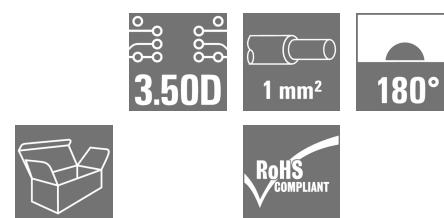


B2L 3.50/14/180 SN BK BX

Weidmüller Interface GmbH & Co. KG
 Klingenbergsstraße 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: 14, 180°, Tension-clamp connection, Clamping range, max. : 1 mm ² , Box
Order No.	1727680000
Type	B2L 3.50/14/180 SN BK BX
GTIN (EAN)	4032248037872
Qty.	72 ST
Product data	IEC: 200 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	2023-12-31T00:00:00+01:00
Alternative product	B2CF 3.50/14/180 SN BK BX

B2L 3.50/14/180 SN BK BX

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Technical data

Approvals

Approvals



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

Dimensions and weights

Depth	20.8 mm
Height	15.7 mm
Width	24.5 mm
Net weight	7.92 g

Depth (inches)	0.8189 inch
Height (inches)	0.6181 inch
Width (inches)	0.9646 inch

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	14	L1 in mm	21.00 mm
L1 in inches	0.827 "	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

Material data

Insulating material	PBT	Colour	black
Colour chart (similar)	RAL 9011	Moisture Level (MSL)	
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

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Technical data

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, 0.14 mm ² min.	
w. plastic collar ferrule, DIN 46228 pt 4, 0.34 mm ² max.	
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
	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
	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.
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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)	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)	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.		

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Technical data**Packing**

Packaging	Box	VPE length	350.00 mm
VPE width	139.00 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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Drawings

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Product image**Dimensional drawing****Graph****Graph****Graph**

B2L 3.50/14/180 SN BK BX

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Accessories**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 BK BX	Version
Order No.	1849740000	PCB plug-in connector, Accessories, Coding element, black, Number
GTIN (EAN)	4032248378203	of poles: 1
Qty.	100 ST	
Type	B2L/S2L 3.50 KO OR BX	Version
Order No.	1849730000	PCB plug-in connector, Accessories, Coding element, orange, Number
GTIN (EAN)	4032248378197	of poles: 1
Qty.	100 ST	

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 AH14 BK BX	Version
Order No.	1781600000	PCB plug-in connector, Accessories, Hood, black, Number of poles: 14
GTIN (EAN)	4032248172658	
Qty.	10 ST	

B2L 3.50/14/180 SN BK BX

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Counterpart

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S2L 3.50/90F

Angled, two-tier pin header available as closed-sided or with flange (open-sided pin headers on request). Pin headers with 3.5mm pins are designed for wave soldering and are packaged in a box. They can be screwed on to the PCB. The pin headers provide space for labelling and can be coded.

General ordering data

Type	S2L 3.50/14/90F 3.5SN O...	Version
Order No.	1728510000	PCB plug-in connector, male header, Flange, THT solder connection,
GTIN (EAN)	4032248039999	3.50 mm, Number of poles: 14, 90°, Solder pin length (l): 3.5 mm,
Qty.	54 ST	tinned, orange, Box
Type	S2L 3.50/14/90F 3.5SN B...	Version
Order No.	1728670000	PCB plug-in connector, male header, Flange, THT solder connection,
GTIN (EAN)	4032248040131	3.50 mm, Number of poles: 14, 90°, Solder pin length (l): 3.5 mm,
Qty.	54 ST	tinned, black, Box

S2L 3.50/180F

Straight, double-row pin header available in closed-sided or flange version (open-sided pin headers on request). The male headers with a pin length of 3.5mm are designed for wave soldering and are packed in a box. They can be screwed on to the PCB. The male headers provide space for labelling and can be coded.

