

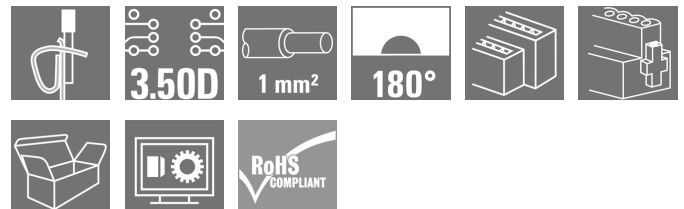
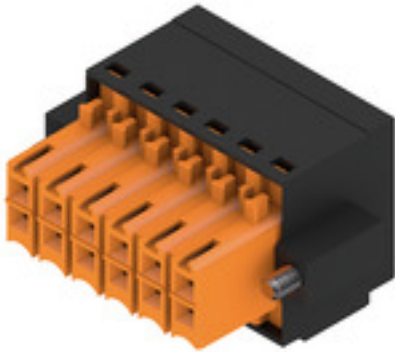
B2L 3.50/12/180FQV6 SN BK BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image

Female connector with integral cross-connection and clear printing for uninterrupted relaying of potential at full current-carrying capacity with the maximum cable cross-section. The cross-connection is positioned vertically between the poles of rows directly on top of each other. Conductor connection with tension clamp system with straight outlet and 3.5 mm pitch. Flange and release lever available. Packed in cardboard box.

General ordering data

Version	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 12, 180°, Tension-clamp connection, Clamping range, max. : 1 mm², Box
Order No.	1944700000
Type	B2L 3.50/12/180FQV6 SN BK BX
GTIN (EAN)	4032248619634
Qty.	66 pc(s).
Product data	IEC: 200 V / 10.6 A / 0.2 - 1 mm² UL: 150 V / 7 A / AWG 28 - AWG 18
Packaging	Box

Creation date June 2, 2024 12:38:30 PM CEST

Catalogue status 18.05.2024 / 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	27.8 mm	Width (inches)	1.094 inch
Net weight	7.26 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 "			
Conductor outlet direction	180°			
Number of poles	12			
L1 in mm	17.5 mm			
L1 in inches	0.689 "			
Number of rows	1			
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	black
Colour chart (similar)	RAL 9011	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	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 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

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Technical data

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	H0,14/12 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	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)	10.6 A
Rated current, max. number of poles (Tu=20°C)	8.2 A	Rated current, min. number of poles (Tu=40°C)	9.1 A
Rated current, max. number of poles (Tu=40°C)	7 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	1.5 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)	7 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)

E60693

Rated voltage (Use group B / UL 1059) 150 V

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

Rated current (Use group B / UL 1059) 7 A

Rated current (Use group C / UL 1059) 7 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	350 mm
VPE width	135 mm	VPE height	30 mm

Type tests

Test: Durability of markings	Standard	DIN EN 61984 section 7.3.2 / 09.02 taking pattern from DIN EN 60068-2-70 / 07.96
	Test	mark of origin, type identification, rated cross-section, type of material
	Evaluation	available
	Test	durability
	Evaluation	passed
Test: Misengagement (Non-interchangeability)	Standard	DIN EN 61984 section 6.3 and 6.9.1 / 09.02, DIN IEC 60512-7 section 5 / 05.94
	Test	180° turned without coding elements
	Evaluation	passed
	Test	visual examination
	Evaluation	passed
Test: Clampable cross section	Standard	DIN EN 60999-1 section 7 and 9.1 / 12.00, DIN EN 60947-1 section 8.2.4.5.1 / 12.02
	Conductor type	Type of conductor and solid 0.2 mm ² conductor cross-section
		Type of conductor and stranded 0.2 mm ² conductor cross-section
		Type of conductor and solid 1.0 mm ² conductor cross-section
		Type of conductor and stranded 1.0 mm ² conductor cross-section
		Type of conductor and AWG 28/1 conductor cross-section
		Type of conductor and AWG 28/19 conductor cross-section
		Type of conductor and AWG 18/1 conductor cross-section
		Type of conductor and AWG 18/19 conductor cross-section
	Evaluation	passed

