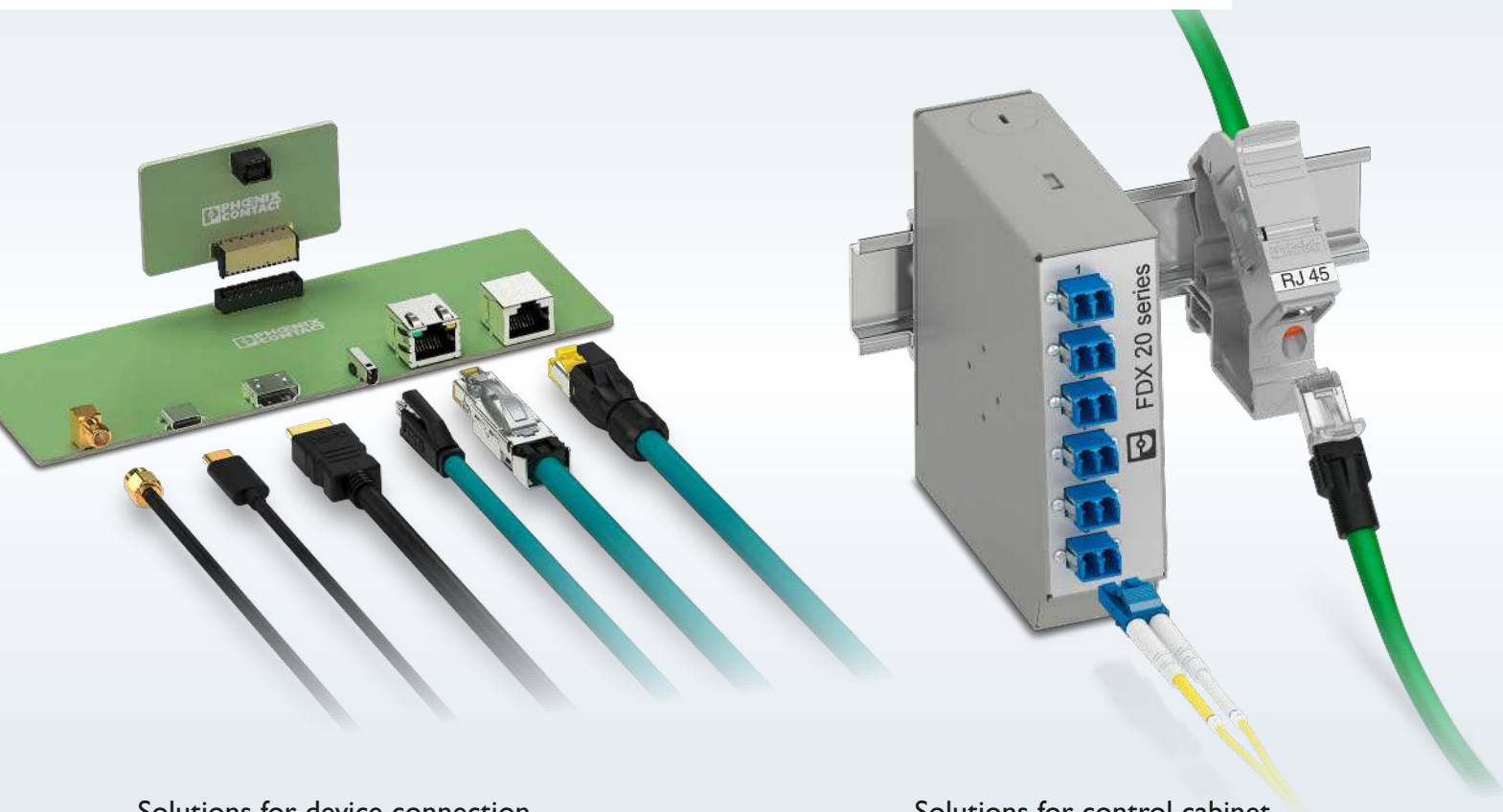


# Data connectors

Product overview 2022

# Reliable data connectors for copper and FO applications

Phoenix Contact provides reliable data connectors for a wide range of industrial and semi-industrial applications. Whether for copper or fiber optics, IP20 or IP69K protection class – our connection solutions satisfy high demands. Splice boxes, distributors, and adapters round out the comprehensive solution range.



## Solutions for device connection

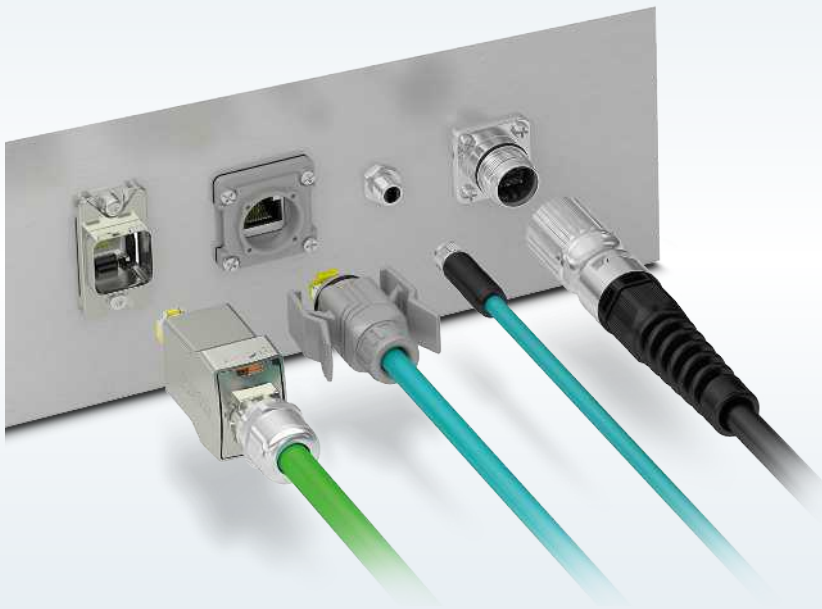
Phoenix Contact has the right device connector for your application. From SPE, RJ45, HDMI, USB, coaxial for printed circuit boards and M12 panel feed-throughs to D-SUB connectors, Phoenix Contact has a comprehensive portfolio of different pin connector patterns for a wide range of transmission properties.

## Solutions for control cabinet cabling

Along with classic connectors, the product portfolio also includes creative solutions for your control cabinet application. Phoenix Contact DIN rail adapters and splice boxes combine high packing density with easy handling.



SPE connectors:  
 Winner of the Best of Industry  
 Awards 2021



### Solutions for field cabling

From IP20 degree of protection right through to IP67, Phoenix Contact enables assembly without the need for special tools and provides reliable components for every application. Whether for use directly on your machine, in buildings, or even outdoors, Phoenix Contact connection solutions are the perfect choice in any environment.

## Contents

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### Find out more with the web code

For detailed information, use the web codes provided in this brochure. Simply enter # and the four-digit number in the search field on our website.

**i** Web code: #1234 (example)

Or use the direct link:  
[phoenixcontact.net/webcode/#1234](https://phoenixcontact.net/webcode/#1234)

# Unrivalled variety for copper and FO cabling

Create consistent solutions for reliable data transmission at speeds of up to 40 Gbps with our wide range of designs, codings, and pin assignments.

## Always the right connection



For compact device connection



For flexible on-site connection



For easy cabling

F-SMA



SC DUPLEX



LC DUPLEX



SC-RJ

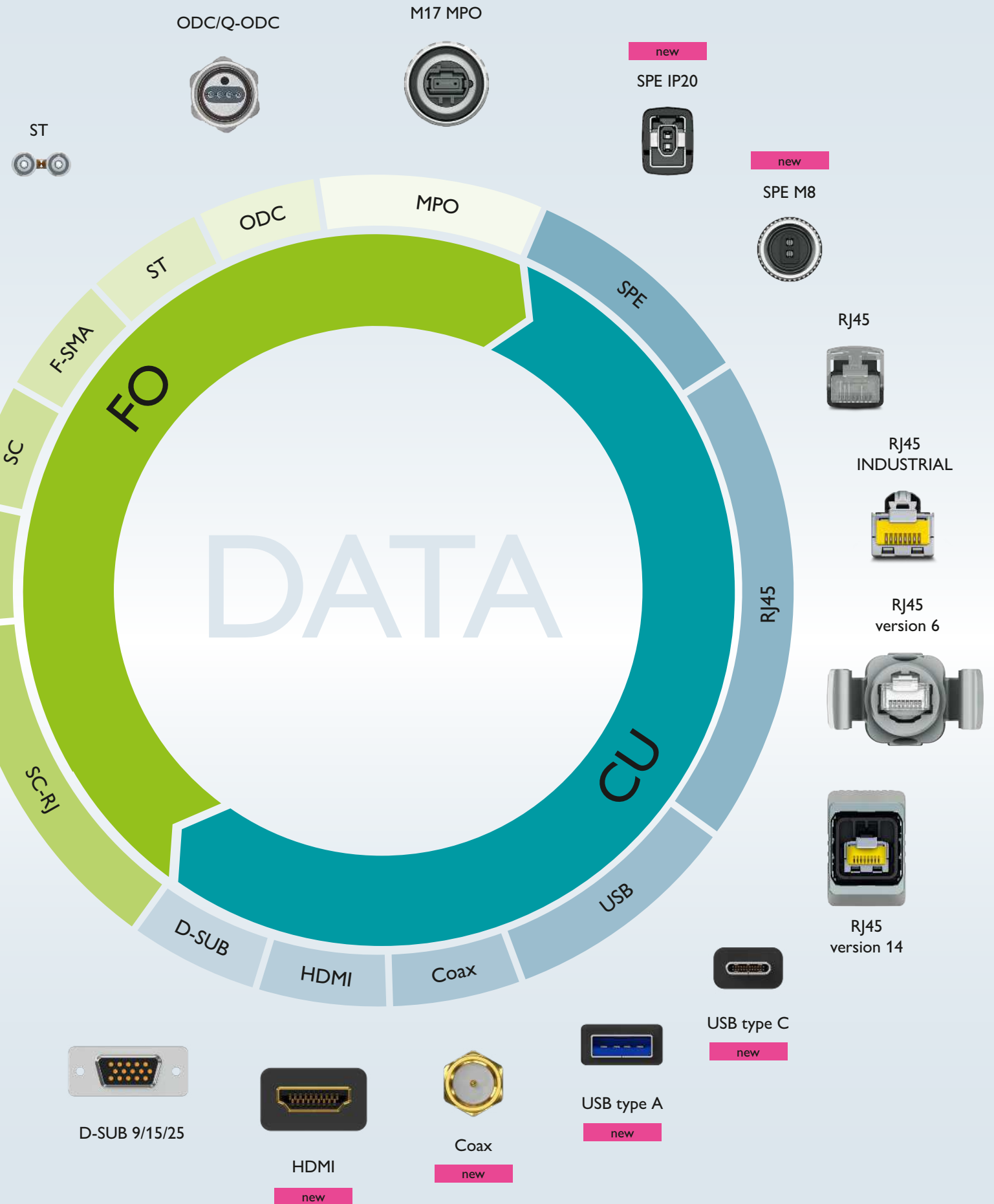


SC-RJ  
version 6



SC-RJ  
version 14





# Copper-based data cabling for networks and fieldbuses

Complex automation processes call for high volumes of data at ever-increasing transmission speeds. Benefit now from high-performance connectors and cables designed for assembly on site. Whether future-proof high-speed cabling up to 10 Gbps or innovative hybrid cabling – we have the perfect solution for your automation network.

