



**THE DATASHEET OF
1920840000**



B2L 3.50/04/180 SN BK BX

Weidmüller Interface GmbH & Co. KG

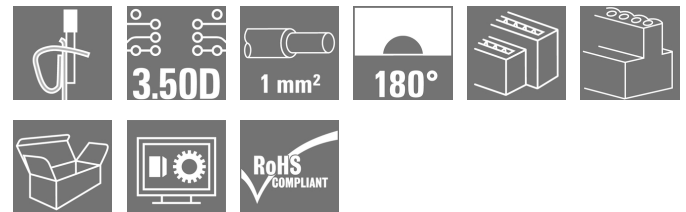
Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image



Component density redefined: the future standard for signal connection

A maximum number of connections requiring minimum space - the double-row B2L sets the bar for field connections of typical sensor cables up to 1 mm² very high and closes the gap between "less space" and "more functions".

The result is a connection solution for standard industrial cables in 1.75 pitch - 30% smaller than equivalent solutions in 2.5 pitch, and with the 140% robustness of the 3.5 pitch

Dimensions: double the connection density with a 3.5mm pitch size

Connection system: tried and tested maintenance-free Weidmüller tension clamp connection

The basic application advantages:

Efficient: maximum component density on the PCB

Suitable for industrial use - minimum dimensions, maximum robustness

Process-optimised - automatic assembly and reflow soldering, fast connection

User-friendly - patented release lever for the easy release of larger numbers of poles

Application-oriented: easy labelling and reliable coding despite compact dimensions

Miniaturisation is more than just a larger number of functions within a smaller space:

Each reduction in size decreases space requirements and so reduces overall system costs for the end customer. Thus, Weidmüller fulfils a growing demand in the engineering and industrial automation sectors.

General ordering data

Version	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 4, 180°, Tension-clamp connection, Clamping range, max.: 1 mm ² , Box
Order No.	1920840000
Type	B2L 3.50/04/180 SN BK BX
GTIN (EAN)	4032248561711
Qty.	252 pc(s).
Product data	IEC: 200 V / 10.3 A / 0.2 - 1 mm ² UL: 300 V / 10 A / AWG 28 - AWG 16
Packaging	Box

Creation date September 16, 2022 9:31:52 PM CEST

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Technical data**Dimensions and weights**

Depth	20.8 mm	Depth (inches)	0.819 inch
Height	15.7 mm	Height (inches)	0.618 inch
Width	7 mm	Width (inches)	0.276 inch
Net weight	2.076 g		

System Parameters

Product family	OMNIMATE Signal - series B2L/S2L 3.50 - 2-row	Type of connection	Field connection
Wire connection method	Tension-clamp connection	Pitch in mm (P)	3.5 mm
Pitch in inches (P)	0.138 inch	Conductor outlet direction	180°
Number of poles	4	L1 in mm	3.5 mm
L1 in inches	0.138 inch	Number of rows	1
Pin series quantity	2	Rated cross-section	1 mm ²
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch	Touch-safe protection acc. to DIN VDE 0470	IP 20
Can be coded	Yes	Stripping length	7 mm
Screwdriver blade	0.4 x 2.5	Screwdriver blade standard	DIN 5264
Plugging cycles	25	Plugging force/pole, max.	5 N
Pulling force/pole, max.	4 N		

Material data

Insulating material	PBT	Colour	black
Colour chart (similar)	RAL 9011	UL 94 flammability rating	V-0
Contact material	Copper alloy	Contact surface	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.	0.08 mm ²
Clamping range, max.	1 mm ²
Wire connection cross section AWG, min.	AWG 28
Wire connection cross section AWG, max.	AWG 18
Solid, min. H05(07) V-U	0.2 mm ²
Solid, max. H05(07) V-U	1 mm ²
Flexible, min. H05(07) V-K	0.2 mm ²
Flexible, max. H05(07) V-K	1 mm ²
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.14 mm ²
w. plastic collar ferrule, DIN 46228 pt 4, max.	0.34 mm ²
w. wire end ferrule, DIN 46228 pt 1, min.	0.14 mm ²
w. wire end ferrule, DIN 46228 pt 1, max.	0.34 mm ²

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Clampable conductor	Cross-section for conductor connection	Type	fine-wired
		nominal	0.14 mm ²
	wire end ferrule	Stripping length	nominal 10 mm
		Recommended wire-end ferrule	HO.14/12 GR SV
Cross-section for conductor connection	Type	fine-wired	
	nominal	0.25 mm ²	
wire end ferrule	Stripping length	nominal 10 mm	
	Recommended wire-end ferrule	HO.25/12 HBL	

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.

