

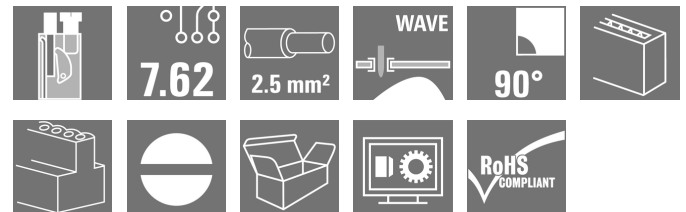
TOP1.5GS6/90 7 2STI OR**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image

Similar to illustration

Conductor entry and screw connection in the same direction on this PCB terminal with 7.62 mm pitch for conductor cross-sections up to 2.5 mm². Conductor outlet direction 90° and 180°.

General ordering data

Version	Printed circuit board terminals, 7.62 mm, Number of poles: 6, 90°, Solder pin length (l): 3.5 mm, tinned, orange, TOP connection, Clamping range, max.: 2.5 mm ² , Box
Order No.	1683990000
Type	TOP1.5GS6/90 7 2STI OR
GTIN (EAN)	4008190475710
Qty.	20 pc(s).
Product data	IEC: 1000 V / 24 A / 0.5 - 2.5 mm ² UL: 300 V / 10 A / AWG 26 - AWG 14
Packaging	Box

Creation date March 24, 2021 7:35:58 PM CET

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Technical data

Dimensions and weights

Depth	19.5 mm	Depth (inches)	0.768 inch
Height	22 mm	Height (inches)	0.866 inch
Height of lowest version	18.5 mm	Net weight	24.45 g
Width	47.52 mm	Width (inches)	1.871 inch

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)	7.62 mm	Pitch in inches (P)	0.3 inch
Number of poles	6	Pin series quantity	1
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	38.1 mm	L1 in inches	1.5 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
Comparative Tracking Index (CTI)	≥ 600	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.	-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.	0.13 mm ²
Clamping range, max.	2.5 mm ²
Wire connection cross section AWG, min.	AWG 26
Wire connection cross section AWG, max.	AWG 14
Solid, min. H05(07) V-U	0.5 mm ²
Solid, max. H05(07) V-U	2.5 mm ²
Flexible, min. H05(07) V-K	0.5 mm ²
Flexible, max. H05(07) V-K	2.5 mm ²
w. plastic collar ferrule, DIN 46228 pt 4, 0.5 mm ² min.	
w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm ² max.	
w. wire end ferrule, DIN 46228 pt 1, min.	0.5 mm ²
w. wire end ferrule, DIN 46228 pt 1, max.	2.5 mm ²
Plug gauge in accordance with EN 60999 a x b; ø	2.4 mm x 1.5 mm

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Clampable conductor	Cross-section for conductor connection	Type	fine-wired		
		nominal	0.5 mm ²		
	wire end ferrule	Stripping length	nominal	12 mm	
		Recommended wire-end ferrule	H0.5/16 OR		
		Stripping length	nominal	10 mm	
		Recommended wire-end ferrule	H0.5/10		
	Cross-section for conductor connection	Type	fine-wired		
		nominal	0.75 mm ²		
	wire end ferrule	Stripping length	nominal	12 mm	
		Recommended wire-end ferrule	H0.75/16 W		
		Stripping length	nominal	10 mm	
		Recommended wire-end ferrule	H0.75/10		
	Cross-section for conductor connection	Type	fine-wired		
		nominal	1 mm ²		
	wire end ferrule	Stripping length	nominal	12 mm	
		Recommended wire-end ferrule	H1.0/16D R		
		Stripping length	nominal	10 mm	
		Recommended wire-end ferrule	H1.0/10		
	Cross-section for conductor connection	Type	fine-wired		
		nominal	1.5 mm ²		
	wire end ferrule	Stripping length	nominal	10 mm	
		Recommended wire-end ferrule	H1.5/10		
		Stripping length	nominal	12 mm	
		Recommended wire-end ferrule	H1.5/16 R		
	Cross-section for conductor connection	Type	fine-wired		
		nominal	2.5 mm ²		
	wire end ferrule	Stripping length	nominal	10 mm	
		Recommended wire-end ferrule	H2.5/10		
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)	24 A
Rated current, max. number of poles (Tu=20°C)	19 A	Rated current, min. number of poles (Tu=40°C)	21 A
Rated current, max. number of poles (Tu=40°C)	16 A	Rated voltage for surge voltage class / pollution degree II/2	1,000 V
Rated voltage for surge voltage class / pollution degree III/2	630 V	Rated voltage for surge voltage class / pollution degree III/3	400 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)



