

B2L 3.50/24/180F SN BK BX

Weidmüller Interfaces GmbH & Co. KG

Postfach 3030

32760 Detmold

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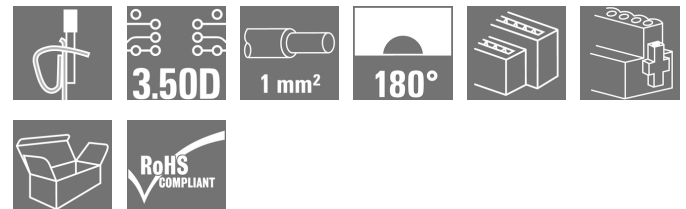
info@weidmuller.com

www.weidmuller.com

Product image



Do not use product for new developments



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: 24, 180°, Tension-clamp connection, Clamping range, max.: 1 mm ² , Box
Order No.	1748260000
Type	B2L 3.50/24/180F SN BK BX
GTIN (EAN)	4032248038091
Qty.	36 pc(s).
Product data	IEC: 250 V / 10.3 A / 0.2 - 1 mm ² UL: 300 V / 10 A / AWG 28 - AWG 16
Packaging	Box
Delivery status	This article will no longer be available in the future.
Available until	2023-12-31

Creation date April 28, 2023 1:10:02 PM CEST

Catalogue status 14.04.2023 / We reserve the right to make technical changes.

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Technical data**Dimensions and weights**

Depth	20.6 mm	Depth (inches)	0.811 inch
Height	15.7 mm	Height (inches)	0.618 inch
Width	48.8 mm	Width (inches)	1.921 inch
Net weight	14.1 g		

Temperatures

Operating temperature, min.	-50 °C	Operating temperature, max.	100 °C
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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	24		
L1 in mm	38.5 mm		
L1 in inches	1.516 inch		
Number of rows	2		
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	IP20 plugged/ IP10 unplugged		
Protection degree	IP20, when fully mounted		
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		
Tightening torque	Torque type	Screw flange	
	Usage information	Tightening torque	min. 0.15 Nm max. 0.2 Nm

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

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Technical data

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			
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	250 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.		

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Technical data**Rated data acc. to UL 1059**

Institute (UR)



Certificate No. (UR)

www.weidmueller.com

E60693

Rated voltage (Use group B / UL 1059) 300 V

Rated voltage (Use group C / UL 1059) 50 V

Rated current (Use group B / UL 1059) 10 A

Rated current (Use group C / UL 1059) 10 A

Wire cross-section, AWG, min. AWG 28

Wire cross-section, AWG, max. AWG 16

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

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 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

Data sheet

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Technical data

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
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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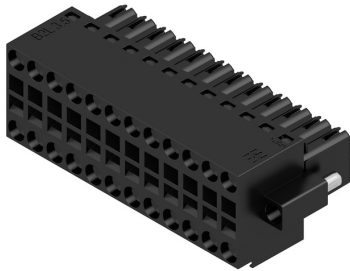
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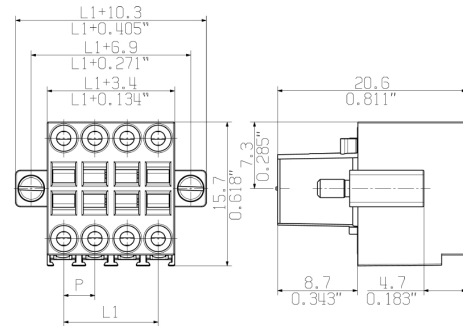
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Drawings

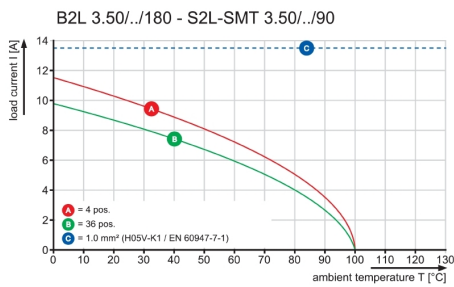
Product image



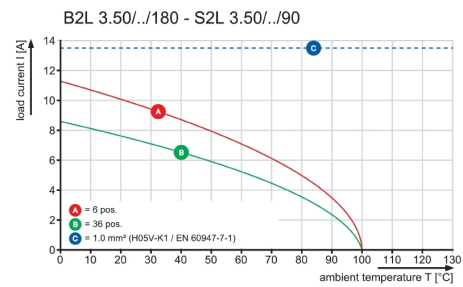
Dimensional drawing info@weidmueller.com