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Technical data

Test for damage to and accidental loosening of conductors	Standard	DIN EN 60999-1 section 9.4 / 12.00
	Requirement	0.2 kg
	Conductor type	Type of conductor and AWG 28/1 conductor cross-section
		Type of conductor and AWG 28/19 conductor cross-section
	Evaluation	passed
	Requirement	0.3 kg
	Conductor type	Type of conductor and solid 0.5 mm ² conductor cross-section
		Type of conductor and stranded 0.5 mm ² conductor cross-section
	Evaluation	passed
	Requirement	0.4 kg
Pull-out test	Standard	DIN EN 60999-1 section 9.4 / 12.00
		≥5 N
	Conductor type	Type of conductor and AWG 28/1 conductor cross-section
		Type of conductor and AWG 28/19 conductor cross-section
	Requirement	≥20 N
	Conductor type	Type of conductor and H05V-U0.5 conductor cross-section
		Type of conductor and H05V-K0.5 conductor cross-section
	Requirement	≥35 N
	Conductor type	Type of conductor and H05V-U1 conductor cross-section
		Type of conductor and H05V-K1 conductor cross-section
		Type of conductor and AWG 18/1 conductor cross-section
		Type of conductor and AWG 18/19 conductor cross-section

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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	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	<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 • 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

Approvals

Approvals



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

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www.weidmueller.com**Technical data****Downloads**Approval/Certificate/Document of Con-
formity[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](#)[PO OMNIMATE EN](#)

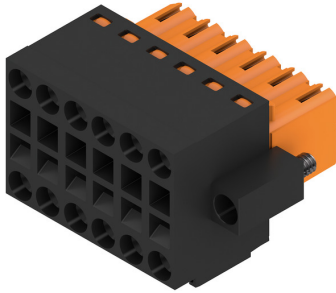
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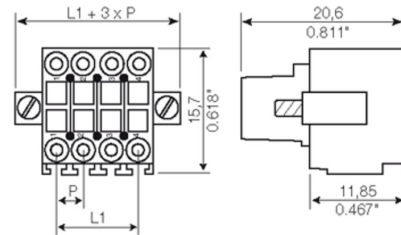
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Drawings

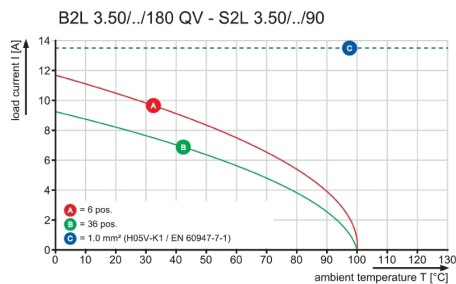
Product image



Dimensional drawing



Graph



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Accessories

Cover hoods



Effective protection, optimised ergonomics and closed design:

From the strain relief on the connected conductors and the visual/contact protection and the disconnection aid: the optional retrofit hoods perform mechanical, visual and haptic functions.

The two half shells clip together securely, enclose the plug completely and offer the following functions:

- Cable ties or integrated cable clips provide strain relief.
- Marked with dekafix labels or adhesive strips
- Mounting side by side without losing poles or displacing the pitch
- Compatible: suitable for plugs with or without a flange or mounting bracket
- Flexible: 1-3 cable outlets leading in different directions available depending on the size

Weidmüller hoods offer added stability, better identification, complete compatibility and versatility. The result: maximum reliability and user-friendliness in any application.

General ordering data

Type	B2L 3.50 AH12 BK BX	Version	Product data	Packaging
Order No.	1781590000	PCB plug-in connector, Accessories, Hood, black, Number of poles: 12		Box
GTIN (EAN)	4032248172641			
Qty.	10 pc(s).			

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	B2L/S2L 3.50 KO OR BX	Version	Product data	Packaging
Order No.	1849730000	PCB plug-in connector, Accessories, Coding element, orange, Number of poles: 1		Box
GTIN (EAN)	4032248378197			
Qty.	100 pc(s).			

