

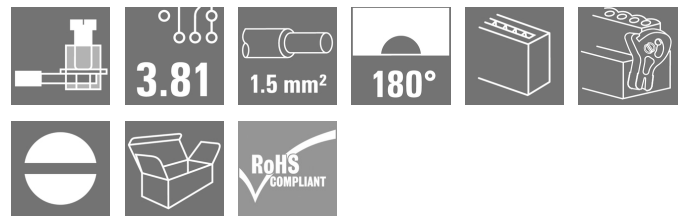
**SCZ 3.81/07/180LRZE SN OR BX****Weidmüller Interface GmbH & Co. KG**

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 outlet connections. 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-SMT socket block on the PCB.

The SCZ is available in four different versions:

- Without flange ("G", closed)
- With standard flange ("F", with nut) for wire-to-wire connections
- With inverted flange ("FI", with screw) for screw connection to the BCL-SMT LFI
- With Weidmüller's patented release latch (LR) for lock-and-release latching with the BCL-SMT LFI: no strain and no tools needed.

Weidmüller's 3.81-mm-pitch (0.15 inch) plug-in connectors are compatible with the layouts of standard connectors and offer space for labelling and coding.

**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.	<a href="#">2444200000</a>
Type	SCZ 3.81/07/180LRZE SN OR BX
GTIN (EAN)	4050118542707
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

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## Technical data

## Dimensions and weights

Depth	42.1 mm	Depth (inches)	1.657 inch
Height	16.6 mm	Height (inches)	0.654 inch
Net weight	8.24 g		

## 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 "		
Conductor outlet direction	180°		
Number of poles	7		
L1 in mm	22.86 mm		
L1 in inches	0.9 "		
Number of rows	1		
Pin series quantity	1		
Rated cross-section	1 mm <sup>2</sup>		
Touch-safe protection acc. to DIN VDE 57 106	finger-safe plugged/ back-of-hand-safe unplugged		
Touch-safe protection acc. to DIN VDE 0470	IP20 plugged/ IP10 unplugged		
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		
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

## Material data

Insulating material	PA 66 GF 30	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 550	UL 94 flammability rating	V-0
Contact material	Cu-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		

## Conductors suitable for connection

Clamping range, min.	0.08 mm <sup>2</sup>
Clamping range, max.	1.5 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 28
Wire connection cross section AWG, max.	AWG 16
Solid, min. H05(07) V-U	0.2 mm <sup>2</sup>

Creation date July 4, 2024 2:33:25 PM CEST

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Solid, max. H05(07) V-U	1.5 mm <sup>2</sup>			
Flexible, min. H05(07) V-K	0.2 mm <sup>2</sup>			
Flexible, max. H05(07) V-K	1.5 mm <sup>2</sup>			
w. plastic collar ferrule, DIN 46228 pt 4, 0.2 mm <sup>2</sup> min.				
w. plastic collar ferrule, DIN 46228 pt 4, 1.5 mm <sup>2</sup> max.				
w. wire end ferrule, DIN 46228 pt 1, 0.2 mm <sup>2</sup> min.				
w. wire end ferrule, DIN 46228 pt 1, 1.5 mm <sup>2</sup> max.				
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 mm <sup>2</sup>	
	wire end ferrule	Stripping length	nominal	6 mm
		Recommended wire-end ferrule	<a href="#">H0.5/6</a>	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.75 mm <sup>2</sup>	
	wire end ferrule	Stripping length	nominal	6 mm
		Recommended wire-end ferrule	<a href="#">H0.75/6</a>	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1 mm <sup>2</sup>	
	wire end ferrule	Stripping length	nominal	6 mm
		Recommended wire-end ferrule	<a href="#">H1.0/6</a>	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1.5 mm <sup>2</sup>	
	wire end ferrule	Stripping length	nominal	7 mm
		Recommended wire-end ferrule	<a href="#">H1.5/7</a>	

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

## Rated data acc. to CSA

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

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## Technical data

## 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	167 mm
VPE width	121 mm	VPE height	51 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

