

OMNIMATE Data - RJ45 jacks transformer RJ45G1 R1D 3.3E4G/Y TY

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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 (30μ) for improved corrosion protection

- At least 3 mm stand-off ensures a perfect soldering result

Általános rendelési adatok

Típus	RJ45G1 R1D 3.3E4G/Y TY
Rendelési szám	2544510000
Verzió	NYÁK dugaszoló csatlakozó, RJ45 jacks transformer, 1000 Mbps , THT/THR-forrasztott csatlakozással, 90°, Rendszer opció: bottom, Shield tabs: 6 tabs, 30-80 μ Ni / 30- μ Au , LED: lgen, zöld, sárga, Pólusszám: 10, Tray (manual assembly)
GTIN (EAN)	4050118554168
Menny.	120 Stück
Csomagolás	Tray (manual assembly)

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Műszaki adatok**Méretetek és tömegek**

Szélesség	15,9 mm	Szélesség (coll)	0,626 inch
Magasság	16,8 mm	Magasság (coll)	0,661 inch
Legalacsonyabb változat magassága	13,5 mm	Mélység	21,35 mm
Mélység (coll)	0,841 inch	Nettó tömeg	4,002 g

Hőmérsékletek

Tárolási hőmérséklet, max.	85 °C	Tárolási hőmérséklet, min.	-40 °C
Üzemi hőmérséklet, max.	85 °C	Üzemi hőmérséklet, min.	-40 °C

Termék környezetvédelmi megfelelése

REACH SVHC	Lead 7439-92-1
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System specifications

Colour of left LED	zöld	Colour of right LED	sárga
Csatlakozás típusa	Aljzatos csatlakozó	Dugaszolási ciklusok	750
Felszerelés NYÁK-ra	THT/THR-forrasztott csatlakozással	Forrasztótűske hossza (l)	3,3 mm
Forrasztótűskék száma pólusonként	1	Kimenő könyök	90°
LED	Igen	Osztás, inch (P)	0,05 inch
Osztás, mm (P)	1,27 mm	Pólusszám	10
Retes opció	bottom	Shield tabs	6 tabs
Termékcsalád	OMNIMATE Data - RJ45 jacks transformer	Védelmi osztály	IP20
Árnyékolás	Igen	Árnyékolás felülete	nikkelezett
Árnyékoló anyag	Sárgaréz	Átviteli sebesség	1000 Mbps

Electrical properties

Névleges feszültség	30 V DC	Névleges áram	0,80 A
Szigetelés erőssége	> 500 MΩ	Átütési szilárdság, érintkező / árnyékolás	1500 V DC
Átütési szilárdság, érintkező / érintkező	1000 V DC		

Anyagjellemzők

Szigetelőanyag	PA 9T	Szín	fekete
Színskála (hasonló)	RAL 9011	Szigetelőanyag csoport	II
CTI	≥ 500	Szigetelés erőssége	> 500 MΩ
Moisture Level (MSL)	1	UL 94 éghetőségi osztály	V-0
Érintkező alapanyaga	Foszfór-bronz	Érintkező felület	Arany a nikkel felett
Dugó érintkező rétegének felépítése	30-80 μ" Ni / 30-μ" Au	Tárolási hőmérséklet, min.	-40 °C
Tárolási hőmérséklet, max.	85 °C	Üzemi hőmérséklet, min.	-40 °C
Üzemi hőmérséklet, max.	85 °C		

Csomagolás

Csomagolás	Tray (manual assembly)	VPE hosszúság	0 m
VPE szélesség	0 m	VPE magasság	0 m

Besorolások

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

A létrehozás dátuma 2019. július 24. 10:58:26 CEST

A katalógus állapota 19.07.2019 / A műszaki módosítások jogát fenntartjuk.

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Műszaki adatok**Jóváhagyások**

Jóváhagyások



ROHS

Megfelel

Letöltések

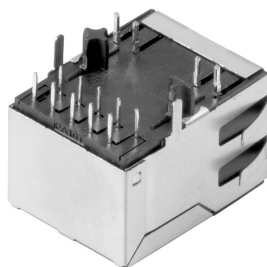
Engineering Data	STEP
Product Change Notification	PCN PCN

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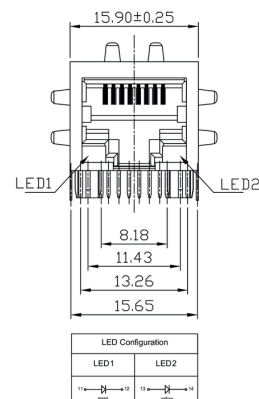
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Rajzok

