

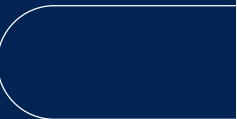


# Industrial Connectivity Solutions

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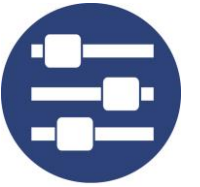
**DATA CONNECTORS**

**PORTFOLIO**



# Data Connectors Portfolio

M8, M12, 7/8", M23, RJ45



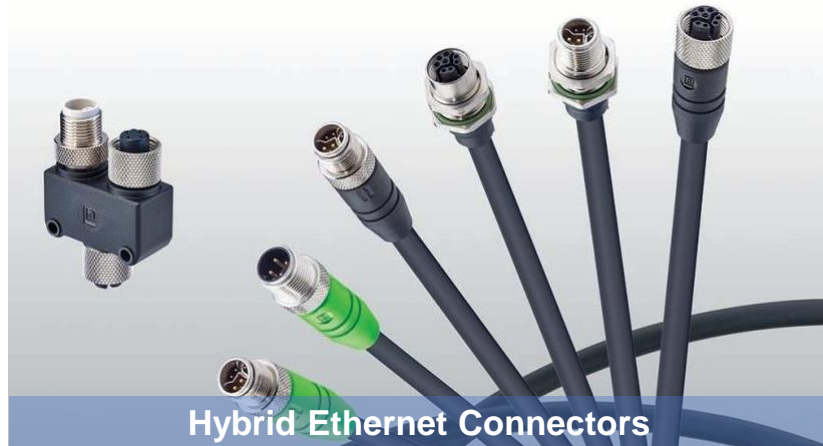
Fieldbus Data Connectors



Fast Ethernet Connectors



Gigabit Ethernet Connectors



Hybrid Ethernet Connectors



Railway Data Connectors



Fieldbus Legacy Connectors



# Data Connectors Portfolio

M8, M12, 7/8", M23, RJ45

- ✓ Standardized, ready-for-connection technology
- ✓ Protection degree IP67 and higher
- ✓ Data connectors in thread sizes 7/8", M12, M23, plus RJ45 and DSUB for Profibus, DeviceNet, CANopen, AS-Interface, Ethernet/IP, and PROFINET (A-, B-, D-, U- and X-coding)
- ✓ High network reliability due to robust design and high mechanical and chemical resistance capability







# Data Connectors

## Molded Versions

							
M12M-M12F							
							
M23-M23 Single		M23-SUBD	M23-M23 IRC	M23-M23 RC	M23-M23 Double		
							
M23M-M23F		M12M-SUBD	M12F-SUBD	M23M-M23M	M12M-M12F	7/8" M-7/8" F	7/8" M-7/8" F
							
M12M-M12F		M12M-7/8" F	7/8" M-7/8" F	7/8" M-7/8" F	M12F-7/8" M		
							
M12M-M12F		RJ45-RJ45	RJ45-M12	M12M-M12M	M12M-M12M		

# Data Connectors

## Industrial Ethernet Connectors

Supported Protocols	Connectors			Cables								
	Field attachables	Molded	Receptacles	Used Cables								
  	 EMC 105 / EMC 102	 M12 D-coded Male	 EF12LW Octopus	 Profinet STL 342								
	 EMC 102 / EFC 107	 M12 360° right angled	 0986 EFC 151 A	 Ethernet Railway STL508								
	 EM12S Octopus	 M12 Female Straight	 0986 EFC 152	<table border="1"> <thead> <tr> <th colspan="2">Connectors</th> <th>Cables</th> </tr> </thead> <tbody> <tr> <td>                       M12 X-coded Male                 </td> <td>                       0986 EFC 651                 </td> <td>                       STL 478                 </td> </tr> <tr> <td>                       RJ45 Male for Gigabit                 </td> <td>                       0986 EMC 600 (GBit)                 </td> <td> <b>Gigabit Ethernet</b> </td> </tr> </tbody> </table>	Connectors		Cables	 M12 X-coded Male	 0986 EFC 651	 STL 478	 RJ45 Male for Gigabit	 0986 EMC 600 (GBit)
Connectors		Cables										
 M12 X-coded Male	 0986 EFC 651	 STL 478										
 RJ45 Male for Gigabit	 0986 EMC 600 (GBit)	<b>Gigabit Ethernet</b>										

Fast Ethernet

# Data Connectors

## Applications



### Communications interface

between I/O modules and  
field bus/network



### Food & Beverage

Temperature sensors,  
flow switches



### Machine Building

Sensor-/ Actuator  
applications



### Automotive

Proximity sensors, reflex  
light sensors

**NP 1058LE**
**Lumberg Automation™  
M12 Angle Connectors  
with 360° Shielding**

Equipped with 360° shielding and the highest industrial protection class IP69K, the new angle connectors and couplers reliably secure transmission of analog and digital data, even in harsh industrial environments.



**Right Angle Male and Female Connectors Shielded Fully Using Knurled Nuts/Screws and Based on Proven M12 Technology are now Available to Fulfill the Most Stringent EMC Requirements, Thanks to Their Patented Shielding Concept.**

- Secure data transmission of analog and digital signals for maximum efficiency and functional reliability.
- Industrial protection class IP69K allows the use of the 360° shielded connectors even under the harshest environmental conditions and thus opens up new markets.
- Shock and vibration resistance ensure increased machine uptime.

Whether angled or straight in design, the M12 connectors for transmission of digital and analog signals enable fully shielded connections from one device to the next in automation technology. Bus modules (Profibus, ProfiNet), passive distribution boxes and control cabinets, as well as sensors and actuators, can be connected in the field. The angled design of the male and female connectors allows convenient assembly even in confined spaces.

The angle male and female connectors with threaded joint and molded cable guide the shield using the knurled nuts/knurled screws, just as with the straight versions. The rugged design withstands even high pressure and steam cleaners and is extremely resistant to vibration.

#### Applications

Automated systems in food processing, packaging, machine tool engineering, automobile manufacturing and many other industries

work at extremely high speeds and often create strong vibrations. Process reliability and system availability are assured with the new connectors, thanks to their optimally secure data transmission and extremely robust design.

Confined spaces and complex cable runs in installations and handling systems are typical with growing levels of automation. Such applications can often be realized more efficiently with angled connectors, without sacrificing safety. The patented shield concept and mechanically robust construction of the angle connectors and couplers allow reliable and safe operation, even in harsh industrial environments.

