

SC-SMT 3.81/03/180G 1.5SN BK RL

Weidmüller Interface GmbH & Co. KG

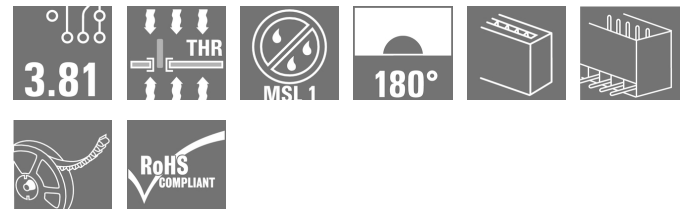
Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image



Similar to illustration

High-temperature-resistant pin header (SC-SMT 180G) in 3.81-mm pitch (0.15 inch)

- Plugging direction is perpendicular to PCB (standing)
- Closed (G) .
- Packed either in box (BX) or on anti-static roll (tape-on-reel, RL)
- Pin length of either 1.5 mm or 3.2 mm

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 header, closed side, THT/THR solder connection, 3.81 mm, Number of poles: 3, 180°, Solder pin length (l): 1.5 mm, tinned, black, Tape
Order No.	1864060000
Type	SC-SMT 3.81/03/180G 1.5SN BK RL
GTIN (EAN)	4032248429189
Qty.	300 pc(s).
Product data	IEC: 320 V / 17.5 A UL: 300 V / 11 A
Packaging	Tape

Creation date September 16, 2022 7:34:16 PM CEST

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Technical data

Dimensions and weights

Depth	7.07 mm	Depth (inches)	0.278 inch
Height	10.7 mm	Height (inches)	0.421 inch
Height of lowest version	9.2 mm	Width	12.12 mm
Width (inches)	0.477 inch	Net weight	2.06 g

System specifications

Product family	OMNIMATE Signal - series BC/SC 3.81	Type of connection	Board connection
Mounting onto the PCB	THT/THR solder connection	Pitch in mm (P)	3.81 mm
Pitch in inches (P)	0.15 inch	Outgoing elbow	180°
Number of poles	3	Number of solder pins per pole	1
Solder pin length (l)	1.5 mm	Solder pin length tolerance	0 / -0,02 mm
Solder pin dimensions	d = 1.0 mm, Octagonal	Solder pin dimensions = d tolerance	0 / -0,04 mm
Solder eyelet hole diameter (D)	1.3 mm	Solder eyelet hole diameter tolerance (D)	+ 0,1 mm
Outside diameter of solder pad	2.1 mm	Template aperture diameter	1.9 mm
L1 in mm	7.62 mm	L1 in inches	0.3 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

Material data

Insulating material	LCP GF	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 175	Moisture Level (MSL)	1
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)	13.9 A	Rated current, min. number of poles (Tu=40°C)	17 A
Rated current, max. number of poles (Tu=40°C)	12.4 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) 11 A

Reference to approval values Specifications are maximum values, details - see approval certificate.

Packing

Packaging	Tape	VPE length	35 mm
VPE width	330 mm	VPE height	330 mm
Tape depth (T2)	14.5 mm	Tape width (W)	32 mm
Tape pocket depth (K0)	14 mm	Tape pocket height (A0)	7.4 mm
Tape pocket width (B0)	12.4 mm	Tape pocket separation (P1)	16 mm
Tape hole separation (E)	1.75 mm	Tape pocket separation (F)	14.2 mm
Tape reel diameter \varnothing (A)	330 mm	Surface resistance	$R_s = 10^9 - 10^{12} \Omega$
Width Pick & Place Pad (W_{PPP})	6.7 mm	Length Pick & Place Pad (L_{PPP})	12.5 mm
Diameter of the withdrawal surface ($\varnothing D_{max}$)	6 mm	Protrusion 1 Pick & Place Pad ($L_{01 (PPP)}$)	6.25 mm
Protrusion 2 Pick & Place Pad ($P_{02 (PPP)}$)	6.25 mm		

Classifications

ETIM 6.0	EC002637	ETIM 7.0	EC002637
ETIM 8.0	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	ECLASS 12.0	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

- 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

Approvals

Approvals



ROHS Conform

UL File Number Search UL Website

Certificate No. (cURus) E60693

Creation date September 16, 2022 7:34:16 PM CEST

Catalogue status 09.09.2022 / We reserve the right to make technical changes.