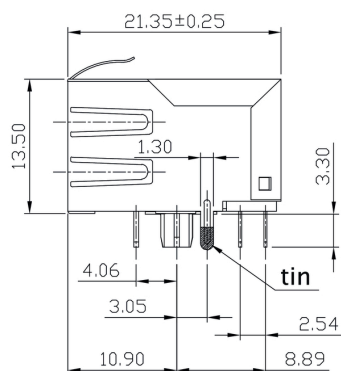
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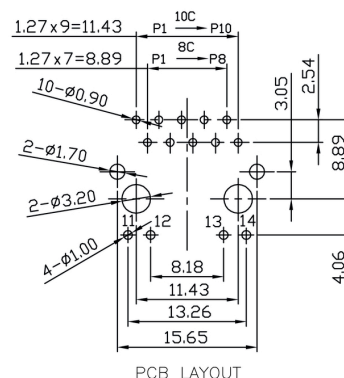
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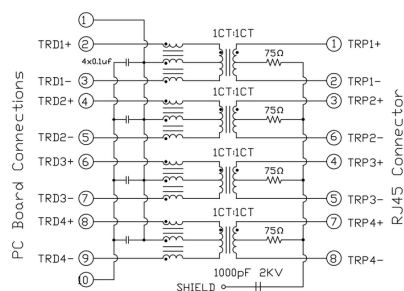
Méretrajz



NYÁK kivitel



NYÁK kivitel



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Rajzok

Schematic

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

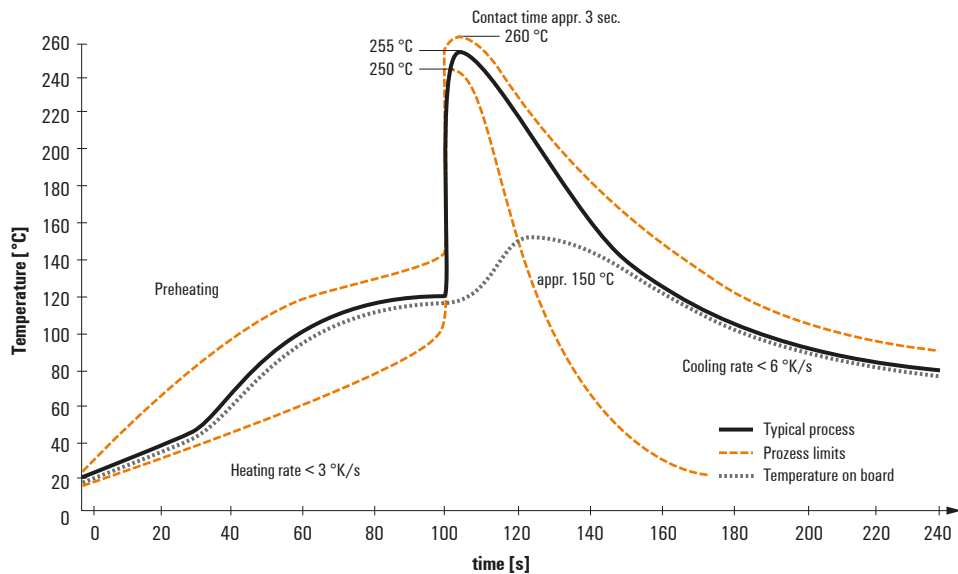
Type codes

RJ45	G1	R	1	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
										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
										Soldering process: Wave or Reflow soldering
										S
										Surface Mount Technology - SMT
										Soldering process: Reflow soldering
										T
										Through Hole Technology - THT
										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+

