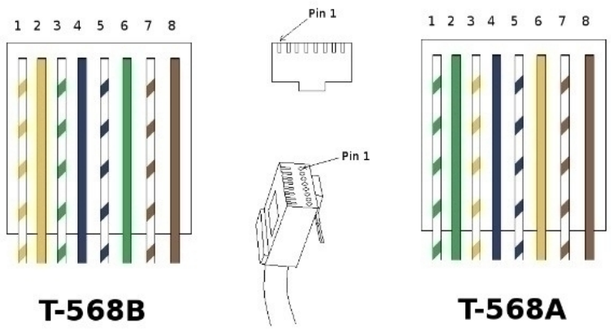
RJI MF-PN RJ45 plug Cat5, 4p IDC angled

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
	Note: 4-pole version only 10 / 100 Mbit/s
Transmission performance	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)	



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	--

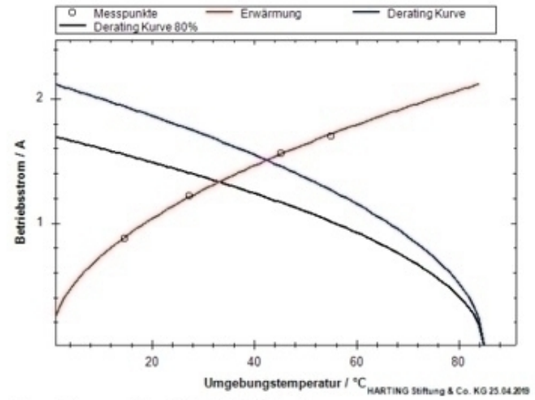
Derating diagram acc. to IEC512 (Current carrying capacity)

Current-carrying capacity: min. 1,0 A @ 55°C

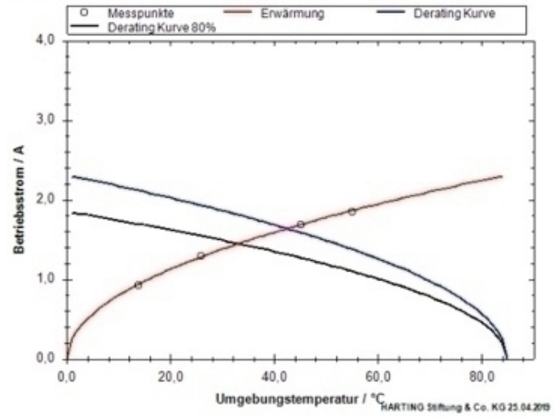
The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals.
The current capacity curve is valid for continuous, non interrupted current loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the 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= mm²	V= mm³	m= g	Mat.	
All Dimensions in mm Original Size DIN A3	Scale 1:1	Free size tol.		Ref.	Sub.
	Created by BALSAN	Inspected by PREOTU	Standardisation HOFFMANN	Date 2020-07-16	State Final Release
Department EL PD	Title RJI MF-PN RJ45 plug Cat5, 4p IDC angled				Doc-Key / ECM-Nr. 100905239/UGD/000/A 5000001765 10
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RJI MF-PN RJ45 plug Cat5, 4p IDC angled

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/s2 10 cycles / 2 h / 3 axis No contact disturbances ≥ 1 µs
Mechanical shock (IEC 60512-test 6c)	Half sine shock 300 m/s2, 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/s2 / ASD-Level: 0.964 (m/s2)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: IDC contact:	1,27 µm (50 µinch) Au over Ni 2,54 µm (100 µinch) 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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