#### Your Benefits

Design engineers and service technicians are very familiar with the standardized M12 connection technology and its flexible field of application. With the new 360° shielded male and female right angle connectors, highly secure data transmission is also possible, even if the available installation space is limited or there is a risk of cable breaks.

Highest EMC compatibility – even in harsh environments where industrial protection class IP69K is required – together with the proven, robust M12 connectors, guarantees maximum functional reliability and safety.

**A new product to  
serve your needs.  
Be certain.**



## M12 Male and Female Right Angle Connectors with 360° Shielding

The standardized M12 connection technology allows the fast and uncomplicated assembly of shielded control systems with analog or digital components. This also applies when using male and female angled connectors, which are equipped with the patented 360° shielding. Technicians can choose between cordsets with straight and angled connectors and connecting cables with the connector combinations straight/straight, angle/straight and angle/angle. Maximum robustness and ease of installation, even in confined spaces, make the connection technology suitable for use in harsh industrial environments.

Robust EMC networks for automation technology in industrial environments can be set up, for example, in conjunction with switches from the Hirschmann™ Octopus series. All components fulfill RoHS and REACH requirements.

Variants are available with 4, 5 or 8 poles and codings for actuator/sensor (A), Profibus (B) and ProfiNet (D). The products for bus systems are black in color, while those for actuator/sensor connectors are orange.

### Benefits at a Glance

- Very high EMC resistance, true 360° shielding
- High mechanical quality, resistance to shocks and vibrations (DIN EN 61076-2-1-101, DIN EN 60068-2-64, DIN EN 60028-2-27)
- Industrial protection class IP67, IP68 and IP69K (in accordance with IEC 60529 and DIN 40050-9)
- Very safe operation thanks to the combination of high mechanical strength and protection against electro-magnetic radiation
- Available with 4, 5 or 8 ports as male or female connector
- Differently colored variants for bus systems and analog connections
- Codings for different bus systems
- Operating temperature range of -25°C to +85°C
- Perfect addition to the switches from the Hirschmann™ Octopus series











Enhanced safety in the operation of equipment, machinery and systems, thanks to EMC, shock and vibration resistance and optimum protection rating of connection technology.



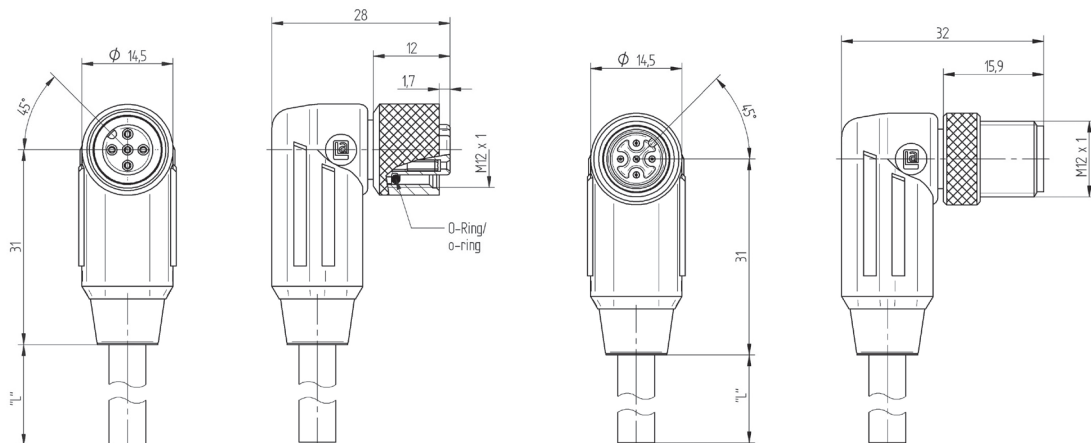




## Technical Information

Product Description					
Type	RKWTS	RSWTS	0975 254 151 (RKWTS 5B)	0975 254 152 (RSWTS 5B)	0985 342 106 (RSWTS 4D)
	 	 	 	 	 
Description	Actuator/sensor cordset, M12 female right angle connector with threaded joint and molded cable, 360° shielding connected to knurled nut	Actuator/sensor cordset, M12 male right angle connector with threaded joint and molded cable, 360° shielding connected to knurled screw	Profibus signal cable, M12 female right angle connector B coded, molded on one side, 360° shielding connected to knurled nut	Profibus signal cable, M12 male right angle connector B coded, molded on one side, 360° shielding connected to knurled screw	Industrial Ethernet data cable, M12 male right angle connector D coded, molded on one side, 360° shielding connected to knurled screw
Technical Data					
Operating Temperature	-25°C to +85°C				
Housing/Molded Body	TPU, orange	TPU, orange	TPU, black	TPU, black	TPU, black
Insert	PBT, black	PBT, black	PBT, violet	PBT, violet	PBT, black
Contact	CuSn 4 to 5 poles, CuZn 8 poles	CuSn 4 to 5 poles, CuZn 8 poles	CuSn	CuSn	CuSn
Contact Surface	Cu/Au				
Receptacle Shell/Knurled Screw/-nut	CuZn, nickel-plated				
Shield Sleeve	CuZn, tin-plated				
O-Ring	FKM				
Mechanical Data					
Protection Class	IP67, IP68, IP69K (IEC 60529)				
Electrical Data					
Contact Resistance	≤ 5 mΩ				
Nominal Current	4 to 5 poles 4 A, 8 poles 2 A	4 to 5 poles 4 A, 8 poles 2 A	4 A	4 A	4 A
Rated Voltage	4 poles 240 V AC/DC 5 poles 60 V AC/DC 8 poles 30 V AC/DC	4 poles 240 V AC/DC 5 poles 60 V AC/DC 8 poles 30 V AC/DC	60 V AC/DC	60 V AC/DC	240 V AC/DC
Test Voltage	4 poles 2.0 kV 5 to 8 poles 1.5 kV	4 poles 2.0 kV 5 to 8 poles 1.5 kV	1.5 kV	1.5 kV	2.0 kV
Insulation Resistance	> 10 <sup>9</sup> Ω				
Pollution Degree	3 DIN EN 60664-1 (VDE0110)				

### Technical Data



### Belden® Connectivity Center

Nowadays it is more important than ever to continuously increase the efficiency of production processes. Safe, cost-effective connectivity solutions for your machinery and plant play an important role in achieving this. Customized solutions tailored to your individual requirements enable you to substantially reduce your total cost of ownership. Thanks to the Belden Connectivity Center, the only one of its kind in the market, we are your worldwide partner when it comes to implementing such solutions, flexibly and rapidly, whether you need customized connectors and cable assemblies, or active and passive I/O modules for fieldbus or Ethernet networks – always in line with our motto “listen, understand, implement and deliver.” You will benefit both from the expertise of our knowledgeable specialists and from our extensive experience as a leading supplier of high-quality automation components. Let us utilize your challenges for our mutual success.