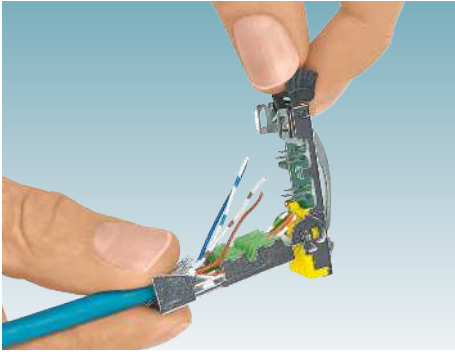


**i** Web code:  
#0297

## Main features

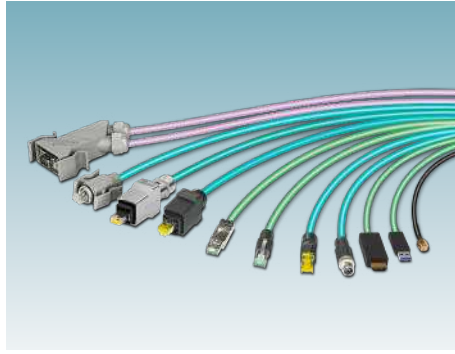
- Transmission speeds of up to 10 Gbps
- Solutions from IP20 to IP69K
- Spring, pierce, and IDC connection
- 360° shielding concepts

## Your advantages at a glance



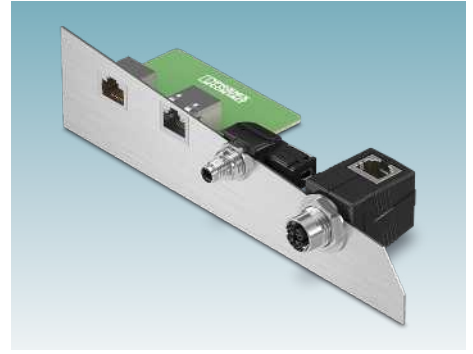
### Fast assembly

without special tools – with IDC and pierce fast connection.



### Wide range of connectors

from SPE and RJ45 through USB, HDMI, coaxial, and D-SUB to M12.



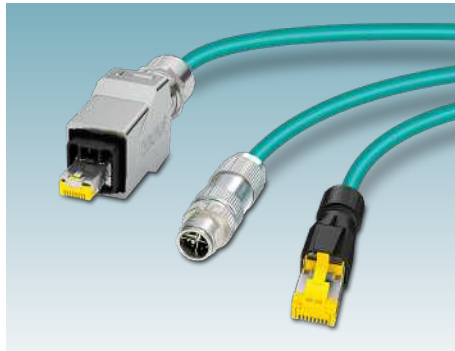
### Flexible device connection

with versatile housing feed-throughs for devices and control cabinets.



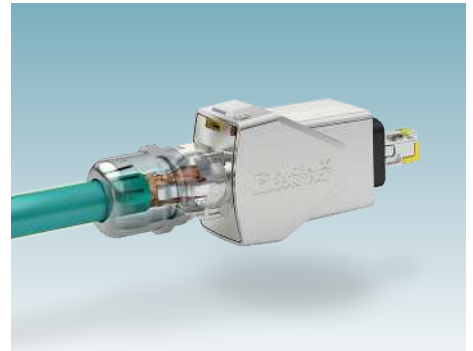
### Reliable protection

against extreme temperatures, liquids, vibrations, and UV light.



### Fast data transmission

with data rates of up to 10 Gbps and components in accordance with the CAT6<sub>A</sub> standard.



### Special shielding concepts

with 360° EMC shielding guarantee a high level of resistance to EMI and ESD.

## Choose a flexible type of cabling

Whether for machine building and systems manufacturing, building automation or process automation – with copper-based data connectors from Phoenix Contact, you are opting for a flexible type of cabling that supports a wide range of bus systems:

- EtherNet/IP™, Ethernet, VARAN
- EtherCAT®, PROFINET, Sercos®
- INTERBUS, PROFIBUS, CANopen®
- DeviceNet™, CC-Link
- Universal Serial Bus (USB)

# FO-based data cabling for networks and fieldbuses

High transmission speed, low attenuation, resistance to electromagnetic interference: FO cables are a modern transmission medium for industrial systems and infrastructure applications. Whatever the fiber type or interface – you can choose the right connection technology from the extensive Phoenix Contact portfolio.



Web code:  
#0298

## Main features

- Transmission speeds of up to 40 Gbps
- Solutions for IP20, IP65/IP67, and IP68
- For all common fiber types
- Maximum security against EMC and ESD influences



## Your advantages at a glance



### Wide choice of versions

from SC-RJ, LC, SC, F-SMA to ST, plus POF, PCF, and GOF fiber types.



### Comprehensive range of cables

for all applications, networks, and standard interfaces.



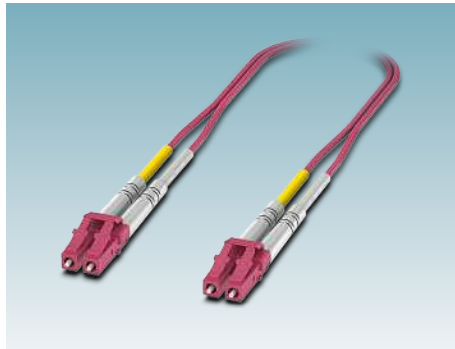
### Fast assembly

in the field using professional tools.



### Reliable protection

against extreme temperatures, liquids, and UV light.



### Large selection

of patch cable versions for all typical connection methods.



### High packing density

and large splice comb in splice boxes for DIN rail and 19 inch mounting.

## Choose the right fiber type for your application

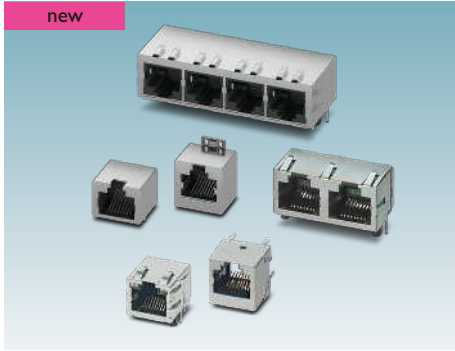
- POF (polymer optical fiber) for short transmission paths up to 75 m and maximum data rates of up to 100 Mbps
- PCF (Polymer-Clad Fiber) for medium transmission distances up to 500 m and maximum data rates of up to 1 Gbps
- GOF (Glass Optical Fiber) multimode for long transmission distances up to 550 m at 10 Gbps
- GOF singlemode for up to 50 km and data rates of up to 40 Gbps

## Solutions for industrial device connection

Special shielding concepts and torsion-resistant, optimally coordinated components are essential for the reliable operation of robots and conveying systems. Use Phoenix Contact's reliable and consistent product range for error-free data transmission.

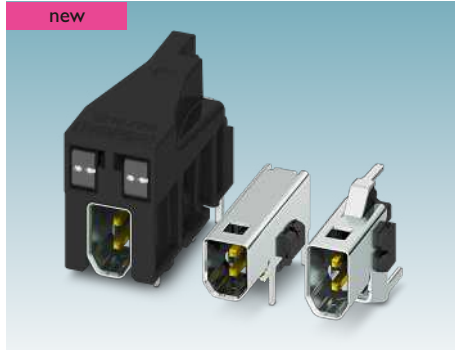


# Product overview



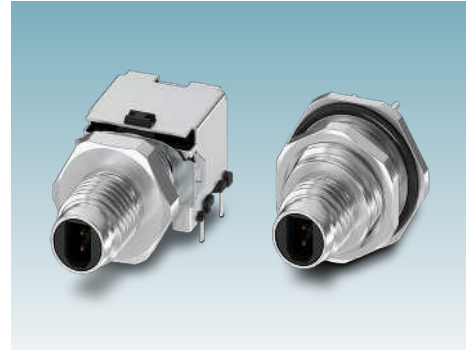
## RJ45 jacks

Reliable data transmission for a variety of applications.



## SPE IP20 PCB connectors

Consistent communication in the Industrial Internet of Things.



## SPE M8 device connectors

Future-proof networking from the sensor right through to the cloud.



## M8-M12 device connectors

Connection solution for signal, data, and power supply.



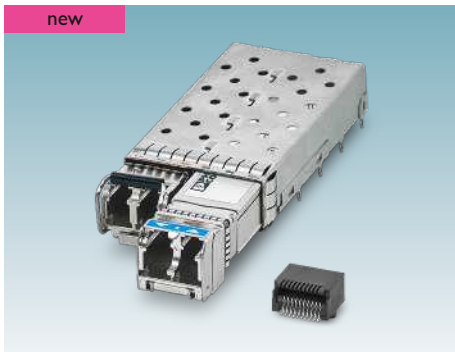
## Coaxial device connectors

Ideal for the transmission of WLAN, Bluetooth, LTE, and 5G signals. The use of lead-free materials ensures future-proof use.



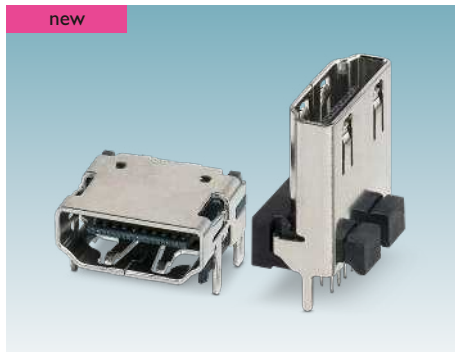
## D-SUB contact inserts

D-SUB contact carriers and housings for shell sizes 1 to 3.



## SFP/SFP+ device connection

Fiberglass device connection for secure data transmission.



## HDMI device connectors

Secure transmission of audio and video with HDMI type A jacks.

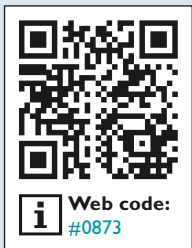


## USB device connectors

USB type A and type C jacks for industrial applications.

# Solutions for industrial device connection

Complex automation processes demand communication in many areas. Benefit now from reliable PCB terminal blocks and PCB connectors that have been qualified based on various transmission standards, including Ethernet APL, PROFINET, Ethernet CAT5, and EtherCAT P, among others.



Ethernet



## Product overview



### Ethernet APL PCB terminal blocks

APL (Advanced Physical Layer) technology allows communication through to the field level with 10 Mbps via two-wire Ethernet. The connection points are marked and color-coded for easy installation. The portfolio also includes products for use in potentially explosive areas.

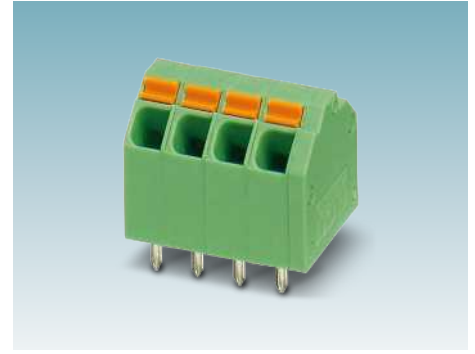
**i** Web code: #2390



### PROFINET PCB terminal blocks

PROFINET features high transmission speeds of up to 100 Mbps through to the field level. Phoenix Contact PCB terminal blocks satisfy the requirements of the "Guideline for PROFINET". You will find products for the increased safety requirements of the "Ex e" type of protection under the following web code.

