

Product **FOCUS**

Efficiency in Automation

Cable • Connectivity • Cabinet • Control

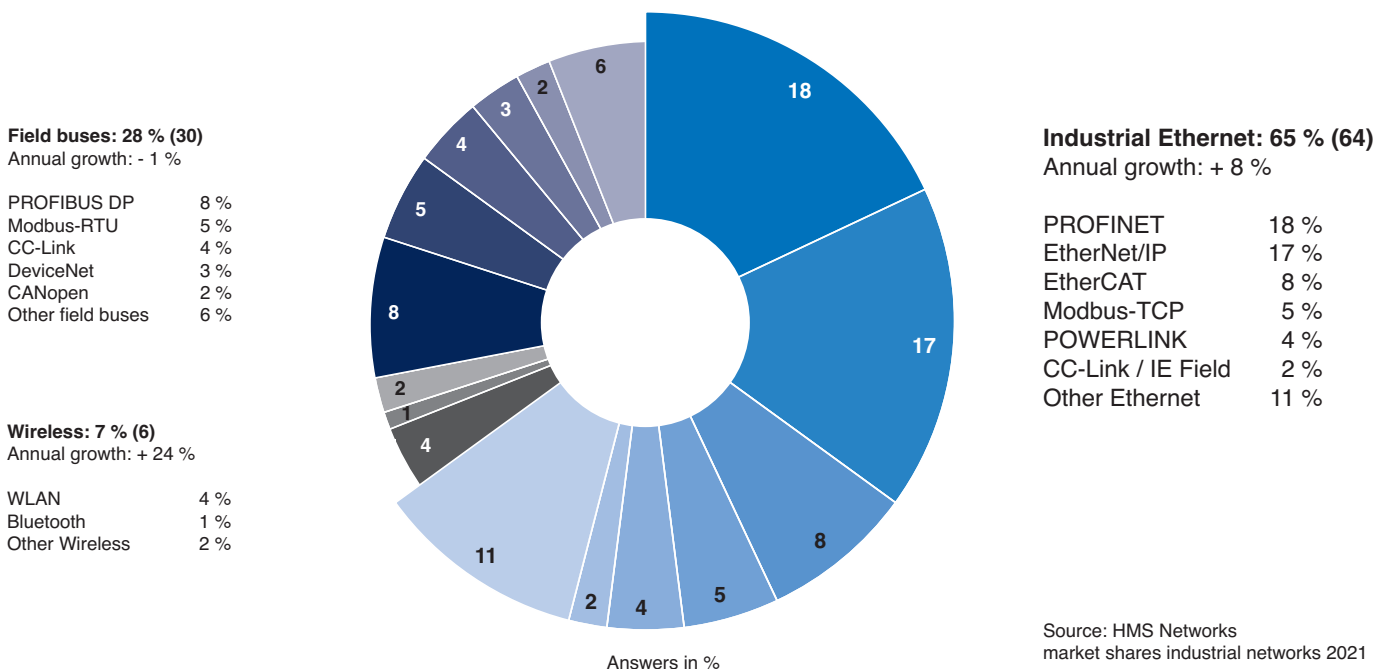
Network solutions for the Industrial Ethernet



Real time. Flexible. Durable!

Industrial Ethernet is a standard based and uniform communication system between the master, control and sensor levels that allows communication in real time. Larger data quantities can be transferred securely and efficiently.

Shielded industrial Ethernet cables are very suitable for reliable data transfer in industrial network systems.



PROFINET

The company Siemens AG cooperated with PROFIBUS & PROFINET Nutzerorganisation e.V. (PNO) to develop the Industrial Ethernet system PROFINET for automation.

The PROFINET technology complements the PROFIBUS technology for applications that require fast data communication via Ethernet networks in combination with IT functions. In today's automation equipment, Ethernet and the information technology (IT) with the established standards define the market.