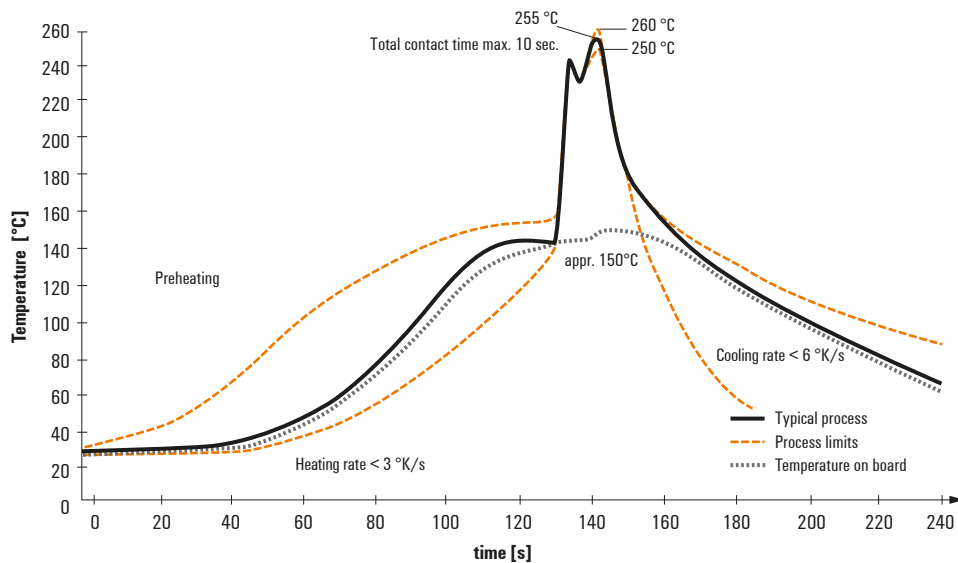
Recommended wave soldering profiles

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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

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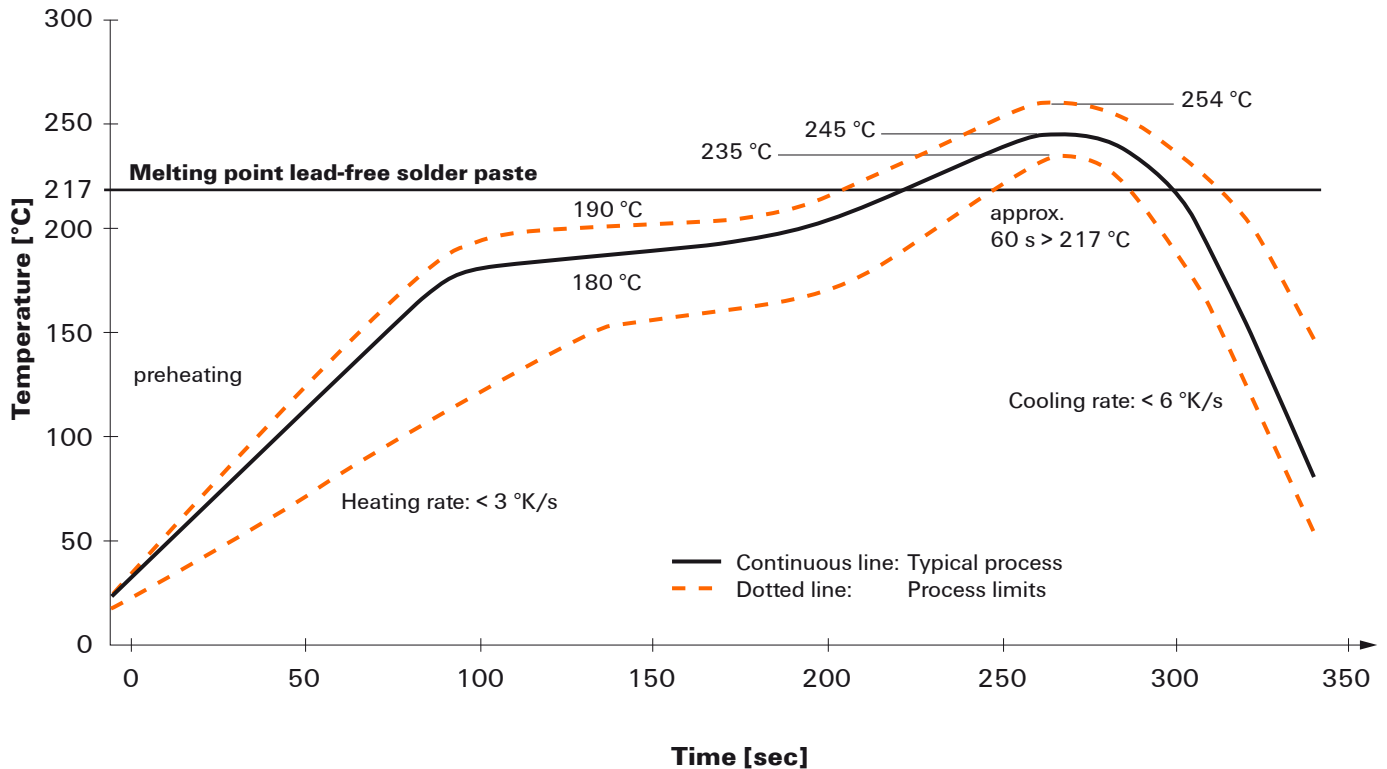
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Reflow soldering profile

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.