OMNIMATE Signal - series BL/SL 3.50
BLF 3.50/14/180F SN BK BX

Weidmüller Interface GmbH & Co. KG
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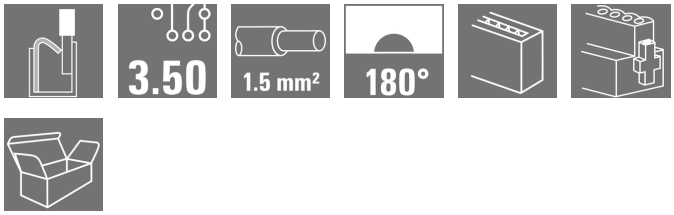

Connect efficiently - in a small space: female header with spring connection (PUSH IN) as a plug-in connection level; used together with male headers in 3.50 mm pitch.

General ordering data

Type	BLF 3.50/14/180F SN BK BX
Order No.	2537950000
Version	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 14, 180°, PUSH IN, Spring connection, Clamping range, max. : 1.5 mm², Box
GTIN (EAN)	4050118549706
Qty.	30 pc(s).
Product data	IEC: 320 V / 17.5 A / 0.14 - 1.5 mm² UL: 300 V / AWG 26 - AWG 16
Packaging	Box

Creation date May 2, 2020 6:37:33 AM CEST

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Technical data

Dimensions and weights

Width	56 mm	Width (inches)	2.205 inch
Height	9 mm	Height (inches)	0.354 inch
Depth	22.7 mm	Depth (inches)	0.894 inch
Net weight	333 g		

System Parameters

Product family	OMNIMATE Signal - series BL/SL 3.50	
Type of connection	Field connection	
Wire connection method	PUSH IN, Spring connection	
Pitch in mm (P)	3.5 mm	
Pitch in inches (P)	0.138 inch	
Conductor outlet direction	180°	
Number of poles	14	
L1 in mm	45.5 mm	
L1 in inches	1.791 inch	
Number of rows	1	
Pin series quantity	1	
Rated cross-section	1.5 mm²	
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch	
Touch-safe protection acc. to DIN VDE 0470	IP 20	
Volume resistance	≤ 5mΩ	
Can be coded	Yes	
Stripping length	8 mm	
Stripping length tolerance	min.	0 mm
	max.	1 mm
Tightening torque for screw flange, min.	0.15 Nm	
Tightening torque for screw flange, max.	0.2 Nm	
Screwdriver blade	0.4 x 2.5	
Screwdriver blade standard	DIN 5264-A	
Plugging cycles	25	
Plugging force/pole, max.	6 N	
Pulling force/pole, max.	6 N	

Material data

Insulating material	PA GF	Colour	black
Colour of operational elements	orange	Material of operational elements	PA 66/6
Colour chart (similar)	RAL 9011	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 400, ≤ 600	Insulation strength	10^6 Ω
UL 94 flammability rating	V-0	GWFI	960 °C
Contact material	Copper alloy	Contact surface	tinned
Storage temperature, min.	-25 °C	Storage temperature, max.	50 °C
Max. relative humidity during storage	70 %	Operating temperature, min.	-50 °C
Operating temperature, max.	120 °C	Temperature range, installation, min.	-30 °C
Temperature range, installation, max.	100 °C		

Conductors suitable for connection

Clamping range, min.	0.14 mm²
Clamping range, max.	1.5 mm²
Wire connection cross section AWG, min.	AWG 26

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Wire connection cross section AWG, max.	AWG 16
Solid, min. H05(07) V-U	0.14 mm²
Solid, max. H05(07) V-U	1.5 mm²
Flexible, min. H05(07) V-K	0.14 mm²
Flexible, max. H05(07) V-K	1.5 mm²
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.25 mm²
w. plastic collar ferrule, DIN 46228 pt 4, max.	1 mm²
w. wire end ferrule, DIN 46228 pt 1, min.	0.25 mm²
w. wire end ferrule, DIN 46228 pt 1, max.	1 mm²
Plug gauge in accordance with EN 60999 a x b; ø	2.4 mm x 1.5 mm

Clampable conductor	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.25 mm²	
	wire end ferrule	Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H0,25/12 HBL	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.34 mm²	
	wire end ferrule	Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H0,34/12 TK	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.5 mm²	
	wire end ferrule	Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H0,5/14 OR	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.75 mm²	
	wire end ferrule	Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H0,75/14T HBL	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1 mm²	
	wire end ferrule	Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H1,0/14 GE	

