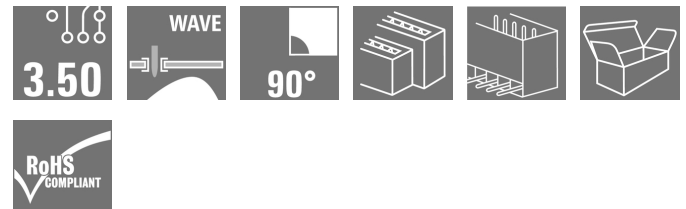


**OMNIMATE Signal - series BL/SL 3.50
SLD 3.50V/36/90G 3.2SN OR BX**

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Product image

Similar to illustration

Double-level, staggered pin header for wave soldering at 3.50 mm pitch. They are available in closed and flanged versions. The male connectors provide space for labelling and can be coded.

General ordering data

Type	SLD 3.50V/36/90G 3.2SN OR BX
Order No.	1642320000
Version	PCB plug-in connector, male header, closed side, THT solder connection, 3.50 mm, Number of poles: 36, 90°, Solder pin length (l): 3.2 mm, tinned, orange, Box
GTIN (EAN)	4008 190280840
Qty.	10 pc(s).
Product data	IEC: 200 V / 10.5 A UL: 300 V / 8 A
Packaging	Box

Creation date May 3, 2020 5:09:14 PM CEST

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Technical data**Dimensions and weights**

Width	64.4 mm	Width (inches)	2.535 inch
Height	25.2 mm	Height (inches)	0.992 inch
Height of lowest version	22 mm	Depth	24.2 mm
Depth (inches)	0.953 inch	Net weight	23 g

System specifications

Product family	OMNIMATE Signal - series BL/SL 3.50	Type of connection	Board connection
Mounting onto the PCB	THT solder connection	Pitch in mm (P)	3.5 mm
Pitch in inches (P)	0.138 inch	Outgoing elbow	90°
Number of poles	36	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	± 0.20 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	L1 in mm	59.5 mm
L1 in inches	2.343 inch	Number of rows	2
Pin series quantity	2	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	≤ 5mΩ
Can be coded	Yes	Plugging cycles	25
Plugging force/pole, max.	10 N	Pulling force/pole, max.	8 N

Material data

Insulating material	PBT	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	Insulation strength	≥ 10 ⁸ Ω
UL 94 flammability rating	V-0	GWFI	960 °C
Contact material	CuSn	Contact surface	tinned
Layer structure of solder connection	2-3 μm Ni / 5-7 μm Sn glossy	Storage temperature, min.	-25 °C
Storage temperature, max.	50 °C	Max. relative humidity during storage	70 %
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. number of poles (Tu=20°C)	10.5 A
Rated current, max. number of poles (Tu=20°C)	8 A	Rated current, min. number of poles (Tu=40°C)	9 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	125 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 80 A


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

Institute (CSA)		Certificate No. (CSA)	154685-1318353
Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group D / CSA)	300 V
Rated current (Use group B / CSA)	8 A	Rated current (Use group D / CSA)	8 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 / UL 1059)	300 V	Rated voltage (Use group D / UL 1059)	300 V
Rated current (Use group B / UL 1059)	8 A	Rated current (Use group D / UL 1059)	8 A
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	34 mm
VPE width	133 mm	VPE height	154 mm

Classifications

ETIM 6.0	EC002637	ETIM 7.0	EC002637
eClass 9.0	27-44-04-02	eClass 9.1	27-44-04-02
eClass 10.0	27-44-04-02	UNSPSC	30-21-18-10

Notes

Notes	<ul style="list-style-type: none"> • Additional colours on request • Rated current related to rated cross-section & min. No. of poles. • Spacing between rows: see hole layout • 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.
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.

