

OMNIMATE Data - RJ45 jacks RJ45C5 S1V 2.7N4N RL

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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
- Performance category Cat. 3 to Cat. 6
- 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

Properties and advantages:

- Extended temperature range of -40°C to $+85^{\circ}\text{C}$ for maximum performance
- Reinforced gold layer ($30\mu\text{m}$) for improved corrosion protection
- At least 3 mm stand-off ensures a perfect soldering result

General ordering data

Type	RJ45C5 S1V 2.7N4N RL
Order No.	1433900000
Version	PCB plug-in connector, RJ45 jacks, Cat. 5, SMD solder connection, 180°, Shield tabs: none, 30-80 μm Ni / 30- μm Au, LED: No, No. of poles: 8, Tape
GTIN (EAN)	4050118238587
Qty.	300 pc(s).
Packaging	Tape

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Technical data

Dimensions and weights

Width	16.1 mm	Width (inches)	0.634 inch
Height	13.2 mm	Height (inches)	0.52 inch
Height of lowest version	13.2 mm	Depth	20.05 mm
Depth (inches)	0.789 inch	Net weight	3.467 g

Temperatures

Operating temperature, max.	85 °C	Operating temperature, min.	-40 °C
Storage temperature, max.	85 °C	Storage temperature, min.	-40 °C

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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System specifications

Category	Cat. 5	LED	No
Mounting onto the PCB	SMD solder connection	No. of poles	8
Number of solder pins per pole	1	Outgoing elbow	180°
Pitch in inches (P)	0.05 inch	Pitch in mm (P)	1.27 mm
Plugging cycles	750	Product family	OMNIMATE Data - RJ45 jacks
Protection degree	IP20	Shield surface	nickel-plated
Shield tabs	none	Shielding	Yes
Shielding material	Copper alloy	Solder pin length (l)	3.5 mm
Type of connection	Socket connector	Wiring	8-core

Electrical properties

Dielectric strength, contact / contact	≥ 1000 V DC	Insulation strength	> 500 MΩ
Rated current	1.5 A	Rated voltage	125 V AC

Material data

Insulating material	PA 9T	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	II
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 solder connection	30-80 μ" Ni / 30- μ" Sn	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	50 mm
VPE width	330 mm	VPE height	330 mm
Tape reel diameter Ø (A)	330 mm	Surface resistance	Rs = 10 ⁹ - 10 ¹² Ω

Classifications

ETIM 6.0	EC002637	eClass 6.2	27-25-05-04
eClass 7.1	27-25-05-04	eClass 8.1	19-17-01-25
eClass 9.0	27-44-04-02	eClass 9.1	27-44-04-02

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Technical data

Approvals

Approvals



ROHS

Conform

Downloads

Brochure/Catalogue

[CAT 9 IETH 15/16 EN](#)
[MB FREECONTACT EN](#)
[FL FIELDWIRING EN](#)
[PI PROFINET CABLING EN](#)

User Documentation

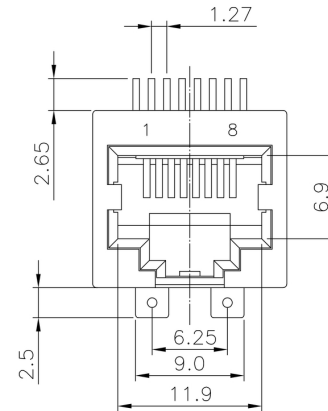
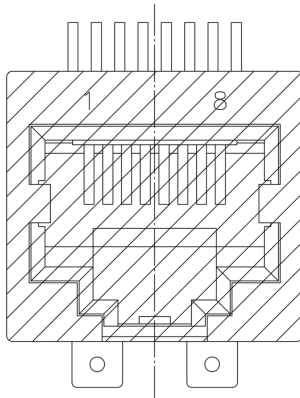
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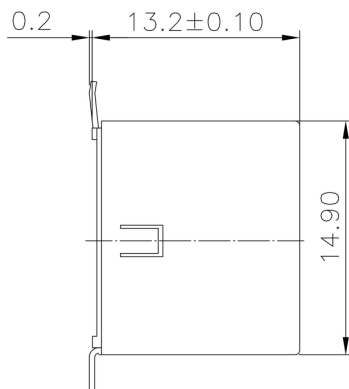
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Drawings

