



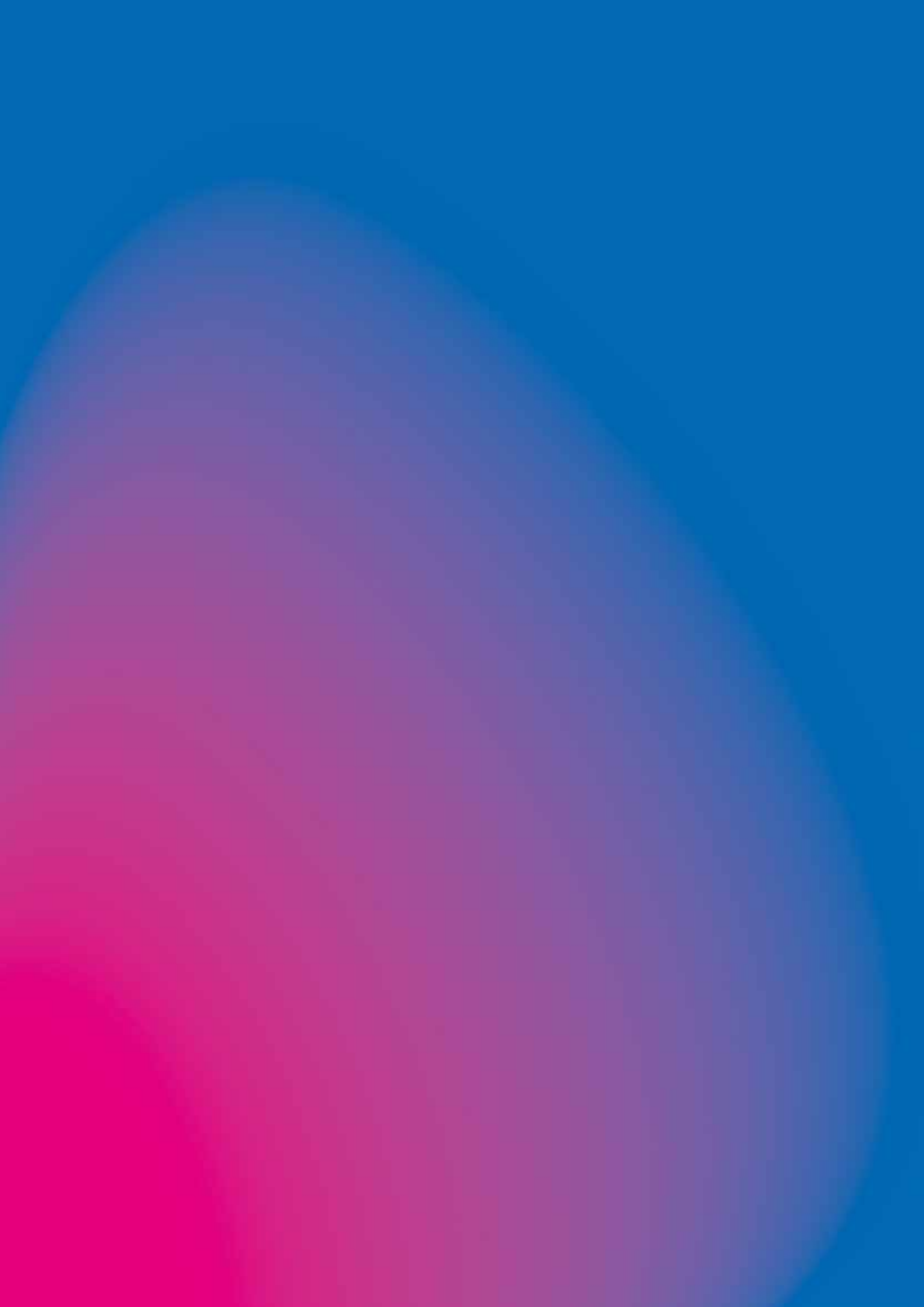
Creating Secure Connections

Bringing Tomorrow's Data Infrastructure into Today's Transport Infrastructure

pe-light

Made in Germany





The Future is Connected. Data is its Most Valuable Resource.

Today, more than half of the world's population lives in urban areas, and this share is projected to rise to nearly 70% by 2050. As cities continue to grow, pressures on transport infrastructure, parking capacity and public safety increase. Intelligent, connected technologies help cities manage mobility more efficiently and provide better services for citizens and visitors.