PROFINET is the innovative and open standard for Industrial Ethernet. PROFINET is specified in the IEC 61158 and the IEC 61784.

LÜTZE cables differ for PROFINET depending on the application:

PROFINET - Star quad design and termination

Traditionally, the Cat5 PROFINET cables have a star quad design. The star quad structure of the cable allows a compact design. Four conductors are twisted on a common axis. The conductors across from each other make a pair.

In **Figure 1** the pairs are as follows:

Pair 1:

Conductor A \longleftrightarrow Conductor D

Pair 2:

Conductor B \longleftrightarrow Conductor C

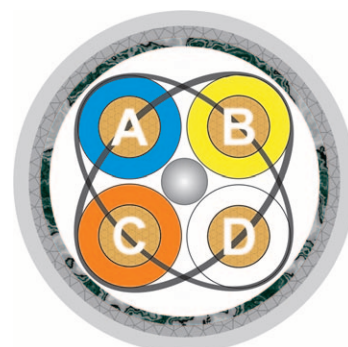


Fig. 1

Terminations other than those in Figure 1 lead to interference, decreased connectivity or no connectivity at all.

Industrial Ethernet is used in automation technology to allow components to communicate successfully. The PNO expanded the PROFINET specification in 2011 to include 4-pair conductors for wiring concepts that make higher demands on the transmission rate. LÜTZE also supplies PNO-compliant cables with a 4-pair conductor design. Here, transmission properties of up to Category 7 (Cat. 7) are achieved.

Cable & Connectivity catalogues



Catalogue
Cable Solutions



Catalogue
Connectivity Solutions



Catalogue
Ethernet Connectivity

LÜTZE Ethernet cables for PROFINET applications

Entry into the successful PROFINET world: the fastest solution for a high level of operational security and availability.

Highlights

- LÜTZE SUPERFLEX® Ethernet in various styles for PROFINET applications
- Safe transmission of real-time data
- New LÜTZE SUPERFLEX® Ethernet cable for torsional applications
- Various jacket styles and diameters allow them to be used in many applications

Advantages

- Simple and seamless integration of established field bus systems
- High levels of operating safety and availability
- Transparent data accessibility
- Detailed diagnosis possibilities



Part Number	Description	Jacket material	Category	Construction	Dimensions	Profinet type	Outer diameter
104301	EL ET (C) PVC (2x2xAWG22/1) StC Cat5e	PVC	Cat 5e	2x2	AWG22/1	Type A (fixed)	6.5
104307	EL ET (C) PVC (2x2xAWG22/7) StC Cat5e	PVC	Cat 5e	2x2	AWG22/7	Type B (flexible installation)	6.5
104397	EL ET (C) PVC (4x(2xAWG22/1)St)C Cat6A	PVC	Cat 6A	4x2	AWG22/1	Type A (fixed)	9.6
104335	EL ET (C) PVC (4x2xAWG26/7)StC Cat5e	PVC	Cat 5e	4x2	AWG26/7		6.3
104336	EL ET (C) PVC (4x2xAWG24/7)StC Cat5e	PVC	Cat 5e	4x2	AWG24/7		7.3
104338	EL ET (C) PVC (4x(2xAWG26/7)St)C Cat6A	PVC	Cat 6A	4x2	AWG26/7		6.4
104331	EL ET (C) PVC (4x(2xAWG26/7)St)C Cat7	PVC	Cat 7	4x2	AWG26/7		6.4
104350	EL ET (C) PVC (4x2xAWG22/7)StC Cat5e	PVC	Cat 5e	4x2	AWG22/7		8.6
104110*	EL ET (C) PVC (4x(2xAWG23/7)St)C Cat7	PVC	Cat 7	4x2	AWG23/7	Type B (flexible installation)	8.7
104401	SU ET (C) PUR (4x2xAWG24/7)StC Cat6A	PUR	Cat 6A	4x2	AWG24/7	Type C (C-track, torsion-capable)	8.9
104404	SU ET (C) PUR (4x(2xAWG24/7)St)C Cat7	PUR	Cat 7	4x2	AWG24/7	Type C (C-track, torsion-capable)	9.4
104302	SU ET (C) PUR (2x2xAWG22/19)C Cat5e	PUR	Cat 5e	2x2	AWG22/19	Type C (C-track)	6.6
104303	SU ET (C) PUR (2x2xAWG22/7)C Cat5e	PUR	Cat 5e	2x2	AWG22/7	Type C (C-track)	6.5
104379	SU ET (C) PUR (2x2xAWG26/19)StC Cat5e	PUR	Cat 5e	2x2	AWG26/19		5.3
104337	SU ET (C) PUR (4x2xAWG24/19)C Cat5e	PUR	Cat 5e	4x2	AWG24/19		7.8
104396	SU ET (C) PUR (4x2xAWG26/19)StC Cat5e	PUR	Cat 5e	4x2	AWG26/19		6.7
104347	SU ET (C) PUR (4x2xAWG26/19)StC Cat6	PUR	Cat 6	4x2	AWG26/19		7.9
104450	SU SP ET (C) PUR (1x2xAWG26/7)StC	PUR	SPE	1x2	AWG26/7		4.7
104050*	SU ET R (C) PUR (2x2xAWG22/19)StC Cat5e	PUR	Cat 5e	2x2	AWG 22/19	Type R (torsion-capable)	6.5

