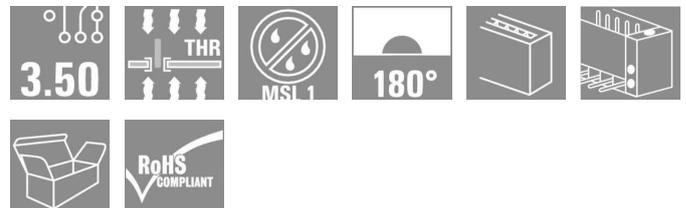


**OMNIMATE Signal - series BL/SL 3.50
SL-SMT 3.50/10/180F 3.2SN BK BX**

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 16
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High-temperature-resistant male header, 3.50 mm pitch.

- **Plugging direction parallel (90°), straight 180° or angled (135°) to PCB**
- **Housing variants: closed side (G), screw flange (F), solder flange (LF) or snap-on solder flange (RF)**
- **Optimised for the SMT process**
- **Pin length 3.2 mm universal for all soldering methods**
- **Pin length 1.5 mm optimised for reflow soldering methods**
- **Packed either in a box (BX) or tape-on-reel (RL)**
- **Male header can be coded**

General ordering data

Type	SL-SMT 3.50/10/180F 3.2SN BK BX
Order No.	1842850000
Version	PCB plug-in connector, male header, Flange, THT/THR solder connection, 3.50 mm, No. of poles: 10, 180°, Solder pin length (l): 3.2 mm, tinned, Black, Box
GTIN (EAN)	4032248354313
Qty.	42 pc(s).
Product data	IEC: 320 V / 15 A UL: 300 V / 10 A
Packaging	Box

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Technical data**Dimensions and weights**

Net weight 3.72 g

System specifications

Product family	OMNIMATE Signal - series BL/SL 3.50	Type of connection	Solder connection
Mounting onto the PCB	THT/THR solder connection	Pitch in mm (P)	3.5 mm
Pitch in inches (P)	0.138 inch	Outgoing elbow	180°
No. of poles	10	Number of solder pins per pole	1
Solder pin length (l)	3.2 mm	Solder pin length tolerance	0 / -0.3 mm
Tolerance of solder pin position	± 0.15 mm	Solder pin dimensions	d = 1.2 mm, Octagonal
Solder pin dimensions = d tolerance	0 / -0,03 mm	Solder eyelet hole diameter (D)	1.4 mm
Solder eyelet hole diameter tolerance (D)+	0,1 mm	Outside diameter of solder pad	2.3 mm
Template aperture diameter	2.1 mm	L1 in mm	31.5 mm
L1 in inches	1.24 inch	Number of rows	1
Pin series quantity	1	Touch-safe protection acc. to DIN VDE 57 106	Safe from back-of-hand touch
Touch-safe protection acc. to DIN VDE 0470	IP 10	Volume resistance	4.50 mΩ
Can be coded	Yes	Plugging cycles	25
push-in force/pole	4 N	Withdrawal force per pole	4 N
Packaging	Box		

Material data

Insulating material	LCP GF	Colour	Black
Colour chart (similar)	RAL 9011	Insulating material group	IIIa
CTI	≥ 175	Insulation resistance	≥ 10 ⁸ Ω
Moisture Level (MSL)	1	UL 94 flammability rating	V-0
Contact material	CuSn	Contact surface	tinned
Layer structure of solder connection	2-3 μm Ni / 5-7 μm Sn	Layer structure of plug contact	2-3 μm Ni / 5-7 μm Sn
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		

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. no. of poles (Ta = 20°C)	15 A
Rated current, max. no. of poles (Ta = 20°C)	12 A	Rated current, min. no. of poles (Ta = 40°C)	13 A
Rated current, max. no. of poles (Ta = 40°C)	10 A	Rated voltage for surge voltage class / pollution degree II/2	320 V
Rated voltage for surge voltage class / pollution degree III/2	160 V	Rated voltage for surge voltage class / pollution degree III/3	160 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 100 A

**OMNIMATE Signal - series BL/SL 3.50
SL-SMT 3.50/10/180F 3.2SN BK BX**

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Technical data**Rated data acc. to CSA**

Institute (CSA)		Certificate No. (CSA)	200039-1176845
Rated voltage (Use group B)	300 V	Rated voltage (use group D)	300 V
Rated current (use group B)	10 A	Rated current (use group D)	10 A
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)	300 V	Rated voltage (use group D)	300 V
Rated current (use group B)	10 A	Rated current (use group D)	10 A
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Classifications

