

HARTING



HARTING RJ Industrial® IP 20 cable assemblies

Quality Connections Worldwide

HARTING was founded in 1945 by the family that still owns the company. Today, HARTING employs around 2,000 people worldwide, including 150 qualified engineers. The sales team, including more than 100 sales engineers is in daily contact with our customers.

The company is one of the world's leading manufacturers of connectors, and currently have 34 subsidiary companies in Europe, the United States and Asia.

In several product areas, HARTING is a market leader. Great emphasis is placed on close links with customers, including the provision of a 'Just-in-Time'-Service to ensure rapid delivery to key customers.

HARTING products are designed and manufactured using the latest automated techniques, from CAD systems in the research and development department to automatic production techniques on the assembly lines.

Production and quality control is based on a 'zero-error' philosophy which can only be reached by the continuous successful implementation of fully automated production techniques.

The organisation and procedures for quality assurance are based on the EN ISO 9001 standard. A total of 60 engineers and other employees, most of whom are trained and qualified to standards laid down by the DGQ (German Association of Quality) or the SAQ (Swiss Association of Quality), are employed solely on quality-assurance activities.



IP 20 cable assembly solutions

The cabling represents the backbone of a network. Mistakes during the selection and laying of cables may lead to serious errors in data transfer, data loss and even total network failure. Especially in the industrial environment, reliable and fully functional cables are a crucial element in planning and implementing high-performance networks ensuring a high degree of availability.

HARTING offers a wide range of Ethernet cables, which are specially designed for use in an industrial environment. Data transfer in the Categories 5 and 6 according to ISO/IEC 11801 is supported. Additionally choice options like solid, stranded, or trailing cable are provided. Oil resistance, high mechanical stability and halogen-free, are only a few of the features HARTING demands from on its cables.

The range of HARTING RJ Industrial® cable assemblies uses these upscale cables combined with high-grade connectors. All of them use IP 20 connectors, which fulfill the pitch of 14mm. Thus a maximum packaging density in the application and having an industrial cable at the same time is possible.

All HARTING RJ Industrial® cables provide an optimized electrical and mechanical support. Since these products are tested 100% a stable quality on a high level can be assured. Without having any assembly work the application can "play" by "unpacking and plug", so that "plug and play" becomes reality. By covering various lengths and supporting customized solutions a wide field of applications can be served.

HARTING offers both standard cable assemblies and customer specific versions for small and high volumes!



General information

The HARTING RJ Industrial® IP 20 connector allows solid and stranded AWG 22 cables using IDC technology. Thus the connection is vibration proof and gas-tight. Also all 4-pole cables are completely PROFINET compliant.

Additionally the higher copper diameter of the cables enables the assemblies to overcome distances up to 100 m. The cables can take high mechanical stress and provide a double shielding.

The combination of these advantages enables the HARTING RJ Industrial® cable assemblies to be an almost all-purpose product range.

Starting from inside the control cabinet up to outdoor cabling with a protection degree of IP 20, nearly everything can be maintained.

Technical characteristics

Transmission properties in accordance with ISO/IEC 11 801:2002: Class D

Mating face: 2 x RJ 45 in acc. with IEC 60603-7

Protection level: IP 20 (when mated)

Pin assignment in accordance with PROFINET:

Signal	Function	Wire colour	RJ 45 pin number
TD +	Transmission Data +	Yellow	1
TD -	Transmission Data -	Orange	2
RD +	Receiver Data +	White	3
RD -	Receiver Data -	Blue	6

Cables 4-pole



Industrial Ethernet Standard Cable, 2 x 2 x AWG 22/1 (Ø 0.64 mm), star quad, double shielding, PVC green, Ø 6.5 mm



Industrial Ethernet Stranded Cable, 2 x 2 x AWG 22/7, (Ø 0.75 mm), star quad, double shielding, PVC green, Ø 6.5 mm