Reference text	The outside diameter of the plastic collar should not be larger than the pitch (P), Length of ferrules is to be chosen depending on the product and the rated voltage.
Max. clamping range	1.5 mm²

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	17.5 A
Rated current, max. number of poles (Tu=20°C)	14.7 A	Rated current, min. number of poles (Tu=40°C)	17.1 A
Rated current, max. number of poles (Tu=40°C)	13.1 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	1 x 1s with 120 A

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Technical data

Rated data acc. to CSA

Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group C / CSA)	50 V
Rated voltage (Use group D / CSA)	300 V	Rated current (Use group B / CSA)	10 A
Rated current (Use group D / CSA)	10 A	Wire cross-section, AWG, min.	AWG 26
Wire cross-section, AWG, max.	AWG 16		

Rated data acc. to UL 1059

Institute (cURus)		Certificate No. (cURus)	E60693
Rated voltage (Use group B / UL 1059)	300 V	Rated voltage (Use group C / UL 1059)	50 V
Rated voltage (Use group D / UL 1059)	300 V	Rated current (Use group D / UL 1059)	10 A
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 16
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	348 mm
VPE width	135 mm	VPE height	30 mm

Classifications

ETIM 6.0	EC002638	ETIM 7.0	EC002638
eClass 9.0	27-44-03-09	eClass 9.1	27-44-03-09
eClass 10.0	27-44-03-09		

Notes

Notes	• Additional colours on request • Gold-plated contact surfaces on request • Rated current related to rated cross-section & min. No. of poles. • Wire end ferrule without plastic collar to DIN 46228/1 • Wire end ferrule with plastic collar to DIN 46228/4 • 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.

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Technical data

Approvals

Approvals	

Downloads

Engineering Data	STEP
White paper PUSH IN wire connection	Download Whitepaper

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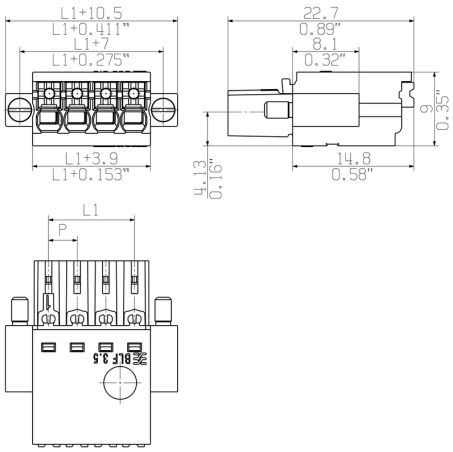
Drawings



Product benefits

Solid PUSH IN contact
Safe and durable

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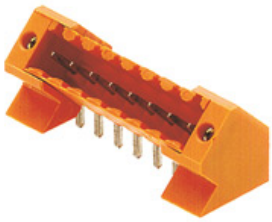
Mating connector (fully pluggable)

SL 3.50/135F



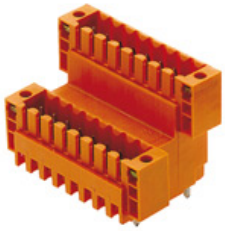
Pin headers for wave soldering in 3.50 mm pitch

- Plugging direction is parallel (90°), straight 180° or angled (135°) to the PCB
- Housing variant: screw flange (F)
- Packed in a cardboard box (BX)
- Pin header can be coded

General ordering data

Type	SL 3.50/14/135F 3.2SN O ...	Version	Product data	Packaging
Order No.	1643450000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: 320 V / 15 A	Box
GTIN (EAN)	4008190282219	3.50 mm, Number of poles: 14, 135°, Solder pin length (l): 3.2 mm,	UL: 300 V / 10 A	
Qty.	30 pc(s).	tinned, orange, Box		

SLD 3.50V/180F



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/28/180F 3.2 ...	Version	Product data	Packaging
Order No.	1641300000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: 200 V / 10.5 A	Box
GTIN (EAN)	4008190279707	3.50 mm, Number of poles: 28, 180°, Solder pin length (l): 3.2 mm,	UL: 300 V / 8 A	
Qty.	10 pc(s).	tinned, orange, Box		

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Mating connector (fully pluggable)

SL-THR 3.5/135F

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 3.50/14/135F 3.2 ...	Version	Product data	Packaging
Order No.	1003640000	PCB plug-in connector, male header, Flange, THT/THR solder	IEC: 320 V / 15 A	Box
GTIN (EAN)	4032248700264	connection, 3.50 mm, Number of poles: 14, 135°, Solder pin length	UL: 300 V / 10 A	
Qty.	30 pc(s).	(l): 3.2 mm, tinned, black, Box		

