

## RJ45M T12D 3.3E4G/Y RL

Weidmüller Interfaces GmbH & Co. KG

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### Product image



RJ45 transmitter sockets (magnetics) for gigabit applications (1000 base-T) with integrated compensation actively counteracts inductive and capacitive couplings and saves space on the PCB.

The product range encompasses the following designs:

- 90°, lying (horizontal) and 180°, standing (vertical)
- latch up / latch down
- THT, THR or SMD soldering processes
- Wide range of different design types, also with integrated LEDs and shield contact tabs
- Transmission rates of up to 1 Gbps
- Packed either in a tray (TY) or on a roll (tape-on-reel, RL)
- Compatible with modular RJ45 connector according to ANSI / TIA-1096-A and IEC 60603
- Dielectric strength  $\geq 1500$  V AC RMS (2250 V AC peak value) according to IEEE 802.3
- Dielectric strength  $\geq 1500$  V AC (peak value) or  $\geq 1500$  V DC according to IEC 60603
- Compliance with IEEE 802.3 requirements (1000Base-T, 1 Gbps, IEEE 802.3ab or 100Base-Tx, 100 Mbps, IEEE 802.3u)

Properties and advantages:

- Extended temperature range of  $-40$  °C to  $+85$  °C for maximum performance
- Reinforced gold layer ( $30\mu$ "") for improved corrosion protection

- At least 0.3mm stand-off ensures a perfect soldering result

### General ordering data

Article - short description PCB plug-in connector, RJ45 jacks transformer, 10/100 MBit/s, THT solder connection, 90°, Latch option: bottom, Shield tabs: 6 tabs, 30...80  $\mu$ " Ni /  $\geq 30$   $\mu$ " Au, LED: Yes, green, yellow, Number of poles: 8, Tape

Material number [2036460000](#)

Short text for material RJ45M T12D 3.3E4G/Y RL

EAN 4050118408317

Qty. 180 pc(s).

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## Technical data

## Dimensions and weights

Depth	21.5 mm	Depth (inches)	0.846 inch
Height	16.9 mm	Height (inches)	0.665 inch
Height of lowest version	13.6 mm	Net weight	7.45 g
Width	31.2 mm	Width (inches)	1.228 inch

## Environmental Product Compliance

REACH SVHC Lead 7439-92-1

## System specifications

Colour of left LED	green	Colour of right LED	yellow
Diameter of solder eyelet	0.9 mm	LED	Yes
Latch option	bottom	Mounting onto the PCB	THT solder connection
Number of poles	8	Number of solder pins per pole	1
Outgoing elbow	90°	Performance-Category	10/100 MBit/s
Pitch in inches	0.05 inch	Pitch in mm	1.27 mm
Plugging cycles	750	Product family	OMNIMATE Data - RJ45 transformer jack
Protection degree	IP20	Shield surface	nickel-plated
Shield tabs	6 tabs	Shielding	Yes
Shielding material	Brass	Solder pin dimensions	0.40 x 0.30 mm, LED pins = 0.50 x 0.50 mm
Solder pin length	3.3 mm	Soldering process	Reflow soldering, Manual soldering, Wave soldering
Tolerance of the diameter of the solder eyelet	± 0.1 mm	Transmission rate	10/100 MBit/s
Type of connection	Socket connector	Wiring	8-core

## Electrical properties

Dielectric strength, contact / contact	≥ 1000 V DC	Dielectric strength, contact / shield	1500 V DC
Insulation strength	> 500 MΩ	Rated current	1.5 A
Rated voltage	125 V AC		

## Material data

Insulating material	PA 66	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 500	Insulation strength	> 500 MΩ
UL 94 flammability rating	V-0	Contact base material	Phosphorus bronze
Contact surface	Gold over nickel	Layer structure of plug contact	30...80 μ" Ni / ≥ 30 μ" Au
Storage temperature, min.	-40 °C	Storage temperature, max.	85 °C
Operating temperature, min.	-40 °C	Operating temperature, max.	85 °C

## Packing

Packaging	Tape	VPE length	0.33 m
VPE width	0.33 m	VPE height	0.06 m
Tape reel diameter Ø (A)	330 mm	Surface resistance	Rs = 10 <sup>9</sup> - 10 <sup>12</sup> Ω

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### Classifications

ETIM 6.0	EC002637	ETIM 7.0	EC002637
eClass 9.0	27-44-04-02	eClass 9.1	27-44-04-02
eClass 10.0	27-44-04-02	eClass 11.0	27460201