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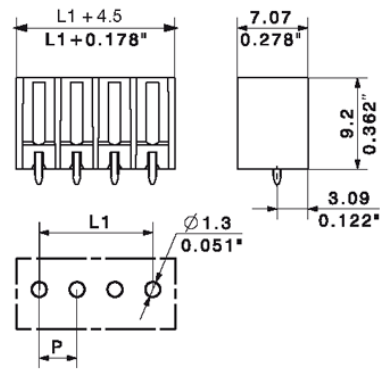
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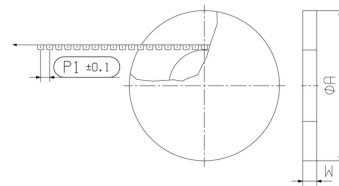
Technical data

Downloads

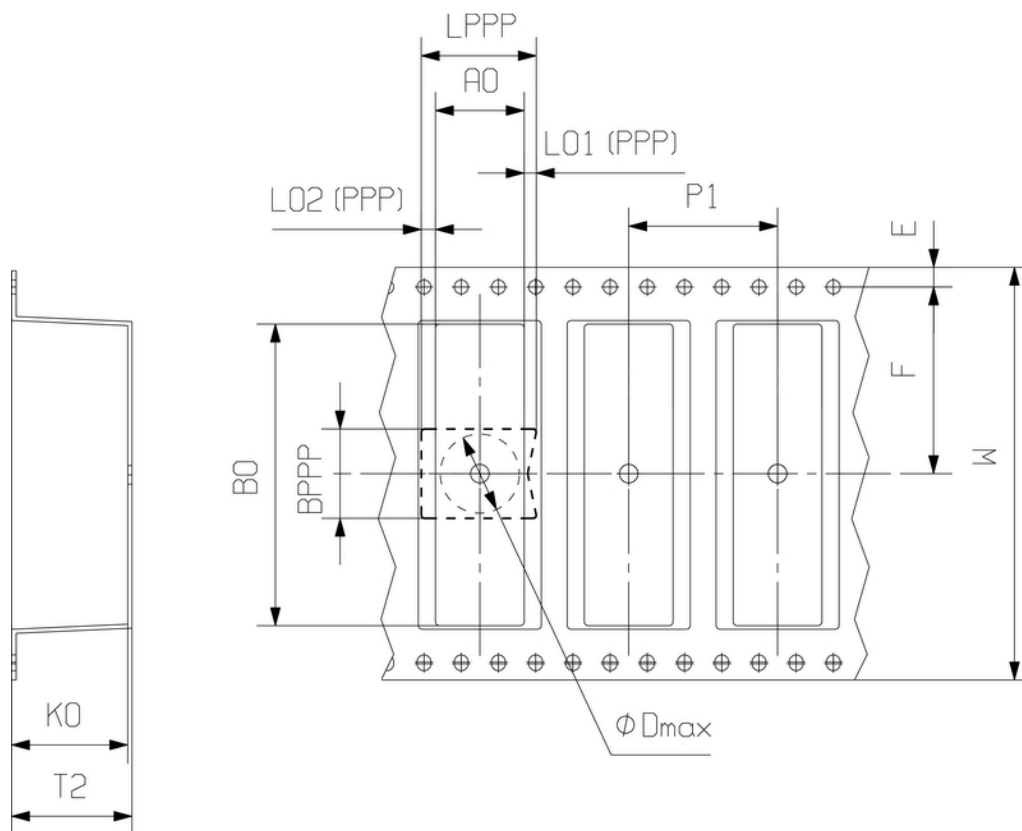
Approval/Certificate/Document of Conformity	CB Certificate CB Testreport Declaration of the Manufacturer
Engineering Data	CAD data – STEP
Product Change Notification	PCN_2015_208_PL30X_SC-SMT_SL_SMT_3.xx_5.xx_new_Tape_Packaging_Step_1_EN PCN_2015_208_PL30X_SC-SMT_SL_SMT_3.xx_5.xx_neue_Tapeverpackung_Step_1_DE
Catalogues	Catalogues in PDF-format
Brochures	FL DRIVES EN MB SMT EN FL DRIVES DE MB DEVICE MANUF. EN FL BUILDING SAFETY EN FL APPL LED LIGHTING EN FLIndustr.CONTROLS EN FL MACHINE SAFETY EN FL HEATING ELECTR EN FL APPL INVERTER EN FL_BASE_STATION EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN PO OMNIMATE EN
White paper surface mount technology	Download Whitepaper

Data sheet**SC-SMT 3.81/03/180G 1.5SN BK RL****Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
D-32758 Detmold
Germanywww.weidmueller.com**Drawings****Dimensional drawing****Example of use**

