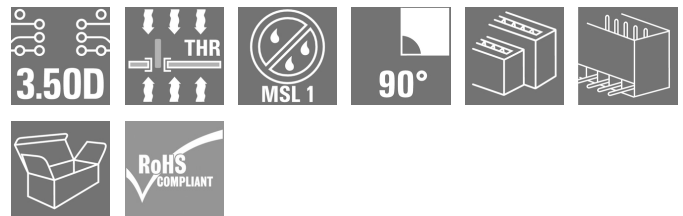


S2CD-THR 3.50/08/90LF 3.2SN BK BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com**Product image****The new benchmark for component density: the virtual 0.875mm pitch - for 1mm² I/O connections**

The only 4-row double level male connectors for standard IP20 sensor interfaces with 3.5 pitch

The S2L in a double pack - a standard has surpassed itself:

- Each 3.5mm wide, 4 I/O contacts for 1mm² connection cross-section
- Force-fit enclosure geometry guarantees maximum stability
- Solder flange eliminates the need for a screw fastening

Less is more - basic advantages for your applications:

- 75% space savings on the circuit board
- Solder flange reduces process costs
- Less mechanical load on the soldering points
- More space for displays in the front panel, for example

A "small" contribution to greater competitiveness: additional features in the same installation space or a more compact device with the same range of functions.

General ordering data

| | |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Version | PCB plug-in connector, male header, Solder flange, THT/THR solder connection, 3.50 mm, Number of poles: 8, 90°, Solder pin length (l): 3.2 mm, tinned, black, Box |
| Order No. | 1357890000 |
| Type | S2CD-THR 3.50/08/90LF 3.2SN BK BX |
| GTIN (EAN) | 4050118160833 |
| Qty. | 50 pc(s). |
| Product data | IEC: 200 V / 7.9 A UL: 150 V / 9.5 A |
| Packaging | Box |

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Technical data**Dimensions and weights**

| | | | |
|--------------------------|------------|-----------------|------------|
| Depth | 24.4 mm | Depth (inches) | 0.961 inch |
| Height | 35 mm | Height (inches) | 1.378 inch |
| Height of lowest version | 31.8 mm | Width | 14 mm |
| Width (inches) | 0.551 inch | Net weight | 6.86 g |

System specifications

| | | | |
|--------------------------------------------|-----------------------------------------------|---------------------------------------------------|-----------------------------------------------------|
| Product family | OMNIMATE Signal - series B2C/S2C 3.50 - 2-row | Type of connection | Board connection |
| Mounting onto the PCB | THT/THR solder connection | Pitch in mm (P) | 3.5 mm |
| Pitch in inches (P) | 0.138 " | Outgoing elbow | 90° |
| Number of poles | 8 | Number of solder pins per pole | 1 |
| Solder pin length (l) | 3.2 mm | Solder pin dimensions | d = 1.0 mm, Octagonal |
| 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 | 10.5 mm | L1 in inches | 0.413 " |
| Pin series quantity | 4 | Touch-safe protection acc. to DIN VDE 57 106 | finger-safe unplugged/ back-of-hand-safe plugged |
| Touch-safe protection acc. to DIN VDE 0470 | IP20 plugged/ IP10 unplugged | Can be coded | Yes |

Material data

| | | | |
|---------------------------------------|---------------------------|---------------------------------------|--------------------------------|
| Insulating material | LCP GF | Colour | black |
| Colour chart (similar) | RAL 9011 | Insulating material group | IIIb |
| Comparative Tracking Index (CTI) | ≥ 175 | Moisture Level (MSL) | 1 |
| UL 94 flammability rating | V-0 | Contact material | Cu-alloy |
| Contact surface | tinned | Layer structure of solder connection | 1...3 µm Ni / 2...5 µm Sn matt |
| Layer structure of plug contact | 2...5 µm Sn / 1...3 µm Ni | Storage temperature, min. | -40 °C |
| Storage temperature, max. | 70 °C | Operating temperature, min. | -50 °C |
| Operating temperature, max. | 120 °C | Temperature range, installation, min. | -40 °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) | 7.9 A |
| Rated current, max. number of poles (Tu=20°C) | 5 A | Rated current, min. number of poles (Tu=40°C) | 6.8 A |
| Rated current, max. number of poles (Tu=40°C) | 5 A | Rated voltage for surge voltage class / pollution degree II/2 | 200 V |
| Rated voltage for surge voltage class / pollution degree III/2 | 160 V | Rated voltage for surge voltage class / pollution degree III/3 | 100 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 | 1.5 kV | Short-time withstand current resistance | 3 x 1s with 80 A |