### Approvals

Approvals	CURUS
ROHS	Conform
UL File Number Search	E471884

### Downloads

Brochure/Catalogue	<a href="#">MB FREECONTACT EN</a> <a href="#">FL FIELDWIRING EN</a> <a href="#">PI PROFINET CABLING EN</a>
Engineering Data	<a href="#">STEP</a>
Product Change Notification	<a href="#">PCN</a> <a href="#">PCN</a>
User Documentation	<a href="#">MAN IE GUIDE DE</a> <a href="#">MAN IE GUIDE EN</a>

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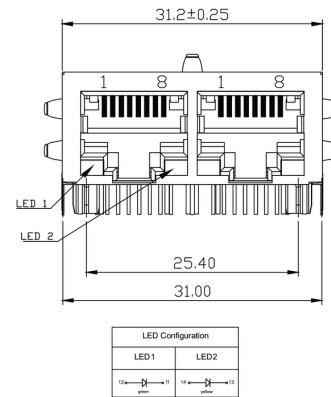
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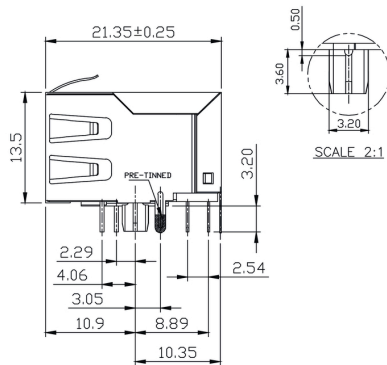
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**Drawings**

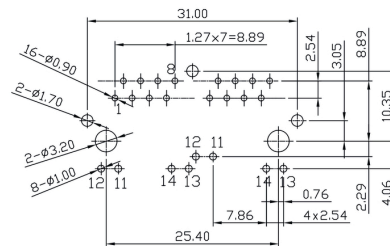
**Dimensioned drawing** [info@weidmueller.com](mailto:info@weidmueller.com)



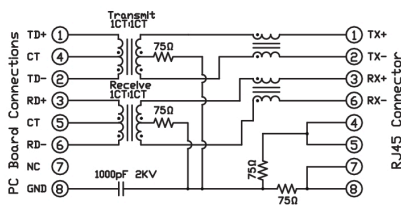
**Dimensioned drawing**



**PCB design**



**Wiring diagram**



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# Drawings

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### Characteristics

Inductance	350 µH min. @ 100 kHz, 100 mV, 8 mA DC Bias
Leakage Inductance	0.3 µH max. @ 100 kHz, 100 mV
Insertion Loss	1.1 dB max. @ (1 - 100) MHz
Return Loss	18 dB min. @ (1 - 30) MHz 16 dB min. @ (30 - 60) MHz 12 dB min. @ (60 - 80) MHz
Cross Talk	30 dB min. @ (1 - 100) MHz
Common Mode Rejection	30 dB min. @ (1 - 100) MHz

Code	Parameter	Value	Description
RJ45	Product	RJ45	Product
G1	Performance Category	G1	Category 5, 10/100/1000 Mbit, 10 Gbit, Unshielded
R	Assembly on PCB	R	Through Hole Reflow - THR
I	Assembly on PCB	S	Surface Mount Technology - SMT
U	Direction, latch style	U	Horizontal (90°, side entry), latch up
3.2	Solder Pin length	3.2	3.2 mm
E	EMI tabs (ground fingers)	E	E = with EMI tabs
4	Contact surface thickness	4	1 = 3µ", 2 = 6µ", 3 = 15µ", 4 = 30µ", 5 = 50µ"
GY/GY	LED	GY/GY	Green-Yellow/Green-Yellow
TY	Packaging	TY	Tray in box (manual assembly)
		RL	Tape on Reel (automated assembly)
		Y/G	Yellow/Green
		G/Y	Green/Yellow (standard)
		O/G	Orange/Green
		R/O	Red/Orange
		N	without LED
		D	SMD
		1	1 Port
		12; 14; ...	multi ports side by side, Multiport
		21; 41; ...	multi ports about each other, Multilevel
		C5	Category 5
		C6	Category 6
		C6A	Category 6A
		C5e	Category 5e
		M	10/100 Mbit
		G1	10/100/1000 Mbit
		G10	10 Gbit
		U	Unshielded
		MP	10/100 Mbit with POE
		MP+	10/100 Mbit with POE+

### Type codes

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