

The logo for Lynxéo, featuring the word "lynxéo" in a dark blue, sans-serif font. The letter "x" is stylized with a red-to-orange gradient and a white outline. A large, thick orange arc is positioned in the top right corner of the page.

# lynxéo

Wired to electrify industry

## **MOTIONLINE®**

### Profinet and Industrial Ethernet Cables Solutions



# Applications and requirements

Fieldbus and Ethernet cables represent the central nervous system of modern production systems.

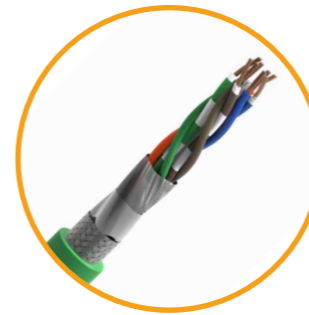
They limit the overall wiring, create transparency, and improve diagnosis, availability and safety of such systems. Industry 4.0 - the internet of things - standing for even more interconnections between machines and components, will further increase the need to transmit easily and safely high amounts of data within and between machines.

Due to the various needs of different levels (control, automation and field level) and applications (real time, easy cabling, high data rates, etc.) a variety of Fieldbus and Ethernet standards has emerged. In order to provide you with reliable and up-to-date solutions, Lynxeo has developed a complete range of Profibus and Industrial Ethernet cables, specifically designed for the needs of Automation market and high demanding applications.

## How choose the cable that fit your needs?

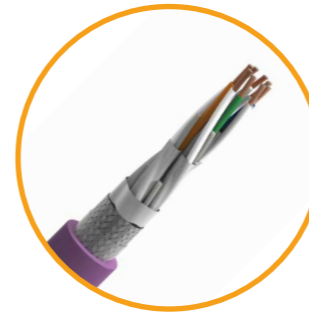
- Application data rate: Select the cable that suits the application's bandwidth needs
- Shielded vs Unshielded: take in consideration the noise in the environment
- 2 or 4 pairs: it depends on gigabit speeds needed
- Outer sheat: consider the flexibility that your cable should have and the condition of the environment where the cable would be installed

# Lynxeo industrial Ethernet and Profinet cables complete offer



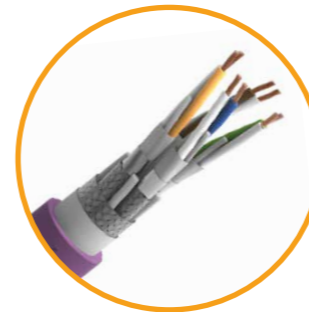
### Industrial Ethernet CAT 5E

2 or 4 pairs cables, available in different type based on performance needed  
Static ● Flexible ● High Flexible



### Industrial Ethernet CAT6A

4 pairs cables, available in different type based on performance needed  
Static ● Flexible ● High Flexible



### Industrial Ethernet CAT7

4 pairs cables, available in different type based on performance needed  
Static ● Flexible ● High Flexible



### Profinet

2 pairs cables, available in different type based on performance needed  
Type A ● Type B ● Type C



# Profinet cables at a glance



Lynxio PROFINET cables are designed specifically for PROFINET devices and are easily identified by their distinguishing bright green jacket.

Lynxio PROFINET four conductor cables are generally designed with 22 AWG conductors compared to the 24 AWG conductor sizes of most other Industrial Ethernet cables. This increased copper content leads to better transmission over larger lengths.

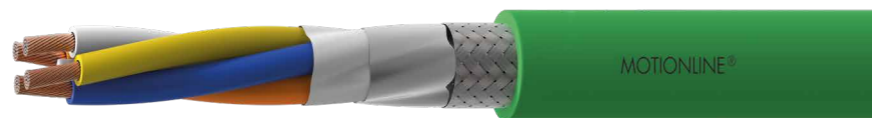
There are 3 types of PROFINET cables defined by the industry:

- Type A - 4 conductors, 22 AWG, shielded, solid bare copper for fixed installations.
- Type B - 4 conductors, 22 AWG, shielded, stranded tinned copper for flexible installations.
- Type C - 4 conductors, 22 AWG, shielded, highly Stranded tinned copper for continuous movement

Lynxio PROFINET range is certified for harsh conditions, holding a wide range of UL standards, including CMX, CMG and PLTC, allowing all three constructions to be used in Class 1 Div areas, maximizing uptime while reducing product failures in all Industrial environments PROFINET is based on industrial Ethernet and transmits real time data (I/O signals) and IT data (quality and statistics data) over the same cable.