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www.weidmueller.com

Technical data**Rated data acc. to CSA**

Institute (CSA)



Certificate No. (CSA)

200039-1121690

| | |
|-----------------------------------|------------------------------------------------------------------------|
| Rated voltage (Use group B / CSA) | 50 V |
| Rated voltage (Use group D / CSA) | 150 V |
| Rated current (Use group C / CSA) | 9.5 A |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. |

| | |
|-----------------------------------|-------|
| Rated voltage (Use group C / CSA) | 50 V |
| Rated current (Use group B / CSA) | 5 A |
| Rated current (Use group D / CSA) | 9.5 A |

Rated data acc. to UL 1059

Institute (cURus)



Certificate No. (cURus)

E60693

| | |
|---------------------------------------|------------------------------------------------------------------------|
| Rated voltage (Use group B / UL 1059) | 150 V |
| Rated voltage (Use group D / UL 1059) | 50 V |
| Rated current (Use group C / UL 1059) | 9.5 A |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. |

| | |
|---------------------------------------|-------|
| Rated voltage (Use group C / UL 1059) | 50 V |
| Rated current (Use group B / UL 1059) | 9.5 A |
| Rated current (Use group D / UL 1059) | 9.5 A |

Packing

| | | | |
|-----------|--------|------------|--------|
| Packaging | Box | VPE length | 196 mm |
| VPE width | 139 mm | VPE height | 37 mm |

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 6.0 | EC002637 | ETIM 7.0 | EC002637 |
| ETIM 8.0 | EC002637 | ETIM 9.0 | 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 | ECLASS 13.0 | 27-46-02-01 |
| ECLASS 14.0 | 27-46-02-01 | | |

Environmental Product Compliance

| | |
|------------------------|-----------------------------|
| REACH SVHC | / |
| RoHS Compliance Status | Compliant without exemption |

S2CD-THR 3.50/08/90LF 3.2SN BK BX

Weidmüller Interface GmbH & Co. KG

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Germany

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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"> • 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. • 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 • Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months |

Approvals

Approvals



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

Downloads

| | |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approval/Certificate/Document of Conformity | Declaration of the Manufacturer |
| Engineering Data | CAD data – STEP |
| Product Change Notification | Changeover of the locking hook for the solder flange pin of the S2C-SMT 3.50 and S2L-SMT 3.50 |
| Catalogues | Catalogues in PDF-format |
| Brochures | FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE FL BUILDING SAFETY EN FL APPL LED LIGHTING EN FL INDUSTR.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 |

www.weidmueller.com

[illegible]

S2CD-THR 3.50/08/90LF 3.2SN BK BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com**Accessories****Coding elements****Only connects what is supposed to be connected:
the right connection at the right place.**

Coding elements and locking devices clearly assign connecting elements during the manufacturing process and operation

The coding elements and locking devices are inserted prior to assembly or during the cable assembly phase. The Weidmüller alternative: configure online using the variant configurator to precode prior to delivery.

Incorrect assembly on the circuit board and incorrect plugging of connecting elements is no longer possible. The advantage: no troubleshooting during manufacture and no operational errors by the user.

General ordering data

| Type | B2L/S2L 3.50 KO BK BX | Version | Product data | Packaging |
|------------|----------------------------|--------------------------------------------------------------------|--------------|-----------|
| Order No. | 1849740000 | PCB plug-in connector, Accessories, Coding element, black, Number | | Box |
| GTIN (EAN) | 4032248378203 | of poles: 1 | | |
| Qty. | 100 pc(s). | | | |
| Type | B2L/S2L 3.50 KO OR BX | Version | Product data | Packaging |
| Order No. | 1849730000 | PCB plug-in connector, Accessories, Coding element, orange, Number | | Box |
| GTIN (EAN) | 4032248378197 | of poles: 1 | | |
| Qty. | 100 pc(s). | | | |

