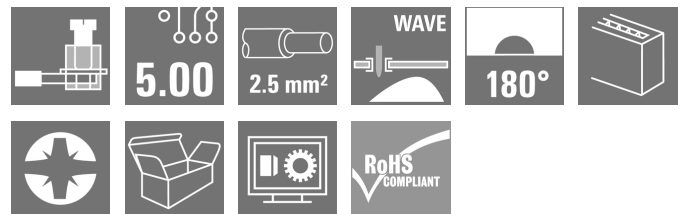


LM 5.00/23/180 3.5SN OR BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com**Product image**

PCB terminal with proven clamping yoke connection at 5.00 and 5.08 mm pitch. Conductor outlet direction 90°, 135° and 180°. Suitable for conductor cross-sections up to 2.5 mm².

General ordering data

| | |
|--------------|--|
| Version | Printed circuit board terminals, 5.00 mm, Number of poles: 23, 180°, Solder pin length (l): 3.5 mm, tinned, orange, Clamping yoke connection, Clamping range, max. : 2.5 mm ² , Box |
| Order No. | 1234450000 |
| Type | LM 5.00/23/180 3.5SN OR BX |
| GTIN (EAN) | 4050118018820 |
| Qty. | 50 pc(s). |
| Product data | IEC: 630 V / 17.5 A / 0.2 - 2.5 mm ² UL: 300 V / 15 A / AWG 24 - AWG 14 |
| Packaging | Box |

Creation date October 6, 2024 6:05:13 AM CEST

Catalogue status 28.09.2024 / We reserve the right to make technical changes.

LM 5.00/23/180 3.5SN OR BX

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

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Technical data

Dimensions and weights

| | | | |
|--------------------------|------------|-----------------|------------|
| Depth | 13.8 mm | Depth (inches) | 0.543 inch |
| Height | 13.5 mm | Height (inches) | 0.531 inch |
| Height of lowest version | 10 mm | Width | 115.55 mm |
| Width (inches) | 4.549 inch | Net weight | 27.6 g |

System parameters

| | | | |
|---|-----------------------------|--|------------------------------|
| Product family | OMNIMATE Signal - series LM | Wire connection method | Clamping yoke connection |
| Mounting onto the PCB | THT solder connection | Conductor outlet direction | 180° |
| Pitch in mm (P) | 5 mm | Pitch in inches (P) | 0.197 " |
| Number of poles | 23 | Pin series quantity | 1 |
| Fitted by customer | Yes | Number of rows | 1 |
| Max. adjacent poles per row | 24 | Solder pin length (l) | 3.5 mm |
| Solder pin dimensions | 0.95 x 0.8 mm | Solder eyelet hole diameter (D) | 1.3 mm |
| Solder eyelet hole diameter tolerance (D)+ 0,1 mm | | Number of solder pins per pole | 1 |
| Screwdriver blade | 0.6 x 3.5 | Screwdriver blade standard | DIN 5264 |
| Tightening torque, min. | 0.4 Nm | Tightening torque, max. | 0.5 Nm |
| Clamping screw | M 2.5 | Stripping length | 6 mm |
| L1 in mm | 110 mm | L1 in inches | 4.331 " |
| Touch-safe protection acc. to DIN VDE 0470 | IP 10 | Touch-safe protection acc. to DIN VDE 57 106 | Safe from back-of-hand touch |
| Protection degree | IP20 | Volume resistance | 1.20 mΩ |

Material data

| | | | |
|---------------------------------------|------------|---------------------------------------|--------------------------------|
| Insulating material | Wemid (PA) | Colour | orange |
| Colour chart (similar) | RAL 2000 | Insulating material group | I |
| Comparative Tracking Index (CTI) | ≥ 600 | Insulation strength | ≥ 10 ⁸ Ω |
| UL 94 flammability rating | V-0 | Contact material | Cu-alloy |
| Contact surface | tinned | Coating | 1-3 µm Ni, 4-6 µm SN |
| Tinning type | matt | Layer structure of solder connection | 1...3 µm Ni / 4...6 µm Sn matt |
| Storage temperature, min. | -40 °C | Storage temperature, max. | 70 °C |
| Operating temperature, min. | -50 °C | Operating temperature, max. | 120 |
| Temperature range, installation, min. | -25 °C | Temperature range, installation, max. | 120 °C |

