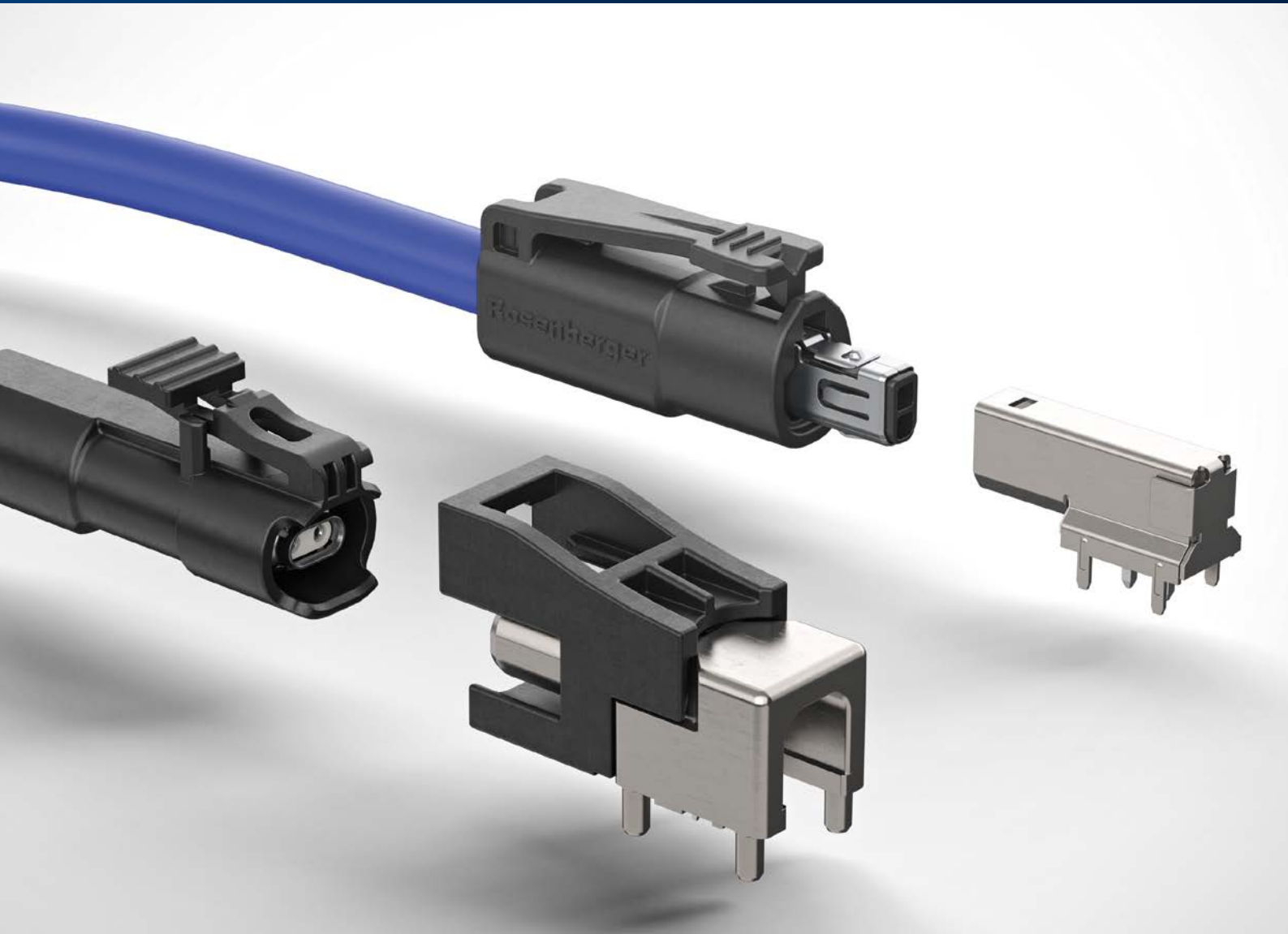