*should be available starting January 2022

LÜTZE Cable Solutions

Bus and network cables



Control cables



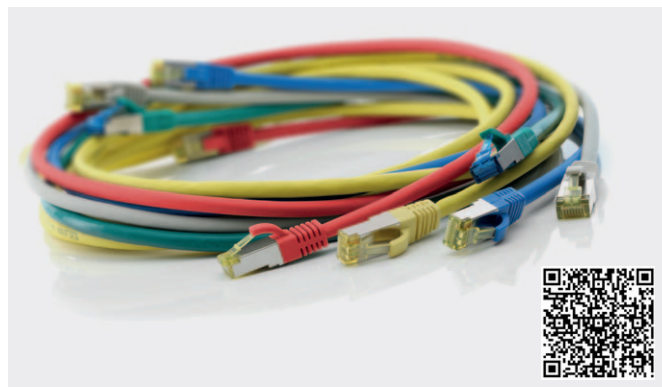
NEW
with 90 °C
approval

Motor, servo and feedback cables



NEW
with 90 °C
approval

Patch cables



Cable entry systems, cable glands and accessories

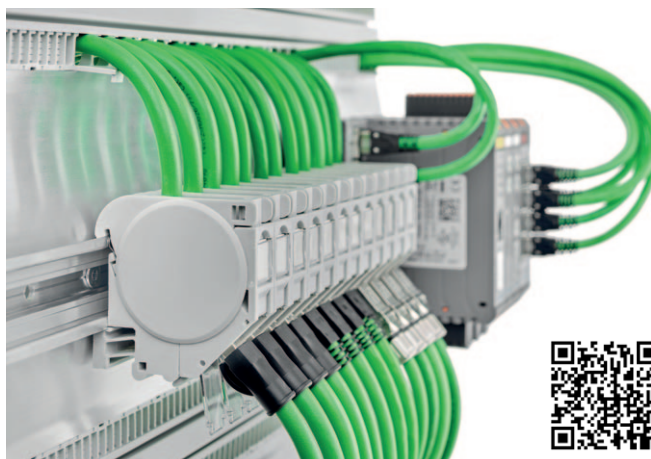


Configurable connectors

For secure and reliable systems: connectors for connection without special tools, that are always matched to the cable.