#### Always Stay Ahead with Belden

In a highly competitive environment, it is crucial to have reliable partners who are able to add value to your business. When it comes to signal transmissions, Belden is the number one solutions provider. We understand your business and want to know your specific challenges and targets to see how effective signal transmission solutions can push you ahead of the competition. By combining the strengths of our three leading brands, Belden®; Hirschmann™; and Lumberg Automation™, we are able to offer the solution you need. Today it may be a single cable, a switch or a connector, thus solving a specific issue; tomorrow it can be a complex range of integrated applications, systems and solutions.

We guarantee the superior performance of your mission-critical systems, even in the most demanding circumstances. If signal transmission is vital to your business, get in touch with the partner that delivers. Be certain. Belden.

Product Overview



**NP 1045LE****Lumberg Automation™  
Gigabit Ethernet Connectors**

The new shielded Gigabit Ethernet connectors from Lumberg Automation™ impress through their compact design and secure data transmission.

**M12 or RJ45 Connectors  
Permit Flexible Wiring of  
the Application.**

- Innovative shielding concept ensures reliable data transmission
- Fast and inexpensive startup thanks to molded and field-attachable connector types including individual cable lengths
- The robust design and industrial protection class IP67 (the latter for M12 versions) guarantee high network availability and long product life

The new shielded Gigabit Ethernet connectors from Lumberg Automation™ turn the network into a data highway: The connectors, which are available in both M12 and RJ45 connection technology, allow maximum data rates – and that applies equally to the field-attachable and flange version, or the plug and connection cables.

In addition, the Gigabit Ethernet connectors are able to withstand even the most rugged environmental conditions, as well as extreme heat and cold, thus offering highly available and cost-effective solutions for a host of automation applications.

**Applications**

The shielded Lumberg Automation™ Gigabit Ethernet connectors are ideal for all applications that depend on both high bandwidth and secure data transmission, such as video surveillance using IP cameras, or infotainment systems in local and long-distance public transport vehicles. The connectors also permit equally high-availability solutions for wiring complex installations with high bandwidth requirements – for instance in mechanical engineering.

**Benefits**

Thanks to their innovative shielding concept, the Gigabit Ethernet connectors always offer reliable data communication. Available in both molded cable and field-attachable versions (including cable lengths if required), the connectors are quick and cost-effective to put into operation.

In addition, the robust design and industrial protection class IP67 (for the M12 versions), guarantee high network availability and long product life.

**A new product to  
serve your needs.  
Be certain**



## High Flexibility Thanks to M12 or RJ45 Connection Technology

The Gigabit Ethernet connectors support data rates of up to 10 Gbps. An innovative shielding concept that also covers the individual wire pairs guarantees reliable data transmission even in case of strong electromagnetic fields. The connectors also feature a robust design, a temperature range from up to  $-30^{\circ}\text{C}$  to  $+90^{\circ}\text{C}$  and industrial protection class IP67 for the M12 version. They thus ensure high network availability even under rugged environmental conditions. And, incidentally, they also have a long product life.

Innovative shielding concept ensures reliable data transmission.

### The Advantages at a Glance

- Gigabit speeds up to 10 Gbps
- Innovative shielding concept with high resistance to electromagnetic interference
- Flexibility thanks to different versions
- Shockproof and vibration-proof M12 connection technology
- Industrial protection class IP67 (RJ45: IP20)
- Temperature range from up to  $-30^{\circ}\text{C}$  to  $+90^{\circ}\text{C}$
- Long product life
- Transmission properties for Cat 6 and Cat 6A compliant with IEC PAS 61076-2-109
- EN 50155 approval for use in railroad vehicles applied for
- Can be ideally combined with Hirschmann™ Industrial Ethernet switches and Belden® cables





## Technical Information

Product Description				
Type	0985 478 600/* M	0985 478 602/* M	0986 EMC 600	0986 EFC 651
Description	Cord sets, single-ended, M12, Industrial Ethernet Data cable for GigaBit Applications, single-ended, molded with M12 male connector, 8 poles X coded	Cord sets, single-ended, RJ45, Industrial Ethernet Data cable for GigaBit Applications, single-ended, molded with RJ45 connector	Field attachable connector, M12 male connector with threaded joint, shieldable, assembling with insulation displacement connection, 8 poles X coded	Receptacle connectors, M12 female connector for front mounting, assembling with Printed contacts, 8 poles X coded
Technical Data				
Operating Temperature	-30°C to +90°C	-20°C to +75°C	-25°C to +85°C	-25°C to +85°C
Housing/Molded Body	TPU	TPU	Zinc diecasting, nickel-plated	CuZn, nickel-plated
Insert	PA	PC	PA	PA
Contact	CuZn, gold-plated	CuZn, gold-plated	CuZn, gold-plated	CuZn, gold-plated
Receptacle Shell/Knurled Screw/-nut/Hexagon Screw/-nut/Sleeve	CuZn, nickel-plated	CuZn, nickel-plated	CuZn, zinc diecasting, nickel-plated	CuZn, nickel-plated
O-Ring	–		–	FPM
Mechanical Data				
Protection Class	IP67 (Only in locked position with its proper counterparts.)	IP20	IP67 (Only in locked position with its proper counterparts.)	IP67 (Only in locked position with its proper counterparts.)
Mode of Connection	–	–	Insulation displacement connection technology	Printed contacts
Electrical Data				
Nominal Current at 40°C	0.5 A	1 A	0.5 A	0.5 A
Nominal Voltage	48 V	50 V DC	48 V	48 V
Insulation Resistance	> 10 <sup>9</sup> Ω	> 10 <sup>9</sup> Ω	> 10 <sup>9</sup> Ω	> 10 <sup>9</sup> Ω
Pollution Degree	3	3	3	3

