# OMNIMATE Signal - series TOP1.5GS
# TOP1.5GS2/90 5 2STI OR

**Weidmüller Interface GmbH & Co. KG**
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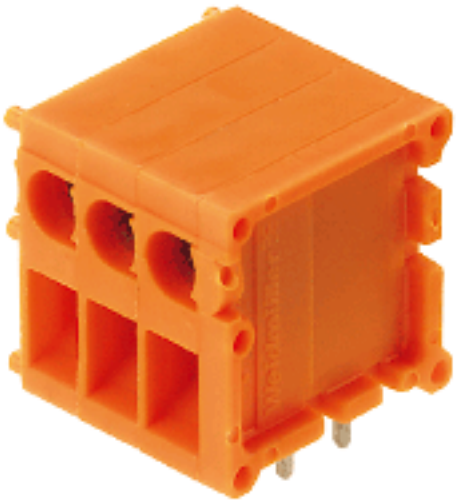
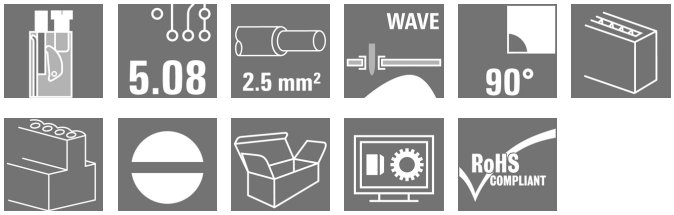
## Product image



Similar to illustration




Conductor entry and screw connection in the same direction on this PCB terminal with 5.08 mm pitch for conductor cross-sections up to 2.5 mm². Conductor outlet direction 90° and 180°.

## General ordering data

| | |
|---|---|
| Type | TOP1.5GS2/90 5 2STI OR |
| Order No. | 0641960000 |
| Version | PCB terminal, 5.08 mm, No. of poles: 2, 90°, Solder pin length (l): 3.5 mm, tinned, Orange, TOP connection, Clamping range, max. : 2.5 mm², Box |
| GTIN (EAN) | 4008190105433 |
| Qty. | 100 pc(s). |
| Product data | IEC: 630 V / 24 A / 0.5 - 2.5 mm²<br>UL: 300 V / 10 A / AWG 26 - AWG 14 |
| Packaging | Box |

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## Technical data

### Dimensions and weights

| | | | |
|---|---|---|---|
| Width | 11.96 mm | Width (inches) | 0.471 inch |
| Height | 22 mm | Height (inches) | 0.866 inch |
| Height of lowest version | 18.5 mm | Depth | 19.5 mm |
| Depth (inches) | 0.768 inch | Net weight | 7.7 g |

### System parameters

| | | | |
|---|---|---|---|
| Product family | OMNIMATE Signal - series TOP1.5GS | Wire connection method | TOP 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 inch |
| No. of poles | 2 | Fitted by customer | No |
| Solder pin length (l) | 3.5 mm | Solder pin dimensions | 0.8 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 | 2 | 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 | 10 mm | L1 in mm | 5.08 mm |
| L1 in inches | 0.2 inch | Touch-safe protection acc. to DIN VDE 0470 | IP 20 |
| Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch | Volume resistance | 1.20 mΩ |

### Material data

| | | | |
|---|---|---|---|
| Insulating material | PA | Colour | Orange |
| Colour chart (similar) | RAL 2000 | Insulating material group | I |
| CTI | ≥ 600 | Insulation resistance | ≥ $10^8$ Ω |
| UL 94 flammability rating | V-2 | Contact material | CuZn |
| Contact surface | tinned | Layer structure of solder connection | 1.5-3 µm Ni / 4-6 µm Sn |
| Storage temperature, min. | -25 °C | Storage temperature, max. | 55 °C |
| Max. relative humidity during storage | 80 % | 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. | 0.13 mm² | Clamping range, max. | 2.5 mm² |
| Wire connection cross section AWG, min. | AWG 26 | Wire connection cross section AWG, max. | AWG 14 |
| Solid, min. H05(07) V-U | 0.5 mm² | Solid, max. H05(07) V-U | 2.5 mm² |
| Flexible, min. H05(07) V-K | 0.5 mm² | Flexible, max. H05(07) V-K | 2.5 mm² |
| w. plastic collar ferrule, DIN 46228 pt 4, min. | 0.5 mm² | w. plastic collar ferrule, DIN 46228 pt 4, max. | 2.5 mm² |
| w. wire end ferrule, DIN 46228 pt 1, min | 0.5 mm² | w. wire end ferrule, DIN 46228 pt 1, max. | 2.5 mm² |
| Plug gauge in accordance with EN 60999 a x b; ø | 2.4 mm x 1.5 mm | | |