Highlights

- Tool-free installation
- Extremely compact design
- Full-metal casing
- Fast connection method
- UL Listed
- Simple classification of the conductor colour
- Suitable for cables in C-tracks and torsional applications
- Expanded temperature range -40 to +85 °C
- POE-compatible



490174



490151



490167



490214

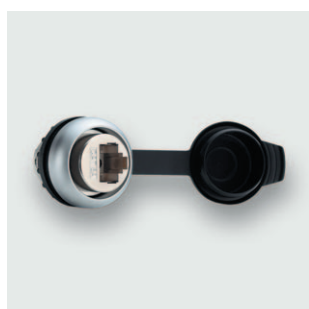
Part Number	Description	Category	Color code	Cable outlet	Connectors	Cable diameter
490174	RJ45-M 8pol. Cat.6A T568B	6A	Ethernet TIA 568 B	straight, 180°	RJ45 Connector	5.5 - 10 mm
490175	RJ45-M 8pol. Cat.6A T568A	6A	Ethernet TIA 568 A	straight, 180°	RJ45 Connector	5.5 - 10 mm
490176	RJ45-M 8pol. Cat.6A T568B AWG 26	6A	Ethernet TIA 568 B	straight, 180°	RJ45 Connector	5.5 - 10 mm
490177	RJ45-MS 4pol. PROFINET	5e	PROFINET	straight, 180°	RJ45 Connector	5.5 - 10 mm
490151	RJ45-X 8pol. Cat.6A T568B	6A	Ethernet TIA 568 B	angled, can be rotated in 90° steps	RJ45 Connector	5.5 - 10 mm
490152	RJ45-X 8pol. Cat.6A T568A	6A	Ethernet TIA 568 A	angled, can be rotated in 90° steps	RJ45 Connector	5.5 - 10 mm
490153	RJ45-X 8pol. Cat.6A T568B AWG26	6A	Ethernet TIA 568 B	angled, can be rotated in 90° steps	RJ45 Connector	5.5 - 10 mm
490178	RJ45-MR 4pol. PROFINET	5e	PROFINET	angled, can be rotated in 90° steps	RJ45 Connector	5.5 - 10 mm
490167	STGK8-M12(C) 8pol. X-kod. Cat.6A	6A	Ethernet PROFINET	straight, 180°	M12 Connector	5 - 9.7 mm
490168	KUGK8-M12(C) 8pol. X-kod. Cat.6A	6A	Ethernet PROFINET	straight, 180°	M12 Female	5 - 9.7 mm
490212	STGK4-M12 (C)-D FK	6A	Ethernet PROFINET	straight, 180°	M12 Connector	4 - 8 mm
490213	KUGK4-M12 (C)-D FK	6A	Ethernet PROFINET	straight, 180°	M12 Female	4 - 8 mm
490214	STWK4-M12 (C)-D FK	6A	Ethernet PROFINET	angled	M12 Connector	4 - 8 mm
490215	KUWK4-M12 (C)-D FK	6A	Ethernet PROFINET	angled	M12 Female	4 - 8 mm

Panel pass through devices for safe data transmission

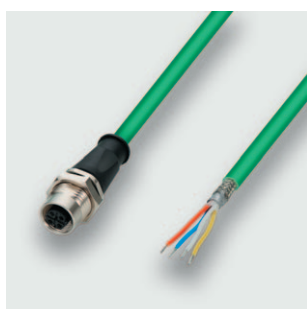
Panel pass through and transfer elements for secure data communication between the system and components in the control cabinet. Thanks to the service interfaces, data can be exported for service purposes or new data can be imported without having to open the cabinet.

