

Datos OMNIMATE - Transformador de conectores RJ45 RJ45G1 R1D 3.3E4G/Y TY

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com



Conectores hembra de transmisores RJ45 (magnéticos) para aplicaciones de gigabit (1000 base-T) con compensación integrada contrarrestan activamente acoplamientos inductivos y capacitivos y ahorran espacio en el PCB.

- Procedimientos de soldadura THT o THR
- Amplia gama de diferentes tipos de diseño, también con LED integrados y lengüetas de contacto de apantallado
- Embalaje en bandeja (TY) o en rollo (embalaje en cinta, RL)
- Rango de temperaturas ampliado de -40 °C a +85 °C
- Capa de oro reforzada para protección mejorada contra la corrosión
- Velocidades de transmisión de hasta 1 Gbit/s

Datos generales para pedido

Tipo	RJ45G1 R1D 3.3E4G/Y TY
Código	2544510000
Versión	Conector para placa c.i., Transformador de conectores RJ45, 1000 Mbps , Conexión por soldadura THT/THR, 90°, Opción de bloqueo: inferior, Anilla de apantallado: 6 tabs, 30-80 µ" Ni / 30- µ" Au , LED: Sí, verde, amarillo, Número de polos: 10, Bandeja (conjunto manual)
GTIN (EAN)	4050118554168
U.E.	120 Pieza
Embalaje	Bandeja (conjunto manual)

Datos OMNIMATE - Transformador de conectores RJ45

RJ45G1 R1D 3.3E4G/Y TY

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 16
 D-32758 Detmold
 Germany
 Fon: +49 5231 14-0
 Fax: +49 5231 14-292083
 www.weidmüller.com

Datos técnicos

Dimensiones y pesos

Anchura	15,9 mm	Anchura (pulgadas)	0,626 inch
Altura	16,8 mm	Altura (pulgadas)	0,661 inch
Altura construcción baja	13,5 mm	Profundidad	21,35 mm
Profundidad (pulgadas)	0,841 inch	Peso neto	4,002 g

Temperaturas

Temperatura de almacenamiento, max.	85 °C	Temperatura de almacenamiento, min.	-40 °C
Temperatura de servicio, max.	85 °C	Temperatura de servicio, min.	-40 °C

Conformidad medioambiental del producto

REACH SVHC	Lead 7439-92-1
------------	----------------

Especificaciones del sistema

Angulo de salida	90°	Anilla de apantallado	6 tabs
Apantallamiento	Sí	Ciclos de enchufado	750
Color de LED derecho	amarillo	Color de LED izquierdo	verde
Familia del producto	Datos OMNIMATE - Transformador de conectores RJ45	LED	
Longitud del terminal de soldadura (l)	3,3 mm		Sí
Montaje sobre placas c.i.	Conexión por soldadura THT/THR	Material del apantallamiento	Latón
Número de terminales de soldadura por polo	1	Número de polos	10
Paso en mm (P)	1,27 mm	Opción de bloqueo	inferior
Superficie de apantallado	niquelado	Paso en pulgadas (P)	0,05 inch
Tipo de protección	IP20	Tipo de conexión	Conector hembra
		Velocidad de transmisión	1000 Mbps

Propiedades eléctricas

Intensidad nominal	0,80 A	Resistencia a tensiones eléctricas, contacto/apantallado	1500 V DC
Resistencia a tensiones eléctricas, contacto/contacto	1000 V DC	Resistencia de aislamiento	> 500 MΩ
Tensión nominal	30 V DC		

Datos del material

Materiales aislantes	PA 9T	Color	negro
Carta de colores (similar)	RAL 9011	Grupo de materiales aislantes	II
CTI	≥ 500	Resistencia de aislamiento	> 500 MΩ
Moisture Level (MSL)	1	Grado inflamabilidad según UL 94	V-0
Material del contacto	Fósforo, bronce	Superficie de contacto	Oro sobre níquel
Estructura de capas del contacto del conector	30-80 μ" Ni / 30- μ" Au	Temperatura de almacenamiento, min.	-40 °C
Temperatura de almacenamiento, max.	85 °C	Temperatura de servicio, min.	-40 °C
Temperatura de servicio, max.	85 °C		

