

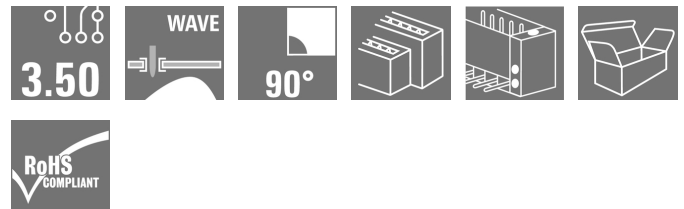
**OMNIMATE Signal - series BL/SL 3.50
SLD 3.50 V/44/90F 3.2 SN OR BX**

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany
 Fon: +49 5231 14-0
 Fax: +49 5231 14-292083
 www.weidmueller.com

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 3.50 V/44/90F 3.2 SN OR BX
Order No.	1642470000
Version	PCB plug-in connector, male header, Flange, THT solder connection, 3.50 mm, Number of poles: 44, 90°, Solder pin length (l): 3.2 mm, tinned, orange, Box
GTIN (EAN)	4008 190280994
Qty.	10 pc(s).
Product data	IEC: 200 V / 10.5 A UL: 300 V / 8 A
Packaging	Box

Creation date May 3, 2020 5:06:17 PM CEST

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Technical data
Dimensions and weights

Width	84 mm	Width (inches)	3.307 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	28.9 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	44		
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	73.5 mm		
L1 in inches	2.894 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		
Tightening torque	Torque type	PCB, Screw flange	
	Usage information	Tightening torque	min. 0.1 Nm max. 0.15 Nm
		Recommended screw	Part number PTSC KA 2.2X4.5 WN1412

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

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Technical data
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

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	1 mm
VPE width	1 mm	VPE height	1 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

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Technical data**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.

Approvals

Approvals



ROHS

Conform

Downloads

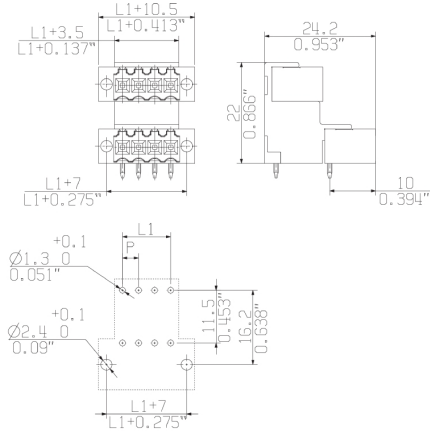
Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Brochure/Catalogue	FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE CAT 2 PORTFOLIOGUIDE EN FL BUILDING SAFETY EN FL APPL LED LIGHTING EN FLIndustr.CONTROLS EN FL MACHINE SAFETY EN FL HEATING ELECTR EN FL APPL INVERTER EN FL_BASE_STATION EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN
Engineering Data	SLD.zip STEP

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Drawings

Dimensional drawing



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Mating connector (conditionally 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 3.50/22/90 SN OR BX	Version	Product data	Packaging
Order No.	1638750000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 22,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190276294	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 3.50/22/90 SN BK BX	Version	Product data	Packaging
Order No.	1638980000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 22,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190276522	90°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	20 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 3.50/22/270 SN BK BX	Version	Product data	Packaging
Order No.	1639900000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 22,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190277451	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		
Type	BL 3.50/22/270 SN OR BX	Version	Product data	Packaging
Order No.	1639670000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 22,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190277222	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		

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Mating connector (conditionally 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 3.50/22/180 SN BK BX	Version	Product data	Packaging
Order No.	1620420000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 22,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190156022	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 3.50/22/180 SN DKGN ...	Version	Product data	Packaging
Order No.	1620730000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 22,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190161415	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 3.50/22/180 SN OR BX	Version	Product data	Packaging
Order No.	1620340000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 22,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190154783	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 3.50/22/180 SN GY BX	Version	Product data	Packaging
Order No.	1620650000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 22,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190160357	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		