Cameras, sensors and loudspeakers installed at safety-critical locations are effective tools for meeting regulatory requirements and enhancing protection levels. They help safeguard critical infrastructure, manufacturing facilities, administrative buildings, car parks, construction sites and property, while improving overall security in vulnerable areas.

The ability to manage data effectively is becoming a key factor in competitiveness, security and digital sovereignty. Today's digital applications generate and process more information than ever before, creating growing demands on the speed, availability and security of data transmission.

Digital transformation presents new challenges, but it also creates significant opportunities. The foundation for success is an infrastructure that reliably connects people, systems and information. With pe-light, you invest in a network that meets these requirements efficiently, delivering high performance, economic viability and long-term future readiness.

From Streetlight Pole to Data Hub – The Idea Behind pe-light



Cities and industrial sites worldwide are facing growing demands for connectivity, efficiency and safety. By making intelligent use of existing infrastructure, digital networks can be created that transform public spaces and business locations into smarter, more resilient and future-ready environments.

In Germany alone, for example, there are around 9.4 million streetlights and more than 100,000 traffic signal locations. Combined with existing power and fibre-optic connections, such infrastructure offers enormous potential for digital connectivity.

Rather than creating additional installation sites, existing streetlight and traffic signal poles can be transformed cost-effectively into powerful network nodes.

pe-light pole connection boxes incorporate copper and fibre-optic technology and can be integrated into existing streetlight and traffic signal poles in accordance with DIN 49778 and DIN EN 40-5 standards. They utilise existing infrastructure and transform poles into intelligent network nodes without compromising their original function.

This provides the foundation for connecting sensors, Wi-Fi, video and audio systems securely and reliably to a high-performance network in real time, enabling a wide range of smart city and industrial applications.

With pe-light, cities become smarter and public spaces and business sites are connected, managed and secured through a high-speed, reliable network.

- Fibre Optics Deliver:
- Ultra-high bandwidth and real-time communication
 - Enhanced security with immunity to eavesdropping and high resistance to tampering
 - Reliable operation even in electromagnetically challenging environments
 - Long-distance transmission capabilities
 - Future-proof performance and high availability

As a fully pre-configured system, pe-light integrates all essential components required for secure fibre-optic and data connectivity within a single compact unit.

The unit is installed directly behind the access hatch, keeping the technology concealed from view and protected against tampering, contamination and environmental influences. No structural modifications to the pole are required; only the connection to the fibre-optic network must be provided on site. The equipment remains accessible for maintenance without the need for a platform lift.

Simple Integration. Intelligent Connectivity.

With pe-light, you benefit from an intelligent solution that is quick to install and easy to operate.

A range of pe-light variants is available to meet different application requirements, ensuring the right balance of performance, functionality and cost-effectiveness.

Example Configuration of a pe-light Unit:

- 1 - PoE ports for network-connected devices
- 2 - Managed PoE switch
- 3 - Fibre splice module
- 4 - Power supply unit for the switch
- 5 - Fuses
- 6 - Connection terminals



Connecting with Confidence – pe-light in Action



Smart Parking Management and Access Control

Connected parking facilities, access control systems and sensors enhance both efficiency and security in parking management. Real-time information on available parking spaces, automatic number plate recognition, as well as the integration of ground sensors and parking guidance systems via pe-light, helps maximise the use of existing parking capacity while reducing unnecessary traffic caused by drivers searching for a space.

At the same time, the data collected provides valuable insights for the planning, optimisation and future development of parking infrastructure. This improves traffic flow, reduces noise and vehicle emissions, and increases both safety and operational efficiency through automated processes, monitoring capabilities and alarm functions.



Safer Infrastructure

Whether on roads, industrial sites, rail networks or in ports, wherever vehicles, people and goods interact, the quality of data transmission plays a crucial role in ensuring both safety and operational efficiency. pe-light enables the secure connection of sensors, cameras, control systems and information displays directly at poles, signals and barriers to the existing fibre-optic network, right where the data is generated.

This provides a high-performance and secure data connection wherever rapid response times and reliable information are essential.