Embalaje

Embalaje	Bandeja (conjunto manual)	Longitud de VPE	0 m
Anchura VPE	0 m	Altura de VPE	0 m

Fecha de creación 1 de agosto de 2019 14:06:37 CEST

Datos OMNIMATE - Transformador de conectores RJ45 RJ45G1 R1D 3.3E4G/Y TY

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Datos técnicos

Clasificaciones

ETIM 6.0	EC002637	eClass 6.2	27-25-05-04
eClass 9.0	27-44-04-02	eClass 9.1	27-44-04-02

Homologaciones en línea

Homologaciones



ROHS Conformidad

Descargas

Datos de ingeniería	STEP
Notificación de cambio de producto	PCN PCN

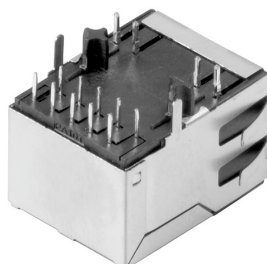
Datos OMNIMATE - Transformador de conectores RJ45

RJ45G1 R1D 3.3E4G/Y TY

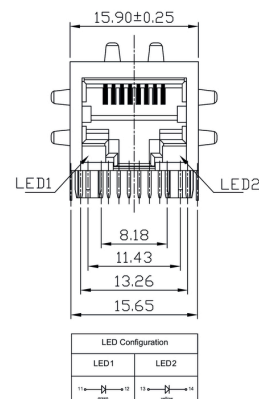
Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Dibujos

