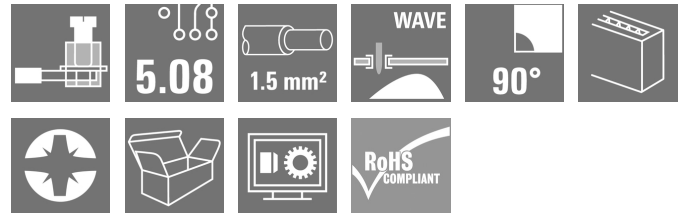


LS 5.08/09/90 3.5SN BK BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com**Product image**

Small, compact and powerful - this PCB terminal with proven clamping yoke connection and 5.08 mm pitch has a capacity of 17.5 A. Conductor outlet direction 90°. Suitable for conductor cross-sections up to 1.5 mm².

General ordering data

| | |
|--------------|--|
| Version | Printed circuit board terminals, 5.08 mm, Number of poles: 9, 90°, Solder pin length (l): 3.5 mm, tinned, black, Clamping yoke connection, Clamping range, max. : 1.5 mm², Box |
| Order No. | 1810920000 |
| Type | LS 5.08/09/90 3.5SN BK BX |
| GTIN (EAN) | 4032248289899 |
| Qty. | 100 pc(s). |
| Product data | IEC: 630 V / 17.5 A / 0.08 - 1.5 mm² UL: 300 V / 15 A / AWG 28 - AWG 14 |
| Packaging | Box |

Creation date July 8, 2024 1:20:33 AM CEST

Catalogue status 29.06.2024 / We reserve the right to make technical changes.

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Technical data

Dimensions and weights

| | | | |
|--------------------------|-----------|-----------------|------------|
| Depth | 8.1 mm | Depth (inches) | 0.319 inch |
| Height | 13.8 mm | Height (inches) | 0.543 inch |
| Height of lowest version | 10.3 mm | Width | 46.22 mm |
| Width (inches) | 1.82 inch | Net weight | 10.37 g |

System parameters

| | | | |
|---|-----------------------------|--|--------------------------|
| Product family | OMNIMATE Signal - series LS | Wire connection method | Clamping yoke connection |
| Mounting onto the PCB | THT solder connection | Conductor outlet direction | 90° |
| Pitch in mm (P) | 5.08 mm | Pitch in inches (P) | 0.2 " |
| Number of poles | 9 | 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 | 0.5 x 1.0 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 | 40.64 mm | L1 in inches | 1.6 " |
| Touch-safe protection acc. to DIN VDE 0470 | IP 20 | Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch |
| Protection degree | IP20 | | |

Material data

| | | | |
|---------------------------------------|-------------|---------------------------------------|--------|
| Insulating material | Wemid (PA) | Colour | black |
| Colour chart (similar) | RAL 9011 | Insulating material group | I |
| Comparative Tracking Index (CTI) | ≥ 600 | UL 94 flammability rating | V-0 |
| Contact material | Cu-alloy | Contact surface | tinned |
| Layer structure of solder connection | 5...8 µm Sn | 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 | | |

Conductors suitable for connection

| | |
|--|----------------------|
| Clamping range, min. | 0.08 mm ² |
| Clamping range, max. | 1.5 mm ² |
| Wire connection cross section AWG, min. | AWG 28 |
| Wire connection cross section AWG, max. | AWG 14 |
| Solid, min. H05(07) V-U | 0.08 mm ² |
| Solid, max. H05(07) V-U | 1.5 mm ² |
| Flexible, min. H05(07) V-K | 0.08 mm ² |
| Flexible, max. H05(07) V-K | 1.5 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. | |
| w. wire end ferrule, DIN 46228 pt 1, 1.5 mm ² max. | |

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Technical data

| | | | | |
|---------------------|--|------------------------------|------------------------------|------|
| 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) | 17.5 A | Rated current, min. number of poles (Tu=40°C) | 17.5 A |
| Rated current, max. number of poles (Tu=40°C) | 17.5 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 | | |

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Weidmüller Interface GmbH & Co. KG

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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 voltage (Use group D / CSA) 300 V