Product Description		
Type	0985 478 601/* M	0985 478 603/* M
Description	Cord sets, double-ended, M12-M12, Industrial Ethernet Data cable for GigaBit Applications, molded with M12 male connectors, 8 poles X coded	Cord sets, double-ended, RJ45-RJ45, Industrial Ethernet Data cable for GigaBit Applications, molded with RJ45 connectors
Technical Information	see 0985 478 600/* M	see 0985 478 602/* M

**NP 1044LE****Lumberg Automation™  
Shielded Railway Connectors**

Maximum security thanks to compliance with the highest fire protection class including Hazard Level 2



**The Shielded Railway Connectors from Lumberg Automation™ Comply with International Railway Standards EN 50155, IEC 61373 and DIN CLC/TS 50467 and with Fire Protection Class DIN CEN/TS 45545, DIN 5100 Making Them Suitable for a Wide Range of Applications.**

- Fast and inexpensive installation thanks to molded and field-attachable connector types including individual cable lengths
- Due to their availability in different versions, the railway connectors can be used to meet a wide range of application requirements
- Industrial protection class IP67 and the robust design ensure maximum reliability and a long service life

Specially developed for use in the railway sector, these new shielded connectors comply with all the relevant international norms and standards. This was achieved by combining the tried-and-tested M12 connection technology with completely new materials.

The result: extremely reliable connectors that can be used anywhere in the world. What's more, these connectors are available as pre-assembled Industrial Ethernet cables for ProfiNet and in a field-attachable version, and can thus be used to provide optimum solutions for a variety of applications.

**Applications**

These shielded Lumberg Automation™ connectors are railroad approved and offer fast and reliable communication plus enhanced system performance in rail transport and local public transport systems. They are deployed in applications critical to the comfort and safety of passengers. These include the networking of control modules regulating doors, heating and air conditioning. They can also be used for reliable connection of IP cameras, passenger counting systems and information displays.

**Benefits**

The new shielded railway connectors are fast and inexpensive to install. They come with already molded cables or in field-attachable versions where the desired length of cable can be ordered at the same time. You can use the connectors flexibly to suit the requirements of your application. Thanks to industrial protection class IP67 and their robust design, they offer maximum reliability and a long service life.

**A new product to  
serve your needs.  
Be certain.**



## Shielded Railway Connector with Fire Protection Rating Hazard Level 2

Compliant with all international railway norms and standards, the shielded connectors are simple and safe to install. The male and female connectors are equipped with spring-clamp terminals that make assembly considerably easier. Thanks to M12 connection technology, the IP67 industrial protection class and an extended operating temperature range of -40°C to +90°C, the connectors are capable of withstanding even extreme vibrations and are ideally suited for use in harsh environments. Two different versions are available to provide the optimum solution for a wide range of different applications.

They can be used  
anywhere in the world  
thanks to compliance  
with all international  
norms and standards.

### The Advantages at a Glance

- Molded cable versions and field-attachable versions including cable
- Vibration-proof M12 connection technology
- Industrial protection class IP67
- Extended temperature range: -40°C to +90°C
- Simple handling thanks to male and female connectors with spring-clamp terminals
- Cat 5 and Cat 5e transmission properties according to ISO IEC 11801 and TIA/EIA-568-B.2
- Standards and approvals: EN 50155, IEC 61373, DIN CLC/TS 50467, DIN 5510, DIN CEN/TS 45545
- Can be ideally combined with OCTOPUS Industrial Ethernet switches from Hirschmann™ and Belden® railway cable





## Technical Information

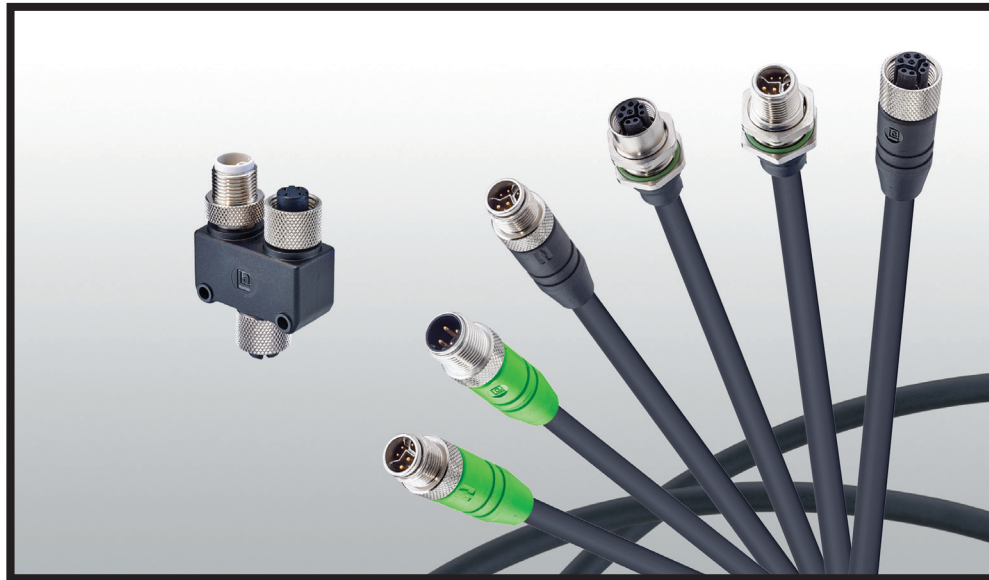
Product Description				
Type	0985 508 120/* M	0985 508 121/* M	0986 EFC 107	0986 EMC 105
Description	M12 cordset single-ended, Industrial Ethernet data cable, Cat 5 (ProfiNet), single-ended molded with M12 male connector, 4 poles, D coding	M12 cordset double-ended, Industrial Ethernet data cable, Cat 5 (ProfiNet), double-ended molded with M12 male connectors, 4 poles, D coding	Field attachable connector, M12 female connector with threaded joint, shieldable, assembling with spring-type terminals, 4 poles, D coding	Field attachable connector, M12 male connector with threaded joint, shieldable, assembling with spring-type terminals, 4 poles, D coding
Technical Data				
Operating Temperature	-40°C to +85°C	-40°C to +85°C	-40°C to +90°C	-40°C to +90°C
Housing/Molded Body	PA	PA	GD-ZnAl	GD-ZnAl
Insert	PBT	PBT	PBT	PBT
Contact	CuSn, gold-plated	CuSn, gold-plated	stainless steel, silver-plated, gold-plated	stainless steel, silver-plated, gold-plated
Receptacle Shell/Knurled Screw/-nut	CuZn, nickel-plated	CuZn, nickel-plated	CuZn, nickel-plated	CuZn, nickel-plated
Shield Sleeve	CuZn, tin-plated	CuZn, tin-plated	Shield contacting spring: CuBe, tined	Shield contacting spring: CuBe, tined
O-Ring	–	–	EPDM	EPDM
Mechanical Data				
Protection Class	IP67 (Only in locked position with its proper counterparts.)			
Mode of Connection	–	–	spring-type terminals	spring-type terminals
Connectable Conductor	–	–	max. 0.14 mm <sup>2</sup> (with wire end ferrule) to 0.5 mm <sup>2</sup>	max. 0.14 mm <sup>2</sup> (with wire end ferrule) to 0.5 mm <sup>2</sup>
Electrical Data				
Contact Resistance	≤ 5 mΩ	≤ 5 mΩ	≤ 5 mΩ	≤ 5 mΩ
Nominal Current at 40°C	4 A	4 A	4 A	4 A
Nominal Voltage	60 V	60 V	60 V	60 V
Rated Voltage	250 V	250 V	250 V	250 V
Test Voltage	2.0 kV eff./60 s	2.0 kV eff./60 s	1.5 kV eff./60 s	1.5 kV eff./60 s
Insulation Resistance	>10 <sup>9</sup> Ω	>10 <sup>9</sup> Ω	>10 <sup>9</sup> Ω	>10 <sup>9</sup> Ω
Pollution Degree	3	3	3	3
Approvals				
Railway Standards	EN 50155, IEC 61373, DIN CLC/TS 50467			
Fire Protection	DIN CEN/TS 45545, DIN 5510			

