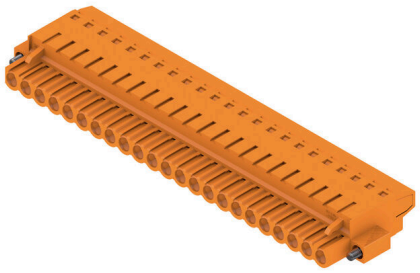
Data sheet

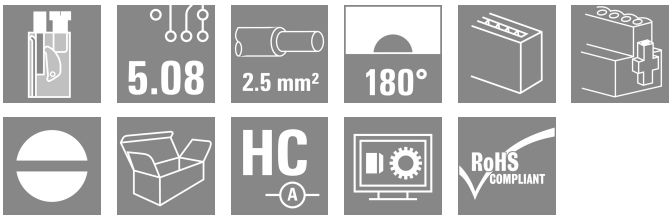
BLT 5.08HC/23/180F SN OR BX

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

www.weidmueller.com

Product image





Female plugs with TOP screw connection system for connecting wires with straight outlet direction and screw flange. The female connectors provide space for labelling and can be coded. HC = High Current.

General ordering data

Version	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 23, 180°, TOP connection, Clamping range, max. : 2.5 mm², Box
Order No.	1844200000
Type	BLT 5.08HC/23/180F SN OR BX
GTIN (EAN)	4032248356126
Qty.	12 items
Product data	IEC: 400 V / 27 A / 0.2 - 2.5 mm² UL: 300 V / 17 A / AWG 26 - AWG 14
Packaging	Box

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Technical data

Approvals

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

Dimensions and weights

Depth	31.8 mm	Depth (inches)	1.252 inch
Height	12.2 mm	Height (inches)	0.4803 inch
Width	126.64 mm	Width (inches)	4.9858 inch
Net weight	74.17 g		

Environmental Product Compliance

RoHS Compliance Status	Compliant without exemption
REACH SVHC	No SVHC above 0.1 wt%

System Parameters

Product family	OMNIMATE Signal - series BL/SL 5.08			
Type of connection	Field connection			
Wire connection method	TOP connection			
Pitch in mm (P)	5.08 mm			
Pitch in inches (P)	0.200 "			
Conductor outlet direction	180°			
Number of poles	23			
L1 in mm	111.76 mm			
L1 in inches	4.400 "			
Number of rows	1			
Pin series quantity	1			
Rated cross-section	2.5 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	13 mm			
Clamping screw	M 2.5			
Screwdriver blade	0.6 x 3.5			
Screwdriver blade standard	DIN 5264			
Plugging cycles	25			
Plugging force/pole, max.	8 N			
Pulling force/pole, max.	7 N			
Tightening torque	Torque type	Wire connection		
	Usage information	Tightening torque	min.	0.4 Nm
			max.	0.5 Nm
	Torque type	Screw flange		
	Usage information	Tightening torque	min.	0.2 Nm
			max.	0.25 Nm

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Material data

Insulating material	PBT	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	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.	2.5 mm²			
Wire connection cross section AWG, min.	AWG 28			
Wire connection cross section AWG, max.	AWG 14			
Solid, min. H05(07) V-U	0.2 mm²			
Solid, max. H05(07) V-U	2.5 mm²			
Flexible, min. H05(07) V-K	0.2 mm²			
Flexible, max. H05(07) V-K	2.5 mm²			
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.2 mm²			
w. plastic collar ferrule, DIN 46228 pt 4, max.	1.5 mm²			
w. wire end ferrule, DIN 46228 pt 1, min.	0.2 mm²			
w. wire end ferrule, DIN 46228 pt 1, max.	1.5 mm²			
Plug gauge in accordance with EN 60999 a x b; ø	2.4 mm x 1.5 mm ; 2.4 mm			
Clampable conductor	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.5 mm²	
	wire end ferrule	Stripping length	nominal	14 mm
		Recommended wire-end ferrule	H0,5/18 OR	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1 mm²	
	wire end ferrule	Stripping length	nominal	15 mm
		Recommended wire-end ferrule	H1,0/18 GE	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1.5 mm²	
	wire end ferrule	Stripping length	nominal	15 mm
		Recommended wire-end ferrule	H1,5/18D SW	
		Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H1,5/12	
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)	27 A
Rated current, max. number of poles (Tu=20°C)	19 A	Rated current, min. number of poles (Tu=40°C)	24 A

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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 100 A

Rated data acc. to CSA

Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group D / CSA)	300 V
Rated current (Use group B / CSA)	15 A	Rated current (Use group D / CSA)	15 A
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 14

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)	17 A	Rated current (Use group D / UL 1059)	10 A
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 14
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	350.00 mm
VPE width	130.00 mm	VPE height	33.00 mm