**i** Web code: #1598



### Ethernet CAT5 PCB terminal blocks

Ethernet is one of the most widely used data transmission technologies, and can transmit 100 Mbps / 1 Gbps in Category 5. Phoenix Contact provides PCB terminal blocks with various connection methods and connection alignments for CAT5 transmission.

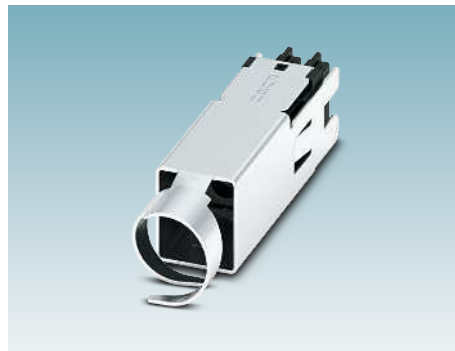
**i** Web code: #2713



### Ethernet APL PCB connectors

The Phoenix Contact PCB connectors satisfy the requirements of the "Guideline for Ethernet APL". APL technology allows communication from the field level to the control levels of the Industry 4.0 structure with large data quantities over communication paths of up to 1,000 m.

**i** Web code: #2390



### EtherCAT® P PCB connectors

Along with Category 5 transmission, the DMCC 0,5 also features EtherCAT® P qualification, which realizes voltage supply (24 V/3 A) via the data line (100 Mbps). Moreover, shielding and an optional locking function are also available.

**i** Web code: #2332



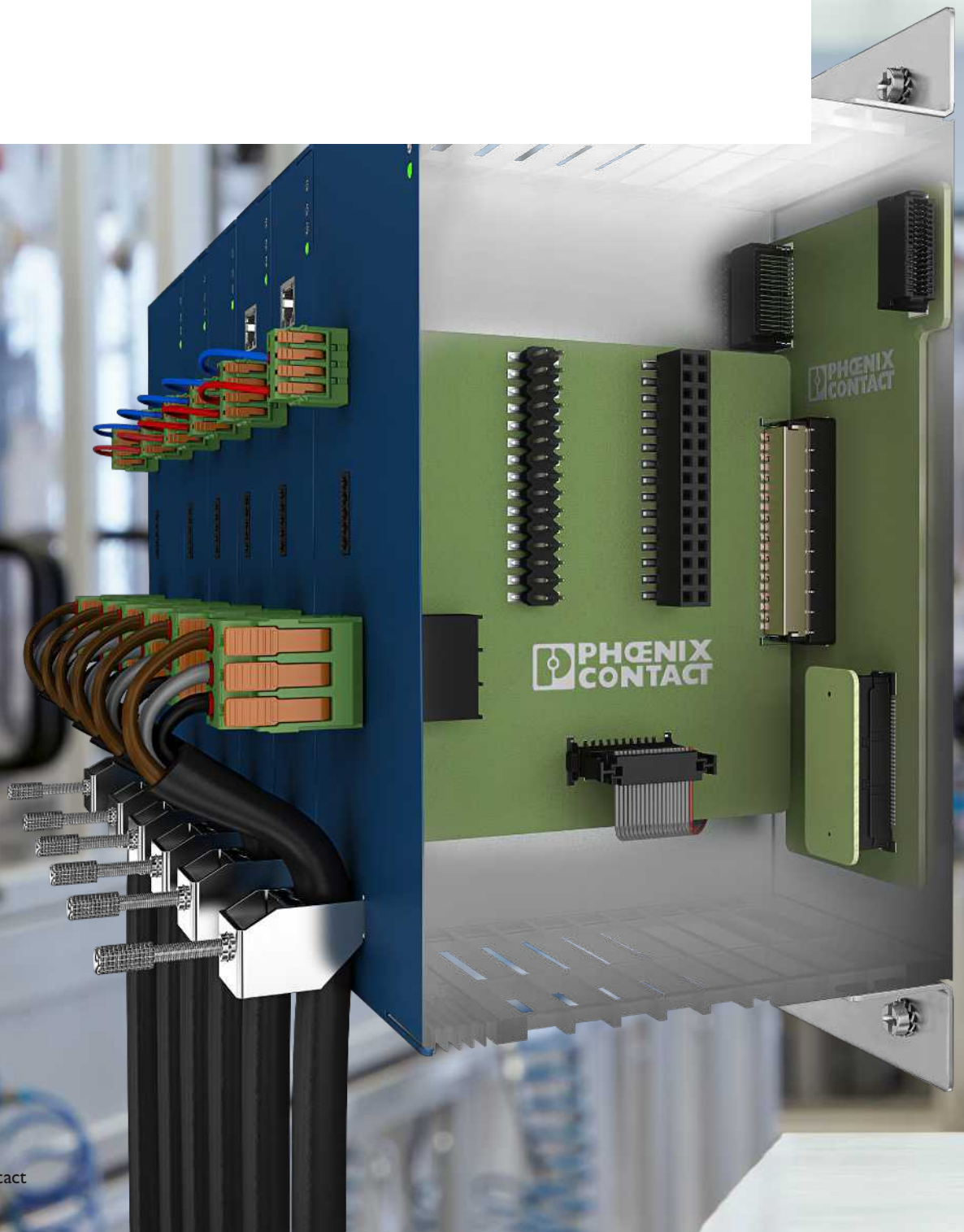
### Ethernet CAT5 PCB connectors

Data transmission speeds of up to 1 Gbps can also be enabled via CAT5 PCB connectors. To prevent effects such as crosstalk, some empty positions must be provided for reliable communication.

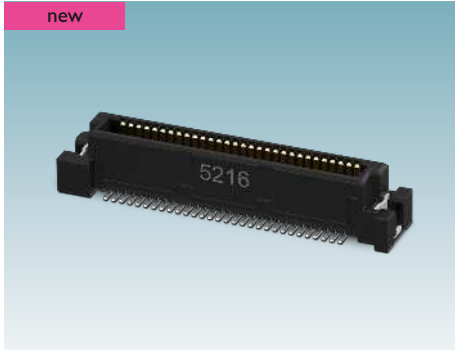
**i** Web code: #2713

## Solutions for device-internal PCB connections

With FP, FQ, and FS series board-to-board connectors, Phoenix Contact provides shielded and unshielded solutions for signal and data transmission in the device. These allow you to realize individual PCB orientations with various application-oriented designs, stack heights, and numbers of positions with pitches of 0.635 mm, 0.8 mm, 1.27 mm, and 2.54 mm.



# Product overview



## FS 0,635

The space-saving board-to-board connectors of the FS 0,635 series enable mezzanine PCB arrangements with high-speed data transmission rates up to 20 Gbps.

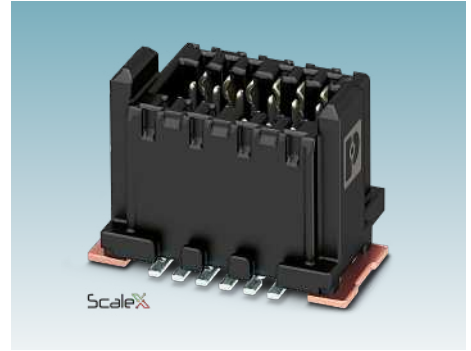
**i** Web code: #2879



## FP 0,8 shielded

The double-sided ScaleX contact system of the FP 0,8 series allows particularly robust PCB connections. It also supports high-speed data rates up to 16 Gbps. The shielding ensures excellent electromagnetic behavior.

**i** Web code: #2050



## FP 0,8 unshielded

The unshielded board-to-board connectors with the robust ScaleX contact system enable high-speed data transmissions of up to 16 Gbps in mezzanine, orthogonal, and coplanar PCB arrangements.

**i** Web code: #2330



## FP 1,27 board-to-board

FP 1,27 series board-to-board connectors offer versatile solutions for the connection of several PCBs within the device. Horizontal and vertical male and female connector strips enable application-specific arrangements.

**i** Web code: #1520



## FP 1,27 wire-to-board

The FP 1,27 board-to-board connector system, including both self-assembly and preconfigured versions, provides a high degree of flexibility in the device design in terms of the PCB arrangement.

**i** Web code: #1520



## FQ 1,27 / FQ 2,54

The pin and base strips in the pitches of 1.27 and 2.54 mm allow mezzanine, coplanar, and mother-daughter connections to be realized. They are characterized by their application-oriented and cost-optimized design.

**i** Web code: #2658, #2659

# Solutions for control cabinet cabling

Select the FO or copper components in cabling solutions for Ethernet and PROFINET applications that suit your data transmission system. The comprehensive product range for control cabinet applications provides the right solution for your requirements.





# Product overview



## Splice boxes

The FDX 20 series splice boxes ensure continuously reliable real-time data transmission. With their compact and uniform design, the splice boxes for both DIN rail and 19 inch mounting provide plenty of interior space for the secure connection of fiber-optic cables.



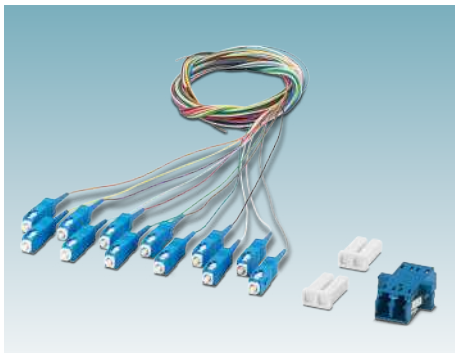
## 19 inch distributors

High packing density, greater flexibility: The 19 inch marshalling panels simplify FO cabling, and are therefore ideal for real-time data transmission. The modular design allows a variety of applications, for example in power distribution and process technology.



## DIN rail adapter

The universal DIN rail adapters offer a high degree of flexibility in a small space. The one-piece housing snaps quickly and easily onto the DIN rail. Module inserts with RJ45, SC simplex, LC duplex, and MTP connections are available for data transmission with copper and FO conductors.



## FO couplings and pigtails

FO couplings and pigtails enable safe and reliable cabling inside the FDX20 splice boxes – both for DIN rail and 19 inch mounting. The comprehensive product portfolio enables a high degree of flexibility, whatever the application.



## Copper cable connection and couplings

The cable connections and coupling modules for RJ45 ensure the secure connection of your cables and the reliable transmission of data via the interface. The versions for Freenet and Keystone can be integrated into existing panel-mount frames or integrated directly into the DIN rail adapter.



## Bulkheads

The compact control cabinet feed-throughs provide a high degree of flexibility for through-panel applications with an interface change. They are available in various outlet directions and for various M12 codings.

## Solutions for industrial IP20 cabling

For the special requirements in industrial cabling, Phoenix Contact provides RJ45, USB, and HDMI patch cables as well as RJ45 connectors designed for assembly that do not need special tools, providing reliable connection solutions and consistent data transmission up to 10 Gbps (CAT6<sub>A</sub>).

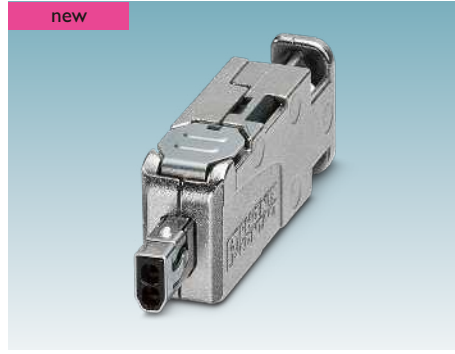


## Product overview



### RJ45 INDUSTRIAL connectors

The RJ45 INDUSTRIAL connectors for data transmission speeds up to 10 Gbps are a future-oriented solution for your interface. In combination with the RJ45 INDUSTRIAL PCB connectors, they form the perfect connector system. The perfectly coordinated components guarantee high-level transmission reliability in industrial applications. Furthermore, the one-piece design and assembly without the need for special tools facilitate easy handling.