## Product Bulletin

**PB00075**

### **M12 Hybrid Connectors**

Transfer power and  
Fast Ethernet data in one  
space-saving interface.



The small size and light weight of the M12 Hybrid Connectors ease installation and maintenance efforts, while the high performance shielding concept enables more reliable power and data transmission.

- **Efficient** – transfer data and power simultaneously in one small interface to meet the performance needs of today's compact machines and cut installation time in half.
- **Flexible** – use this connector in nearly any application, including existing infrastructure, by selecting from a wide range of product variants, such as male and female connectors and adapter equipment.
- **Industrial performance** – enhance power and data transmission capabilities with advanced hybrid technology that withstands the harshest industrial conditions. The M12 Hybrid Connector has undergone rigorous testing, making this product the first M12 Hybrid Connector to receive UL 2238 certification.

Up until now, engineers and installers had to use two separate connections to transfer both data and power. The M12 Hybrid Connectors revolutionize connectivity by providing one interface that simultaneously transfers power up to 2 x 6A and data with speeds up to 100 Mbit/s.





## Benefits at a Glance

- Combined power and data transmission in one interface
- Data transfer rate of 100 Mbit/s
- Power transmission of up to 2 x 6A
- Small and light weight for easy handling and installation in tight spaces
- Ingress protection of up to IP69K
- Certification according to UL 2238
- Compatible with the LioN-Power system of products

## Applications

M12 Hybrid Connectors are built to withstand harsh environments, including exposure to any kind of mechanical stress, such as the shock and vibration that comes with operating in high pressure cleaning processes (IP69K). The M12 Hybrid Connectors can handle the daily rigors of use with heavy equipment in the machine building, food and beverage, automotive, material handling, industrial automation and building automation industries.

Their small size and weight also make the connectors ideal for applications with moving parts, or any use where high data/power performance needs are combined with constrained space and weight limitations.

## Your Benefits

As part of the LioN-Power system of products, M12 Hybrid Connectors give you the flexibility to easily design applications to meet your specific needs. The connectors' small size and ability to transfer power and data through one interface enables you to quickly install devices to reduce installation time.

These robust M12 Hybrid Connectors can withstand the varying environmental conditions of multiple application scenarios, such as moving production equipment from a paint shop to a body shop, to maximize production capacity.

The connectors' superior resistance to mechanical stress further ensures maximum functional and operational uptime, reducing your costs and maintenance efforts. The T-splitters provide flexibility by allowing you to connect a separate power feed into daisy chain installations – where several devices are connected together in a linear series – for continuous daisy chaining.



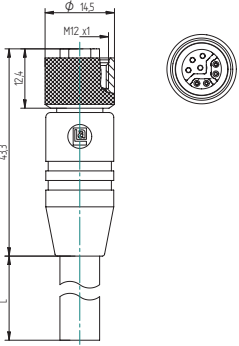
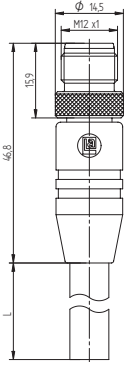
## M12 Hybrid Connectors

The M12 Hybrid Connectors' innovative technology combines reliable power and data transmission while meeting industry Y-coding standards according to IEC 61076-2-113.

Together with Lumberg Automation's LioN-Power system, featuring I/O-Link and multiprotocol capability, the M12 Hybrid Connectors provide a complete connection solution with the reduced size needed for today's smaller and more intelligent devices.



### M12 Hybrid Single-Ended Overmolded Cordsets, 8-Pole (Y-Coded)

Product Description		
Order Designation	RKTS 8Y	RSTS 8Y
		
Description	M12 Hybrid single-ended molded cordset, female straight, 8-pole, Y-coded, 360° shielded, screw attachment transmits power and data (Fast Ethernet, 100 Mbit/s, Cat 5)	M12 Hybrid single-ended molded cordset, male straight, 8-pole, Y-coded, 360° shielded, screw attachment transmits power and data (Fast Ethernet, 100 Mbit/s, Cat 5)
Type Contact	Female	Male
Number of Contacts	8 Pole (4 + 4)	
Standard	IEC 61076-2-113	
Construction Type	Y-Coded	
Technical Data		
Rated Voltage	50 V AC/DC	
Rated Current	0.5 A (data) / 6 A (power)	
Rated Impulse Voltage	0.8 kV	
Pollution Degree	3 acc. to DIN EN 60664-1 (VDE 0110-1)	
Environmental Conditions		
Protection Class (IEC 60529)	IP65, IP67, IP69K (only when mated to associated counterparts)	
Temperature Range (connector)	-40° C to +90° C, notice derating	
Technical Drawing		
		