Type tests

Test: Durability of markings	Standard	DIN EN 61984 section 7.3.2 / 09.02 taking pattern from DIN EN 60068-2-70 / 07.96	
	Test	mark of origin, type of material, date clock	
	Evaluation	available	
	Test	durability	
	Evaluation	passed	
Test: Misengagement (Non-interchangeability)	Standard	DIN EN 61984 section 6.3 and 6.9.1 / 09.02, DIN EN 60512-13-5 / 11.06	
	Test	180° turned with coding elements	
	Evaluation	passed	
	Test	visual examination	
	Evaluation	passed	
Test: Clampable cross section	Standard	DIN EN 60999-1 section 7 and 9.1 / 12.00, DIN EN 60947-1 section 8.2.4.5.1 / 12.02	
	Conductor type	Type of conductor and conductor cross-section	solid 0.08 mm²
		Type of conductor and conductor cross-section	stranded 0.08 mm²
		Type of conductor and conductor cross-section	solid 2.5 mm²
		Type of conductor and conductor cross-section	stranded 2.5 mm²
		Type of conductor and conductor cross-section	AWG 26/1

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		Type of conductor and conductor cross-section	AWG 26/19
		Type of conductor and conductor cross-section	AWG 14/1
		Type of conductor and conductor cross-section	AWG 14/19
	Evaluation	passed	
Test for damage to and accidental loosening of conductors	Standard	DIN EN 60999-1 section 9.4 / 12.00	
	Requirement	0.2 kg	
	Conductor type	Type of conductor and conductor cross-section	AWG 28/1
		Type of conductor and conductor cross-section	AWG 26/19
	Evaluation	passed	
	Requirement	0.3 kg	
	Conductor type	Type of conductor and conductor cross-section	solid 0.5 mm²
		Type of conductor and conductor cross-section	stranded 0.5 mm²
	Evaluation	passed	
	Requirement	0.7 kg	
	Conductor type	Type of conductor and conductor cross-section	solid 2.5 mm²
		Type of conductor and conductor cross-section	stranded 2.5 mm²
		Type of conductor and conductor cross-section	AWG 14/1
		Type of conductor and conductor cross-section	AWG 14/19
	Evaluation	passed	
Pull-out test	Standard	DIN EN 60999-1 section 9.5 / 12.00	
	Requirement	≥5 N	
	Conductor type	Type of conductor and conductor cross-section	AWG 28/1
	Evaluation	passed	
	Requirement	≥10 N	
	Conductor type	Type of conductor and conductor cross-section	AWG 26/19
	Evaluation	passed	
	Requirement	≥20 N	
	Conductor type	Type of conductor and conductor cross-section	solid 0.5 mm²
		Type of conductor and conductor cross-section	stranded 0.5 mm²
	Evaluation	passed	
	Requirement	≥40 N	

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Technical data

	Conductor type	Type of conductor and conductor cross-section	AWG 14/1
		Type of conductor and conductor cross-section	AWG 14/19
	Evaluation	passed	
	Requirement	≥50 N	
	Conductor type	Type of conductor and conductor cross-section	solid 2.5 mm²
		Type of conductor and conductor cross-section	stranded 2.5 mm²
	Evaluation	passed	

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 • Crimp form A for wire end ferrules with PZ 6/5 crimping tool are recommended for the largest cable sizes. • 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

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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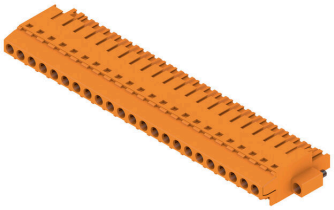
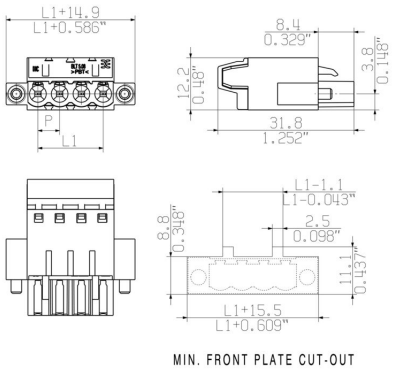
Drawings

