

**OMNIMATE Signal - series B2L/S2L 3.50 - 2-row  
B2L 3.50/22/180 AU BK BX PRT**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 16  
 D-32758 Detmold  
 Germany  
 Fon: +49 5231 14-0  
 Fax: +49 5231 14-292083  
 www.weidmueller.com

**Product image**

Similar to illustration

**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 mm<sup>2</sup> 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

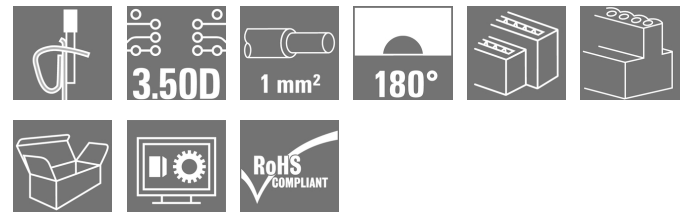
Suitable for industrial use - minimum dimensions, maximum robustness

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**

Type	B2L 3.50/22/180 AU BK BX PRT
Order No.	<a href="#">1028260000</a>
Version	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 22, 180°, Tension-clamp connection, Clamping range, max.: 1 mm <sup>2</sup> , Box
GTIN (EAN)	4032248756858
Qty.	42 pc(s).
Product data	IEC: 200 V / 10.3 A / 0.2 - 1 mm <sup>2</sup> UL: 300 V / 10 A / AWG 28 - AWG 16
Packaging	Box

**OMNIMATE Signal - series B2L/S2L 3.50 - 2-row  
B2L 3.50/22/180 AU BK BX PRT**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 16  
 D-32758 Detmold  
 Germany  
 Fon: +49 5231 14-0  
 Fax: +49 5231 14-292083  
 www.weidmueller.com

**Technical data****Dimensions and weights**

Width	38.5 mm	Width (inches)	1.516 inch
Height	15.7 mm	Height (inches)	0.618 inch
Depth	20.8 mm	Depth (inches)	0.819 inch
Net weight	11.45 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°
No. of poles	22	L1 in mm	35 mm
L1 in inches	1.378 inch	Number of rows	1
Pin series quantity	2	Rated cross-section	1 mm <sup>2</sup>
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	≥ 200	Plugging force/pole, max.	5 N
Pulling force/pole, max.	4 N		

**Material data**

Insulating material	PBT	Colour	black
Colour chart (similar)	RAL 9011	Insulation strength	≥ 10 <sup>8</sup> Ω
UL 94 flammability rating	V-0	GWFI	960 °C
Contact material	Copper alloy	Contact surface	Gold-plated
Storage temperature, min.	-25 °C	Storage temperature, max.	55 °C
Max. relative humidity during storage	80 %	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 <sup>2</sup>
Clamping range, max.	1 mm <sup>2</sup>
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 <sup>2</sup>
Solid, max. H05(07) V-U	1 mm <sup>2</sup>
Flexible, min. H05(07) V-K	0.2 mm <sup>2</sup>
Flexible, max. H05(07) V-K	1 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.14 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, max.	0.34 mm <sup>2</sup>
w. wire end ferrule, DIN 46228 pt 1, min.	0.14 mm <sup>2</sup>
w. wire end ferrule, DIN 46228 pt 1, max.	0.34 mm <sup>2</sup>

**OMNIMATE Signal - series B2L/S2L 3.50 - 2-row  
B2L 3.50/22/180 AU BK BX PRT**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 16  
 D-32758 Detmold  
 Germany  
 Fon: +49 5231 14-0  
 Fax: +49 5231 14-292083  
 www.weidmueller.com


**Technical data**

Clampable conductor	Cross-section for conductor connection	Type	fine-wired
		nominal	0.14 mm <sup>2</sup>
	AEH	Stripping length	nominal 10 mm
	Cross-section for conductor connection	Type	fine-wired
nominal		0.25 mm <sup>2</sup>	
	AEH	Stripping length	nominal 10 mm
Reference text	The outside diameter of the plastic collar should not be larger than the pitch (P).		
Max. clamping range	1 mm <sup>2</sup>		


**Rated data acc. to IEC**

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. no. of poles (Tu=20°C)	10.3 A
Rated current, max. no. of poles (Tu=20°C)	8.7 A	Rated current, min. no. of poles (Tu=40°C)	8.9 A
Rated current, max. no. 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.		

**Rated data acc. to UL 1059**

Institute (UR)		Certificate No. (UR)	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	55 mm
VPE width	70 mm	VPE height	110 mm

**OMNIMATE Signal - series B2L/S2L 3.50 - 2-row  
B2L 3.50/22/180 AU BK BX PRT**

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 16  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
www.weidmueller.com

**Technical data**
**Classifications**

ETIM 4.0	EC002637	ETIM 5.0	EC002637
ETIM 6.0	EC002638	UNSPSC	30-21-18-01
eClass 6.2	27-26-07-04	eClass 7.1	27-44-04-02
eClass 8.1	27-44-04-02	eClass 9.0	27-44-03-09
eClass 9.1	27-44-03-09		

**Notes**

Notes	<ul style="list-style-type: none"> <li>• Additional colours on request</li> <li>• Gold-plated contact surfaces on request</li> <li>• Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>• Wire end ferrule with plastic collar to DIN 46228/4</li> <li>• Wire end ferrule without plastic collar to DIN 46228/1</li> <li>• P on drawing = pitch</li> <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>
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.