Data sheet**OMNIMATE Signal - series BL/SL 3.50
SLD 3.50V/36/90G 3.2SN OR BX**

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Technical data**Approvals**

Approvals



ROHS

Conform

DownloadsApproval/Certificate/Document of
Conformity[Declaration of the Manufacturer](#)

Brochure/Catalogue

[FL DRIVES EN](#)
[MB DEVICE MANUF. EN](#)
[FL DRIVES DE](#)
[CAT 2 PORTFOLIOGUIDE EN](#)
[FL BUILDING SAFETY EN](#)
[FL APPL LED LIGHTING EN](#)
[FLIndustr.CONTROLS EN](#)
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[FL APPL INVERTER EN](#)
[FL_BASE_STATION_EN](#)
[FL ELEVATOR EN](#)
[FL POWER SUPPLY EN](#)
[FL 72H SAMPLE SER EN](#)
[PO OMNIMATE EN](#)

Engineering Data

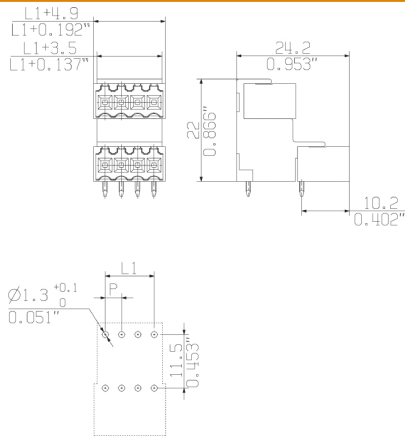
[SLD.zip](#)
[STEP](#)

**OMNIMATE Signal - series BL/SL 3.50
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Drawings

Dimensional drawing



**OMNIMATE Signal - series BL/SL 3.50
SLD 3.50V/36/90G 3.2SN OR BX**

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Mating connector (conditionally 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	BL 3.50/18/180LH SN BK ...	Version	Product data	Packaging
Order No.	1688040000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190853594	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		
Type	BL 3.50/18/180LH SN DKG ...	Version	Product data	Packaging
Order No.	1752880000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4032248007493	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	20 pc(s).	Box		
Type	BL 3.50/18/180LH SN OR ...	Version	Product data	Packaging
Order No.	1687810000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190853365	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	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

Type	BL 3.50/18/180F SN GY BX	Version	Product data	Packaging
Order No.	1621080000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190168247	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	20 pc(s).	Box		
Type	BL 3.50/18/180F SN BK BX	Version	Product data	Packaging
Order No.	1620850000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190164621	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		
Type	BL 3.50/18/180F SN OR BX	Version	Product data	Packaging
Order No.	1620770000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190163075	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		

**OMNIMATE Signal - series BL/SL 3.50
SLD 3.50V/36/90G 3.2SN OR BX**

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Mating connector (conditionally pluggable)

Type	BL 3.50/18/180F SN DKG...	Version	Product data	Packaging
Order No.	1621290000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190170912	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	20 pc(s).	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	BL 3.50/18/90F SN OR BX	Version	Product data	Packaging
Order No.	1639170000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190276713	90°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	24 pc(s).			
Type	BL 3.50/18/90F SN BK BX	Version	Product data	Packaging
Order No.	1639400000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190276942	90°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	24 pc(s).			

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	BL 3.50/18/270F SN BK BX	Version	Product data	Packaging
Order No.	1640320000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190277901	270°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		
Type	BL 3.50/18/270F SN OR BX	Version	Product data	Packaging
Order No.	1640090000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190277642	270°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		

**OMNIMATE Signal - series BL/SL 3.50
SLD 3.50V/36/90G 3.2SN OR BX**

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Mating connector (fully pluggable)
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	BL 3.50/18/90 SN OR BX	Version	Product data	Packaging
Order No.	1638710000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190276263	90°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	24 pc(s).			
Type	BL 3.50/18/90 SN BK BX	Version	Product data	Packaging
Order No.	1638940000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190276485	90°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	24 pc(s).			

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	BL 3.50/18/270 SN OR BX	Version	Product data	Packaging
Order No.	1639630000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190277185	270°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		
Type	BL 3.50/18/270 SN BK BX	Version	Product data	Packaging
Order No.	1639860000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190277413	270°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	20 pc(s).	Box		

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SLD 3.50V/36/90G 3.2SN OR BX**

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Mating connector (fully pluggable)**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	BL 3.50/18/180 SN OR BX	Version	Product data	Packaging
Order No.	1620300000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190154172	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		
Type	BL 3.50/18/180 SN GY BX	Version	Product data	Packaging
Order No.	1620610000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190159795	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	20 pc(s).	Box		
Type	BL 3.50/18/180 SN BK BX	Version	Product data	Packaging
Order No.	1620380000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190155766	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		
Type	BL 3.50/18/180 SN DKGN ...	Version	Product data	Packaging
Order No.	1620690000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190160630	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		

BLF 3.50/180

Connect efficiently - in a small space: female header with spring connection (PUSH IN) as a plug-in connection level; used together with male headers in 3.50 mm pitch.

