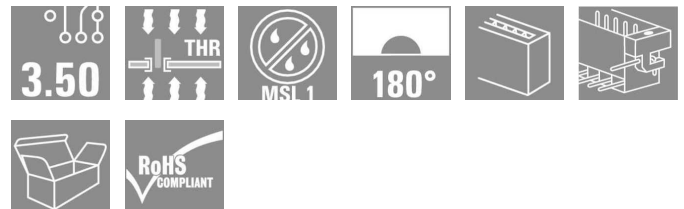


**OMNIMATE Signal - series BL/SL 3.50  
SL-SMT 3.50/10/180LF 3.2SN BK BX**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 16  
 D-32758 Detmold  
 Germany  
 Fon: +49 5231 1429-0  
 Fax: +49 5231 14292083  
 www.weidmueller.com



**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 3.50/10/180LF 3.2SN BK BX
Order No.	<a href="#">1842620000</a>
Version	PCB plug-in connector, male header, Solder 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)	4032248353989
Qty.	42 pc(s).
Product data	IEC: 320 V / 15 A UL: 300 V / 10 A
Packaging	Box

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

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

Net weight 3.337 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 <sup>8</sup> 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


**Data sheet**

**OMNIMATE Signal - series BL/SL 3.50  
SL-SMT 3.50/10/180LF 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"> <li>• Gold-plated contact surfaces on request</li> <li>• Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>• Solder eyelet diameter D = 1.5 + 0.1 mm, from 9 poles</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>
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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.

**Approvals**

Approvals	
ROHS	Conform

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

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**Technical data****Downloads**

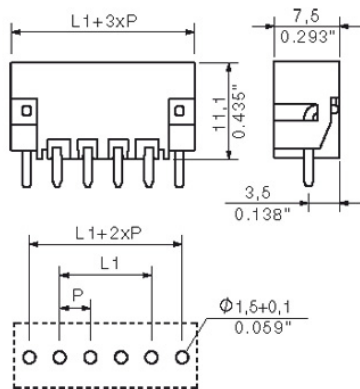
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Approval/Certificate/Document of Conformity	<a href="#">Declaration of the Manufacturer</a>
Brochure/Catalogue	<a href="#">FL DRIVES EN</a> <a href="#">FL DRIVES DE</a>
Engineering Data	<a href="#">SL-SMT.zip</a>
SMT white paper	<a href="#">Download Whitepaper</a>

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

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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 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	<a href="#">1789080000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Box	4032248208012	20 pc(s).	IEC: / 2.2 A / 0.2 - 1.5 mm <sup>2</sup> UL: 50 V / 5 A / AWG 24 - AWG 16	Box
BL-I/O 3.50/10F PNP LED SN LTGY BX	<a href="#">1965940000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Box	4032248657605	20 pc(s).	IEC: / 2.2 A / 0.2 - 1.5 mm <sup>2</sup> 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	<a href="#">1965960000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Box	4032248657728	20 pc(s).
BL-I/O 3.50/10F PNP LED SN BK BX	<a href="#">1789090000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Box	4032248208029	20 pc(s).	IEC: / 2.2 A / 0.2 - 1.5 mm <sup>2</sup> UL: 50 V / 5 A / AWG 24 - AWG 16	Box

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

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**Mating connector (conditionally pluggable)**
**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	<a href="#">1639550000</a>	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 <sup>2</sup> , Box	4008190277109	48 pc(s).	IEC: 320 V / 12 A / 0.2 - 1.5 mm <sup>2</sup> UL: 300 V / 8 A / AWG 28 - AWG 14	Box
BL 3.50/10/270 SN BK BX	<a href="#">1639780000</a>	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 <sup>2</sup> , Box	4008190277338	48 pc(s).	IEC: 320 V / 12 A / 0.2 - 1.5 mm <sup>2</sup> UL: 300 V / 8 A / AWG 28 - AWG 14	Box

**BL 3.50/180**


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 3.50/10/180 SN OR BX PRT	<a href="#">1740681001</a>	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 <sup>2</sup> , Box	4008190961633	48 pc(s).	IEC: 320 V / 17 A / 0.2 - 1.5 mm <sup>2</sup> UL: 300 V / 10 A / AWG 28 - AWG 14	Box
BL 3.50/10/180 SN OR BX	<a href="#">1597440000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°	4008190192013	48 pc(s).	IEC: 320 V / 17 A / 0.2 - 1.5 mm <sup>2</sup> UL: 300 V / 10 A / AWG 28 - AWG 14	Box

