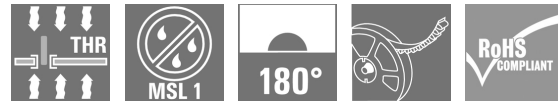


RJ45M R1V 1.9N4YG/YG RL**Weidmüller Interface GmbH & Co. KG**

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 ≥ 1500 V AC RMS (2250 V AC peak value) according to IEEE 802.3
- Dielectric strength ≥ 1500 V AC (peak value) or ≥ 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 (30μ) for improved corrosion protection

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

General ordering data

Version	PCB plug-in connector, RJ45 jacks transformer, 10/100 MBit/s , THT/THR solder connection, 180°, Shield tabs: none, $30\ldots 80\mu$ Ni / $\geq 30\mu$ Au , LED: Yes, Green/yellow, Green/yellow, Number of poles: 8, Tape
Order No.	2562150000
Type	RJ45M R1V 1.9N4YG/YG RL
GTIN (EAN)	4050118570380
Qty.	200 pc(s).
Packaging	Tape

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Technical data

Dimensions and weights

Depth	16.8 mm	Depth (inches)	0.661 inch
Height	18.9 mm	Height (inches)	0.744 inch
Height of lowest version	17 mm	Width	16 mm
Width (inches)	0.63 inch	Net weight	4.75 g

System specifications

Colour of left LED	Green/yellow	Colour of right LED	Green/yellow
Forward current	20 mA	Forward voltage, max.	2.5 V
Forward voltage, min.	1.8 V	LED	Yes
Mounting onto the PCB	THT/THR solder connection	Number of poles	8
Number of solder pins per pole	1	Outgoing elbow	180°
Performance-Category	10/100 MBit/s	Pitch in inches (P)	0.05 "
Pitch in mm (P)	1.27 mm	Plugging cycles	750
Product family	OMNIMATE Data - RJ45 transformer jack	Protection degree	IP20
Shield surface	nickel-plated	Shield tabs	none
Shielding	Yes	Shielding material	Brass
Solder pin dimensions	Octagonal	Solder pin length (l)	1.9 mm
Soldering process	Reflow soldering, Manual soldering, Wave soldering	Tolerance of solder pin position	± 0.1 mm
Transmission rate	10/100 MBit/s	Type of connection	Solder connection

Electrical properties

Dielectric strength, contact / contact	1000 V DC	Dielectric strength, contact / shield	1500 V DC
Rated current	1.5 A	Rated voltage	125 V

Material data

Insulating material	PA 9T	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 500	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	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	331 mm
VPE width	331 mm	VPE height	50 mm
Tape reel diameter Ø (A)	330 mm	Surface resistance	Rs = 10 ⁹ - 10 ¹² Ω

Classifications

ETIM 6.0	EC002637	ETIM 7.0	EC002637
ETIM 8.0	EC002637	ETIM 9.0	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	27-46-02-01
ECLASS 12.0	27-46-02-01	ECLASS 13.0	27-46-02-01

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Technical data

Environmental Product Compliance

REACH SVHC

/

Approvals

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate No. (cURus)	E471884

Downloads

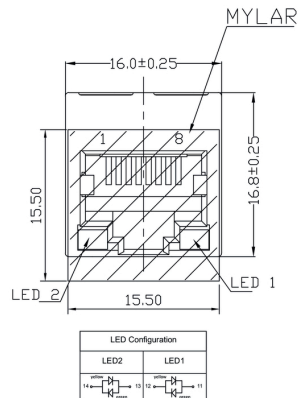
Approval/Certificate/Document of Conformity	Certificate of Compliance
Catalogues	Catalogues in PDF-format

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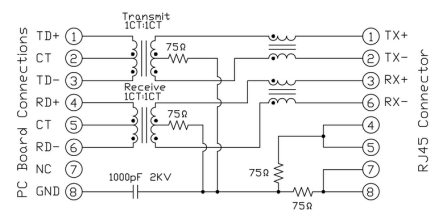
Drawings



Wiring diagram

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



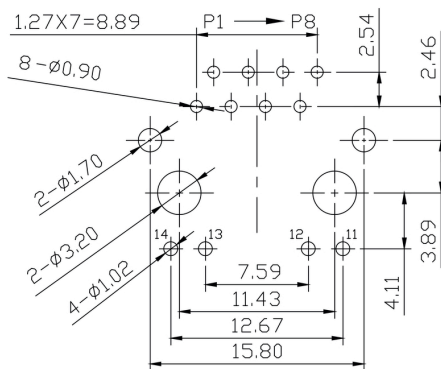
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Drawings

