

**TCS 3.81/06/90 3.5SN GN BX**

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

[www.weidmueller.com](http://www.weidmueller.com)

**General ordering data**

|              |   |
|--------------|---|
| Order No.    | <a href="#">2650470000</a>  |
| Type         | TCS 3.81/06/90 3.5SN GN BX  |
| GTIN (EAN)   | 4050118636505   |
| Qty.         | 320 Stück   |
| Product data | IEC: 320 V / 10 A / 0.2 - 1.5 mm <sup>2</sup><br>UL: 150 V / 10 A / AWG 26 - AWG 16 |
| Packaging    | Box   |

Erstellungs-Datum May 26, 2023 1:34:43 PM CEST

Katalogstand 12.05.2023 / Technische Änderungen vorbehalten

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## Technische Daten

### Dimensions and weights

Net weight 2.76 g

### Temperatures

Operating temperature, min. -40 °C Operating temperature, max. 105 °C

### System parameters

|                                |                             |                                 |                          |
|--------------------------------|-----------------------------|---------------------------------|--------------------------|
| Product family                 | OMNIMATE basic – Series TCS | Wire connection method          | Clamping yoke connection |
| Mounting onto the PCB          | THT solder connection       | Conductor outlet direction      | 90°                      |
| Pitch in mm (P)                | 3.81 mm                     | Pitch in inches (P)             | 0.15 inch                |
| Number of poles                | 6                           | Pin series quantity             | 1                        |
| Number of rows                 | 1                           | Solder pin length (l)           | 3.5 mm                   |
| Solder pin dimensions          | 0.5 x 0.9mm                 | Solder eyelet hole diameter (D) | 1.3 mm                   |
| Number of solder pins per pole | 1                           | Screwdriver blade               | 0.4 x 2.5                |
| Tightening torque, min.        | 0.2 Nm                      | Tightening torque, max.         | 0.23 Nm                  |
| Clamping screw                 | M 2                         | Stripping length                | 5 mm                     |
| L1 in mm                       | 19.05 mm                    | L1 in inches                    | 0.75 inch                |
| Protection degree              | IP20                        |                                 |                          |

### Material data

|                             |          |                             |              |
|-----------------------------|----------|-----------------------------|--------------|
| Insulating material         | PA       | Colour                      | Pale green   |
| Colour chart (similar)      | RAL 6021 | Insulating material group   | I            |
| UL 94 flammability rating   | V-0      | Contact material            | Copper alloy |
| Contact surface             | tinned   | Tinning type                | matt         |
| Storage temperature, min.   | -40 °C   | Storage temperature, max.   | 70 °C        |
| Operating temperature, min. | -40 °C   | Operating temperature, max. | 105 °C       |

### Conductors suitable for connection

|   |                      |   |                     |
|---|----------------------|---|---------------------|
| Clamping range, min.                            | 0.2 mm <sup>2</sup>  | Clamping range, max.                            | 1.5 mm <sup>2</sup> |
| Wire connection cross section AWG, min.         | AWG 26               | Wire connection cross section AWG, max.         | AWG 16              |
| Solid, min. H05(07) V-U                         | 0.2 mm <sup>2</sup>  | Solid, max. H05(07) V-U                         | 1.5 mm <sup>2</sup> |
| Flexible, min. H05(07) V-K                      | 0.2 mm <sup>2</sup>  | Flexible, max. H05(07) V-K                      | 1 mm <sup>2</sup>   |
| w. plastic collar ferrule, DIN 46228 pt 4, min. | 0.25 mm <sup>2</sup> | w. plastic collar ferrule, DIN 46228 pt 4, max. | 1 mm <sup>2</sup>   |
| w. wire end ferrule, DIN 46228 pt 1, min.       | 0.25 mm <sup>2</sup> | w. wire end ferrule, DIN 46228 pt 1, max.       | 1 mm <sup>2</sup>   |

### Rated data acc. to IEC

|   |        |   |        |
|---|--------|---|--------|
| Rated current, min. number of poles (Tu=20°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            | 250 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 |   |        |

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### Rated data acc. to CSA

|                                   |        |                                   |        |
|-----------------------------------|--------|-----------------------------------|--------|
| Rated voltage (Use group B / CSA) | 150 V  | Rated current (Use group B / CSA) | 10 A   |
| Wire cross-section, AWG, min.     | AWG 26 | Wire cross-section, AWG, max.     | AWG 16 |

### Rated data acc. to UL 1059

|                                       |   |                                       |        |
|---------------------------------------|---|---------------------------------------|--------|
| Institute (cURus)                     |  | Certificate No. (cURus)               | E60693 |
| Rated voltage (Use group B / UL 1059) | 150 V   | Rated current (Use group B / UL 1059) | 10 A   |
| Wire cross-section, AWG, min.         | AWG 26  | Wire cross-section, AWG, max.         | AWG 16 |
| Reference to approval values          | Specifications are maximum values, details - see approval certificate.            |                                       |        |

### Packing

|           |        |            |        |
|-----------|--------|------------|--------|
| Packaging | Box    | VPE length | 168 mm |
| VPE width | 133 mm | VPE height | 47 mm  |

### 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 |

### Environmental Product Compliance

|            |                                      |
|------------|--------------------------------------|
| REACH SVHC | Lead 7439-92-1                       |
| SCIP       | e8ca8b50-189f-4e0d-bdaa-5c8b34abe5bd |

### Important note

- Notes
- Only compatible with OMNIMATE basic products
  - P on drawing = pitch
  - Rated current related to rated cross-section & min. No. of poles.
  - 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.
  - In the case of a two-pole terminal, the insulating body must be held against the terminal when tightening the screw.
  - Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

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## Technische Daten

### Approvals

Approvals



ROHS Conform

UL File Number Search [UL Website](#)

Certificate No. (cURus) E60693

### Downloads

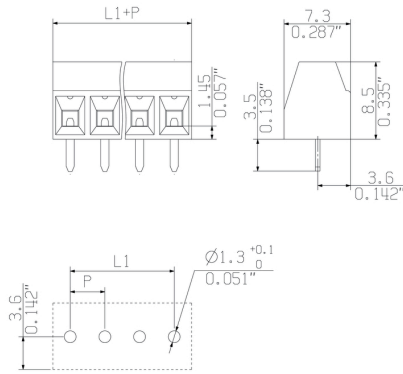
Catalogues [Catalogues in PDF-format](#)

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Zeichnungen

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## 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.