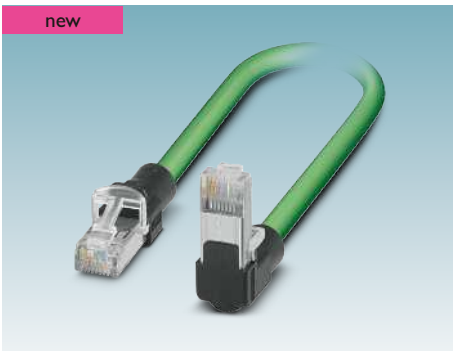
### SPE IP20 IDC connectors

The SPE IDC connectors in accordance with IEC 63171-2 allow you to assemble SPE cables from AWG 26 to AWG 22 in no time at all. The connection of just two wires with IDC insulation displacement connection without the need for special tools enables tailored, efficient, and rapid assembly.



### SPE IP20 patch cables

The new patch cables for Single Pair Ethernet conform to IEC 63171-2 and are designed for use in IP20 environments. The innovative SPE connection system from Phoenix Contact reduces the amount of space required and the installation effort involved, and also enables the last level of manufacturing to be integrated into Industrial Ethernet.



### RJ45 INDUSTRIAL patch cables

With a large selection of cable types and five cable outlet directions, the new molded RJ45 INDUSTRIAL patch cables for PROFINET and ETHERNET applications provide the ideal solution for a variety of applications. Along with flexible cables, versions for robot, drag chain, and railway applications are also available.



### USB patch cables

The new USB type A and type C patch cables are available in the versions USB 2.0 and USB 3.0 / USB 3.2 Gen. 1 in a variety of combinations. The high-quality items are optimal as service interfaces or for permanent transmission in protected applications.

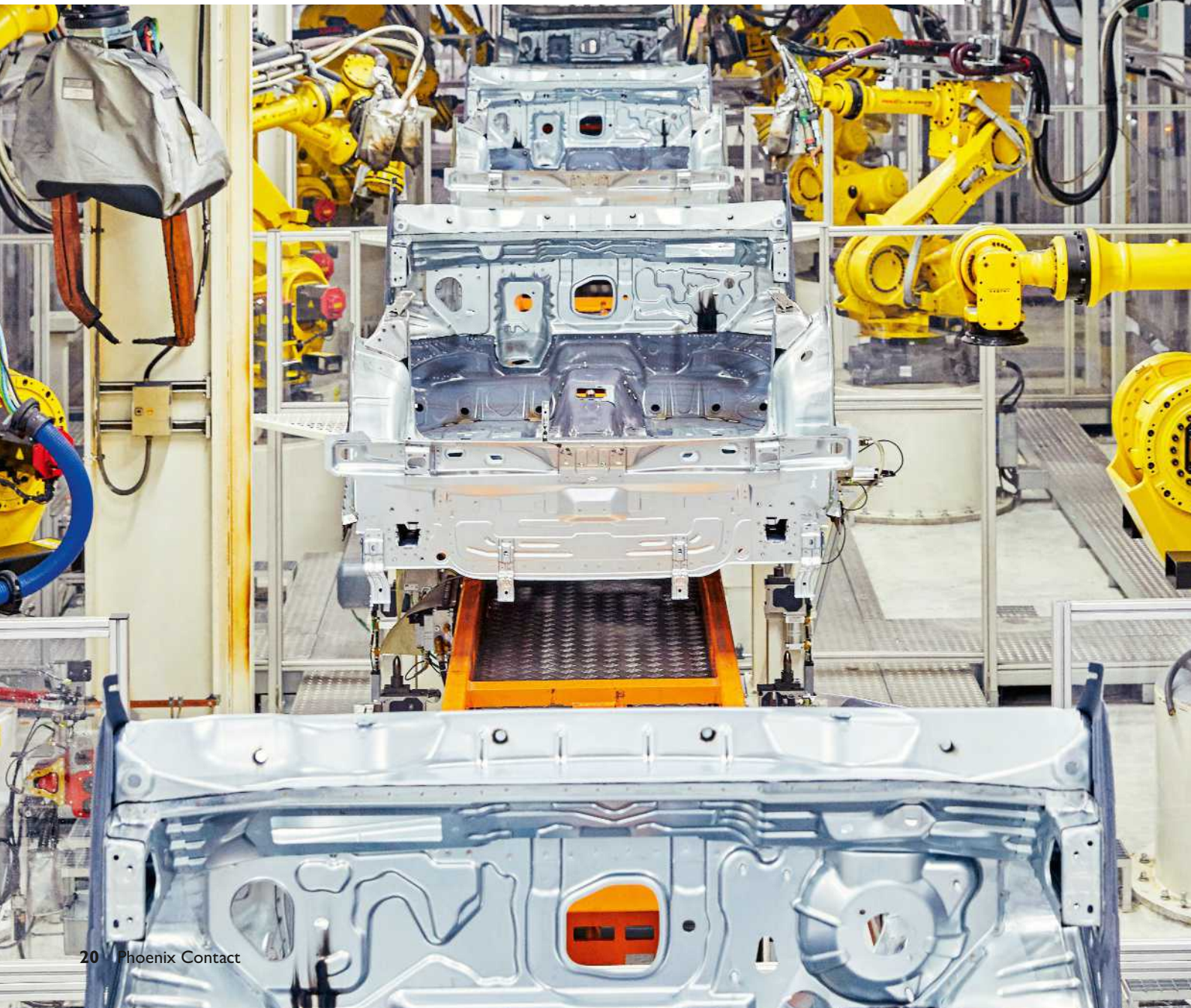


### HDMI patch cables

The new HDMI type A patch cables are ideal for the reliable transmission of audio and video data in protected applications. The high-quality items also feature the option of operating an Ethernet channel (HEC) via the HDMI cable.

# Solutions for industrial IP6X cabling

Special shielding concepts and torsion-resistant components are essential for the reliable operation of robots and conveying systems. Use Phoenix Contact's reliable and consistent product range for error-free data transmission.



## Product overview



### Version 14 RJ45 connectors

Push-pull ADVANCE is the new connector for PROFINET and Ethernet cabling in the high IP65/IP67 protection class. With its 360° shielding and the optional mechanical locking mechanism, it provides maximum safety in field applications.



### Version 14 FO connectors

With their robust design, IP65/IP67 protection class, and optional mechanical locking mechanism, the push-pull ADVANCE connectors provide maximum safety for FO cabling in the field.



### SPE network cables

The new SPE network cables are the Ethernet interface for the industrial field cabling of the future. Established inductive sensors can be connected to the Ethernet protocol easily using the standardized connectors in accordance with IEC 63171-5. With Advanced Shielding Technology, the patch cables with male or female contacts provide optimum protection against external interference.



### Push-pull power

The push-pull ADVANCE connectors are suitable for power transmission up to 24 V and 16 A. The IP65/IP67 connectors have a one-piece zinc die-cast housing with a large wiring space for outside cable diameters of 6.5 mm to 13 mm. The interlock prevents inadvertent removal.



### Push-pull panel-mount frames and outlets

The push-pull ADVANCE panel-mount frames for data connectors are made from robust die-cast zinc and are ideal for industrial applications. The IP65/IP67 panel-mount frames are designed for the connection of RJ45 or SC-RJ connectors. They therefore support flexible solutions for data transmission.

Push-pull outlets are the ideal solution for creating IP-protected interfaces from free cable ends.



### Coaxial IP6X patch cables

The new assembled coaxial cables are ideal for the transmission of WLAN, Bluetooth, LTE, and 5G signals. The use of lead-free materials ensures future-proof use. Cables with excellent attenuation properties with connectors of the N, SMA, and R-SMA series allow use in a variety of applications.

# Solutions for office and building cabling

Our connectors and patch cables allow you to realize secure and flexible cabling in your building. From copper-based transmission up to 10 Gbps through to FO-based transmission at 40 Gbps, Phoenix Contact provides the right solution for any application.



## Product overview



### RJ45 connectors

The ideal RJ45 connectors for PROFINET cabling up to 1 Gbps or Ethernet cabling up to 10 Gbps.

QUICKON fast connection technology for assembling without the need for special tools guarantees quick and easy installation in the field.

Together with the RJ45 connectors with crimp connection technology, Phoenix Contact provides the ideal solution for every application from CAT5 to CAT6<sub>A</sub>.



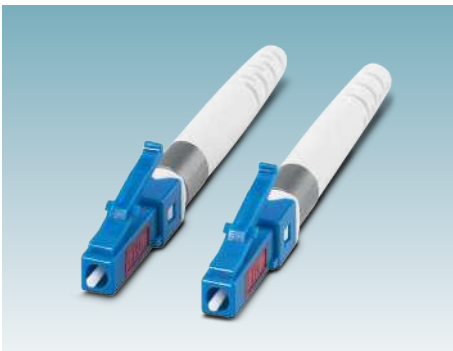
### RJ45 office/building patch cables

The new RJ45 patch cables for building applications are ideal for data cabling within enclosed spaces. With materials and approvals specifically intended for these applications, the patch cables enable permanently reliable communication at up to 10 Gbps.



### Copper cables by the meter

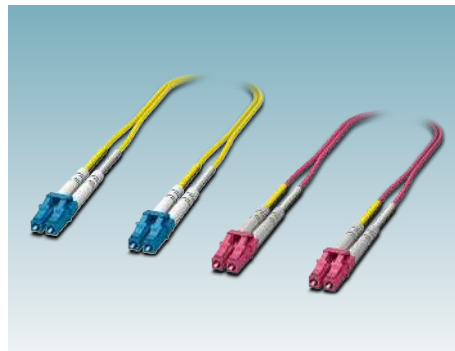
Phoenix Contact offers a comprehensive portfolio of cables by the meter for copper-based data transmission. The cables are available for various protocols and applications as well as with various materials and shielding.



### FO connectors

The new, innovative FO connectors feature high process reliability and are quick and easy to connect. Multimode and singlemode versions are available for quartz glass.

Furthermore, these connectors can also be re-used.



### FO singlemode/multimode patch cables

With exceptional quality, the FO patch cables from Phoenix Contact provide the ideal conditions for reliable data transmission with data rates of up to 40 Gbps. The huge variety of connector types and cable lengths enables an individual solution to be created for every application.



### FO cables by the meter

The comprehensive Phoenix Contact range of FO cables is ideal for your individual application. Phoenix Contact provides the perfect solution, whether multimode or singlemode, and for indoor or outdoor routing.

## Solutions for outdoor applications

High demands are placed on components used for outdoor data transmission, for example in fields such as telecommunications and renewable energy. Phoenix Contact provides special connectors for outdoor applications. These can withstand demanding environmental conditions with extreme temperature variations, humidity, UV rays, and vibrations.





## Product overview



### Multi-fiber FO connectors

Industrial-grade multi-fiber data connectors are ideally suited for real-time data transmission in intelligent power grids. The robust interfaces feature high-quality fiber optics which ensure stable bandwidths over long transmission distances.



### Version 6 FO connectors

The version 6 data connectors, developed in-house by Phoenix Contact, are a cost-effective option for IP-protected connectors. The practical latching wings ensure a reliable connection with the corresponding panel-mount frame, yet can be operated easily.