ETIM 3.0	EC001284	ETIM 4.0	EC002637
ETIM 5.0	EC002637	ETIM 6.0	EC002637
UNSPSC	30-21-18-10	eClass 5.1	27-26-07-04
eClass 6.2	27-26-07-04	eClass 7.1	27-44-04-02
eClass 8.1	27-44-04-02	eClass 9.0	27-44-04-02
eClass 9.1	27-44-04-02		

Notes

Notes	<ul style="list-style-type: none"> • Gold-plated contact surfaces on request • Rated current related to rated cross-section & min. No. of poles. • Solder eyelet diameter D = 1.5 + 0.1 mm, from 9 poles • Solder eyelet diameter D = 1.5 + 0.1 mm, from 9 poles • 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. • For additional mechanical support for male connectors with screw flange (...F), we recommend an additional cable gland with fastening screws (sheet metal screw ISO 1481-ST 2.2x4.5 C or ISO 7049-ST 2.2x4.5 C - see Accessories). Cable gland only permitted after soldering.
IPC conformity	The products are developed, manufactured and delivered according to the internationally recognised IPC-A-610 standard, category "permissible". More extensive demands on the products can be evaluated on request.

Data sheet

**OMNIMATE Signal - series BL/SL 3.50
SL-SMT 3.50/10/180F 3.2SN BK BX**

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Technical data

Approvals

Approvals



ROHS

Conform

Downloads

Approval/Certificate/Document of
Conformity

[Declaration of the Manufacturer](#)

Brochure/Catalogue

- [FL DRIVES EN](#)
- [MB SMT EN](#)
- [FL DRIVES DE](#)
- [MB DEVICE MANUF. EN](#)
- [CAT 2 PORTFOLIOGUIDE EN](#)
- [FL BUILDING SAFETY EN](#)
- [FL APPL LED LIGHTING EN](#)
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SMT white paper

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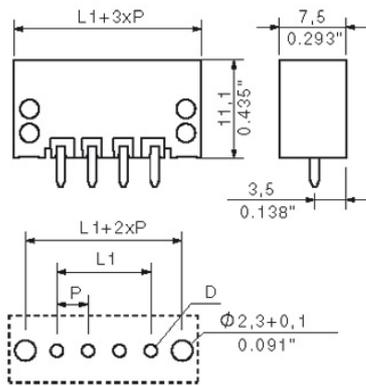
Data sheet

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Drawings

Dimensional drawing



**OMNIMATE Signal - series BL/SL 3.50
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Mating connector (conditionally pluggable)
BL-I/O 3.5/10


Female header with spring connection (PUSH IN) as a plug-in connection level for decentralised I/O electronics; used together with male headers in 3.50 mm pitch.

General ordering data

Delivery status	Available until	Type	Order No.	Version	GTIN (EAN)	Qty.
Discontinued	2014-05-20T00:00:00+02:00	BL-I/O 3.50/10FP SN BX	LTGY 1965890000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm ² , Box	4032248657551	20 pc(s).
BL-I/O 3.50/10FP SN BK BX	1779870000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm ² , Box	403224816519320	pc(s).	IEC: 200 V / 2.2 A / 0.2 - 1.5 mm ² UL: 50 V / 5 A / AWG 24 - AWG 16	Box

BL-I/O 3.5/10 F PNP LED


Female header with spring connection (PUSH IN) as a plug-in connection level for decentralised I/O electronics; used together with male headers in 3.50 mm pitch.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL-I/O 3.50/10FP PNP LED SN BK BX	1789080000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm ² , Box	4032248208012	20 pc(s).	IEC: / 2.2 A / 0.2 - 1.5 mm ² UL: 50 V / 5 A / AWG 24 - AWG 16	Box
Discontinued	2014-05-20T00:00:00+02:00	BL-I/O 3.50/10FP PNP LED SN LTGY BX	1965960000	PCB plug-in connector, female plug, 3.50 mm,	4032248657728	20 pc(s).