Product image

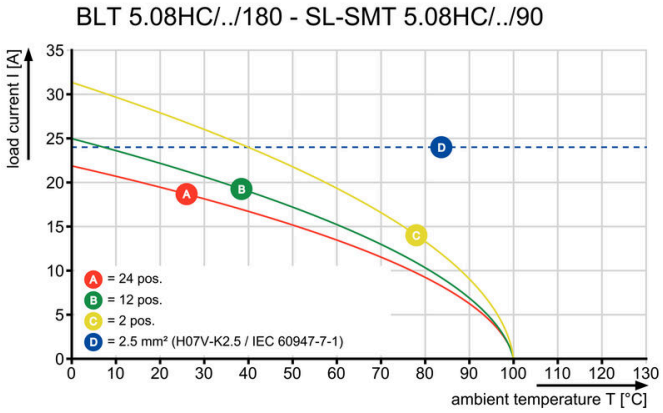


Dimensional drawing



MIN. FRONT PLATE CUT-OUT

Graph



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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 BK BX	Version
Order No.	1545710000	PCB plug-in connector, Accessories, Coding element, black, Number
GTIN (EAN)	4008190087142	of poles: 1
Qty.	50 ST	
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	

Strain reliefs

For frequent load changes: the "trailer coupling" for plug-in connectors.
The strain relief can do more than just relieve the strain on conductors:
Simply clip onto the plug and
- bundle conductors
- guide cables
- use as a connection and disconnection aid

No damage to the connecting points, clear, tidy wiring and easy to handle.
User advantages: permanent heavy-duty connections for harsh industrial environments and convenient operation ensure improved system availability.

General ordering data

Type	BLAT ZE04 OR BX	Version
Order No.	1577980000	PCB plug-in connector, Accessories, Strain relief, orange, Number of
GTIN (EAN)	4008190078249	poles: 4
Qty.	50 ST	
Type	BLAT ZE08 OR BX	Version
Order No.	1578010000	PCB plug-in connector, Accessories, Strain relief, orange, Number of
GTIN (EAN)	4008190003753	poles: 8
Qty.	50 ST	

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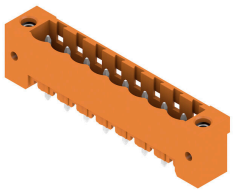
Counterpart

SL 5.08HC/180F

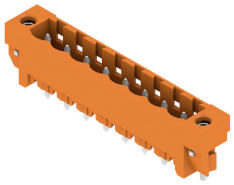


Pin headers in glass-fibre-reinforced plastic with straight wire outlet; optimised for wave soldering. The flange variant (F) can be screwed onto the respective counter piece or the circuit board. There is no need for an extra screw to connect the circuit board when the solder flange (LF) version is used. This also protects the solder points from mechanical strain. All pin headers can be manually coded or ordered pre-coded. HC = High Current.

General ordering data

Type	SL 5.08HC/23/180F 3.2SN...	Version
Order No.	1149150000	PCB plug-in connector, male header, Flange, THT solder connection,
GTIN (EAN)	4032248932788	5.08 mm, Number of poles: 23, 180°, Solder pin length (l): 3.2 mm,
Qty.	12 ST	tinned, black, Box
Type	SL 5.08HC/23/180F 3.2SN...	Version
Order No.	1147820000	PCB plug-in connector, male header, Flange, THT solder connection,
GTIN (EAN)	4032248931569	5.08 mm, Number of poles: 23, 180°, Solder pin length (l): 3.2 mm,
Qty.	12 ST	tinned, orange, Box

SL 5.08HC/180LF



Pin headers in glass-fibre-reinforced plastic with straight wire outlet; optimised for wave soldering. The flange variant (F) can be screwed onto the respective counter piece or the circuit board. There is no need for an extra screw to connect the circuit board when the solder flange (LF) version is used. This also protects the solder points from mechanical strain. All pin headers can be manually coded or ordered pre-coded. HC = High Current.

General ordering data

Type	SL 5.08HC/23/180LF 3.2S...	Version
Order No.	1149920000	PCB plug-in connector, male header, Solder flange, THT solder
GTIN (EAN)	4032248932962	connection, 5.08 mm, Number of poles: 23, 180°, Solder pin length
Qty.	12 ST	(l): 3.2 mm, tinned, black, Box
Type	SL 5.08HC/23/180LF 3.2S...	Version
Order No.	1148440000	PCB plug-in connector, male header, Solder flange, THT solder
GTIN (EAN)	4032248931545	connection, 5.08 mm, Number of poles: 23, 180°, Solder pin length
Qty.	12 ST	(l): 3.2 mm, tinned, orange, Box

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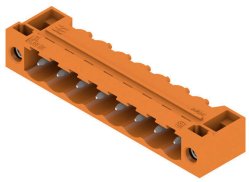
Counterpart

SL 5.08HC/90F

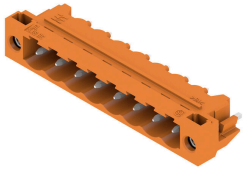


Pin headers made from glass-fibre-reinforced plastic with 90° wire outlet; optimised for wave soldering. The flange variant (F) can be screwed onto the respective counter piece or the circuit board. There is no need for an extra screw to connect the circuit board when the solder flange (LF) version is used. This also protects the solder points from mechanical strain. All pin headers can be manually coded or ordered pre-coded. HC = High Current.