PROFINET leads to lower installation and maintenance costs, because until now, two different bus systems were needed to perform these tasks.

Despite being larger than other Industrial Ethernet cables, the PROFINET quad design gives it a smaller overall diameter than other paired, 22AWG PROFINET cables, making it more pliable while remaining compatible and easy to install with Siemens Fast Connect.



## What is it?

PROFINET is a strategic, global, open standard Ethernet technology which is widely used in Europe and quickly gaining traction in America. Developed by Siemens and the PROFIBUS User Organization (PI), PROFINET combines the benefits of PROFIBUS with the flexibility of network standard Ethernet by allowing the simultaneous exchange of I/O device data and common data in real time through IT protocols.

# Profinet cables at a glance



Office and industrial environments could not be more different. In a typical office environment, the Ethernet infrastructure works in a relatively clean, quiet environment, with cables covered by walls, ceilings, or floors. If the same Commercially available RJ45 plug is also found in installations with industrial Ethernet, the industrial plug is reinforced (with an overmolded cable) to prevent ingress of dust. Lynxio Industrial Ethernet cables are available with different coats: Industrial PVC, FRNC / LSZH, PUR, PE.

The data rates is 10/100 Mbps, 1 Gbps, 10 Gbps in different category Cat 5e, Cat 6, and Cat 7 with 2 and 4 pairs.

The drag chain capability varies from 2 to 10 million cycles, while the torsional strength is up to > 2 million cycles.

Lynxio Industrial Ethernet cables are compliant to UL / non-UL and ROHS. Halogen free and low smoke halogen free (LSZH) are also available. Special versions of Lynxio Industrial Ethernet cables are suitable for direct burial, petrol resistant, high and low temperature resistant and much more.

We have field tested our cables in many conditions: oil, sunlight, temperature changes, scrubbing and crushing, bending, EMI / RF influence (electromagnetic interference or high frequency radiation), welding sparks.

The possible connections for Lynxio Industrial Ethernet cables are molded RJ45 IP20 connectors.

## Why choose Lynxio Industrial Ethernet cables?

While the data usage in recent years was limited to stationary applications in commercial infrastructures, the technological expansion into the industrial sectors, Industry 4.0 or «Internet of Things», has led to the fact that today Ethernet connects automation islands - and further down to the control level, where it interfaces with Devices such as sensors, controllers, I/O units and switches, and covers all levels of the automation pyramid.



# Selector guide

## Zone A: Infrastructure IT cabling from the Enterprise Network to the Plant

### Static Application

Icon	Construction							Performance Rating					
	Cat.	Construction	Wire Gauge	Shielding	Jacket Material	Nominal Diameter	Approvals	Recycling	Flame Retardant	Oil Resistance	Voltage Rating	Operating Temperature static	Continuous high flex life
Profinet Type A	5e	2x2xAWG22	22 AWG	Braid & Foil	PVC	6,8	CMG	Solid	IEC 60332-3-24	X	125V (peak)	-40°C to 80°C	X
IE Cat 5e Static	5e	4x2xAWG24	24 AWG	Braid & Foil	PVC	7,3	CMX	Stranded	IEC 60332-3-24	X	125V (peak)	-40°C to 80°C	X
IE Cat 5e Static	5e	4x2xAWG24	24 AWG	Braid & Foil	FRNC	6,8	X	Stranded	IEC 60332-3-24	X	125V (peak)	-40°C to 80°C	X
IE Cat 6 Static	6a	4x2xAWG26	26 AWG	Braid & Foil	PVC	7,1	CMG	Stranded	IEC 60332-3-24	X	125V (peak)	-40°C to 80°C	X
IE Cat 7 Static	7	4x2xAWG26	26 AWG	Braid & Foil	PVC	7,2	CMX	Stranded	IEC 60332-3-24	X	125V (peak)	-40°C to 80°C	X