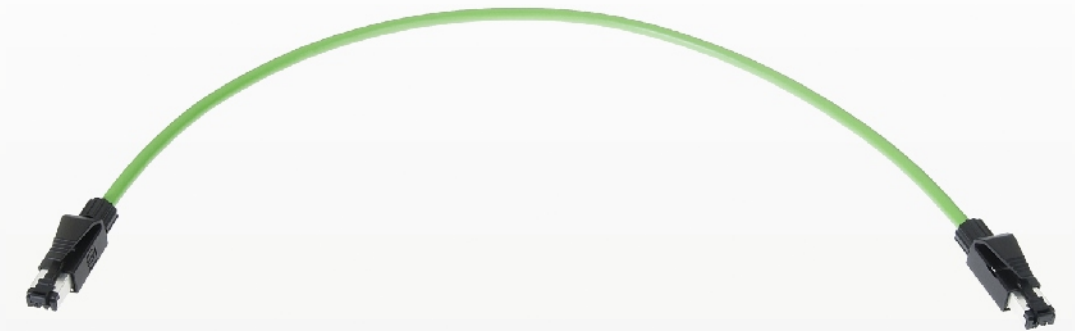


Industrial Ethernet Trailing Cable, 2 x 2 x AWG 22/7, (Ø 0.75 mm), star quad, double shielding, PUR green, Ø 6.5 mm



Industrial Ethernet Outdoor Cable, 2 x 2 x AWG 22/7, (Ø 0.76 mm), star quad, double shielding, PVC black, Ø 6.5 mm

20 m	09 45 600 0130	20 m	09 45 600 0132	20 m	09 45 600 0131	20 m	09 45 600 0135
50 m	09 45 600 0140	50 m	09 45 600 0142	50 m	09 45 600 0141	50 m	09 45 600 0145
100 m	09 45 600 0100	100 m	09 45 600 0102	100 m	09 45 600 0101	100 m	09 45 600 0105
500 m	09 45 600 0110	500 m	09 45 600 0112	500 m	09 45 600 0111	500 m	09 45 600 0115

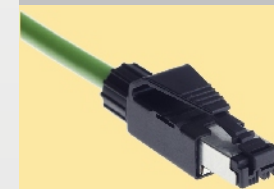


RJ Industrial Fieldpatch IP 20

Description

Being capable of handling all kinds of HARTING Industrial Ethernet cables (4-pole), the RJ Industrial Fieldpatch IP 20 is offered in a form of pre-assembled cables. They are especially designed for the cabling of Industrial Ethernet networks. Versions in halogen free material, trailing cables and an outdoor variant offer the possibility to cover a big variety of applications.

Matrix



2 x HARTING RJ Industrial® IP 20 Data with IDC fast termination technology



Industrial Ethernet Standard Cable



Industrial Ethernet Stranded Cable



Industrial Ethernet Trailing Cable



Industrial Ethernet Outdoor Cable

1.5 m	09 45 751 1123	09 45 751 0023	09 45 751 1164
3.0 m	09 45 751 1125	09 45 751 0025	09 45 751 1166
5.0 m	09 45 751 1127	09 45 751 0027	09 45 751 1168
10.0 m	09 45 751 1151	09 45 751 0051	09 45 751 1173
20.0 m	09 45 751 1153	09 45 751 0053	09 45 751 1175
50.0 m	09 45 751 1156	09 45 751 0056	09 45 751 1178
100.0 m	09 45 751 1161	09 45 751 0061	09 45 751 1183