In road transport applications, this enables proactive traffic management. Traffic signals can adapt to changing traffic volumes in real time, congestion warnings and speed recommendations can be communicated at an early stage, and diversion routes can be implemented automatically when disruptions occur.

On industrial and commercial sites, connectivity supports intelligent traffic and route management through access control systems, dynamic signage and the monitoring of critical junctions and traffic flows.

In the rail sector, the connection of tracks, points, level crossings and platforms provides the foundation for condition monitoring and predictive maintenance. In port environments, it enables the monitoring of access routes, cargo handling areas, storage facilities, quaysides and weather conditions, supporting safe and efficient crane and vessel operations.

With pe-light, data is available in real time for monitoring, analysis and control, enabling potential risks to be identified at an early stage and helping to prevent bottlenecks and operational disruptions before they occur.

The result is safer and more efficient operations, enhanced protection against theft, vandalism and operational failures, and improved service quality for operators, businesses and transport users alike. Clear, transparent information and smooth traffic flows also contribute to a positive user experience and help drive acceptance of modern mobility solutions.



Protecting People, Property and Critical Assets

The monitoring of sites and buildings has become a key element of modern security strategies. High-performance video and audio systems combined with fibre-optic technology enable the real-time detection of unauthorised access, theft, sabotage and other security-related incidents. Potential threats can be assessed at an early stage, allowing appropriate measures to be implemented without delay.

Continuous monitoring helps organisations protect people, assets and operational processes with greater reliability. Particularly in security-critical environments, it contributes to risk reduction, minimises downtime and helps ensure business continuity.

A high-performance fibre-optic infrastructure provides the foundation for this capability. It enables interference-free data transmission, even over long distances. Thanks to its high bandwidth and low latency, security-relevant information is available immediately whenever required.

In addition, fibre optics are completely immune to electromagnetic interference and provide an exceptionally secure and tamper-resistant communications platform for critical security applications. The result is a higher level of protection, faster response times, improved operational reliability and more effective safeguarding of people, facilities and infrastructure.

Businesses, public authorities and operators of critical infrastructure benefit from a future-proof solution that sustainably enhances security, availability and operational efficiency.





Public Wi-Fi Coverage

In central locations such as city centres, railway stations, universities, parks and tourist destinations, public Wi-Fi provides convenient access to digital information and services.

Connected simply and reliably to the fibre-optic network via pe-light, public Wi-Fi enhances communication, improves the visitor experience, supports digitalisation initiatives and increases the long-term attractiveness of locations.

Digital Information and Advertising Displays

Digital display systems provide citizens and visitors with targeted information about events and activities. They simplify access to venues and promote exhibitions, concerts and attractions in a faster, cleaner and more sustainable way than traditional printed posters. Content can be provided in multiple languages and updated flexibly in real time. Displays can also support wayfinding and help manage visitor flows more effectively. This brings together public information, tourism services and place marketing in a highly effective way.

Preventing Vandalism, Sabotage and Littering

Motion detectors, video surveillance and audio systems play an important role in reducing damage and helping identify those responsible. In many cases, their presence alone acts as a powerful deterrent.

Investment in such systems is often mandatory and generally modest when compared with the costs associated with repairs, restoration, waste removal or the complete loss of valuable assets and public property.

This cost-effectiveness is supported by the modular design of pe-light, which offers a wide range of configurations while maintaining excellent value for money.



Public Safety and Environmental Monitoring

Sensors, cameras and security systems make an important contribution to public safety, risk prevention and sustainable urban development. Intelligent security solutions improve responsiveness in critical situations.

Camera systems, sirens, emergency call stations and the analysis of unusual acoustic events can help detect security incidents, accidents and other potential threats at an early stage, enabling rapid notification and response.

Whether installed at railway stations, schools, universities, event venues, outdoor swimming facilities, underpasses or other high-risk locations, monitoring and emergency systems enhance public safety, strengthen emergency response capabilities and make efficient use of available public space.