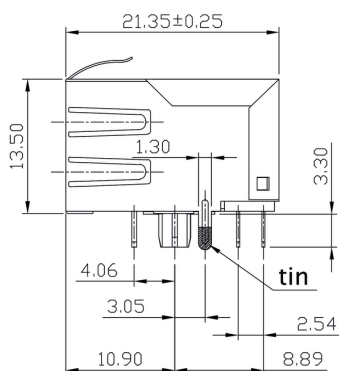
Dibujo acotado



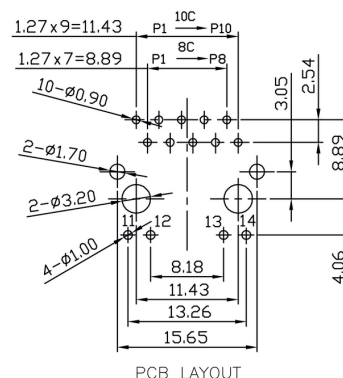
Dibujo acotado



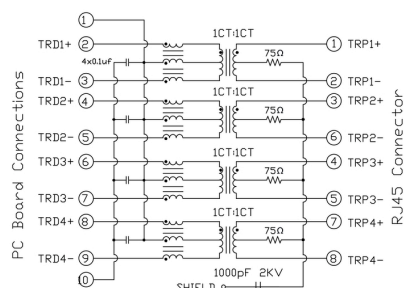
Dibujo acotado



Diseño de la placa de circuito impreso



Diseño de la placa de circuito impreso



Datos OMNIMATE - Transformador de conectores RJ45 RJ45G1 R1D 3.3E4G/Y TY

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Dibujos

Gráfico

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

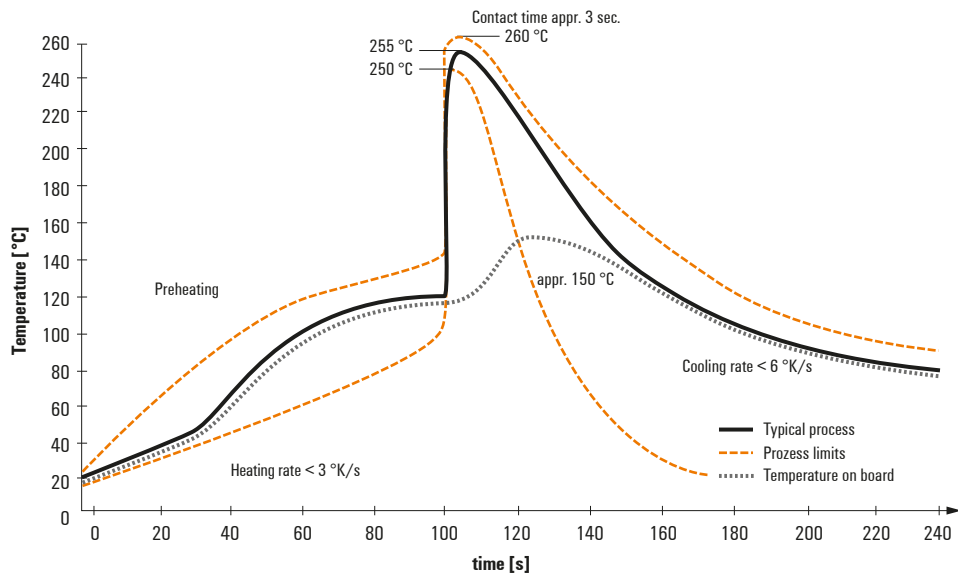
Códigos de tipo

RJ45	G1	R	1	U	3.2	E	4	GY/GY	TY	RJ45G1 R1U 3.2E4GY/GY TY																																																																																																																		
										<table><tr><td>Packaging</td><td>TY</td><td>Tray in box (manual assembly)</td></tr><tr><td></td><td>RL</td><td>Tape on Reel (automated assembly)</td></tr><tr><td>LED</td><td>Y/G</td><td>Yellow/Green</td></tr><tr><td></td><td>G/Y</td><td>Green/Yellow (standard)</td></tr><tr><td></td><td>GY/GY</td><td>Green-Yellow/Green-Yellow</td></tr><tr><td></td><td>O/G</td><td>Orange/Green</td></tr><tr><td></td><td>R/O</td><td>Red/Orange</td></tr><tr><td></td><td>...</td><td>... (further combinations possible)</td></tr><tr><td></td><td>N</td><td>without LED</td></tr><tr><td>Contact surface thickness</td><td>4</td><td>1 = 3µ", 2 = 6µ", 3 = 15µ", 4 = 30µ", 5 = 50µ"</td></tr><tr><td>EMI tabs (ground fingers)</td><td>E</td><td>E = with EMI tabs</td></tr><tr><td></td><td>N</td><td>N = without EMI tabs</td></tr><tr><td>Solder Pin length</td><td>3.2</td><td>3.2 mm</td></tr><tr><td></td><td>1.6</td><td>1.6 mm</td></tr><tr><td></td><td>D</td><td>SMD</td></tr><tr><td>Direction, latch style</td><td>U</td><td>Horizontal (90°, side entry), latch up</td></tr><tr><td></td><td>D</td><td>Horizontal (90°, side entry), latch down</td></tr><tr><td></td><td>V</td><td>Vertical (180°, top entry)</td></tr><tr><td></td><td>Y</td><td>Diagonal (45°), latch up</td></tr><tr><td>Number of Ports</td><td>1</td><td>1 Port</td></tr><tr><td></td><td>12; 14; ...</td><td>multi ports side by side, Multiport</td></tr><tr><td></td><td>2; 4; ...</td><td>multi ports about each other, Multilevel</td></tr><tr><td>Assembly on PCB</td><td>R</td><td>Through Hole Reflow - THR</td></tr><tr><td></td><td>S</td><td>Soldering process: Wave or Reflow soldering</td></tr><tr><td></td><td>T</td><td>Surface Mount Technology - SMT</td></tr><tr><td></td><td>T</td><td>Soldering process: Reflow soldering</td></tr><tr><td></td><td>T</td><td>Through Hole Technology - THT</td></tr><tr><td></td><td>T</td><td>Soldering process: Wave</td></tr><tr><td>Performance Category</td><td>C5</td><td>Category 5</td></tr><tr><td></td><td>C6</td><td>Category 6</td></tr><tr><td></td><td>C6A</td><td>Category 6A</td></tr><tr><td></td><td>C5e</td><td>Category 5e</td></tr><tr><td></td><td>M</td><td>10/100 Mbit</td></tr><tr><td></td><td>G1</td><td>10/100/1000 Mbit</td></tr><tr><td></td><td>G10</td><td>10 Gbit</td></tr><tr><td></td><td>U</td><td>Unshielded</td></tr><tr><td></td><td>MP</td><td>10/100 Mbit with POE</td></tr><tr><td></td><td>MP+</td><td>10/100 Mbit with POE+</td></tr></table>	Packaging	TY	Tray in box (manual assembly)		RL	Tape on Reel (automated assembly)	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		2; 4; ...	multi ports about each other, Multilevel	Assembly on PCB	R	Through Hole Reflow - THR		S	Soldering process: Wave or Reflow soldering		T	Surface Mount Technology - SMT		T	Soldering process: Reflow soldering		T	Through Hole Technology - THT		T	Soldering process: Wave	Performance Category	C5	Category 5		C6	Category 6		C6A	Category 6A		C5e	Category 5e		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+
Packaging	TY	Tray in box (manual assembly)																																																																																																																										
	RL	Tape on Reel (automated assembly)																																																																																																																										
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																																																																																																																										
	2; 4; ...	multi ports about each other, Multilevel																																																																																																																										
Assembly on PCB	R	Through Hole Reflow - THR																																																																																																																										
	S	Soldering process: Wave or Reflow soldering																																																																																																																										
	T	Surface Mount Technology - SMT																																																																																																																										
	T	Soldering process: Reflow soldering																																																																																																																										
	T	Through Hole Technology - THT																																																																																																																										
	T	Soldering process: Wave																																																																																																																										
Performance Category	C5	Category 5																																																																																																																										
	C6	Category 6																																																																																																																										
	C6A	Category 6A																																																																																																																										
	C5e	Category 5e																																																																																																																										
	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+																																																																																																																										

