

## RJ45G1 R12D 3.2E4YG/YG RL

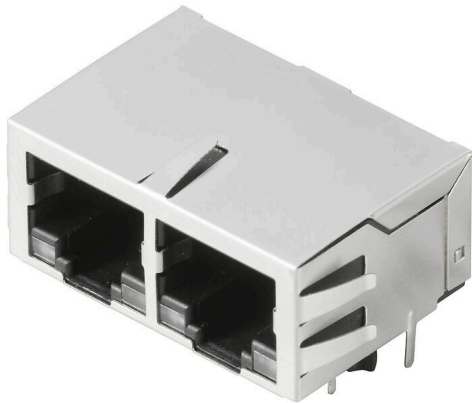
Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

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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, Yes, Plugging cycles: 750, Number of poles: 8, PA 9T, 30...80 $\mu\text{m}$ Ni / $\geq 30$ $\mu\text{m}$ Au, Tape
Order No.	<a href="#">2036510000</a>
Type	RJ45G1 R12D 3.2E4YG/YG RL
GTIN (EAN)	4050118408409
Qty.	180 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	21.5 mm	Depth (inches)	0.8465 inch
Height	16.9 mm	Height (inches)	0.6654 inch
Height of lowest version	13.6 mm	Width	31.2 mm
Width (inches)	1.2283 inch	Net weight	7.67 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)	3.2 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
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	Wiring	10-wire
Outgoing elbow	90°	Forward current	20 mA
Forward voltage, max.	2.5 V	Shield surface	nickel-plated
Colour of right LED	Green/yellow	Shield tabs	6 tabs
Performance-Category	1000 Mbps	Soldering process	Reflow soldering, Manual soldering, Wave soldering
Latch option	bottom	Solder pin dimensions	0.40 x 0.30 mm, LED pins = 0.50 x 0.50 mm
Tolerance of solder pin position	± 0.1 mm	Forward voltage, min.	1.8 V
Colour of left LED	Green/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
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**Technical data**

**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
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	360.00 mm
VPE width	352.00 mm	VPE height	132.00 mm
Tape reel diameter ∅ (A)	330 mm	Surface resistance	Rs = 109 - 1012 Ω

**Important note**

Notes

**Classifications**

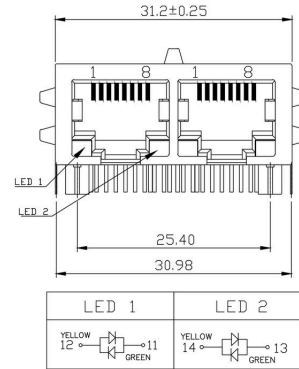
ETIM 8.0	EC002637	ETIM 9.0	EC002637
ETIM 10.0	EC002637	ECLASS 14.0	27-46-02-01
ECLASS 15.0	27-46-02-01		

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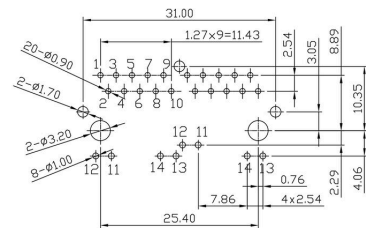
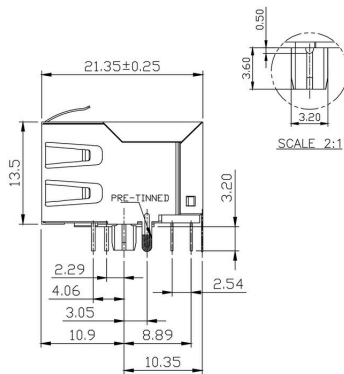
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Drawings

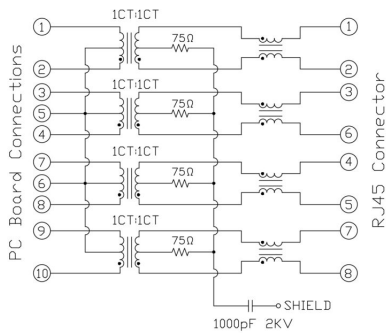
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PCB design



Wiring diagram



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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	Soldering process: Wave or Reflow soldering
E	4	Soldering process: Reflow soldering
GY/GY	TY	Through Hole Technology - THT
		Soldering process: Wave
		Performance Category
		C5 Category 5
		C6 Category 6
		C6A Category 6A
		C6e Category 6e
		M 10/100 Mbit
		G1 10/100/1000 Mbit
		G10 10 Gbit
		U Unshielded
		MP 10/100 Mbit with POE
		MP+ 10/100 Mbit with POE+
		LED
		Y/G Yellow/Green
		G/Y Green/Yellow (standard)
		GY/GY Green-Yellow/Green-Yellow
		O/G Orange/Green
		R/O Red/Orange
		... (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
		S Surface Mount Technology - SMT
		T Soldering process: Reflow soldering
		T Through Hole Technology - THT
		T Soldering process: Wave

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.	<a href="#">8813100000</a>	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.	<a href="#">8813110000</a>	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.	<a href="#">8813120000</a>	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.	<a href="#">1963580000</a>	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.	<a href="#">1963590000</a>	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.	<a href="#">2584980000</a>	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.	<a href="#">1992850000</a>	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.	<a href="#">1992820000</a>	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.	<a href="#">1992860000</a>	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.	<a href="#">1992830000</a>	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.	<a href="#">1992840000</a>	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.	<a href="#">1518080000</a>	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.	<a href="#">1992870000</a>	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.	<a href="#">1518090000</a>	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.	<a href="#">1992890000</a>	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.	<a href="#">1518100000</a>	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.	<a href="#">1963600000</a>	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.	<a href="#">1132040000</a>	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.	<a href="#">1132050000</a>	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.	<a href="#">1132060000</a>	RJ45 IDC plug, Cat.5 (ISO/IEC 11801), 4-core, PROFINET
GTIN (EAN)	4032248912162	
Qty.	10 ST	