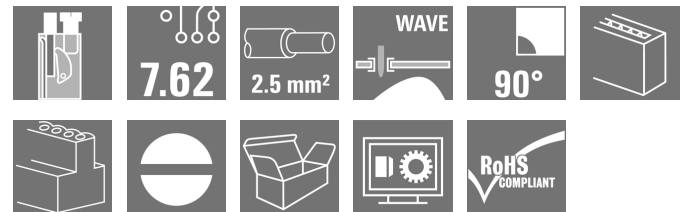


## OMNIMATE Signal - series TOP1.5GS TOP1.5GS8/90 7 2STI OR

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 26  
D-32758 Detmold  
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Fon: +49 5231 14-0  
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### 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 mm<sup>2</sup>. Conductor outlet direction 90° and 180°.

### General ordering data

Type	TOP1.5GS8/90 7 2STI OR
Order No.	<a href="#">0642460000</a>
Version	Printed circuit board terminals, 7.62 mm, Number of poles: 8, 90°, Solder pin length (l): 3.5 mm, tinned, orange, TOP connection, Clamping range, max.: 2.5 mm <sup>2</sup> , Box
GTIN (EAN)	4008 190134242
Qty.	20 pc(s).
Product data	IEC: 1000 V / 24 A / 0.5 - 2.5 mm <sup>2</sup> UL: 300 V / 10 A / AWG 26 - AWG 14
Packaging	Box

Creation date May 1, 2020 1:48:37 AM CEST

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**Technical data**
**Dimensions and weights**

Width	62.76 mm	Width (inches)	2.471 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	32.5 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)	7.62 mm	Pitch in inches (P)	0.3 inch
Number of poles	8	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	53.34 mm
L1 in inches	2.1 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	Insulation strength	≥ 10 <sup>8</sup> 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.	50 °C
Max. relative humidity during storage	70 %	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 <sup>2</sup>
Clamping range, max.	2.5 mm <sup>2</sup>
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 <sup>2</sup>
Solid, max. H05(07) V-U	2.5 mm <sup>2</sup>
Flexible, min. H05(07) V-K	0.5 mm <sup>2</sup>
Flexible, max. H05(07) V-K	2.5 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, 0.5 mm <sup>2</sup> min.	
w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm <sup>2</sup> max.	
w. wire end ferrule, DIN 46228 pt 1, min.	0.5 mm <sup>2</sup>
w. wire end ferrule, DIN 46228 pt 1, max.	2.5 mm <sup>2</sup>

Creation date May 1, 2020 1:48:37 AM CEST

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**Technical data**

Plug gauge in accordance with EN 60999 a x b; ø 2.4 mm x 1.5 mm

Clampable conductor	Cross-section for conductor connection	Type	fine-wired
		nominal	0.5 mm <sup>2</sup>
wire end ferrule		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	<a href="#">H0.5/16 OR</a>
		Stripping length	nominal 10 mm
		Recommended wire-end ferrule	<a href="#">H0.5/10</a>
Cross-section for conductor connection	Type	fine-wired	
	nominal	0.75 mm <sup>2</sup>	
wire end ferrule		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	<a href="#">H0.75/16 W</a>
		Stripping length	nominal 10 mm
		Recommended wire-end ferrule	<a href="#">H0.75/10</a>
Cross-section for conductor connection	Type	fine-wired	
	nominal	1 mm <sup>2</sup>	
wire end ferrule		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	<a href="#">H1.0/16D R</a>
		Stripping length	nominal 10 mm
		Recommended wire-end ferrule	<a href="#">H1.0/10</a>
Cross-section for conductor connection	Type	fine-wired	
	nominal	1.5 mm <sup>2</sup>	
wire end ferrule		Stripping length	nominal 10 mm
		Recommended wire-end ferrule	<a href="#">H1.5/10</a>
		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	<a href="#">H1.5/16 R</a>
Cross-section for conductor connection	Type	fine-wired	
	nominal	2.5 mm <sup>2</sup>	
wire end ferrule		Stripping length	nominal 10 mm
		Recommended wire-end ferrule	<a href="#">H2.5/10</a>

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)

Max. clamping range 2.5 mm<sup>2</sup>

**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	50 mm
VPE width	105 mm	VPE height	155 mm

**Classifications**

ETIM 6.0	EC002643	ETIM 7.0	EC002643
eClass 9.0	27-44-04-01	eClass 9.1	27-44-04-01
eClass 10.0	27-44-04-01	UNSPSC	30-21-18-01

**Notes**

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.

