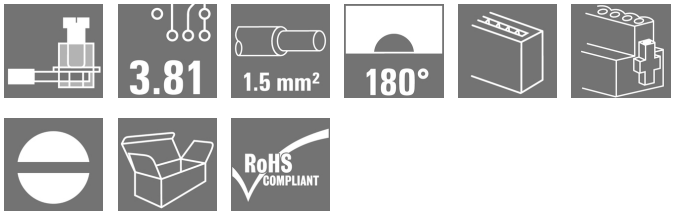
SCZ 3.81/07/180F SN OR BX

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

www.weidmueller.com

Product image



The inverted SCZ pin plug with clamping-yoke screw connection is designed for straight wire connections in 3.81-mm pitch. It can be used in two ways:
- for wire-to-wire connections together with the BCZ
- as a mating plug for the touch-safe BCL socket block on the PCB.

The SCZ is available in four different versions:
- Without flange ("G", closed)
- With standard flange ("F", with socket nut)
- With inverted flange ("FI", with screw)
- and with Weidmüller's patented release latch for a tool-free, no-strain disconnect

The SCZ provides space for labelling and can be coded.

General ordering data

Version	PCB plug-in connector, male plug, 3.81 mm, Number of poles: 7, 180°, Clamping yoke connection, Clamping range, max. : 1.5 mm², Box
Order No.	1970970000
Type	SCZ 3.81/07/180F SN OR BX
GTIN (EAN)	4032248680689
Qty.	50 pc(s).
Product data	IEC: 320 V / 17.5 A / 0.2 - 1.5 mm² UL: 300 V / 10 A / AWG 28 - AWG 16
Packaging	Box

Creation date March 26, 2021 4:26:46 PM CET

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Technical data

Dimensions and weights

Depth	18.4 mm	Depth (inches)	0.724 inch
Height	11.1 mm	Height (inches)	0.437 inch
Net weight	6.85 g		

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1

System Parameters

Product family	OMNIMATE Signal - series BC/SC 3.81			
Type of connection	Field connection			
Wire connection method	Clamping yoke connection			
Pitch in mm (P)	3.81 mm			
Pitch in inches (P)	0.15 inch			
Conductor outlet direction	180°			
Number of poles	7			
L1 in mm	22.86 mm			
L1 in inches	0.9 inch			
Number of rows	1			
Pin series quantity	1			
Rated cross-section	1 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	≤5 mΩ			
Can be coded	Yes			
Stripping length	7 mm			
Clamping screw	M 2			
Screwdriver blade	0.4 x 2.5			
Screwdriver blade standard	DIN 5264-A			
Plugging cycles	25			
Plugging force/pole, max.	8 N			
Pulling force/pole, max.	5 N			
Tightening torque	Torque type	Wire connection		
	Usage information	Tightening torque	min.	0.2 Nm
			max.	0.25 Nm
	Torque type	Screw flange		
	Usage information	Tightening torque	min.	0.15 Nm
			max.	0.2 Nm

Material data

Insulating material	PA 66 GF 30	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 550	Insulation strength	≥ 10^8 Ω
UL 94 flammability rating	V-0	Contact material	Copper alloy
Contact surface	tinned	Layer structure of plug contact	4...8 µm Sn
Storage temperature, min.	-40 °C	Storage temperature, max.	70 °C
Operating temperature, min.	-50 °C	Operating temperature, max.	120 °C
Temperature range, installation, min.	-25 °C	Temperature range, installation, max.	120 °C

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Conductors suitable for connection

Clamping range, min.	0.08 mm²			
Clamping range, max.	1.5 mm²			
Wire connection cross section AWG, min.	AWG 28			
Wire connection cross section AWG, max.	AWG 16			
Solid, min. H05(07) V-U	0.2 mm²			
Solid, max. H05(07) V-U	1.5 mm²			
Flexible, min. H05(07) V-K	0.2 mm²			
Flexible, max. H05(07) V-K	1.5 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	6 mm
		Recommended wire-end ferrule	H0,5/6	
	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	
	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	
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)	17.5 A
Rated current, max. number of poles (Tu=20°C)	17.1 A	Rated current, min. number of poles (Tu=40°C)	17.5 A
Rated current, max. number of poles (Tu=40°C)	15.2 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	3 x 1s with 76 A

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Technical data

Rated data acc. to CSA

Institute (CSA)		Certificate No. (CSA)	200039-1121690
Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group C / CSA)	50 V
Rated current (Use group B / CSA)	11 A	Rated current (Use group C / CSA)	11 A
Wire cross-section, AWG, min.	AWG 28	Wire cross-section, AWG, max.	AWG 16
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