**OMNIMATE Signal - series BL/SL 3.50
SL-SMT 3.50/10/180F 3.2SN BK BX**

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Mating connector (conditionally pluggable)

No. of poles: 10,
180°, PUSH IN,
Clamping range,
rated connection,
max.: 1.5 mm²,
Box

BL 3.50/90


Female connectors with clamping yoke screw system for connecting conductors at 3.50 mm pitch. They provide space for labelling and can be coded.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL 3.50/10/90 SN OR BX	1638630000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 90°, Clamping yoke connection, Clamping range, rated connection, max.: 1.5 mm ² , Box	4008190276171	48 pc(s).	IEC: 320 V / 12 A / 0.2 - 1.5 mm ² UL: 300 V / 8 A / AWG 28 - AWG 14	Box
BL 3.50/10/90 SN BK BX	1638860000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 90°, Clamping yoke connection, Clamping range, rated connection, max.: 1.5 mm ² , Box	4008190276409	48 pc(s).	IEC: 320 V / 12 A / 0.2 - 1.5 mm ² UL: 300 V / 8 A / AWG 28 - AWG 14	Box

BL 3.50/270


Female connectors with clamping yoke screw system for connecting conductors at 3.50 mm pitch. They provide space for labelling and can be coded.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL 3.50/10/270 SN OR BX	1639550000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 270°, Clamping yoke connection, Clamping range, rated	4008190277109	48 pc(s).	IEC: 320 V / 12 A / 0.2 - 1.5 mm ² UL: 300 V / 8 A / AWG 28 - AWG 14	Box

Creation date September 7, 2017 4:22:38 PM CEST

OMNIMATE Signal - series BL/SL 3.50
SL-SMT 3.50/10/180F 3.2SN BK BX

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Mating connector (conditionally pluggable)

		connection, max.: 1.5 mm ² , Box		
BL 3.50/10/270 SN BK BX	1639780000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 270°, Clamping yoke connection, Clamping range, rated connection, max.: 1.5 mm ² , Box	4008190277338 48 pc(s).	IEC: 320 V / 12 A / 0.2 - 1.5 mm ² UL: 300 V / 8 A / AWG 28 - AWG 14

BLZF 3.5/180


Female connectors with tension clamp system for connecting cables in 3.50 pitch. They provide space for labelling and can be coded.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BLZF 3.50/10/180 SN OR BX	1690270000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, Tension clamp connection, Clamping range, rated connection, max.: 1.5 mm ² , Box	4008190328764 50 pc(s).		IEC: 320 V / 14.5 A / 0.2 - 1.5 mm ² UL: 300 V / 10 A / AWG 26 - AWG 14	Box
BLZF 3.50/10/180 SN DKGX BX	1690730000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, Tension clamp connection, Clamping range, rated connection, max.: 1.5 mm ² , Box	4008190329242 50 pc(s).		IEC: 320 V / 14.5 A / 0.2 - 1.5 mm ² UL: 300 V / 10 A / AWG 26 - AWG 14	Box
BLZF 3.50/10/180 SN BK BX	1690500000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, Tension clamp connection, Clamping range, rated connection, max.: 1.5 mm ² , Box	4008190329013 50 pc(s).		IEC: 320 V / 14.5 A / 0.2 - 1.5 mm ² UL: 300 V / 10 A / AWG 26 - AWG 14	Box

**OMNIMATE Signal - series BL/SL 3.50
SL-SMT 3.50/10/180F 3.2SN BK BX**

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Mating connector (conditionally pluggable)
BL-I/O 3.5/30


Female header with spring connection (PUSH IN) as a plug-in connection level for decentralised I/O electronics; used together with male headers in 3.50 mm pitch.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL-I/O 3.50/30FP SN BK BX	1779910000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 30, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm ² , Box	4032248165230 20 pc(s).		IEC: 200 V / 2.2 A / 0.2 - 1.5 mm ² UL: 50 V / 5 A / AWG 24 - AWG 16	Box
Discontinued	2014-05-20T00:00:00+02:00	BL-I/O 3.50/30FP SN LTGY BX	1965930000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 30, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm ² , Box	4032248657599	20 pc(s).

BL-I/O 3.5/30 F PNP LED


Female header with spring connection (PUSH IN) as a plug-in connection level for decentralised I/O electronics; used together with male headers in 3.50 mm pitch.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL-I/O 3.50/30FP PNP LED SN BK BX	1789100000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 30, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm ² , Box	4032248208036 20 pc(s).		IEC: / 2.2 A / 0.2 - 1.5 mm ² UL: 50 V / 5 A / AWG 24 - AWG 16	Box
Discontinued	2014-05-20T00:00:00+02:00	BL-I/O 3.50/30FP PNP LED SN LTGY BX	1965990000	PCB plug-in connector, female plug, 3.50 mm,	4032248657759	20 pc(s).