Conductors suitable for connection

| | |
|--|---------------------|
| Clamping range, min. | 0.2 mm ² |
| Clamping range, max. | 2.5 mm ² |
| Wire connection cross section AWG, min. | AWG 24 |
| Wire connection cross section AWG, max. | AWG 14 |
| Solid, min. H05(07) V-U | 0.2 mm ² |
| Solid, max. H05(07) V-U | 2.5 mm ² |
| Flexible, min. H05(07) V-K | 0.2 mm ² |
| Flexible, max. H05(07) V-K | 2.5 mm ² |
| w. plastic collar ferrule, DIN 46228 pt 4, 0.25 mm ² min. | |
| w. plastic collar ferrule, DIN 46228 pt 4, 1.5 mm ² max. | |
| w. wire end ferrule, DIN 46228 pt 1, 0.25 mm ² min. | |

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LM 5.00/23/180 3.5SN OR BX

Weidmüller Interface GmbH & Co. KG

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Technical data

| | | | |
|---|--|------------------------------|------------------------------|
| w. wire end ferrule, DIN 46228 pt 1, max. | 1.5 mm ² | | |
| Plug gauge in accordance with EN 60999 a x b; ø | 2.4 mm x 1.5 mm; 1.9mm | | |
| Clampable conductor | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 0.5 mm ² |
| | wire end ferrule | Stripping length | nominal 8 mm |
| | | Recommended wire-end ferrule | H0.5/12 OR |
| | | Stripping length | nominal 6 mm |
| | | Recommended wire-end ferrule | H0.5/6 |
| | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 0.75 mm ² |
| | wire end ferrule | Stripping length | nominal 8 mm |
| | | Recommended wire-end ferrule | H0.75/12 W |
| | | Stripping length | nominal 6 mm |
| | | Recommended wire-end ferrule | H0.75/6 |
| | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 1 mm ² |
| | wire end ferrule | Stripping length | nominal 8 mm |
| | | Recommended wire-end ferrule | H1.0/12 GE |
| | | Stripping length | nominal 6 mm |
| | | Recommended wire-end ferrule | H1.0/6 |
| | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 0.25 mm ² |
| | wire end ferrule | Stripping length | nominal 8 mm |
| | | Recommended wire-end ferrule | H0.25/10 HBL |
| | | Stripping length | nominal 5 mm |
| | | Recommended wire-end ferrule | H0.25/5 |
| | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 0.34 mm ² |
| | wire end ferrule | Stripping length | nominal 8 mm |
| | | Recommended wire-end ferrule | H0.34/10 TK |
| Reference text | Length of ferrules is to be chosen depending on the product and the rated voltage., The outside diameter of the plastic collar should not be larger than the pitch (P) | | |

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) | 16 A | Rated current, min. number of poles (Tu=40°C) | 17.5 A |
| Rated current, max. number of poles (Tu=40°C) | 14.2 A | Rated voltage for surge voltage class / pollution degree II/2 | 630 V |
| Rated voltage for surge voltage class / pollution degree III/2 | 320 V | Rated voltage for surge voltage class / pollution degree III/3 | 250 V |
| Rated impulse voltage for surge voltage class/ pollution degree II/2 | 4 kV | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 4 kV |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 4 kV | Short-time withstand current resistance | 3 x 1s with 120 A |

LM 5.00/23/180 3.5SN OR BX

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

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Technical data

Rated data acc. to CSA

Institute (CSA)



Certificate No. (CSA)

200039-1815154

| | |
|-----------------------------------|--|
| Rated voltage (Use group B / CSA) | 300 V |
| Rated current (Use group B / CSA) | 18 A |
| Wire cross-section, AWG, min. | AWG 24 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. |

| | |
|-----------------------------------|--------|
| Rated voltage (Use group D / CSA) | 300 V |
| Rated current (Use group D / CSA) | 10 A |
| Wire cross-section, AWG, max. | AWG 14 |

Rated data acc. to UL 1059

Institute (cURus)



Certificate No. (cURus)

E60693

| | |
|---------------------------------------|--|
| Rated voltage (Use group B / UL 1059) | 300 V |
| Rated current (Use group B / UL 1059) | 15 A |
| Wire cross-section, AWG, min. | AWG 24 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. |

| | |
|---------------------------------------|--------|
| Rated voltage (Use group D / UL 1059) | 300 V |
| Rated current (Use group D / UL 1059) | 10 A |
| Wire cross-section, AWG, max. | AWG 14 |

Packing

| | | | |
|-----------|--------|------------|--------|
| Packaging | Box | VPE length | 275 mm |
| VPE width | 150 mm | VPE height | 105 mm |

Type tests

| | | |
|------------------------------|------------|---|
| Test: Durability of markings | Standard | DIN EN 60512-1-1 / 01.03 |
| | Test | mark of origin, type identification, pitch, type of material, approval marking UL, approval marking CSA, durability |
| | Evaluation | available |