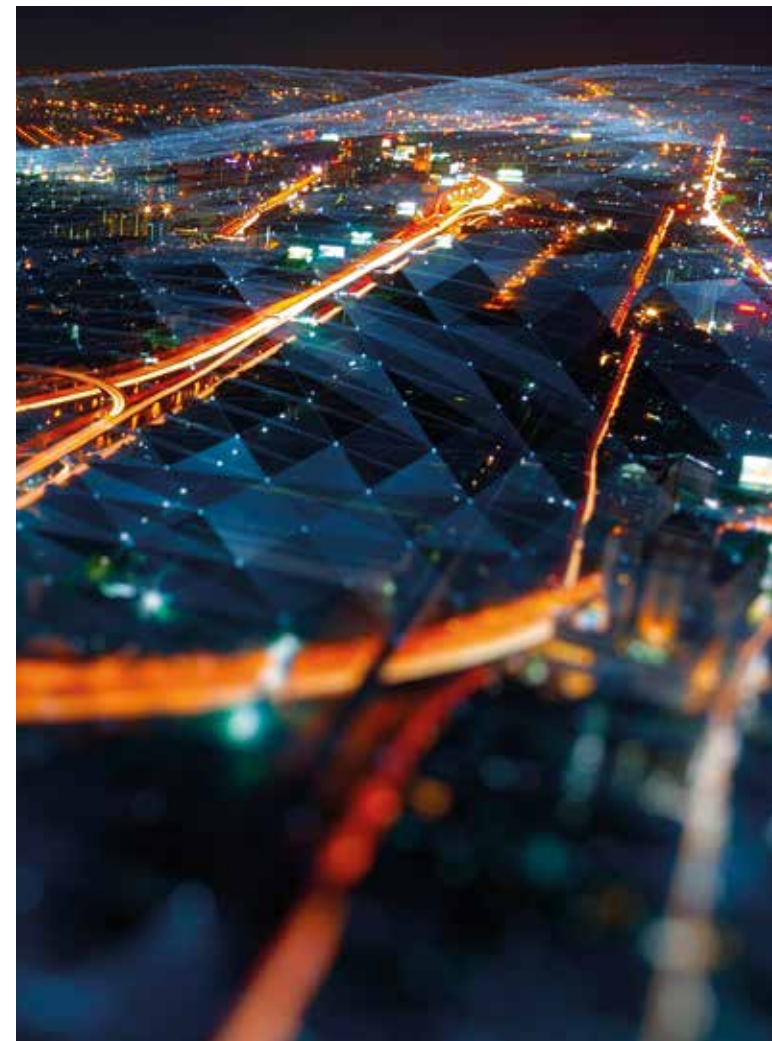
Extreme weather events and temperatures above 30°C are becoming increasingly common, and many urban environments are not adequately prepared. Through the continu-

ous monitoring of microclimate conditions, temperature rainfall, air quality and other environmental data, risks such as heat stress, smog, icy conditions and heavy rainfall can be identified early and location-specific warnings issued.

This supports accident prevention and emergency preparedness, improves the deployment planning of maintenance, emergency and rescue services, and enhances safety throughout public spaces.

At the same time, the collected data provides valuable insights for climate adaptation measures and forward-looking urban planning. Heat islands can be identified, the impact of infrastructure projects evaluated and targeted measures developed to improve quality of life, support drought and fire prevention, and reduce environmental stress on local communities.

In this way, the effects of climate change become measurable, enabling informed decisions that contribute to safe, sustainable and liveable communities.



“Smart up Your City!” with Support from eks Engel

Making Communities More Connected and Convenient

Marketplaces with cashless payment systems, emergency call stations and charging points for electric vehicles: wherever control, monitoring and billing processes depend on a reliable and uninterrupted data connection, municipalities and businesses benefit from secure connectivity to the fibre-optic network via pe-light.

Once a pole has been equipped with pe-light, additional opportunities become available, including motion-controlled lighting systems that can be implemented reliably using the existing fibre-optic connection.

Every pe-light installation creates new possibilities for public spaces and business premises, from charging and docking stations for shared mobility solutions such as e-scooters and e-bikes to smart urban furniture and customised service applications for municipalities, businesses and infrastructure operators.

The result is public spaces and operational environments that become more efficient, more attractive and more sustainable through secure, high-performance connectivity.

Expert Support for Demanding Projects

Our Competence Centre provides expert assistance with technical and system-related questions, both during the planning phase and long after project implementation.