OMNIMATE Signal - series BL/SL 3.50
SL-SMT 3.50/10/180F 3.2SN BK BX

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Mating connector (conditionally pluggable)

		connection, max.: 1.5 mm ² , Box	
BL	1740681001	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, Clamping yoke connection, Clamping range, rated connection, max.: 1.5 mm ² , Box	400819096163348 pc(s). IEC: 320 V / 17 A / 0.2 - 1.5 mm ² Box UL: 300 V / 10 A / AWG 28 - AWG 14
3.50/10/180 SN OR BX PRT			
BL	1606570000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, Clamping yoke connection, Clamping range, rated connection, max.: 1.5 mm ² , Box	400819003985148 pc(s). IEC: 320 V / 17 A / 0.2 - 1.5 mm ² Box UL: 300 V / 10 A / AWG 28 - AWG 14
3.50/10/180 SN DKGX BX			

**OMNIMATE Signal - series BL/SL 3.50
SL-SMT 3.50/10/180F 3.2SN BK BX**

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Mating connector (fully pluggable)
BL-I/O 3.5/10


Female header with spring connection (PUSH IN) as a plug-in connection level for decentralised I/O electronics; used together with male headers in 3.50 mm pitch.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL-I/O 3.50/10F SN LTGY BX	1871690000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm ² , Box	403224845119720 pc(s).		IEC: 200 V / 2.2 A / 0.2 - 1.5 mm ² UL: 50 V / 5 A / AWG 24 - AWG 16	Box
BL-I/O 3.50/10F SN BK BX	1779880000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm ² , Box	403224816520920 pc(s).		IEC: 200 V / 2.2 A / 0.2 - 1.5 mm ² UL: 50 V / 5 A / AWG 24 - AWG 16	Box

BL-I/O 3.5/10 F PNP LED


Female header with spring connection (PUSH IN) as a plug-in connection level for decentralised I/O electronics; used together with male headers in 3.50 mm pitch.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL-I/O 3.50/10F PNP LED SN BK BX	1789090000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm ² , Box	403224820802920 pc(s).		IEC: / 2.2 A / 0.2 - 1.5 mm ² UL: 50 V / 5 A / AWG 24 - AWG 16	Box
BL-I/O 3.50/10F PNP LED SN LTGY BX	1965940000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, PUSH IN, Clamping range, rated	403224865760520 pc(s).		IEC: / 2.2 A / 0.2 - 1.5 mm ² UL: 50 V / 5 A / AWG 24 - AWG 16	Box

OMNIMATE Signal - series BL/SL 3.50 SL-SMT 3.50/10/180F 3.2SN BK BX

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Mating connector (fully pluggable)

connection, max.: 1.5 mm²,
 Box

BL-I/O 3.5/10 NPN LED



Female header with spring connection (PUSH IN) as a plug-in connection level for decentralised I/O electronics; used together with male headers in 3.50 mm pitch.

General ordering data

Delivery status	Available until	Type	Order No.	Version	GTIN (EAN)	Qty.
Discontinued	2014-05-20T00:00:00+02:00	BL-I/O 3.50/10F NPN LED SN LTGY BX	1965950000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm ² , Box	4032248657711	20 pc(s)
BL-I/O 3.50/10F NPN LED SN BK BX	1938010000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm ² , Box	4032248610228	20 pc(s).	IEC: / 2.2 A / 0.2 - 1.5 mm ² UL: 50 V / 5 A / AWG 24 - AWG 16	Box

BL-I/O 3.5/30



Female header with spring connection (PUSH IN) as a plug-in connection level for decentralised I/O electronics; used together with male headers in 3.50 mm pitch.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL-I/O 3.50/30F M SN BK BX PRT	1792330000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 30, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm ² , Box	4032248225330	20 pc(s).	IEC: 200 V / 2.2 A / 0.2 - 1.5 mm ² UL: 50 V / 5 A / AWG 24 - AWG 16	Box

**OMNIMATE Signal - series BL/SL 3.50
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Mating connector (fully pluggable)

BL-I/O 3.50/30F SN BK BX	1779920000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 30, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm ² , Box	4032248165247 20 pc(s).	IEC: 200 V / 2.2 A / 0.2 - 1.5 mm ² UL: 50 V / 5 A / AWG 24 - AWG 16	Box
Discontinued	2016-07-08T00:00:00+02:00	BL-I/O 3.50/30F SN LTGY BK BX	1965910000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 30, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm ² , Box	4032248657575 20 pc(s).