General ordering data

Type	BLF 3.50/18/180 SN OR BX	Version	Product data	Packaging
Order No.	2459210000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 18,	IEC: 320 V / 17.5 A / 0.14 - 1.5 mm ²	Box
GTIN (EAN)	4050118474565	180°, PUSH IN, Spring connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / AWG 26 - AWG 16	
Qty.	24 pc(s).	Box		

OMNIMATE Signal - series BL/SL 3.50 SLD 3.50V/36/90G 3.2SN OR 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.

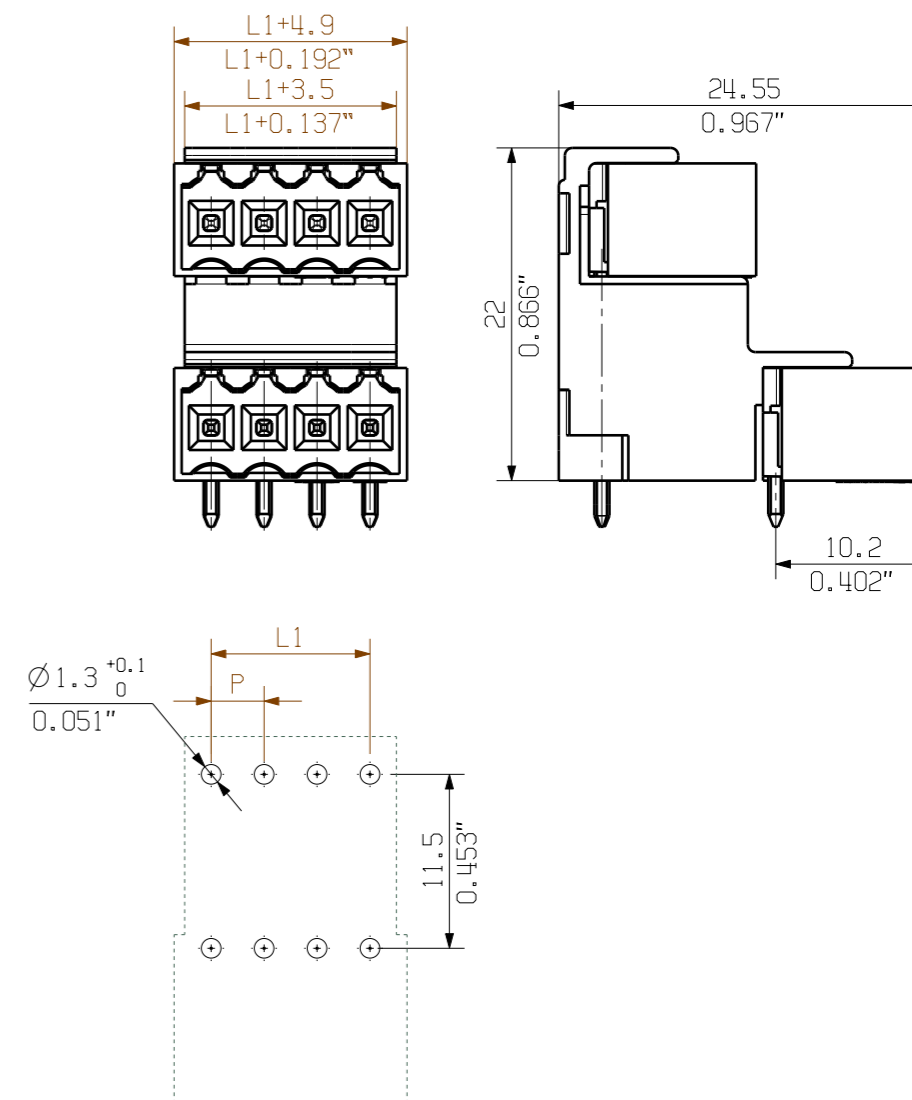
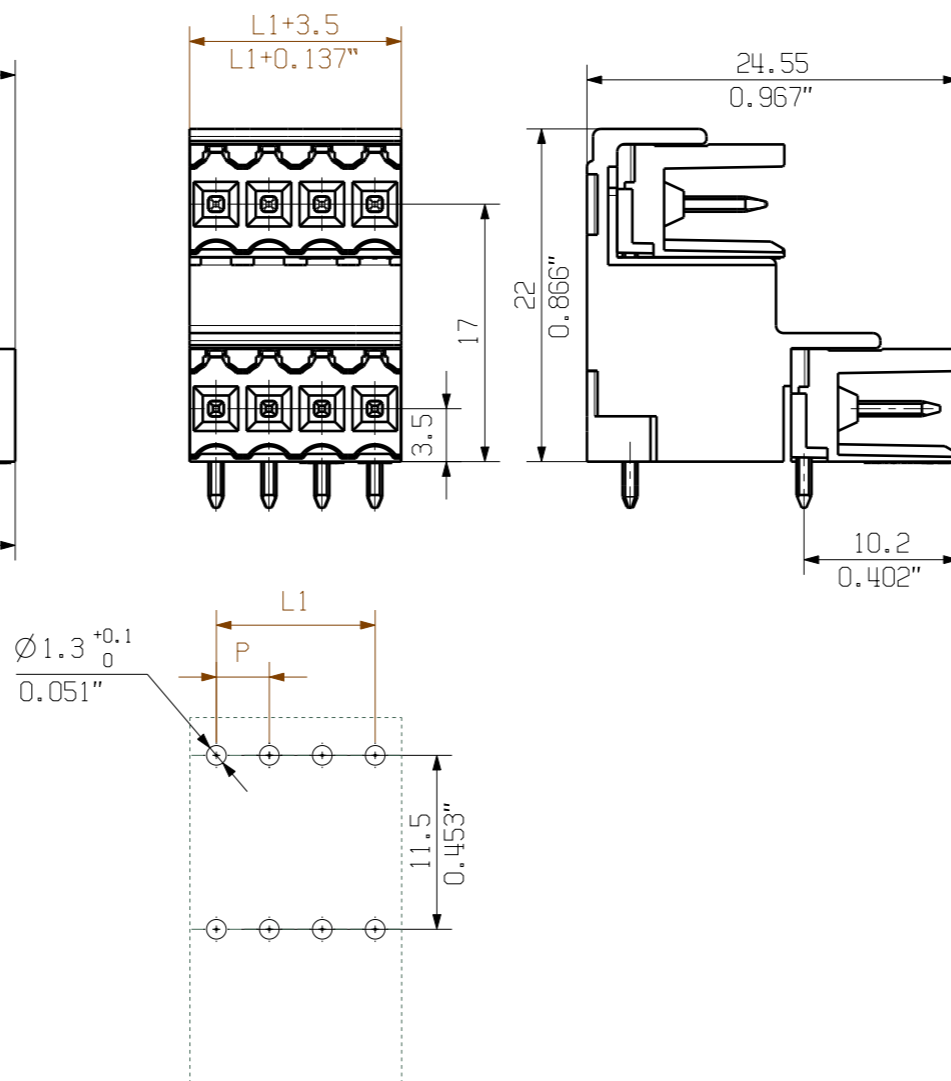
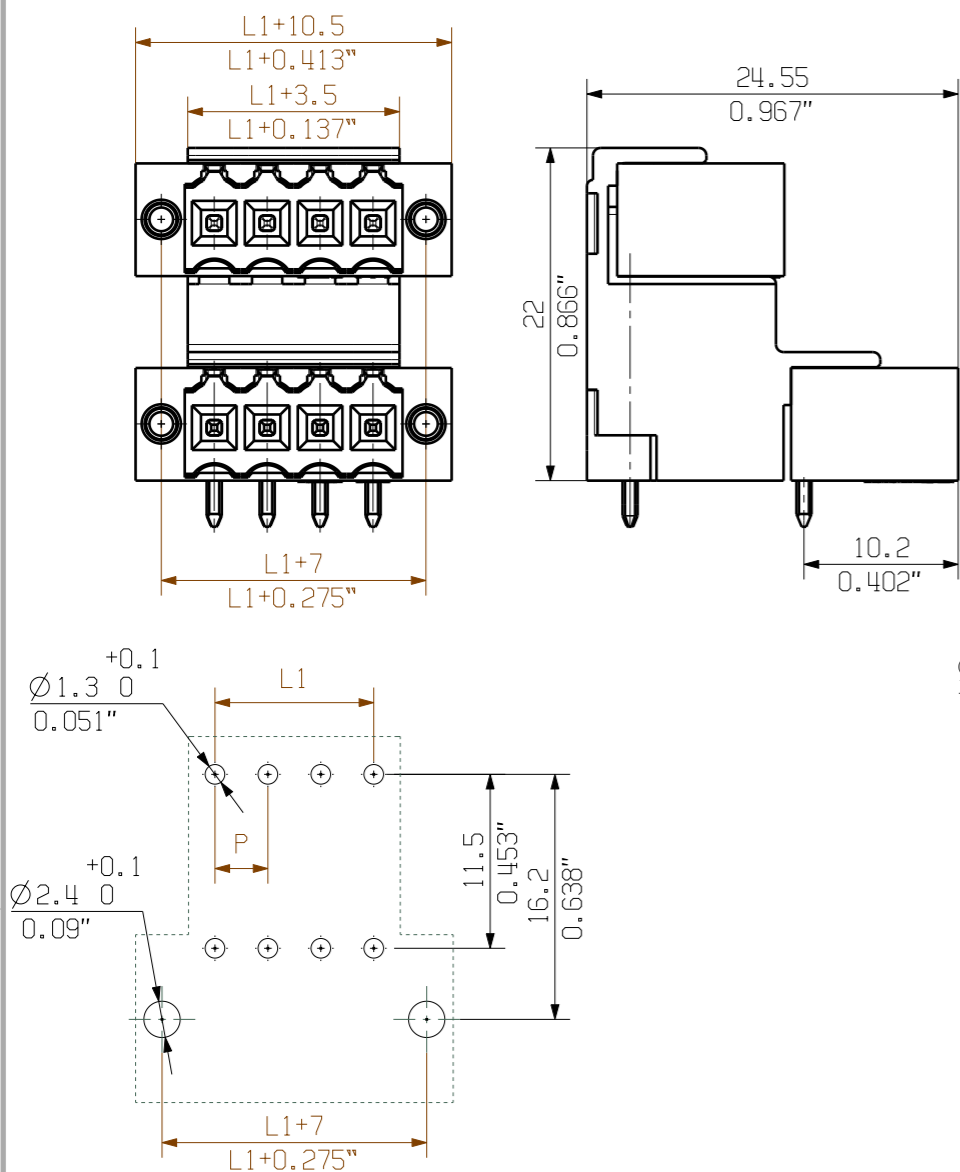
General ordering data