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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	BL 3.50/22/180LH SN BK ...	Version	Product data	Packaging
Order No.	1688080000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 22,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190853631	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 3.50/22/180LH SN OR ...	Version	Product data	Packaging
Order No.	1687850000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 22,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190853402	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	18 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 3.50/22/180F SN BK BX	Version	Product data	Packaging
Order No.	1620890000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 22,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190164874	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	18 pc(s).	Box		
Type	BL 3.50/22/180F SN DKGK ...	Version	Product data	Packaging
Order No.	1621330000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 22,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190171230	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 3.50/22/180F SN GY BX	Version	Product data	Packaging
Order No.	1621120000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 22,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190168810	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 3.50/22/180F SN OR BX	Version	Product data	Packaging
Order No.	1620810000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 22,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190164195	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	18 pc(s).	Box		

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Mating connector (fully pluggable)
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 3.50/22/90F SN BK BX	Version	Product data	Packaging
Order No.	1639440000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 22,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190276980	90°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	20 pc(s).			
Type	BL 3.50/22/90F SN OR BX	Version	Product data	Packaging
Order No.	1639210000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 22,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190276751	90°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	18 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 3.50/22/270F SN BK BX	Version	Product data	Packaging
Order No.	1640360000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 22,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190277949	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		
Type	BL 3.50/22/270F SN OR BX	Version	Product data	Packaging
Order No.	1640130000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 22,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190277680	270°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	18 pc(s).	Box		

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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).			

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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

