

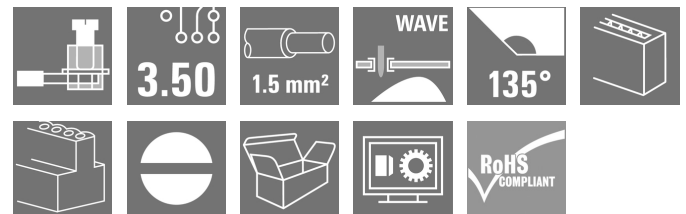
LM 3.50/04/135 3.2SN OR BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image

Small, compact PCB terminal with proven clamping yoke connection and 3.5 mm pitch. Conductor outlet direction 90° and 135°. Suitable for conductor cross-sections up to 1.5 mm².

General ordering data

| | |
|--------------|---|
| Version | Printed circuit board terminals, 3.50 mm, Number of poles: 4, 135°, Solder pin length (l): 3.2 mm, tinned, orange, Clamping yoke connection, Clamping range, max. : 2.08 mm², Box |
| Order No. | 1845220000 |
| Type | LM 3.50/04/135 3.2SN OR BX |
| GTIN (EAN) | 4032248357932 |
| Qty. | 126 pc(s). |
| Product data | IEC: 320 V / 16 A / 0.5 - 1.5 mm² UL: 300 V / 10 A / AWG 28 - AWG 14 |
| Packaging | Box |

Creation date July 3, 2024 4:24:42 AM CEST

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

LM 3.50/04/135 3.2SN OR BX

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Technical data

Dimensions and weights

| | | | |
|--------------------------|------------|-----------------|------------|
| Depth | 12.7 mm | Depth (inches) | 0.5 inch |
| Height | 15.9 mm | Height (inches) | 0.626 inch |
| Height of lowest version | 12.7 mm | Width | 14.6 mm |
| Width (inches) | 0.575 inch | Net weight | 2.456 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 | 135° |
| Pitch in mm (P) | 3.5 mm | Pitch in inches (P) | 0.138 " |
| Number of poles | 4 | 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 | 10.5 mm | L1 in inches | 0.413 " |
| 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 | Cu-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, 0.5 mm ² min. | |
| w. plastic collar ferrule, DIN 46228 pt 4, 0.75 mm ² max. | |
| Plug gauge in accordance with EN 60999 a x b; ø | 2.4 mm x 1.5 mm |

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Technical data

| | | | | |
|---------------------|--|------------------------------|----------------------------|------|
| 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 | H0.75/12 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, min. number of poles (Tu=20°C) | 16 A |
| Rated current, max. number of poles (Tu=20°C) | 12 A | Rated current, min. number of poles (Tu=40°C) | 14 A |
| Rated current, max. number of poles (Tu=40°C) | 10 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 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 | 353 mm |
| VPE width | 136 mm | VPE height | 25 mm |

Type tests

| | | |
|------------------------------|------------|---|
| Test: Durability of markings | Test | type identification, mark of origin, type of material |
| | Evaluation | available |

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| | | | |
|---|----------------|---|-------------------------------|
| 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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Technical data

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

/

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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. • 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 maximum humidity 70%, 36 months |

Approvals

Approvals



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

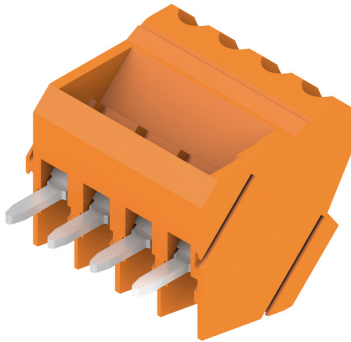
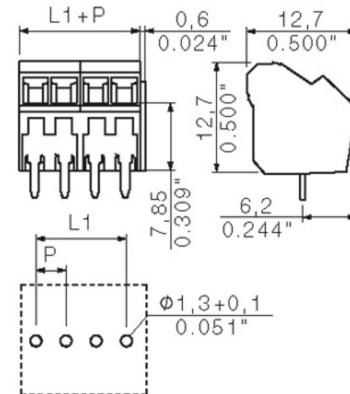
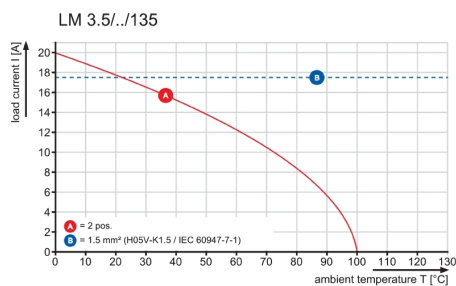
Downloads

| | |
|---|--|
| Approval/Certificate/Document of Conformity | Declaration of the Manufacturer |
| Engineering Data | CAD data – STEP |
| 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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Drawings**Product image****Dimensional drawing****Graph**

