

**TCS 3.81/13/90 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="#">2650540000</a>
Type	TCS 3.81/13/90 3.5SN GN BX
GTIN (EAN)	4050118636437
Qty.	156 Stück
Product data	IEC: 320 V / 10 A / 0.2 - 1.5 mm <sup>2</sup> UL: 150 V / 10 A / AWG 26 - AWG 16
Packaging	Box

Erstellungs-Datum May 26, 2023 1:35:46 PM CEST

Katalogstand 12.05.2023 / Technische Änderungen vorbehalten

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## Technische Daten

### Dimensions and weights

Net weight 5.98 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	13	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	45.72 mm	L1 in inches	1.8 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

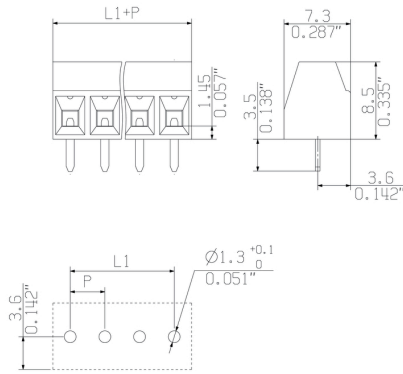
Catalogues [Catalogues in PDF-format](#)

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Zeichnungen

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## Recommended wave soldering profiles

**Weidmüller Interface GmbH & Co. KG**  
 Klängenbergstraße 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.