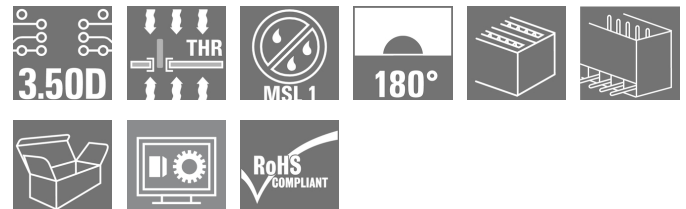


**OMNIMATE Signal - series B2C/S2C 3.50 - 2-row
S2C-SMT 3.50/04/180G 3.5SN BK BX**

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 16
 D-32758 Detmold
 Germany
 Fon: +49 5231 1429-0
 Fax: +49 5231 14292083
 www.weidmueller.com


High-temperature-resistant pin header.

- touch-safe
- can be plugged into B2CF 3.50 PUSH IN female plug
- Plug-in direction is perpendicular or parallel to the circuit board (180° / 90°)
- Housing variants: closed (G) and with solder flange (LF)
- Box packaging (BX) or, anti-static, tape-on-reel (RL)
- Suitable for reflow and wave soldering applications
- Pin length of either 1.5 mm or 3.5 mm

General ordering data

Type	S2C-SMT 3.50/04/180G 3.5SN BK BX
Order No.	1290030000
Version	PCB plug-in connector, male header, closed side, THT/THR solder connection, 3.50 mm, No. of poles: 4, 180°, Solder pin length (l): 3.5 mm, tinned, Black, Box
GTIN (EAN)	4050118082968
Qty.	222 pc(s).
Product data	IEC: 200 V / 13.4 A UL: 150 V / 10 A
Packaging	Box

**OMNIMATE Signal - series B2C/S2C 3.50 - 2-row
S2C-SMT 3.50/04/180G 3.5SN BK BX**

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 16
 D-32758 Detmold
 Germany
 Fon: +49 5231 1429-0
 Fax: +49 5231 14292083
 www.weidmueller.com

Technical data**Dimensions and weights**

Net weight 1.54 g

System specifications

Product family		Type of connection	
OMNIMATE Signal - series B2C/S2C 3.50 - 2-row		Board connection	
Mounting onto the PCB		Pitch in mm (P)	
THT/THR solder connection		3.5 mm	
Pitch in inches (P)		Outgoing elbow	
0.138 inch		180°	
No. of poles		Number of solder pins per pole	
4		1	
Solder pin length (l)		Solder pin length tolerance	
3.5 mm		0 / -0.3 mm	
Tolerance of solder pin position		Solder pin dimensions	
± 0.1 mm		d = 1.0 mm, Octagonal	
Solder pin dimensions = d tolerance		Solder eyelet hole diameter (D)	
+0,01 / -0,03 mm		1.3 mm	
Solder eyelet hole diameter tolerance (D)+ 0,1 mm		Outside diameter of solder pad	
		2.1 mm	
Template aperture diameter		L1 in mm	
1.9 mm		3.5 mm	
L1 in inches		Number of rows	
0.138 inch		1	
Pin series quantity		Touch-safe protection acc. to DIN VDE 57 106	
2		Safe from finger touch	
Touch-safe protection acc. to DIN VDE 0470		Can be coded	
IP 20		Yes	
Plugging cycles		push-in force/pole	
25		5 N	
Withdrawal force per pole		Packaging	
5 N		Box	

Material data

Insulating material		Colour	
LCP GF		Black	
Colour chart (similar)		Insulating material group	
RAL 9011		IIIb	
CTI		Insulation resistance	
≥ 175		≥ 10 ⁸ Ω	
Moisture Level (MSL)		UL 94 flammability rating	
1		V-0	
Contact material		Contact surface	
Copper alloy		tinned	
Layer structure of solder connection		Layer structure of plug contact	
2-5 µm Sn / 1-3 µm Ni		2-5 µm Sn / 1-3 µm Ni	
Storage temperature, min.		Storage temperature, max.	
-25 °C		55 °C	
Max. relative humidity during storage		Operating temperature, min.	
80 %		-50 °C	
Operating temperature, max.		Temperature range, installation, min.	
120 °C		-40 °C	
Temperature range, installation, max.			
120 °C			

Rated data acc. to IEC

tested acc. to standard		Rated current, min. no. of poles (Ta = 20°C)	
IEC 60664-1, IEC 61984		13.4 A	
Rated current, min. no. of poles (Ta = 40°C)		Rated voltage for surge voltage class / pollution degree II/2	
12 A		200 V	
Rated voltage for surge voltage class / pollution degree III/2		Rated voltage for surge voltage class / pollution degree III/3	
160 V		80 V	
Rated impulse voltage for surge voltage class/ pollution degree II/2		Rated impulse voltage for surge voltage class/ pollution degree III/2	
2.5 kV		2.5 kV	
Rated impulse voltage for surge voltage class/ contamination degree III/3		Short-time withstand current resistance	
2.5 kV		3 x 1s with 80 A	

OMNIMATE Signal - series B2C/S2C 3.50 - 2-row S2C-SMT 3.50/04/180G 3.5SN BK BX

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 16
 D-32758 Detmold
 Germany
 Fon: +49 5231 1429-0
 Fax: +49 5231 14292083
 www.weidmueller.com

Technical data

Rated data acc. to CSA

Institute (CSA)		Certificate No. (CSA)	200039-1121690
Rated voltage (Use group B)	150 V	Rated voltage (Use group C)	50 V
Rated voltage (use group D)	150 V	Rated current (use group B)	9.5 A
Rated current (use group C)	9.5 A	Rated current (use group D)	9.5 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)	150 V	Rated voltage (use group C)	50 V
Rated current (use group B)	10 A	Rated current (use group C)	10 A
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Classifications

ETIM 4.0	EC002637	ETIM 5.0	EC002637
ETIM 6.0	EC002637	eClass 6.2	27-26-07-04
eClass 7.1	27-44-04-02	eClass 8.1	27-44-04-02
eClass 9.0	27-44-04-02	eClass 9.1	27-44-04-02

Notes

Notes	<ul style="list-style-type: none"> • Gold-plated contact surfaces on request • Rated current related to rated cross-section & min. No. of poles. • Spacing between rows: see hole layout • 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.
IPC conformity	The products are developed, manufactured and delivered according to the internationally recognised IPC-A-610 standard, category "permissible". More extensive demands on the products can be evaluated on request.

Approvals

Approvals	
ROHS	Conform

Data sheet**OMNIMATE Signal - series B2C/S2C 3.50 - 2-row
S2C-SMT 3.50/04/180G 3.5SN BK BX**

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 1429-0
Fax: +49 5231 14292083
www.weidmueller.com

Technical data**Downloads**

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Brochure/Catalogue	FL DRIVES EN MB SMT EN FL DRIVES DE MB DEVICE MANUF. EN CAT 2 PORTFOLIOGUIDE 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
Engineering Data	EPLAN, WSCAD
SMT white paper	Download Whitepaper

Data sheet

**OMNIMATE Signal - series B2C/S2C 3.50 - 2-row
S2C-SMT 3.50/04/180G 3.5SN BK BX**

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 16
 D-32758 Detmold
 Germany
 Fon: +49 5231 1429-0
 Fax: +49 5231 14292083
 www.weidmueller.com

Drawings

Dimensional drawing



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.