Highlights

- Easy installation
- No special tools necessary
- Reliable connections
- Cost and time savings during installation, repair and maintenance
- Suitable for PROFINET applications
- POE-compatible



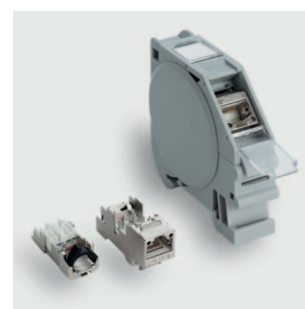
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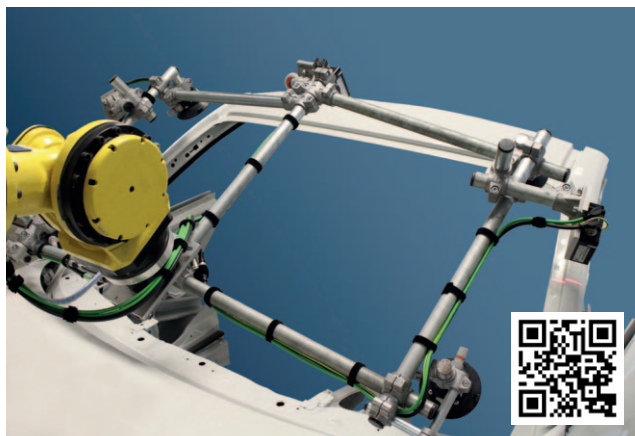
490230



490209

Part Number	Description	Category	Color code	Entry	Connectors
490209	MDT-RJ45 F 8pol. Cat.6A TIA 568B	6A	TIA 568 B	-	RJ45 Connector
490238	MDT-RJ45 F 8pol. Cat.6A TIA 568A	6A	TIA 568 A	-	RJ45 Connector
490105	M12-RJ45 F/F 90° 4/4 Cat.5e PN	5e	-	angled, 90°	M12 Connector
490106	M12-RJ45 F/F 180° 4/4 Cat.5e PN	5e	-	straight, 180°	M12 Connector
490230	M12-RJ45 F/F 90° 8/8 Cat.6A	6A	-	straight, 180°	M12 Connector
490231	M12-RJ45 F/F 180° 8/8 Cat.6A	6A	-	straight, 180°	M12 Connector
492075	RJ45 F/F 8/8 Cat.5e	5e	-	straight, 180°	RJ45 Connector
492076	RJ45 F/F 8/8 Cat.6A	6A	-	straight, 180°	RJ45 Connector
475500.0200	KUGE4-M12/PN 2M PUR	5e	PROFINET	straight, 180°	M12 Connector

LÜTZE solutions in the **network field**



Robotics and vision - a combination that sets high standards for cables

Visually-guided robots used in production work very precisely. Demands are also made on their 'optical nerves' - namely the data cables. VMT Bildverarbeitungssysteme GmbH - the leading supplier of robot vision systems - relies on the M12 X-coded customized connector, a torsion-suitable solution by LÜTZE.

Bundled competence for Single Pair Ethernet technology

LÜTZE joined the SPE Industrial Partner Network to promote the distribution of the new Single Pair Ethernet Standard. With its SUPERFLEX® SINGLE PAIR ETHERNET (C) PUR cable (SPE), LÜTZE services the growing demand from industrial users for standardized and cost-effective network connections in line with the new SPE standard.



High-speed transmission unit for fast installation

The new LÜTZE Cat. 6A module carriers allow data transmission points between the field and control cabinet to be performed even faster and more safely. Core benefits include the greatly simplified wiring process that does not require special tools. The module carrier therefore allows uncomplicated, secure and fast installation compared to conventional models.

In case of special application requirements, e.g. c-track suitable cables, torsion capable designs and overmolded connectors, please contact us. The LÜTZE Connectivity expert team will be happy to help!

Cable Solutions

High flexing cables for industrial applications

Connectivity Solutions

Industrial Ethernet, assembled cables, Actuator Sensor Interface, connectors and suppression technology

Cabinet Solutions

AirSTREAM complete system for thermally optimized and space-saving cabinet wiring

Control Solutions

Industrial Power Supplies and electronic current control for Industrial Internet of Things. Infrastructure for industrial networks, signal converter, relays and modular electronics housing

Transportation Solutions

Solutions for the demanding Railway Sector, for example control technology, Interface solutions and signalling and passenger information systems

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RoHS