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.

**Data sheet****OMNIMATE Signal - series TOP1.5GS  
TOP1.5GS8/90 7 2STI OR**

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**Technical data****Approvals**

Approvals



ROHS

Conform

**Downloads**

Brochure/Catalogue

[FL DRIVES EN](#)  
[FL ANALO.SIGN.CONV. EN](#)  
[MB DEVICE MANUF. EN](#)  
[FL DRIVES DE](#)  
[CAT 2 PORTFOLIOGUIDE EN](#)  
[FL BUILDING SAFETY EN](#)  
[FL APPL LED LIGHTING EN](#)  
[FL INDUSTR.CONTROLS EN](#)  
[FL MACHINE SAFETY EN](#)  
[FL HEATING ELECTR EN](#)  
[FL APPL\\_INVERTER EN](#)  
[FL\\_BASE\\_STATION\\_EN](#)  
[FL ELEVATOR EN](#)  
[FL POWER SUPPLY EN](#)  
[FL 72H SAMPLE SER EN](#)  
[PO OMNIMATE EN](#)

Engineering Data

[EPLAN, WSCAD](#)

Engineering Data

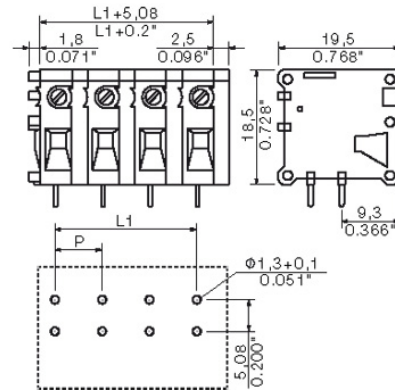
[STEP](#)

**OMNIMATE Signal - series TOP1.5GS  
TOP1.5GS8/90 7 2STI OR**

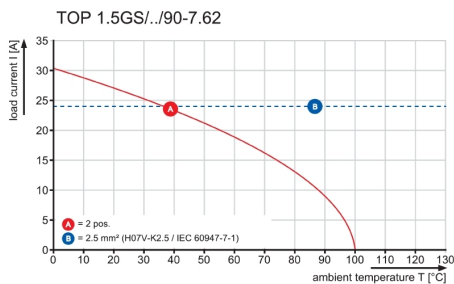
**Weidmüller Interface GmbH & Co. KG**  
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**Drawings**

**Dimensional drawing**



**Graph**



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**Accessories**

**Mounting blocks**



**Minor component, major effect:**

Clip-on attachment elements increase the mechanical resilience of the circuit board terminals.

Clip-on or pre-assembled - always the right solution:

- Hard-wearing, precise fitting dovetail joint
- Hard-wearing metal threaded inserts
- Suitable for all outlet directions

Maximum stability, minimum effort:

- Extremely resilient for frequent fastening operations
- Complete set for easy selection

The result: soldering points, contacts and overall module are more resilient against mechanical stress such as vibrations and tensile loads.