BL-I/O 3.5/30 F PNP LED


Female header with spring connection (PUSH IN) as a plug-in connection level for decentralised I/O electronics; used together with male headers in 3.50 mm pitch.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL-I/O 3.50/30F PNP LED SN LTGY BK BX	1965970000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 30, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm ² , Box	4032248657735	20 pc(s).	IEC: / 2.2 A / 0.2 - 1.5 mm ² UL: 50 V / 5 A / AWG 24 - AWG 16	Box
BL-I/O 3.50/30F PNP LED SN BK BX	1789110000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 30, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm ² , Box	4032248208043	20 pc(s).	IEC: / 2.2 A / 0.2 - 1.5 mm ² UL: 50 V / 5 A / AWG 24 - AWG 16	Box

**OMNIMATE Signal - series BL/SL 3.50
SL-SMT 3.50/10/180F 3.2SN BK BX**

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Mating connector (fully pluggable)
BL 3.50/180LH


Female connectors with clamping yoke screw system for connecting conductors at 3.50 mm pitch. They provide space for labelling and can be coded.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL 3.50/10/180LH SN OR BX	1687730000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, Clamping yoke connection, Clamping range, rated connection, max.: 1.5 mm², Box	4008190853280	42 pc(s).	IEC: 320 V / 17 A / 0.2 - 1.5 mm² UL: 300 V / 10 A / AWG 28 - AWG 14	Box
BL 3.50/10/180LH SN BK BX	1687960000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, Clamping yoke connection, Clamping range, rated connection, max.: 1.5 mm², Box	4008190853518	42 pc(s).	IEC: 320 V / 17 A / 0.2 - 1.5 mm² UL: 300 V / 10 A / AWG 28 - AWG 14	Box

BL 3.50/270F


Female connectors with clamping yoke screw system for connecting conductors at 3.50 mm pitch. They provide space for labelling and can be coded.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL 3.50/10/270F SN OR BX	1640010000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 270°, Clamping yoke connection, Clamping range, rated connection, max.: 1.5 mm², Box	4008190277567	42 pc(s).	IEC: 320 V / 12 A / 0.2 - 1.5 mm² UL: 300 V / 8 A / AWG 28 - AWG 14	Box
BL 3.50/10/270F SN BK BX	1640240000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 270°	4008190277819	42 pc(s).	IEC: 320 V / 12 A / 0.2 - 1.5 mm² UL: 300 V / 8 A / AWG 28 - AWG 14	Box

Creation date September 7, 2017 4:22:38 PM CEST

**OMNIMATE Signal - series BL/SL 3.50
SL-SMT 3.50/10/180F 3.2SN BK BX**

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Mating connector (fully pluggable)

Clamping yoke connection,
Clamping range, rated
connection, max.: 1.5 mm²,
Box

BL-I/O 3.5/30 NPN LED



Female header with spring connection (PUSH IN) as a plug-in connection level for decentralised I/O electronics; used together with male headers in 3.50 mm pitch.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL-I/O 3.50/30F NPN LED SN BK BX	1938020000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 30, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm ² , Box	4032248610235	20 pc(s).	IEC: / 2.2 A / 0.2 - 1.5 mm ² UL: 50 V / 5 A / AWG 24 - AWG 16	Box
Discontinued	2014-05-20T00:00:00+02:00	BL-I/O 3.50/30F NPN LED SN LTGY BX	1965980000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 30, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm ² , Box	4032248657742	20 pc(s).

BL 3.50/90F



Female connectors with clamping yoke screw system for connecting conductors at 3.50 mm pitch. They provide space for labelling and can be coded.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL 3.50/10/90F SN OR BX	1639090000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 90°, Clamping yoke connection, Clamping	4008190276638	42 pc(s).	IEC: 320 V / 12 A / 0.2 - 1.5 mm ² UL: 300 V / 8 A / AWG 28 - AWG 14	Box

**OMNIMATE Signal - series BL/SL 3.50
SL-SMT 3.50/10/180F 3.2SN BK BX**

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Mating connector (fully pluggable)

		range, rated connection, max.: 1.5 mm ² , Box		
BL 3.50/10/90F SN BK BX	1639320000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 90°, Clamping yoke connection, Clamping range, rated connection, max.: 1.5 mm ² , Box	4008190276867 42 pc(s).	IEC: 320 V / 12 A / 0.2 - 1.5 mm ² Box UL: 300 V / 8 A / AWG 28 - AWG 14

