



RJI MF-PN RJ45plug Cat5, 4p IDC straight

| Pin No. ix | 10BASE-T 100BASE-TX | 1/10GBASE-T | EIA/TIA 568A | EIA/TIA 568B | Industrial (PROFINET) |
|------------|------------------------|-------------|--------------|--------------|-----------------------|
| 1 | TX+ | BI_DA+ | white/green | white/orange | yellow |
| 2 | TX- | BI_DA- | green | orange | orange |
| 3 | RX+ | BI_DB+ | white/orange | white/green | white |
| 4 | N.C | BI_DC+ | blue | blue | -- |
| 5 | N.C | BI_DC- | white/blue | white/blue | -- |
| 6 | RX- | BI_DB- | orange | green | blue |
| 7 | N.C | BI_DD+ | white/brown | white/brown | -- |
| 8 | N.C | BI_DD- | brown | brown | -- |

General information

| | |
|--------------------------|---|
| Design | RJ45 connector for Ethernet communication |
| Product standard | IEC 600603-7 |
| No. of contacts | 8 / (4) |
| Transmission rate | 10 / 100 Mbit/s and 1 / 2.5 / 5 / 10 Gbit/s |
| Transmission performance | Note: 4-pole version only 10 / 100 Mbit/s 8-pole versions 0945 151 1570 / 1571 Category 6A / Class EA up to 500 MHz acc. to ISO/IEC 11801:2002, EN 50173-1 |
| Transmission performance | 4-pole versions 0945 151 1140 / 1141 Category 5 / Class D up to 100 MHz acc. to ISO/IEC 11801:2002, EN 50173-1 |
| Shielding | Fully shielded, 360° shielding contact |
| Termination | Field termination IDC with cutting function of the single wires |
| Degree of protection | IP20 |
| Mating cycles | min. 750 |
| UL certification | under preparation |
| RoHS - complainant | yes |
| Lead free | yes |

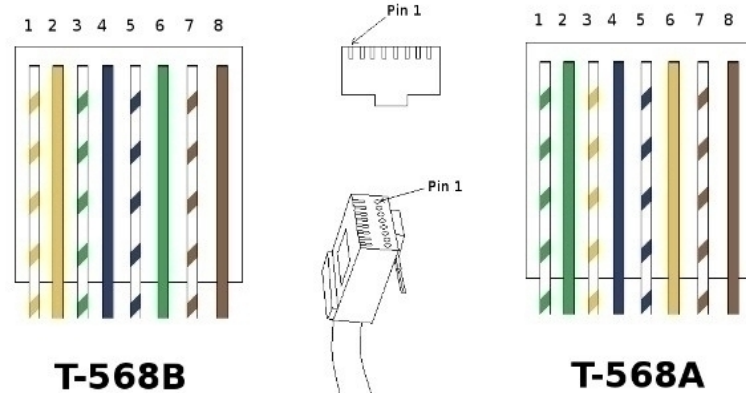
Cable specification

| | |
|-------------------------|---------------------------------------|
| Cable diameter | 4,5 to 9 mm |
| Conductor cross section | AWG 26 to AWG 22 (solid and stranded) |
| Conductor diameter | 0,8 - 1,6 mm |

Electrical specification

| | |
|---|--|
| Rated current | 1,76 A (all pins) values at 0°C / 1,1 A (all pins) values at 55°C |
| Rated voltage | 50 V AC / 60 V DC |
| Contact Resistance | contact: 20 mΩ max. (100 mA max. (DC or 1000 Hz)) shield: 100 mΩ max. |
| Insulation Resistance | 500 MΩ min. (500 V DC) |
| Voltage Proof | 1.000 V DC pin to pin 1.500 V DC pin to shielding (for 1 min. current leakage max. 2 mA) |
| Mechanical operation with electrical load (IEC 60512 - test 9c) | unmating under electrical load with: 1,2 A / 50 V 50 cycles for each polarity |
| Power over Ethernet (PoE) | PoE IEEE 802.3af PoE+ IEEE 802.3at 4PPoE IEEE 802.3bt |

Pin and pair grouping assignment pin assignment (front view)



Derating diagram acc. to IEC512 (Current carrying capacity)

