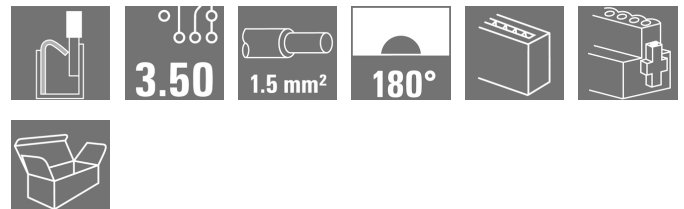


OMNIMATE Signal - series BL/SL 3.50 BLF 3.50/16/180F SN OR BX

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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 3.50/16/180F SN OR BX
Order No.	2459530000
Version	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 16, 180°, PUSH IN, Spring connection, Clamping range, max. : 1.5 mm², Box
GTIN (EAN)	4050118474947
Qty.	24 pc(s).
Product data	IEC: 320 V / 17.5 A / 0.14 - 1.5 mm² UL: 300 V / AWG 26 - AWG 16
Packaging	Box

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BLF 3.50/16/180F SN OR BX

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Technical data
Dimensions and weights

Width	63 mm	Width (inches)	2.48 inch
Height	9 mm	Height (inches)	0.354 inch
Depth	22.7 mm	Depth (inches)	0.894 inch
Net weight	11.4 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	16		
L1 in mm	52.5 mm		
L1 in inches	2.067 inch		
Number of rows	1		
Pin series quantity	1		
Rated cross-section	1.5 mm ²		
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	orange
Colour of operational elements	black	Material of operational elements	PA 66/6
Colour chart (similar)	RAL 2000	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 mm ²
Clamping range, max.	1.5 mm ²
Wire connection cross section AWG, min.	AWG 26

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Technical data

Wire connection cross section AWG, max.	AWG 16		
Solid, min. H05(07) V-U	0.14 mm ²		
Solid, max. H05(07) V-U	1.5 mm ²		
Flexible, min. H05(07) V-K	0.14 mm ²		
Flexible, max. H05(07) V-K	1.5 mm ²		
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.25 mm ²		
w. plastic collar ferrule, DIN 46228 pt 4, max.	1 mm ²		
w. wire end ferrule, DIN 46228 pt 1, min.	0.25 mm ²		
w. wire end ferrule, DIN 46228 pt 1, max.	1 mm ²		
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 mm ²
	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 mm ²
	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 mm ²
	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 mm ²	
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 mm ²	
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 mm ²		

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	0 m
VPE width	0 m	VPE height	0 m

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	<ul style="list-style-type: none"> • 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.

Data sheet**OMNIMATE Signal - series BL/SL 3.50
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Technical data**Approvals**

Approvals

**Downloads**

Engineering Data

[STEP](#)

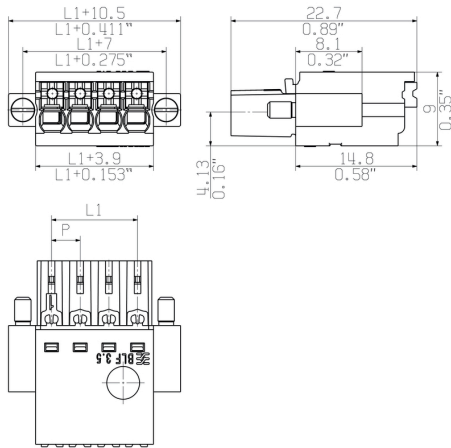
White paper PUSH IN wire connection

[Download Whitepaper](#)

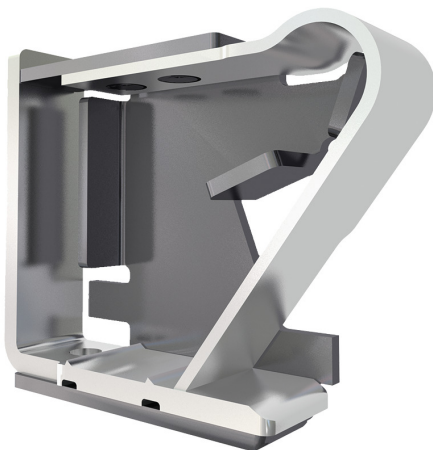
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Drawings



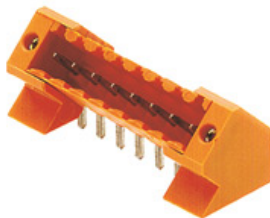
Product benefits



Solid PUSH IN contact
Safe and durable

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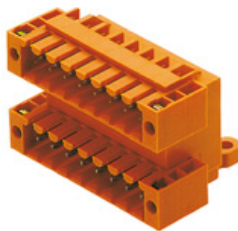
Mating connector (fully pluggable)
SL 3.50/135F