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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 solid 0.08 mm <sup>2</sup> conductor cross-section
		Type of conductor and stranded 0.08 mm <sup>2</sup> conductor cross-section
		Type of conductor and solid 1.5 mm <sup>2</sup> conductor cross-section
		Type of conductor and stranded 1.5 mm <sup>2</sup> conductor cross-section
		Type of conductor and AWG 28/1 conductor cross-section
		Type of conductor and AWG 28/19 conductor cross-section
		Type of conductor and AWG 16/1 conductor cross-section
		Type of conductor and AWG 16/19 conductor cross-section
	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 stranded 0.25 mm <sup>2</sup> conductor cross-section
		Type of conductor and AWG 28/1 conductor cross-section
		Type of conductor and AWG 28/19 conductor cross-section
	Evaluation	passed
	Requirement	0.3 kg
	Conductor type	Type of conductor and solid 0.5 mm <sup>2</sup> conductor cross-section
	Evaluation	passed
	Requirement	0.4 kg
	Conductor type	Type of conductor and solid 1.5 mm <sup>2</sup> conductor cross-section
		Type of conductor and stranded 1.5 mm <sup>2</sup> conductor cross-section
		Type of conductor and AWG 16/1 conductor cross-section
		Type of conductor and AWG 16/19 conductor cross-section
	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 stranded 0.25 mm <sup>2</sup> conductor cross-section
		Type of conductor and AWG 28/1 conductor cross-section
		Type of conductor and AWG 28/19 conductor cross-section
	Evaluation	passed
	Requirement	≥20 N
	Conductor type	Type of conductor and H05V-U0.5 conductor cross-section
	Evaluation	passed
	Requirement	≥40 N
	Conductor type	Type of conductor and H07V-U1.5 conductor cross-section
		Type of conductor and H07V-K1.5 conductor cross-section
		Type of conductor and AWG 16/1 conductor cross-section
		Type of conductor and AWG 16/19 conductor cross-section
	Evaluation	passed

## Classifications

ETIM 6.0	EC002638	ETIM 7.0	EC002638
ETIM 8.0	EC002638	ETIM 9.0	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
ECLASS 12.0	27-46-02-02	ECLASS 13.0	27-46-02-02

## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
SCIP	cec56c8c-fe86-40ec-b01a-efe288a878ac

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[www.weidmueller.com](http://www.weidmueller.com)**Technical data****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	<ul style="list-style-type: none"><li>• Additional variants on request</li><li>• Rated current related to rated cross-section &amp; min. No. of poles.</li><li>• Wire end ferrule with plastic collar to DIN 46228/4</li><li>• P on drawing = pitch</li><li>• 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.</li><li>• 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</li><li>• Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months</li></ul>

**Approvals**

Approvals



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

**Downloads**

Engineering Data	<a href="#">CAD data – STEP</a>
Product Change Notification	<a href="#">PCN_2017_190_PL30X_BL_381_Lock_Release_lever_EN</a> <a href="#">PCN_2017_190_PL30X_BL_381_Löseriegel_DE</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>

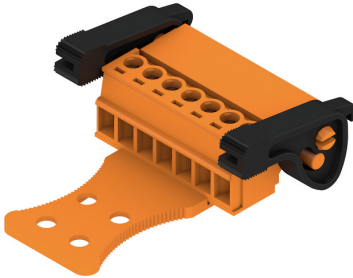
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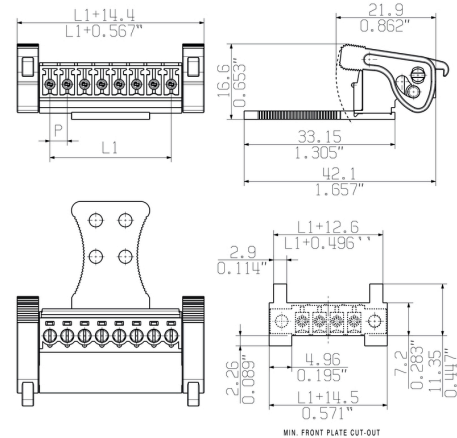
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## Drawings