Certificate No. (CSA)

154685-1501716

Rated voltage (Use group B / CSA) 300 V

Rated current (Use group B / CSA) 10 A

Wire cross-section, AWG, min. AWG 26

Reference to approval values Specifications are maximum values, details - see approval certificate.

Rated voltage (Use group D / CSA) 300 V

Rated current (Use group D / CSA) 10 A

Wire cross-section, AWG, max. AWG 14

Rated data acc. to UL 1059

Rated voltage (Use group B / UL 1059) 300 V

Rated current (Use group B / UL 1059) 10 A

Wire cross-section, AWG, min. AWG 26

Rated voltage (Use group D / UL 1059) 300 V

Rated current (Use group D / UL 1059) 10 A

Wire cross-section, AWG, max. AWG 14

Packing

Packaging Box

VPE length 61 mm

VPE width 100 mm

VPE height 118 mm

Classifications

ETIM 6.0 EC002643

ECLASS 9.0 27-44-04-01

ECLASS 10.0 27-44-04-01

ETIM 7.0 EC002643

ECLASS 9.1 27-44-04-01

ECLASS 11.0 27-46-01-01

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

- Additional colours on request
- Rated current related to rated cross-section & min. No. of poles.
- Wire end ferrule without plastic collar to DIN 46228/1
- Wire end ferrule with plastic collar to DIN 46228/4
- Crimp form A for wire end ferrules with PZ 6/5 crimping tool are recommended for the largest cable sizes.
- 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 average humidity 70%, 36 months

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Technical data

Approvals

Approvals



ROHS

Conform

Downloads

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Engineering Data	STEP
Engineering Data	EPLAN, WSCAD

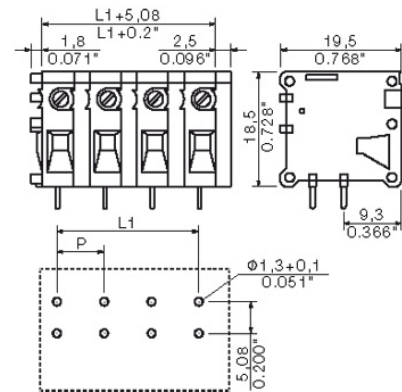
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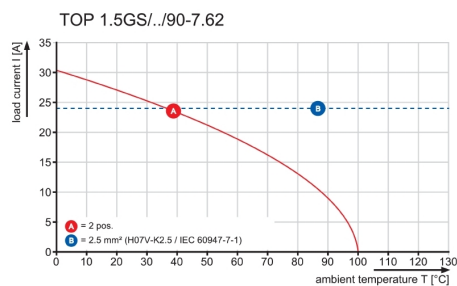
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Drawings