WEITERGABE SOWIE VERVIELFÄLTIGUNG DIESER DOKUMENTS, VERWERTUNG UND MITTEILUNG SEINER INHALTS SIND VERBOTEN, SOWEIT NICHT AUSDRUECKLICH GESTATTET.
ZUWIDERHANDLUNGEN VERPFLICHTEN ZU SCHADENERSATZ. ALLE RECHTE FUER DEN FALL DER PATENT-, GEBRAUCHSMUSTER- ODER GESCHMACKSMUSTERRECHTUNG VORBEHALTEN.
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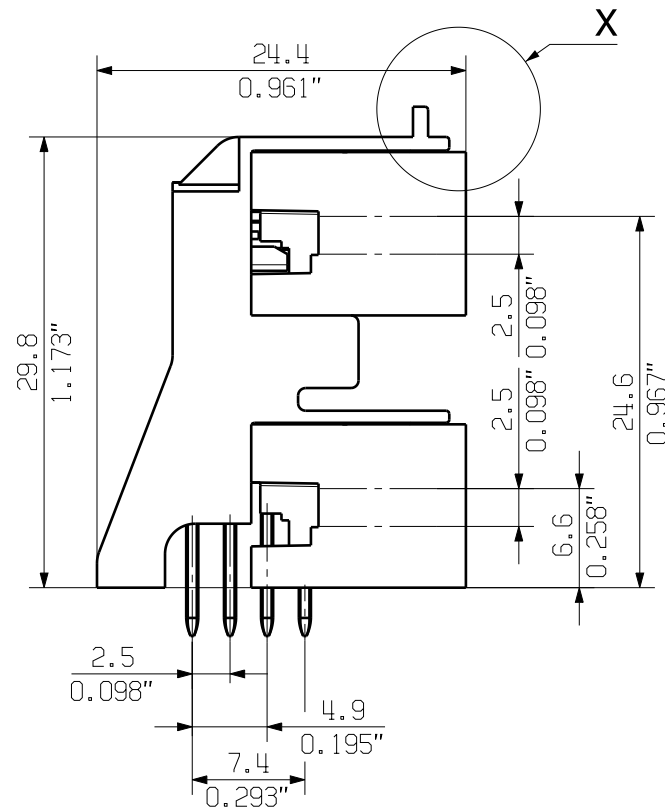
MASSE OHNE TOLERANZ SIND KEINE PRUEFMASSE
DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.

ALLGEMEINGUELTIGE KUNDENZEICHNUNG, AKTUELLER STAND NUR AUF ANFRAGE
GENERAL CUSTOMER DRAWING, TOPICAL VERSION ONLY IF REQUIRED