BL 3.50/180F


Female connectors with clamping yoke screw system for connecting conductors at 3.50 mm pitch. They provide space for labelling and can be coded.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL 3.50/10/180F SN OR BX	1606720000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, Clamping yoke connection, Clamping range, rated connection, max.: 1.5 mm ² , Box	4008190062422 42 pc(s).		IEC: 320 V / 17 A / 0.2 - 1.5 mm ² UL: 300 V / 10 A / AWG 28 - AWG 14	Box
BL 3.50/10/180F SN BK BX	1615860000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, Clamping yoke connection, Clamping range, rated connection, max.: 1.5 mm ² , Box	4008190063269 42 pc(s).		IEC: 320 V / 17 A / 0.2 - 1.5 mm ² UL: 300 V / 10 A / AWG 28 - AWG 14	Box
Discontinued	2016-04-08T00:00:00+02:00	BL 3.50/10/180F SN OR BX PRT	1701730000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, Clamping yoke connection, Clamping range, rated connection, max.: 1.5 mm ² , Box	4008190908058	50 pc(s).

OMNIMATE Signal - series BL/SL 3.50 SL-SMT 3.50/10/180F 3.2SN BK BX

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Accessories

Additional accessories



No task is too small when creating the perfect solution.

Connections form just one part of the overall process. Small details are often the key to the perfect solution in applications where potentials are tested, grouped or even isolated.

A system is not a system without small but useful details:

- Test plugs - ensure reliable pick-up from diagnostic sockets
- Cross-connectors - ensure a stable electrical distribution contact directly at the connection
- Compartment partition elements - divide a large number of male connectors into several separate socket connector channels
- Locks and clips - optional vibration-resistant clip-on connection or mounting for male and female connectors

In tandem with the manufacturing process and application - more accessories = smaller workload

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data
BL/SL 3.50 VR OR BX	1669310000	PCB plug-in connector, Accessories, Latches, Orange, No. of poles: 1	4008190428488	100 pc(s).	UL:
PTSC KA 2.2X4.5 WN1412	1610740000	PCB plug-in connector, Accessories, Mounting screw, No. of poles: 1	4008190039523	100 pc(s).	UL:
BL/SL 3.50 VR BK BX	1669300000	PCB plug-in connector, Accessories, Latches, Black, No. of poles: 1	4008190428471	100 pc(s).	UL:

**OMNIMATE Signal - series BL/SL 3.50
SL-SMT 3.50/10/180F 3.2SN 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	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL SL 3.5 KO OR	1693430000	PCB plug-in connector, Accessories, Coding element, Orange, No. of poles: 1	4008190867447	100 pc(s).	UL:	Box
BL SL 3.5 KO SW	1610100000	PCB plug-in connector, Accessories, Coding element, Black, No. of poles: 1	4008190187637	100 pc(s).	UL:	Box

**OMNIMATE Signal - series BL/SL 3.50
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Accessories**LED Light guides****Effective: the link between LED and front panel.**

Floodlight indicators allow users to monitor the switching states without requiring a special design: optical plastic directs the light from standard LEDs around a bend into the connectors or through the front plate.

The fibre-optic elements are simply clipped behind the relevant 90° bend male connectors (90° outlet direction). Versions with different incoming light beam heights achieve maximum light efficiency for LEDs with different designs or heights.

The advantages compared to conventional solutions:

- No additional LED circuit board required behind the front panel
- No "long-legged" LEDs with separate mounting required
- Bent fibre-optic cable line for maximum light efficiency
- Uncomplicated front plate bore holes due to circular shape of outgoing light beam
- Easy to maintain correct clearance and creepage distance
- Can be partitioned for smaller pole numbers

The result: simplified manufacturing process, reduced costs and simplified design