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	10.3 A
Rated current, max. number of poles (Tu=20°C)	8.7 A	Rated current, min. number of poles (Tu=40°C)	8.9 A
Rated current, max. number of poles (Tu=40°C)	7.4 A	Rated voltage for surge voltage class / pollution degree II/2	200 V
Rated voltage for surge voltage class / pollution degree III/2	160 V	Rated voltage for surge voltage class / pollution degree III/3	80 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	2.5 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	2.5 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	2.5 kV	Short-time withstand current resistance	3 x 1s with 77 A

Rated data acc. to CSA

Institute (CSA)		Certificate No. (CSA)	200039-1488444
Rated voltage (Use group B / CSA)	300 V	Rated current (Use group B / CSA)	5 A
Wire cross-section, AWG, min.	AWG 28	Wire cross-section, AWG, max.	AWG 18
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	348 mm
VPE width	135 mm	VPE height	31 mm

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	ECLASS 12.0	27-46-02-02

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Technical data

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 with plastic collar to DIN 46228/4 • Wire end ferrule without plastic collar to DIN 46228/1 • P on drawing = pitch • Crimp shape A for wire-end ferrules with crimping tools PZ 1,5 (order no. 9005990000) or PZ 6/5 (order no. 9011460000) for larger wire cross-sections recommended. • 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. • Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

Approvals

Approvals



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

Downloads

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Engineering Data	CAD data – STEP
Engineering Data	EPLAN, WSCAD
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 FLIndustr.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

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Catalogue status 09.09.2022 / We reserve the right to make technical changes.

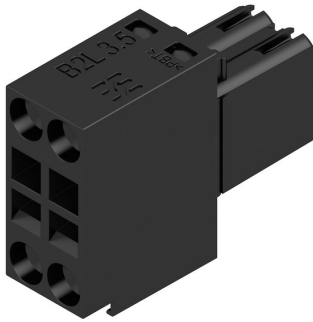
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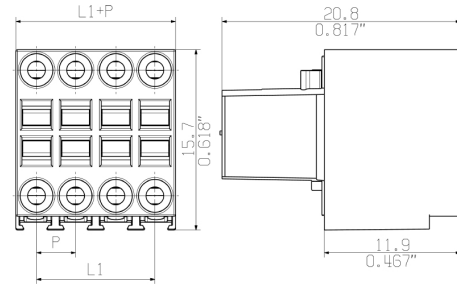
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Drawings