### Version 6 RJ45 connectors

The version 6 data connectors from Phoenix Contact are a cost-effective option for IP-protected connectors. The portfolio of packaged RJ45 connectors includes versions with IDC and crimp connection for CAT5 and CAT6<sub>A</sub> applications, as well as pre-assembled patch cables.



### Version 6 panel-mount frames and accessories

The version 6 panel-mount frames and further version 6 accessories are a convenient and simple option for creating a reliable IP-protected connection between version 6 data connectors and devices.



### Version 6 connection modules and inserts

The version 6 panel-mount frames can be extended to create the matching insert for your mating connector by adding the appropriate coupling modules for RJ45 and FO connections as well as the cable connection modules for copper connections.















### D-SUB IP6X housings


The IP-protected plastic housings for D-SUB connectors ensure a reliable connection for your interface, even under harsh conditions. The optional protective caps provide reliable protection even when a connector is not plugged in.

## Product application overview of data connectors

		Application	Solutions for industrial device connection	Solutions for the control cabinet	Solutions for industrial IP20 cabling	Solutions for industrial IP6X cabling	Solutions for office and building cabling	Solutions for outdoor applications
<b>Copper</b>								
<b>SPE</b>		Female	32					
		Male		35	37			
		Patch cable			37	40		
<b>RJ45</b>		Female/coupling	28-29	35		39		50-51
		Male			36	38	44	50
		Patch cable			36		44	
		Cable by the meter			36			
<b>HDMI</b>		Female	33					
		Patch cable			37			
<b>Coax</b>		Female	29					
		Patch cable				43		
<b>M12</b>		Female	32					
		Male				43		
<b>D-SUB</b>		Contact insert	30-31					
		Panel-mount frame/sleeve housing	31					





		Application	Solutions for industrial device connection	Solutions for the control cabinet	Solutions for industrial IP20 cabling	Solutions for industrial IP6X cabling	Solutions for office and building cabling	Solutions for outdoor applications
<b>Copper</b>								
<b>USB</b>		Female	33					
		Patch cable			37			
<b>Power</b>		Female				42		
		Male				42		

<b>FO</b>								
<b>POF, PCF, and GOF</b>		Coupling		35			45	50
		Male					45	50
		Patch cable					47	
		Cable by the meter					46	
		Transceiver	33					
<b>Distributor/splice boxes</b>		DIN rail		34				
		19 inch		34				
		M17 MPO/Q-ODC					48-49	

<b>Copper/FO</b>								
<b>Distributors</b>				35				

## Solutions for industrial device connection

RJ45 INDUSTRIAL PCB jacks				
 Web code: #2059				
	Wave / THR			
Alignment	90° horizontal		180° vertical	
Housing shield springs	Yes	No	Yes	No
Without LED	1099280	1091946	1099279	1091942
With LED	1099281	1091950	1099282	1091947
Without LED, short solder contacts	1321248	1321104	1321249	1321106
With LED, short solder contacts	1321246	1321101	1321247	1321102

RJ45 single-port PCB jacks						
 Web code: #2341						
	SMD		Wave		Wave / THR	
Alignment	180° vertical	90° horizontal		180° vertical	90° horizontal	
Locking clip		Upward	Downward		Upward	Downward
Without LED	1149611	1149882	1149874	1149872	1149870	1149868
With LED		1149873		1149871	1149867	1149866
Without LED, short solder contacts						1337238 1337240
With LED, short solder contacts						1337239 1337243

## RJ45 multi-port PCB jacks

new

**i** Web code: #2341



<b>Soldering process</b>	Wave				Wave / THR
<b>Alignment</b>	90° horizontal				
<b>RJ45 ports</b>	2		4		2
<b>Locking clip</b>	Upward	Downward	Upward	Downward	Upward
<b>Without LED</b>	<a href="#">1149858</a>	<a href="#">1149855</a>	<a href="#">1149851</a>	<a href="#">1149849</a>	
<b>With LED</b>	<a href="#">1149854</a>	<a href="#">1149852</a>	<a href="#">1149848</a>	<a href="#">1149616</a>	
<b>Without LED, short solder contacts</b>					<a href="#">1337251</a>
<b>With LED, short solder contacts</b>					<a href="#">1337254</a>

## Coaxial PCB connectors


new



**i** Web code: #2890










<b>Soldering process</b>	Wave / THR	Wave	Wave / THR	Wave
<b>Series</b>	SMA	SMA	R-SMA	R-SMA
<b>Version</b>	90°	90° bulkhead	90°	90° bulkhead
<b>Item number</b>	<a href="#">1340151</a>	<a href="#">1340153</a>	<a href="#">1340150</a>	<a href="#">1340152</a>

# Solutions for industrial device connection

D-SUB contact inserts						
 Web code: #0340	Housing size 1		Housing size 2		Housing size 3	
						
	Connection technology	Thread/ drill hole	Housing size	Designation	Item number	
		Solder connection with solder cup	3 mm hole	1	VS-09-ST-DSUB-EG	1688793
2				VS-15-ST-DSUB-EG	1688874	
3				VS-25-ST-DSUB-EG	1689899	
1				VS-09-BU-DSUB-EG	1688803	
2				VS-15-BU-DSUB-EG	1688887	
3				VS-25-BU-DSUB-EG	1689909	
	PCB connection with angled solder pins	M3 thread	1	VS-09-ST-DSUB-ER	1688382	
			2	VS-15-ST-DSUB-ER	1688081	
			3	VS-25-ST-DSUB-ER	1689873	
			1	VS-09-BU-DSUB-ER	1688405	
			2	VS-15-BU-DSUB-ER	1688120	
			3	VS-25-BU-DSUB-ER	1689886	
	PCB connection with angled solder pins and solder plate	2.5 mm hole	1	VS-09-ST-DSUB-LH-B	1654785	
			2	VS-15-ST-DSUB-LH-B	1654808	
			3	VS-25-ST-DSUB-LH-B	1654824	
			1	VS-09-BU-DSUB-LH-B	1654798	
			2	VS-15-BU-DSUB-LH-B	1654811	
			3	VS-25-BU-DSUB-LH-B	1654837	
	Crimp connection	3 mm hole	1	VS-09-ST-DSUB-CD-B	1688858	
			2	VS-15-ST-DSUB-CD-OG	1688939	
			3	VS-25-ST-DSUB-CD-B	1689954	
			1	VS-09-BU-DSUB-CD-B	1688861	
			2	VS-15-BU-DSUB-CD-OG	1688942	
			3	VS-25-BU-DSUB-CD-B	1689967	
	Crimp connection for high-density contacts	3 mm hole	1	VS-09-ST-DSUB-HD-CD-B	1655137	
			2	VS-15-ST-DSUB-HD-CD-B	1655195	
			3	VS-25-ST-DSUB-HD-CD-B	1655250	
			1	VS-09-BU-DSUB-HD-CD-B	1655124	
			2	VS-15-BU-DSUB-HD-CD-B	1655182	
			3	VS-25-BU-DSUB-HD-CD-B	1655247	
	IDC connection for flat-ribbon cables	3 mm hole	1	VS-09-ST-DSUB-FK	1688816	
			2	VS-15-ST-DSUB-FK	1688890	
			3	VS-25-ST-DSUB-FK	1689912	
			1	VS-09-BU-DSUB-FK	1688829	
			2	VS-15-BU-DSUB-FK	1688900	
			3	VS-25-BU-DSUB-FK	1689925	
	Solder connection for straight combination contacts with solder cup	3 mm hole	1	VS-09-ST-DSUB-2P	1688418	
			2	VS-15-ST-DSUB-3P	1688201	
			3	VS-25-ST-DSUB-5P	1689970	
			1	VS-09-BU-DSUB-2P	1688421	
			2	VS-15-BU-DSUB-3P	1688214	
			3	VS-25-BU-DSUB-5P	1689983	



D-SUB contact inserts					
 Web code: #0340	Connection technology	Thread/ drill hole	Housing size	Designation	Item number
	PCB connection for angled combination contacts with solder pin	4-40 UNC thread	1	VS-09-ST-DSUB-2P-LH	1655292
			2	VS-15-ST-DSUB-3P-LH	1655331
			3	VS-25-ST-DSUB-5P-LH	1655441
			1	VS-09-BU-DSUB-2P-LH	1655289
			2	VS-15-BU-DSUB-3P-LH	1655328
			3	VS-25-BU-DSUB-5P-LH	1655438



D-SUB contacts			
 Web code: #0676	Contact type	Designation	Item number
	Power contact with solder cup	VS-ST-LK-3,6/22,4/2,6	1688243
		VS-ST-LK-3,6/22,4/4,6	1688269
		VS-BU-LK-3,6/22,8/2,6	1688256
		VS-BU-LK-3,6/22,8/4,6	1688272
	Power contact for PCB mounting	VS-ST-LH-3,6/18/3,8	1655467
		VS-BU-LH-3,6/18/3,8	1655454
	Standard crimp contact AWG 28-26, 24-20	CUC-DSC-C1BAU-S/DSC28	1418784
		CUC-DSC-C1BAU-S/DSC24	1418786
		CUC-DSC-J1BAU-S/DSC28	1418787
		CUC-DSC-J1BAU-S/DSC24	1418788
	High-density crimp contact AWG 28-22	CUC-DSC-C1BAU-S/DSC22	1418789
		CUC-DSC-J1BAU-S/DSC22	1418790

D-SUB sleeve housing			
 Web code: #0340	Material, thread	Designation	Item number
	Metal-plated ABS, 4-40 UNC screw thread	CUC-DST-GPME-S/DSSC9	1419705
		CUC-DST-GPME-A/DSSC9	1419706
		CUC-DST-GPME-S/DSSC15	1419710
		CUC-DST-GPME-A/DSSC15	1419718
		CUC-DST-GPME-S/DSSC25	1419719
		CUC-DST-GPME-A/DSSC25	1419721
	Die-cast zinc, 4-40 UNC screw thread	CUC-DST-GZNI-S/DSSC9	1419722
		CUC-DST-GZNI-A/DSSC9	1419723
		CUC-DST-GZNI-S/DSSC15	1419724
		CUC-DST-GZNI-A/DSSC15	1419725
		CUC-DST-GZNI-S/DSSC25	1419727
		CUC-DST-GZNI-A/DSSC25	1419728

## Solutions for industrial device connection




SPE PCB and device connectors					
 Web code: #2341					
<b>Description</b>	SPE IP20 PCB connectors		SPE M8 device connectors		
<b>Soldering process</b>	Wave / THR		SMD	Wave / THR	
<b>Contact type</b>	Pin contact				
<b>Alignment</b>	180° vertical	90° horizontal	180° vertical		90° horizontal
<b>Without LED</b>	1163798	1163797	1215777	1163793	1163795
<b>With LED</b>		1215778			

M12 device connectors with PCB connection							
 Web code: #0222							
Network	Technology	Wave soldering		THR		SMD	
		Male	Female	Male	Female	Male	Female
Ethernet	CAT5, 4-pos.	1456514	1456527	1552214	1551451	1411956	1411950
	CAT, 8-pos.	1456530	1456543	1557578	1557549		
	CAT, 8-pos. hybrid		1407503		1405225		1411965
	CAT6 <sub>A</sub> , 8-pos.		1424177		1402457		1411964
PROFINET	4-pos.	1456556	1456569	1552175	1542648		
Sercos	4-pos.	1457979	1457966				
EtherCAT	4-pos.	1456556	1456569				
PROFIBUS	5-pos.	1456475	1456488				
INTERBUS	5-pos.	1456572	1456585				
CANopen EtherNet/IP	5-pos.	1456491	1456501				
CC-Link	4-pos.	1457856	1457869				
FOUNDATION Fieldbus	4-pos.	1457872	1457885				


