

RJ45M R1D 3.3N4Y/G TY

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 ($30\mu\text{m}$) 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, none, Yes, Plugging cycles: 750, Number of poles: 8, PA 9T, 30...80 μm Ni / ≥ 30 μm Au, Tray (manual assembly) |
| Order No. | 2461060000 |
| Type | RJ45M R1D 3.3N4Y/G TY |
| GTIN (EAN) | 4050118476439 |
| Qty. | 120 items |
| Packaging | Tray (manual assembly) |

RJ45M R1D 3.3N4Y/G TY

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

Technical data

Approvals

Approvals



| | |
|-------------------------|----------------------------|
| ROHS | Conform |
| UL File Number Search | UL Website |
| 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 | 3.45 g |

Environmental Product Compliance

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

System specifications

| | | | |
|-----------------------|----------------------------------------------------|----------------------------------|---------------------------------------|
| Number of poles | 8 | LED | Yes |
| Solder pin length (l) | 3.3 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 | 10/100 MBit/s | 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° |
| Forward current | 20 mA | Forward voltage, max. | 2.6 V |
| Shield surface | nickel-plated | Colour of right LED | green |
| Shield tabs | none | Performance-Category | 10/100 MBit/s |
| Soldering process | Reflow soldering, Manual soldering, Wave soldering | Latch option | bottom |
| Solder pin dimensions | Octagonal | Tolerance of solder pin position | ± 0.1 mm |
| Forward voltage, min. | 1.8 V | Colour of left LED | yellow |

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 |
|--------------------|-------------|

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 |

RJ45M R1D 3.3N4Y/G TY

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

Technical data

| | | | |
|-----------------------------|-------------------|---------------------------------|----------------------------|
| 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 | Tray (manual assembly) | VPE length | 315.00 mm |
| VPE width | 193.00 mm | VPE height | 70.00 mm |

