Data sheet

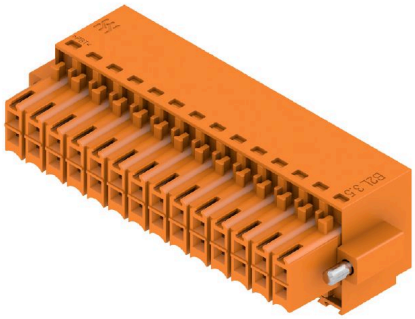
B2L 3.50/28/180F SN OR BX

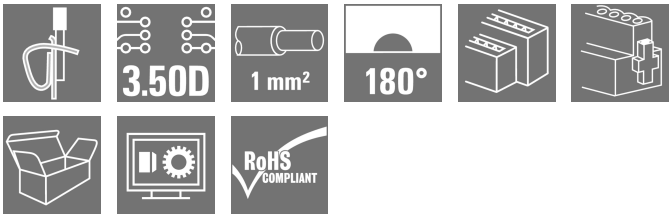
Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

Do not use product for new developments

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 1mm² 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: 28, 180°, Tension-clamp connection, Clamping range, max. : 1 mm², Box
Order No.	1748120000
Type	B2L 3.50/28/180F SN OR BX
GTIN (EAN)	4032248198474
Qty.	30 items
Product data	IEC: 250 V / 10.3 A / 0.2 - 1 mm² 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	2023-12-31T00:00:00+01:00
Alternative product	B2CF 3.50/28/180F SN OR BX

Data sheet

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Technical data

Approvals

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

Dimensions and weights

Depth	20.6 mm	Depth (inches)	0.811 inch
Height	15.7 mm	Height (inches)	0.6181 inch
Width	55.8 mm	Width (inches)	2.1968 inch
Net weight	17.05 g		

Environmental Product Compliance

RoHS Compliance Status	Compliant without exemption
REACH SVHC	No SVHC above 0.1 wt%

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)	3.50 mm
Pitch in inches (P)	0.138 "
Conductor outlet direction	180°
Number of poles	28
L1 in mm	45.50 mm
L1 in inches	1.791 "
Number of rows	2
Pin series quantity	2
Rated cross-section	1 mm²
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	orange
Colour chart (similar)	RAL 2000	Moisture Level (MSL)	

Data sheet

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UL 94 flammability rating	V-0	Contact material	Cu-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 mm²			
Clamping range, max.	1 mm²			
Wire connection cross section AWG, min.	AWG 28			
Wire connection cross section AWG, max.	AWG 18			
Solid, min. H05(07) V-U	0.2 mm²			
Solid, max. H05(07) V-U	1 mm²			
Flexible, min. H05(07) V-K	0.2 mm²			
Flexible, max. H05(07) V-K	1 mm²			
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.14 mm²			
w. plastic collar ferrule, DIN 46228 pt 4, max.	0.34 mm²			
w. wire end ferrule, DIN 46228 pt 1, min.	0.14 mm²			
w. wire end ferrule, DIN 46228 pt 1, max.	0.34 mm²			
Clampable conductor	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.14 mm²	
	wire end ferrule	Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H0,14/12 GR SV	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.25 mm²	
	wire end ferrule	Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H0,25/12 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)	CSA	Certificate No. (CSA)	200039-1488444
Rated voltage (Use group B / CSA)	300 V	Rated current (Use group B / CSA)	5 A

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Technical data

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)	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	348.00 mm
VPE width	136.00 mm	VPE height	31.00 mm

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 • 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. • 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. • 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

Classifications

ETIM 6.0	EC002638	ETIM 7.0	EC002638
ETIM 8.0	EC002638	ETIM 9.0	EC002638
ETIM 10.0	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	ECLASS 14.0	27-46-02-02
ECLASS 15.0	27-46-02-02		

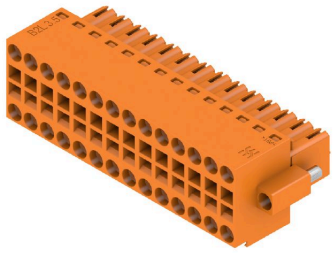
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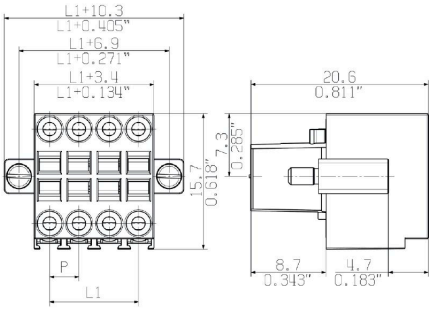
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Drawings

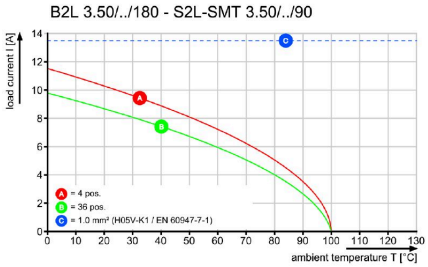
Product image



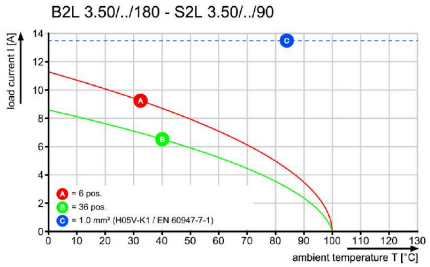
Dimensional drawing



Graph



Graph



Graph