General ordering data

Type	SL 5.08HC/23/90F 3.2SN ...	Version
Order No.	1150320000	PCB plug-in connector, male header, Flange, THT solder connection,
GTIN (EAN)	4032248937226	5.08 mm, Number of poles: 23, 90°, Solder pin length (l): 3.2 mm,
Qty.	12 ST	tinned, black, Box
Type	SL 5.08HC/23/90F 3.2SN ...	Version
Order No.	1149310000	PCB plug-in connector, male header, Flange, THT solder connection,
GTIN (EAN)	4032248936465	5.08 mm, Number of poles: 23, 90°, Solder pin length (l): 3.2 mm,
Qty.	12 ST	tinned, orange, Box

SL 5.08HC/90LF



Pin headers made from glass-fibre-reinforced plastic with 90° wire outlet; optimised for wave soldering. The flange variant (F) can be screwed onto the respective counter piece or the circuit board. There is no need for an extra screw to connect the circuit board when the solder flange (LF) version is used. This also protects the solder points from mechanical strain. All pin headers can be manually coded or ordered pre-coded. HC = High Current.

General ordering data

Type	SL 5.08HC/23/90LF 3.2SN...	Version
Order No.	1150580000	PCB plug-in connector, male header, Solder flange, THT solder
GTIN (EAN)	4032248937486	connection, 5.08 mm, Number of poles: 23, 90°, Solder pin length (l):
Qty.	12 ST	3.2 mm, tinned, black, Box
Type	SL 5.08HC/23/90LF 3.2SN...	Version
Order No.	1150040000	PCB plug-in connector, male header, Solder flange, THT solder
GTIN (EAN)	4032248936083	connection, 5.08 mm, Number of poles: 23, 90°, Solder pin length (l):
Qty.	12 ST	3.2 mm, tinned, orange, Box

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Counterpart

SL-SMT 5.08/180F 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 5.08HC/23/180F 3...	Version
Order No.	1837960000	PCB plug-in connector, male header, Flange, THT/THR solder
GTIN (EAN)	4032248347773	connection, 5.08 mm, Number of poles: 23, 180°, Solder pin length
Qty.	12 ST	(l): 3.2 mm, tinned, black, Box

SL-SMT 5.08/180LF 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 5.08HC/23/180LF ...	Version
Order No.	1838650000	PCB plug-in connector, male header, Solder flange, THT/THR solder
GTIN (EAN)	4032248348718	connection, 5.08 mm, Number of poles: 23, 180°, Solder pin length
Qty.	12 ST	(l): 3.2 mm, tinned, black, Box

SL-SMT 5.08HC/90F 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 5.08HC/23/90F 3....	Version
Order No.	1837840000	PCB plug-in connector, male header, Flange, THT/THR solder
GTIN (EAN)	4032248347650	connection, 5.08 mm, Number of poles: 23, 90°, Solder pin length (l):
Qty.	12 ST	3.2 mm, tinned, black, Box

BLT 5.08HC/23/180F SN OR BX

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Counterpart

SL-SMT 5.08HC/90LF 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 5.08HC/23/90LF 3...	Version
Order No.	1780640000	PCB plug-in connector, male header, Solder flange, THT/THR solder
GTIN (EAN)	4032248165940	connection, 5.08 mm, Number of poles: 23, 90°, Solder pin length (l):
Qty.	12 ST	3.2 mm, tinned, black, Box

SLDV-THR 5.08/180F

High-temperature resistant, double level, laterally offset, male connector with flange or solder flange. 1.5 mm solder pin is suitable for reflow soldering. 3.2 mm solder pin suitable for reflow and wave soldering. The pin headers provide space for labelling and can be coded.

General ordering data

Type	SLDV-THR 5.08/46/180F 3...	Version
Order No.	1889420000	PCB plug-in connector, male header, Flange, THT/THR solder
GTIN (EAN)	4032248495764	connection, 5.08 mm, Number of poles: 46, 180°, Solder pin length
Qty.	8 ST	(l): 3.2 mm, tinned, black, Box

SLDV-THR 5.08/180FLF

High-temperature resistant, double level, laterally offset, male connector with flange or solder flange. 1.5 mm solder pin is suitable for reflow soldering. 3.2 mm solder pin suitable for reflow and wave soldering. The pin headers provide space for labelling and can be coded.

General ordering data

Type	SLDV-THR 5.08/46/180FLF...	Version
Order No.	1889320000	PCB plug-in connector, male header, Flange / Solder flange, THT/THR
GTIN (EAN)	4032248495665	solder connection, 5.08 mm, Number of poles: 46, 180°, Solder pin
Qty.	8 ST	length (l): 3.2 mm, tinned, black, Box