General ordering data

Type	S2L 3.50/14/180F 3.5SN ...	Version
Order No.	1729470000	PCB plug-in connector, male header, Flange, THT solder connection,
GTIN (EAN)	4032248040896	3.50 mm, Number of poles: 14, 180°, Solder pin length (l): 3.5 mm,
Qty.	54 ST	tinned, orange, Box
Type	S2L 3.50/14/180F 3.5SN ...	Version
Order No.	1729630000	PCB plug-in connector, male header, Flange, THT solder connection,
GTIN (EAN)	4032248041039	3.50 mm, Number of poles: 14, 180°, Solder pin length (l): 3.5 mm,
Qty.	54 ST	tinned, black, Box

B2L 3.50/14/180 SN BK BX

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Counterpart**S2L-SMT 3.50/180LF Tape**

High-temperature-resistant, double-row pin header for all common soldering methods. Optimised for automatic assembly. Packed in box or tape. Solder pin 3.2 mm long, suitable for reflow and wave soldering. The male connectors provide space for labelling and can be coded.

General ordering data

Type	S2L-SMT 3.50/14/180LF 3...	Version
Order No.	1807910000	PCB plug-in connector, male header, Solder flange, THT/THR solder
GTIN (EAN)	4032248279616	connection, 3.50 mm, Number of poles: 14, 180°, Solder pin length
Qty.	175 ST	(l): 3.5 mm, tinned, black, Tape

S2L-SMT 3.50/90LF Box

High-temperature-resistant, straight, 2-tier male connector for all common soldering methods. Optimised for automatic assembly. Packed in box or tape. 3.2 mm solder pin suitable for reflow and wave soldering. These male connectors can be labelled and coded.

General ordering data

Type	S2L-SMT 3.50/14/90LF 3....	Version
Order No.	1794900000	PCB plug-in connector, male header, Solder flange, THT/THR solder
GTIN (EAN)	4032248232352	connection, 3.50 mm, Number of poles: 14, 90°, Solder pin length (l):
Qty.	54 ST	3.2 mm, tinned, black, Box

S2L-SMT 3.50/90LF Tape

High-temperature-resistant, straight, 2-tier male connector for all common soldering methods. Optimised for automatic assembly. Packed in box or tape. 3.2 mm solder pin suitable for reflow and wave soldering. These male connectors can be labelled and coded.

General ordering data

Type	S2L-SMT 3.50/14/90LF 3....	Version
Order No.	1807600000	PCB plug-in connector, male header, Solder flange, THT/THR solder
GTIN (EAN)	4032248278893	connection, 3.50 mm, Number of poles: 14, 90°, Solder pin length (l):
Qty.	235 ST	3.2 mm, tinned, black, Tape

B2L 3.50/14/180 SN BK BX

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Counterpart**S2L-SMT 3.50/180LF Box**

High-temperature-resistant, double-row pin header for all common soldering methods. Optimised for automatic assembly. Packed in box or tape. Solder pin 3.2 mm long, suitable for reflow and wave soldering. The male connectors provide space for labelling and can be coded.

General ordering data

Type	S2L-SMT 3.50/14/180LF 3...	Version
Order No.	1795240000	PCB plug-in connector, male header, Solder flange, THT/THR solder
GTIN (EAN)	4032248232758	connection, 3.50 mm, Number of poles: 14, 180°, Solder pin length
Qty.	54 ST	(I): 3.5 mm, tinned, black, Box

S2L 3.50/90G

Angled, two-tier pin header available as closed-sided or with flange (open-sided pin headers on request). Pin headers with 3.5mm pins are designed for wave soldering and are packaged in a box. They can be screwed on to the PCB. The pin headers provide space for labelling and can be coded.

General ordering data

Type	S2L 3.50/14/90G 3.5SN O...	Version
Order No.	1727870000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4032248039388	connection, 3.50 mm, Number of poles: 14, 90°, Solder pin length (I):
Qty.	66 ST	3.5 mm, tinned, orange, Box
Type	S2L 3.50/14/90G 3.5SN B...	Version
Order No.	1728030000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4032248039524	connection, 3.50 mm, Number of poles: 14, 90°, Solder pin length (I):
Qty.	66 ST	3.5 mm, tinned, black, Box

S2L 3.50/180G

Straight, double-row pin header available in closed-sided or flange version (open-sided pin headers on request). The male headers with a pin length of 3.5mm are designed for wave soldering and are packed in a box. They can be screwed on to the PCB. The male headers provide space for labelling and can be coded.