M12 device connectors with assembled cable							
 Web code: #0222							
Category/version	CAT5, 93E	CAT5, 93B		CAT5, 93K		CAT5, 94H	CAT6 <sub>A</sub> , 94F
	Female	Male	Female	Male	Female	Female	Female
0.5		1427805	1437766	1410158	1419154	1407504	1424135
1		1437818	1437779	1419159	1419155	1407505	1424148
2	1405866	1437821	1437782	1428160	1419156	1407506	1424751
5		1437834	1437795	1437161	1419157	1407507	1424164







## Fiber-optic transceiver

new								
 Web code: #2893								
Type	SFP				SFP+			
Wavelength	850 nm	850 nm	1310 nm	1310 nm	850 nm	850 nm	1310 nm	1310 nm
Temperature range	-25 ... +70°C	-40 ... +85°C	-25 ... +70°C	-40 ... +85°C	-25 ... +70°C	-40 ... +85°C	-25 ... +70°C	-40 ... +85°C
Item number	1334209	1334210	1334212	1334213	1334214	1334215	1334218	1334219




## Cages and PCB connectors

new				
 Web code: #2893				
Form factor	SFP/SFP+			
Mounting	Press-In			SMD
Module slots	1	2	4	
Item number	1334220	1334221	1334222	1334224

## USB device connectors


new										
 Web code: #2888										
Version	USB 2.0				USB 3.2 Gen. 1			USB 3.2 Gen. 2		
Type	USB type A							USB type C		
Alignment	90° Horizontal	90° Vertical	180° Vertical	90° Horizontal	90° Horizontal	180° Vertical	90° Vertical	90° Horizontal	180° Vertical	90° Horizontal
Soldering process	Wave			SMD	THR			SMD/THR	SMD	
Item number	1332630	1332631	1332632	1332634	1332637	1332638	1332636	1332643	1332645	1332646

## HDMI device connectors


new		
 Web code: #2889		
Version	HDMI2.0	
Type	HDMI type A	
Alignment	90°	180°
Soldering process	SMD	
Item number	1332071	1332073

## Solutions for the control cabinet

### FO splice boxes, FDX 20 series, IP20

FO splice boxes, FDX 20 series, IP20						
<b>new</b>  <b>i</b> Web code: #0336						
	DIN rail mounting					
	6x LC duplex	12x LC duplex	6x SC duplex	6x ST duplex 6x SC duplex	6x ST duplex 6x ST duplex	6x LSH duplex
Without pigtails, multimode, polymer couplings	1019710	1019705	1019686			
Without pigtails, multimode, metal couplings	1343385		1343387	1343388	1343383	
Without pigtails, singlemode, polymer couplings	1343386		1084827			
Without pigtails, singlemode, metal couplings					1343384	
OM1 (G62.5/125 μm)	1343377		1343380	1019684		
OM2 (G50/125 μm)	1019713	1019709	1019700	1019683		
OM3 (G50/125 μm)	1343378		1343381			
OM4 (G50/125 μm)	1019712	1019708	1019698			
OS2 PC (E9/125 μm)	1019711	1019707	1019692	1019682		
OS2 APC (E9/125 μm)	1083665		1343382			1019680

### FO splice boxes, FDX 20 series, 19 inch mounting

FO splice boxes, FDX 20 series, 19 inch mounting						
<b>i</b> Web code: #0336						
	12x LC duplex	24x LC duplex	12x SC duplex	24x SC duplex	12x ST duplex	24x ST duplex
OM1 (G62.5/125 μm)					1145399	1145389
OM2 (G50/125 μm)	1145416	1145375	1145408	1145407	1145398	1145397
OM4 (G50/125 μm)	1145415	1145413	1145406	1145403		
OS2 (PC) (E9/125 μm)	1145411	1145409	1143631	1145400	1145395	1145392


## DIN rail adapters/marshalling panels

<b>i</b> Web code: #1643			
	Type	DIN rail adapter	Marshalling panel
	Gray, set item	1100077	
	Gray, unassembled	1041740	1422978
	Black, unassembled		1422979

## RJ45 modules for the DIN rail adapter

<b>i</b> Web code: #1643			
	Inserts	RJ45 coupling module	RJ45 cable connection with IDC connection
	CAT6 <sub>A</sub>	1041760	1417274










## FO coupling modules for the DIN rail adapter














<b>i</b> Web code: #1643		
	Inserts	FO coupling module
	LC duplex, singlemode APC	1041780
	SC simplex, singlemode APC	1041800
	MTP type A	1041820
	MTP type B	1041840

## IP20/IP6X control cabinet feed-through

<b>i</b> Web code: #0339					
	Protocol	Ethernet		PROFINET	Single Pair Ethernet
	Category	CAT5	CAT6 <sub>A</sub>	CAT5	CAT B
	180° version	1414396	1404549	1414398	-
	90° version	1414393	1404548	1414397	1358333

# Solutions for industrial IP20 cabling



RJ45 INDUSTRIAL connectors								
								
<b>Connection technology</b>	IDC insulation displacement connectors							
<b>Protocol</b>	PROFINET				Ethernet			
<b>Connection area</b>	AWG 23 ... AWG 22				AWG 26 ... AWG 24			
<b>Category</b>	CAT5			CAT6 <sub>A</sub>	CAT5			CAT6 <sub>A</sub>
<b>Cable outlet</b>	Straight	Upward	Downward	Straight	Straight	Upward	Downward	Straight
<b>Item number</b>	1421126	1421127	1421128	1149847	1421607	1421876	1421877	1149846

Cable overview: RJ45 INDUSTRIAL												
Cable by the meter	93A	93B	93C	93E	93K	93R	937	94B	94C	94D	94F	94S
												
<b>Transmission</b>	CAT5 (up to 100 Mbps)	CAT5 (up to 100 Mbps)	CAT5 (up to 100 Mbps)	CAT5 (up to 100 Mbps)	CAT5 (up to 100 Mbps)	CAT5 (up to 100 Mbps)	CAT5 (up to 100 Mbps)	CAT5 (up to 1 Gbps)	CAT5 (up to 1 Gbps)	CAT5 (up to 1 Gbps)	CAT6 <sub>A</sub> (up to 10 Gbps)	CAT6 <sub>A</sub> (up to 10 Gbps)
<b>Positions</b>	4	4	4	4	4	4	4	8	8	8	8	8
<b>Cable structure</b>	AWG22/1	AWG22/7	AWG22/19	AWG26/7	AWG22/7	AWG22/7	AWG22/7	AWG26/7	AWG26/7	AWG26/7	AWG26/7	AWG26/7
<b>Shielding</b>	SFTQ	SFTQ	SFTQ	SF/UTP	SFTQ	SFTQ	SFTQ	SF/UTP	SF/UTP	SF/UTP	S/FTP	S/FTP
<b>Sheath material</b>	PVC	PVC	PUR	PUR	PVC	PUR	Radox	PUR	PUR	PVC	PUR	PE-X
<b>Length [m]</b>	0.5 ... 400	0.5 ... 400	0.5 ... 400	0.5 ... 100	100	0.5 ... 100	0.5 ... 400	0.5 ... 400	0.5 ... 400	0.5 ... 100	0.5 ... 400	100
<b>Item number</b>	1416486	1417362	1417491	1417320	1419173	1417388	1402687	1417333	1417346	1416444	1417359	1423514




You will find detailed information on our cables in the technical data for the item in our web shop.

RJ45 INDUSTRIAL patch cables											
											
<b>Item number</b>	1247656	1247661	1247629	1247649	1247658	1247660	1247630	1247634	1247639	1387606	
<b>Cable length configurable between 0.5 and 50 m</b>	93B 93K 93M 93C 93R	93B 93K 93M 93C 93R	93B 93K 93M 93C 93R	93B 93K 93M 93C 93R	93B 93K 93M 93C 93R	93B 93K 93M 93C 93R	93B 93K 93M 93C 93R	93B 93K 93M 93C 93R	93B 93K 93M 93C 93R	94C	94F

### SPE IP20 patch cables

 Web code: #2240				
	<b>Transmission</b>	1 Gbps (up to 600 MHz)	<b>1.0 m</b>	<a href="#">1183807</a>
	<b>Sheath material</b>	PVC	<b>2.0 m</b>	<a href="#">1183808</a>
	<b>Cable structure</b>	1 x 2 x AWG 22	<b>3.0 m</b>	<a href="#">1183810</a>
	<b>Shielding</b>	SFTP	<b>5.0 m</b>	<a href="#">1183811</a>

### SPE IDC connectors in accordance with IEC 63171-2




		
 Web code: #2671		
	<b>Item number</b>	<a href="#">1343953</a>
	<b>Transmission</b>	1 Gbps (600 MHz)
	<b>Conductor cross-section</b>	AWG 26/7 ... AWG 22/7
	<b>Shielding</b>	360° zinc die-cast housing

### USB patch cables






							
 Web code: #2888							
	<b>USB version</b>	USB 2.0		USB 3.2 Gen. 1		USB 3.2 Gen. 2	
	<b>Head 1 USB type</b>	USB type A				USB type C	
	<b>Head 2 USB type</b>	USB type A			USB type C		
	<b>Sheath material</b>	PVC					
	<b>0.3 m</b>	<a href="#">1333130</a>	<a href="#">1333148</a>	<a href="#">1333158</a>	<a href="#">1333194</a>		
	<b>0.5 m</b>	<a href="#">1333131</a>	<a href="#">1333150</a>	<a href="#">1333160</a>	<a href="#">1333195</a>		
	<b>1.0 m</b>	<a href="#">1333136</a>	<a href="#">1333151</a>	<a href="#">1333165</a>	<a href="#">1333197</a>		
	<b>1.5 m</b>	<a href="#">1333137</a>	<a href="#">1333153</a>	<a href="#">1333166</a>	<a href="#">1333210*</a>		
	<b>1.8 m</b>	<a href="#">1333138</a>	<a href="#">1333155</a>	<a href="#">1333185</a>	<a href="#">1333211*</a>		
<b>2.0 m</b>	<a href="#">1333139</a>	<a href="#">1333156</a>	<a href="#">1333187</a>	<a href="#">1333213*</a>			
<b>3.0 m</b>	<a href="#">1333140</a>	<a href="#">1333157</a>	<a href="#">1333190</a>	<a href="#">1333214*</a>			
<b>5.0 m</b>	<a href="#">1333145</a>						





\* USB 3.2 Gen. 1





### HDMI patch cables

						
 Web code: #2889						
	<b>HDMI version</b>	HDMI high speed with Ethernet channel				
	<b>Head 1 HDMI type</b>	HDMI type A				
	<b>Head 2 HDMI type</b>	HDMI type A				
	<b>0.3 m</b>	<a href="#">1332077</a>	<b>1.5 m</b>	<a href="#">1332081</a>	<b>5.0 m</b>	<a href="#">1332084</a>
<b>0.5 m</b>	<a href="#">1332078</a>	<b>2.0 m</b>	<a href="#">1332082</a>	<b>7.5 m</b>	<a href="#">1332086</a>	
<b>1.0 m</b>	<a href="#">1332079</a>	<b>3.0 m</b>	<a href="#">1332083</a>			