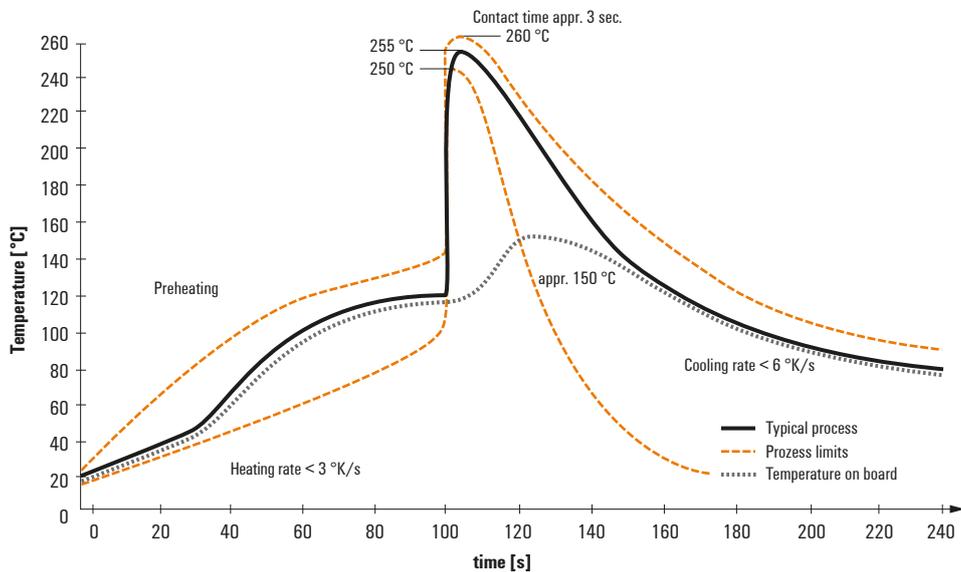
General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
SL 3.5 FLA 1.5/1.75/8	1597630000	PCB plug-in connector, Accessories, Flood-light display, Transparent, No. of poles: 1	4008190148386	50 pc(s).	UL:	Box
SL 3.5 FLA 1.5/8	1597510000	PCB plug-in connector, Accessories, Flood-light display, Transparent, No. of poles: 1	4008190127541	50 pc(s).	UL:	Box
SL 3.5 FLA 2.3/8	1597520000	PCB plug-in connector, Accessories, Flood-light display, Transparent, No. of poles: 1	4008190120566	50 pc(s).	UL:	Box
SL 3.5 FLA 4.0/1.75/8	1597650000	PCB plug-in connector, Accessories, Flood-light display, Transparent, No. of poles: 1	4008190027773	50 pc(s).	UL:	Box
SL 3.5 FLA 2.3/1.75/8	1597640000	PCB plug-in connector, Accessories, Flood-light display, Transparent, No. of poles: 1	4008190011321	25 pc(s).	UL:	Box

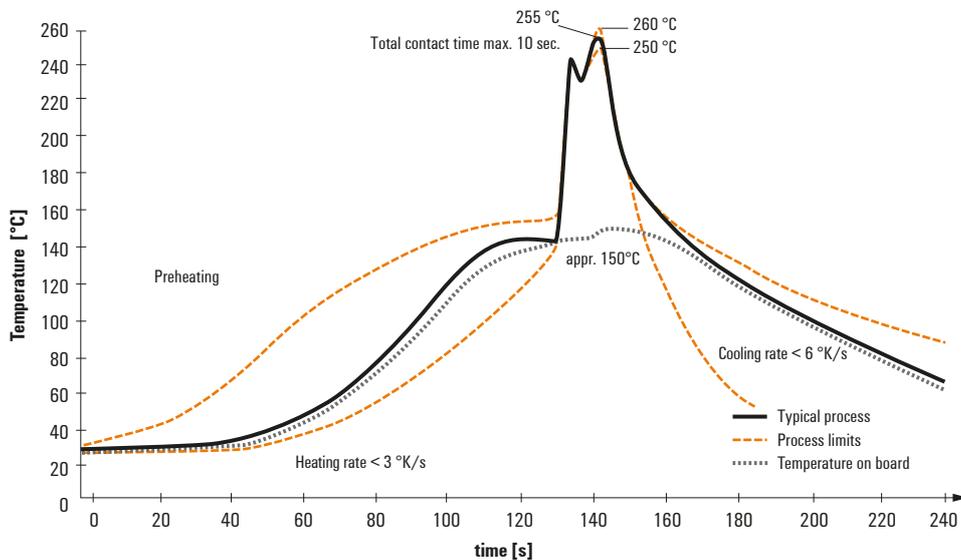
Recommended wave soldering profiles

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Single Wave:



Double Wave:



Wave soldering profiles

Wired connection elements should be processed in accordance with the DIN EN 61760-1 standard. We have included two recommendations for practical wave soldering profiles, with which Weidmüller PCB terminals and connectors are qualified.