B2L 3.50/14/180 SN BK BX

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Counterpart**General ordering data**

Type	S2L 3.50/14/180G 3.5SN ...	Version
Order No.	1728830000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4032248040285	connection, 3.50 mm, Number of poles: 14, 180°, Solder pin length (I): 3.5 mm, tinned, orange, Box
Qty.	66 ST	
Type	S2L 3.50/14/180G 3.5SN ...	Version
Order No.	1728990000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4032248040421	connection, 3.50 mm, Number of poles: 14, 180°, Solder pin length (I): 3.5 mm, tinned, black, Box
Qty.	66 ST	

S2L-SMT 3.50/90G Box

High-temperature-resistant, straight, 2-tier male connector for all common soldering methods. Optimised for automatic assembly. Packed in box or tape. 3.2 mm solder pin suitable for reflow and wave soldering. These male connectors can be labelled and coded.

General ordering data

Type	S2L-SMT 3.50/14/90G 3.2...	Version
Order No.	1794250000	PCB plug-in connector, male header, closed side, THT/THR solder
GTIN (EAN)	4032248231300	connection, 3.50 mm, Number of poles: 14, 90°, Solder pin length (I): 3.2 mm, tinned, black, Box
Qty.	66 ST	

S2L-SMT 3.50/90G Tape

High-temperature-resistant, straight, 2-tier male connector for all common soldering methods. Optimised for automatic assembly. Packed in box or tape. 3.2 mm solder pin suitable for reflow and wave soldering. These male connectors can be labelled and coded.

General ordering data

Type	S2L-SMT 3.50/14/90G 3.2...	Version
Order No.	1807510000	PCB plug-in connector, male header, closed side, THT/THR solder
GTIN (EAN)	4032248278800	connection, 3.50 mm, Number of poles: 14, 90°, Solder pin length (I): 3.2 mm, tinned, black, Tape
Qty.	235 ST	

B2L 3.50/14/180 SN BK BX

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Counterpart

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S2L-SMT 3.50/180G Tape

High-temperature-resistant, double-row pin header for all common soldering methods. Optimised for automatic assembly. Packed in box or tape. Solder pin 3.2 mm long, suitable for reflow and wave soldering. The male connectors provide space for labelling and can be coded.

General ordering data

Type	S2L-SMT 3.50/14/180G 3...	Version
Order No.	1807820000	PCB plug-in connector, male header, closed side, THT/THR solder
GTIN (EAN)	4032248279524	connection, 3.50 mm, Number of poles: 14, 180°, Solder pin length
Qty.	175 ST	(I): 3.5 mm, tinned, black, Tape

S2L-SMT 3.50/90 BOX

High-temperature-resistant, straight, 2-tier pin header for all common soldering methods. Optimized for automatic assembly. Packed in box or tape. 3.2 mm solder pin suitable for reflow and wave soldering. These pin headers can be labelled and coded. (Packaging in tape on request)

General ordering data

Type	S2L-SMT 3.50/14/90 3.2S...	Version
Order No.	1794410000	PCB plug-in connector, male header, open side, THT/THR solder
GTIN (EAN)	4032248231591	connection, 3.50 mm, Number of poles: 14, 90°, Solder pin length (I):
Qty.	72 ST	3.2 mm, tinned, black, Box

S2L-SMT 3.50/180G Box

High-temperature-resistant, double-row pin header for all common soldering methods. Optimised for automatic assembly. Packed in box or tape. Solder pin 3.2 mm long, suitable for reflow and wave soldering. The male connectors provide space for labelling and can be coded.

General ordering data

Type	S2L-SMT 3.50/14/180G 3...	Version
Order No.	1794570000	PCB plug-in connector, male header, closed side, THT/THR solder
GTIN (EAN)	4032248231751	connection, 3.50 mm, Number of poles: 14, 180°, Solder pin length
Qty.	66 ST	(I): 3.5 mm, tinned, black, Box