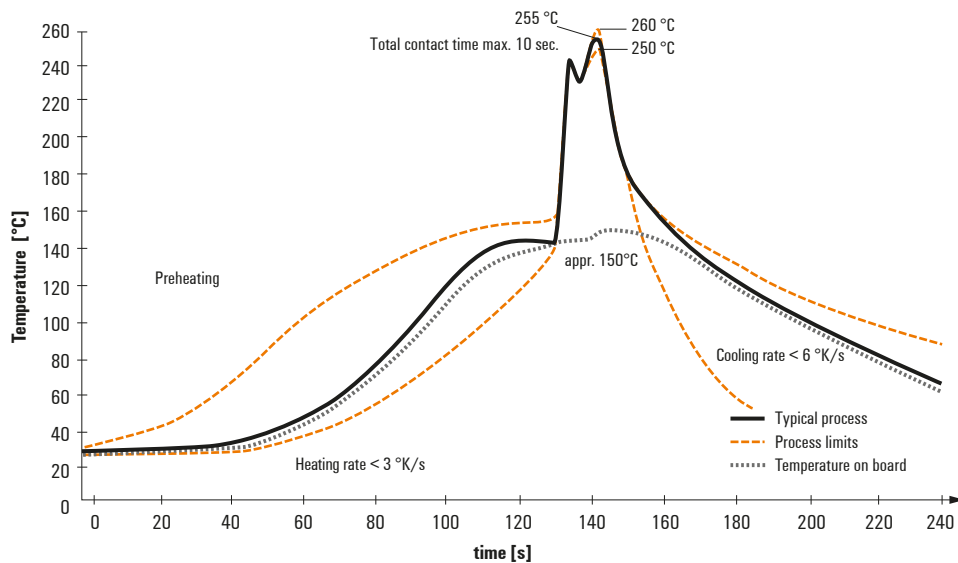
Recommended wave soldering profiles

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Single Wave:



Double Wave:



Wave soldering profiles

Wired connection elements should be processed in accordance with the DIN EN 61760-1 standard. We have included two recommendations for practical wave soldering profiles, with which Weidmüller PCB terminals and connectors are qualified.

When choosing a suitable profile for your application, the following factors also need to be considered:

- PCB thickness
- Proportion of Cu in the layers
- Single/double-sided assembly
- Product range
- Heating and cooling rates

The single and double wave profiles each indicate the recommended operating range, including the maximum soldering temperature of 260°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.

We reserve the right to make technical changes.