Dimensional drawing



Graph



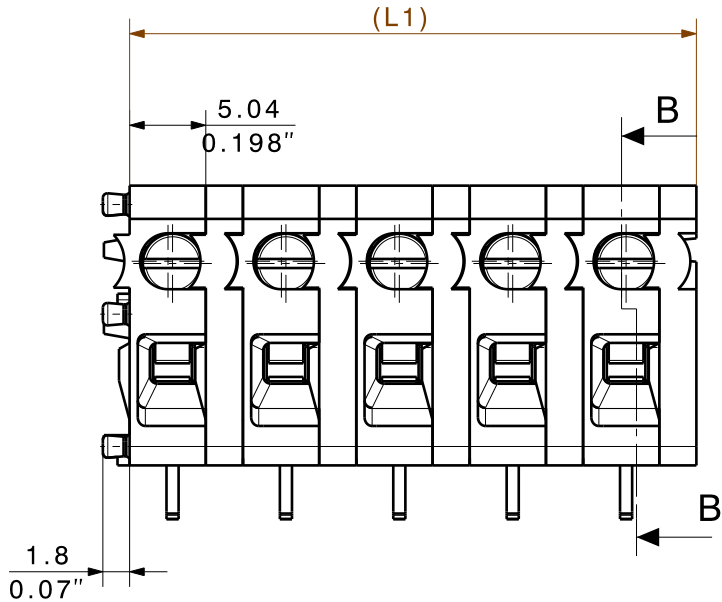
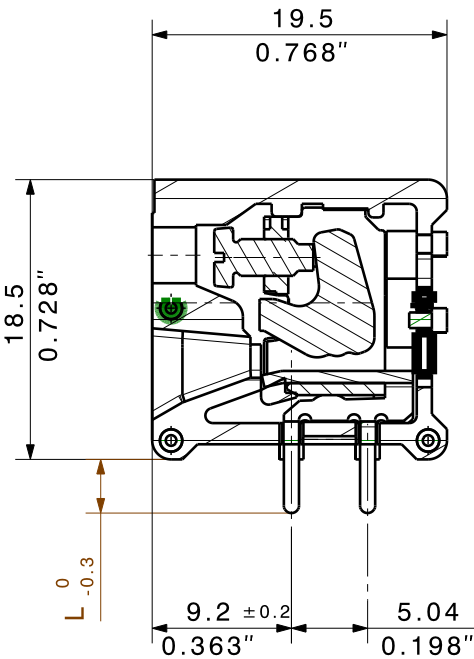
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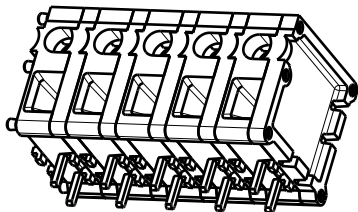
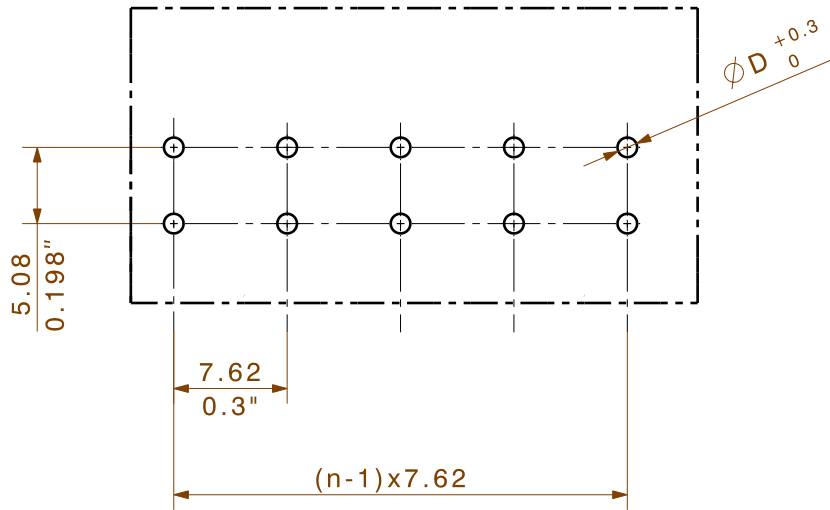
DIE DEUTSCHE VERSION IST VERBINDLICH
THE GERMAN VERSION IS BINDING