SL-SMT 3.5/180F Box

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 3.50/14/180F 1.5 ...	Version	Product data	Packaging
Order No.	1761082001	PCB plug-in connector, male header, Flange, THT/THR solder	IEC: 320 V / 15 A	Box
GTIN (EAN)	4032248131655	connection, 3.50 mm, Number of poles: 14, 180°, Solder pin length	UL: 300 V / 10 A	
Qty.	50 pc(s).	(l): 1.5 mm, tinned, black, Box		

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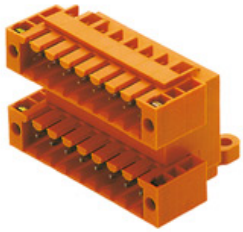
Mating connector (fully pluggable)

Type	SL-SMT 3.50/14/180F 3.2 ...	Version	Product data	Packaging
Order No.	1842890000	PCB plug-in connector, male header, Flange, THT/THR solder connection, 3.50 mm, Number of poles: 14, 180°, Solder pin length (l): 3.2 mm, tinned, black, Box	IEC: 320 V / 15 A UL: 300 V / 10 A	Box
GTIN (EAN)	4032248354351			
Qty.	30 pc(s).			

SLD 3.50/90F



Two-tier pin header for wave soldering in 3.50 mm pitch. The connector is available in open, closed and flange versions. The male connectors provide space for labelling and can be coded. Packed in a cardboard box.

General ordering data

Type	SLD 3.50/28/90F 3.2SN O ...	Version	Product data	Packaging
Order No.	1633930000	PCB plug-in connector, male header, Flange, THT solder connection, 3.50 mm, Number of poles: 28, 90°, Solder pin length (l): 3.2 mm, tinned, orange, Box	IEC: 200 V / 10.5 A UL: 300 V / 8 A	Box
GTIN (EAN)	4008190258382			
Qty.	10 pc(s).			

SLD 3.50V/90F

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/28/90F 3.2 S ...	Version	Product data	Packaging
Order No.	1642430000	PCB plug-in connector, male header, Flange, THT solder connection, 3.50 mm, Number of poles: 28, 90°, Solder pin length (l): 3.2 mm, tinned, orange, Box	IEC: 200 V / 10.5 A UL: 300 V / 8 A	Box
GTIN (EAN)	4008190280956			
Qty.	10 pc(s).			

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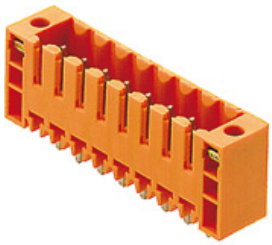
Mating connector (fully pluggable)

SL 3.50/180F



Pin headers for wave soldering in 3.50 mm pitch

- Plugging direction is parallel (90°), straight 180° or angled (135°) to the PCB
- Housing variant: screw flange (F)
- Packed in a cardboard box (BX)
- Pin header can be coded

General ordering data

Type	SL 3.50/14/180F 3.2SN O ...	Version	Product data	Packaging
Order No.	1607620000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: 320 V / 17 A	Box
GTIN (EAN)	4008190055196	3.50 mm, Number of poles: 14, 180°, Solder pin length (l): 3.2 mm,	UL: 300 V / 10 A	
Qty.	50 pc(s).	tinned, orange, Box		

SL-SMT 3.5/90F Box

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 3.50/14/90F 3.2S ...	Version	Product data	Packaging
Order No.	1842200000	PCB plug-in connector, male header, Flange, THT/THR solder	IEC: 320 V / 15 A	Box
GTIN (EAN)	4032248353552	connection, 3.50 mm, Number of poles: 14, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	30 pc(s).	3.2 mm, tinned, black, Box		

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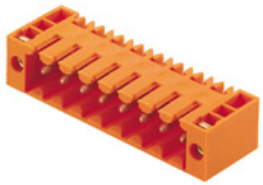
Mating connector (fully pluggable)

SL 3.50/90F



Pin headers for wave soldering in 3.50 mm pitch

- Plugging direction is parallel (90°), straight 180° or angled (135°) to the PCB
- Housing variant: screw flange (F)
- Packed in a cardboard box (BX)
- Pin header can be coded

General ordering data

Type	SL 3.50/14/90F 3.2SN OR ...	Version	Product data	Packaging
Order No.	1607160000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: / 17 A	Box
GTIN (EAN)	4008190003340	3.50 mm, Number of poles: 14, 90°, Solder pin length (l): 3.2 mm,	UL: 300 V / 10 A	
Qty.	50 pc(s).	tinned, orange, Box		