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www.weidmueller.com**Accessories**

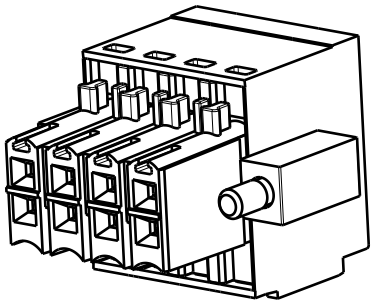
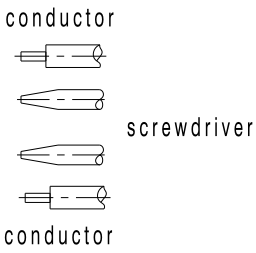
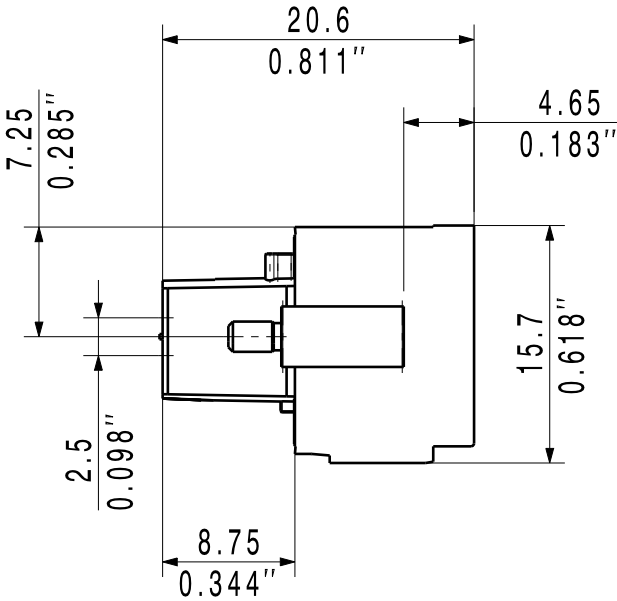
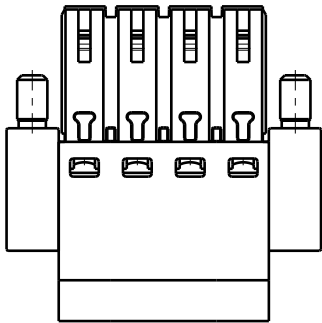
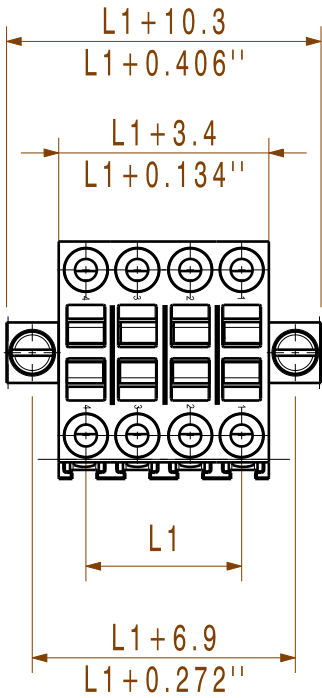
Type	B2L/S2L 3.50 KO BK BX	Version	Product data	Packaging
Order No.	1849740000	PCB plug-in connector, Accessories, Coding element, black, Number		Box
GTIN (EAN)	4032248378203	of poles: 1		
Qty.	100 pc(s).			

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Dimensions without tolerances are no check dimensions

The English version is binding






36	2,345	59,50
34	2,207	56,00
32	2,069	52,50
30	1,931	49,00
28	1,793	45,50
26	1,655	42,00
24	1,517	38,50
22	1,379	35,00
20	1,241	31,50
18	1,103	28,00
16	0,965	24,50
14	0,827	21,00
12	0,689	17,50
10	0,551	14,00
8	0,413	10,50
6	0,275	7,00
n	L1[inch]	L1 [mm]

shown: B2L 3.5/08F QV4 BED

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 with 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 connectors are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

GENERAL TOLERANCE: DIN ISO 2768-mK		87939/5 03.05.16 HELIS_MA		01	Weidmüller 		Cat.no.: .		
		Modification		Date		Name		Drawing no. 3 39691 02	
		Drawn		02.07.2007		NICKOL_M		Issue no.	
Scale: 2:1		Responsible				AMANN_A		Sheet 00 of 00 sheets	
Supersedes: .		Checked		13.05.2016		HELIS_MA		Product file: B2L QV	
		Approved				HECKERT_M		7367	

B2L 3.50/.../...PRT
BUCHSENLEISTE
SOCKET BLOCK