L = Standard length of cable

### Pin Assignment

#### 8-pin, Y-coded







































- 1 = white/orange
- 2 = orange
- 3 = white/green
- 4 = green
- 5 = blue
- 6 = white
- 7 = brown
- 8 = black

Continued Next Page

## M12 Hybrid Single-Ended Overmolded Cordsets, 8-Pole (Y-Coded)

### Order Information

Order No.	Order Designation	No. of Pins	Jacket	Conductor Size	Characteristics
934-845-001	RKTS 8Y-922/2 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-845-002	RKTS 8Y-922/5 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-845-003	RKTS 8Y-922/10 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-845-004	RKTS 8Y-922/15 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-845-005	RKTS 8Y-922/20 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-845-006	RKTS 8Y-922/25 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-847-001	RSTS 8Y-922/2 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-847-002	RSTS 8Y-922/5 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-847-003	RSTS 8Y-922/10 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-847-004	RSTS 8Y-922/15 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-847-005	RSTS 8Y-922/20 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-847-006	RSTS 8Y-922/25 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  

Special circuitry available upon request

Use of the product in aggressive media must be checked on a case-by-case basis.  
Subject to technical modification.





### M12 Hybrid Single-Ended Overmolded Receptacle Cordsets, 8-Pole (Y-Coded)

Product Description		
Order Designation	RKHS 8Y	RSHS 8Y
Description	M12 Hybrid single-ended molded cordset with female straight receptacle, 8-pole, Y-coded, 360° shielded, chassis side thread PG9, transmits power and data (Fast Ethernet, 100 Mbit/s, Cat 5).	M12 Hybrid single-ended molded cordset with male straight receptacle, 8-pole, Y-coded, 360° shielded, chassis side thread PG9, transmits power and data (Fast Ethernet, 100 Mbit/s, Cat 5).
Type Contact	Female	Male
Number of Contacts	8 Pole (4 + 4)	
Standard	IEC 61076-2-113	
Construction Type	Y-Coded	
Technical Data		
Rated Voltage	50 V AC/DC	
Rated Current	0.5 A (data) / 6 A (power)	
Rated Impulse Voltage	0.8 kV	
Pollution Degree	3 acc. to DIN EN 60664-1 (VDE 0110-1)	
Environmental Conditions		
Protection Class (IEC 60529)	IP65, IP67, IP69K (only when mated to associated counterparts)	
Temperature Range (connector)	-40° C to +90° C, notice derating	
Technical Drawing		

L = Standard length of cable

\*a = O-Ring • \*b = Nut (SW18), enclosed separately • \*c = O-Ring, enclosed separately • \*d = anti-rotation protection

### Pin Assignment





































#### 8-pin, Y-coded



- 1 = white/orange
- 2 = orange
- 3 = white/green
- 4 = green
- 5 = blue
- 6 = white
- 7 = brown
- 8 = black

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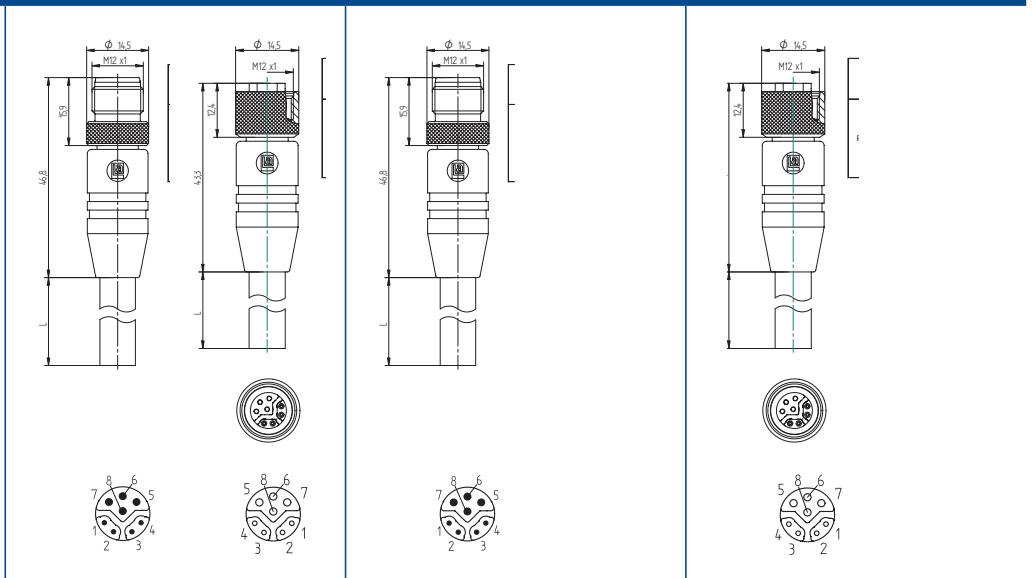
**M12 Hybrid Single-Ended Overmolded Receptacle Cordsets, 8-Pole (Y-Coded)**
**Order Information**

Order No.	Order Designation	No. of Pins	Jacket	Conductor Size	Characteristics
934-925-001	RSYS 8Y-922/2 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-925-002	RSYS 8Y-922/5 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-925-003	RSYS 8Y-922/10 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-925-004	RSYS 8Y-922/15 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-925-005	RSYS 8Y-922/20 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-925-006	RSYS 8Y-922/25 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-926-001	RKYS 8Y-922/2 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-926-002	RKYS 8Y-922/5 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-926-003	RKYS 8Y-922/10 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-926-004	RKYS 8Y-922/15 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-926-005	RKYS 8Y-922/20 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-926-006	RKYS 8Y-922/25 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  



