

## RJ45G1 R1D 3.2E4N RL

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com



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 ( $30\mu\text{m}$ ) for improved corrosion protection
- At least 0.3mm stand-off ensures a perfect soldering result

### General ordering data

Version	OMNIMATE Data - RJ45 transformer jack, PCB plug-in connector, THT/THR solder connection, 90°, bottom, 6 tabs, No, Plugging cycles: 750, Number of poles: 10, PA 9T, 30...80 $\mu\text{m}$ Ni / $\geq 30$ $\mu\text{m}$ Au , Tape
Order No.	<a href="#">2564440000</a>
Type	RJ45G1 R1D 3.2E4N RL
GTIN (EAN)	4050118572933
Qty.	200 items
Packaging	Tape

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## Technical data

## Approvals

Approvals



ROHS	Conform
UL File Number Search	<a href="#">UL Website</a>
Certificate No. (cURus)	E471884

## Dimensions and weights

Depth	21.35 mm	Depth (inches)	0.8405 inch
Height	16.8 mm	Height (inches)	0.6614 inch
Height of lowest version	13.5 mm	Width	15.9 mm
Width (inches)	0.626 inch	Net weight	4.32 g

## Environmental Product Compliance

RoHS Compliance Status	Compliant without exemption
REACH SVHC	No SVHC above 0.1 wt%

## System specifications

Number of poles	10	LED	No
Solder pin length (l)	3.2 mm	Mounting onto the PCB	THT/THR solder connection
Pitch in inches (P)	0.050 "	Shielding material	Brass
Shielding	Yes	Side termination, characteristic	Solder flange
Transmission rate	1000 Mbps	Number of solder pins per pole	1
Type of connection	Solder connection	Product family	OMNIMATE Data - RJ45 transformer jack
Pitch in mm (P)	1.27 mm	Protection degree	IP20
Plugging cycles	750	Outgoing elbow	90°
Shield surface	nickel-plated	Shield tabs	6 tabs
Performance-Category	1000 Mbps	Soldering process	Reflow soldering, Manual soldering, Wave soldering
Latch option	bottom	Solder pin dimensions	Octagonal
Tolerance of solder pin position	± 0.15 mm		

## Electrical properties

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

## Standards

Connector standard	IEC 60603-7
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## Material data

Insulating material	PA 9T	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 500	Insulation resistance	≥ 500 MΩ
Moisture Level (MSL)	1	UL 94 flammability rating	V-0
Contact base material	Phosphorus bronze	Contact material	Cu-alloy
Contact surface	Gold over nickel	Layer structure of plug contact	30...80 μ" Ni / ≥ 30 μ" Au

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**Technical data**

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	330.00 mm
VPE width	330.00 mm	VPE height	54.00 mm
Tape reel diameter $\varnothing$ (A)	330 mm	Surface resistance	Rs = 109 - 1012 $\Omega$

**Important note**

Notes

**Classifications**

ETIM 8.0	EC002637	ETIM 9.0	EC002637
ETIM 10.0	EC002637	ECLASS 14.0	27-46-02-01
ECLASS 15.0	27-46-02-01		

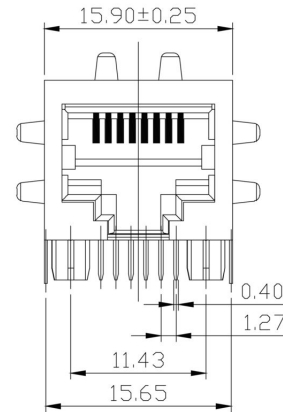
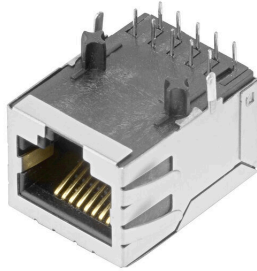
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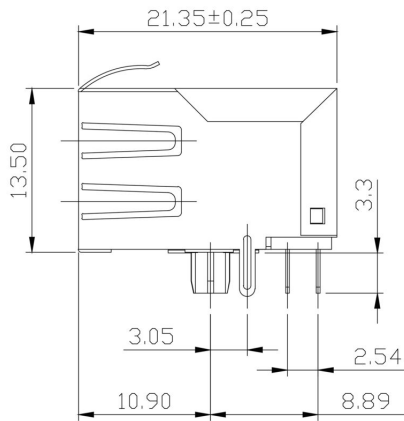
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Drawings