Creation date July 25, 2017 12:03:42 PM CEST

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

**Weidmüller Interface GmbH & Co. KG**  
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D-32758 Detmold  
Germany  
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**Mating connector (conditionally pluggable)**

		Clamping yoke connection, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Box			
BL 3.50/10/180 SN BK BX	<a href="#">161020000</a>	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 <sup>2</sup> , Box	4008190126940 48 pc(s).	IEC: 320 V / 17 A / 0.2 - 1.5 mm <sup>2</sup> UL: 300 V / 10 A / AWG 28 - AWG 14	Box
Discontinued BL 3.50/10/180 SN GY BX	<a href="#">162053000</a>	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 <sup>2</sup> , Box	4008190158545 50 pc(s).	IEC: 320 V / 17 A / 0.2 - 1.5 mm <sup>2</sup> UL: 300 V / 10 A / AWG 28 - AWG 14	Box
BL 3.50/10/180 SN DKGX BX	<a href="#">160657000</a>	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 <sup>2</sup> , Box	4008190039851 48 pc(s).	IEC: 320 V / 17 A / 0.2 - 1.5 mm <sup>2</sup> UL: 300 V / 10 A / AWG 28 - AWG 14	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**

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL-I/O 3.50/10F	<a href="#">1938010000</a>	PCB plug-in connector, female plug, 3.50 mm, No.	4032248610228 20 pc(s).		IEC: / 2.2 A / 0.2 - 1.5 mm <sup>2</sup> UL: 50 V / 5 A / AWG 24 - AWG 16	Box

Creation date July 25, 2017 12:03:42 PM CEST

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

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### Mating connector (conditionally pluggable)

NPN LED SN  
BK BX

of poles: 10, 180°, PUSH  
IN, Clamping range, rated  
connection, max.: 1.5 mm<sup>2</sup>,  
Box

Discontinued	2014-05-20T00:00:00+02:00	BL-I/O 3.50/10F NPN LED <a href="#">1965950000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Box	4032248657711	20 pc(s).
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### 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

Delivery status	Available until	Type	Order No.	Version	GTIN (EAN)	Qty.
Discontinued	2016-07-08T00:00:00+02:00	BL-I/O 3.50/30F SN LTGY BX	<a href="#">1965910000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 30, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Box	4032248657575	20 pc(s).
Discontinued	2014-05-20T00:00:00+02:00	BL-I/O 3.50/30FP SN LTGY BX	<a href="#">1965930000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 30, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Box	4032248657599	20 pc(s).
		BL-I/O 3.50/30FP SN BK BX	<a href="#">1779910000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 30, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Box	IEC: 200 V / 2.2 A / 0.2 - 1.5 mm <sup>2</sup> UL: 50 V / 5 A / AWG 24 - AWG 16	Box

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

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### Mating connector (conditionally pluggable)

BL-I/O 3.50/30F SN BK BX	<a href="#">1779920000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 30, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Box	4032248165247 20 pc(s).	IEC: 200 V / 2.2 A / 0.2 - 1.5 mm <sup>2</sup> UL: 50 V / 5 A / AWG 24 - AWG 16	Box
BL-I/O 3.50/30F M SN BK BX PRT	<a href="#">1792330000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 30, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Box	4032248225330 20 pc(s).	IEC: 200 V / 2.2 A / 0.2 - 1.5 mm <sup>2</sup> UL: 50 V / 5 A / AWG 24 - AWG 16	Box

### 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	<a href="#">1789100000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 30, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Box	4032248208036 20 pc(s).		IEC: / 2.2 A / 0.2 - 1.5 mm <sup>2</sup> 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	<a href="#">1965990000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 30, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Box	4032248657759	20 pc(s).
BL-I/O 3.50/30F PNP LED SN LTGY BX	<a href="#">1965970000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 30, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Box	4032248657735 20 pc(s).		IEC: / 2.2 A / 0.2 - 1.5 mm <sup>2</sup> UL: 50 V / 5 A / AWG 24 - AWG 16	Box
BL-I/O 3.50/30F PNP LED SN BK BX	<a href="#">1789110000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 30, 180°, PUSH IN, Clamping range, rated	4032248208043 20 pc(s).		IEC: / 2.2 A / 0.2 - 1.5 mm <sup>2</sup> UL: 50 V / 5 A / AWG 24 - AWG 16	Box