# Solutions for industrial IP6X cabling

Version 14 RJ45 connectors							
							
<b>Connection technology</b>	IDC insulation displacement connector						Crimp
<b>Cable outlet</b>	Straight		Downward		Upward		Straight
<b>Connection</b>	AWG 26 ... AWG 24	AWG 23 ... AWG 22	AWG 26 ... AWG 24	AWG 23 ... AWG 22	AWG 26 ... AWG 24	AWG 23 ... AWG 22	AWG 26 ... AWG 24
<b>CAT5</b>	1422661	1422664	1422662	1422665	1422663	1422667	
<b>CAT6<sub>A</sub></b>	1149841	1149843					1422108

Version 14 FO connectors			
			
<b>Fiber type</b>	POF		
<b>Material</b>	Die-cast zinc		
<b>Cable outlet</b>	Straight	Downward	Upward
<b>Item number</b>	1407896	1407902	1408028

Version 14 panel-mount frames and inserts				
				
<b>Panel cutout</b>	Rectangular		Circular	
<b>Panel-mount frame, unassembled</b>	For PCB modules		For AVAGO transceivers	For Freenet modules
<b>Item number</b>	1413963		1413981	1405222
<b>Panel-mount frame, assembled</b>	CAT6 <sub>A</sub> cable connection	CAT6 <sub>A</sub> coupler module	SC-RJ coupler	SC-RJ coupler
<b>Item number</b>	1413961	1413962	1413964	1405235

Version 14 accessories					
					
<b>Type</b>	Protective cap	Protective cover	Protective cover	Spacer	45° adapter
<b>Accessories for</b>	Connectors	Panel-mount frames	Panel-mount frames	Panel-mount frames	Panel-mount frames
<b>Degree of protection</b>	IP65	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67
<b>Item number</b>	1405316	1413985	1413970	1413989	1413988

### Version 14 RJ45 modules and couplings

 Web code: #0325				
<b>Type</b>	RJ45 cable module for V14 panel-mount frames	RJ45 coupler module for V14 panel-mount frames	RJ45 V14 coupling	SC-RJ V14 coupling
<b>CAT5</b>	<a href="#">1652936</a>		<a href="#">1405183</a>	
<b>CAT6<sub>A</sub></b>	<a href="#">1418984</a>	<a href="#">1086111</a>		
<b>FO</b>				<a href="#">1405206</a>




### Version 14 multi-ports
















 Web code: #0325			
<b>Connection</b>	Power	RJ45	Power/RJ45
<b>Connection</b>	AWG 18 ... AWG 13	AWG 26 ... AWG 22	AWG 18 ... AWG 13 AWG 26 ... AWG 22
<b>Cable module</b>	<a href="#">1403681</a>	<a href="#">1403678</a>	<a href="#">1403682</a>
<b>Coupling</b>	<a href="#">1403684</a>	<a href="#">1403685</a>	

### Terminal outlets

 Web code: #0325			
<b>Connection</b>	RJ45/RJ45	M12 D-coded/ M12 D-coded	M12 A-coded/ M12 A-coded
<b>Item number</b>	<a href="#">1404281</a>	<a href="#">1404294</a>	<a href="#">1404304</a>















## Solutions for industrial IP6X cabling

IP67 (M8) SPE network cables in accordance with IEC 63171-5						
 Web code: #2670						
	SPE network cable, PVC			SPE network cable, PUR		
Contact type	Male - female	Female - female	Male - male	Male - female	Female - female	Male - male
Type	SPE-T1-M8MSM/ 2,0-97B/M8FSF	SPE-T1-M8FSF/ 2,0-97B/M8FSF	SPE-T1-M8MSM/ 2,0-97B/M8MSM	SPE-T1-M8MSM/ 2,0-99B/M8FSF	SPE-T1-M8FSF/ 2,0-99B/M8FSF	SPE-T1-M8MSM/ 2,0-99B/M8MSM
Item number	1217524 (2 m)	1217530 (2 m)	1217526	1150575 (2 m)	1217320 (2 m)	1217316

IP65/67 PROFINET cables up to 100 Mbps, variable cable length								
 Web code: #0326	      							
	Free cable end	RJ45 connector, straight, IP20	RJ45 connector, angled	RJ45 connector, version 14, metal	RJ45 connector, version 14, plastic	M12 male, straight	M12 male, angled	
	RJ45 connector, version 14, metal	1411859	1411863	1411866		1408636	1408610	
	RJ45 connector, version 14, plastic	1411860	1411864		1411867	1408635	1408609	
	M12 male, straight	1408640	1408639	1408638	1408636	1408635	1408634	1408608
	M12 male, angled	1408633	1408632	1408631	1408628	1408626	1408625	1408624
	M12 female, straight	1408623	1408622	1408621	1408619	1408618	1408617	1408616
	M12 female, angled	1408615	1408613	1408612	1408610	1408609	1408608	1408607
	M12 flush-type female connector, rear mounting, limited cable length	1 m 1437779	0.5 m 1404367					
		2 m 1437782	1 m 1404368					
		5 m 1437795	5 m 1404369					






### IP65/67 Ethernet cables up to 1 Gbps, variable cable length




 <b>Web code: #0327</b> Up to 1 Gbps, IP65/IP67, variable cable length								
		Free cable end	RJ45 connector, IP20	RJ45 connector, version 6, IP20	RJ45 connector, version 14, metal	RJ45 connector, version 14, plastic	M12 male, straight	M12 male, angled
	RJ45 connector, version 6	1411839	1411843	1411846			1408679	1408671
	RJ45 connector, version 14, metal	1411840	1411844		1411847		1408678	1408670
	RJ45 connector, version 14, plastic	1411841	1411845			1411848	1408677	1408668
	M12 male, straight	1408682	1408681	1408679	1408678	1408677	1408676	1408667
	M12 male, angled	1408675	1408674	1408671	1408670	1408668	1408667	1408666
	M12 flush-type female connector, rear mounting, cable length limited to 5 m	1407877	1412082		1412503	1412590		

### IP65/67 Ethernet cables up to 10 Gbps, variable cable length




 <b>Web code: #0328</b>							
		Free cable end	RJ45 connector, IP20	RJ45 connector, version 6, plastic	RJ45 connector, version 14, metal	RJ45 connector, version 14, plastic	M12 male, straight
	RJ45 connector, version 6	1415639	1414321	1414322			
	RJ45 connector, version 14, metal	1415637	1411855		1414323		
	RJ45 connector, version 14, plastic	1415638	1411856			1414324	
	M12 male, straight	1408648	1408647		1408646	1408645	1408644
	M12 flush-type female connector, rear mounting, limited cable length	1 m 1424148					
		2 m 1424151					
		5 m 1424164					






## Solutions for industrial IP6X cabling

Version 14 power connectors				
 Web code: #0341				
Connection	AWG 18 ... AWG 13			
Coding	Fixed		Variable	
External cable diameter	6.5 mm ... 9 mm	9 mm ... 13 mm	6.5 mm ... 9 mm	9 mm... 13 mm
Item number	1421785	1421783	1425515	1425514



Assembled version 14 panel-mount frames			
 Web code: #0341			
Panel cutout	Rectangular		
Connection	AWG 18 ... AWG 13		
Assembly	Fixed coding	Variable coding	Not assembled, for PCB connection
Item number	1608249	1408235	1608087

Push-pull power contact inserts			
 Web code: #0321			
Alignment	90° horizontal	180° vertical	
Item number	1657915	1609565	

Version 14 power distributors			
 Web code: #0341			
Cable	5 x 2.5 mm <sup>2</sup> / cable length 0.2 m		
Type	Y distributor		H distributor
Connection	2x push-pull / 1x push-pull		2x push-pull / 2x push-pull
Item number	1404799		1405387

Version 14 power accessories				
 Web code: #0341				
Type	Protective cap	Coding profile	Protective cover	Coding section
Accessories for	Connectors	Connectors, variable	Panel-mount frames	Panel-mount frames, variable
Degree of protection	IP65		IP65/IP67	
Item number	1405329	1734634	1424989	1734401

## M12 connectors

 Web code: #0338								
	Push-in connection		IDC connection		Piercecon connection		Screw connection	
	Straight	Angled	Straight	Angled	Straight	Angled	Straight	Angled


### Networks

Ethernet	CAT5, 4-pos.	Male			1411066	1553624			1521261	
		Female			1411069	1553637				
	CAT5, 8-pos.	Male			1421679	1553653				
		Female			1421680	1553666				
	CAT6 <sub>A</sub> , 8-pos.	Male			1411043		1417430	1417443		
		Female			1414586					
PROFINET	Male	1424682	1424684	1411068	1554539			1521261		
	Female	1424686	1424685	1411071	1554542					
VARAN	Male			1429130	1429156					
	Female			1429143	1429169					






### Fieldbuses

INTERBUS	Male	1424674	1424675					1507764	1430417
	Female	1424676	1424677					1507777	1430420
PROFIBUS	Male	1424678	1424679	1413931				1507764	1430417
	Female	1424680	1424681	1413932				1507777	1430420
CANopen®, DeviceNet™	Male	1424670	1424671	1422759				1508352	
	Female	1424672	1424673	1422760				1508365	
CC-Link	Male	1424699							
	Female	1424700							

## Assembled coaxial cables

 Web code: #2890										
	Head 1	N (m)	N (f) BH	N (m)	N (f) BH	N (m)	SMA (m)	SMA (m)	SMA (m)	SMA (f)
Head 2	N (m)	R-SMA (m)	R-SMA (m)	SMA (m)	SMA (m)	SMA (m)	SMA (m)	SMA (m)	SMA (f)	
0.5 m	1340122	1340129	1340130	1340138	1340139					
1.0 m			1340131		1340143					
1.5 m			1340133							
2.0 m			1340135							
3.0 m	1340123		1340136		1340144					
5.0 m	1340124		1340137		1340147			1340149		
10 m	1340125							1340148		
15 m	1340126									
30 m	1340127									

## Solutions for office and building cabling

RJ45 connectors				
				
<b>i</b> Web code: #0330				
<b>Protocol</b>	Ethernet		PROFINET	Ethernet
<b>Connection technology</b>	IDC insulation displacement connectors			Crimp
<b>Connection area</b>	AWG 26 ... AWG 24	AWG 26 ... AWG 23		AWG 22
<b>CAT5</b>		1656725	1658008	1658435
<b>CAT6<sub>A</sub></b>	1419001			1414395

RJ45 office/building patch cables			
			
<b>i</b> Web code: #2676			
<b>Transmission</b>	CAT5 (up to 1 Gbps)	CAT6 <sub>A</sub> (up to 10 Gbps)	
<b>Sheath material</b>	LSZH		
<b>Cable structure</b>	2x4xAWG26/7		
<b>Shielding</b>	S/UTP	S/FTP	
<b>Length</b>	0.3 m	1227558	1227572
	0.5 m	1227559	1227573
	1.0 m	1227560	1227575
	1.5 m	1227561	1227578
	2.0 m	1227562	1227580
	3.0 m	1227563	1227581
	5.0 m	1227564	1227583
	7.5 m	1227565	1227585
	10.0 m	1227566	1227588
	12.5 m	1227567	1227590
	15.0 m	1227570	1227591
20.0 m	1227571	1227593	




