

RJ45M R1V 3.3N4YG/YG 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 ≥ 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

Article - short description PCB plug-in connector, RJ45 jacks transformer, 10/100 MBit/s, THT/THR solder connection, 180°, Shield tabs: none, 30...80 μ Ni / ≥ 30 μ Au, LED: Yes, Green/yellow, Green/yellow, Number of poles: 8, Tray (manual assembly)

Material number [1534750000](#)

Short text for material RJ45M R1V 3.3N4YG/YG TY

EAN 4050118338416

Qty. 120 pc(s).

Creation date November 18, 2020 1:34:32 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	16.8 mm	Depth (inches)	0.661 inch
Height	20.3 mm	Height (inches)	0.799 inch
Height of lowest version	17 mm	Net weight	4.208 g
Width	16 mm	Width (inches)	0.63 inch

Environmental Product Compliance

REACH SVHC Lead 7439-92-1

System specifications

Colour of left LED	Green/yellow	Colour of right LED	Green/yellow
Diameter of solder eyelet	0.9 mm	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	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	none
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	3.2 mm
Soldering process	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		

Standards

Connector standard IEC 60603-7-51

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	25 mm
VPE width	175 mm	VPE height	305 mm

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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	MB FREECONTACT EN FL FIELDWIRING EN PI PROFINET CABLING EN
Engineering Data	STEP
Product Change Notification	PCN PCN
User Documentation	MAN IE GUIDE DE MAN IE GUIDE EN

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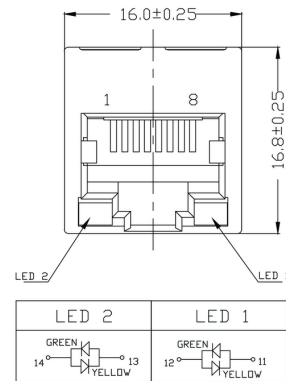
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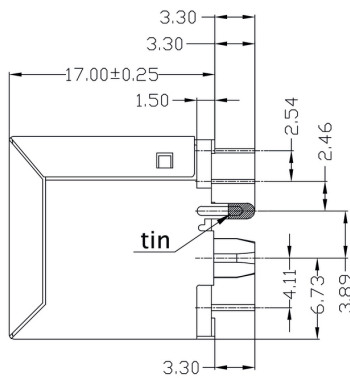
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Drawings

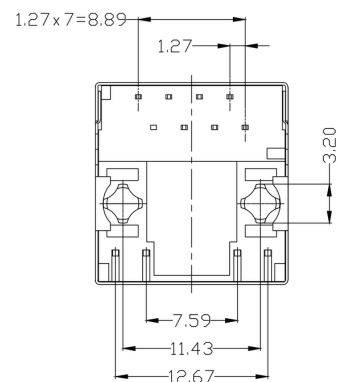
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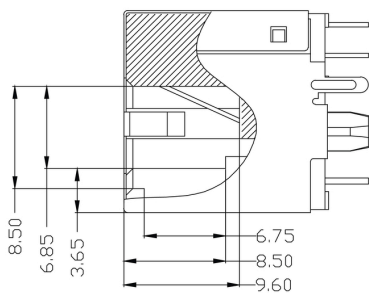
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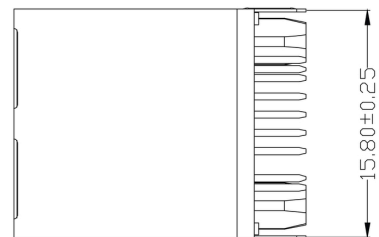
Dimensioned drawing



Dimensioned drawing



Dimensioned drawing



Data sheet

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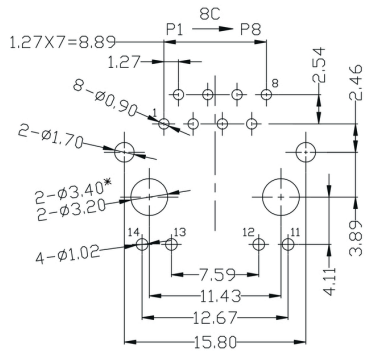
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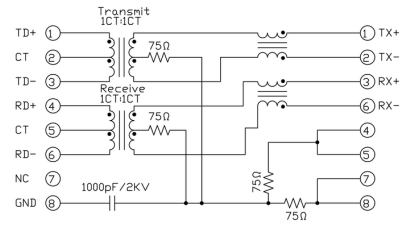
Drawings

PCB design



PCB LAYOUT

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	Value	Description
RJ45		Product family
G1		Performance Category
R		Assembly on PCB
U		Direction, latch style
3.2		Solder Pin length
E		EMI tabs (ground fingers)
4		Contact surface thickness
GY/GY		LED
TY		Packaging

Code	Value	Description
RJ45G1R1U3.2E4GY/GYTY		Product name
TY		Packaging: Tray in box (manual assembly), Tape on Reel (automated assembly)
RL		Packaging: Tape on Reel (automated assembly)
Y/G		LED: Yellow/Green
G/Y		LED: Green/Yellow (standard)
GY/GY		LED: Green-Yellow/Green-Yellow
O/G		LED: Orange/Green
R/O		LED: Red/Orange
...		LED: ... (further combinations possible)
N		LED: without LED
4		Contact surface thickness: 1 = 3µ", 2 = 6µ", 3 = 15µ", 4 = 30µ", 5 = 50µ"
E		EMI tabs (ground fingers): E = with EMI tabs, N = without EMI tabs
N		EMI tabs (ground fingers): N = without EMI tabs
3.2		Solder Pin length: 3.2 mm
1.6		Solder Pin length: 1.6 mm
D		Solder Pin length: SMD
U		Direction, latch style: Horizontal (90°, side entry), latch up
D		Direction, latch style: Horizontal (90°, side entry), latch down
V		Direction, latch style: Vertical (180°, top entry)
Y		Direction, latch style: Diagonal (45°), latch up
1		Number of Ports: 1 Port
12; 14; ...		Number of Ports: multi ports side by side, Multiport
21; 41; ...		Number of Ports: multi ports about each other, Multilevel
R		Assembly on PCB: Through-Hole Reflow - THR
S		Assembly on PCB: Soldering process: Wave or Reflow soldering
T		Assembly on PCB: Surface Mount Technology - SMT
T		Assembly on PCB: Soldering process: Reflow soldering
T		Assembly on PCB: Through Hole Technology - THT
T		Assembly on PCB: Soldering process: Wave
C5		Performance Category: Category 5
C6		Performance Category: Category 6
C6A		Performance Category: Category 6A
C5e		Performance Category: Category 5e
M		Performance Category: 10/100 Mbit
G1		Performance Category: 10/100/1000 Mbit
G10		Performance Category: 10 Gbit
U		Performance Category: Unshielded
MP		Performance Category: 10/100 Mbit with POE
MP+		Performance Category: 10/100 Mbit with POE+

Type codes

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