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

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**Mating connector (conditionally pluggable)**

connection, max.: 1.5 mm<sup>2</sup>,  
Box

**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	<a href="#">1871690000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Box	403224845119720	20 pc(s).	IEC: 200 V / 2.2 A / 0.2 - 1.5 mm <sup>2</sup> UL: 50 V / 5 A / AWG 24 - AWG 16	Box
BL-I/O 3.50/10FP SN BK BX	<a href="#">1779870000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Box	403224816519320	20 pc(s).	IEC: 200 V / 2.2 A / 0.2 - 1.5 mm <sup>2</sup> UL: 50 V / 5 A / AWG 24 - AWG 16	Box
Discontinued	2014-05-20T00:00:00+02:00	BL-I/O 3.50/10FP SN LTGY BX	<a href="#">1965890000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Box	4032248657551	20 pc(s).
BL-I/O 3.50/10F SN BK BX	<a href="#">1779880000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, PUSH IN, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Box	403224816520920	20 pc(s).	IEC: 200 V / 2.2 A / 0.2 - 1.5 mm <sup>2</sup> UL: 50 V / 5 A / AWG 24 - AWG 16	Box

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

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Fax: +49 5231 14292083  
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**Mating connector (conditionally pluggable)**
**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**

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

**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**

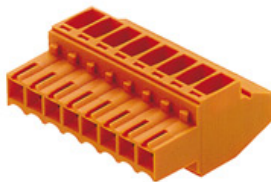
Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BLZF 3.50/10/180 SN OR BX	<a href="#">1690270000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, Tension clamp connection, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Box	4008190328764	50 pc(s).	IEC: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

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

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 16  
D-32758 Detmold  
Germany  
Fon: +49 5231 1429-0  
Fax: +49 5231 14292083  
www.weidmueller.com

**Mating connector (conditionally pluggable)**

BLZF 3.50/10/180 SN BK BX	<a href="#">1690500000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, Tension clamp connection, Clamping range, rated connection, max.: 1.5 mm², Box	4008190329013 50 pc(s).	IEC: 320 V / 14.5 A / 0.2 - 1.5 mm² UL: 300 V / 10 A / AWG 26 - AWG 14	Box
BLZF 3.50/10/180 SN DKGX BX	<a href="#">1690730000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, Tension clamp connection, Clamping range, rated connection, max.: 1.5 mm², Box	4008190329242 50 pc(s).	IEC: 320 V / 14.5 A / 0.2 - 1.5 mm² UL: 300 V / 10 A / AWG 26 - AWG 14	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 BK BX	<a href="#">1638860000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 90°, Clamping yoke connection, Clamping range, rated connection, max.: 1.5 mm², Box	4008190276409 48 pc(s).		IEC: 320 V / 12 A / 0.2 - 1.5 mm² UL: 300 V / 8 A / AWG 28 - AWG 14	Box
BL 3.50/10/90 SN OR BX	<a href="#">1638630000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 90°, Clamping yoke connection, Clamping range, rated connection, max.: 1.5 mm², Box	4008190276171 48 pc(s).		IEC: 320 V / 12 A / 0.2 - 1.5 mm² UL: 300 V / 8 A / AWG 28 - AWG 14	Box

**OMNIMATE Signal - series BL/SL 3.50  
SL-SMT 3.50/10/180LF 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	<a href="#">1687730000</a>	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	<a href="#">1687960000</a>	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 3.50/180F**


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**

Delivery status	Available until	Type	Order No.	Version	GTIN (EAN)	Qty.
Discontinued	2016-04-08T00:00:00+02:00	BL 3.50/10/180F SN OR BX PRT	<a href="#">1701730000</a>	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	4008190908058	50 pc(s).

