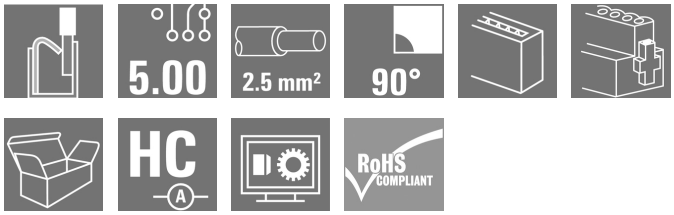
BLF 5.00HC/12/90F SN OR BX

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: 12, 90°, PUSH IN with actuator, Clamping range, max. : 3.31 mm², Box
Order No.	1980740000
Type	BLF 5.00HC/12/90F SN OR BX
GTIN (EAN)	4032248675890
Qty.	24 pc(s).
Product data	IEC: 400 V / 24 A / 0.2 - 2.5 mm² UL: 300 V / 18.5 A / AWG 26 - AWG 12
Packaging	Box

Creation date December 5, 2023 10:19:21 AM CET

BLF 5.00HC/12/90F SN OR BX

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Technical data

Dimensions and weights

Depth	26.2 mm	Depth (inches)	1.031 inch
Height	20.8 mm	Height (inches)	0.819 inch
Width	69.8 mm	Width (inches)	2.748 inch
Net weight	27.5 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 inch
Conductor outlet direction	90°
Number of poles	12
L1 in mm	55 mm
L1 in inches	2.167 inch
Number of rows	1
Pin series quantity	1
Rated cross-section	2.5 mm²
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	orange
Colour chart (similar)	RAL 2000	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	UL 94 flammability rating	V-0
Contact material	CuSn	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 mm²
Clamping range, max.	3.31 mm²
Wire connection cross section AWG, min.	AWG 26
Wire connection cross section AWG, max.	AWG 12

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Technical data

Solid, min. H05(07) V-U	0.2 mm²		
Solid, max. H05(07) V-U	2.5 mm²		
Flexible, min. H05(07) V-K	0.2 mm²		
Flexible, max. H05(07) V-K	2.5 mm²		
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.25 mm²		
w. plastic collar ferrule, DIN 46228 pt 4, max.	2.5 mm²		
w. wire end ferrule, DIN 46228 pt 1, min.	0.25 mm²		
w. wire end ferrule, DIN 46228 pt 1, max.	2.5 mm²		
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 mm²
	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 mm²
	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 mm²
	wire end ferrule	Stripping length	nominal 12 mm
		Recommended wire-end ferrule	H1,0/16D R
		Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H1,0/10
	Cross-section for conductor connection	Type	fine-wired
		nominal	1.5 mm²
	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 mm²
	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)	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	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	347 mm
VPE width	135 mm	VPE height	31 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 conductor cross-section	solid 0.2 mm²
		Type of conductor and conductor cross-section	stranded 0.2 mm²
		Type of conductor and conductor cross-section	solid 2.5 mm²
		Type of conductor and conductor cross-section	stranded 2.5 mm²
		Type of conductor and conductor cross-section	AWG 26/1
		Type of conductor and conductor cross-section	AWG 26/19
		Type of conductor and conductor cross-section	AWG 14/1
		Type of conductor and conductor cross-section	AWG 14/19
	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 conductor cross-section	AWG 26/1
		Type of conductor and conductor cross-section	AWG 26/19
	Evaluation	passed	
	Requirement	0.3 kg	
	Conductor type	Type of conductor and conductor cross-section	H05V-U0.5
		Type of conductor and conductor cross-section	H05V-K0.5
	Evaluation	passed	
	Requirement	0.7 kg	
	Conductor type	Type of conductor and conductor cross-section	H07V-U2.5
		Type of conductor and conductor cross-section	H07V-K2.5
		Type of conductor and conductor cross-section	AWG 14/1
		Type of conductor and conductor cross-section	AWG 14/19
	Evaluation	passed	
Pull-out test	Standard	IEC 60999-1 section 9.5 / 11.99	
	Requirement	≥10 N	
	Conductor type	Type of conductor and conductor cross-section	AWG 26/1
		Type of conductor and conductor cross-section	AWG 26/19
	Evaluation	passed	
	Requirement	≥20 N	
	Conductor type	Type of conductor and conductor cross-section	H05V-U0.5
		Type of conductor and conductor cross-section	H05V-K0.5
	Evaluation	passed	
	Requirement	≥50 N	
	Conductor type	Type of conductor and conductor cross-section	H07V-U2.5
		Type of conductor and conductor cross-section	H07V-K2.5
		Type of conductor and conductor cross-section	AWG 14/1
		Type of conductor and conductor cross-section	AWG 14/19
	Evaluation	passed	

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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	27460202

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	• 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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Technical data