### FO connectors – POF

 Web code: #0332					
	Connectors		Tools		
	Type	SC-RJ	F-SMA	SC-RJ	F-SMA
	Item number	1654879	2799720	1658820	2744131








### FO connectors – PCF

 Web code: #0332								
	Type	SC-RJ	SC-RJ	ST	SC	SC-RJ	ST	F-SMA
	Cable diameter	ø (2.2 mm)				ø (2.9 mm)		
	Connector	1411304	1404087	2313782	2313779	1654866	2708481	2799487
	Tool set	1411051	2708876	2708465	2708876	2708876	2708465	2799526



### FO connectors – GOF


 Web code: #0332			
	Type	LC duplex	SC duplex
	MM	1089521	1089518
	SM PC	1089520	1089517
	SM APC	1089519	1089516
	Tool set	1089515	


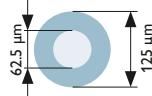

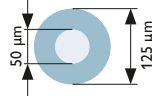

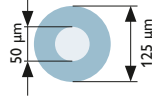

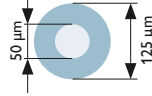


### FO couplings – GOF, PCF, and POF

 Web code: #2678								
	Description	LC duplex	SC duplex	ST duplex	ST duplex SC duplex	ST simplex	FSMA	SC-RJ
	Multimode	1207355	1208081					
	Multimode metal	1208069	1208083	1208094	1208096	1208099	2799416	1652978
	OM3	1208070	1208084					
	OM4	1208072	1208085					
	Singlemode PC	1208073	1208086					
	Singlemode APC	1208077	1208088					
	Singlemode			1208095	1208098	1208100		1652978

# Solutions for office and building cabling

FO pigtails						
 Web code: #2678						
Description	OM1	OM2	OM3	OM4	OS2 UPC	OS2 APC
LC	1250833	1208101	1208103	1208104	1208105	1208106
SC	1209107	1208109	1208111	1208112	1208113	1208114
ST	1208117	1208118			1208119	

FO cables by the meter										
<b>new</b>										
Web code: #2894										
Type	Bundled conductors									
Fiber category	OM1	OM2	OM3	OM4	OS2	OM1	OM2	OM3	OM4	OS2
Number of fibers	12					24				
Item number	1286223	1286222	1286221	1286220	1286219	1286217	1286215	1286214	1286211	1286210
										
Type	Full breakout				Mini breakout		Zip cord			
Fiber category	OM2			PCF	OM4		OM1	OM2	OM3	OM4
Number of fibers	2	2	4	2	12	24	2			
Item number	1406429	1406430	1406431	1406432	1286209	1286208	1411566	1411561	1411563	1411564

	Zip cord fiber classes	Sheath color	Fiber category	Typical range	Typical wavelength	Fiber structure
Multimode		Orange	OM1	1000Base-SX: min. 350 m 1000Base-LX: min. 550 m	850 nm 1300 nm	
		Orange	OM2	1000Base-SX: min. 525 m 1000Base-LX: min. 1000 m	850 nm 1300 nm	
		Aqua	OM3	1000Base-SX: min. 1000 m 1000Base-LX: min. 550 m 10GBase-SX: min. 300 m	850 nm 1300 nm	
		Heather violet	OM4	1000Base-SX: min. 1040 m 1000Base-LX: min. 600 m 10GBase-SX: min. 550 m	850 nm 1300 nm	
Singlemode		Yellow	OS2	10GBase-LR: min. 10 km 10GBase-ER: min. 40 km	1310 nm 1550 nm	

## FO patch cables (length: 1.0 m\*)


 Web code: #0333						
<b>Description</b>	<b>OM1</b>			<b>OM2</b>		
<b>Type</b>	LC	SC	ST	LC	SC	ST
<b>LC</b>	1146497	1146498	1146499	1115633	1115607	1115588
<b>SC</b>	1146498	1146504		1115607	1115536	1115574
<b>ST</b>	1146499		1146501	1115588	1115574	1115560
						
<b>Description</b>	<b>OM3</b>			<b>OM4</b>		
<b>Type</b>	LC	SC	ST	LC	SC	ST
<b>LC</b>	1185473	1185480		1115625	1115601	
<b>SC</b>	1185480	1185485		1115601	1115424	
<b>ST</b>						
						
<b>Description</b>	<b>OS2 UPC</b>			<b>OS2 APC</b>		
<b>Type</b>	LC	SC	ST	LC	SC	ST
<b>LC</b>	1115636	1115618	1115596	1115630	1115613	
<b>SC</b>	1115618	1115550	1115582	1115613	1115544	
<b>ST</b>	1115596	1115582	1115565			

\* Further available length versions: 0.5 m, 1 m, 2 m, 3 m, 5 m, 10 m configurable




Go directly to the online configurator

new

Simply enter the web code into the search field on our website.

 Web code: #1975

## Solutions for outdoor applications

FO multi-fiber patch cables (plug)							
 Web code: #1623							
		ODC 4-pos.	Q-ODC 12-pos.	Q-ODC 24-pos.	M17 4-pos.	M17 12-pos.	M17 24-pos.
Length	5 m					1018494	
	10 m	1415228	1415353	1007606	1087168	1018526	1087149
	15 m	1419720	1415229	1007608			
	20 m	1415347	1415354	1007629	1087167	1019181	1087150
	25 m	1419733	1419692	1007609	1183913	1184007	1183986
	30 m	1419734	1419693	1007632	1087166	1018528	1087152
	35 m	1419735	1419694	1007612	1183914	1184008	1183987
	40 m	1415348	1415355	1007803	1087165	1018529	1087153
	45 m	1419737	1419695	1007621	1183915	1183993	1183988
	50 m	1419738	1419696	1007602	1087164	1018530	1087154
	55 m	1419740	1419707		1183958	1184009	1183989
	60 m	1415349	1415230	1007626	1087163	1018554	1087148
	65 m	1419743	1419708			1184011	1183991
	70 m	1419744	1419709	1007635	1087162	1018556	1087155
	75 m	1419745	1419711			1184012	1183992
	80 m	1415350	1415356	1007627	1087161	1018557	1087156
	85 m	1419747	1419712				
	90 m	1419748	1419714	1007636	1087160	1018559	1087127
	95 m	1419749	1419715				
	100 m	1415352	1415357	1007809	1087158	1018560	1087125
	105 m	1421802	1421800				
	110 m	1419750	1419716		1087157	1126995	1087128
	115 m	1421823	1421806				
	120 m	1419751	1419717	1007638	1087146	1127010	1087130
	125 m	1421824	1421807				
	130 m	1421825	1421808		1087145	1127004	1087132
	135 m	1421826	1421809				
	140 m	1421827	1421810	1007808	1087144	1127003	1087123
	145 m	1421828	1421811				
	150 m	1421829	1421812		1087430	1127002	1087133
	155 m	1421830	1421813				
	160 m	1421831	1421814	1007640	1087143	1127001	1087134
	165 m	1421832	1421815				
170 m	1421833	1421816		1087142	1127000	1087122	
175 m	1421834	1421817					
180 m	1421835	1421818	1007807	1087141	1150514	1087120	
185 m	1421836	1421819					
190 m	1421837	1421820		1087139	1150515	1087117	
195 m	1421838	1421821					
200 m	1421839	1421822	1007641	1087138	1018562	1087116	



## FO multi-fiber socket cables, ODC and Q-ODC

**i** Web code: #0337



		ODC 4-pos.		Q-ODC 12-pos.	Q-ODC 24-pos.
		2x LC duplex	4 x ST	6x LC duplex	12x LC duplex
Length	0.6 m	1419753		1419752	1007804
	1 m	1415231		1415232	
	2 m	1419656	1419620	1419643	1007805

## FO multi-fiber socket cables, M17

**i** Web code: #1623



		M17 4-pos.		M17 12-pos.	M17 24-pos.
		2x LC duplex	4 x ST	6x LC duplex	12x LC duplex
Length	0.6 m	1087118	1126996	1018563	1087113
	1 m	1087115	1087108	1018564	1087111
	2 m	1087114	1087107	1018567	1087110

## FO multi-fiber connection boxes and modules


new

**i** Web code: #1626









		ODC 4-pos.	Q-ODC 12-pos.	Q-ODC 24-pos.	M17 4-pos.	M17 12-pos.	M17 24-pos.
Rack unit	1U, 2 sockets	1076851	1419973	1081340	1087121	1018570	1087112
	1U, 1 socket	1076661	1419974	1081342	1087135	1018568	1087109
	3U, 1 socket		1419978			1018571	
	DIN rail, 1 socket	1208054	1019679	1208056	1208051	1208052	1208053
19 in. mounting frame, 3U				1419976			
Central plate, 3U				1419977			






# Solutions for outdoor applications

Version 6 RJ45 connectors				
 Web code: #0329				
<b>Connection technology</b>	IDC	Crimp	IDC	Crimp
<b>External cable diameter</b>	5 mm ... 8.5 mm			
<b>Connection area</b>	AWG 26 ... AWG 23	AWG 27 ... AWG 24	AWG 26 ... AWG 23	AWG 27 ... AWG 24
<b>Color</b>	Gray		Black	
<b>CAT5</b>	1656990	1414383*	1658493	1414408*
<b>CAT6<sub>A</sub></b>		1414406*		1414410*





\* Tool 1653265 required.

Version 6 FO connectors	
 Web code: #0329	
<b>Connection</b>	FO
<b>Fiber type</b>	POF
<b>Item number</b>	1657009








Version 6 couplings and terminal outlets			
 Web code: #0329			
<b>Description</b>	Coupling		Terminal outlet
<b>Connections</b>	1 x RJ45/RJ45	SC-RJ SC-RJ	2 x RJ45
<b>Gray</b>	1689268	1410050	
<b>Black</b>	1658684		1404278

Version 6 panel-mount frames				
 Web code: #0329				
<b>Panel cutout</b>	Circular		Rectangular	
<b>Color</b>	Gray	Black	Gray	Black
<b>For Keystone modules</b>	1689844	1658053	1689080	1658642
<b>For Freenet modules</b>	1653744	1658668		
<b>For PCB modules</b>			1689446	1658655





## RJ45 jack insert

 Web code: #0329					
	Cable module	Coupler		PCB module	
	Freenet	Keystone	Freenet		
	CAT5	<a href="#">1652936</a>	<a href="#">1689064</a>		<a href="#">1653087</a>
	CAT6 <sub>A</sub>	<a href="#">1418984</a>	<a href="#">1086108</a>	<a href="#">1086111</a>	

## Version 6 USB device connectors

 Web code: #0335							
	Panel-mount frame, assembled		Panel-mount frame, unassembled	Freenet modules		Solder connection	
	USB A / USB B	USB B / USB A	Freenet	USB A	USB B	M12 / USB mini	
	Item number	<a href="#">1411904</a>	<a href="#">1411905</a>	<a href="#">1653744</a>	<a href="#">1653854</a>	<a href="#">1653867</a>	<a href="#">1440711</a>

## Version 6 accessories

 Web code: #0329						
	Protective cover, for covering the contact insert in the panel-mount frame		Protective cover, for covering the pin inserts in the sleeve housing		Kink protection for SC-RJ sleeve housing	
	Color	Gray	Black	Gray	Black	Gray
	Item number	<a href="#">1652606</a>	<a href="#">1658066</a>	<a href="#">1653757</a>	<a href="#">1417840</a>	<a href="#">1655056</a>

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