LM 3.50/04/135 3.2SN OR BX**Weidmüller Interface GmbH & Co. KG**

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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 0.4X2.5X75 | Version |
| Order No. | 9009030000 | Screwdriver, Screwdriver |
| GTIN (EAN) | 4032248266944 | |
| Qty. | 1 pc(s). | |

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 0.4X2.5X75 | Version |
| Order No. | 9008370000 | Screwdriver, Screwdriver |
| GTIN (EAN) | 4032248056330 | |
| Qty. | 1 pc(s). | |

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WEIDMUELLER INTERFACE GmbH & Co.KG

Technical Data

Rev.

Material data

| | |
|--|----------------------|
| Insulation material type | PA 66 |
| Insulation material colours | orange |
| Insulation material flammability class | UL94 V - 2 |
| Insulation resistance | MOhm 10 ³ |
| Conatct base material | Cu-alloy |
| Contact plating | tin-plated |

System characteristic values

| | | |
|--|---------|---------------------|
| Pitch P | mm/inch | 3.5/0.138 |
| Number of rows | | 1 |
| Dielectric strength (r.m.s withstand voltage) | kV | >2.0 |
| Through resistance (typical) | mOhm | 1.6 |
| Operating temperature range | °C | -55°...+100° |
| Degree of protection acc. to VDE 0106 | | finger safe |
| Degree of protection acc. to DIN EN 60529 | | IP20 |
| Conductor connection method | | clamping yoke |
| Screw size | | M2 |
| Screw torque max. acc. to EN 60999 | Nm | 0.2 |
| Screw driver type | | SDI 0.4x2.5 |
| Solder pin length L | mm/inch | 3.2/0.126 |
| PCB hole diameter D (wave soldering) | mm/inch | 1.3+0.1/0.051+0.004 |
| PCB hole diameter D (reflow soldering) | mm/inch | n.a. |
| Resistance to soldering heat acc. to DIN IEC 60512-6 | °C/sec | 260/10 |
| Resistance to soldering heat acc. to EN 61760-1 | °C/sec | n.a. |
| Solderability classification acc. to EN 61760-1 | | n.a. |
| Solder connection type | | wave soldering |
| Solder pin diameter d (max.) | mm/inch | 1.22/0.048 |

Application notes

| | | |
|--------------------------------|--------|-----|
| Coding possibility | yes/no | no |
| Joinable without loss of pitch | yes/no | no |
| Manual assembly of modules | yes/no | yes |
| Max. number of poles | n | 24 |

Conductor

| | | |
|---|-----------------|------------|
| Clamping range | mm ² | 0.08...1.5 |
| "e" solid H05(07) V-U | mm ² | 0.08...1.5 |
| "f" flexible H05(07) V-K | mm ² | 0.08...1.5 |
| "f" with ferrule acc. to DIN 46228/1 | mm ² | n.a. |
| ... with plastic collar acc. to DIN 46228/4 | mm ² | n.a. |
| Conductor insulation stripping length | mm/inch | 7/0.276 |
| Conductor insulation diameter max. | mm/inch | n.a. |
| Two wire clamping range | mm ² | 0.5...0.75 |
| Gauge to EN 60999 (a x b ; Ø) | mm | 2.4x1.5 |

IEC 664-1 / VDE0110 (4.97) rated data

| | | |
|--------------------------------------|-----------------|------|
| Rated cross section acc. to EN 60999 | mm ² | 1.5 |
| Rated current @ 20°C ambient | A | 17 |
| Rated current @ 40°C ambient | A | 14.5 |