Rated current (Use group B / CSA) 20 A

Rated current (Use group D / CSA) 10 A

Wire cross-section, AWG, min. AWG 28

Wire cross-section, AWG, max. AWG 14

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 / UL 1059) 300 V

Rated voltage (Use group D / UL 1059) 300 V

Rated current (Use group B / UL 1059) 15 A

Rated current (Use group D / UL 1059) 10 A

Wire cross-section, AWG, min. AWG 28

Wire cross-section, AWG, max. AWG 14

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

Packing

Packaging Box

VPE length 280 mm

VPE width 154 mm

VPE height 109 mm

Type tests

Test: Durability of markings

Test

mark of origin, type identification, pitch, approval marking UL, durability

Evaluation

available

LS 5.08/09/90 3.5SN BK BX

Weidmüller Interface GmbH & Co. KG

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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 / 12.99 | |
| | Conductor type | Type of conductor and solid 0.08 mm ² conductor cross-section | |
| | | Type of conductor and stranded 0.08 mm ² conductor cross-section | |
| | | Type of conductor and solid 1.5 mm ² conductor cross-section | |
| | | Type of conductor and stranded 1.5 mm ² conductor cross-section | |
| | | Type of conductor and AWG 28/1 conductor cross-section | |
| | | Type of conductor and AWG 28/19 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 AWG 28/1 conductor cross-section | |
| | | Type of conductor and AWG 28/19 conductor cross-section | |
| | Evaluation | passed | |
| | Requirement | 0.3 kg | |
| | Conductor type | Type of conductor and solid 0.5 mm ² conductor cross-section | |
| | | Type of conductor and stranded 0.5 mm ² conductor cross-section | |
| | Evaluation | passed | |
| | Requirement | 0.4 kg | |
| | Conductor type | Type of conductor and solid 1.5 mm ² conductor cross-section | |
| | | Type of conductor and stranded 1.5 mm ² conductor cross-section | |
| | Evaluation | passed | |
| | Requirement | 0.7 kg | |
| | Conductor type | 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 | ≥5 N |
| | Conductor type | Type of conductor and AWG 28/1 conductor cross-section |
| | | Type of conductor and AWG 28/19 conductor cross-section |
| | Evaluation | passed |
| | Requirement | ≥20 N |
| | Conductor type | Type of conductor and H05V-U0.5 conductor cross-section |
| | | Type of conductor and H05V-K0.5 conductor cross-section |
| | Evaluation | passed |
| | Requirement | ≥40 N |
| | Conductor type | Type of conductor and H05V-U1.5 conductor cross-section |
| | | Type of conductor and H05V-K1.5 conductor cross-section |
| | Evaluation | passed |
| | Requirement | ≥50 N |
| | Conductor type | 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 |

Environmental Product Compliance

| | |
|------------|--------------------------------------|
| REACH SVHC | Lead 7439-92-1 |
| SCIP | bf16c6c7-a337-4c4d-8703-f321e4125514 |

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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 The data given under CSA relates to a cUL approval - E60693 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 |
| 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 |

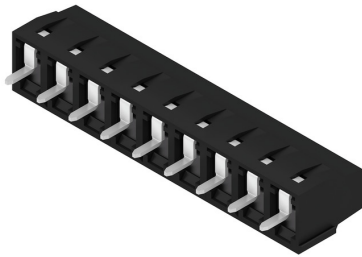
LS 5.08/09/90 3.5SN BK BX

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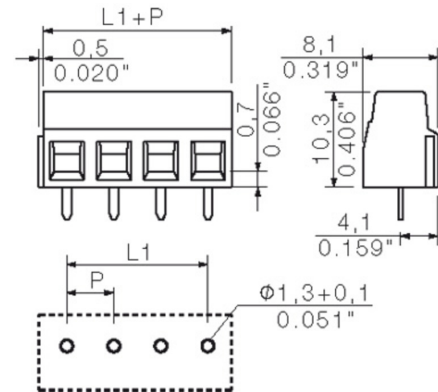
www.weidmueller.com