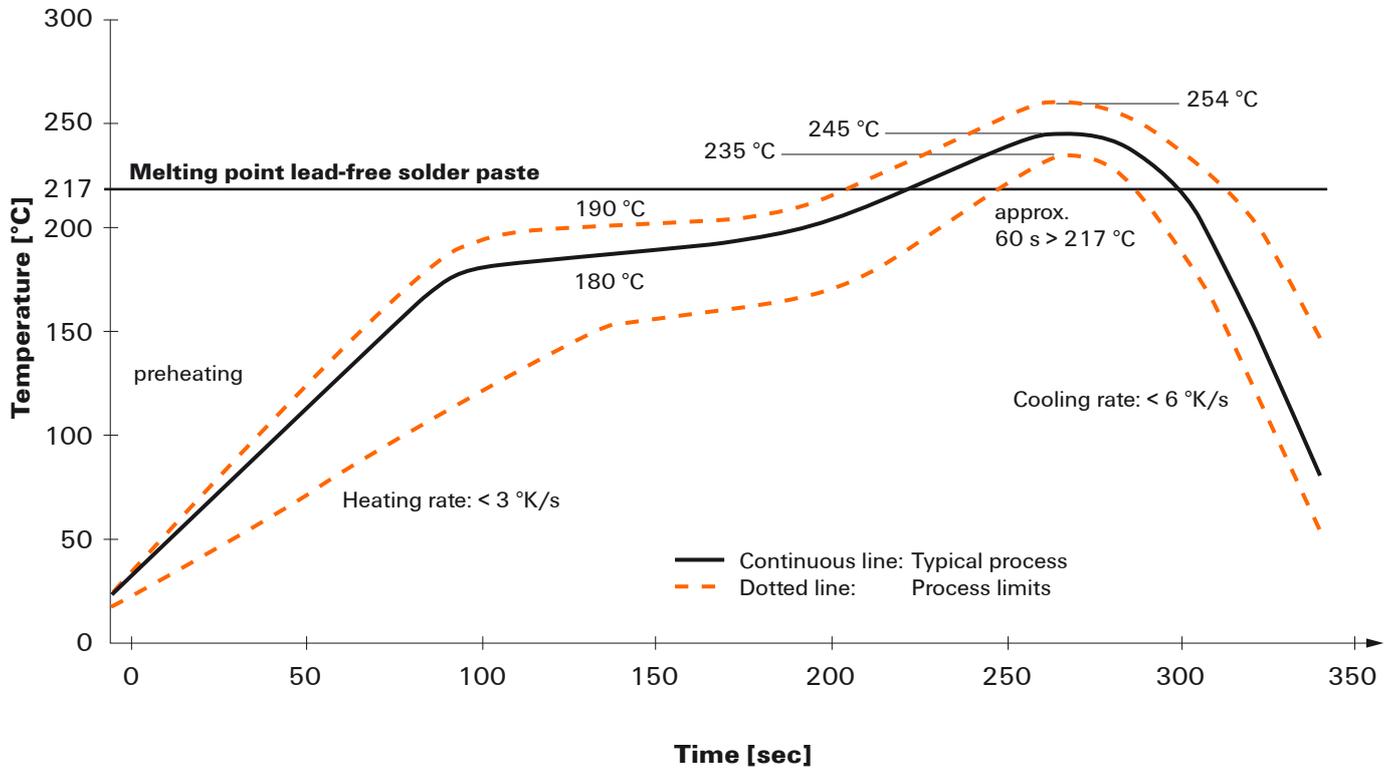
When choosing a suitable profile for your application, the following factors also need to be considered:

- PCB thickness
- Proportion of Cu in the layers
- Single/double-sided assembly
- Product range
- Heating and cooling rates

The single and double wave profiles each indicate the recommended operating range, including the maximum soldering temperature of 260°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.

Recommended reflow soldering profile

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Reflow soldering profile

The perfect soldering profile for SMT Surface Mount Technology is one the most exiting question in SMT production. But there are more than one correct answer: The diagram of temperature-on-time is related to processing features of solder paste and to maximum load of components.

We have to consider the following parameters:

- Time for pre heating
- Maximum temperature
- Time above melting point
- Time for cooling
- Maximum heating rate
- Maximum cooling rate

We recommend a typical solder profile with associated process limits. With preheating components and board are prepared smoothly for the solder phase. Heating rate is typically $\leq +3\text{K/s}$. In parallel the solder paste is ‚activated‘. The time above melting point of 217°C the paste gets liquid and components and boards begin to connect. The maximum temperature of 245°C to 254°C should stay between 10 and 40 seconds. In the cooling phase at $\geq -6\text{K/s}$ solder is cured. Board and components cool down while avoiding cold cracks.