Type	BL SL 3.5 KO SW	Version	Product data	Packaging
Order No.	1610100000	PCB plug-in connector, Accessories, Coding element, black, Number		Box
GTIN (EAN)	4008190187637	of poles: 1		
Qty.	100 pc(s).			
Type	BL SL 3.5 KO OR	Version	Product data	Packaging
Order No.	1693430000	PCB plug-in connector, Accessories, Coding element, orange, Number		Box
GTIN (EAN)	4008190867447	of poles: 1		
Qty.	100 pc(s).			

AUSFUEHRUNG/TYP: SLD 3.50V/./90F..

AUSFUEHRUNG/TYP SLD 3.50V/./90..

AUSFUEHRUNG/TYP: SLD 3.50V/./90G..



46	80,50	77,00	81,90	87,50
42	73,50	70,00	74,90	80,50
38	66,50	63,00	67,90	73,50
34	59,50	56,00	60,90	66,50
30	52,50	49,00	53,90	59,50
26	45,50	42,00	46,90	52,50
22	38,50	35,00	39,90	45,50
18	31,50	28,00	32,90	38,50
14	24,50	21,00	25,90	31,50
10	17,50	14,00	18,90	24,50
6	10,50	7,00	11,90	17,50
n	L	L1	L2	L3

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 to VDE 0110. The current-carrying capacity and pitch tolerance is to be determined according to IEC 60326 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, thermal and corrosive stress will be satisfied.