**General ordering data**

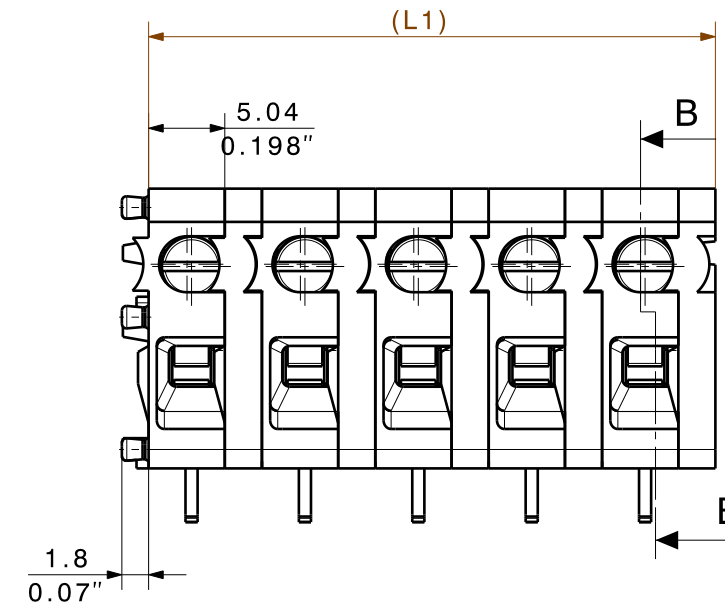
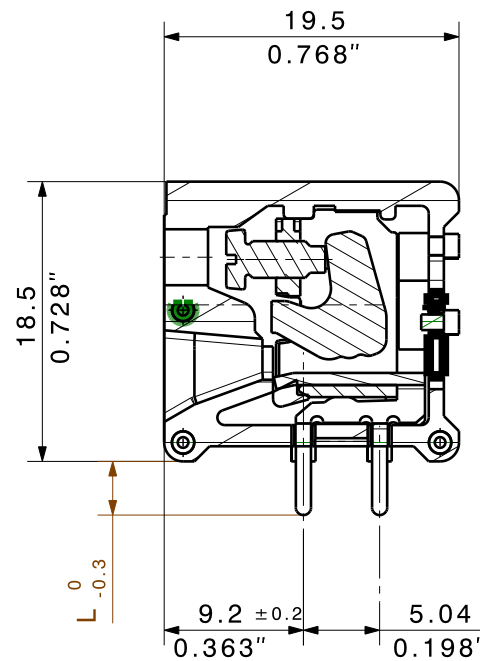
Type	TOP1.5GS BB OR	Version	Product data	Packaging
Order No.	<a href="#">1539860000</a>	Printed circuit board terminals, Accessories, Mounting block, orange,		Box
GTIN (EAN)	4008190061692	Number of poles: 1		
Qty.	20 pc(s).			

MASSE OHNE TOLERANZ SIND KEINE PRUEFMASSE  
DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.

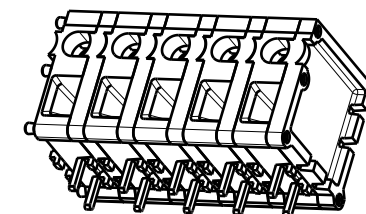
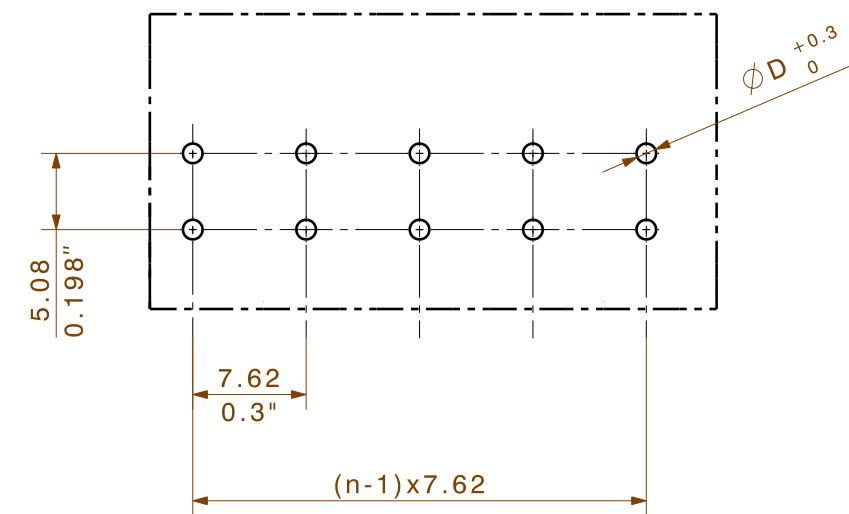
DIE DEUTSCHE VERSION IST VERBINDLICH  
THE GERMAN VERSION IS BINDING

