

SCDN 3.81/10/90F 3.2SN OR BX

Weidmüller Interface GmbH & Co. KG

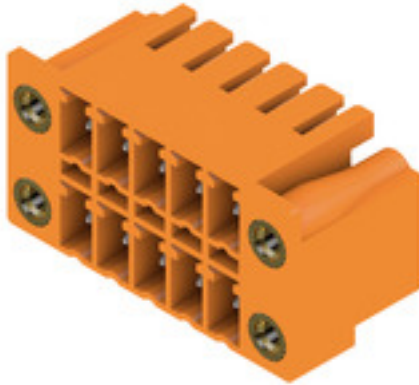
Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image



Extra flat two-tier SCDN pin header for wave soldering.

- Two compact interfaces are used with the flat BCF 3.81 (PUSH IN) socket block.
- Available as 90° (recumbent).
- Connections on a single level, allowing access that is flush over the front board.
- Space for labelling and coding
- Packed in cardboard box.

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, Flange, THT solder connection, 3.81 mm, Number of poles: 10, 90°, Solder pin length (l): 3.2 mm, tinned, orange, Box |
| Order No. | 1040990000 |
| Type | SCDN 3.81/10/90F 3.2SN OR BX |
| GTIN (EAN) | 4032248769834 |
| Qty. | 50 pc(s). |
| Product data | IEC: 320 V / 17.5 A UL: 300 V / 10 A |
| Packaging | Box |

Creation date March 12, 2024 11:37:43 AM CET

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Technical data

Dimensions and weights

| | | | |
|--------------------------|------------|-----------------|------------|
| Depth | 13.3 mm | Depth (inches) | 0.524 inch |
| Height | 18.4 mm | Height (inches) | 0.724 inch |
| Height of lowest version | 15.2 mm | Width | 29.44 mm |
| Width (inches) | 1.159 inch | Net weight | 5.27 g |

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 " | | |
| Outgoing elbow | 90° | | |
| Number of poles | 10 | | |
| Number of solder pins per pole | 1 | | |
| Solder pin length (l) | 3.2 mm | | |
| Solder pin length tolerance | +0,02 / -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 | 15.24 mm | | |
| L1 in inches | 0.6 " | | |
| Number of rows | 2 | | |
| Pin series quantity | 2 | | |
| 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 | | |
| Volume resistance | ≤5 mΩ | | |
| Can be coded | Yes | | |
| Tightening torque | Torque type | Mounting screw, PCB | |
| | Usage information | Tightening torque | min. 0.1 Nm max. 0.15 Nm |
| | | Recommended screw | Part number PTSC KA 2.2X4.5 WN1412 |

Material data

| | | | |
|---------------------------------------|----------|---------------------------------------|--------|
| Insulating material | PA GF | 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 |
| 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 |

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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) | 13.2 A | Rated current, min. number of poles (Tu=40°C) | 17 A |
| Rated current, max. number of poles (Tu=40°C) | 12.2 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 D / CSA) | 300 V |
| Rated current (Use group B / CSA) | 11 A | Rated current (Use group D / CSA) | 11 A |

Rated data acc. to UL 1059

| | | | |
|---------------------------------------|-------|---------------------------------------|-------|
| 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 |

Packing

| | | | |
|-----------|--------|------------|--------|
| Packaging | Box | VPE length | 256 mm |
| VPE width | 160 mm | VPE height | 28 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 |

Environmental Product Compliance

| | |
|------------|--------------------------------------|
| REACH SVHC | Lead 7439-92-1 |
| SCIP | cad4723c-c5fc-4802-be22-8cbcef126ab4 |

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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"> • Additional variants 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 • 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

| | |
|------|---------|
| ROHS | Conform |
|------|---------|

Downloads

| | |
|---|---|
| Approval/Certificate/Document of Conformity | Declaration of the Manufacturer |
| Engineering Data | CAD data – STEP |
| 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 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 |