**M12 Hybrid Double-Ended Overmolded Cordsets, 8-Pole (Y-Coded)**

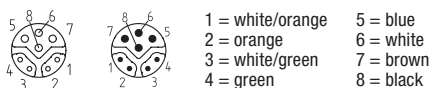
Product Description			
Order Designation	RSTS 8Y-RKTS 8Y	RSTS 8Y-RSTS 8Y	RKTS 8Y-RKTS 8Y
Description	M12 Hybrid double-ended molded cordset, male straight to female straight, 8-pole, Y-coded, 360° shielded, screw attachment transmits power and data (Fast Ethernet, 100 Mbit/s, Cat 5).	M12 Hybrid double-ended molded cordset, male straight to male straight, 8-pole, Y-coded, 360° shielded, screw attachment transmits power and data (Fast Ethernet, 100 Mbit/s, Cat 5).	M12 Hybrid double-ended molded cordset, female straight to female straight, 8-pole, Y-coded, 360° shielded, screw attachment transmits power and data (Fast Ethernet, 100 Mbit/s, Cat 5).
Type Contact	Male to Female	Male to Male	Female to Female
Number of Contacts	8 Pole (4 + 4)		
Standard	IEC 61076-2-113		
Construction Type	Y-Coded		
Technical Data			
Rated Voltage	50 V AC/DC		
Rated Current	0.5 A (data) / 6 A (power)		
Rated Impulse Voltage	0.8 kV		
Pollution Degree	3 acc. to DIN EN 60664-1 (VDE 0110-1)		
Environmental Conditions			
Protection Class (IEC 60529)	IP65, IP67, IP69K (only when mated to associated counterparts)		
Temperature Range (connector)	-40° C to +90° C, notice derating		
Technical Drawing			



L = Standard length of cable

**Pin Assignment**








































































**8-pin, Y-coded**



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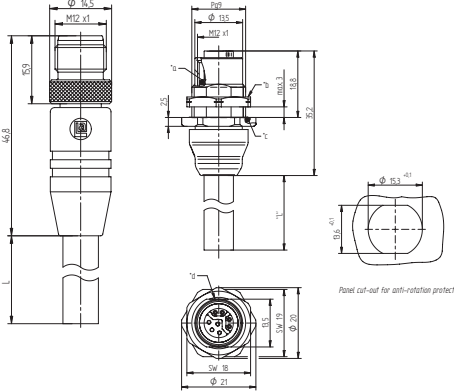
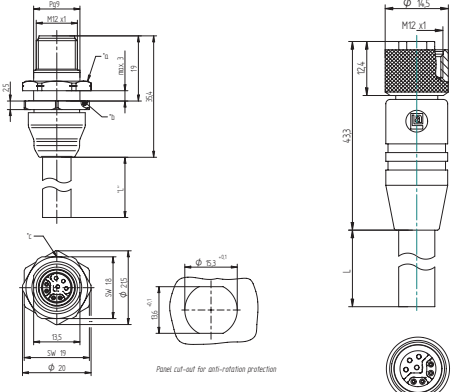
## M12 Hybrid Double-Ended Overmolded Cordsets, 8-Pole (Y-Coded)

### Order Information

Order No.	Order Designation	No. of Pins	Jacket	Conductor Size	Characteristics
934-966-001	RSTS 8Y-RKTS 8Y-922/0.3 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-002	RSTS 8Y-RKTS 8Y-922/0.6 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-003	RSTS 8Y-RKTS 8Y-922/1 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-004	RSTS 8Y-RKTS 8Y-922/2 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-005	RSTS 8Y-RKTS 8Y-922/3 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-006	RSTS 8Y-RKTS 8Y-922/5 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-007	RSTS 8Y-RKTS 8Y-922/10 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-008	RSTS 8Y-RKTS 8Y-922/15 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-101	RKTS 8Y-RKTS 8Y-922/0.3 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-102	RKTS 8Y-RKTS 8Y-922/0.6 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-103	RKTS 8Y-RKTS 8Y-922/1 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-104	RKTS 8Y-RKTS 8Y-922/2 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-105	RKTS 8Y-RKTS 8Y-922/3 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-106	RKTS 8Y-RKTS 8Y-922/5 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-107	RKTS 8Y-RKTS 8Y-922/10 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-108	RKTS 8Y-RKTS 8Y-922/15 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-301	RSTS 8Y-RSTS 8Y-922/0.3 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-302	RSTS 8Y-RSTS 8Y-922/0.6 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-303	RSTS 8Y-RSTS 8Y-922/1 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-304	RSTS 8Y-RSTS 8Y-922/2 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-305	RSTS 8Y-RSTS 8Y-922/3 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-306	RSTS 8Y-RSTS 8Y-922/5 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-307	RSTS 8Y-RSTS 8Y-922/10 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-308	RSTS 8Y-RSTS 8Y-922/15 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  



### M12 Hybrid Double-Ended Overmolded Cordsets, 8-Pole (Y-Coded)

Product Description		
Order Designation	RSTS 8Y-RKHS 8Y	RSHS 8Y-RKTS 8Y
		
Description	M12 Hybrid double-ended molded cordset, male straight to female straight receptacle, 8-pole, Y-coded, 360° shielded, screw attachment transmits power and data (Fast Ethernet, 100 Mbit/s, Cat 5).	M12 Hybrid double-ended molded cordset, male straight to female straight, 8-pole, Y-coded, 360° shielded, screw attachment transmits power and data (Fast Ethernet, 100 Mbit/s, Cat 5).
Type Contact	Male to Female	Male to Female
Number of Contacts	8 Pole (4 + 4)	
Standard	IEC 61076-2-113	
Construction Type	Y-Coded	
Technical Data		
Rated Voltage	50 V AC/DC	
Rated Current	0.5 A (data) / 6 A (power)	
Rated Impulse Voltage	0.8 kV	
Pollution Degree	3 acc. to DIN EN 60664-1 (VDE 0110-1)	
Environmental Conditions		
Protection Class (IEC 60529)	IP65, IP67, IP69K (only when mated to associated counterparts)	
Temperature Range (connector)	-40° C to +90° C, notice derating	
Technical Drawing		
		

L = Standard length of cable

#### Pin Assignment

##### 8-pin, Y-coded



















































- 1 = white/orange
- 2 = orange
- 3 = white/green
- 4 = green
- 5 = blue
- 6 = white
- 7 = brown
- 8 = black