Our team is available Monday to Friday from 9:00 am to 4:00 pm:

Tel. +49 2762 9313-850

Tel. +49 2762 9313-667

Outside office hours, please contact:
support@eks-engel.de

More Than a Product. We Offer:

Fibre-Optic Training Courses: Fundamentals of fibre-optic technology, fibre types, connectors, common faults, parametric measurements, network topologies, serial interfaces and protocols, as well as specialised applications and security systems.

Product and Project Consulting: Support for engineering consultancies, network design and the development of alternative infrastructure concepts.

Advanced Troubleshooting: Expert support for diagnosing and resolving product and network issues, either remotely or on site.

The Right Solution for Every Requirement – The pe-light Product Family



pe-light with switch
in a wide housing (S2) or
in a slim housing (S), IP46.

pe-light with media converter
in a wide housing (M2) or
in a slim housing (M), IP54.

pe-light passive,
passive version with splice
cassette only (P), IP54.

We Create the Right Solution for Your Project

Every pe-light pole connection box is built around an integrated fibre splice unit. Depending on project requirements, it can be equipped with a high-performance switch or media converter for active data transmission.

Two enclosure sizes and a wide range of performance and feature options ensure the ideal solution for virtually any application.

And if our standard configurations do not meet your requirements, we can design and manufacture a customised solution tailored specifically to your project.



pe-light Key Features

General Features



Developed and manufactured in Germany, pe-light combines exceptional quality and reliability with a five-year manufacturer’s warranty.

All eks products comply with the requirements of the CE, FCC and RoHS directives. This demonstrates conformity with stringent safety standards, electromagnetic compatibility requirements and current environmental regulations.

The pe-light product family is designed for an extended operating temperature range, ensuring reliable performance even under demanding environmental conditions.

Device-specific Features



Management Functions



Ring Redundancy



Speeds: Gigabit Ethernet or Fast Ethernet



Specifications: Power over Ethernet with 90 watts or 60 watts, depending on whether PoE++ or PoE+ is specified, and 30 watts for PoE+



Ports available: M12, SFP, RJ45, fibre optic



Splice unit comprising a splice cassette, splice holder (max. 12 x crimp splice protectors), pigtails (not included with P)

1. What do you wish to connect/achieve? >> pe-light S or pe-light M

pe-light S via a ‘managed switch’ –
For up to 4 devices on the mast, for active management/control; for setting up linear or ring structures:
A managed switch connects several network devices to one another and also offers extensive management and configuration options. These include, among other things, network segmentation (VLAN), traffic prioritisation (QoS), monitoring and remote management for greater control and security within the network.

pe-light S via an ‘unmanaged switch’ –
For up to 2 devices on the mast, for the simple expansion of network connections:
An unmanaged switch connects several network devices to one another and automatically distributes data traffic amongst the connected devices. As no configuration or active management is required, it enables quick and straightforward network set-up whilst ensuring a high level of operational reliability.

pe-light M via ‘media converter’ –
The cost-effective connection for a single device on a mast that requires no additional functions:
A media converter converts network signals from one transmission medium to another, for example from copper (RJ45) to fibre optic (MM, SM). It acts as a bridge between different cabling technologies and enables devices to be connected over longer distances.

2. What features would you like? >> Gigabit Ethernet or Fast Ethernet, Power over Ethernet

1000, Gigabit Ethernet: This network standard, with a transmission speed of up to 1 Gbit/s (1,000 Mbit/s), which enables fast and reliable data connections between devices, is now the industry standard.

100, Fast Ethernet: The network standard with a transmission speed of up to 100 Mbit/s.

SFP (Small Form-factor Pluggable): SFP is a compact, pluggable transceiver for network devices. It enables flexible connections via fibre-optic or copper cables and can be easily swapped out as required.

PoE++ 90 W: Power over Ethernet transmits both data and power simultaneously via a network cable. Designed for high-performance devices requiring up to 90 watts.

PoE++ 60 W: Power over Ethernet transmits both data and power simultaneously via a network cable. Designed for multiple high-power devices requiring up to 60 watts.

PoE+ 30 W: Power over Ethernet transmits both data and power simultaneously via a network cable. Designed for end devices requiring up to 30 watts.

3. How much space is available? >> Wide housing, narrow housing or external cabinet

Wide housing 2 (100 x 370 x 96 mm) –
Ideal for poles with a minimum internal diameter of 120 mm.