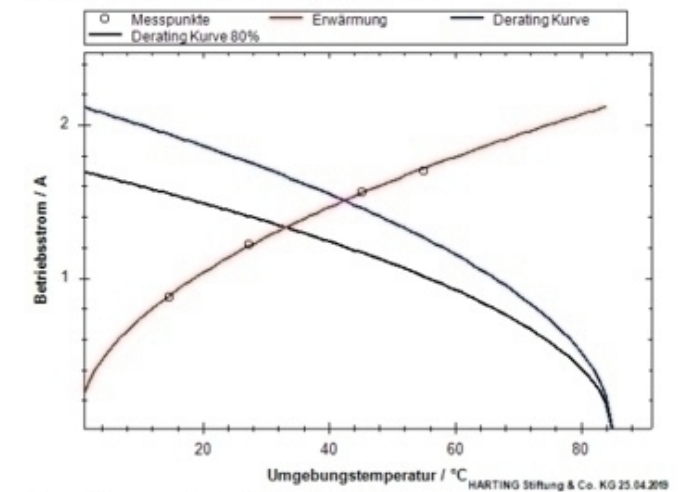
Current-carrying capacity

min. 1,0 A @ 55°C

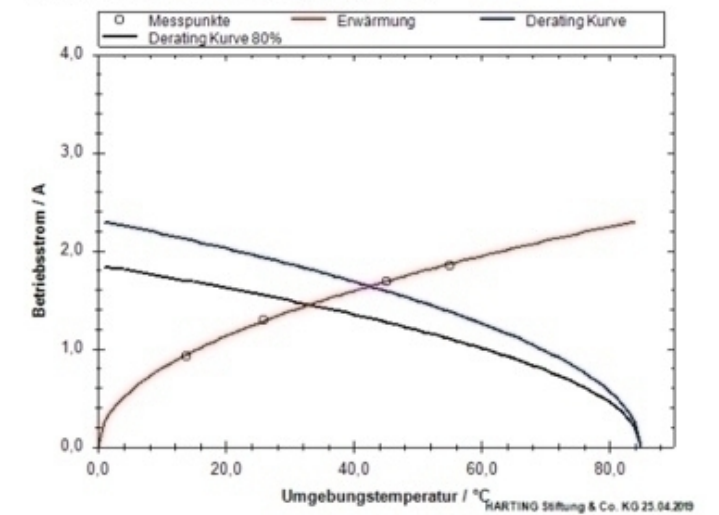
The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals. The current capacity curve is valid for continuous, non interrupted current loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.

Control and test procedures according to DIN IEC 60 512

Derating with AWG 26/7 wire:



Derating with AWG 23/1 wire:





| | | | | | | |
|---|---|---|------------------------|-----------------------------|--|------------------------|
| Coating | A= mm ² V= mm ³ m= g Mat. | All Dimensions in mm Original Size DIN A3 | | Scale 1:1 | Free size tol. | Ref. |
| | All rights reserved Department EL PD | Created by BALSAN | Inspected by PREUTU | Standardisation HOFFMANN | Date 2020-07-16 | State Final Release |
| HARTING Electronics GmbH D-32339 Espelkamp | | Title RJI MF-PN RJ45plug Cat5, 4p IDC straight | | | Doc-Key / ECM-Nr. 100905128/UGD/000/A 500000176510 | |
| | | Type DS | Number 09451511140 | | Rev. A | Page 1/3 |



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| Mechanical specification | |
|--|---|
| Insertion force | Max. 25 N |
| Withdrawal force | Max. 25 N |
| Mechanical Operation | 750 times insertions and extractions mating speed: 10 mm/s max. rest: 5s, min.(unmated) |
| Lock Strength | Min. 50 N (for the mating axis direction in state in fitted with applicable connector) |
| Environment specification | |
| Storage temperature range | -40°C to +85°C (95% RH max.) |
| Operating temperature range | -40°C to +85°C (95% RH max.) |
| Rapid change of temperature (IEC 60512-11-4) | 5 cycles between -40°C and 85°C with 30 minutes dwell at temp. extremes and 1 minute transition between temperatures |
| Dry heat (IEC 60512-11-9) | Temperature 85°C, duration 500 h |
| Damp heat cyclic (IEC 60512-11-12) | 5 cycles at test temperature +55°C; Variant 2 |
| Cyclic damp heat (IEC 60068-2-38) | 25°C to 65°C; cold sub-cycle - 10°C; humidity 93 % RH 21 cycles, 1 cycle/24 h |
| Cold (IEC 60512-11-10) | -40°C duration 2 h |
| Flow mixed gas test (IEC 60512-11-7) | Duration 4 d, Method 4 (mated and unmated) |
| Vibration Sine (IEC 60512-6-4) | 10 - 500 Hz; 0.35 mm; 50 m/s ² 10 cycles / 2 h / 3 axis No contact disturbances ≥ 1 µs |
| Mechanical shock (IEC 60512-test 6c) | Half sine shock 300 m/s ² , duration 11 ms 3 shocks / both directions / 3 axis - totally 18 shocks No contact disturbances ≥ 1 µs |
| Mechanical shock (DIN EN 61373 Class 1 cat b) Additional test to fulfill DIN EN 50155 for railway equipment | Categroy 1 / Class B Half sine shock 5 g, duration 30 ms 5 shocks / both directions / 3 axis - totally 30 shocks No contact disturbances ≥ 1 µs |
| Random vibration (DIN EN 61373 Class 1 cat b) Additional test to fulfill DIN EN 50155 for railway equipment | Categroy 1 / Class B 5 - 150 Hz / aeff = 5,72 m/s ² / ASD-Level: 0.964 (m/s ²) ² /Hz Duration 5 h No contact disturbances ≥ 1 µs |

| | | | | | | | |
|---|--|---|-----------------------|------------------------|--|--------------------|------------------------|
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Material specification

Isolator material plug

| | | |
|----------|------------------------------------|---|
| Material | Insulation housing Wire Manager | PC (8-pol. yellow / 4-pol. black) PC (white) |
|----------|------------------------------------|---|

Housing material

| | |
|----------|-----------------------------------|
| Material | Zink-die-cast (connector housing) |
| Color | silver |
| Plating | Housing: 20 µm Ni |

Contact



| | |
|------------------|---|
| Contact material | CuSn6 |
| Plating | RJ45 contact mating area: 1,27 µm (50 pinch) Au over Ni IDC contact: 2,54 µm (100 pinch) tin |

Packaging specification

Carton box with one piece

Versions:

| | |
|---------------|---|
| 0945 151 1570 | RJI MF RJ45 plug Cat6A, 8p IDC straight |
| 0945 151 1571 | RJI MF RJ45 plug Cat6A, 8p IDC angled |
| 0945 151 1140 | RJI MF-PN RJ45 plug Cat5, 4p IDC straight |
| 0945 151 1141 | RJI MF-PN RJ45 plug Cat5, 4p IDC angled |

| | | | | | | | |
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