Downloads

Approval/Certificate/Document of Conformity	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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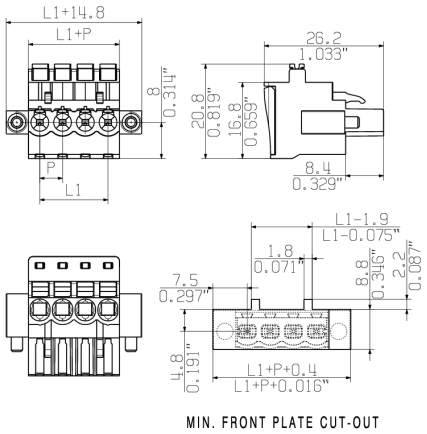
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Drawings

Product image



Dimensional drawing



Product benefits



Uncompromising functionality
High vibration resistance

Product benefits



Uncompromising functionality
High vibration resistance
Solid PUSH IN contact
Safe and durable

Creation date December 5, 2023 10:19:21 AM CET

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Accessories

Coding elements



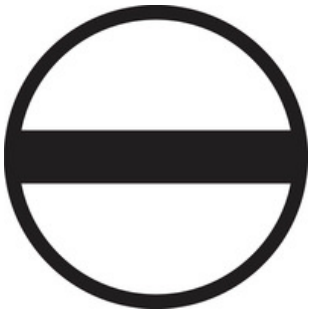
Only connects what is supposed to be connected: the right connection at the right place.
Coding elements and locking devices clearly assign connecting elements during the manufacturing process and operation
The coding elements and locking devices are inserted prior to assembly or during the cable assembly 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 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).			

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.	2749810000	Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade
GTIN (EAN)	4050118897012	thickness (A): 0.6 mm
Qty.	1 pc(s).	

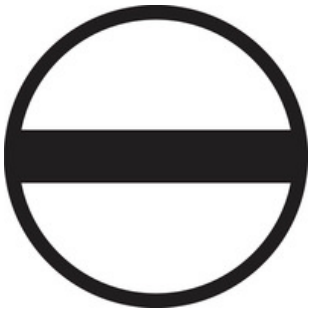
BLF 5.00HC/12/90F SN OR BX

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Accessories

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

Type	SDS 0.6X3.5X100	Version
Order No.	2749340000	Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade
GTIN (EAN)	4050118895568	thickness (A): 0.6 mm
Qty.	10 pc(s).	

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Drawings

Product benefits



Cost-effective wiring
Quick and intuitive operation

Product benefits

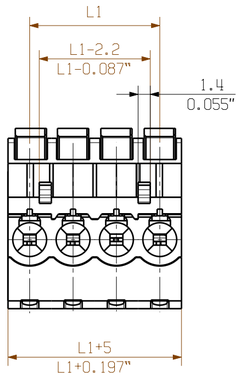


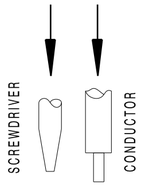
Wide clamping range
Tool-free wire connection

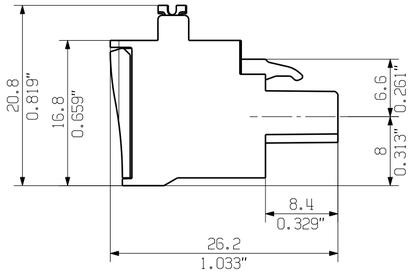
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DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.

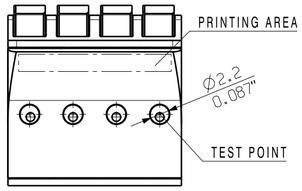
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THE GERMAN VERSION IS BINDING

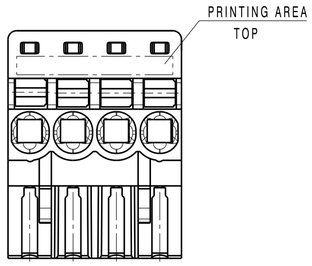
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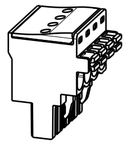




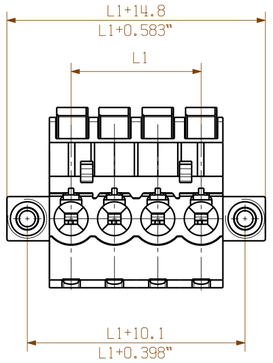


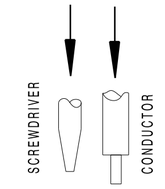




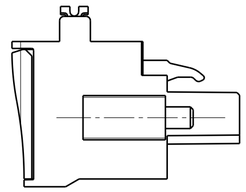


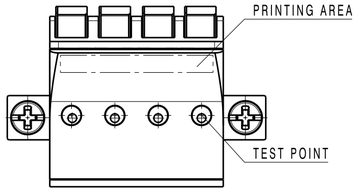
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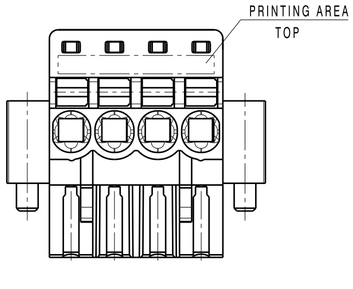