Recommended reflow soldering profile

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 16

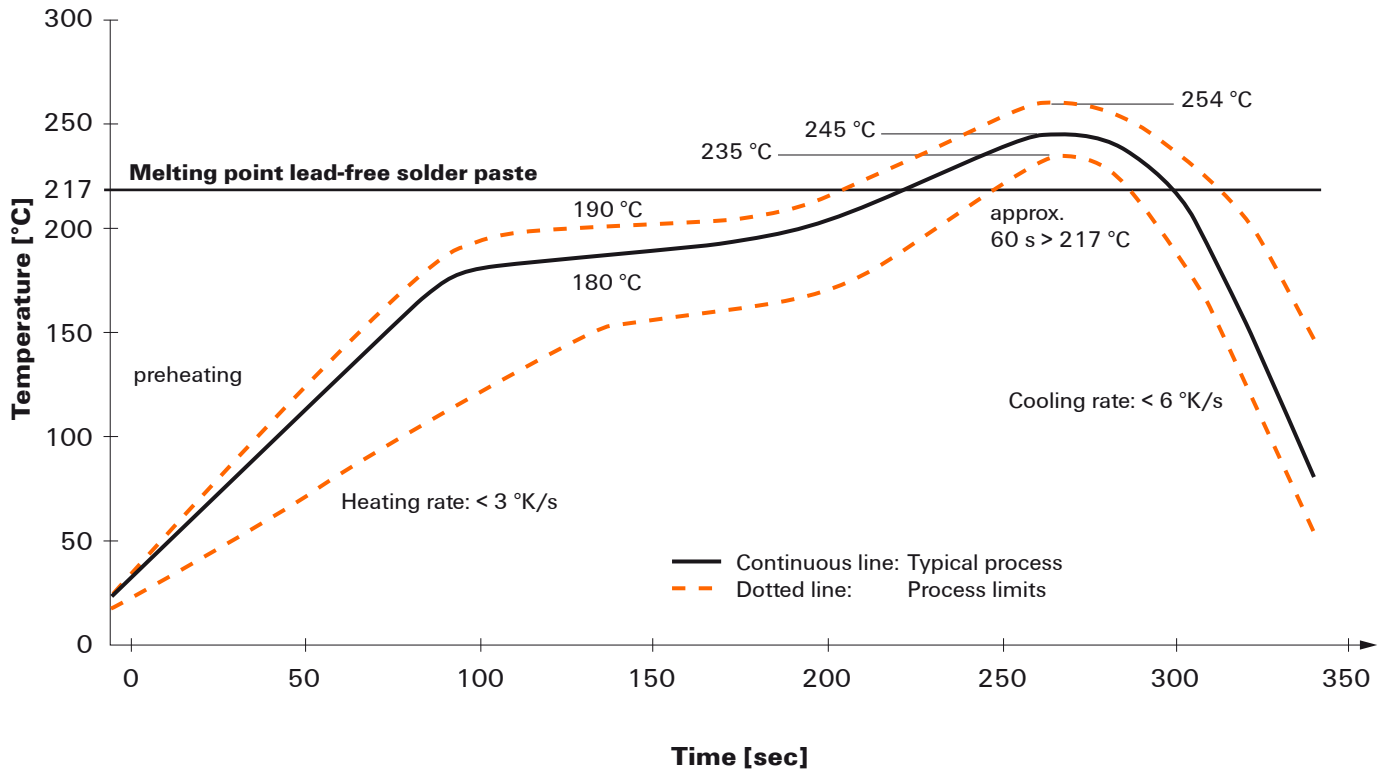
D-32758 Detmold

Germany

Fon: +49 5231 14-0

Fax: +49 5231 14-292083

www.weidmueller.com



Reflow soldering profile

The perfect soldering profile for SMT Surface Mount Technology is one the most exiting question in SMT production. But there are more than one correct answer: The diagram of temperature-on-time is related to processing features of solder paste and to maximum load of components.

We have to consider the following parameters:

- Time for pre heating
- Maximum temperature
- Time above melting point
- Time for cooling
- Maximum heating rate
- Maximum cooling rate

We recommend a typical solder profile with associated process limits. With preheating components and board are prepared smoothly for the solder phase. Heating rate is typically $\leq +3\text{K/s}$. In parallel the solder paste is 'activated'. The time above melting point of 217°C the paste gets liquid and components and boards begin to connect. The maximum temperature of 245°C to 254°C should stay between 10 and 40 seconds. In the cooling phase at $\geq -6\text{K/s}$ solder is cured. Board and components cool down while avoiding cold cracks.