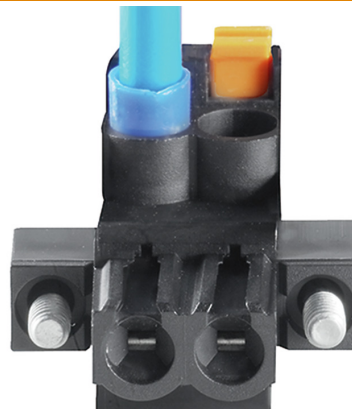
Drawings

Product benefits



Cost-effective wiring
Quick and intuitive operation

Product benefits



Wide clamping range
Tool-free wire connection

SHOWN: BLF 5.00HC/04/180



SHOWN: BLF 5.00HC/04/180F



SHOWN: BLF 5.00HC/04/180LR



SONDERVARIANTE OHNE RASTHAKEN /
SPECIAL VERSION WITHOUT SNAP LATCH



SHOWN: BLF 5.00HC/04/180LH



BLF 5.00HC/04/180F SO
SONDERVARIANTE / EINSEITIGER FLANSCH
SPECIAL VERSION ONESIDED FLANSH



24	115	4.527
23	110	4.430
22	105	4.130
21	100	3.930
20	95	3.741
19	90	3.543
18	85	3.349
17	80	3.152
16	75	2.955
15	70	2.758
14	65	2.561
13	60	2.364
12	55	2.167
11	50	1.970
10	45	1.773
9	40	1.576
8	35	1.379
7	30	1.182
6	25	0.985
5	20	0.788
4	15	0.591
3	10	0.394
2	5	0.197
n	L_{mm}	L_{inch}

P = 5.08 RASTER/PITCH
n = POLZAHL/NO OF POLES

General tolerance: DIN ISO 2768-mK		Cat.no.:	
		1 43920 (07)	
90260/0 14.02.16 HERTEL_S		01	
Modification		Drawing no. Sheet 01 of 01 sheets	
Date		Name	
Drawn		BLF 5.00HC/./180...	
Responsible		BUCHSENSTECKER	
Checked		FEMALE PLUG	
Approved		Product file: BLF 5.00	
Scale: 2/1		7379	
Supersedes:..			