further lengths on customer inquiry

on customer inquiry



RJ Industrial overmoulded IP 20

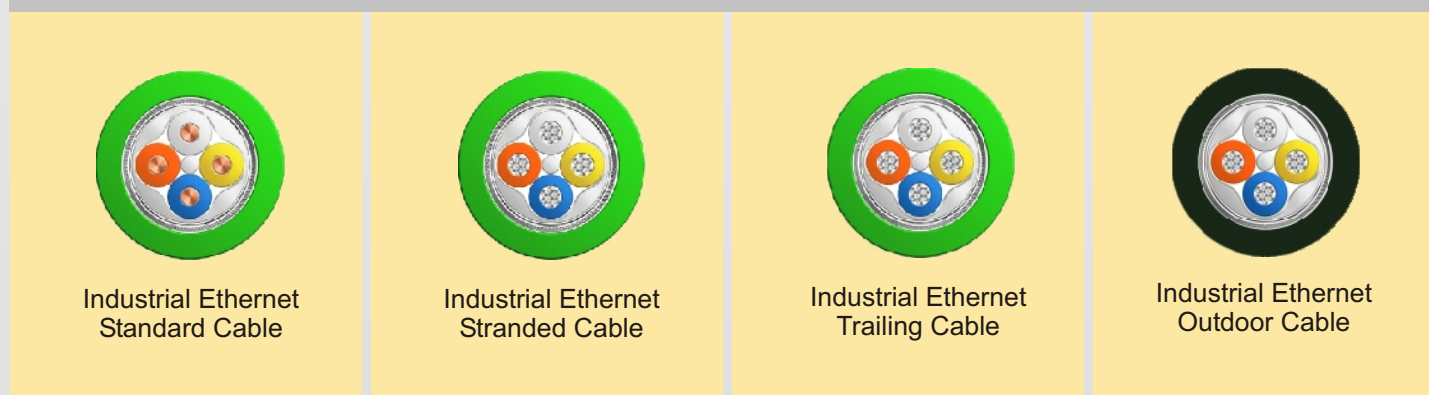
Description

For cabling of Industrial Ethernet networks (e.g. in accordance with the PROFINET guideline) the cables come pre-assembled at both ends. Working with Industrial Ethernet cables and having a 360° shielding the IP 20 overmoulded is a real industrial connector. Overmoulding prevents the locking lever from kinking and offers bend protection. The cables come already assembled so no termination work is necessary. Combinations with an overmoulded M12 and a single ended version give the flexibility to serve nearly every application. Also the cable exit can be moulded in one of four different directions, this allows for effective cable management.

Versions



Cables



RJ Industrial overmoulded IP 20

IP 20 overmoulded cable assembly matrix

HARTING offers a full range of IP 20 Ethernet cable assemblies.

Lengths and part numbers see catalogue "Solutions for Industrial Ethernet" and on customer inquiry



General information

The Harting RJ Industrial® cable assemblies in 8-pole cover both requirements: CAT5 and CAT6. Using 8 wires also gives the opportunity to have Power over Ethernet.

For applications with up to 100 MHz the CAT5 assemblies suit the requirements. For future-proof and very fast systems the CAT6 cable can serve up to 250 Mhz.

All used cables work with twisted pairs in order to achieve an optimized EMC performance. The twisting of the wires within one pair decreases the capacitive coupling and reduces the influence of interference voltage.

Technical characteristics

Transmission properties in accordance with ISO/IEC 11 801:2002: Either Class D or Class E, depending on used cable

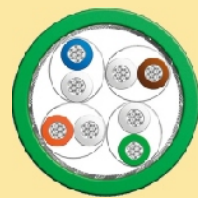
Mating face: 2 x RJ 45 in acc. with IEC 60603-7
 Protection level: IP 20 (when mated)

Pin assignment in accordance with EIA/TIA 568 A & B:

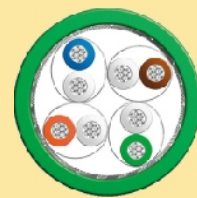
Contact	EIA / TIA 568 A		EIA / TIA 568 B	
1	green	white	orange	white
2	green		orange	
3	orange	white	green	white
4	blue		blue	
5	blue	white	blue	white
6	orange		green	
7	brown	white	brown	white
8	brown		brown	

RJ Industrial Fieldpatch IP 20

RJ Industrial standard patch cable IP 20



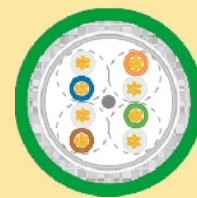
Gigabit Ethernet Stranded Cable, CAT 6, 4 x 2 x AWG 27/7, shielded twisted pair, PVC green, Ø 6.8 mm



Gigabit Ethernet Stranded Cable, halogen-free, CAT 6, 4 x 2 x AWG 27/7, shielded twisted pair, PVC green, Ø 6.8 mm

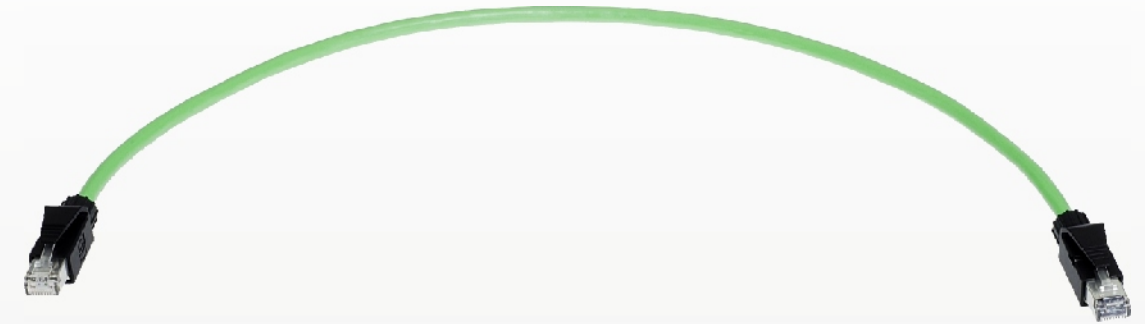


Industrial Ethernet Outdoor Cable, CAT 5, 4 x 2 x AWG 26/7, shielded twisted pair, PVC green, Ø 6.7 mm