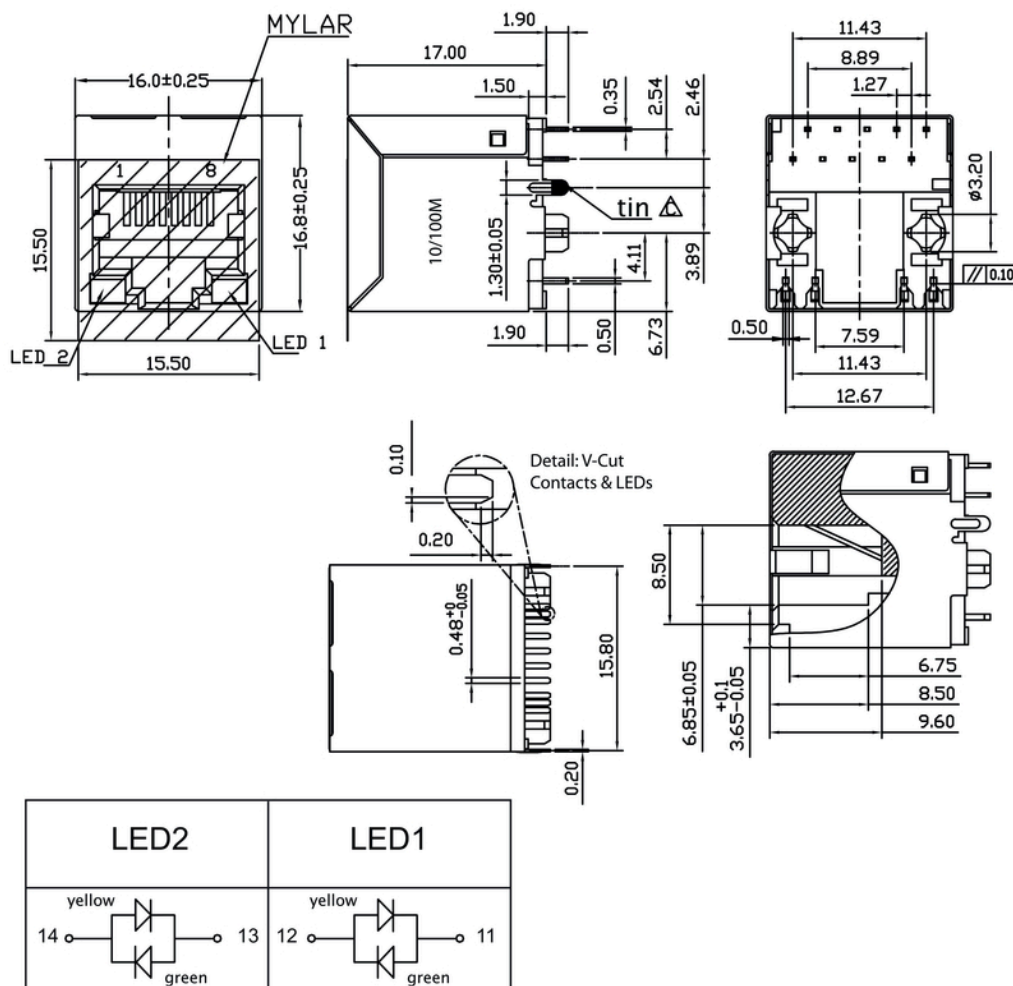
PCB design



PCB LAYOUT 1

PCB design

Drawing

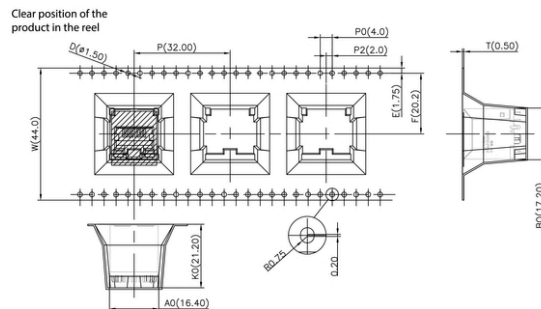
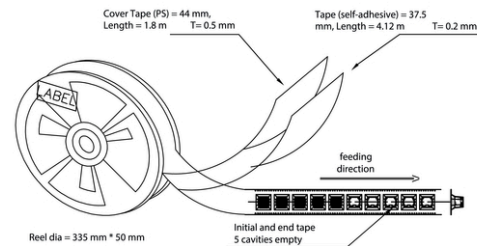


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Drawings



RJ45 G1 R1 U 3.2 E 4 GY/GY TY RJ45G1 R1U 3.2E4GY/GY TY									
Packaging		TY	Tray in box (manual assembly)						
LED		RL	Tape on Reel (automated assembly)						
		Y/G	Yellow/Green						
		G/Y	Green/Yellow (standard)						
		GY/GY	Green-Yellow/Green-Yellow						
		O/G	Orange/Green						
		R/O	Red/Orange						
		N	... (further combinations possible)						
		N	without LED						
Contact surface thickness		4	1 = 3µ", 2 = 6µ", 3 = 15µ", 4 = 30µ", 5 = 50µ"						
EMI tabs (ground fingers)		E	E = with EMI tabs						
		N	N = without EMI tabs						
Solder Pin length		3.2	3.2 mm						
		1.6	1.6 mm						
		D	SMD						
Direction, latch style		U	Horizontal (90°, side entry), latch up						
		D	Horizontal (90°, side entry), latch down						
		V	Vertical (180°, top entry)						
		Y	Diagonal (45°), latch up						
Number of Ports		1	1 Port						
		12; 14; ...	multi ports side by side, Multiport						
		21; 41; ...	multi ports about each other, Multilevel						
Assembly on PCB		R	Through Hole Reflow - THR						
		S	Soldering process: Wave or Reflow soldering						
		T	Surface Mount Technology - SMT						
		T	Soldering process: Reflow soldering						
		T	Through Hole Technology - THT						
		T	Soldering process: Wave						
Performance Category		C5	Category 5						
		C6	Category 6						
		C6A	Category 6A						
		C5e	Category 5e						
		M	10/100 Mbit						
		G10	10/100/1000 Mbit						
		G10	10 Gbit						
		U	Unshielded						
		MP	10/100 Mbit with POE						
		MP+	10/100 Mbit with POE+						

Type codes

Creation date June 18, 2024 10:51:06 PM CEST

Catalogue status 14.06.2024 / We reserve the right to make technical changes.