## Product image



## Dimensional drawing



## Graph



## Graph



## Graph



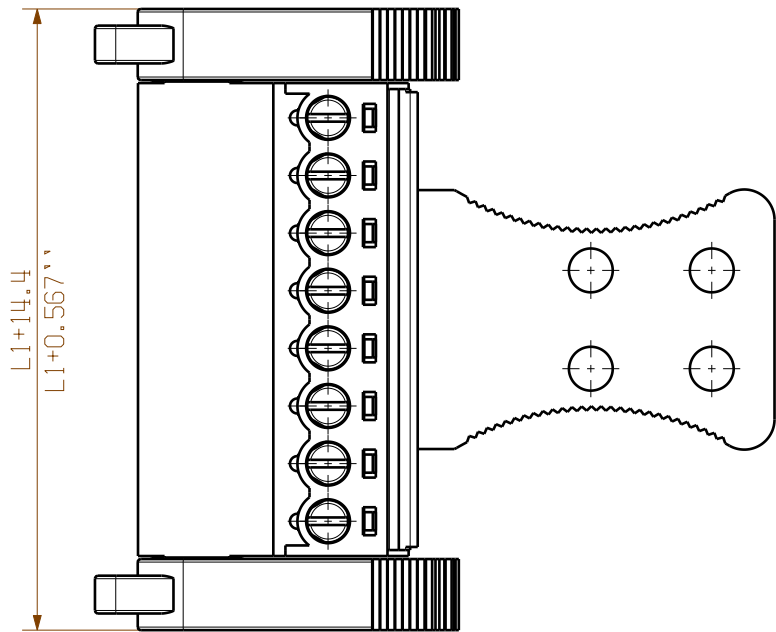
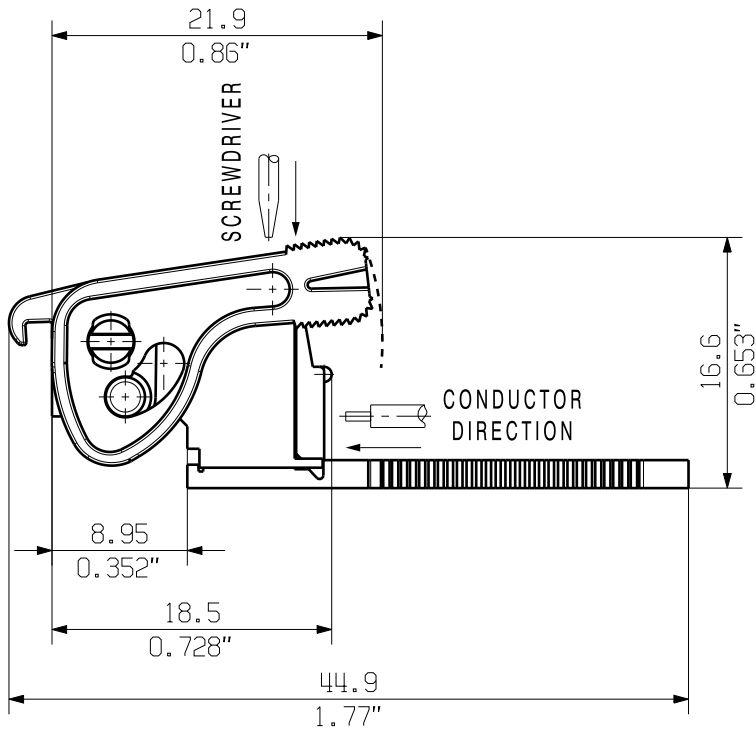