## Zone B: Control Panel interconnection

### Flexible Application

Icon	Construction							Performance Rating					
	Cat.	Construction	Wire Gauge	Shielding	Jacket Material	Nominal Diameter	Approvals	Recycling	Flame Retardant	Oil Resistance	Voltage Rating	Operating Temperature static	Continuous high flex life
Profinet Type B	5e	2x2xAWG22	22 AWG	Braid & Foil	PVC	6,9	CMG	Stranded	IEC 60332-3-24	X	125V (peak)	-40°C to 80°C	X
Profinet Type B	5e	2x2xAWG22	22 AWG	Braid & Foil	PUR	6,6	CMX	Stranded	Horizontal Flame Test (UL 2556)	EN 60811-404	125V (peak)	-40°C to 80°C	X
IE Cat 7 Flexible	7	4x2xAWG26	26 AWG	Braid & Foil	FRNC	7,2	X	Stranded	X	X	125V (peak)	-40°C to 80°C	X

## Zone C: Near Machines and Equipment

### High Flexible Application

Icon	Construction							Performance Rating					
	Cat.	Construction	Wire Gauge	Shielding	Jacket Material	Nominal Diameter	Approvals	Recycling	Flame Retardant	Oil Resistance	Voltage Rating	Operating Temperature static	Continuous high flex life
Profinet Type C	5e	2x2xAWG22	22 AWG	Braid & Foil	PUR	6,6	CMX	Stranded	IEC 60332-1	EN 60811-404	125V (peak)	-40°C to 80°C	YES
Profinet Type C	5e	2x2xAWG22	22 AWG	Braid & Foil	PUR	6,6	AWM	Stranded	IEC 60332-1	EN 60811-404	125V (peak)	-40°C to 80°C	YES
IE Cat 5e High Flexible	5e	2x2xAWG26	26 AWG	Braid & Foil	PUR	7,0	CMX	Stranded	IEC 60332-1	EN 60811-404	125V (peak)	-40°C to 80°C	YES
IE Cat 5e High Flexible	5e	4x2xAWG26	26 AWG	Braid & Foil	PUR	7,2	CMX	Stranded	IEC 60332-1	EN 60811-404	125V (peak)	-40°C to 80°C	YES
IE Cat 6 High Flexible	6a	4x2xAWG26	26 AWG	Braid & Foil	PUR	7,8	CMX	Stranded	IEC 60332-1	EN 60811-404	125V (peak)	-40°C to 80°C	
IE Cat 7 High Flexible	7	4x2xAWG26	26 AWG	Braid & Foil	PUR	7,2	CMX	Stranded	IEC 60332-1	EN 60811-404	125V (peak)	-40°C to 80°C	YES



Conductor



Flame Retardant



Oil Resistance



Voltage Rating



Operating Temperature static



Continuous high flex life

The data and drawings reported in this tab are not binding and they could be varied as a consequence of modifications and/or improvements considered suitable by the manufacturer.



# Lynxeo Expertise

In the Lynxeo Motion Application Center (MAC) located in Nuremberg, Lynxeo develops and tests high quality automation cables, to provide its customers with reliable cables solutions. Thanks to this, Lynxeo is able to control the complete life cycles of a cable and to optimize copper conductors, jacket materials, cable design and production process to achieve the best results in terms of cost and durability.

# Lynxeo Capabilities

With four plants strongly dedicated to the automation industry, located in Europe (Germany- Italy), China and USA, Lynxeo is able to support its customers providing a full range of automation cables.

The quality and reliability of Lynxeo cables and services result from yearlong partnerships with robot producers, leading component OEMs and machine tool producers.





## Wired to electrify industry

**Industry is everywhere.** Making our daily lives easier. Fostering progress. Moving the world. Industry plays a key role in shaping a better future.

**We have been serving industry for generations.** Today, we are committed to making it more efficient, more reliable and more sustainable.

**Our cables are essential to the machines developed by global industry champions.** They serve as the spinal cord of mission-critical infrastructures, assets and applications. Our clients rely on our advanced technologies and our industrial excellence to bring their machines to life.

**In the century since we were founded,** we have risen to a leading position in our markets.

**Now, as a standalone company,** we embark on a new journey with even greater agility, more focus and stronger customer intimacy.

**For industry leaders,** we are ever-evolving partners in an ever-changing world.

**Together,** we build connections beyond cables.

**From energy transition to mobility and automation,** our teams are tackling the greatest challenges of our times.

**Our name is Lynxéo.** We have local roots and global reach.

**Connected to our customers,** committed to excellence and progress, we are wired.

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**Wired to electrify the industries that move the world.**

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