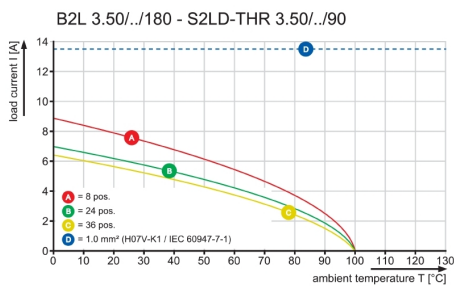
Graph



Graph



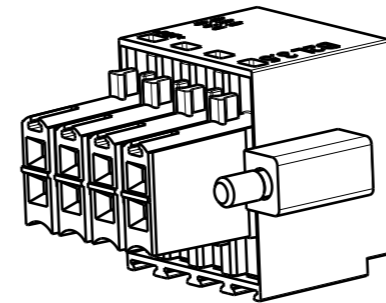
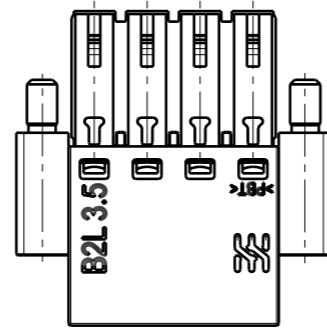
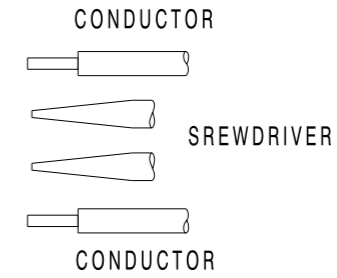
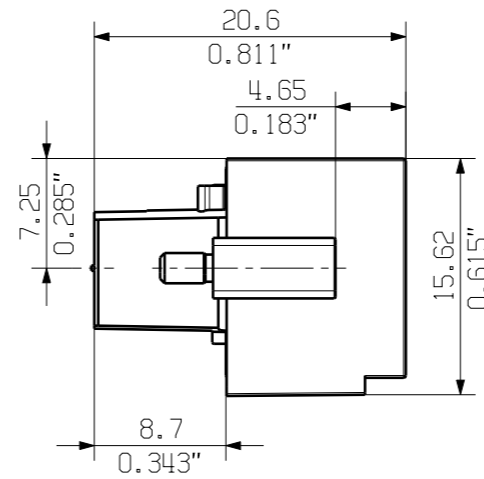
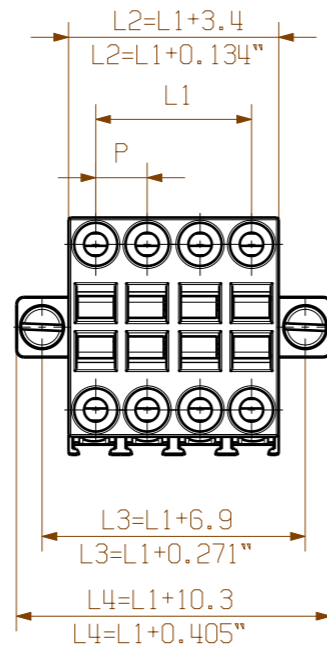
Graph



MASSE OHNE TOLERANZ SIND KEINE PRUEFMASSE
 DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.

DIE DEUTSCHE VERSION IST VERBINDLICH
 THE GERMAN VERSION IS BINDING

WEITERGABE SOWIE VERVIELFAELTIGUNG DIESES DOKUMENTS, VERWERTUNG UND MITTEILUNG SEINES INHALTS SIND VERBOTEN, SOWEIT NICHT AUSDRUECKLICH GESTATTET.
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36	59,5	2,344	62,9	2,479	66,4	2,617	69,8	2,751
34	56,0	2,206	59,4	2,341	62,9	2,479	66,3	2,613
32	52,5	2,069	55,9	2,203	59,4	2,341	62,8	2,475
30	49,0	1,931	52,4	2,065	55,9	2,203	59,3	2,337
28	45,5	1,793	48,9	1,927	52,4	2,065	55,8	2,199
26	42,0	1,655	45,4	1,789	48,9	1,927	52,3	2,061
24	38,5	1,517	41,9	1,651	45,4	1,789	48,8	1,923
22	35,0	1,379	38,4	1,513	41,9	1,651	45,3	1,785
20	31,5	1,241	34,9	1,375	38,4	1,513	41,8	1,647
18	28,0	1,103	31,4	1,237	34,9	1,375	38,3	1,509
16	24,5	0,965	27,9	1,099	31,4	1,237	34,8	1,371
14	21,0	0,827	24,4	0,961	27,9	1,099	31,3	1,233
12	17,5	0,690	20,9	0,823	24,4	0,961	27,8	1,095
10	14,0	0,552	17,4	0,685	20,9	0,823	24,3	0,957
8	10,5	0,414	13,9	0,547	17,4	0,685	20,8	0,819
6	7,0	0,276	10,4	0,409	13,9	0,547	17,3	0,681
4	3,5	0,138	6,9	0,271	10,4	0,409	13,8	0,543
n	L1	L1[inch]	L2	L2[inch]	L3	L3[inch]	L4	L4[inch]

n = POLZAHL/NO OF POLES

P = RASTER/PITCH

SHOWN: B2L 3.50/08/180F

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