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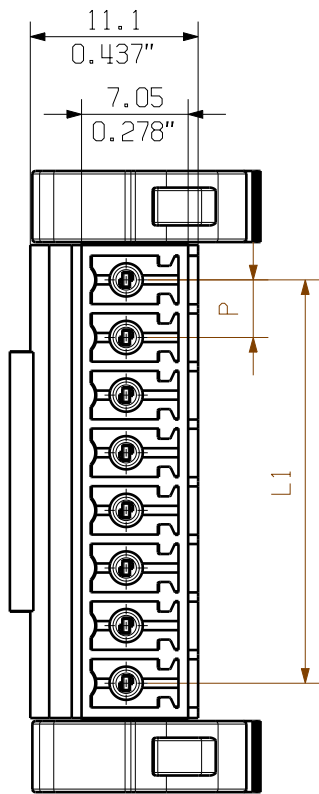
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Dimensions without tolerances are no check dimensions

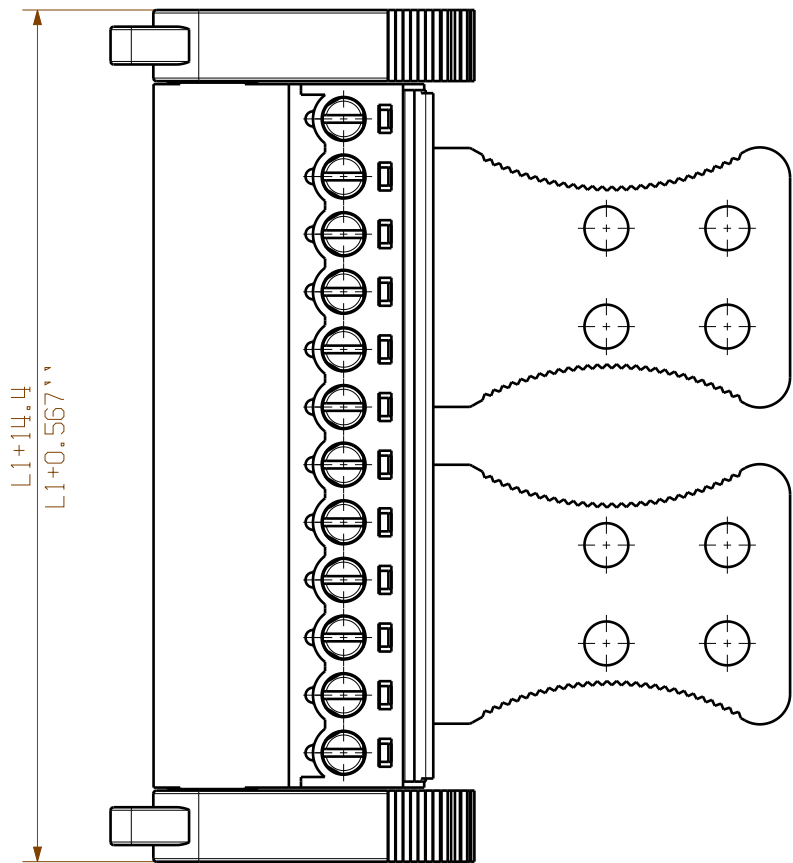
The English version is binding



SCZ 3.81/.../180LRZE SN...  
ONE ZE FOR 4-9 POLE



KUNDENZEICHNUNG  
CUSTOMER DRAWING



SCZ 3.81/.../180LRZE SN...  
TWO ZE FOR 10-20 POLE

P = 3.81 RASTER  
0.15" PITCH

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	-	-
3	-	-
2	-	-
N	L1 [mm]	L1 [inch]

GENERAL TOLERANCE:  
DIN ISO 2768-m

RoHS  
COMPLIANT

Max. nos.

86251/0  
26.05.16 XIANG\_K

00

Modification

Date

17.02.2016

Name

XIANG\_K

Drawn

Responsible

Checked

Approved

26.05.2016

ZHOU\_N

XU\_S

**Weidmüller**

Cat.no.: .

C 63184

00

Drawing no.

Sheet 00

Issue no.

of 00 sheets

SCZ 3.81...180LR...

ZUGBUEGELANSCHLUSS STIFTLEISTE

CLAMPING YOKE CONNECTION PIN HEADER

Product file: SCZ 3.81

7078