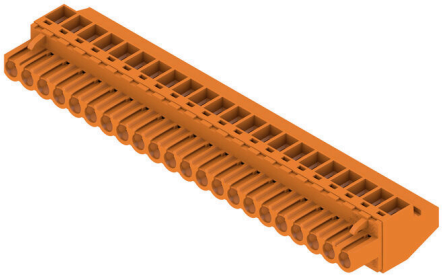
Data sheet

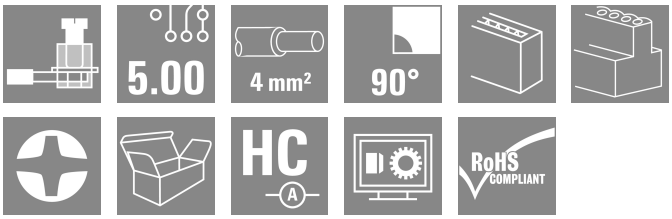
BLZP 5.00HC/22/90 SN OR BX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

Product image





Female plugs with clamping-yoke connection for connecting wires with a right-angle (90° or 270°) outlet direction. The female connectors provide space for labelling and can be coded. Fastened by means of a flange or release latch. They also provide an integrated plus/minus screw, protection against faulty insertion of the wire, and they are delivered with open clamping yokes. HC = High Current.

General ordering data

Version	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 22, 90°, Clamping yoke connection, Clamping range, max. : 4 mm², Box
Order No.	1957820000
Type	BLZP 5.00HC/22/90 SN OR BX
GTIN (EAN)	4032248636969
Qty.	12 items
Product data	IEC: 400 V / 23 A / 0.2 - 4 mm² UL: 300 V / 20 A / AWG 26 - AWG 12
Packaging	Box

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Technical data

Approvals

Approvals	cULus
ROHS	Conform
UL File Number Search	UL Website
Certificate No. (cURus)	E60693

Dimensions and weights

Depth	27.2 mm	Depth (inches)	1.0709 inch
Height	14.1 mm	Height (inches)	0.5551 inch
Width	110 mm	Width (inches)	4.3307 inch
Net weight	44.35 g		

Environmental Product Compliance

RoHS Compliance Status	Compliant without exemption	
REACH SVHC	No SVHC above 0.1 wt%	
Product Carbon Footprint	Cradle to gate	0,536 kg CO2 eq.

System Parameters

Product family	OMNIMATE Signal - series BL/SL 5.00		
Type of connection	Field connection		
Wire connection method	Clamping yoke connection		
Pitch in mm (P)	5.00 mm		
Pitch in inches (P)	0.197 "		
Conductor outlet direction	90°		
Number of poles	22		
L1 in mm	105.00 mm		
L1 in inches	4.137 "		
Number of rows	1		
Pin series quantity	1		
Rated cross-section	4 mm²		
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch		
Touch-safe protection acc. to DIN VDE 0470	IP20 plugged/ IP10 unplugged		
Protection degree	IP20		
Volume resistance	≤5 mΩ		
Can be coded	Yes		
Stripping length	7 mm		
Clamping screw	M 2.5		
Screwdriver blade	0.6 x 3.5, PH 1, PZ 1		
Screwdriver blade standard	DIN 5264, ISO 8764/2-PH, ISO 8764/2-PZ		
Plugging cycles	25		
Plugging force/pole, max.	10 N		
Pulling force/pole, max.	9 N		
Tightening torque	Torque type	Wire connection	
	Usage information	Tightening torque	min. 0.4 Nm
			max. 0.5 Nm

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Technical data

Material data

Insulating material	PBT	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	Insulation resistance	≥ 108 Ω
Moisture Level (MSL)		UL 94 flammability rating	V-0
Contact material	Cu-alloy	Contact surface	tinned
Layer structure of plug contact	4...8 µm Sn hot-dip tinned	Storage temperature, min.	-40 °C
Storage temperature, max.	70 °C	Operating temperature, min.	-50 °C
Operating temperature, max.	100 °C	Temperature range, installation, min.	-25 °C
Temperature range, installation, max.	100 °C		

Conductors suitable for connection

Clamping range, min.	0.13 mm²
Clamping range, max.	4 mm²
Wire connection cross section AWG, min.	AWG 30
Wire connection cross section AWG, max.	AWG 12
Solid, min. H05(07) V-U	0.2 mm²
Solid, max. H05(07) V-U	4 mm²
Flexible, min. H05(07) V-K	0.2 mm²
Flexible, max. H05(07) V-K	4 mm²
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.2 mm²
w. plastic collar ferrule, DIN 46228 pt 4, max.	2.5 mm²
w. wire end ferrule, DIN 46228 pt 1, min.	0.2 mm²
w. wire end ferrule, DIN 46228 pt 1, max.	4 mm²
Plug gauge in accordance with EN 60999 a x b; ø	2.8 mm x 2.4 mm