Technical Data

Rev.		Material data	
		Insulation material type	PA 66
		Insulation material colours	S 33230
		Insulation material flammability class	UL94
		Insulation resistance	MOhm
		Contact base material	10 ³
		Contact plating (mating end)	CuZn
		Contact plating (solder end)	Tin-plated
			n/a
System characteristic values together with counterpart			
Pitch P		mm/inch	7.62 / 0.3
Number of rows			1
Dielectric strength (r.m.s withstand voltage)		kV	2.5
Conductor connection methode			TOP connection
Plug in force (max.)		N/pole	n/a 1)
Pull out force (max.)		N/pole	n/a 1)
Through resistance (typical)		mOhm	0.9
Operating temperature range		°C	-20....+100 2)
Degree of protection acc. to VDE 0106 (plugged/unplugged)			finger safe
Degree of protection acc. to DIN EN 60529 (plugged/unplugged)			IP20
Solder pin length L		mm/inch	3.5
PCB hole diameter D (wave soldering)		mm/inch	1.3 3)
PCB hole diameter D (reflow soldering)		mm/inch	n/a 4)
Resistance to soldering heat acc. to DIN IEC 60512-6		°C/sec	260/10 5)
Resistance to soldering heat acc. to EN 61760-1		°C/sec	n/a 6)
Solderability classification acc. to EN 61760-1			n/a
Solder connection type			wave soldering
Solder pin diameter d (max.)		mm/inch	1.28/0.05
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	12
IEC 664-1 / VDE0110 (4.97) rated data			
Rated cross section acc. to EN 60999		mm ²	1.5
Rated current @ 20°C ambient (together with)		A	16 7)
Rated current @ 40°C ambient (together with)		A	xxx 7)
Overvoltage category / Pollution degree			III/3 III/2 II/2
Rated voltage		V	500 630 1000
Rated impulse voltage		kV	6.0 6.0 6.0
UL 1059 rated data File No.: E60693			
Rated voltage		V	300
Rated current		A	10 300
Clamping range		mm ² / AWG	0.5...1.5/26..14
CSA C22.2 rated data File No.: LR12400			
Rated voltage		V	300
Rated current		A	10 300
Clamping range		mm ² / AWG	0.5.....1.5/26....14
Packaging			carton
Downloads			www.weidmueller.de



Drilling Diagram



12	91,44	3,600
11	83,82	3,300
10	76,20	3,000
9	68,58	2,700
8	60,96	2,400
7	53,34	2,100
6	45,72	1,800
5	38,10	1,500
4	30,48	1,200
3	22,86	0,900
2	15,24	0,600
1	7,62	0,300
n	L1 [mm]	L1 [Inch]

- 1) Without locking latches
- 2) Sum of ambient temperature and temperature rise
- 3) Recommendation for manual assembly
- 4) Recommendation for automatic assembly
- 5) Recommendation for wave soldering
- 6) Recommendation for reflow soldering
- 7) Referred to rated cross section and minimum pole number

n.a. = not applicable

Subject to technical changes

For the mounting of PCBs, it should be noted that the rated data stated here relates only to the PCB components alone.
The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to IEC 664 / VDE 0110.
The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller PCB components are tested to the DIN EN 61984 standard, and are valid for its field of application.
Provided that the components are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

02 Zeichnung komplett überarbeitet

METRIC TOLERANCES: X. = ±0.3 X.X = ±0.1 X.XX = ±0.05		35928/5 05.09.06 KRUG_M 01		CAT.NO.: .	
MODIFICATION		Weidmüller		C 33230 02	
METRIC/INCH DIMENSIONS		DATE	NAME	DRAWING NO.	ISSUE NO.
SCALE: 2:1		DRAWN	06.04.2004 HEINEL_M	SHEET 3	OF 4 SHEETS
SUPERSEDES:		RESPONSIBLE	KRUG_M	TOP 1.5 GS /90 2STI	
SUPERSEDED BY: .		CHECKED	05.09.2006 HECKERT_M		
		APPROVED	GUENTHER_W	PRODUCT FILE:	

Recommended wave soldering 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.