Industrial Ethernet Stranded Cable, halogen-free, CAT 5, 4 x 2 x AWG 26/7, shielded twisted pair, PUR green, Ø 6.7 mm

20 m	09 45 600 0530	20 m	09 45 600 0630	20 m	09 45 600 0230	20 m	09 45 600 0430
50 m	09 45 600 0540	50 m	09 45 600 0640	50 m	09 45 600 0240	50 m	09 45 600 0440
100 m	09 45 600 0500	100 m	09 45 600 0600	100 m	09 45 600 0200	100 m	09 45 600 0400
500 m	09 45 600 0520	500 m	09 45 600 0620	500 m	09 45 600 0220	500 m	09 45 600 0420



RJ Industrial Gigalink IP 20

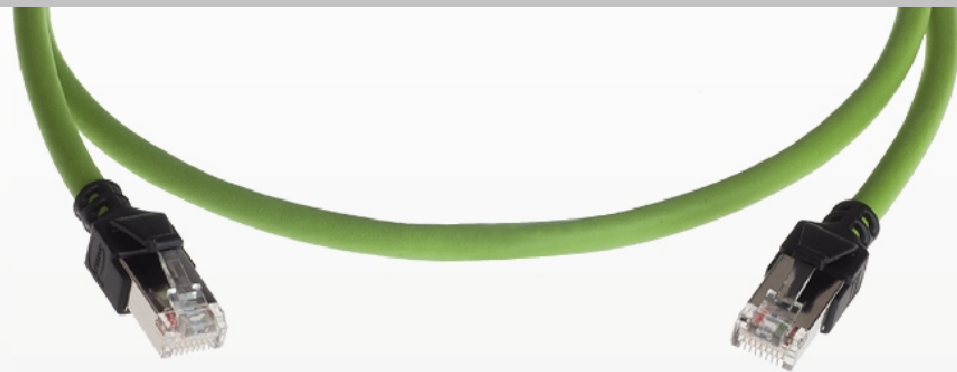
Description

Applications that would benefit from the 360° shielding offered by the RJ Industrial® Gigabit connector can be addressed. The cables come pre-assembled at both ends for cabling of industrial networks in accordance with ISO/IEC 11 801, based on RJ 45 connectors. Combinations with either a Gigabit, a halogen-free cable or one for outdoor applications set up a complete range of high-quality cable assemblies.

The extensive shielding combined with the IP 20 protection makes the assemblies suitable for industrial environments with limited environmental stress on the connector. Additional applications, where 4 pair Ethernet cabling is required can also be addressed. Using the Category 6 cable allows the requirements of Gigabit to be fulfilled.

Matrix

2 x HARTING RJ Industrial® IP 20 Data with IDC fast termination technology	Gigabit Ethernet Stranded Cable, CAT 6	Gigabit Ethernet Stranded Cable, halogen-free, CAT 6	Industrial Ethernet Outdoor Cable, CAT 5	Industrial Ethernet Stranded Cable, halogen-free, CAT 5
1.5 m	09 45 751 1523	<i>on customer inquiry</i>	09 45 751 1105	<i>on customer inquiry</i>
3.0 m	09 45 751 1525		09 45 751 1107	
5.0 m	09 45 751 1527		09 45 751 1109	
10.0 m	09 45 751 1551		09 45 751 1114	
20.0 m	09 45 751 1553		09 45 751 1116	
further lengths on customer inquiry				



RJ Industrial standard patch cable IP 20

Description

HARTING standard patch cables are designed for Industrial Ethernet cabling systems in an environment of limited mechanical stress. Applications in control cabinets require high-quality cables manufactured very "space efficient" connectors.

These cables fit absolutely that kind of applications. Additionally the connectors are small enough for multi-port switches and compact industrial devices.

HARTING Ethernet patch cables, produced using halogen free materials ensure reliable operation within industrial applications.

In co-operation with the new IP 30 Switch HARTING can offer a complete solution for networks and cabling inside of switch cabinets.

Matrix

		
	CAT5 green	CAT5 black
0.5 m	09 45 971 1101	09 45 971 1121
1.0 m	09 45 971 1102	09 45 971 1122
2.0 m	09 45 971 1103	09 45 971 1123
3.0 m	09 45 971 1104	09 45 971 1124
5.0 m	09 45 971 1106	09 45 971 1126
7.5 m	09 45 971 1109	09 45 971 1129

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