Drawings

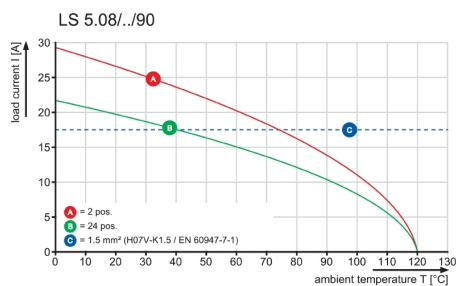
Product image



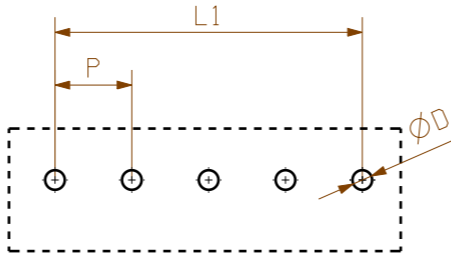
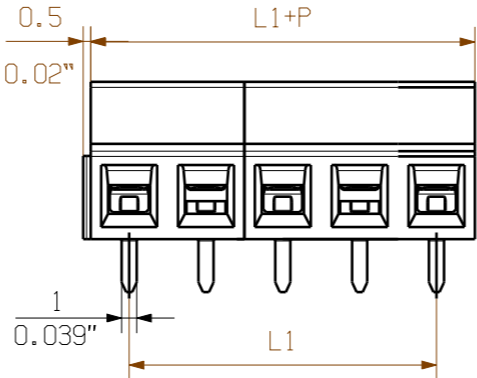
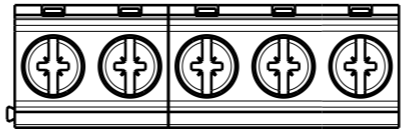
Dimensional drawing



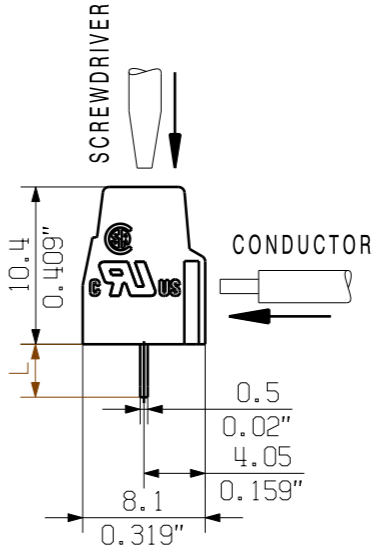
Graph



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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PCB LAYOUT






KUNDENZEICHNUNG
CUSTOMER DRAWING

| | | |
|----|---------|-----------|
| 12 | 55.88 | 2.20 |
| 11 | 50.80 | 2.00 |
| 10 | 45.72 | 1.80 |
| 9 | 40.64 | 1.60 |
| 8 | 35.56 | 1.40 |
| 7 | 30.48 | 1.20 |
| 6 | 25.40 | 1.00 |
| 5 | 20.32 | 0.80 |
| 4 | 15.24 | 0.60 |
| 3 | 10.16 | 0.40 |
| 2 | 5.08 | 0.20 |
| N | L1 [mm] | L1 [inch] |

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

| | | | | | | |
|---|--|---------------------------|------------|--|---|---|
| METRIC TOLERANCES X. = ±0.3 X.X = ±0.1 X.XX = ±0.05 | | 61484/5 22.12.11 SHI_S | | 01 | CAT.NO.: . | |
|  | | MODIFICATION | | Weidmüller  | | C 41703  |
| | | | | DRAWING NO. | | ISSUE NO. |
| | | DATE | NAME | | LS 5.08/.../90 3.5 ... LEITERPLATTENKLEMME PCB TERMINAL | |
| DRAWN | | 01.04.2005 | ZHOU_N | | | |
| RESPONSIBLE | | | XU_S | | | |
| SCALE: 2/1 | | CHECKED | 20.07.2007 | SICKES_A | 7064 | |
| SUPERSEDES: 2 33380/05 | | APPROVED | | XU_S | | |
| SUPERSEDED BY: . | | PRODUCT FILE: LS 5.08 | | | | |

Recommended wave soldering profiles

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D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
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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.