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Technical data

| | | |
|---|----------------|--|
| Test: Clampable cross section | Standard | DIN EN 60999-1 section 7 and 9.1 / 12.00, DIN EN 60947-1 section 8.2.4.5.1 / 12.02 |
| | Conductor type | Type of conductor and solid 0.2 mm ² conductor cross-section |
| | | Type of conductor and stranded 0.2 mm ² conductor cross-section |
| | | Type of conductor and stranded 1.5 mm ² conductor cross-section |
| | | Type of conductor and solid 2.5 mm ² conductor cross-section |
| | | Type of conductor and AWG 24/1 conductor cross-section |
| | | Type of conductor and AWG 24/19 conductor cross-section |
| | | Type of conductor and AWG 14/1 conductor cross-section |
| | | Type of conductor and AWG 14/19 conductor cross-section |
| | Evaluation | passed |
| Test for damage to and accidental loosening of conductors | Standard | DIN EN 60999-1 section 9.4 / 12.00 |
| | Requirement | 0.2 kg |
| | Conductor type | Type of conductor and stranded 0.25 mm ² conductor cross-section |
| | | Type of conductor and AWG 24/1 conductor cross-section |
| | | Type of conductor and AWG 24/19 conductor cross-section |
| | Evaluation | passed |
| | Requirement | 0.3 kg |
| | Conductor type | Type of conductor and solid 0.5 mm ² conductor cross-section |
| | | |
| | Evaluation | passed |
| | Requirement | 0.4 kg |
| | Conductor type | Type of conductor and stranded 1.5 mm ² conductor cross-section |
| | | |
| | Evaluation | passed |
| | Requirement | 0.7 kg |
| | Conductor type | Type of conductor and solid 2.5 mm ² conductor cross-section |
| | | Type of conductor and AWG 14/1 conductor cross-section |
| | | Type of conductor and AWG 14/19 conductor cross-section |
| | Evaluation | passed |

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Technical data

| | | |
|---------------|----------------|---|
| Pull-out test | Standard | DIN EN 60999-1 section 9.5 / 12.00 |
| | Requirement | ≥10 N |
| | Conductor type | Type of conductor and stranded 0.25 mm ² conductor cross-section |
| | | Type of conductor and AWG 24/1 conductor cross-section |
| | | Type of conductor and AWG 24/19 conductor cross-section |
| | Evaluation | passed |
| | Requirement | ≥20 N |
| | Requirement | ≥40 N |
| | Conductor type | Type of conductor and H07V-K1.5 conductor cross-section |
| | | |
| | | |
| | Evaluation | passed |
| | Requirement | ≥50 N |
| | Conductor type | Type of conductor and H07V-U2.5 conductor cross-section |
| | | Type of conductor and AWG 14/1 conductor cross-section |
| | | Type of conductor and AWG 14/19 conductor cross-section |
| | Evaluation | passed |

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 6.0 | EC002643 | ETIM 7.0 | EC002643 |
| ETIM 8.0 | EC002643 | ETIM 9.0 | EC002643 |
| ECLASS 9.0 | 27-44-04-01 | ECLASS 9.1 | 27-44-04-01 |
| ECLASS 10.0 | 27-44-04-01 | ECLASS 11.0 | 27-46-01-01 |
| ECLASS 12.0 | 27-46-01-01 | ECLASS 13.0 | 27-46-01-01 |
| ECLASS 14.0 | 27-46-01-01 | | |

Environmental Product Compliance

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

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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"> Rated current related to rated cross-section & min. No. of poles. Wire end ferrule without plastic collar to DIN 46228/1 Wire end ferrule with plastic collar to DIN 46228/4 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. 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 | Modification of the clamping yoke on product families LM 5.0x, LL 6.35, LL 9.52 and WGK 4 |
| Catalogues | Catalogues in PDF-format |
| Brochures | FL DRIVES EN FL ANALO.SIGN.CONV. 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 |

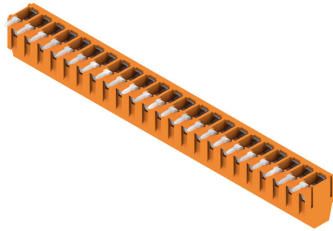
LM 5.00/23/180 3.5SN OR BX

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 Germany

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Drawings

Product image



Dimensional drawing



Graph



Derating curve valid for 5.00 & 5.08 pitch

LM 5.00/23/180 3.5SN OR BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com**Accessories****Slotted screwdriver**

VDE insulated slot-head screwdriver, SDI DIN 7437, ISO 2380/2, drive output acc. to DIN 5264, ISO 2380/1. SoftFinish grip

General ordering data

| | | |
|------------|----------------------------|---|
| Type | SDIS 0.6X3.5X100 | Version |
| Order No. | 2749810000 | Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade |
| GTIN (EAN) | 4050118897012 | thickness (A): 0.6 mm |
| Qty. | 1 pc(s). | |