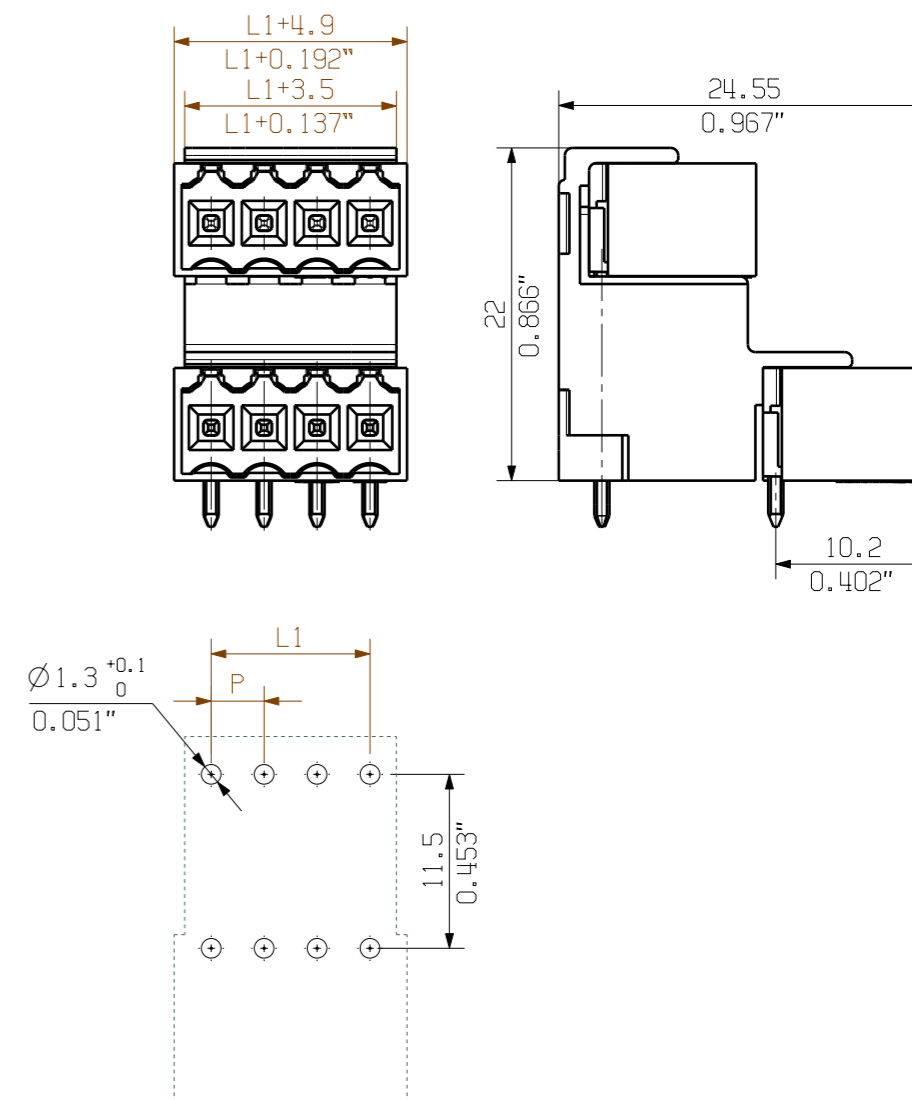
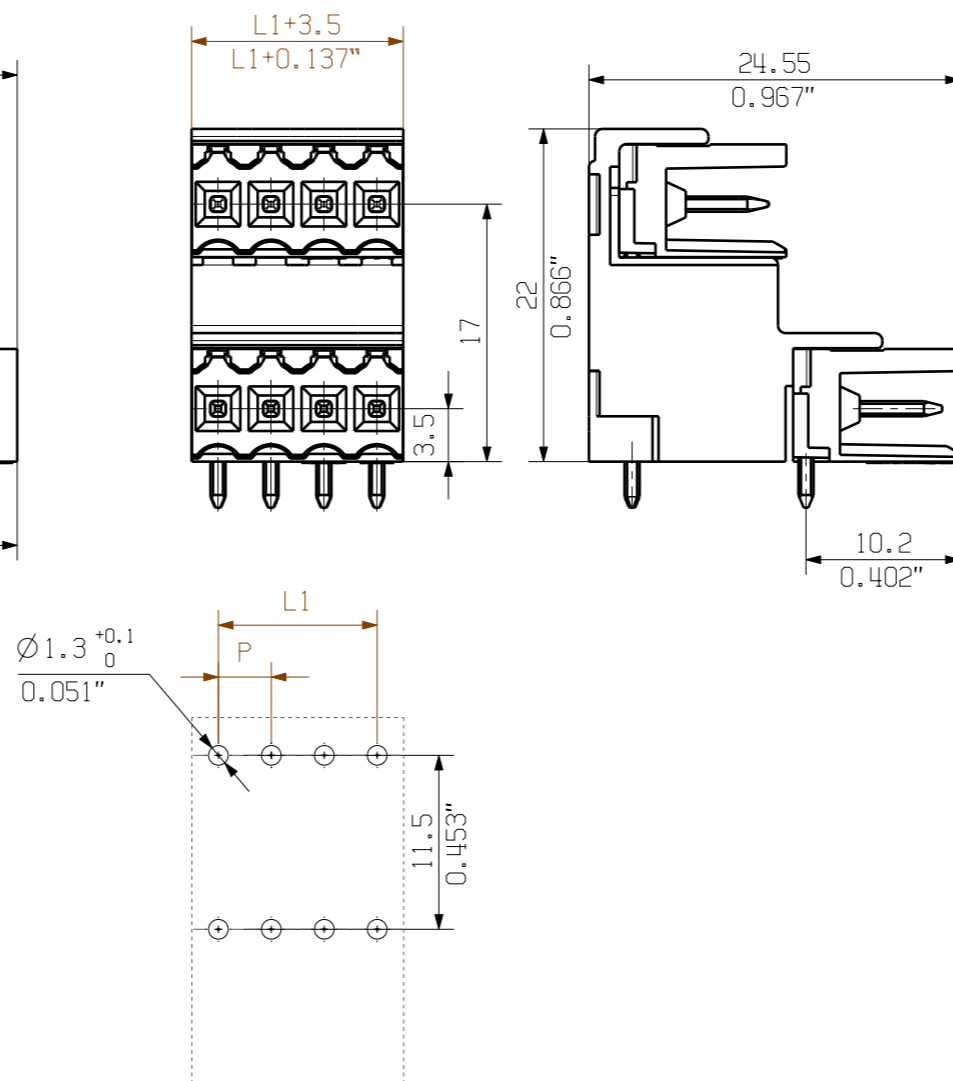