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 D / UL 1059)	300 V
Rated current (Use group B / UL 1059)	10 A	Rated current (Use group D / UL 1059)	10 A
Wire cross-section, AWG, min.	AWG 28	Wire cross-section, AWG, max.	AWG 16
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	25 mm
VPE width	115 mm	VPE height	195 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 identification, rated voltage, rated cross-section, pitch, type of material, approval marking UL, approval marking CSA
	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 without coding elements
	Evaluation	passed
	Test	visual examination
	Evaluation	passed

Weidmüller

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Technical data

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 1.5 mm²
		Type of conductor and conductor cross-section	stranded 1.5 mm²
		Type of conductor and conductor cross-section	AWG 28/1
		Type of conductor and conductor cross-section	AWG 28/19
		Type of conductor and conductor cross-section	AWG 16/1
		Type of conductor and conductor cross-section	AWG 16/19
	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	stranded 0.25 mm²
		Type of conductor and conductor cross-section	AWG 28/1
		Type of conductor and conductor cross-section	AWG 28/19
	Evaluation	passed	
	Requirement	0.3 kg	
	Conductor type	Type of conductor and conductor cross-section	solid 0.5 mm²
	Evaluation	passed	
	Requirement	0.4 kg	
	Conductor type	Type of conductor and conductor cross-section	solid 1.5 mm²
		Type of conductor and conductor cross-section	stranded 1.5 mm²
		Type of conductor and conductor cross-section	AWG 16/1
		Type of conductor and conductor cross-section	AWG 16/19
	Evaluation	passed	

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Technical data

Pull-out test	Standard	DIN EN 60999-1 section 9.5 / 12.00	
	Requirement	≥10 N	
	Conductor type	Type of conductor and conductor cross-section	stranded 0.25 mm²
		Type of conductor and conductor cross-section	AWG 28/1
		Type of conductor and conductor cross-section	AWG 28/19
	Evaluation	passed	
	Requirement	≥20 N	
	Conductor type	Type of conductor and conductor cross-section	H05V-U0.5
	Evaluation	passed	
	Requirement	≥40 N	
	Conductor type	Type of conductor and conductor cross-section	H07V-U1.5
		Type of conductor and conductor cross-section	H07V-K1.5
		Type of conductor and conductor cross-section	AWG 16/1
		Type of conductor and conductor cross-section	AWG 16/19
	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	ECLASS 11.0	27-46-02-02

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 colours on request • Rated current related to rated cross-section & min. No. of poles. • 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. • Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

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Technical data

Approvals

Approvals	
ROHS	Conform
UL File Number Search	E60693

Downloads

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Engineering Data	STEP

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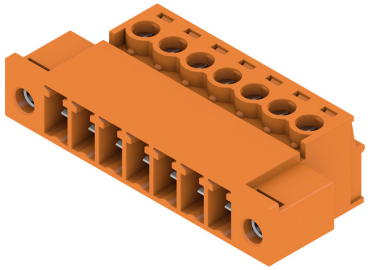
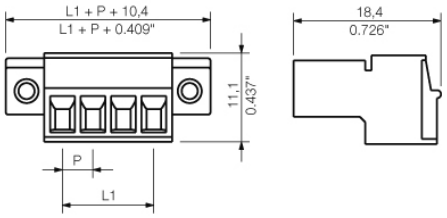
Drawings

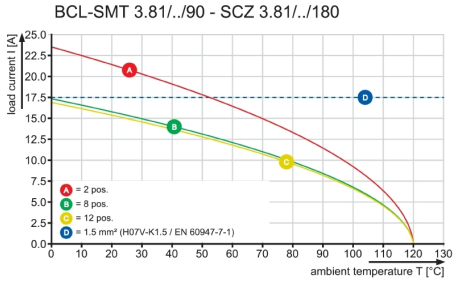
Product image



Dimensional drawing



Graph



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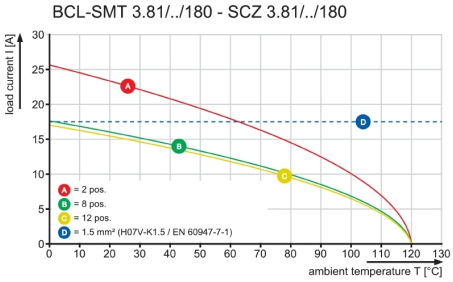

