

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26 D-32758 Detmold

Germany

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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

Туре	BLF 3.50/13/180 SN BK BX	
Order No.	<u>2537830000</u>	
Version	PCB plug-in connector, female plug, 3.50 mm,	
	Number of poles: 13, 180°, PUSH IN, Spring	
	connection, Clamping range, max.: 1.5 mm², Box	
GTIN (EAN)	4050118560329	
Qty.	36 pc(s).	
Product data	IEC: 320 V / 17.5 A / 0.14 - 1.5 mm ²	
	UL: 300 V / AWG 26 - AWG 16	
Packaging	Box	

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Technical data

Dimensions and weights

Width	45.5 mm	Width (inches)	1.791 inch
Height	9 mm	Height (inches)	0.354 inch
Depth	22.7 mm	Depth (inches)	0.894 inch
Net weight	10.889 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	13	
L1 in mm	42 mm	
L1 in inches	1.654 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
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 mm ²
Clamping range, max.	1.5 mm ²
Wire connection cross section AWG, min.	AWG 26
Wire connection cross section AWG,	AWG 16

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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			
min.	1, 0.20 11111		
w. plastic collar ferrule, DIN 46228 pt	4, 1 mm²		
w. wire end ferrule, DIN 46228 pt 1, min.	0.25 mm ²		
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	Туре	fine-wired
		nominal	0.25 mm ²
	wire end ferrule	Stripping length	nominal 10 mm
	The state and	Recommended wire- end ferrule	H0,25/12 HBL
	Cross-section for conductor connection	Туре	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 be chosen depending on the product and		tch (P), Length of ferrule
	1.5 mm ²		

Rated data acc. to IEC

tested acc. to standard		Rated current, min. number of poles	
tested acc. to standard	IEC 60664-1, IEC 61984	(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)

Rated voltage (Use group B / UL 1059)	300 V
Rated voltage (Use group D / UL 1059)	300 V
Wire cross-section, AWG, min.	AWG 26
Reference to approval values	Specifications are
	maximum values, details -
	see approval certificate.

	E60693
Rated voltage (Use group C / UL 1059)	50 V
Rated current (Use group D / UL 1059)	10 A
Wire cross-section, AWG, max.	AWG 16

Packing

Packaging	Box	VPE length	350 mm
VPE width	135 mm	VPE height	30 mm

Type tests

Visual and dimensional test	Standard	IEC 60512-1-1:2002-02
	Test	dimensional inspection
	Evaluation	passed
	Standard	IEC 60512-1-2:2002-02
	Test	weight check
	Evaluation	passed
	Standard	IEC 61984:2001-10 section 6.2
	Test	visual examination
	Evaluation	passed
Test: Durability of markings	Standard	IEC 60068-2-70:1995-12 test Xb
	Test	mark of origin, type identification, pitch, type of material, date clock, approval marking UL, approval marking CSA, durability
	Evaluation	available
Test: Misengagement (Non-	Standard	IEC 60512-13-5:2006-02
nterchangeability)	Test	intentional plugging
	Evaluation	passed
	Test	180° turned without coding elements
	Evaluation	passed
	Test	180° turned with coding elements
	Evaluation	passed
	Test	visual examination
	Evaluation	passed



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Test: Clampable cross section	Standard	IEC 60999-1:1999-11 section 9.1, IEC 60947-1:2011-03 section 8.2.4.5.1
	Conductor type	Type of conductor solid 0.14 mm ² and conductor cross-section
		Type of conductor stranded 0.14 mm ² and conductor cross-section
		Type of conductor solid 1.5 mm ² and conductor cross-section
		Type of conductor stranded 1.5 mm ² and conductor cross-section
		Type of conductor AWG 26/1 and conductor cross-section
		Type of conductor AWG 26/19 and conductor cross-section
		Type of conductor AWG 16/1 and conductor cross-section
		Type of conductor AWG 16/19 and conductor cross-section
	Evaluation	passed
Test for damage to and accidental oosening of conductors	Standard	IEC 60999-1:1999-11 section 9.4 bzw. section 8.10
	Requirement	0.3 kg
	Conductor type	Type of conductor H05V-U0.5 and conductor cross- section
		Type of conductor H05V-K0.5 and conductor cross- section
	Evaluation	passed
	Requirement	0.4 kg
	Conductor type	Type of conductor H07V-U1.5 and conductor cross-section
		Type of conductor H07V-K1.5 and conductor cross-section
		Type of conductor AWG 16/1 and conductor cross-section
		Type of conductor AWG 16/19 and conductor cross-section
	Evaluation	passed
	Requirement	0.2 kg
	Conductor type	Type of conductor AWG 26/1 and conductor cross-section
		Type of conductor AWG 26/19 and conductor cross-section



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Technical data

Pull-out test	Standard	IEC 60999-1:1999-11 section 9.5
	Requirement	≥20 N
	Conductor type	Type of conductor H05V-U0.5 and conductor cross- section
		Type of conductor H05V-K0.5 and conductor cross- section
	Evaluation	passed
	Requirement	≥40 N
	Conductor type	Type of conductor H07V-U1.5 and conductor cross- section
		Type of conductor H07V-K1.5 and conductor cross-section
		Type of conductor AWG 16/1 and conductor cross-section
		Type of conductor AWG 16/19 and conductor cross-section
	Evaluation	passed
	Requirement	≥10 N
	Conductor type	Type of conductor AWG 26/1 and conductor cross-section
		Type of conductor AWG 26/19 and conductor cross-section
	Evaluation	passed

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.
- The test point can only be used as potential-pickup point.

