

SC 3.81/20/90G 3.2SN BK BX

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image



The SC pin header has a parallel (recumbent) plugging direction in relation to the PCB. It is available in closed (G) and screw flange (F) versions.

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

General ordering data

Version	PCB plug-in connector, male header, closed side, THT solder connection, 3.81 mm, Number of poles: 20, 90°, Solder pin length (l): 3.2 mm, tinned, black, Box
Order No.	1942440000
Type	SC 3.81/20/90G 3.2SN BK BX
GTIN (EAN)	4032248655151
Qty.	18 pc(s).
Product data	IEC: 320 V / 17.5 A UL: 300 V / 10 A
Packaging	Box

Creation date March 26, 2021 11:28:49 AM CET

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Technical data
Dimensions and weights

Depth	9.2 mm	Depth (inches)	0.362 inch
Height	10.3 mm	Height (inches)	0.406 inch
Height of lowest version	7.1 mm	Net weight	4.88 g
Width	77.6 mm	Width (inches)	3.055 inch

System specifications

Product family	OMNIMATE Signal - series BC/SC 3.81	Type of connection	Board connection
Mounting onto the PCB	THT solder connection	Pitch in mm (P)	3.81 mm
Pitch in inches (P)	0.15 inch	Outgoing elbow	90°
Number of poles	20	Number of solder pins per pole	1
Solder pin length (l)	3.2 mm	Solder pin length tolerance	0 / -0.2 mm
Solder pin dimensions	d = 1.0 mm, Octagonal	Solder pin dimensions = d tolerance	0 / -0,03 mm
Solder eyelet hole diameter (D)	1.2 mm	Solder eyelet hole diameter tolerance (D)+	0,1 mm
L1 in mm	72.39 mm	L1 in inches	2.85 inch
Number of rows	1	Pin series quantity	1
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
Plugging force/pole, max.	7 N	Pulling force/pole, max.	5 N

Material data

Insulating material	PA GF	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 550	UL 94 flammability rating	V-0
Contact material	Copper alloy	Contact surface	tinned
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

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)	17.5 A	Rated current, min. number of poles (Tu=40°C)	17.5 A
Rated current, max. number of poles (Tu=40°C)	16.3 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 current (Use group B / CSA) 8 A

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

Reference to approval values

Specifications are maximum values, details - see approval certificate.

Packing

Packaging	Box	VPE length	35 mm
VPE width	90 mm	VPE height	155 mm

Classifications

ETIM 6.0	EC002637	ETIM 7.0	EC002637
ECLASS 9.0	27-44-04-02	ECLASS 9.1	27-44-04-02
ECLASS 10.0	27-44-04-02	ECLASS 11.0	27-46-02-01

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

Data sheet**SC 3.81/20/90G 3.2SN BK BX****Weidmüller Interface GmbH & Co. KG**
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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](#)
Engineering Data [EPLAN, WSCAD](#)
Product Change Notification [Change of packaging - DE](#)
[Change of packaging - EN](#)

Data sheet

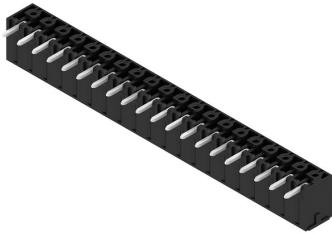
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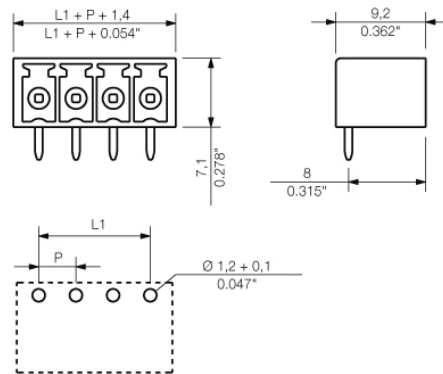
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Drawings

Product image

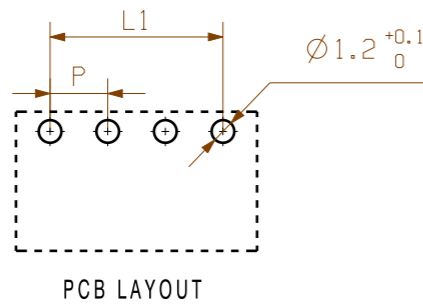


Dimensional drawing

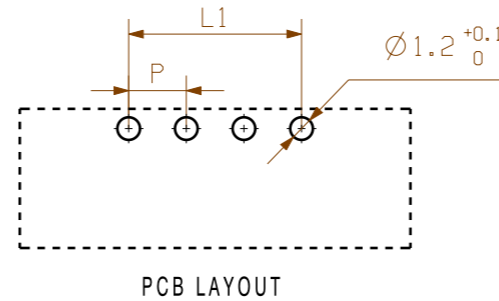
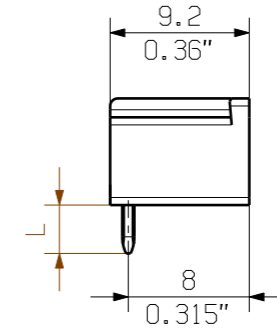
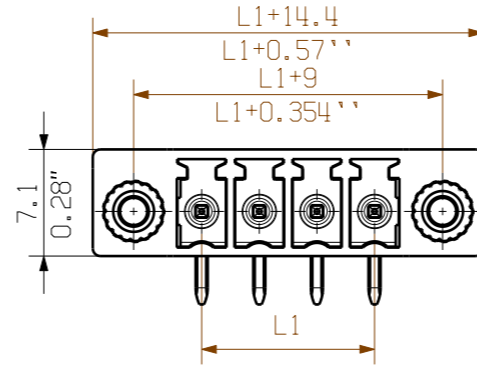


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SC 3.81/.../90G 3.2....



SC 3.81/.../90F 3.2...



KUNDENZEICHUNG
CUSTOMER DRAWING

P=3.81

20	72.39	2.850
19	68.58	2.700
18	64.77	2.550
17	60.96	2.400
16	57.15	2.250
15	53.34	2.100
14	49.53	1.950
13	45.72	1.800
12	41.91	1.650
11	38.10	1.500
10	34.29	1.350
9	30.48	1.200
8	26.67	1.050
7	22.86	0.900
6	19.05	0.750
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]

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

Weidmüller connectors are tested to the DIN VDE 0627 standard, and are valid for its field of application. Provided that the connectors are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

GENERAL TOLERANCE: DIN ISO 2768-m RoHS COMPLIANT	97482/0	01	Weidmüller	C 40384 08 Drawing no. Issue no.
	06.09.17 MA_J			
Modification	Date	Name	SC 3.81/.../90...3.2.... ANSCHLUSS STIFTLISTE PIN HEADER	
Drawn	09.02.2006	ZHANG_H		
Responsible		MA_J		
Checked	13.09.2017	ZHOU_N		
Supersedes:	Approved	XU_S	Product file: SC 3.81	7069

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Recommended wave soldering profiles

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Single Wave:



Double Wave:



Wave soldering profiles

Wired connection elements should be processed in accordance with the DIN EN 61760-1 standard. We have included two recommendations for practical wave soldering profiles, with which Weidmüller PCB terminals and connectors are qualified.

When choosing a suitable profile for your application, the following factors also need to be considered:

- PCB thickness
- Proportion of Cu in the layers
- Single/double-sided assembly
- Product range
- Heating and cooling rates

The single and double wave profiles each indicate the recommended operating range, including the maximum soldering temperature of 260°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.