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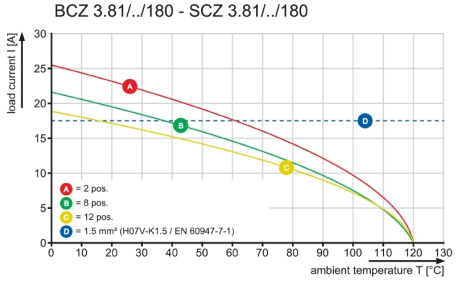

WEITERGABE SOWIE VERVIELFAELTIGUNG DIESES DOKUMENTS, VERWERTUNG UND MITTEILUNG SEINES INHALTS SIND VERBOTEN, SOWEIT NICHT AUSDRUECKLICH GESTATTET.
ZUWIDERHANDLUNGEN VERPFLICHTEN ZU SCHADENERSATZ. ALLE RECHTE FUER DEN FALL DER PATENT-, GEBRAUCHSMUSTER- ODER GESCHMACKSMUSTEREINTRAGUNG VORBEHALTEN.
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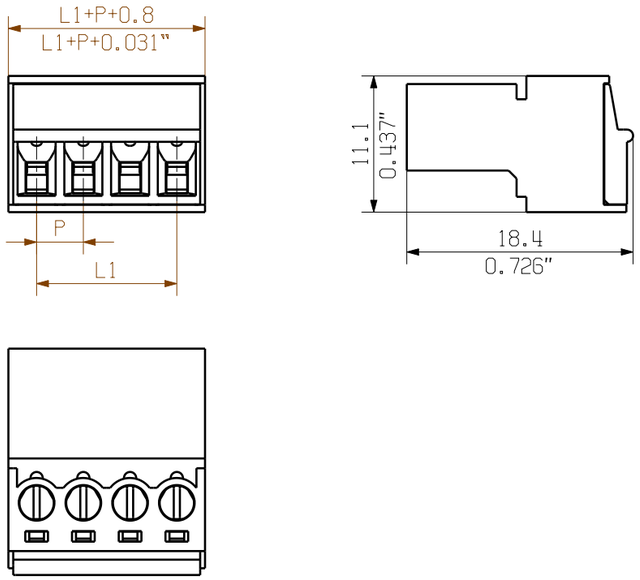
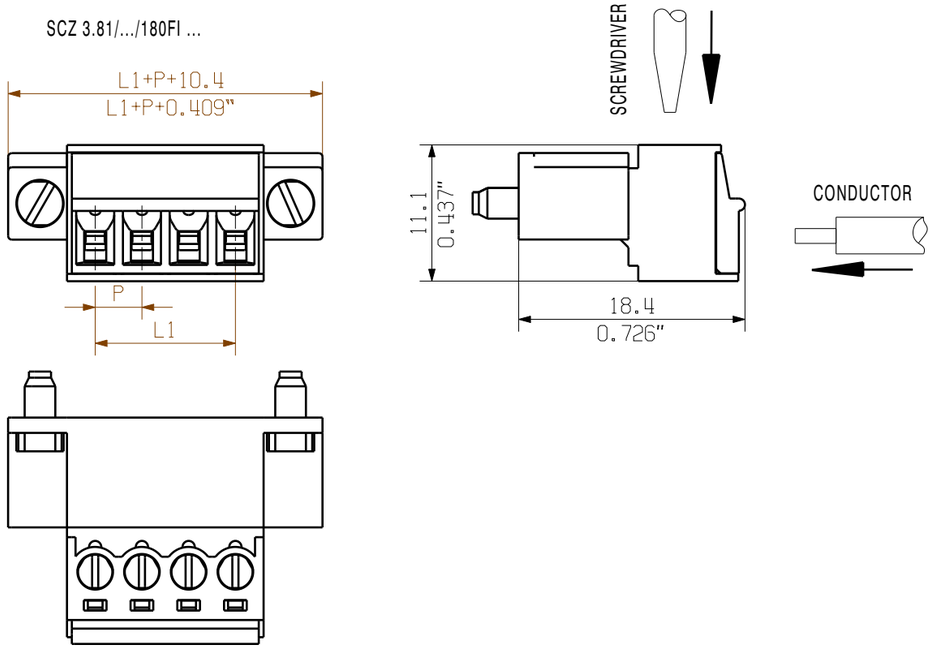
SCZ 3.81/.../180G ...



SCZ 3.81/.../180FI ...