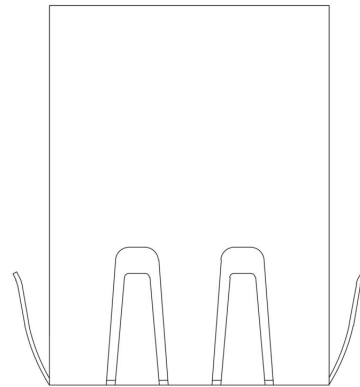
Dimensioned drawing



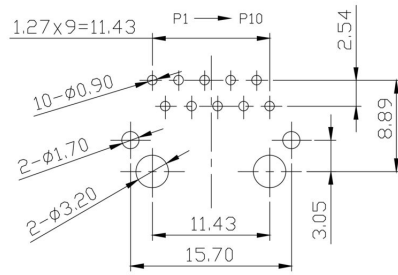
Dimensioned drawing



Dimensioned drawing

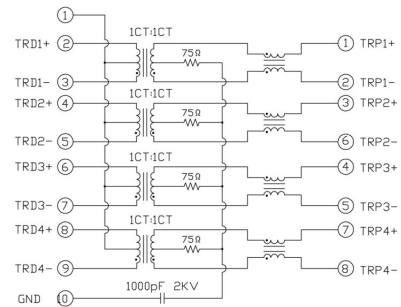


PCB design



PCB Layout

Wiring diagram



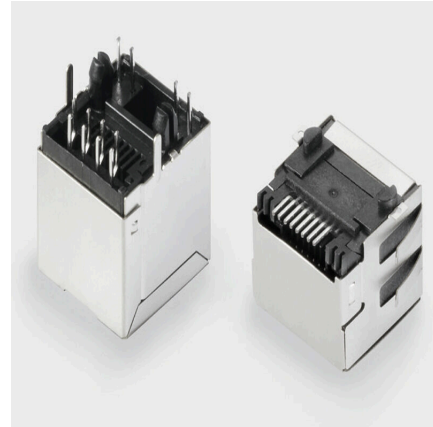
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Drawings

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Product benefits



Trouble-free assembly Short, chamfered solder pins

Code	Description	Options	Details
RJ45	Connector Type		
G1	Performance Category		
R	Assembly on PCB		
1	Number of Ports		
U	Direction, latch style		
3.2	Solder Pin length		
E	EMI tabs (ground fingers)		
4	Contact surface thickness		
GY/GY	LED		
TY	Packaging		
<b>RJ45G1 R1U 3.2E4GY/GY TY</b>			
	<b>Packaging</b>	<b>TY</b>	Tray in box (manual assembly)
		<b>RL</b>	Tape on Reel (automated assembly)
	<b>LED</b>	<b>Y/G</b>	Yellow/Green
		<b>G/Y</b>	Green/Yellow (standard)
		<b>GY/GY</b>	Green-Yellow/Green-Yellow
		<b>O/G</b>	Orange/Green
		<b>R/O</b>	Red/Orange
		...	... (further combinations possible)
		<b>N</b>	without LED
	<b>Contact surface thickness</b>	<b>4</b>	1 = 3µ", 2 = 6µ", 3 = 15µ", 4 = 30µ", 5 = 50µ"
	<b>EMI tabs (ground fingers)</b>	<b>E</b>	E = with EMI tabs
		<b>N</b>	N = without EMI tabs
	<b>Solder Pin length</b>	<b>3.2</b>	3.2 mm
		<b>1.6</b>	1.6 mm
		<b>D</b>	SMD
	<b>Direction, latch style</b>	<b>U</b>	Horizontal (90°, side entry), latch up
		<b>D</b>	Horizontal (90°, side entry), latch down
		<b>V</b>	Vertical (180°, top entry)
		<b>Y</b>	Diagonal (45°), latch up
	<b>Number of Ports</b>	<b>1</b>	1 Port
		<b>12; 14; ...</b>	multi ports side by side, Multiport
		<b>21; 41; ...</b>	multi ports about each other, Multilevel
	<b>Assembly on PCB</b>	<b>R</b>	Through Hole Reflow - THR
			Soldering process: Wave or Reflow soldering
		<b>S</b>	Surface Mount Technology - SMT
			Soldering process: Reflow soldering
		<b>T</b>	Through Hole Technology - THT
			Soldering process: Wave
	<b>Performance Category</b>	<b>C5</b>	Category 5
		<b>C6</b>	Category 6
		<b>C6A</b>	Category 6A
		<b>C6e</b>	Category 6e
		<b>M</b>	10/100 Mbit
		<b>G1</b>	10/100/1000 Mbit
		<b>G10</b>	10 Gbit
		<b>U</b>	Unshielded
		<b>MP</b>	10/100 Mbit with POE
		<b>MP+</b>	10/100 Mbit with POE+

Type codes