Crosshead screwdriver Phillips

Crosshead screwdriver, Phillips, SDK PH DIN 5262, ISO 8764/2-PH, output to ISO 8764-PH, ChromTop tip, SoftFinish grip

General ordering data

| | | |
|------------|----------------------------|---|
| Type | SDK PH0 X 60 | Version |
| Order No. | 2749400000 | Screwdriver, Blade width (B): 60 mm, Blade thickness (A): |
| GTIN (EAN) | 4050118895629 | |
| Qty. | 1 pc(s). | |

LM 5.00/23/180 3.5SN OR BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

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www.weidmueller.com**Accessories****Slotted screwdriver**

Slotted screwdriver with rounded blade SD DIN 5265,
ISO 2380/2, output to DIN 5264, ISO 2380/1.
ChromTop tip, SoftFinish grip

General ordering data

| | | |
|------------|----------------------------|---|
| Type | SDS 0.6X3.5X100 | Version |
| Order No. | 2749340000 | Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade |
| GTIN (EAN) | 4050118895568 | thickness (A): 0.6 mm |
| Qty. | 1 pc(s). | |

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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WEIDMUELLER INTERFACE GmbH & Co.KG

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

09



| STIFTLÄNGE L PIN LENGTH L | TOLERANZ TOLERANCE |
|------------------------------|-----------------------|
| 3.5 | 0.2 -0.2 |



PCB LAYOUT

For the mounting of PCBs, it should be noted that the rated data stated in the catalog 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.

KUNDENZEICHNUNG
CUSTOMER DRAWING

| | | | | |
|----|-------------------------|-----------|-------------------------|-----------|
| 24 | 115.00 | 4.528 | 116.84 | 4.600 |
| 23 | 110.00 | 4.331 | 111.76 | 4.400 |
| 22 | 105.00 | 4.134 | 106.68 | 4.200 |
| 21 | 100.00 | 3.937 | 101.60 | 4.000 |
| 20 | 95.00 | 3.740 | 96.52 | 3.800 |
| 19 | 90.00 | 3.543 | 91.44 | 3.600 |
| 18 | 85.00 | 3.346 | 86.36 | 3.400 |
| 17 | 80.00 | 3.150 | 81.28 | 3.200 |
| 16 | 75.00 | 2.953 | 76.20 | 3.000 |
| 15 | 70.00 | 2.756 | 71.12 | 2.800 |
| 14 | 65.00 | 2.559 | 66.04 | 2.600 |
| 13 | 60.00 | 2.362 | 60.96 | 2.400 |
| 12 | 55.00 | 2.165 | 55.88 | 2.200 |
| 11 | 50.00 | 1.969 | 50.80 | 2.000 |
| 10 | 45.00 | 1.772 | 45.72 | 1.800 |
| 9 | 40.00 | 1.575 | 40.64 | 1.600 |
| 8 | 35.00 | 1.378 | 35.56 | 1.400 |
| 7 | 30.00 | 1.181 | 30.48 | 1.200 |
| 6 | 25.00 | 0.984 | 25.40 | 1.000 |
| 5 | 20.00 | 0.787 | 20.32 | 0.800 |
| 4 | 15.00 | 0.591 | 15.24 | 0.600 |
| 3 | 10.00 | 0.394 | 10.16 | 0.400 |
| 2 | 5.00 | 0.197 | 5.08 | 0.200 |
| N | L1 [mm] | L1 [inch] | L1 [mm] | L1 [inch] |
| | P=5.00 mm, 0.197inch | | P=5.08mm, 0.200 inch | |

| | | | | | | |
|--------------------------------------|--|--------------------------|--------|--------------|--|--|
| GENERAL TOLERANCE: DIN ISO 2768-m | | 78183/5 24.09.14 MA_J | | 01 | CAT.NO.: . | |
| RoHS COMPLIANT | | MAX. NRN./NOS. | | MODIFICATION | | |
| DRAWN | | 31.03.2005 | XU_S | | LM 5.../.../180 ... LEITERPLATTENKLEMME PCB TERMINAL | |
| RESPONSIBLE | | | GE_G | | | |
| CHECKED | | 25.09.2014 | ZHOU_N | | | |
| SCALE: 2/1 | | CHECKED | | | PRODUCT FILE: LM | |
| SUPERSEDES: . | | APPROVED | | | | |
| | | | | | 7065 | |

| | | | |
|-------------------|-------|----------------|-----------|
| Weidmüller | | C 41709 | 09 |
| DRAWING NO. | | ISSUE NO. | |
| SHEET 01 | OF 01 | SHEETS | |

Recommended wave soldering profiles

Weidmüller Interface GmbH & Co. KG
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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.

We reserve the right to make technical changes.