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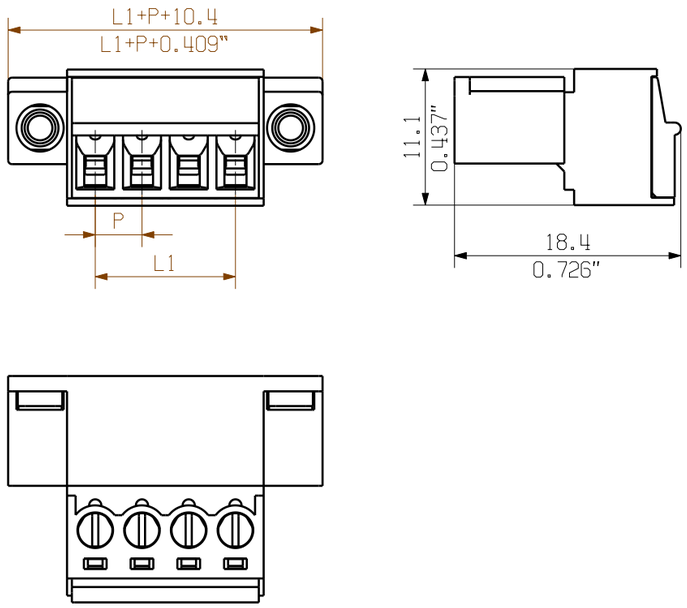
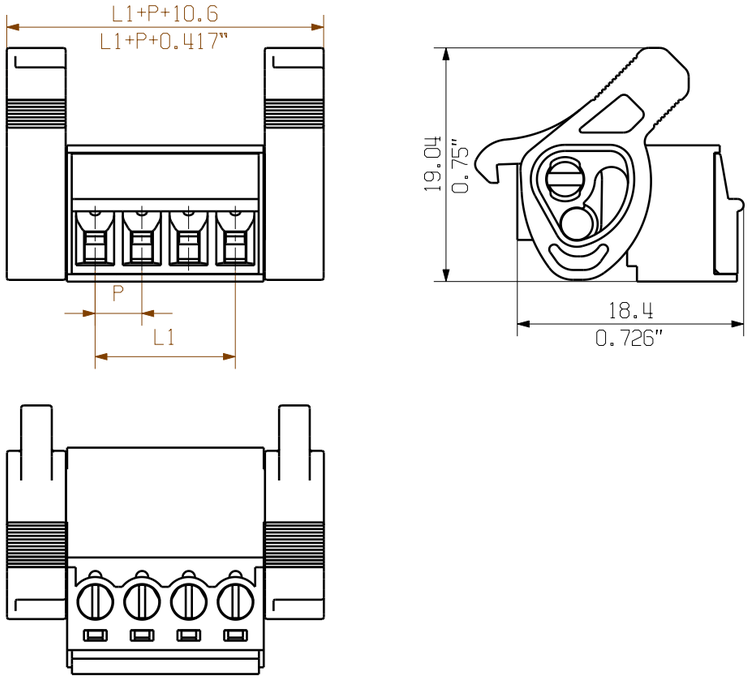


SCZ 3.81/.../180LR ...



12	41.91	1.651
11	38.10	1.501
10	34.29	1.351
9	30.48	1.201
8	26.67	1.051
7	22.86	0.901
6	19.05	0.751
5	15.24	0.600
4	11.43	0.450
3	7.62	0.300
2	3.81	0.150
N	L1 [mm]	L1 [inch]

KUNDENZEICHNUNG
CUSTOMER DRAWING

For the mounting of PCBs, it should be noted that the rated data stated here relates only to the PCB components alone.
The neccessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to IEC 664 / VDE 0110.
The current- carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller PCB components are tested to the DIN EN 61984 standard, and are valid for its field of application.
Provided that the components are used to the intended purpose, all requirements with respect to the occuring of electrical, mechanical, thermic and corrosive stress will be satisfied.

CAT.NO.: .

55304/5
03.06.11 GE_G 00
MODIFICATION

Weidmüller

2 40408 05
DRAWING NO. ISSUE NO.
SHEET . OF . SHEETS

	DATE	NAME
DRAWN	09.10.2008	SHI_S
RESPONSIBLE		XU_S
CHECKED	03.06.2011	RICHTER_G
APPROVED		XU_S

SCALE: 2/1
SUPERSEDES: .
SUPERSEDED BY: .

SCZ 3.81/.../180...

ZUGBUEGELANSCHLUSS STIFTLEISTE
CLAMPING YOKE CONNECTION PIN HEADER

PRODUCT FILE: SCZ 3.81 7078