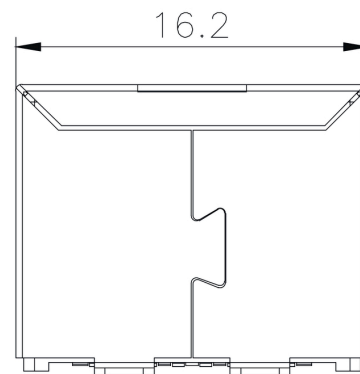
Dimensioned drawing



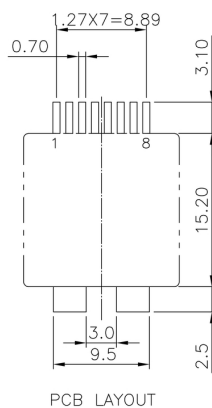
Dimensioned drawing



Dimensioned drawing



Dimensioned drawing



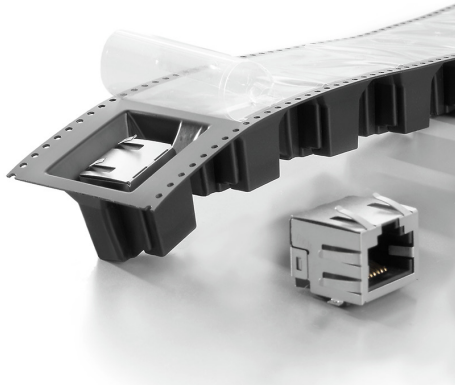
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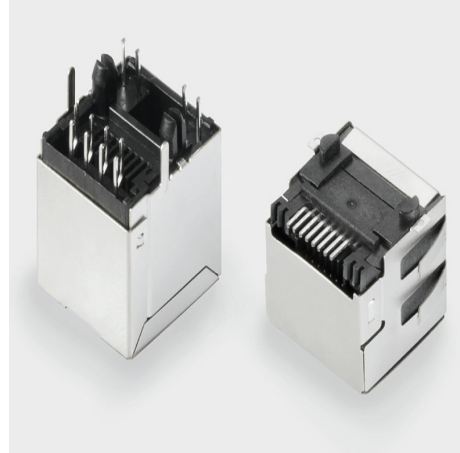
Product benefits



Process-optimised packaging
Tape-on-reel or tray

Product benefits

Product benefits



Trouble-free assembly
Short, chamfered solder pins



Suitable for all soldering processes
SMT, THT or THR

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Catalogue status 23.05.2019 / We reserve the right to make technical changes.

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Drawings

Legend

RJ45	G1	R	1	U	3.2	E	4	GY/GY	TY	RJ45G1 R1U 3.2E4GY/GY TY

Recommended reflow soldering profile

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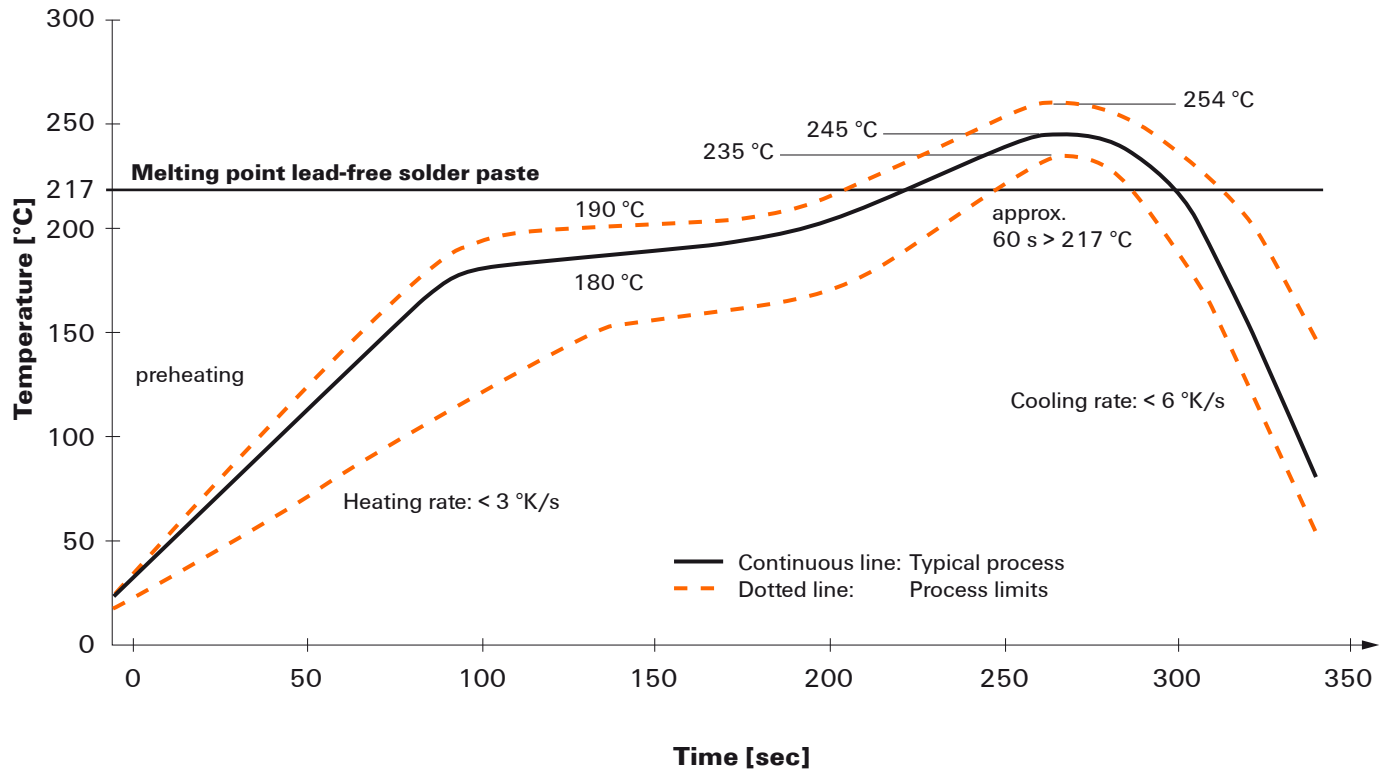
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Reflow soldering profile

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.