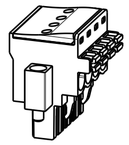


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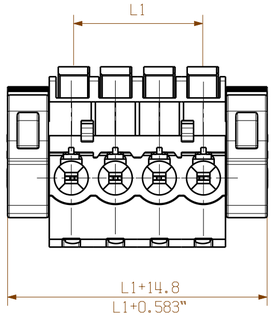


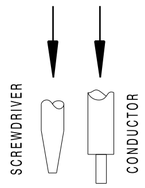


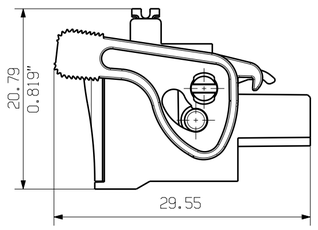


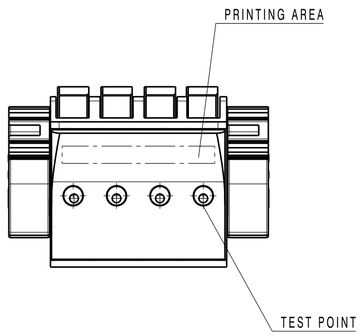
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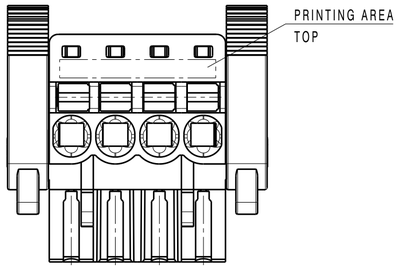
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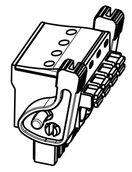






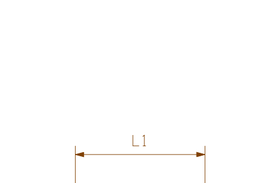


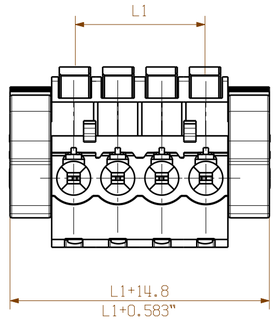


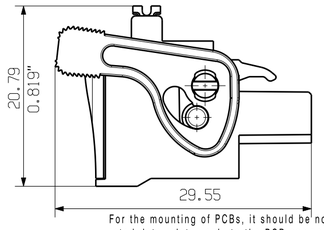


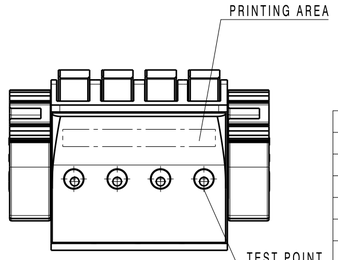
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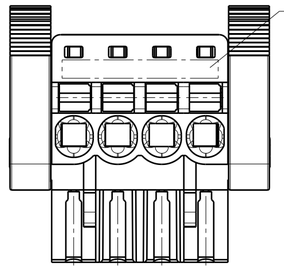
SHOWN: BLF 5.00HC/04/90LH SN ...









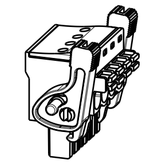


For the mounting of PCBs, it should be noted that the rated data relates only to the PCB components alone.
The neccessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to IEC 664 / VDE 0110.
The current-carrying capacity and pitch tolerance is 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 occuring of electrical, mechanical, thermic and corrosive stress will be satisfied.

P = 5.08 RASTER/PITCH

n = POLZAHL/NO OF POLES



M 1:1

20	95	3.743
19	90	3.546
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	L1[mm]	L1[Inch]

GENERAL TOLERANCE:
DIN ISO 2768-m

RoHS COMPLIANT

85270/5
03.12.15 HELIS_MA 01
MODIFICATION

CAT.NO.:.

Weidmüller

C 44231 07
DRAWING NO. ISSUE NO.
SHEET 01 OF 01 SHEETS

	DATE	NAME
DRAWN	29.11.2007	HUANG_PA
RESPONSIBLE		HERTEL_S
CHECKED	18.12.2015	HELIS_MA
APPROVED		LANG_T

SCALE: 2/1
SUPERSEDES: .

BLF 5.00HC/../90...
BUCHSENLEISTE
SOCKET BLOCK

PRODUCT FILE: BLF 5.00 7379

WEITERGABE SOWIE VERVIELFAELTIGUNG DIESES DOKUMENTS, VERWERTUNG UND MITTEILUNG SEINES INHALTS SIND VERBOTEN, SOWEIT NICHT AUSDRUECKLICH GESTATTET.
ZUWIDERHANDLUNGEN VERPFLICHTEN ZU SCHADENERSATZ. ALLE RECHTE FUER DEN FALL DER PATENT-, GEBRAUCHSMUSTER- ODER GESCHMACKSMUSTEREINTRAGUNG VORBEHALTEN.
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