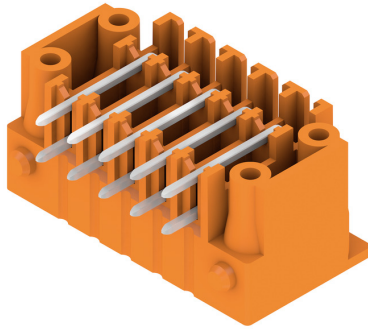
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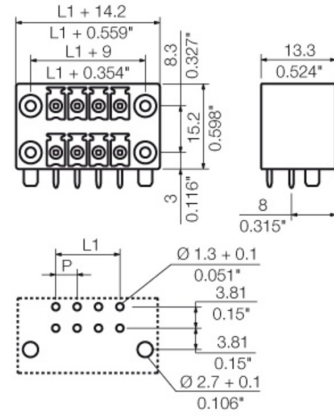
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Drawings

Product image



Dimensional drawing



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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

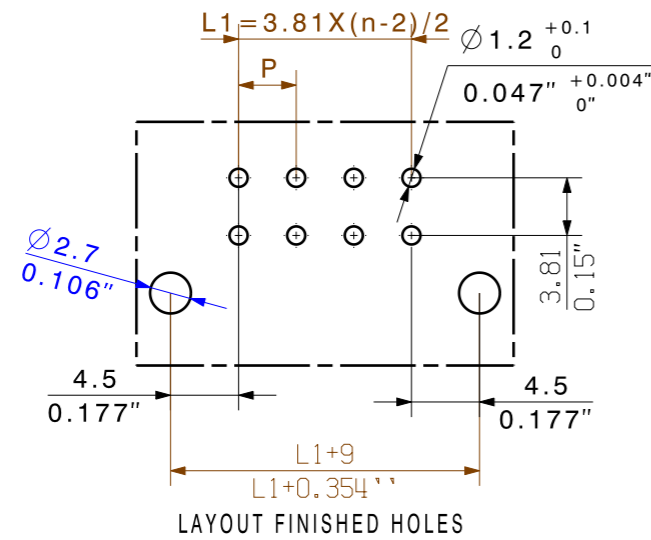
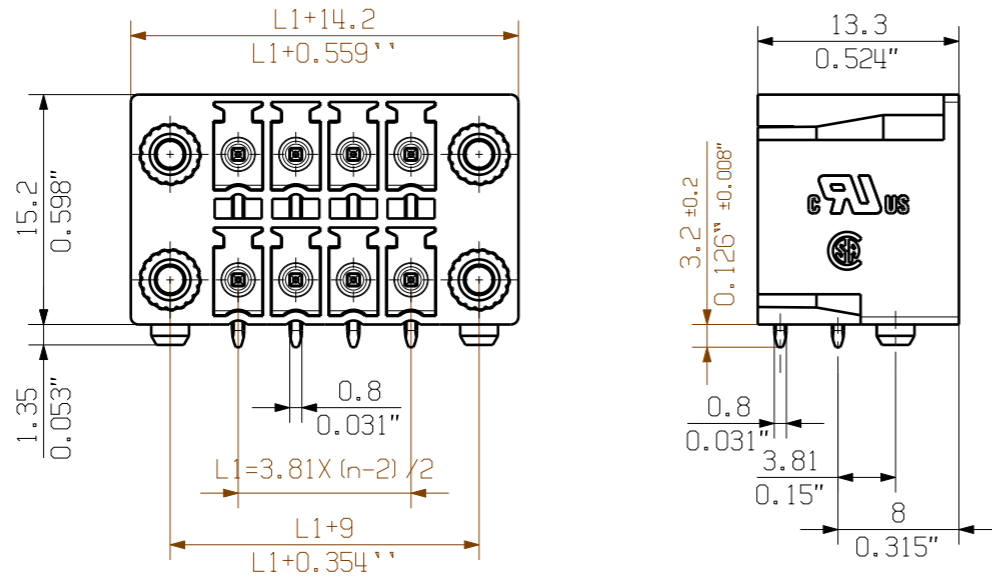
The coding elements and locking devices are inserted prior to assembly or during the cable assembly phase. The Weidmüller alternative: configure online using the variant configurator to precode prior to delivery.

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.