Clampable conductor	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.5 mm²	
	wire end ferrule	Stripping length	nominal	6 mm
		Recommended wire-end ferrule	H0,5/6	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1 mm²	
	wire end ferrule	Stripping length	nominal	6 mm
		Recommended wire-end ferrule	H1,0/6	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1.5 mm²	
	wire end ferrule	Stripping length	nominal	7 mm
		Recommended wire-end ferrule	H1,5/7	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	2.5 mm²	
	wire end ferrule	Stripping length	nominal	7 mm
		Recommended wire-end ferrule	H2,5/7	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.75 mm²	
	wire end ferrule	Stripping length	nominal	6 mm
		Recommended wire-end ferrule	H0,75/6	

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Technical data

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.

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	23 A
Rated current, max. number of poles (Tu=20°C)	18 A	Rated current, min. number of poles (Tu=40°C)	21 A
Rated current, max. number of poles (Tu=40°C)	16 A	Rated voltage for surge voltage class / pollution degree II/2	400 V
Rated voltage for surge voltage class / pollution degree III/2	320 V	Rated voltage for surge voltage class / pollution degree III/3	250 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	4 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	4 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	4 kV	Short-time withstand current resistance	3 x 1s with 120 A

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)	20 A
Rated current (Use group D / CSA)	20 A	Wire cross-section, AWG, min.	AWG 30
Wire cross-section, AWG, max.	AWG 12		

Rated data acc. to UL 1059

Institute (cURus)	CURUS	Certificate No. (cURus)	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)	20 A	Rated current (Use group D / UL 1059)	10 A
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 12
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	338.00 mm
VPE width	130.00 mm	VPE height	27.00 mm

Important note

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.
Notes	• Additional variants 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. • In accordance with IEC 61984, OMNIMATE-connectors are connectors without breaking capacity (COC). During designated use, connectors are not allowed to be engaged or disengaged when live or under load • Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months

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Technical data

Classifications

ETIM 8.0	EC002638	ETIM 9.0	EC002638
ETIM 10.0	EC002638	ECLASS 14.0	27-46-02-02
ECLASS 15.0	27-46-02-02		

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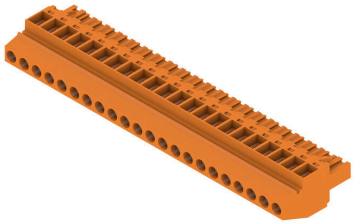
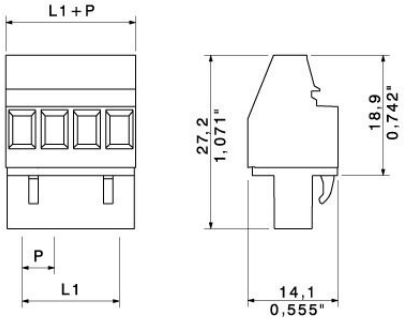
Drawings

Product image



Dimensional drawing



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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	BLZ/SL KO OR BX	Version
Order No.	1573010000	PCB plug-in connector, Accessories, Coding element, orange, Number
GTIN (EAN)	4008190048396	of poles: 1
Qty.	100 ST	
Type	BLZ/SL KO BK BX	Version
Order No.	1545710000	PCB plug-in connector, Accessories, Coding element, black, Number
GTIN (EAN)	4008190087142	of poles: 1
Qty.	50 ST	

Slotted screwdriver

Slotted screwdriver with rounded blade SD DIN 5265, ISO 2380/2, output to DIN 5264, ISO 2380/1.
ChromTop tip, SoftFinish grip

General ordering data

Type	SDS 0.6X3.5X100	Version
Order No.	2749340000	Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade
GTIN (EAN)	4050118895568	thickness (A): 0.6 mm
Qty.	1 ST	
Type	SDIS 0.6X3.5X100	Version
Order No.	2749810000	Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade
GTIN (EAN)	4050118897012	thickness (A): 0.6 mm
Qty.	1 ST	

BLZP 5.00HC/22/90 SN OR BX

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Accessories

Crosshead screwdriver Phillips

Crosshead screwdriver, Phillips, SDK PH DIN 5262, ISO 8764/2-PH, output to ISO 8764-PH, ChromTop tip, SoftFinish grip