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 | | |

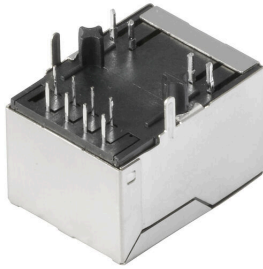
RJ45M R1D 3.3N4Y/G TY

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

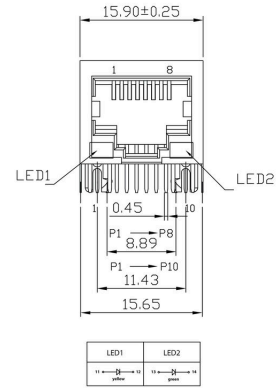
www.weidmueller.com

Drawings

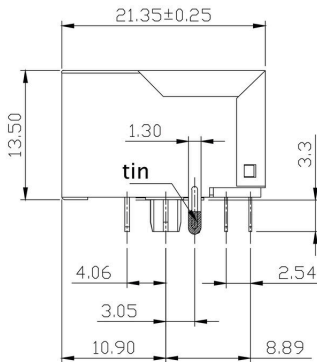
Dimensioned drawing



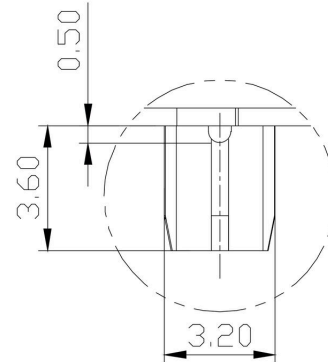
Dimensioned drawing



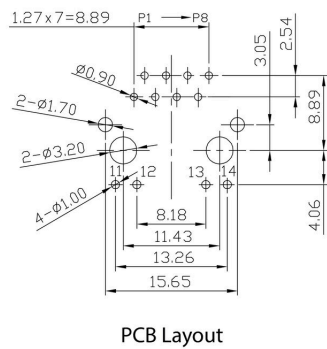
Dimensioned drawing



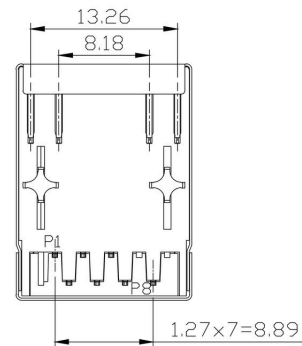
Dimensioned drawing



PCB design



Dimensioned drawing



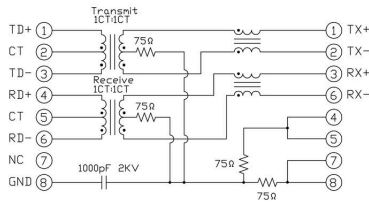
RJ45M R1D 3.3N4Y/G TY

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

Drawings

www.weidmueller.com

Wiring diagram



| RJ45 G1 R1 U 3.2 E 4 GY/GY TY RJ45G1 R1U 3.2E4GY/GY TY | | |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Packaging | TY RL | Tray in box (manual assembly) Tape on Reel (automated assembly) |
| LED | Y/G G/Y GY/GY O/G R/O ... N | Yellow/Green Green/Yellow (standard) Green-Yellow/Green-Yellow Orange/Green Red/Orange ... (further combinations possible) without LED |
| Contact surface thickness | 4 | 1 = 3µ", 2 = 6µ", 3 = 15µ", 4 = 30µ", 5 = 50µ" |
| EMI tabs (ground fingers) | E N | E = with EMI tabs N = without EMI tabs |
| Solder Pin length | 3.2 1.6 D | 3.2 mm 1.6 mm SMD |
| Direction, latch style | U D V Y | Horizontal (90°, side entry), latch up Horizontal (90°, side entry), latch down Vertical (180°, top entry) Diagonal (45°), latch up |
| Number of Ports | 1 12; 14; ... 21; 41; ... | 1 Port multi ports side by side, Multiport multi ports about each other, Multilevel |
| Assembly on PCB | R S T | Through Hole Reflow - THR Soldering process: Wave or Reflow soldering Surface Mount Technology - SMT Soldering process: Reflow soldering Through Hole Technology - THT Soldering process: Wave |
| Performance Category | C5 C6 C6A C6e M G1 G10 U MP MP+ | Category 5 Category 6 Category 6A Category 6e 10/100 Mbit 10/100/1000 Mbit 10 Gbit Unshielded 10/100 Mbit with POE 10/100 Mbit with POE+ |

Type codes

RJ45M R1D 3.3N4Y/G TY

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

www.weidmueller.com

Counterpart

RJ45 crimp

RJ45 crimp plug-in connector according to IEC 60603-7-51 for wire outer diameters up to 1.05 mm



General ordering data

| | | |
|------------|----------------------------|----------------------------------------------------------------------|
| Type | IE-P | Version |
| Order No. | 8813100000 | RJ45 plug-in connector, without kink protection; 5.5 - 7.1 mm, |
| GTIN (EAN) | 4032248512850 | Cat.6A / Class EA (ISO/IEC 11801 2010), IP20 |
| Qty. | 100 ST | |
| Type | IE-P63 | Version |
| Order No. | 8813110000 | RJ45 plug-in connector, with kink protection; 5.5 - 6.2 mm, Cat.6A / |
| GTIN (EAN) | 4032248512867 | Class EA (ISO/IEC 11801 2010), IP20 |
| Qty. | 10 ST | |
| Type | IE-P70 | Version |
| Order No. | 8813120000 | RJ45 plug-in connector, with kink protection; 6.2 - 7.1 mm, Cat.6A / |
| GTIN (EAN) | 4032248512874 | Class EA (ISO/IEC 11801 2010), IP20 |
| Qty. | 10 ST | |
| Type | IE-PM-RJ45-TH | Version |
| Order No. | 1963580000 | RJ45 crimp plug, Plug without bending protection sleeve, Cat.6A / |
| GTIN (EAN) | 4032248645688 | Class EA (ISO/IEC 11801 2010) |
| Qty. | 100 ST | |
| Type | IE-PS-RJ45-TH-BK | Version |
| Order No. | 1963590000 | RJ45 crimp plug, Plug with bending protection sleeve in black, |
| GTIN (EAN) | 4032248645695 | Cat.6A / Class EA (ISO/IEC 11801 2010) |
| Qty. | 10 ST | |
| Type | IE-PS-RJ45-TH-BK-P | Version |
| Order No. | 2584980000 | RJ45 crimp plug, with kink protection; 6.5 - 7.5 mm, Cat.5 (ISO/IEC |
| GTIN (EAN) | 4050118593556 | 11801) |
| Qty. | 10 ST | |

straight

RJ45 plug-in connector (no tools required) according to IEC 60603-7-51.