**Approvals**

Approvals



ROHS

Conform

**Downloads**

Approval/Certificate/Document of Conformity

[Declaration of the Manufacturer](#)

Brochure/Catalogue

[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](#)

Engineering Data

[EPLAN, WSCAD](#)

Creation date May 27, 2019 2:41:20 PM CEST

Catalogue status 23.05.2019 / We reserve the right to make technical changes.

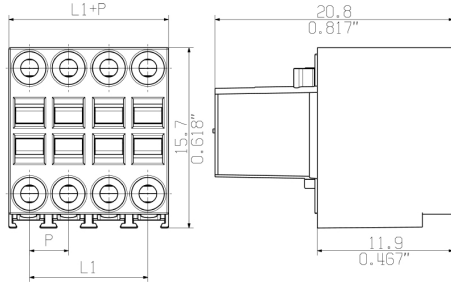
4

**OMNIMATE Signal - series B2L/S2L 3.50 - 2-row  
B2L 3.50/22/180 AU BK BX PRT**

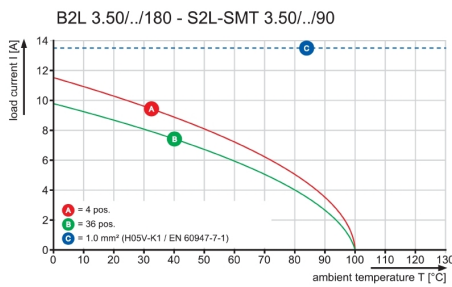
**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 16  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
www.weidmueller.com

**Drawings**

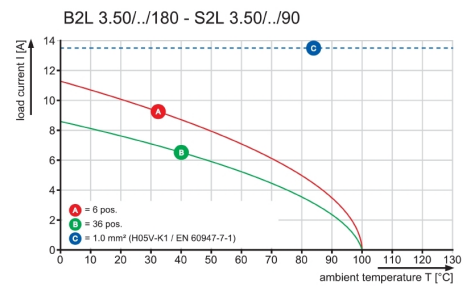
**Dimensional drawing**



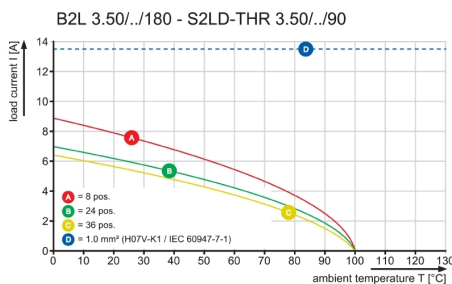
**Graph**



**Graph**



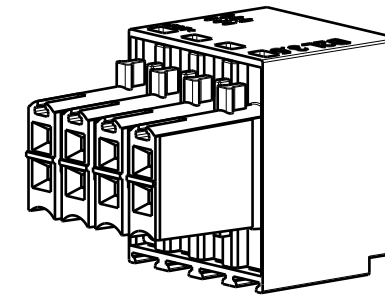
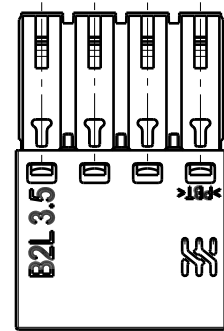
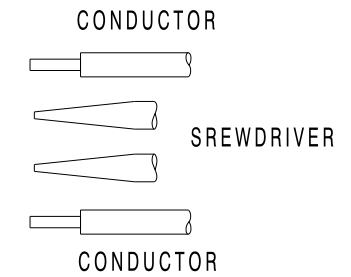
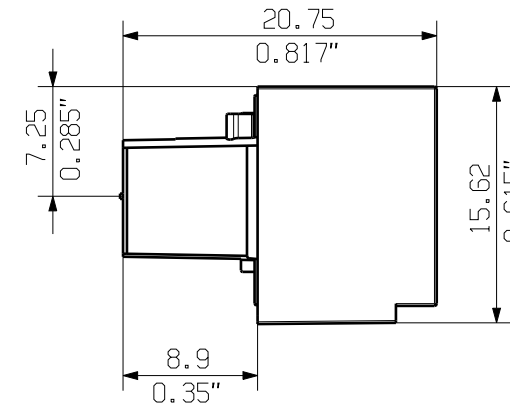
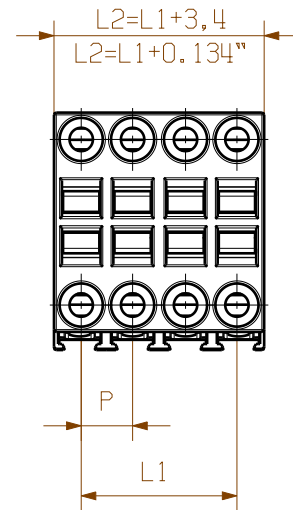
**Graph**



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.  
 ZUWIDERHANDLUNGEN VERPFLICHTEN ZU SCHADENERSATZ. ALLE RECHTE FUER DEN FALL DER PATENT-, GEBRAUCHSMUSTER- ODER GESCHMACKSMUSTEREINTRAGUNG VORBEHALTEN.  
 THE REPRODUCTION, DISTRIBUTION AND UTILIZATION OF THIS DOCUMENT AS WELL AS THE COMMUNICATION OF ITS CONTENTS TO OTHERS WITHOUT EXPLICIT AUTHORIZATION IS PROHIBITED.  
 OFFENDERS WILL BE HELD LIABLE FOR THE PAYMENT OF DAMAGES. WEIDMUELLER EXCLUSIVELY RESERVES THE RIGHT TO FILE FOR PATENTS, UTILITY MODELS OR DESIGNS.  
 © WEIDMUELLER INTERFACE GmbH & Co.KG



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