General ordering data

Type	SDK PH1 X 80	Version
Order No.	2749410000	Screwdriver, Blade width (B): 4.5 mm, 80 mm, Blade thickness (A): 1
GTIN (EAN)	4050118895636	
Qty.	1 ST	

Crosshead screwdriver Pozidriv

Crosshead screwdriver, Pozidriv, SDK PZ DIN 5262, ISO 8764/2-PZ, output to ISO 8764/1-PZ, ChromTop tip, SoftFinish grip

General ordering data

Type	SDK PZ1 X 80	Version
Order No.	2749440000	Screwdriver, Blade width (B): 14.5 mm, 80 mm, Blade thickness (A): 1
GTIN (EAN)	4050118895667	
Qty.	1 ST	

BLZP 5.00HC/22/90 SN OR BX

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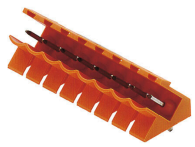
Counterpart

SL 5.00/135



Male connectors with 135° outlet direction. The solder pin length is optimised for wave flow soldering. The pin headers provide space for labelling and can be coded.

General ordering data

Type	SL 5.00/22/135 3.2SN OR...	Version
Order No.	1630450000	PCB plug-in connector, male header, open side, THT solder
GTIN (EAN)	4008190203870	connection, 5.00 mm, Number of poles: 22, 135°, Solder pin length
Qty.	20 ST	(l): 3.2 mm, tinned, orange, Box

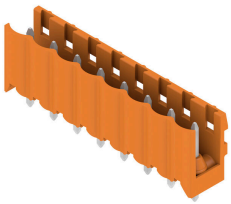
SL 5.00/135B

Male connectors with 135° outlet direction. The solder pin length is optimised for wave flow soldering. The pin headers provide space for labelling and can be coded.

General ordering data

Type	SL 5.00/22/135B 3.2SN O...	Version
Order No.	1630680000	PCB plug-in connector, male header, Dovetails for fixing blocks, THT
GTIN (EAN)	4008190204105	solder connection, 5.00 mm, Number of poles: 22, 135°, Solder pin
Qty.	20 ST	length (l): 3.2 mm, tinned, orange, Box

SL 5.00/180



Male connectors with straight outlet direction. The solder pin length is optimised for wave flow soldering. The pin headers provide space for labelling and can be coded.

General ordering data

Type	SL 5.00/22/180 3.2SN OR...	Version
Order No.	1581520000	PCB plug-in connector, male header, open side, THT solder
GTIN (EAN)	4008190168216	connection, 5.00 mm, Number of poles: 22, 180°, Solder pin length
Qty.	20 ST	(l): 3.2 mm, tinned, orange, Box

BLZP 5.00HC/22/90 SN OR BX

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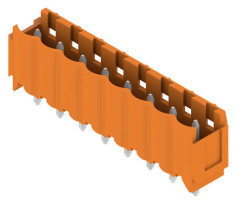
Counterpart

SL 5.00/180B

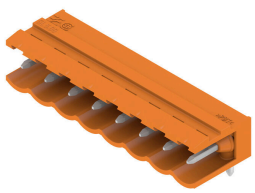


Male connectors with straight outlet direction. The solder pin length is optimised for wave flow soldering. The pin headers provide space for labelling and can be coded.

General ordering data

Type	SL 5.00/22/180B 3.2SN O...	Version
Order No.	1581980000	PCB plug-in connector, male header, Dovetails for fixing blocks, THT
GTIN (EAN)	4008190060862	solder connection, 5.00 mm, Number of poles: 22, 180°, Solder pin
Qty.	20 ST	length (l): 3.2 mm, tinned, orange, Box

SL 5.00/90

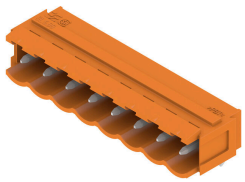


Male connectors with 90° outlet direction. The solder pin length is optimised for wave flow soldering. The pin headers provide space for labelling and can be coded.

General ordering data

Type	SL 5.00/22/90 3.2SN OR ...	Version
Order No.	1571320000	PCB plug-in connector, male header, open side, THT solder
GTIN (EAN)	4008190077419	connection, 5.00 mm, Number of poles: 22, 90°, Solder pin length (l):
Qty.	20 ST	3.2 mm, tinned, orange, Box

SL 5.00/90B



Male connectors with 90° outlet direction. The solder pin length is optimised for wave flow soldering. The pin headers provide space for labelling and can be coded.