RJ45M R1D 3.3N4Y/G TY

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

www.weidmueller.com

Counterpart

General ordering data

| | | |
|------------|----------------------------|---------------------------------------------------------------------|
| Type | IE-PS-RJ45-FH-180-A-1.1 | Version |
| Order No. | 1992850000 | RJ45 plug with piercing contacts, straight, Cat.6A / Class EA (ISO/ |
| GTIN (EAN) | 4050118378115 | IEC 11801 2010), EIA/TIA T568 A |
| Qty. | 1 ST | |
| Type | IE-PS-RJ45-FH-180-A-1.6 | Version |
| Order No. | 1992820000 | RJ45 plug with piercing contacts, straight, Cat.6A / Class EA (ISO/ |
| GTIN (EAN) | 4050118377897 | IEC 11801 2010), EIA/TIA T568 A |
| Qty. | 1 ST | |
| Type | IE-PS-RJ45-FH-180-B-1.1 | Version |
| Order No. | 1992860000 | RJ45 plug with piercing contacts, straight, Cat.6A / Class EA (ISO/ |
| GTIN (EAN) | 4050118378108 | IEC 11801 2010), EIA/TIA T568 B |
| Qty. | 1 ST | |
| Type | IE-PS-RJ45-FH-180-B-1.6 | Version |
| Order No. | 1992830000 | RJ45 plug with piercing contacts, straight, Cat.6A / Class EA (ISO/ |
| GTIN (EAN) | 4050118377972 | IEC 11801 2010), EIA/TIA T568 B |
| Qty. | 1 ST | |
| Type | IE-PS-RJ45-FH-180-P-1.6 | Version |
| Order No. | 1992840000 | RJ45 plug with piercing contacts, straight, Cat.5 (ISO/IEC 11801), |
| GTIN (EAN) | 4050118378023 | PROFINET |
| Qty. | 1 ST | |

angled with cable gland

RJ45 plug-in connector (no tools required) according to IEC 60603-7-51.



General ordering data

| | | |
|------------|----------------------------|--------------------------------------------------------------------|
| Type | IE-PS-RJ45-FH-90-A-1.1 | Version |
| Order No. | 1518080000 | RJ45 plug with piercing contacts, angled, 4x90°, Cat.6A / Class EA |
| GTIN (EAN) | 4050118324969 | (ISO/IEC 11801 2010), EIA/TIA T568 A |
| Qty. | 1 ST | |
| Type | IE-PS-RJ45-FH-90-A-1.6 | Version |
| Order No. | 1992870000 | RJ45 plug with piercing contacts, angled, 4x90°, Cat.6A / Class EA |
| GTIN (EAN) | 4050118378054 | (ISO/IEC 11801 2010), EIA/TIA T568 A |
| Qty. | 1 ST | |
| Type | IE-PS-RJ45-FH-90-B-1.1 | Version |
| Order No. | 1518090000 | RJ45 plug with piercing contacts, angled, 4x90°, Cat.6A / Class EA |
| GTIN (EAN) | 4050118325300 | (ISO/IEC 11801 2010), EIA/TIA T568 B |
| Qty. | 1 ST | |
| Type | IE-PS-RJ45-FH-90-B-1.6 | Version |
| Order No. | 1992890000 | RJ45 plug with piercing contacts, angled, 4x90°, Cat.6A / Class EA |
| GTIN (EAN) | 4050118378122 | (ISO/IEC 11801 2010), EIA/TIA T568 B |
| Qty. | 1 ST | |

RJ45M R1D 3.3N4Y/G TY

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

www.weidmueller.com

Counterpart

| | | |
|------------|----------------------------|----------------------------------------------------------------------------------|
| Type | IE-PS-RJ45-FH-90-P-1.6 | Version |
| Order No. | 1518100000 | RJ45 plug with piercing contacts, angled, 4x90°, Cat.5 (ISO/IEC 11801), PROFINET |
| GTIN (EAN) | 4050118325232 | |
| Qty. | 1 ST | |

RJ45 tool-free



RJ45 plug-in connector (tool-less) according to IEC 60603-7-51 for wire outer diameters up to 1.6 mm

General ordering data

| | | |
|------------|----------------------------|-----------------------------------------------------------------------------------------------------------------|
| Type | IE-PS-RJ45-FH-BK | Version |
| Order No. | 1963600000 | RJ45 IDC plug, Cat.6A / Class EA (ISO/IEC 11801 2010), 8-core, 4-core, EIA/TIA T568 A, EIA/TIA T568 B, PROFINET |
| GTIN (EAN) | 4032248645725 | |
| Qty. | 10 ST | |
| Type | IE-PS-RJ45-FH-BK-A | Version |
| Order No. | 1132040000 | RJ45 IDC plug, Cat.6A / Class EA (ISO/IEC 11801 2010), 8-core, EIA/TIA T568 A |
| GTIN (EAN) | 4032248912155 | |
| Qty. | 10 ST | |
| Type | IE-PS-RJ45-FH-BK-B | Version |
| Order No. | 1132050000 | RJ45 IDC plug, Cat.6A / Class EA (ISO/IEC 11801 2010), 8-core, EIA/TIA T568 B |
| GTIN (EAN) | 4032248912148 | |
| Qty. | 10 ST | |
| Type | IE-PS-RJ45-FH-BK-P | Version |
| Order No. | 1132060000 | RJ45 IDC plug, Cat.5 (ISO/IEC 11801), 4-core, PROFINET |
| GTIN (EAN) | 4032248912162 | |
| Qty. | 10 ST | |