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 3.50/16/135F 3.2SN O ...	Version	Product data	Packaging
Order No.	1643470000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: 320 V / 15 A	Box
GTIN (EAN)	4008190282233	3.50 mm, Number of poles: 16, 135°, Solder pin length (l): 3.2 mm,	UL: 300 V / 10 A	
Qty.	24 pc(s).	tinned, orange, Box		

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 3.50/32/90F 3.2SN O ...	Version	Product data	Packaging
Order No.	1633950000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: 200 V / 10.5 A	Box
GTIN (EAN)	4008190258405	3.50 mm, Number of poles: 32, 90°, Solder pin length (l): 3.2 mm,	UL: 300 V / 8 A	
Qty.	10 pc(s).	tinned, orange, Box		

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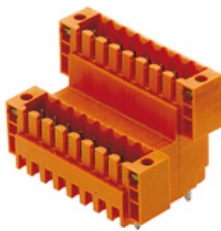
Mating connector (fully pluggable)
SL-THR 3.5/135F


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 3.50/16/135F 3.2 ...	Version	Product data	Packaging
Order No.	1003660000	PCB plug-in connector, male header, Flange, THT/THR solder connection, 3.50 mm, Number of poles: 16, 135°, Solder pin length (l): 3.2 mm, tinned, black, Box	IEC: 320 V / 15 A UL: 300 V / 10 A	Box
GTIN (EAN)	4032248700288			
Qty.	24 pc(s).			

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/32/180F 3.2 ...	Version	Product data	Packaging
Order No.	1641310000	PCB plug-in connector, male header, Flange, THT solder connection, 3.50 mm, Number of poles: 32, 180°, Solder pin length (l): 3.2 mm, tinned, orange, Box	IEC: 200 V / 10.5 A UL: 300 V / 8 A	Box
GTIN (EAN)	4008190279714			
Qty.	10 pc(s).			

**OMNIMATE Signal - series BL/SL 3.50
BLF 3.50/16/180F SN OR BX**

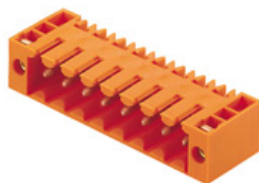
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Mating connector (fully pluggable)
SLD 3.50V/90F


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/32/90F 3.2 S ...	Version	Product data	Packaging
Order No.	1642440000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: 200 V / 10.5 A	Box
GTIN (EAN)	4008190280963	3.50 mm, Number of poles: 32, 90°, Solder pin length (l): 3.2 mm,	UL: 300 V / 8 A	
Qty.	10 pc(s).	tinned, orange, Box		

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 3.50/16/90F 3.2SN OR ...	Version	Product data	Packaging
Order No.	1607180000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: / 17 A	Box
GTIN (EAN)	4008190004446	3.50 mm, Number of poles: 16, 90°, Solder pin length (l): 3.2 mm,	UL: 300 V / 10 A	
Qty.	50 pc(s).	tinned, orange, Box		

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Mating connector (fully pluggable)
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 3.50/16/90F 3.2S ...	Version	Product data	Packaging
Order No.	1842220000	PCB plug-in connector, male header, Flange, THT/THR solder connection, 3.50 mm, Number of poles: 16, 90°, Solder pin length (l): 3.2 mm, tinned, black, Box	IEC: 320 V / 15 A	Box
GTIN (EAN)	4032248353576		UL: 300 V / 10 A	
Qty.	24 pc(s).			

SL-SMT 3.5/180F Box


High-temperature-resistant male header, 3.50 mm pitch.

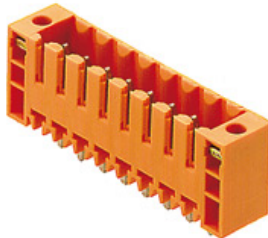
- **Plugging direction parallel (90°), straight 180° or angled (135°) to PCB**
- **Housing variants: closed side (G), screw flange (F), solder flange (LF) or snap-on solder flange (RF)**
- **Optimised for the SMT process**
- **Pin length 3.2 mm universal for all soldering methods**
- **Pin length 1.5 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 3.50/16/180F 3.2 ...	Version	Product data	Packaging
Order No.	1842910000	PCB plug-in connector, male header, Flange, THT/THR solder connection, 3.50 mm, Number of poles: 16, 180°, Solder pin length (l): 3.2 mm, tinned, black, Box	IEC: 320 V / 15 A	Box
GTIN (EAN)	4032248354375		UL: 300 V / 10 A	
Qty.	24 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 3.50/16/180F 3.2SN O ...	Version	Product data	Packaging
Order No.	1607640000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: 320 V / 17 A	Box
GTIN (EAN)	4008190034535	3.50 mm, Number of poles: 16, 180°, Solder pin length (l): 3.2 mm,	UL: 300 V / 10 A	
Qty.	50 pc(s).	tinned, orange, Box		