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

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**Mating connector (fully pluggable)**

BL 3.50/10/180F SN BK BX	<a href="#">1615860000</a>	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	4008190063269 42 pc(s).	IEC: 320 V / 17 A / 0.2 - 1.5 mm² UL: 300 V / 10 A / AWG 28 - AWG 14	Box
BL 3.50/10/180F SN OR BX	<a href="#">1606720000</a>	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	4008190062422 42 pc(s).	IEC: 320 V / 17 A / 0.2 - 1.5 mm² UL: 300 V / 10 A / AWG 28 - AWG 14	Box

**BL 3.50/90F**


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 BK BX	<a href="#">1639320000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 90°, Clamping yoke connection, Clamping range, rated connection, max.: 1.5 mm², Box	4008190276867 42 pc(s).		IEC: 320 V / 12 A / 0.2 - 1.5 mm² UL: 300 V / 8 A / AWG 28 - AWG 14	Box
BL 3.50/10/90F SN OR BX	<a href="#">1639090000</a>	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 90°, Clamping yoke connection, Clamping range, rated connection, max.: 1.5 mm², Box	4008190276638 42 pc(s).		IEC: 320 V / 12 A / 0.2 - 1.5 mm² UL: 300 V / 8 A / AWG 28 - AWG 14	Box

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

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**Mating connector (fully pluggable)**
**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 BK BX	<a href="#">1640240000</a>	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	4008190277819 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 OR BX	<a href="#">1640010000</a>	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

**Data sheet**

**OMNIMATE Signal - series BL/SL 3.50  
SL-SMT 3.50/10/180LF 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.

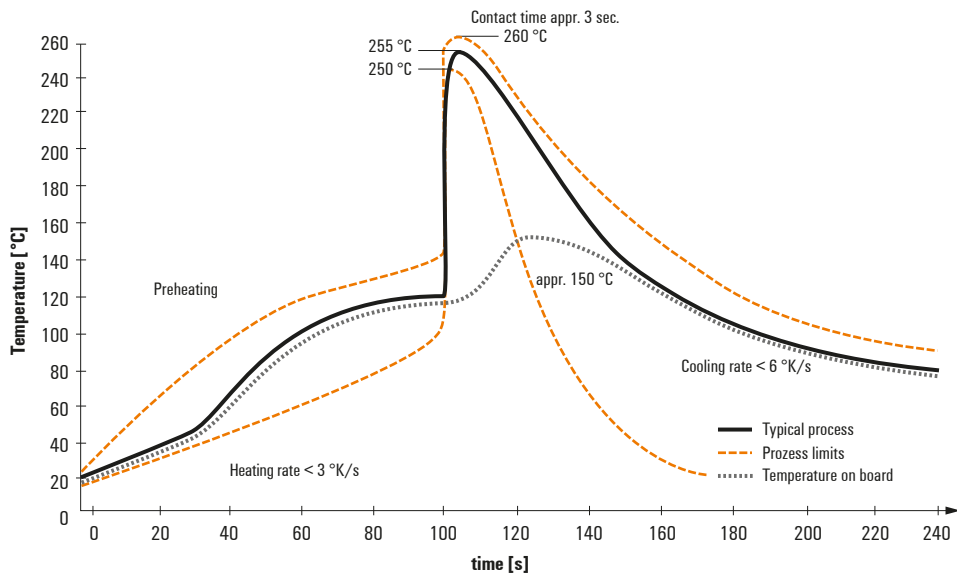
**General ordering data**

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL SL 3.5 KO SW	<a href="#">1610100000</a>	PCB plug-in connector, Accessories, Coding element, Black, No. of poles: 1	4008190187637	100 pc(s).		Box
BL SL 3.5 KO OR	<a href="#">1693430000</a>	PCB plug-in connector, Accessories, Coding element, Orange, No. of poles: 1	4008190867447	100 pc(s).		Box