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## Technical data

### Rated data acc. to IEC

| | | | |
|---|---|---|---|
| tested acc. to standard | IEC 60664-1, IEC 61984 | Rated current, min. no. of poles (Tu=20°C) | 24 A |
| Rated current, max. no. of poles (Tu=20°C) | 19 A | Rated current, min. no. of poles (Tu=40°C) | 21 A |
| Rated current, max. no. of poles (Tu=40°C) | 16 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 | 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 120 A |

### Rated data acc. to CSA

| | | | |
|---|---|---|---|
| Institute (CSA) | | Certificate No. (CSA) | 154685-1501716 |
| 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 26 | 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

| | | | |
|---|---|---|---|
| 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 26 | Wire cross-section, AWG, max. | AWG 14 |

### Packaging

| | | | |
|---|---|---|---|
| Packaging | Box | VPE length | 50 mm |
| VPE width | 124 mm | VPE height | 181 mm |

### Classifications

| | | | |
|---|---|---|---|
| ETIM 3.0 | EC001284 | ETIM 4.0 | EC002643 |
| ETIM 5.0 | EC002643 | ETIM 6.0 | EC002643 |
| UNSPSC | 30-21-18-01 | eClass 6.2 | 27-26-11-01 |
| eClass 7.1 | 27-44-04-01 | eClass 8.1 | 27-44-04-01 |
| eClass 9.0 | 27-44-04-01 | eClass 9.1 | 27-44-04-01 |

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## Technical data

### Notes

| | |
|---|---|
| Notes | • Additional colours on request<br>• Rated current related to rated cross-section & min. No. of poles.<br>• Wire end ferrule without plastic collar to DIN 46228/1<br>• Wire end ferrule with plastic collar to DIN 46228/4<br>• Crimp form A for wire end ferrules with PZ 6/5 crimping tool are recommended for the largest cable sizes.<br>• P on drawing = pitch<br>• 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. |
| 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. |

### Approvals

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

### Downloads

| | |
|---|---|
| Brochure/Catalogue | FL DRIVES EN<br>FL ANALO.SIGN.CONV. EN<br>MB DEVICE MANUF. EN<br>FL DRIVES DE<br>CAT 2 PORTFOLIOGUIDE EN<br>FL BUILDING SAFETY EN<br>FL APPL LED LIGHTING EN<br>FL INDUSTR.CONTROLS EN<br>FL MACHINE SAFETY EN<br>FL HEATING ELECTR EN<br>FL APPL_INVERTER EN<br>FL_BASE_STATION_EN<br>FL ELEVATOR EN<br>FL POWER SUPPLY EN<br>FL 72H SAMPLE SER EN<br>PO OMNIMATE EN |
| Engineering Data | EPLAN, WSCAD |

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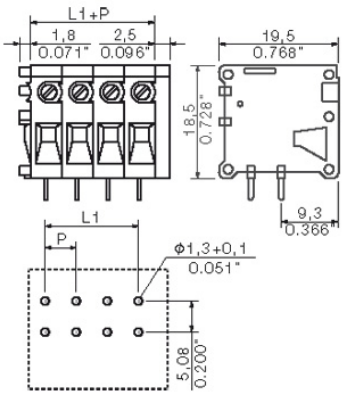
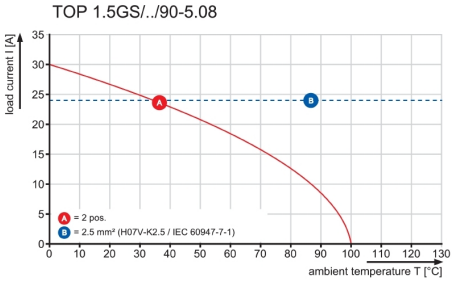
## Drawings