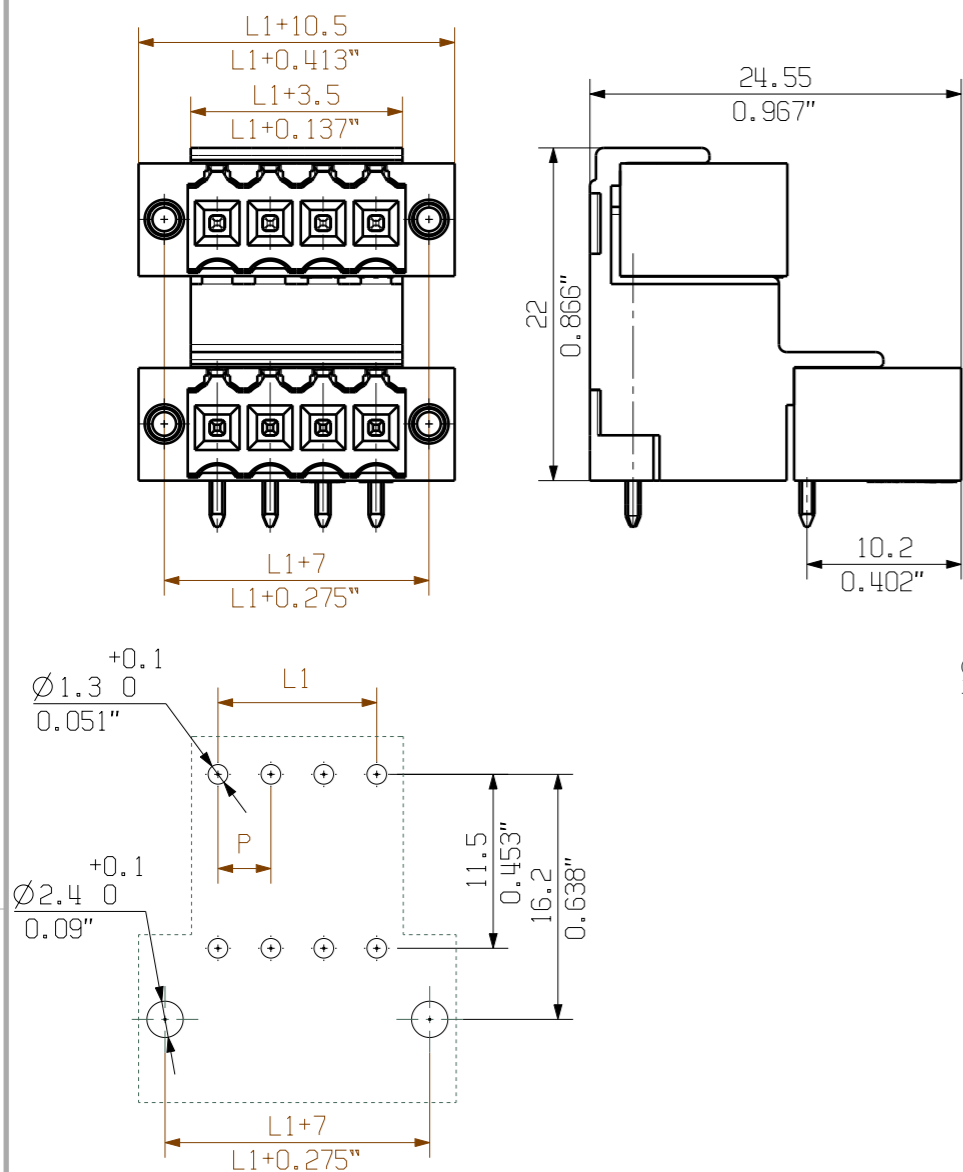
General ordering data