General tolerance: DIN ISO 2768-mK 	99080/5		Cat.no.: .	
	20.10.17 HELIS_MA		06	
	Modification			
	Drawn	Date	Name	3 21372 (15) Drawing no. Issue no.
	Responsible	Checked	Approved	Sheet 00 of 00 sheets
Scale: 2:1	13.08.2004	01.11.2017	HECKERT_M	SLD 3.50V/./90... STIFTLISTE MALE HEADER
Supersedes: .				

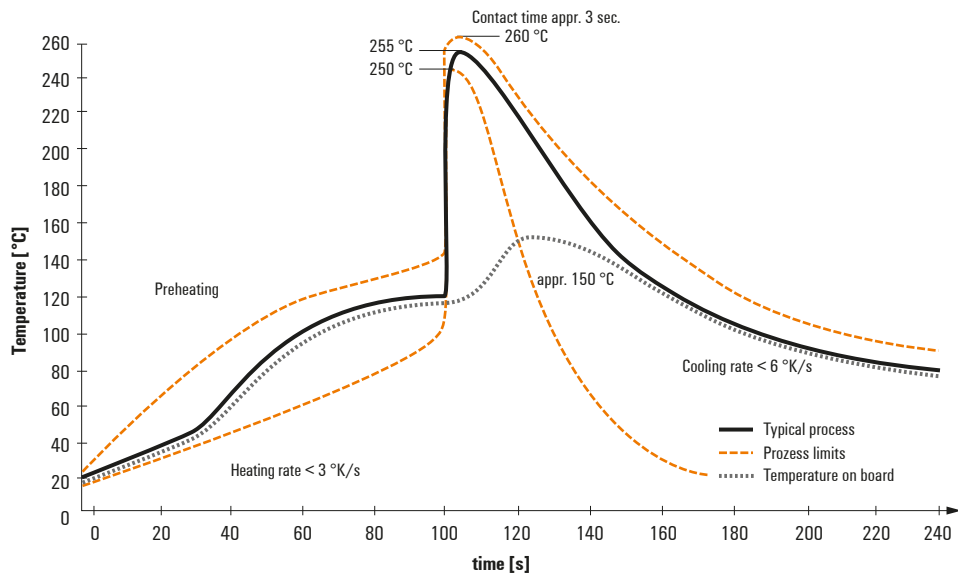
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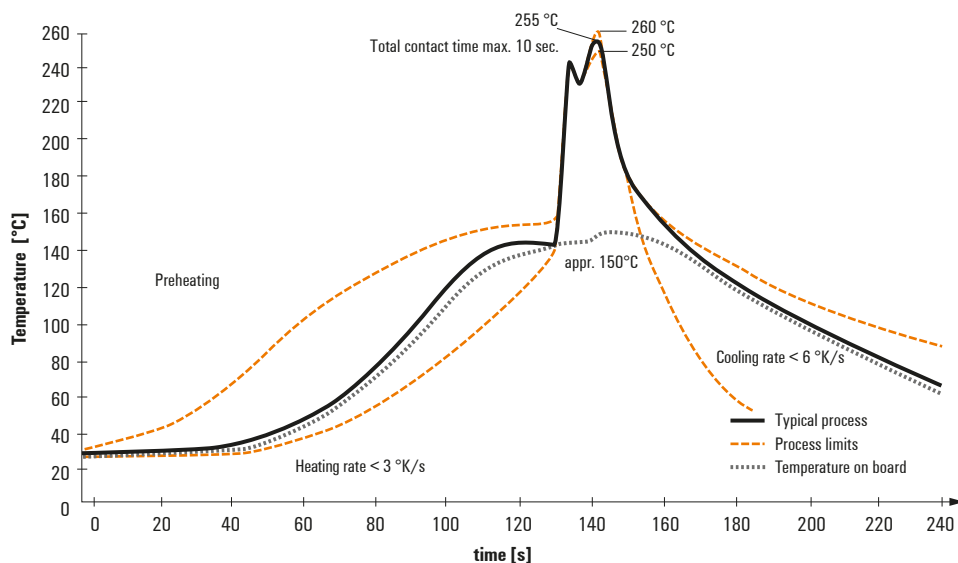
Recommended wave soldering profiles

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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.