DIE DEUTSCHE VERSION IST VERBINDLICH
THE GERMAN VERSION IS BINDING



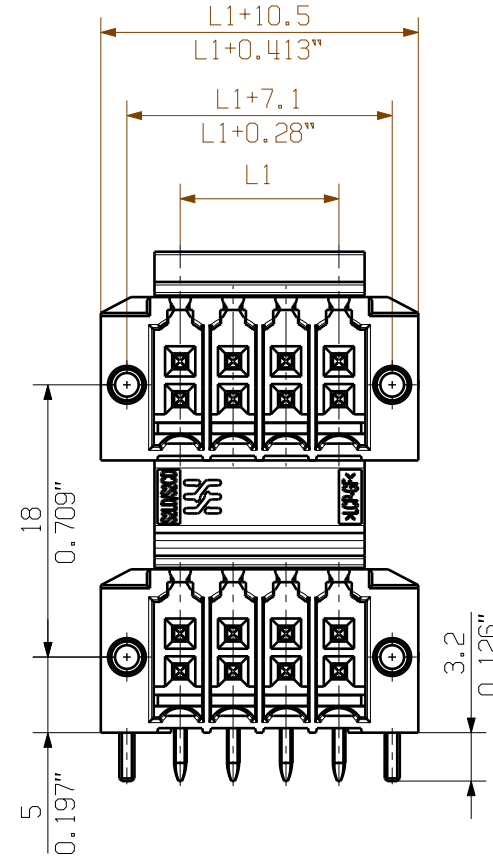
SHOWN: S2CD-THR 3.50/16/90G



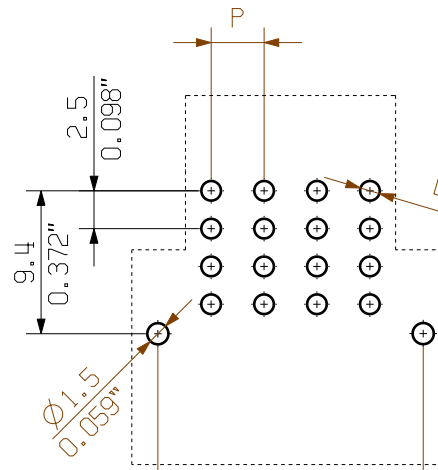
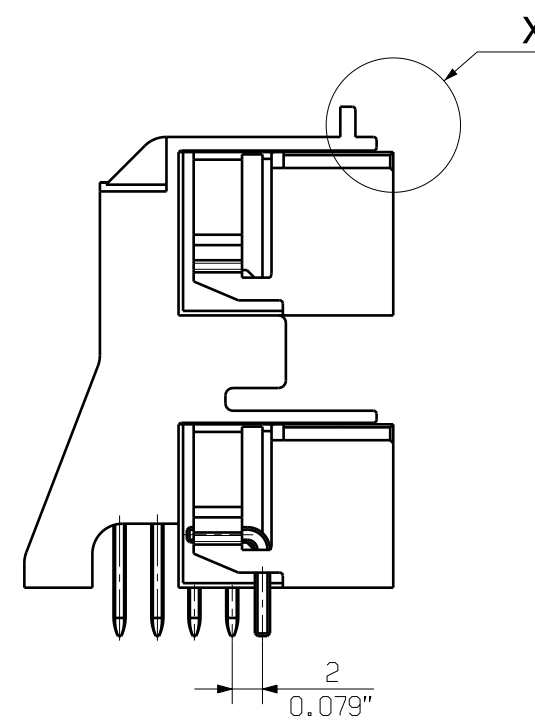
HOLE PATTERN



PASTE FREE AREA
MAX. DIMENSION



SHOWN: S2CD-THR 3.50/16/90LF



HOLE PATTERN

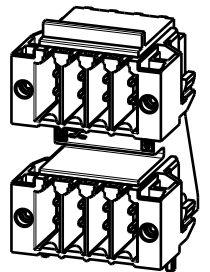


PASTE FREE AREA
MAX. DIMENSION

M 1/1
S2CD-THR 3.50/16/90G



M 1/1
S2CD-THR 3.50/16/90LF



For the mounting of PCBs, it should be noted that the rated data relates only to the PCB components alone.
The necessary 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 occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

| | | |
|----|------------------|----------------------------|
| 36 | 59.5 | 2.343 |
| 32 | 52.5 | 2.067 |
| 28 | 45.5 | 1.791 |
| 24 | 38.5 | 1.516 |
| 20 | 31.5 | 1.240 |
| 16 | 24.5 | 0.965 |
| 12 | 17.5 | 0.689 |
| 8 | 10.5 | 0.413 |
| n | POLZAHL POLES | L1 [mm] L1 [inch] |

P = 3.50 RASTER PITCH
D = Ø1.3 +0.1
0.051
d = 0.8x0.8
0.031"x0.031"

ABSTUETZUNG ERFORDERLICH
SUPPORT NECESSARY
BEI ALLEN VERSIONEN
FOR ALL VERSIONS



X 4/1
ACHTUNG
ATTENTION

| | | | | | |
|--------------------------------------|--|----------------------------------|------------|-----------------------------|--|
| GENERAL TOLERANCE: DIN ISO 2768-m | | 74586/5 01.07.14 TIELKER_S 01 | | CAT.NO.: . | |
| RoHS COMPLIANT | | MODIFICATION | | Weidmüller | |
| DRAWN | | DATE | NAME | DRAWING NO. C 55770 01 | |
| RESPONSIBLE | | 31.01.2013 | FRIELING_L | SHEET 01 OF 01 SHEETS | |
| CHECKED | | 07.07.2014 | HELI_S_MA | ISSUE NO. | |
| APPROVED | | | HANKE_D | S2CD-THR 3.50/.../90 | |
| SCALE: 2/1 | | PRODUCT FILE: B2CF/S2C | | STIFTELEISTE MALE HEADER | |
| SUPERSEDES: . | | 7400 | | | |

Recommended wave soldering profiles

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 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.

We reserve the right to make technical changes.

Recommended reflow soldering profile

Weidmüller Interface GmbH & Co. KG
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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.