Dimensional drawing



Dimensional drawing

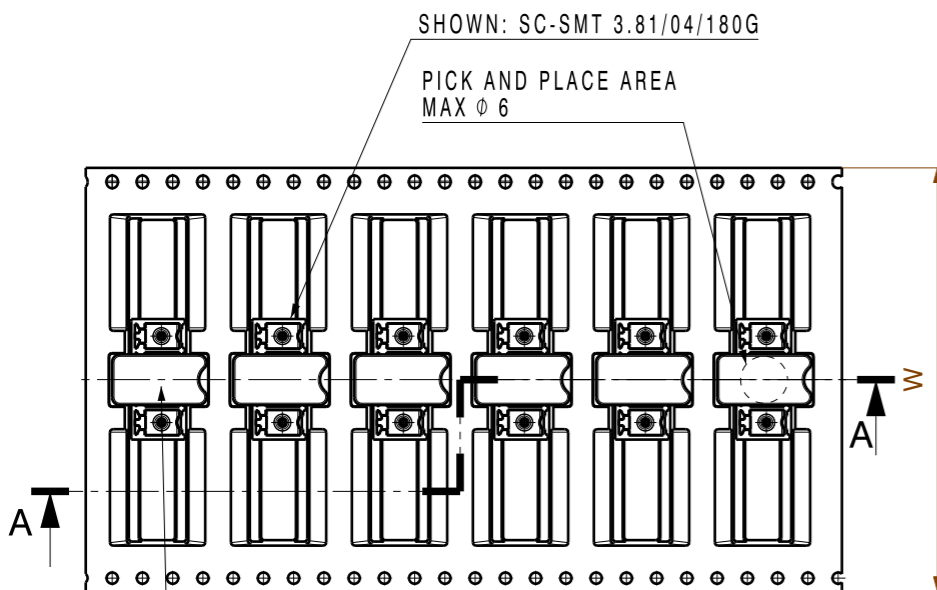
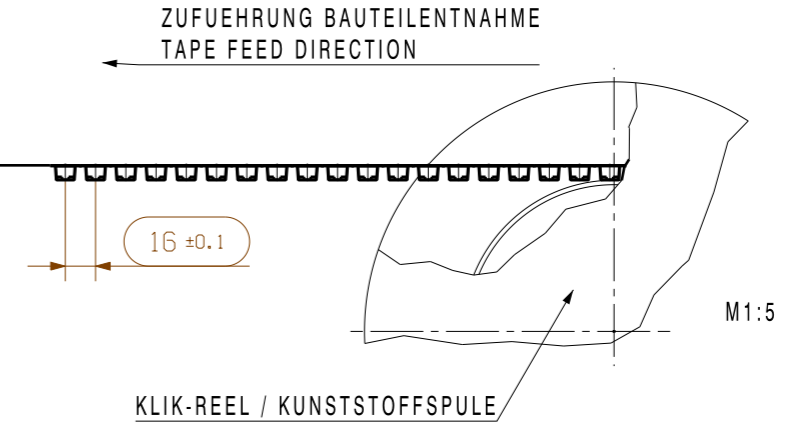
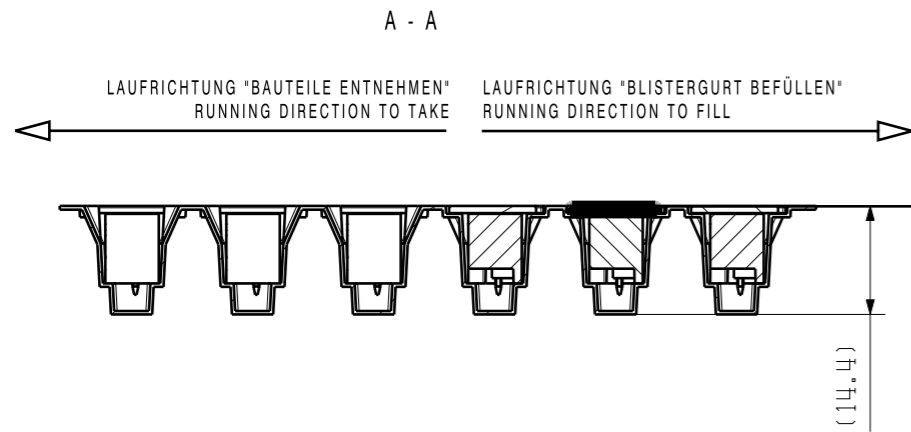


DIRECTION OF UNREELING →

MASSE OHNE TOLERANZ SIND KEINE PRUEFMASSE
 DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.