S2: Wide-housing pe-light version with a high-performance managed PoE switch, additional ventilation slots and protection class IP46.

M2: Wide-housing pe-light version with a media converter and protection class IP54.

pe-light O:
Custom-engineered solutions. If the available pe-light pole connection boxes do not meet your application requirements, for example due to space constraints or the need to integrate customer-supplied equipment, we can provide a customised solution, including external enclosure options where required.

Slim Housing (82 x 369 x 84 mm) – Designed for installation in poles with a minimum internal diameter of 100 mm.

S: The slim-housing pe-light versions with a high-performance managed PoE switch feature additional ventilation slots and achieve protection class IP46.

M: The slim-housing pe-light versions with a media converter achieve protection class IP54.

4. What transmission distance do you need to cover? >> Which fibre type?

SM – Singlemode: With a core diameter of just 9 µm, Singlemode fibres offer exceptionally high performance and support transmission distances of several hundred kilometres. The use of Singlemode fibre provides a future-proof foundation for long-term network infrastructure.

MM – Multimode: Multimode fibres support transmission distances of up to 550 m at Gigabit Ethernet speeds and up to 2 km at lower transmission rates, such as Fast Ethernet.

Included in Delivery:
1 x pole connection box with 1 x fibre splice unit (splice cassette, splice holder for up to 12 crimp splice protectors, pigtails), connection terminals, fuse, power supply unit and optionally a gigabit managed PoE switch, unmanaged PoE switch or media converter, including operating instructions.

pe-light S

Application	Features	Space Requirement	Page
For up to four end devices, with management functions, line or ring topology	Gigabit Ethernet, PoE++ up to 60 W, max. total output 120 W, 4 x M12 and 2 x MM or SM ports, fibre splice unit	min. pole Ø 120 mm	22
		min. pole Ø 100 mm	22
For up to two end devices, unmanaged, line or point-to-point topology	Gigabit Ethernet, PoE++ up to 60 W, max. 120 W total output, 2 x RJ45 and 2 x MM or SM ports, fibre splice unit	for min. pole Ø 120 mm only	23

pe-light M

Application	Features	Space Requirement	Page
For one end device	Gigabit Ethernet, PoE++ up to 90 W, 1 x RJ45 and 1 x MM or SM port, fibre splice unit	for min. pole Ø 120 mm only	24
For one end device	Fast Ethernet, PoE++ up to 90 W, 1 x RJ45 and 1 x MM or SM port, fibre splice unit	for min. pole Ø 120 mm only	24
For one end device	Gigabit Ethernet, PoE+ up to 30 W, 1 x RJ45 and 1 x MM or SM port, fibre splice unit	min. pole Ø 120 mm	25
		min. pole Ø 100 mm	25
For one end device	Gigabit Ethernet, 1 x RJ45 and 1 x MM or SM port, fibre splice unit	min. pole Ø 120 mm	25
		min. pole Ø 100 mm	25
For one end device	Fast Ethernet, PoE+ up to 30 W, 1 x RJ45 and 1 x MM or SM port, fibre splice unit	min. pole Ø 120 mm	26
		min. pole Ø 100 mm	26
For one end device	Fast Ethernet 1 x RJ45 and 1 x MM or SM port, fibre splice unit	min. pole Ø 120 mm	26
		min. pole Ø 100 mm	26

pe-light P, Passive or Custom Solution pe-light O

Application	Features	Space Requirement	Page
Passive only	fibre splice unit	min. pole Ø 100 mm	27
Custom-Engineered Solution		—	27