**Technical Data**

<b>Rev.</b>		
<b>Material data</b>		
Insulation material type		PA 66
Insulation material colours		S 33230
Insulation material flammability class	UL94	V-2
Insulation resistance	MOhm	10 <sup>3</sup>
Contact base material		CuZn
Contact plating (mating end)		Tin-plated
Contact plating (solder end)		n/a
<b>System characteristic values</b> 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
Pull out force (max.)	N/pole	n/a
Through resistance (typical)	mOhm	0.9
Operating temperature range	°C	-20....+100
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
PCB hole diameter D (reflow soldering)	mm/inch	n/a
Resistance to soldering heat acc. to DIN IEC 60512-6	°C/sec	260/10
Resistance to soldering heat acc. to EN 61760-1	°C/sec	n/a
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
<b>Application notes</b>		
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
<b>IEC 664-1 / VDE0110 (4.97) rated data</b>		
Rated cross section acc. to EN 60999	mm <sup>2</sup>	1.5
Rated current @ 20°C ambient (together with)	A	16
Rated current @ 40°C ambient (together with)	A	xxx
<b>Overvoltage category / Pollution degree</b>		
Rated voltage	V	500 630 1000
Rated impulse voltage	kV	6.0 6.0 6.0
<b>UL 1059 rated data</b>  File No.: E60693		
Rated voltage	V	300
Rated current	A	10
Clamping range	mm <sup>2</sup> / AWG	0.5...1.5/26..14
<b>CSA C22.2 rated data</b>  File No.: LR12400		
Rated voltage	V	300
Rated current	A	10
Clamping range	mm <sup>2</sup> / AWG	0.5.....1.5/26....14
<b>Packaging</b>		
		carton
<b>Downloads</b>		
		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]

02 Zeichnung komplett überarbeitet


- Without locking latches
- Sum of ambient temperature and temperature rise
- Recommendation for manual assembly
- Recommendation for automatic assembly
- Recommendation for wave soldering
- Recommendation for reflow soldering
- 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.

METRIC TOLERANCES: X. = ±0.3 X.X = ±0.1 X.XX = ±0.05		35928/5 05.09.06 KRUG_M 01		CAT.NO.:	
MODIFICATION				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	PRODUCT FILE:		
SUPERSEDED BY: .	CHECKED 05.09.2006	HECKERT_M			
	APPROVED	GUENTHER_W			

**TOP 1.5 GS /90 2STI**

WEITERGABE SOWIE VERVIELFÄLTIGUNG DIESES DOKUMENTS, VERWERTUNG UND MITTEILUNG SEINES INHALTS SIND VERBOTEN, SOWEIT NICHT AUSDRUECKLICH GESTATET. ZUWIDERHANDLUNGEN VERPFLICHTEN ZU SCHADENSERSATZ. ALLE RECHTE FUER DEN FALL DER PATENT-, GEBRAUCHSMUSTER- ODER GESCHMACKSMUSTEREINTRAGUNG VORBEHALTEN. THE REPRODUCTION, DISTRIBUTION AND UTILIZATION OF THIS DOCUMENT AS WELL AS THE COMMUNICATION OF ITS CONTENTS TO OTHERS WITHOUT EXPLICIT AUTHORIZATION IS PROHIBITED. OFFENDERS WILL BE HELD LIABLE FOR THE PAYMENT OF DAMAGES. ALL RIGHTS RESERVED IN THE EVENT OF THE GRANT OF A PATENT, UTILITY MODEL OR DESIGN.



## 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.