Type	PTSC KA 2.2X4.5 WN1412	Version	Product data
Order No.	1610740000	PCB plug-in connector, Accessories, Mounting screw, Number of	
GTIN (EAN)	4008190039523	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
20.10.17 HELIS_MA 06

RoHS COMPLIANT

Modification

Date Name

Drawn 13.08.2004 LANG_T

Responsible LANG_T

Checked 01.11.2017 HELIS_MA

Approved HECKERT_M

Cat.no.: .

Weidmüller

3 21372 15

Drawing no. Issue no.

Sheet 00 of 00 sheets

SLD 3.50V/./90...
STIFTLISTE
MALE HEADER

Scale: 2:1

Supersedes: .

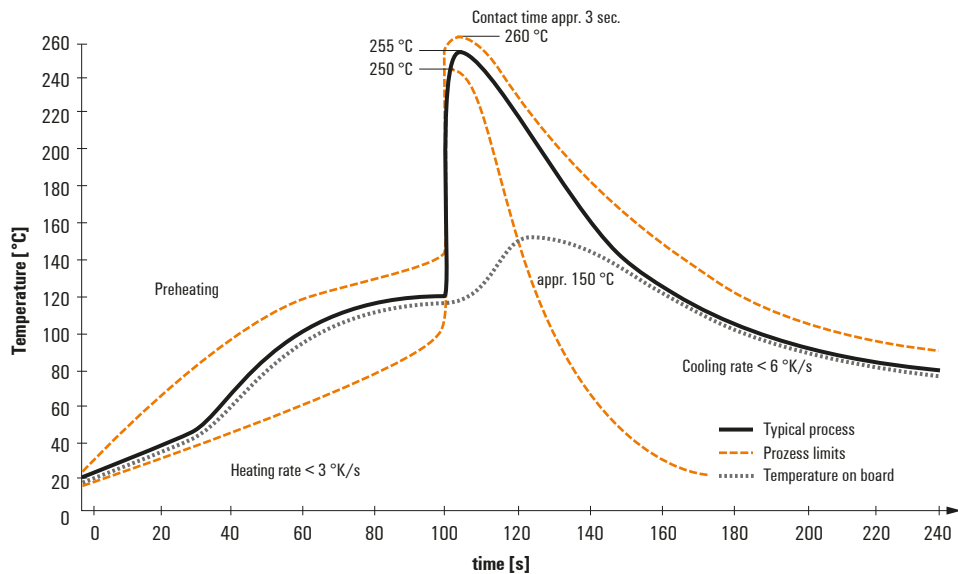
Product file: SLD 3.50V

7302

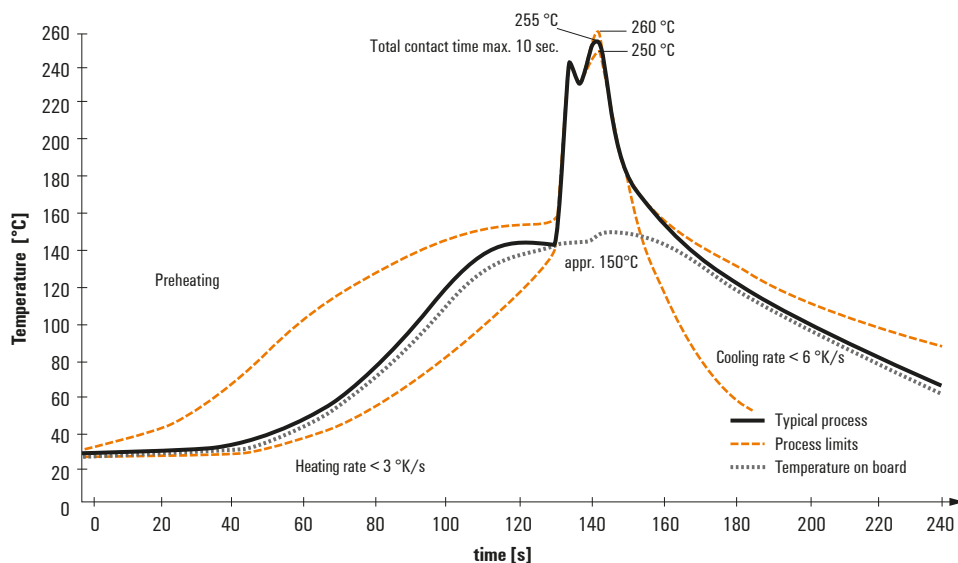
Recommended wave soldering profiles

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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.