

SPE (Single Pair Ethernet) Products

Quality without compromises



Pushing Performance
Since 1945



Single Pair Ethernet (SPE) - Connectors for electrical and electronic equipment - Overview of IEC standards

	IEC 63171-1	IEC 63171-2	IEC 63171-4	IEC 63171-5	IEC 63171-6	IEC 63171-7
Manufacturer	Commscope	PHOENIX	BKS	PHOENIX, binder	HARTING, TE, binder	PHOENIX, TE
Type	LC-Style	rectangular	square	M8/M12	T1 Industrial Style IP20/ M8/ M12 und M8 Hybrid (Screw-Push Pull- and Snap-In-locking)	M12 Hybrid
#Pairs	1	1	1	1	1	1
Protection class	IP20	IP20	IP20	IP67	IP20 / IP67	IP67

The IEC 63171-3 standard has been withdrawn.

Overview: Advantages of SPE

- Open communication protocol
- Part of the IIoT (Industrial Internet of Things)
- Real-time communication with TSN
- Up to 10 GBit/s for automation networks up to 1000 meters long
- Remote power supply via PoDL - Power over Data Line
- Standardized interface for planning reliability
- High-performance data transmission with simultaneous power supply to end devices

Our Portfolio - Proven Quality.

SPE products of our manufacturers

Single Pair Ethernet (SPE) connectors provide a more cost-effective alternative to traditional Ethernet connections. Both the higher data transmission speed and the space-saving design of the connectors are advantages. These benefits make SPE connections an optimal solution for Industry 4.0 or IIoT (Industrial Internet of Things).

binder Products

According to the specifications of the IEC standards 63171-5 and 63171-6 for the Single-Pair Ethernet, binder develops compact solutions of the M8 design for data and power transmission in the factory and process automation environment.

Features:

- M8 field-terminable
- SPE according to IEC 63171-5 resp. IEC 63171-6, 100 Mbit/s
- Number of poles: 2-, 4-pole
- protection class: IP67
- Power-over-Data-Line or hybrid connector

[more informationen](#)



HARTING Products

The interface T1 Industrial, specially developed for SPE, is for industrial applications:

- standardized according to IEC 63171-6
- specified by ISO/IEC SC25 WG3 and TIA42 as industrial interface
- matched to cable and transmission standards according to IEC 61156-x and IEEE 802.3

The following products are available:

- Printed circuit board connectors
- Adapter plates
- Cable Connectors
- Industrial Ethernet Switches

[more informationen](#)



Applications

- **Building Automation**
- **Industrial Automation**
- **Robotics**
- **Railroad industry**
- **Lighting**

Technical Data:

- Standardized connectors according to IEC 63171 standards
- Transmission rates of up to 10 Mbit/s at up to 1000 m
- Transmission distances of 40 m at up to 1 Gbit/s
- Power up to 52 W
- Plug & Play
- Single and multiports
- Continue to use existing cabling
- Transmission standards according to IEEE 802.3

PHOENIX CONTACT Products

The following products are available:

- IP20 connectors and patch cords enable efficient data transmission in numerous sectors and industries - such as factory and building automation.
- M8 device connectors transmit data and power quickly and securely from the OT to the IT level.
- PCB connectors
- Cable connectors
- M12 Hybrid connectors
- Managed Switches

[more informationen](#)



TE Connectivity Products

The following products are available:

- IP20 and IP67 connector solutions
- Data solution with PoDL function up to 50 W
- Hybrid solution for power and data (power levels beyond PoDL 24 V up to 100 W and 48 V up to 400 W) for easy power distribution using existing power supply systems
- PCB connectors
- Cable connectors

[more informationen](#)



Image sources: *HARTING, **PHOENIX CONTACT, ***TE Connectivity

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