

RJ45G1 T1D 3.3E4N 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 solder connection, 90°, bottom, 6 tabs, No, Plugging cycles: 750, Number of poles: 10, PA 66, 30...80 μm Ni / ≥ 30 μm Au , Tray (manual assembly)
Order No.	2564420000
Type	RJ45G1 T1D 3.3E4N TY
GTIN (EAN)	4050118572919
Qty.	120 items
Packaging	Tray (manual assembly)

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Technical data

Approvals

Approvals	CURUS
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	7.05 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)	3.3 mm	Mounting onto the PCB	THT solder connection
Pitch in inches (P)	0.050 "	Shielding material	Brass
Shielding	Yes	Side termination, characteristic	Solder flange
Solder eyelet hole diameter tolerance (D) ± 0.1 mm		Transmission rate	1000 Mbps
Number of solder pins per pole	1	Type of connection	Solder connection
Solder eyelet hole diameter (D)	0.9 mm	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	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 66	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 500	Insulation resistance	≥ 500 MΩ
Moisture Level (MSL)		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

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Technical data**Packing**

Packaging	Tray (manual assembly)	VPE length	322.00 mm
VPE width	194.00 mm	VPE height	69.00 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		

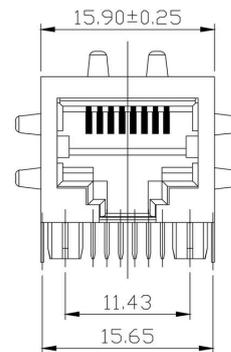
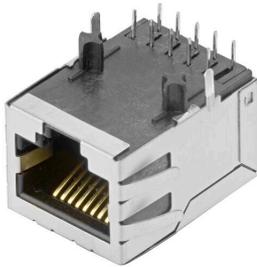
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Drawings

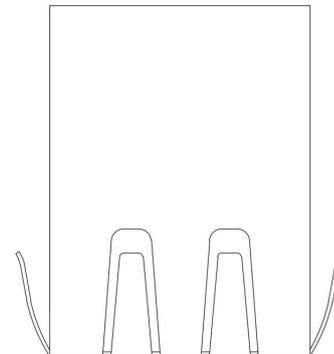
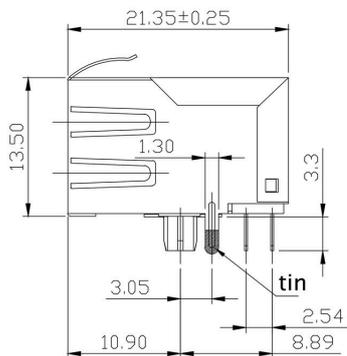
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Dimensioned drawing



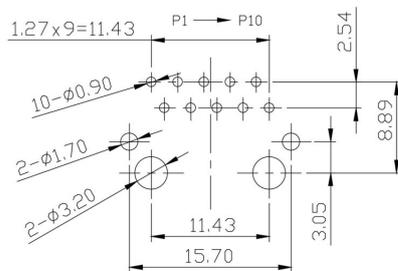
Dimensioned drawing

Dimensioned drawing

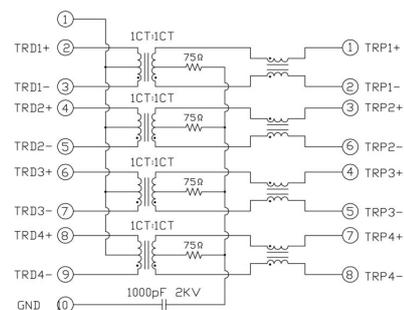


PCB design

Wiring diagram



PCB Layout



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Drawings

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Code	Value	Description
RJ45	G1	RJ45G1 R1U 3.2E4GY/GY TY
R	1	Through Hole Reflow - THR
U	3.2	Solder Pin length: 3.2 mm
E	4	Contact surface thickness: 4 μm
GY/GY	TY	LED: Green-Yellow/Green-Yellow
	TY	Packaging: Tray in box (manual 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
	G/G	LED: Orange/Green
	R/O	LED: Red/Orange
	...	LED: ... (further combinations possible)
	N	LED: without LED
	4	Contact surface thickness: 1 = 3μm, 2 = 6μm, 3 = 15μm, 4 = 30μm, 5 = 50μm
	E	EMI tabs (ground fingers): E = with 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
		Assembly on PCB: Soldering process: Reflow soldering
		Assembly on PCB: Through Hole Technology - THT
		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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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.



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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	

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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	