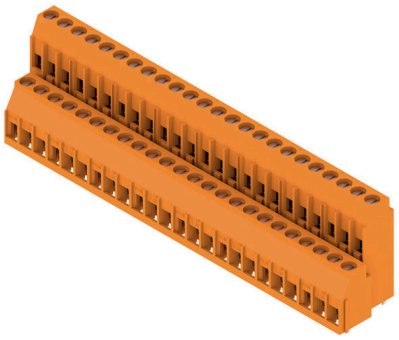
Data sheet

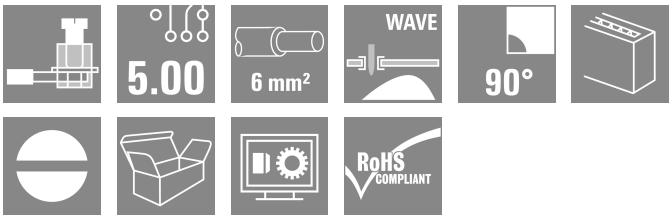
# LL2N 5.00/48/90 3.2SN OR BX

**Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

## Product image






Multi-row PCB terminals with proven clamping yoke connections, in 5.00 and 5.08 mm pitch. 90° conductor outlet direction. Suitable for conductor cross-sections up to 6.0 mm².

### General ordering data

| | |
|---|---|
| Version | Printed circuit board terminals, 5.00 mm, Number of poles: 48, 90°, Solder pin length (l): 3.2 mm, tinned, orange, Clamping yoke connection, Clamping range, max. : 6 mm², Box |
| Order No. | 1977470000 |
| Type | LL2N 5.00/48/90 3.2SN OR BX |
| GTIN (EAN) | 4032248673087 |
| Qty. | 10 items |
| Product data | IEC: 500 V / 32.5 A / 0.5 - 6 mm²<br>UL: 300 V / 20 A / AWG 26 - AWG 12 |
| Packaging | Box |

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# Technical data

### Approvals

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

### Dimensions and weights

| | | | |
|---|---|---|---|
| Depth | 21.99 mm | Depth (inches) | 0.8657 inch |
| Height | 34.5 mm | Height (inches) | 1.3583 inch |
| Height of lowest version | 31.3 mm | Width | 122.5 mm |
| Width (inches) | 4.8228 inch | Net weight | 85.8 g |

### Environmental Product Compliance

| | |
|---|---|
| RoHS Compliance Status | Compliant without exemption |
| REACH SVHC | No SVHC above 0.1 wt% |

### System parameters

| | | | |
|---|---|---|---|
| Product family | OMNIMATE Signal - series LL | Wire connection method | Clamping yoke connection |
| Property, clamping point | WireReady | Mounting onto the PCB | THT solder connection |
| Conductor outlet direction | 90° | Pitch in mm (P) | 5.00 mm |
| Pitch in inches (P) | 0.197 " | Number of poles | 48 |
| Pin series quantity | 2 | Fitted by customer | Yes |
| Number of rows | 2 | Max. adjacent poles per row | 24 |
| Solder pin length (l) | 3.2 mm | Solder pin dimensions | 0.75 x 0.9 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. | 0.5 Nm |
| Tightening torque, max. | 0.6 Nm | Clamping screw | M 3 |
| Stripping length | 6 mm | L1 in mm | 115.00 mm |
| L1 in inches | 4.531 " | Touch-safe protection acc. to DIN VDE 0470 | IP20 plugged/ IP10 unplugged |
| Touch-safe protection acc. to DIN VDE 57 106 | finger-safe unplugged/ back-of-hand-safe plugged | Protection degree | IP20 |

### Material data

| | | | |
|---|---|---|---|
| Insulating material | Wemid (PA) | Colour | orange |
| Colour chart (similar) | RAL 2000 | Insulating material group | I |
| Comparative Tracking Index (CTI) | ≥ 600 | Moisture Level (MSL) | |
| UL 94 flammability rating | V-0 | Contact material | Copper alloy |
| Contact surface | tinned | Coating | 4-6 µm SN |
| Tinning type | matt | Layer structure of solder connection | 4...6 µm Sn matt |
| 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 mm² |

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## Technical data

| | | | | |
|---|---|---|---|---|
| Clamping range, max. | 6 mm² | | | |
| Wire connection cross section AWG, min. | AWG 26 | | | |
| Wire connection cross section AWG, max. | AWG 12 | | | |
| Solid, min. H05(07) V-U | 0.5 mm² | | | |
| Solid, max. H05(07) V-U | 6 mm² | | | |
| Flexible, min. H05(07) V-K | 0.5 mm² | | | |
| Flexible, max. H05(07) V-K | 4 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 | 2.8 mm x 2.4 mm; 3.0 mm | | | |
| Clampable conductor | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 0.5 mm² | |
| | 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 mm² | |
| | 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 mm² | |
| | 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 | |
| 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) | 32.5 A |
| Rated current, max. number of poles (Tu=20°C) | 26 A | Rated current, min. number of poles (Tu=40°C) | 27.5 A |
| Rated current, max. number of poles (Tu=40°C) | 22 A | Rated voltage for surge voltage class / pollution degree II/2 | 500 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 |

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## Technical data

### Rated data acc. to CSA

| | | | |
|---|---|---|---|
| Institute (CSA) | CSA | Certificate No. (CSA) | 200039-1202191 |
| 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 26 | Wire cross-section, AWG, max. | AWG 12 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

### Rated data acc. to UL 1059

| | | | |
|---|---|---|---|
| Institute (UR) | 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) | 20 A | Rated current (Use group D / UL 1059) | 10 A |
| Wire cross-section, AWG, min. | AWG 26 | Wire cross-section, AWG, max. | AWG 12 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

### Packing

| | | | |
|---|---|---|---|
| Packaging | Box | VPE length | 223.00 mm |
| VPE width | 135.00 mm | VPE height | 45.00 mm |

### 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 | • 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>• 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.<br>• Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months |

### Classifications

| | | | |
|---|---|---|---|
| ETIM 8.0 | EC002643 | ETIM 9.0 | EC002643 |
| ETIM 10.0 | EC002643 | ECLASS 14.0 | 27-46-01-01 |
| ECLASS 15.0 | 27-46-01-01 | | |

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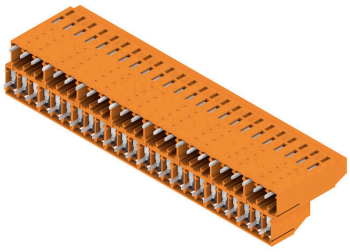
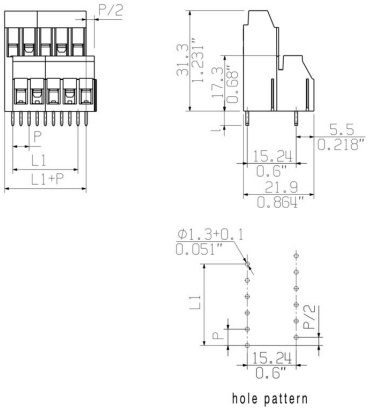
## Drawings

### Product image



### Dimensional drawing




### Graph