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



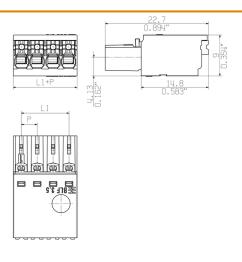
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Drawings



Product benefits



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Mating connector (fully pluggable)

SL 3.50/180G



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

Туре	SL 3.50/13/180G 3.2SN O	Version	Product data	Packaging
Order No.	1604580000	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17 A	Box
GTIN (EAN)	4008190185510	connection, 3.50 mm, Number of poles: 13, 180°, Solder pin length	UL: 300 V / 10 A	
Qty.	50 pc(s).	(I): 3.2 mm, tinned, orange, Box		

SL 3.50/90G



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

Туре	SL 3.50/13/90G 3.2SN OR	Version	Product data	Packaging
Order No.	<u>1605180000</u>	PCB plug-in connector, male header, closed side, THT solder	IEC: / 17 A	Box
GTIN (EAN)	4008190151119	connection, 3.50 mm, Number of poles: 13, 90°, Solder pin length (I)	: UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, orange, Box		



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Mating connector (fully pluggable)

SLD 3.50V/90G



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

Туре	SLD 3.50V/26/90G 3.2SN	Version	Product data	Packaging
Order No.	<u>1890630000</u>	PCB plug-in connector, male header, closed side, THT solder	IEC: 200 V / 10.5 A	Box
GTIN (EAN)	4032248499656	connection, 3.50 mm, Number of poles: 26, 90°, Solder pin length (I)	: UL: 300 V / 8 A	
Qty.	10 pc(s).	3.2 mm, tinned, orange, Box		

SL-SMT 3.5/180G Tape



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

Туре	SL-SMT 3.50/13/180G 3.2	Version	Product data	Packaging
Order No.	<u>1928240000</u>	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 15 A	Tape
GTIN (EAN)	4032248577446	connection, 3.50 mm, Number of poles: 13, 180°, Solder pin length	UL: 300 V / 10 A	
Qty.	230 pc(s).	(I): 3.2 mm, tinned, black, Tape		



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Mating connector (fully pluggable)

SL 3.50/180



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

Туре	SL 3.50/13/180 3.2SN OR	Version	Product data	Packaging
Order No.	<u>1604880000</u>	PCB plug-in connector, male header, open side, THT solder	IEC: 320 V / 17 A	Box
GTIN (EAN)	4008190123079	connection, 3.50 mm, Number of poles: 13, 180°, Solder pin length	UL: 300 V / 10 A	
Qty.	50 pc(s).	(I): 3.2 mm, tinned, orange, Box		

SL-SMT 3.5/180G 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

Туре	SL-SMT 3.50/13/180G 3.2	Version	Product data	Packaging
Order No.	1842420000	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 15 A	Box
GTIN (EAN)	4032248353774	connection, 3.50 mm, Number of poles: 13, 180°, Solder pin length	UL: 300 V / 10 A	
Qty.	50 pc(s).	(I): 3.2 mm, tinned, black, Box		
Туре	SL-SMT 3.50/13/180G 1.5	Version	Product data	Packaging
Type Order No.	SL-SMT 3.50/13/180G 1.5 1753092001	Version PCB plug-in connector, male header, closed side, THT/THR solder	Product data IEC: 320 V / 15 A	Packaging Box
	, ,			0 0



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Mating connector (fully pluggable)

SL-SMT 3.5/90G 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

Туре	SL-SMT 3.50/13/90G 1.5S	Version	Product data	Packaging
Order No.	<u>1761652001</u>	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 15 A	Box
GTIN (EAN)	4032248132249	connection, 3.50 mm, Number of poles: 13, 90°, Solder pin length (I):	UL: 300 V / 10 A	
Qty.	50 pc(s).	1.5 mm, tinned, black, Box		
Туре	CL CMT 2 F0 /12 /000 2 20		D 1	<u> </u>
Type	SL-SMT 3.50/13/90G 3.2S	Version	Product data	Packaging
Order No.	1841740000	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 15 A	Box
	, ,		IEC: 320 V / 15 A	0 0

SL 3.50/90



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

Туре	SL 3.50/13/90 3.2SN OR	Version	Product data	Packaging
Order No.	<u>1597320000</u>	PCB plug-in connector, male header, open side, THT solder	IEC: 320 V / 17 A	Box
GTIN (EAN)	4008190015305	connection, 3.50 mm, Number of poles: 13, 90°, Solder pin length (I)	: UL: 300 V / 10 A	
Qty.	50 pc(s).	3.2 mm, tinned, orange, Box		



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Mating connector (fully pluggable)

SLD 3.50/90G



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

Туре	SLD 3.50/26/90G 3.2SN O	Version	Product data	Packaging
Order No.	<u>1633690000</u>	PCB plug-in connector, male header, closed side, THT solder	IEC: 200 V / 10.5 A	Box
GTIN (EAN)	4008190258146	connection, 3.50 mm, Number of poles: 26, 90°, Solder pin length (I)	: UL: 300 V / 8 A	
Qty.	10 pc(s).	3.2 mm, tinned, orange, Box		

SLD 3.50V/180G



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.

Туре	SLD 3.50V/26/180G 3.2SN	Version	Product data	Packaging
Order No.	<u>1891240000</u>	PCB plug-in connector, male header, closed side, THT solder	IEC: 200 V / 10.5 A	Box
GTIN (EAN)	4032248500789	connection, 3.50 mm, Number of poles: 26, 180°, Solder pin length	UL: 300 V / 8 A	
Qty.	10 pc(s).	(I): 3.2 mm, tinned, orange, Box		