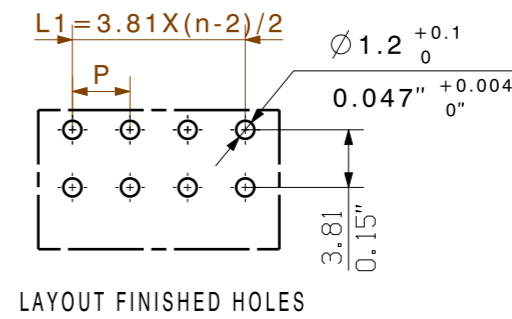
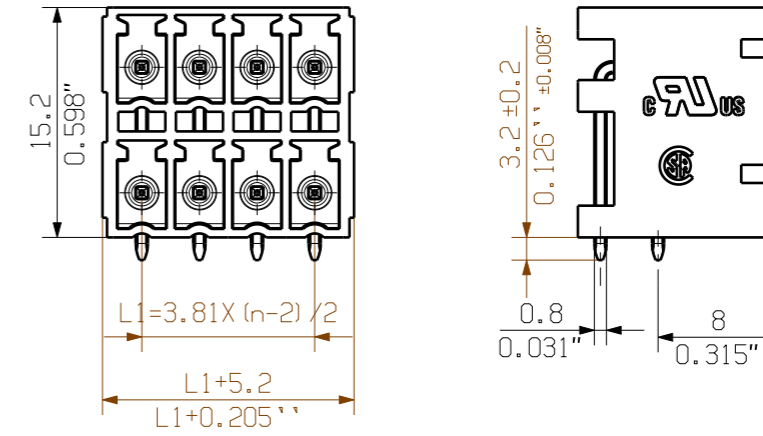
General ordering data

| | Type | Version | Product data | Packaging |
|------------|----------------------------|---|--------------|-----------|
| Type | SC-SMT 3.81 KO GY BX | | | |
| Order No. | 1968900000 | PCB plug-in connector, Accessories, Coding element, grey, Number of | | Box |
| GTIN (EAN) | 4032248772865 | poles: 6 | | |
| Qty. | 100 pc(s). | | | |

SCDN 3.81/.../90F 3.2...



SCDN 3.81/.../90G 3.2...



LAYOUT FINISHED HOLES

NOTE:

n=NO OF POLES
P=PITCH

KUNDENZEICHNUNG
CUSTOMER DRAWING

| | | |
|----|---------|-----------|
| 32 | 57.15 | 2.250 |
| 30 | 53.34 | 2.100 |
| 28 | 49.53 | 1.950 |
| 26 | 45.72 | 1.800 |
| 24 | 41.91 | 1.650 |
| 22 | 38.10 | 1.500 |
| 20 | 34.29 | 1.350 |
| 18 | 30.48 | 1.200 |
| 16 | 26.67 | 1.050 |
| 14 | 22.86 | 0.900 |
| 12 | 19.05 | 0.750 |
| 10 | 15.24 | 0.600 |
| 8 | 11.43 | 0.450 |
| 6 | 7.62 | 0.300 |
| 4 | 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 | | 78721/5 06.11.14 MA_J 01 | | CAT.NO.: . | |
| RoHS COMPLIANT | MAX. NRN./NOS. | MODIFICATION | | Weidmüller | |
| DRAWN 08.01.2009 GE_G | | DATE | | DRAWING NO. C 46288 03 | |
| RESPONSIBLE XU_S | | NAME | | SHEET 01 OF 03 SHEETS | |
| CHECKED 25.11.2014 ZHOU_N | | DATE | | ISSUE NO. | |
| APPROVED XU_S | | NAME | | SCDN... 3.81/.../90... | |
| SCALE: 3/1 | | DATE | | THR-LOETANSCHLUSS STIFTLISTE | |
| SUPERSEDES: . | | NAME | | THR SOLDER CONNECTION PIN HEADER | |
| | | DATE | | PRODUCT FILE: SCDN 3.81 | |
| | | NAME | | 7086 | |

WEITERGABE SOWIE VERVIELFÄLTIGUNG DIESES DOKUMENTS, VERWERTUNG UND MITTEILUNG SEINES INHALTS SIND VERBOTEN, SOWEIT NICHT AUSDRUECKLICH GESTATET.
 ZUWIDERHANDLUNGEN VERPFLICHTEN ZU SCHADENERSATZ. ALLE RECHTE FUER DEN FALL DER PATENT-, GEBRAUCHSMUSTER- ODER GESCHMACKSMUSTEREINTRAGUNG VORBEHALTEN.
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Recommended wave soldering profiles

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 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.