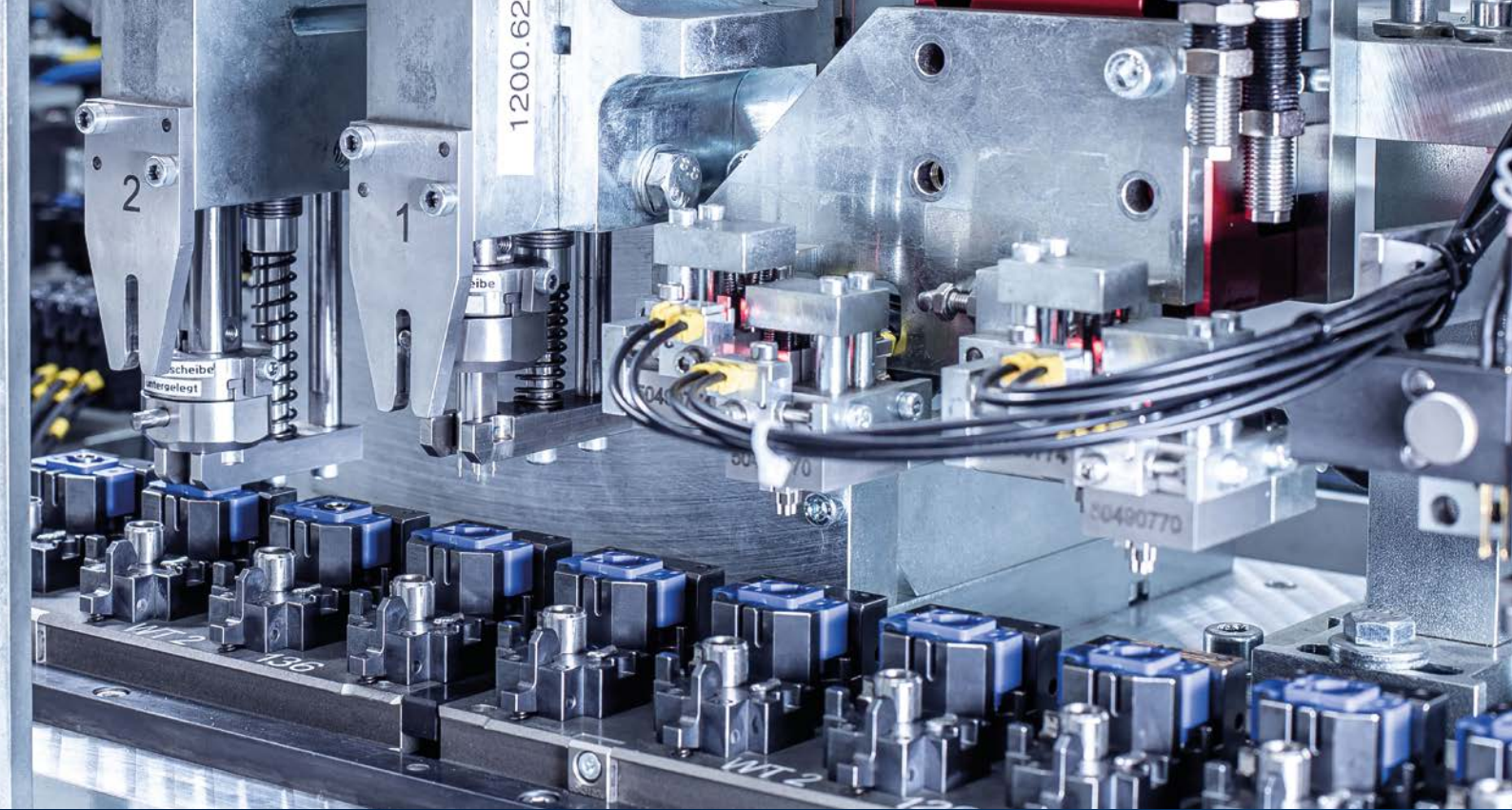