DIE DEUTSCHE VERSION IST VERBINDLICH
 THE GERMAN VERSION IS BINDING

New Universal-Tape



SHOWN : TAPE56 SC3.81/5-11G/180

GERADE POLZAHL DARGESTELLT/
 EVEN POLE NUMBER SHOWN

UNGERADE POLZAHL DREHUNG PPP UM 180°/
 UNEVEN POLE NUMBER WITH PPP ROTATED
 180°

STIFTLISTEN MÜSSEN MITTIG IM TAPE SITZEN /
 PIN HEADER ASSEMBLED IN THE MIDDLE

TAPEBREITE TAPEWIDTH (MAT.NR.)	POL ZAHL NO OF POLS	SC-SMT 3.81/./180.. 1.5 BK		SC-SMT 3.81/./180.. 3.2 BK		SC-SMT 3.81/./180.. 2.6 BK		SC-SMT 3.81/./180.. 2.6 TGY	
		BESTELLNr./CAT.NO.		BESTELLNr./CAT.NO.		BESTELLNr./CAT.NO.		BESTELLNr./CAT.NO.	
W	n	G	LF	G	LF	G	LF	G	LF
32 (1398390000)	2	1864050000	/		/	1508670000	/		/
	3	1864060000	/		/		/		/
	4	1864290000	/	1863490000	/		/		/
44 (2017980000)	2	/	1864220000	/	1863500000	/		/	
	3	/	1864230000	/	1863510000	/		/	
	4	/	1864240000	/	1863530000	/		/	
	5	1864300000	1864250000		1863580000				
	6	1864310000	1864260000		1863600000				
	7	1864320000	/		/		/		/
	8	1864330000	/		/		/		/
56 (1302030000)	7	/	1864270000	/	1863620000	/		/	
	8	/	1864280000	/	1863640000	/		/	
	9	1864340000							
	10	1864350000							
88 (1396720000)	9	/		/		/		/	
	10	/		/	1430710000	/		/	
	11	1430820000	1430680000	1430830000	1430690000				
	12	1430840000	1430700000	1430850000	1359440000				
	13	1430860000	1430720000	1430870000	1430730000				
	14	1430880000	1430740000	1430890000	1430750000	1222740000		1222750000	
	15	1430910000	1430770000	1430920000	1430780000				
16	1430930000	1430790000	1430940000	1430810000					

TAPE UND REEL GEMAESS IEC 286-3 (EN 60286-3) /
 TAPE AND REEL ACCORDING TO IEC 286-3 (EN 60286-3)

84510/5
 29.10.15
 GUETZLAFF_T
 MODIFICATION

DATE: 06.09.2012
 NAME: LANG_T

RESPONSIBLE: AMANN_A

CHECKED: 30.10.2015
 HELIG_MA

APPROVED: LANG_T

SCALE: 1/1 (04)

SUPERSEDES: .

CAT.NO.: .

Weidmüller

3 56539 04

DRAWING NO. 3 56539
 SHEET 00 OF 00 SHEETS

ISSUE NO. 04

SC-SMT 3.81/./180...RL
 ANSCHLUSS STIFTLISTE
 PIN HEADER

PRODUCT FILE: SC-SMT 3.81 7278

WEITERGABE SOWIE VERVIELFÄLTIGUNG 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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Recommended wave soldering profiles

Weidmüller Interface GmbH & Co. KG
 Klängenbergstraße 16
 D-32758 Detmold
 Germany
 Fon: +49 5231 14-0
 Fax: +49 5231 14-292083
 www.weidmueller.com

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.

Recommended reflow soldering profile

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 16
 D-32758 Detmold
 Germany
 Fon: +49 5231 14-0
 Fax: +49 5231 14-292083
 www.weidmueller.com



Reflow soldering profile

The perfect soldering profile for SMT Surface Mount Technology is one the most exiting question in SMT production. But there are more than one correct answer: The diagram of temperature-on-time is related to processing features of solder paste and to maximum load of components.

We have to consider the following parameters:

- Time for pre heating
- Maximum temperature
- Time above melting point
- Time for cooling
- Maximum heating rate
- Maximum cooling rate

We recommend a typical solder profile with associated process limits. With preheating components and board are prepared smoothly for the solder phase. Heating rate is typically $\leq +3\text{K/s}$. In parallel the solder paste is ‚activated‘. The time above melting point of 217°C the paste gets liquid and components and boards begin to connect. The maximum temperature of 245°C to 254°C should stay between 10 and 40 seconds. In the cooling phase at $\geq -6\text{K/s}$ solder is cured. Board and components cool down while avoiding cold cracks.