

## RJ45G1 R12D 3.2E4YG/YG RL

Weidmüller Interfaces GmbH & Co. KG

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

info@weidmueller.com

www.weidmueller.com

### Product image



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 ( $30\mu$ "") 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, 1000 Mbps, THT/THR solder connection, 90°, Latch option: bottom, Shield tabs: 6 tabs, 30...80 $\mu$ " Ni / $\geq 30$ $\mu$ " Au, LED: Yes, Green/yellow, Green/yellow, Number of poles: 8, Tape
Material number	<a href="#">2036510000</a>
Short text for material	RJ45G1 R12D 3.2E4YG/YG RL
EAN	4050118408409
Qty.	180 pc(s).

Creation date November 18, 2020 1:34:27 PM CET

Catalogue status 18.11.2020 / We reserve the right to make technical changes.

**RJ45G1 R12D 3.2E4YG/YG RL**

Weidmüller Interfaces GmbH &amp; Co. KG

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

info@weidmuller.com

www.weidmuller.com

**Technical data****Dimensions and weights**

Depth	21.5 mm	Depth (inches)	0.846 inch
Height	16.9 mm	Height (inches)	0.665 inch
Height of lowest version	13.6 mm	Net weight	7.675 g
Width	31.2 mm	Width (inches)	1.228 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
Latch option	bottom	Mounting onto the PCB	THT/THR solder connection
Number of poles	8	Number of solder pins per pole	1
Outgoing elbow	90°	Performance-Category	1000 Mbps
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	6 tabs	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	1000 Mbps
Type of connection	Socket connector	Wiring	10-wire

**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		

**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	Tape	VPE length	0 m
VPE width	0 m	VPE height	0 m
Tape reel diameter Ø (A)	330 mm	Surface resistance	Rs = 10 <sup>9</sup> - 10 <sup>12</sup> Ω

Creation date November 18, 2020 1:34:27 PM CET

Catalogue status 18.11.2020 / We reserve the right to make technical changes.

2

## RJ45G1 R12D 3.2E4YG/YG RL

**Weidmüller Interfaces GmbH & Co. KG**

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

[info@weidmueller.com](mailto:info@weidmueller.com)

[www.weidmueller.com](http://www.weidmueller.com)

# Technical data

### 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	<a href="#">MB FREECONTACT EN</a> <a href="#">FL FIELDWIRING EN</a> <a href="#">PI PROFINET CABLING EN</a>
Engineering Data	<a href="#">STEP</a>
Product Change Notification	<a href="#">PCN</a> <a href="#">PCN</a>
User Documentation	<a href="#">MAN IE GUIDE DE</a> <a href="#">MAN IE GUIDE EN</a>

**RJ45G1 R12D 3.2E4YG/YG RL**

**Weidmüller Interfaces GmbH & Co. KG**

Postfach 3030

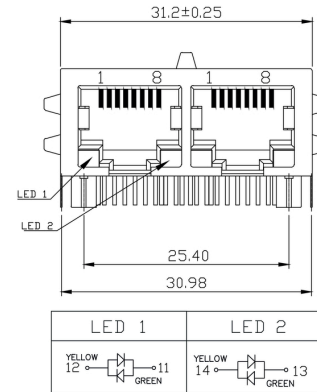
32760 Detmold

Tel. +49 5231 14-0

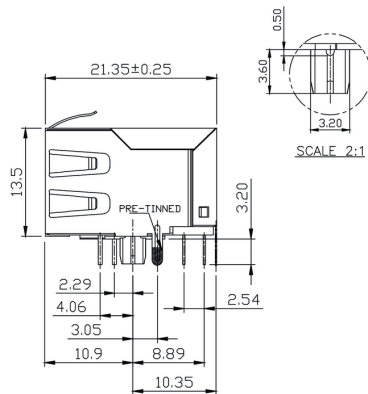
Fax. +49 5231 14-2083

**Drawings**

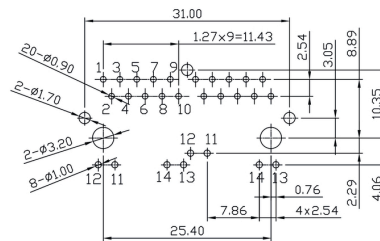
**Dimensioned drawing** [info@weidmueller.com](mailto:info@weidmueller.com)



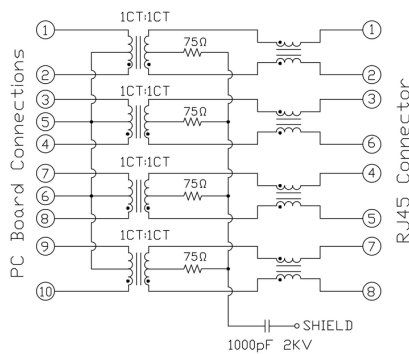
**Dimensioned drawing**



**PCB design**



**Wiring diagram**



## RJ45G1 R12D 3.2E4YG/YG RL

Weidmüller Interfaces GmbH & Co. KG

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

info@weidmueller.com

ueller.com

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

### Type codes

Creation date November 18, 2020 1:34:27 PM CET

Catalogue status 18.11.2020 / We reserve the right to make technical changes.