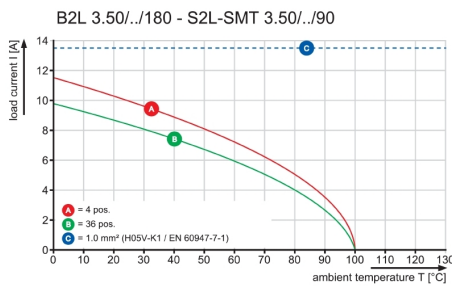
Product image



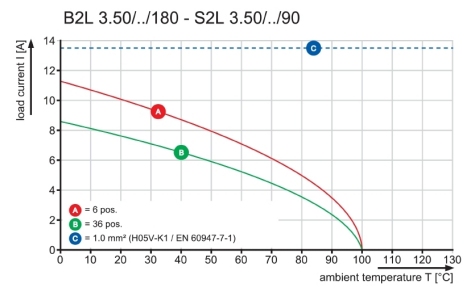
Dimensional drawing



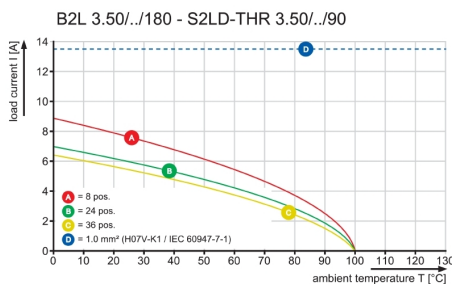
Graph



Graph



Graph

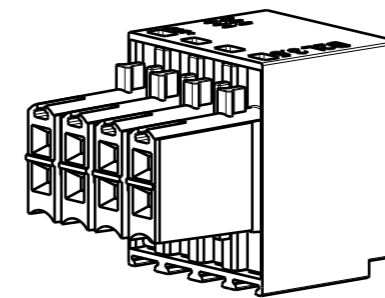
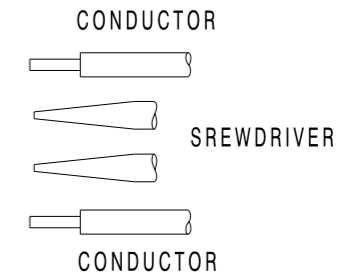
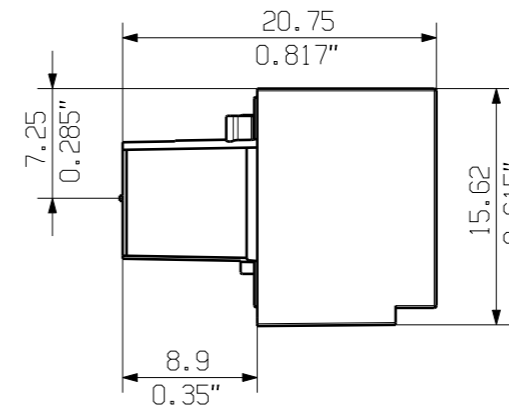
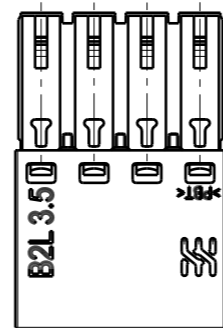
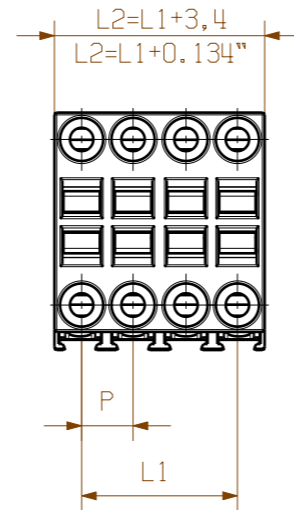


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 DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.

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n = POLZAHL/NO OF POLES

P = RASTER/PITCH

SHOWN: B2L 3.50/08/180

36	59,5	2,344	62,9	2,479
34	56,0	2,206	59,4	2,341
32	52,5	2,069	55,9	2,203
30	49,0	1,931	52,4	2,065
28	45,5	1,793	48,9	1,927
26	42,0	1,655	45,4	1,789
24	38,5	1,517	41,9	1,651
22	35,0	1,379	38,4	1,513
20	31,5	1,241	34,9	1,375
18	28,0	1,103	31,4	1,237
16	24,5	0,965	27,9	1,099
14	21,0	0,827	24,4	0,961
12	17,5	0,690	20,9	0,823
10	14,0	0,552	17,4	0,685
8	10,5	0,414	13,9	0,547
6	7,0	0,276	10,4	0,409
4	3,5	0,138	6,9	0,271
n	L1	L1(inch)	L2	L2(inch)

For the mounting of PCBs, it should be noted that the rated data given in the catalogue relates only to the connection elements. The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to VDE 0110. The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller connectors are tested to the DIN VDE 0627 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.

DIN ISO 2768-m	69611/5 25.04.13 HELIS_MA 00		CAT.NO.:	
	MODIFICATION		Weidmüller	
	DATE	NAME		C 55622 02 DRAWING NO. ISSUE NO. SHEET 01 OF 03 SHEETS
	DRAWN	16.01.2012	HELIS_MA	
	RESPONSIBLE	LANG_T		B2L 3.50/.. /180... BUCHSENLEISTE SOCKET BLOCK
SCALE: 2:1	CHECKED	22.05.2013	HECKERT_M	
SUPERSEDES: 26643/31	APPROVED	HECKERT_M		PRODUCT FILE: B2L 3.50 7110

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