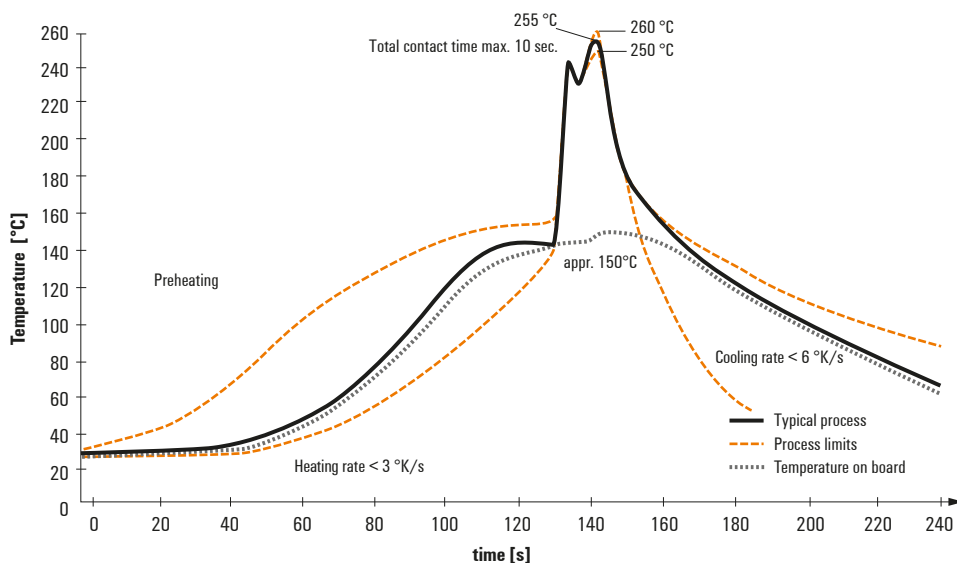
## Recommended wave soldering profiles

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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.

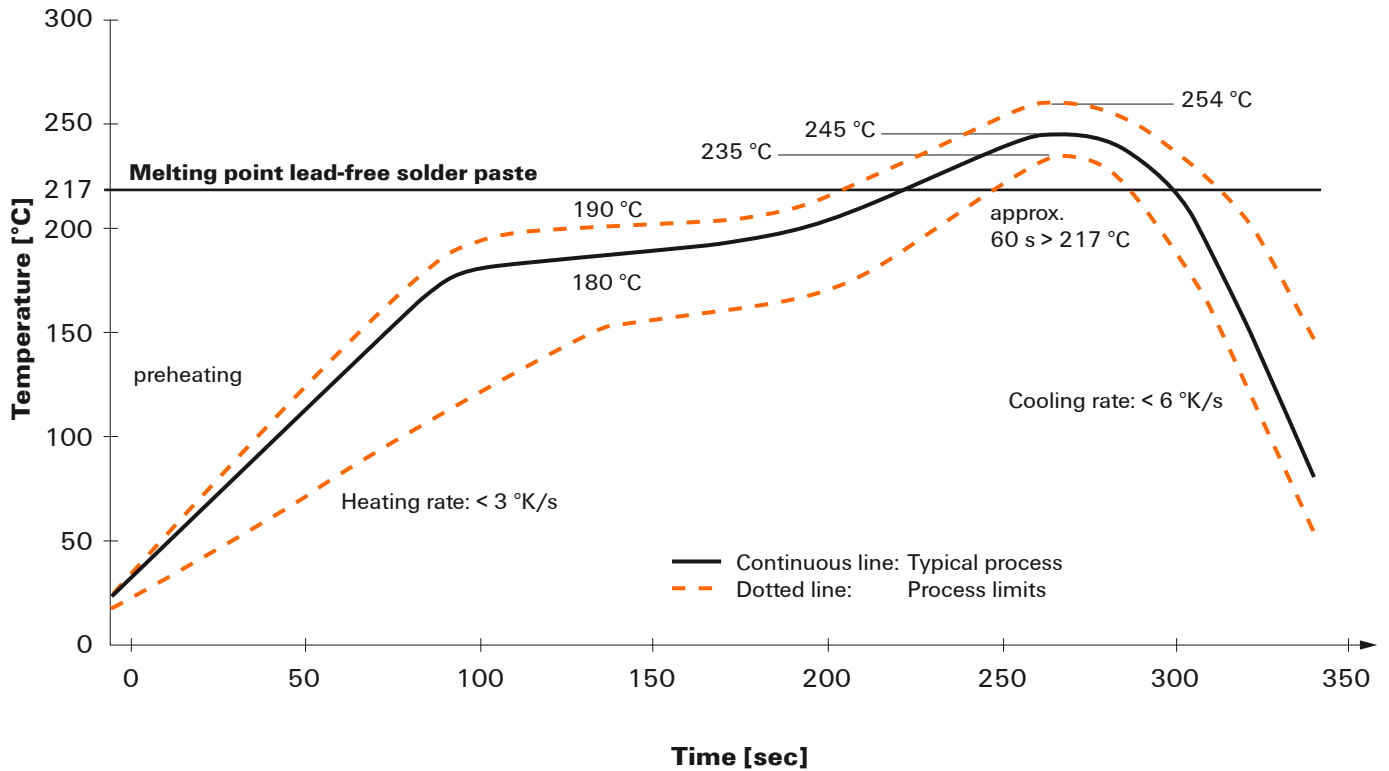
When choosing a suitable profile for your application, the following factors also need to be considered:

- 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.