Overvoltage category / Pollution degree

| | | | |
|-----------------------|-------|-------|------|
| | III/3 | III/2 | II/2 |
| Rated voltage | 160 | 160 | 320 |
| Rated impulse voltage | 2.5 | 2.5 | 2.5 |

UL 1059 rated data



File No.: E60693

| | | | |
|--|----------|----------|----------|
| Rated voltage | B | C | D |
| | 150 | --- | 300 |
| Rated current | 10 | --- | 10 |
| AWG wire range (field wiring / factory wiring) | 28...14 | | |

CSA C22.2 rated data



File No.: LR12400

| | | | |
|--|----------|----------|----------|
| Rated voltage | B | C | D |
| | 150 | --- | 300 |
| Rated current | 10 | --- | 10 |
| AWG wire range (field wiring / factory wiring) | 28...14 | | |

Packaging

carton

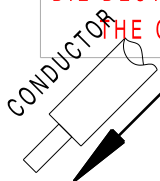
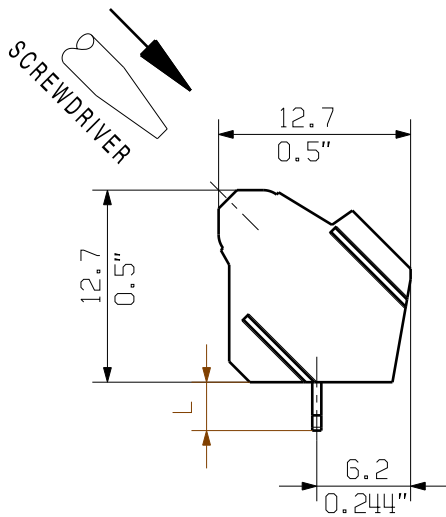
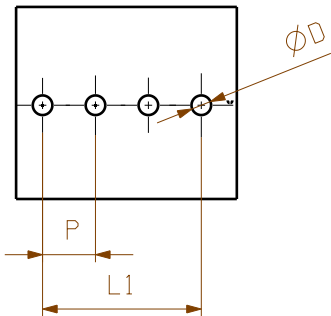
Downloads

www.weidmueller.de

- 1) Sum of ambient temperature and temperature rise
- 2) Recommendation for manual assembly
- 3) Recommendation for automatic assembly
- 4) Recommendation for wave soldering
- 5) Recommendation for reflow soldering
- 6) Referred to rated cross section and minimum pole number

n.a. = not applicable

Subject to technical changes



DIE DEUTSCHE VERSION IST VERBINDLICH
THE GERMAN VERSION IS BINDING

| | | |
|----------|----------------|------------------|
| 24 | 80,50 | 3,169 |
| 23 | 77,00 | 3,031 |
| 22 | 73,50 | 2,894 |
| 21 | 70,00 | 2,756 |
| 20 | 66,50 | 2,618 |
| 19 | 63,00 | 2,480 |
| 18 | 59,50 | 2,343 |
| 17 | 56,00 | 2,205 |
| 16 | 52,50 | 2,067 |
| 15 | 49,00 | 1,929 |
| 14 | 45,50 | 1,791 |
| 13 | 42,00 | 1,654 |
| 12 | 38,50 | 1,516 |
| 11 | 35,00 | 1,378 |
| 10 | 31,50 | 1,240 |
| 9 | 28,00 | 1,102 |
| 8 | 24,50 | 0,965 |
| 7 | 21,00 | 0,827 |
| 6 | 17,50 | 0,689 |
| 5 | 14,00 | 0,551 |
| 4 | 10,50 | 0,413 |
| 3 | 7,00 | 0,276 |
| 2 | 3,50 | 0,138 |
| n | L1 [mm] | L1 [Inch] |

METRIC TOLERANCES
X. = ±0.3
X.X = ±0.1
X.XX = ±0.05

39842/5
17.03.08 HELIS_MA 00

MODIFICATION

DRAWN 17.03.2008 HELIS_MA
RESPONSIBLE KRUG_M
CHECKED 20.03.2008 HECKERT_M
APPROVED HECKERT_M

CAT.NO.:
C 25475 06
DRAWING NO. SHEET 02 OF 03 SHEETS
ISSUE NO.

Weidmüller
LM3.5/././135°
LEITERPLATTENKLEMME
PCB TERMINAL

PRODUCT FILE: LM 3.5/135 7196

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.