

LM 3.50/07/90 3.2SN OR BX

Weidmüller Interfaces GmbH & Co. KG

Postfach 3030

32760 Detmold

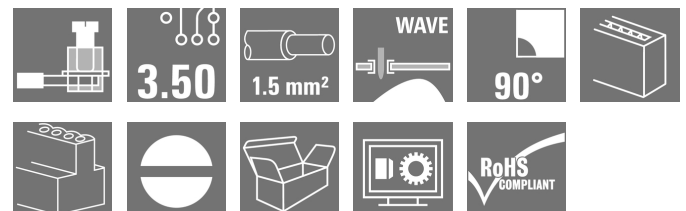
Tel. +49 5231 14-0

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info@weidmueller.com

www.weidmueller.com

Product image



Small, compact PCB terminal or -tier PCB terminal with proven clamping yoke connection and 3.5 mm pitch. Suitable for conductor cross-sections up to 1.5 mm².

General ordering data

| | |
|--------------|--|
| Version | Printed circuit board terminals, 3.50 mm, Number of poles: 7, 90°, Solder pin length (l): 3.2 mm, tinned, orange, Clamping yoke connection, Clamping range, max.: 2.08 mm ² , Box |
| Order No. | 1845060000 |
| Type | LM 3.50/07/90 3.2SN OR BX |
| GTIN (EAN) | 4032248357871 |
| Qty. | 50 pc(s). |
| Product data | IEC: 320 V / 16 A / 0.5 - 1.5 mm ² UL: 300 V / 10 A / AWG 28 - AWG 14 |
| Packaging | Box |

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Technical data

Dimensions and weights

| | | | |
|--------------------------|------------|-----------------|------------|
| Depth | 8.3 mm | Depth (inches) | 0.327 inch |
| Height | 16 mm | Height (inches) | 0.63 inch |
| Height of lowest version | 12.8 mm | Width | 25.1 mm |
| Width (inches) | 0.988 inch | Net weight | 4.46 g |

Temperatures

| | | | |
|-----------------------------|--------|-----------------------------|--------|
| Operating temperature, min. | -50 °C | Operating temperature, max. | 100 °C |
|-----------------------------|--------|-----------------------------|--------|

System parameters

| | | | |
|--|-----------------------------|--|--------------------------|
| Product family | OMNIMATE Signal - series LM | Wire connection method | Clamping yoke connection |
| Mounting onto the PCB | THT solder connection | Conductor outlet direction | 90° |
| Pitch in mm (P) | 3.5 mm | Pitch in inches (P) | 0.138 inch |
| Number of poles | 7 | Pin series quantity | 1 |
| Fitted by customer | Yes | Number of rows | 1 |
| Max. adjacent poles per row | 24 | Solder pin length (l) | 3.2 mm |
| Solder pin dimensions | 1.0 x 0.6 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 | 0.4 x 2.5 | Screwdriver blade standard | DIN 5264 |
| Tightening torque, min. | 0.2 Nm | Tightening torque, max. | 0.25 Nm |
| Clamping screw | M 2 | Stripping length | 5 mm |
| L1 in mm | 21 mm | L1 in inches | 0.827 inch |
| 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 | Volume resistance | 3.60 mΩ |

Material data

| | | | |
|---------------------------------------|----------|---------------------------------------|----------------------------------|
| Insulating material | 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-2 | Contact material | Copper alloy |
| Contact surface | tinned | Coating | 1-3 μm Ni, 4-6 μm SN |
| Tinning type | matt | Layer structure of solder connection | 1.5...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. | 100 °C |
| Temperature range, installation, min. | -25 °C | Temperature range, installation, max. | 100 °C |

Conductors suitable for connection

| | |
|---|----------------------|
| Clamping range, min. | 0.08 mm ² |
| Clamping range, max. | 2.08 mm ² |
| Wire connection cross section AWG, min. | AWG 28 |
| Wire connection cross section AWG, max. | AWG 14 |
| Solid, min. H05(07) V-U | 0.5 mm ² |
| Solid, max. H05(07) V-U | 1.5 mm ² |
| Flexible, min. H05(07) V-K | 0.5 mm ² |
| Flexible, max. H05(07) V-K | 1.5 mm ² |
| w. plastic collar ferrule, DIN 46228 pt 4, min. | 0.5 mm ² |

Creation date March 6, 2023 9:34:21 PM CET

Catalogue status 18.02.2023 / We reserve the right to make technical changes.

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Technical data

w. plastic collar ferrule, DIN 46228 pt 4, 0.75 mm² max.

Plug gauge in accordance with EN 60999 a x b; ø 2.4 mm x 1.5 mm

Clampable conductor

Cross-section for conductor connection

Type fine-wired

nominal 0.75 mm²

wire end ferrule

Stripping length nominal 8 mm

Recommended wire-end ferrule [HO.75/12 W](#)

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, max. number of poles (Tu=20°C)

12 A

Rated current, min. number of poles (Tu=20°C)

16 A

Rated current, max. number of poles (Tu=40°C)

10 A

Rated current, min. number of poles (Tu=40°C)

14 A

Rated voltage for surge voltage class / pollution degree III/2

160 V

Rated voltage for surge voltage class / pollution degree II/2

320 V

Rated impulse voltage for surge voltage class/ pollution degree II/2

2.5 kV

Rated voltage for surge voltage class / pollution degree III/3

160 V

Rated impulse voltage for surge voltage class/ contamination degree III/3

2.5 kV

Rated impulse voltage for surge voltage class/ pollution degree III/2

2.5 kV

Short-time withstand current resistance

3 x 1s with 72 A

Rated data acc. to CSA

Institute (CSA)