General ordering data

Type	SL 5.00/22/90B 3.2SN OR...	Version
Order No.	1581060000	PCB plug-in connector, male header, Dovetails for fixing blocks, THT
GTIN (EAN)	4008190157296	solder connection, 5.00 mm, Number of poles: 22, 90°, Solder pin
Qty.	20 ST	length (l): 3.2 mm, tinned, orange, Box

BLZP 5.00HC/22/90 SN OR BX

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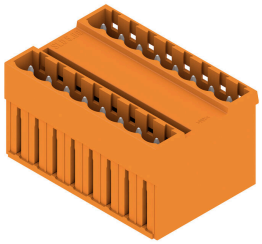
Counterpart

SLD 5.00/180G

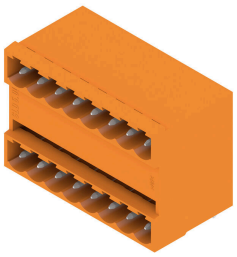


2-tier male header with parallel pin arrangement. The solder pin length is optimised for wave flow soldering. The pin headers provide space for labelling and can be coded.

General ordering data

Type	SLD 5.00/44/180G 3.2SN ...	Version
Order No.	1615010000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4008190041663	connection, 5.00 mm, Number of poles: 44, 180°, Solder pin length
Qty.	10 ST	(l): 3.2 mm, tinned, orange, Box

SLD 5.00/90G

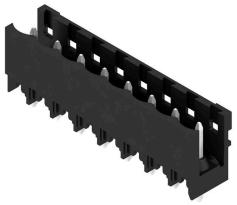


2-tier male header with parallel pin arrangement. The solder pin length is optimised for wave flow soldering. The pin headers provide space for labelling and can be coded.

General ordering data

Type	SLD 5.00/44/90G 3.2 SN ...	Version
Order No.	1614550000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4008190032739	connection, 5.00 mm, Number of poles: 44, 90°, Solder pin length (l):
Qty.	10 ST	3.2 mm, tinned, orange, Box

SL-SMT 5.00HC/180 Box



High-temperature-resistant, straight, open pin header. Packed in box or tape. On tape and with 1.5 mm solder pin, optimised for automatic assembly. 3.2 mm solder pin suitable for reflow and wave soldering. The pin headers provide space for labelling and can be coded. HC = High Current.

General ordering data

Type	SL-SMT 5.00HC/22/180 3....	Version
Order No.	1841130000	PCB plug-in connector, male header, open side, THT/THR solder
GTIN (EAN)	4032248352012	connection, 5.00 mm, Number of poles: 22, 180°, Solder pin length
Qty.	20 ST	(l): 3.2 mm, tinned, black, Box

BLZP 5.00HC/22/90 SN OR BX

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Counterpart

SL-SMT 5.00HC/180G Box

High-temperature-resistant pin header, packed in box or tape. On tape, with 1.5 mm solder pin, optimised for automatic assembly. 3.2 mm solder pin suitable for reflow and wave soldering. The pin headers provide space for labelling and can be coded. HC = High Current.

General ordering data

Type	SL-SMT 5.00HC/22/180G 3...	Version
Order No.	1841360000	PCB plug-in connector, male header, closed side, THT/THR solder
GTIN (EAN)	4032248352265	connection, 5.00 mm, Number of poles: 22, 180°, Solder pin length
Qty.	20 ST	(l): 3.2 mm, tinned, black, Box

SL-SMT 5.00HC/90 Box

High-temperature-resistant, 90° angled, open male header. Packed in box or tape. On tape, with 1.5 mm solder pin, optimised for automatic assembly. 3.2 mm solder pin suitable for reflow and wave soldering. The pin headers provide space for labelling and can be coded. HC = High Current.

General ordering data

Type	SL-SMT 5.00HC/22/90 3.2...	Version
Order No.	1840090000	PCB plug-in connector, male header, open side, THT/THR solder
GTIN (EAN)	4032248350834	connection, 5.00 mm, Number of poles: 22, 90°, Solder pin length (l):
Qty.	20 ST	3.2 mm, tinned, black, Box

SL-SMT 5.00HC/90G Box

High-temperature-resistant pin header, packed in box or tape. On tape, with 1.5 mm solder pin, optimised for automatic assembly. 3.2 mm solder pin suitable for reflow and wave soldering. The pin headers provide space for labelling and can be coded. HC = High Current.

General ordering data

Type	SL-SMT 5.00HC/22/90G 3....	Version
Order No.	1840320000	PCB plug-in connector, male header, closed side, THT/THR solder
GTIN (EAN)	4032248351060	connection, 5.00 mm, Number of poles: 22, 90°, Solder pin length (l):
Qty.	20 ST	3.2 mm, tinned, black, Box