### Dimensional drawing




### Graph



# Wave Solder Profile

## Recommended wave solderding profiles

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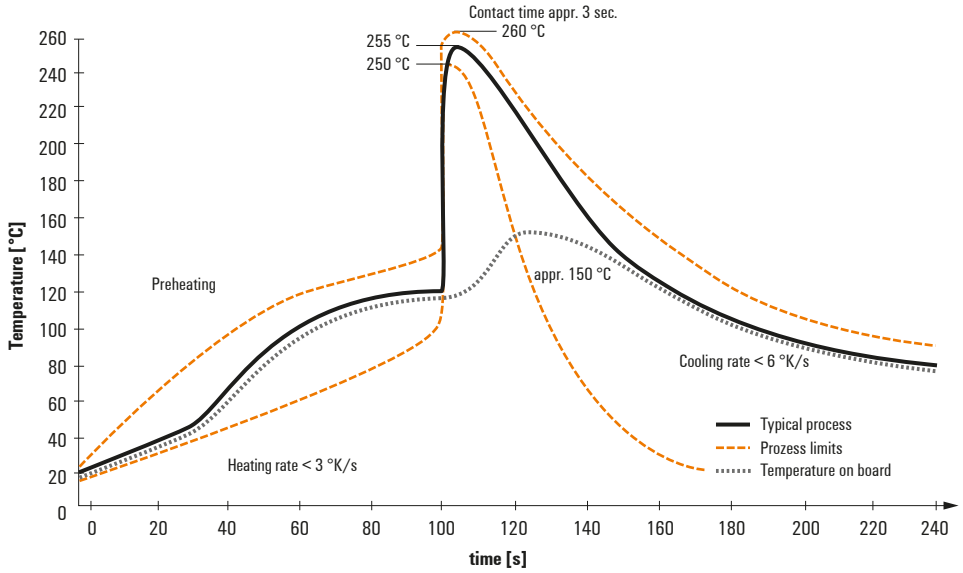
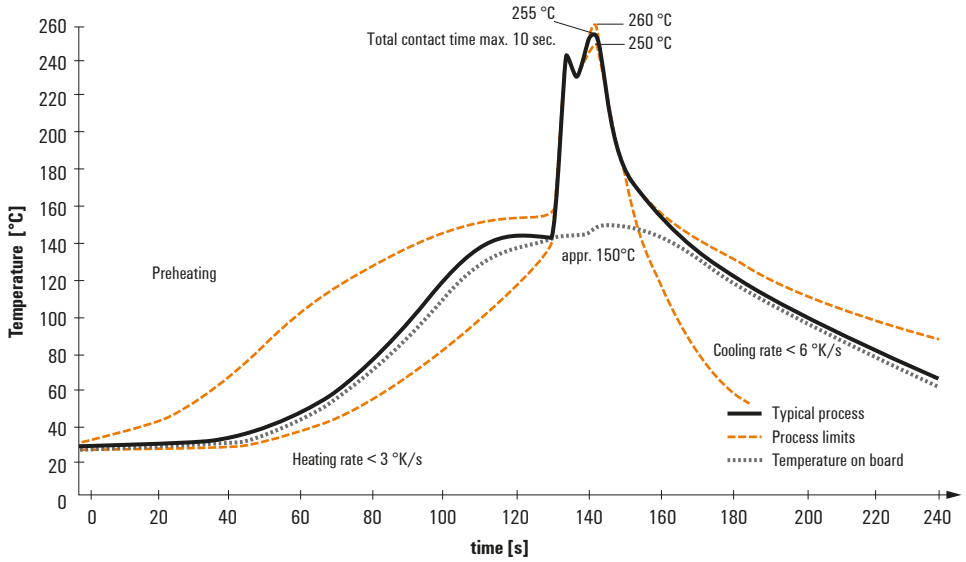
**Single Wave:**




**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.