

## RJ45G1 R1D 3.3E4G/Y TY

Weidmüller Interfaces GmbH & Co. KG

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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, 1000 Mbps , THT/THR 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: 10, Tray (manual assembly)

Material number [2544510000](#)

Short text for material RJ45G1 R1D 3.3E4G/Y TY

EAN 4050118554168

Qty. 120 pc(s).

Creation date November 18, 2020 1:34:28 PM CET

Catalogue status 18.11.2020 / We reserve the right to make technical changes.

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

Depth	21.35 mm	Depth (inches)	0.841 inch
Height	16.8 mm	Height (inches)	0.661 inch
Height of lowest version	13.5 mm	Net weight	4.002 g
Width	15.9 mm	Width (inches)	0.626 inch

**Environmental Product Compliance**

REACH SVHC Lead 7439-92-1

**System specifications**

Colour of left LED	green	Colour of right LED	yellow
LED	Yes	Latch option	bottom
Mounting onto the PCB	THT/THR solder connection	Number of poles	10
Number of solder pins per pole	1	Outgoing elbow	90°
Performance-Category	1000 Mbps	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 length	3.3 mm	Soldering process	Manual soldering, Wave soldering
Transmission rate	1000 Mbps	Type of connection	Socket connector

**Electrical properties**

Dielectric strength, contact / contact	1000 V DC	Dielectric strength, contact / shield	1500 V DC
Insulation strength	> 500 MΩ	Rated current	0,80 A
Rated voltage	30 V DC		

**Material data**

Insulating material	PA 9T	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 500	Insulation strength	> 500 MΩ
Moisture Level (MSL)	1	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	Tray (manual assembly)	VPE length	0 m
VPE width	0 m	VPE height	0 m

**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

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**Data sheet****RJ45G1 R1D 3.3E4G/Y TY****Weidmüller Interfaces GmbH & Co. KG**

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[info@weidmueller.com](mailto:info@weidmueller.com)**Technical data**[www.weidmueller.com](http://www.weidmueller.com)**Approvals**

Approvals	CURUS
ROHS	Conform
UL File Number Search	E471884

**Downloads**

Engineering Data	<a href="#">STEP</a>
Product Change Notification	<a href="#">PCN</a> <a href="#">PCN</a>

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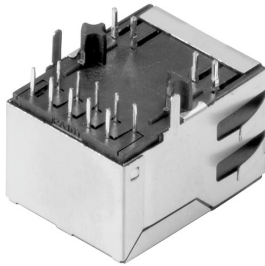
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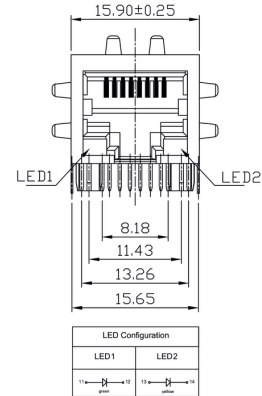
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**Drawings**

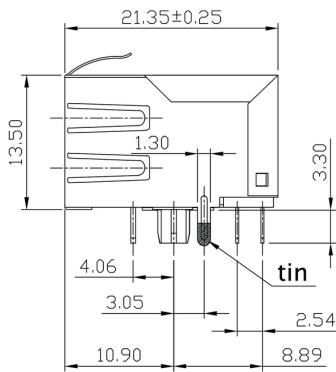
**Dimensioned drawing**



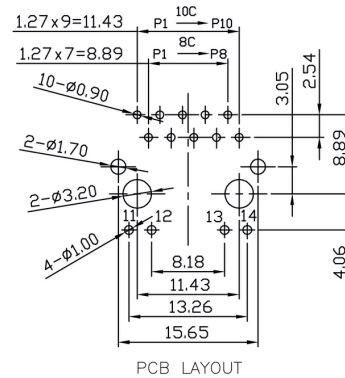
**Dimensioned drawing** [info@weidmueller.com](mailto:info@weidmueller.com)



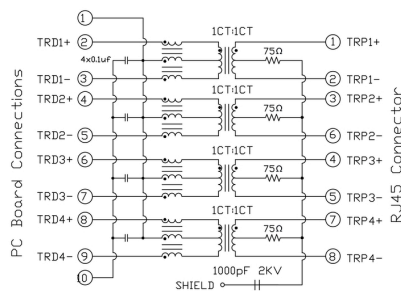
**Dimensioned drawing**



**PCB design**



**Wiring diagram**



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# Drawings

### 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	Description	Options
RJ45	Category	Category 5, 6, 6A, 5e, M, G1, G10, U, MP, MP+
G1	Performance Category	Category 5, 6, 6A, 5e, M, G1, G10, U, MP, MP+
R	Assembly on PCB	R, S, T
U	Direction, latch style	U, D, V, Y
3.2	Solder Pin length	3.2, 1.6, D
E	EMI tabs (ground fingers)	E, N
4	Contact surface thickness	4, 1 = 3µ", 2 = 6µ", 3 = 15µ", 4 = 30µ", 5 = 50µ"
GY/GY	LED	Y/G, G/Y, GY/GY, O/G, R/O, ...
TY	Packaging	TY, RL

### Type codes