Certificate No. (CSA)

154685-1202192

Rated voltage (Use group B / CSA)

300 V

Rated voltage (Use group D / CSA)

300 V

Rated current (Use group B / CSA)

10 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 (UR)



Certificate No. (UR)

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)

10 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

98 mm

VPE width

89 mm

VPE height

40 mm

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Technical data

Type tests

| | | | | |
|---|---|--|-------------------------------|--|
| Test: Durability of markings | Test | type identification marks for origin, type of material | | |
| | Evaluation | available | | |
| Test: Clampable cross section | Standard | DIN EN 60999 section 6 / 04.94 | | |
| | Conductor type | Type of conductor and conductor cross-section | solid 0.08 mm ² | |
| | | Type of conductor and conductor cross-section | stranded 0.08 mm ² | |
| | | Type of conductor and conductor cross-section | solid 1.5 mm ² | |
| | | Type of conductor and conductor cross-section | stranded 1.5 mm ² | |
| | | Type of conductor and conductor cross-section | AWG 28/1 | |
| | | Type of conductor and conductor cross-section | AWG 28/19 | |
| | | Type of conductor and conductor cross-section | AWG 16/1 | |
| | | Type of conductor and conductor cross-section | AWG 16/19 | |
| | Evaluation | passed | | |
| Test for damage to and accidental loosening of conductors | Standard | DIN EN 60999 section 8.4 / 04.94 | | |
| | Requirement | 0.2 kg | | |
| | Conductor type | Type of conductor and conductor cross-section | AWG 28/1 | |
| | | Type of conductor and conductor cross-section | AWG 28/7 | |
| | Evaluation | passed | | |
| | Requirement | 0.3 kg | | |
| | Conductor type | Type of conductor and conductor cross-section | solid 0.5 mm ² | |
| | | Type of conductor and conductor cross-section | stranded 0.5 mm ² | |
| | Evaluation | passed | | |
| | Requirement | 0.4 kg | | |
| Conductor type | Type of conductor and conductor cross-section | solid 1.5 mm ² | | |
| | Type of conductor and conductor cross-section | stranded 1.5 mm ² | | |
| | Type of conductor and conductor cross-section | AWG 16/7 | | |
| | Type of conductor and conductor cross-section | AWG 16/19 | | |
| Evaluation | passed | | | |

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DIN EN 60999 section 8.4 / 04.94

≥5 N info@weidmueller.com

Technical data

| | | | | |
|---------------|----------------|---|---|--|
| Pull-out test | Standard | DIN EN 60999 section 8.4 / 04.94 | | |
| | Requirement | ≥5 N info@weidmueller.com | | |
| | Conductor type | Type of conductor and conductor cross-section | AWG 28/1 and conductor cross-section | |
| | | Type of conductor and conductor cross-section | AWG 28/7 | |
| | Evaluation | passed | | |
| | Requirement | ≥30 N | | |
| | Conductor type | Type of conductor and conductor cross-section | H05V-U0.5 | |
| | | Type of conductor and conductor cross-section | H05V-K0.5 | |
| | Evaluation | passed | | |
| | Requirement | ≥40 N | | |
| | Conductor type | Type of conductor and conductor cross-section | H07V-U1.5 | |
| | | Type of conductor and conductor cross-section | H07V-K1.5 | |
| | | Type of conductor and conductor cross-section | AWG 16/7 | |
| | | Type of conductor and conductor cross-section | AWG 16/19 | |
| | Evaluation | passed | | |

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 6.0 | EC002643 | ETIM 7.0 | EC002643 |
| ETIM 8.0 | 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 |

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. • Max. outer diameter of the conductor: 2.9 mm • 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 average humidity 70%, 36 months |
|-------|---|

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Technical data

Approvals

Approvals



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

Downloads

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

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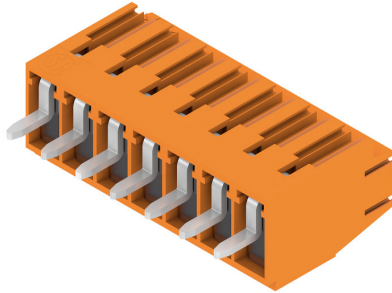
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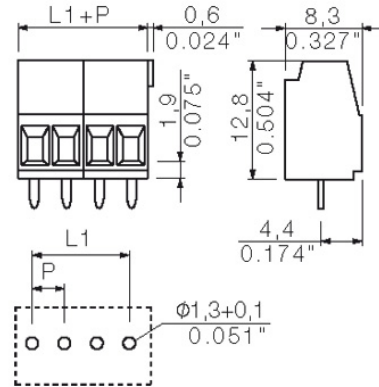
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Drawings

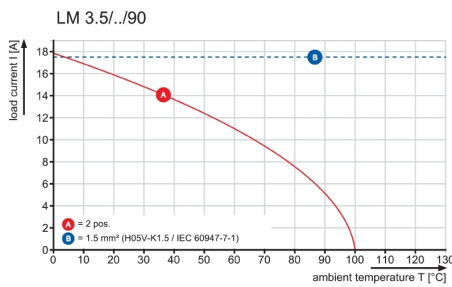
Product image



Dimensional drawing info@weidmueller.com



Graph



Recommended wave soldering profiles

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 Germany
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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.