Connectivity Solutions for Industrial Applications

## Single Pair Ethernet (SPE) Connectors

MEDICAL & INDUSTRIES





## Single Pair Ethernet Connectors

### SPE – One Wire Pair for an Infinite Number of Applications

Single Pair Ethernet (SPE) sets new standards in intelligent communication architecture. Using power over data line (PoDL), parallel high-performance data and power transmission is supported via just one Ethernet wire pair.

### Driven by Automotive Electronics

The development of Single Pair Ethernet systems has been primarily powered in the automotive industries. Future technologies, e.g. autonomous driving, require connectivity solutions which ensure high-reliable transmission of huge data rates in tightest spaces.

For automotive markets, Rosenberger has successfully developed MTD® and H-MTD® connector series – space-saving, lightweight and robust differential connector systems satisfying today's mechanical and environmental requirements.



# SPE Connectors for Industrial Applications

Based on automotive connectors Rosenberger has expanded the product range for industrial Ethernet applications and provides two innovative SPE connector series.

## RoSPE-HMTD | Product Features

- Space saving, lightweight and robust differential SPE connectors
- Based on H-MTD® automotive series
- Optimized with housings for industrial applications
- 2-pin powerful data transmission up to 20 Gbps
- Data and power transmission
- Power transmission up to 60 W, usable power 50 W
- 1-Pair power over Data Lines (PoDL)
- Fully automated production, suitable for low-cost applications

## Product Portfolio

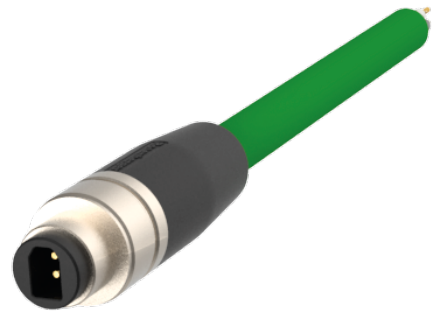
- Cable connectors IP 20 (f)
- Cable connectors IP 67 (f)
- Cable connectors IP 67 with catch spring (f)
- Cable connectors IP 67 with screw cap (f)
- PCB connectors IP 20, right angle (m)
- PCB connectors IP 67, right angle (m)
- PCB connectors IP 67, straight (m)

Specific types on request



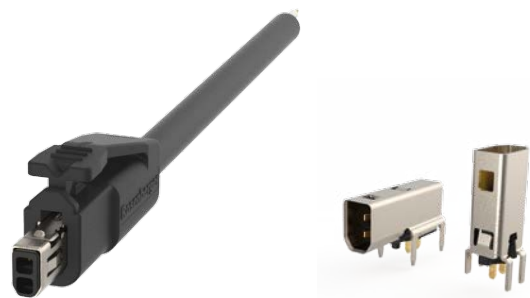
## RoSPE-Industrial | Product Features

- Industrial SPE connectors
- 2-pin powerful data transmission up to 10 Gbps
- Mating cycles > 750
- 360° shielded twisted-pair connector
- Very small dimensions – smallest SPE connector in the market
- Integration into standard M8 / M12 connectors possible
- Developed in cooperation with leading manufacturers



## RoSPE Connectors, Standard According to IEC 63171-2 (IP 20)

- Extremely compact design
- Robust locking mechanism
- Field mounting types available
- Pre-assembled, variable cable lengths
- 50 % smaller than RJ 45 (80 % less installation space for the volume)
- PoDL – up to 50 W useful power



## M8 RoSPE Connectors, Standard According to IEC 63171-5 (IP 67)

- Male and female cable connectors
- Pre-assembled patch cables and field plugs
- Interface identical to IP 20 connectors
- Easy to integrate into sensors with standard M8 connection



## M12 RoSPE Connectors, Standard According to IEC 63171-5 (IP67)

- 1- and 4-way types
- PCB connectors, straight and right angle
- Cable connectors (m/f)
- Inline connections

Specific types planned





## Target Market and Applications

	Automotive	Building automation	Process automation	Factory automation
Focus of application	Wiring harness in vehicles	Wiring in switchboards; field cabling (e.g.: KNX)	Field cabling sensors	Industrial wiring in switchboards; field cabling sensors
Transmission speed	10 Mbps – 1 Gbps	10 Mbps – 1 Gbps	10 Mbps – 1 Gbps	10 Mbps – 1 Gbps
Transmission distance	15-40 m	< 1.000 m	< 1.000 m	< 100 m
Cable cross-section	AWG 26-22	AWG 26-22	AWG 22	AWG 26-22
Mech.   elec. robustness	Medium - high	Low - medium	High (+Ex)	Medium - high
Current connectors	Automotive-specific connectors	Single wiring, terminal, KNX, RJ45	Terminal connectors, M8 or M12	RJ45, single wiring, terminal, M8/12

## About the SPE System Alliance

Rosenberger is member of the SPE System Alliance, an association of leading technology companies from various industries and application areas, which shares a unified goal to combine their know-how in the field of SPE and exchange it in a strategic manner. All partners support the common goal of promoting Single Pair Ethernet technology for IIoT and all other areas of application. For more information on the SPE System Alliance, please visit [www.singlepairethernet.com](http://www.singlepairethernet.com)



**Single Pair Ethernet  
System Alliance**



## Website

For more information refer to our website:  
[www.rosenberger.com/spe](http://www.rosenberger.com/spe)

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