Continued Next Page



## M12 Hybrid Double-Ended Overmolded Cordsets, 8-Pole (Y-Coded)

### Order Information

Order No.	Order Designation	No. of Pins	Jacket	Conductor Size	Characteristics
934-966-201	RSTS 8Y-RKHS 8Y-922/0.3 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-202	RSTS 8Y-RKHS 8Y-922/0.6 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-203	RSTS 8Y-RKHS 8Y-922/1 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-204	RSTS 8Y-RKHS 8Y-922/2 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-205	RSTS 8Y-RKHS 8Y-922/3 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-206	RSTS 8Y-RKHS 8Y-922/5 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-207	RSTS 8Y-RKHS 8Y-922/10 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-208	RSTS 8Y-RKHS 8Y-922/15 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-501	RSYS 8Y-RKTS 8Y-922/0.3 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-502	RSYS 8Y-RKTS 8Y-922/0.6 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-503	RSYS 8Y-RKTS 8Y-922/1 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-504	RSYS 8Y-RKTS 8Y-922/2 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-505	RSYS 8Y-RKTS 8Y-922/3 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-506	RSYS 8Y-RKTS 8Y-922/5 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-507	RSYS 8Y-RKTS 8Y-922/10 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  
934-966-508	RSYS 8Y-RKTS 8Y-922/15 M	8	PUR, black	4x26AWG (data) and 4x0.75mm <sup>2</sup> (power)	  



**M12 Hybrid Double-Ended Overmolded Cordsets, 4-Pole (D-Coded) to 8-Pole (Y-Coded)**

Product Description	
Order Designation	RSTS 4D-RSTS 8Y
Description	M12 Hybrid adapter double-ended molded cordset, male straight 4-pole, D-coded to male straight, 8-pole, Y-coded. 360° shielded, screw attachment transmits data (Fast Ethernet, 100 Mbit/s, Cat 5).
Type Contact	Male to Male
Number of Contacts	4 Pole (D-Coded)   8-Pole (Y-Coded)
Standard	RSTS 4D: IEC 61076-2-101 / RSTS 8Y: IEC 61076-2-113
Construction Type	D-Coded / Y-Coded
Technical Data	
Rated Voltage	50 V AC/DC
Rated Current	0.5 A (data) / 6 A (power)
Rated Impulse Voltage	0.8 kV
Pollution Degree	3 acc. to DIN EN 60664-1 (VDE 0110-1)
Environmental Conditions	
Protection Class (IEC 60529)	IP65, IP67, IP69K (only when mated to associated counterparts)
Temperature Range (connector)	-25°C to +80°C
Technical Drawing	

L = Standard length of cable

























**Pin Assignment**

4-pin, D-coded	8-pin, Y-coded
<ul style="list-style-type: none"> <li>1 = white/orange</li> <li>2 = white/green</li> <li>3 = orange</li> <li>4 = green</li> </ul>	<ul style="list-style-type: none"> <li>1 = white/orange</li> <li>2 = orange</li> <li>3 = white/green</li> <li>4 = green</li> <li>5 = n.c.</li> <li>6 = n.c.</li> <li>7 = n.c.</li> <li>8 = n.c.</li> </ul>

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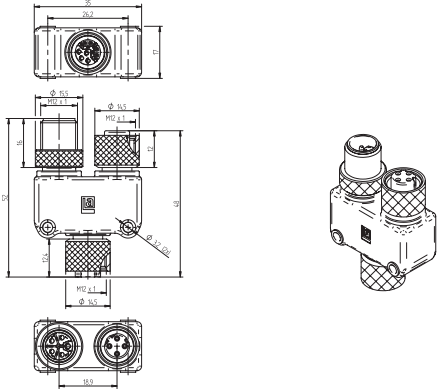
## M12 Hybrid Double-Ended Overmolded Cordsets, 4-Pole (D-Coded) to 8-Pole (Y-Coded)

### Order Information

Order No.	Order Designation	No. of Pins	Jacket	Conductor Size	Characteristics
934-967-001	RSTS 4D-RSTS 8Y-484/0.3 M	4	PUR, black	AWG 26	  
934-967-002	RSTS 4D-RSTS 8Y-484/0.6 M	4	PUR, black	AWG 26	  
934-967-003	RSTS 4D-RSTS 8Y-484/1 M	4	PUR, black	AWG 26	  
934-967-004	RSTS 4D-RSTS 8Y-484/2 M	4	PUR, black	AWG 26	  
934-967-005	RSTS 4D-RSTS 8Y-484/3 M	4	PUR, black	AWG 26	  
934-967-006	RSTS 4D-RSTS 8Y-484/5 M	4	PUR, black	AWG 26	  
934-967-007	RSTS 4D-RSTS 8Y-484/10 M	4	PUR, black	AWG 26	  
934-967-008	RSTS 4D-RSTS 8Y-484/15 M	4	PUR, black	AWG 26	  

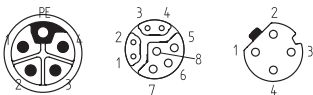


## M12 Hybrid T-Connector (Power and Data), Shielded

Product Description	
Order Designation	ASBS 2 M12 YLD
	
Description	M12 T-Connector, M12 female connector Y-coded with M12 male connector L-coded, and M12 female connector D-coded, 360° shielding connected to knurled screw and knurled nuts, D-coded/Hybrid-data: Fast Ethernet Hybrid Cat. 5 (100 Mbps).
Type Contact	Y-coded: female, 4x power + female, 4x data, L-coded: male, 4x + female, 1x PE, D-coded: female 4x
Number of Contacts	4 Pole (D-Coded)   8-Pole (Y-Coded)
Standard	Y-coded: IEC 61076-2-113 L-coded: IEC 61076-2-11 D-coded: IEC 61076-2-101
Construction Type	D-Coded / Y-Coded
Technical Data	
Rated Voltage	50 V AC/DC
Rated Current	0.5 A (data) / 6 A (power)
Rated Impulse Voltage	0.8 kV
Pollution Degree	3 acc. to DIN EN 60664-1 (VDE 0110-1)
Environmental Conditions	
Protection Class (IEC 60529)	IP 67 / IP69 K (only when mated to associated counterparts)
Temperature Range (connector)	-40° C to +90° C
Technical Drawing	
	

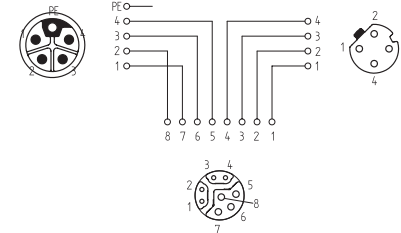
### Pin Assignment

#### ASBS 2 M12 YLD



### Wiring Diagram

#### ASBS 2 M12 YLD



### Order Information

Order No.	Order Designation	Characteristics
934-928-001	ASBS 2 M12 YLD	