pe-light S

4x M12 2x FIBER	
Description	Pole Connection box Gigabit Managed Ethernet Switch
Product No.	068 x F412 4110 x 04
Port Type and Quantity	4 × 10/100/1000 BASE-X: M12, PoE+: IEEE 802.3af, class 1 to 3, type 1 / IEEE 802.3at, class 4, type 2 / IEEE 802.3bt, type 3, class 1 to 6, max. total output 120 W; 2 × 1000 BASE-SX or LX: LC, 1 × splice cassette, 1 × splice holder (max. 12 crimp splice protectors)*, pigtails
LEDs / Interfaces	
Upstream Fuse	max. 16 A
Fuses	min. 40 A²s, PoE-switch: 2 A, lamp: max. 8 A
Power Terminals	1,5 mm²–16 mm²
Lamp / Door Contact Terminals	0,2 mm²–2,5 mm²
Top Connector	4 × M12 connectors, X-coded
Fibre Type / Range / Optical Budget	
Twisted Pair	0 m–100 m (Cat5e)
Multimode 50/125 µm (1 dB/km)	0 m–200 m, optical budget: 5 dB with 850 nm
Multimode 50/125 µm (0,3 dB/km)	0 m–550 m, optical budget: 11,5 dB with 1310 nm
Singlemode 9/125 µm (0,3 dB/km)	0 m–10 km, optical budget: 11,5 dB with 1310 nm
Power Supply	
Supply Voltage	230 VAC/50 Hz–60 Hz
Power Consumption at 230 VAC	max. 140 W
Isolation Voltage	4 kV/overvoltage category II
Power Supply Unit	54 VDC/2,5 A
Environmental Conditions	
Operating Temperature	-40 °C to +65 °C, with derating above 30 °C
Mechanical Design	
Dimensions (W × H × D)	pe-light S: 82 mm x 369 mm x 84 mm pe-light S2: 100 mm x 370 mm x 96 mm
Mounting	hook mounting in the streetlight pole
Weight	pe-light S: 1.580 g, pe-light S2: 1.820 g
Protection Class	IP42
Housing Material	polycarbonate (PC GF 6-7)
Approvals	
Base Standards	DIN EN 55032:2022-08 – class A/DIN EN 61000-6-2:2019-11
Streetlight Pole Standards	DIN EN 40-5, DIN 49778
Scope of Delivery / Accessories	
Scope of Delivery	pole connection box with splice cassette, connection terminals, fuse, power supply unit and GE switch, operating instructions
Accessories (available separately)	patch cables, connection cables, 4-pole/5-pole connection terminals

* splice holder for heat-shrink splice protectors available on request

SAP No.	MM-50-OM3	SM-09-OS2
pe-light S/1000-PoE++ (850 nm/200 m)	10007676	—
pe-light S/1000-PoE++ (1310 nm/550 m)	10007838	—
pe-light S/1000-PoE++ (1310 nm/10 km)	—	10007675
pe-light S2/1000-PoE++ (850 nm/200 m)	10008721	—
pe-light S2/1000-PoE++ (1310 nm/550 m)	10008723	—
pe-light S2/1000-PoE++ (1310 nm/10 km)	—	10008863

others
available on request



pe-light S
(slim housing)



pe-light S2
(wide housing)

New Product
Launch!

2x RJ45 2x FIBER	
Description	Pole Connection box Gigabit Unmanaged Ethernet Switch
Product No.	0686 F4E2 22110 x 04
Port Type and Quantity	2 × 10/100/1000 BASE-X: RJ45, PoE+: IEEE 802.3af, class 1 to 3, type 1 / IEEE 802.3at, class 4, type 2 / IEEE 802.3bt, class 1 to 6, type 3; 2 × 1000 BASE-SX or LX: LC, 1 × splice cassette, 1 × splice holder (max. 12 crimp splice protectors)*, pigtails
LEDs / Interfaces	
Upstream Fuse	max. 16 A
Fuses	min. 40 A²s, PoE-switch: 2 A, lamp: max. 8 A
Power Terminals	1,5 mm²–16 mm²
Lamp / Door Contact Terminals	0,2 mm²–2,5 mm²
Top Connector	1 × M20 × 1.5 blind plug / 1 × M20 × 1.5 split cable gland
Fibre Type / Range / Optical Budget	
Twisted Pair	0 m–100 m (Cat5e)
Multimode 50/125 µm (1 dB/km)	0 m–550 m, optical budget: 5 dB with 850 nm
Singlemode 9/125 µm (0,3 dB/km)	0 m–10 km, optical budget: 11,5 dB with 1310 nm
Power Supply	
Supply Voltage	230 VAC/50 Hz–60 Hz
Power Consumption at 230 VAC	max. 130 W
Isolation Voltage	4 kV/overvoltage category II
Power Supply Unit	54 VDC/2,5 A
Environmental Conditions	
Operating Temperature	-40 °C–+65 °C, with derating above 30 °C
Mechanical Design	
Dimensions (W × H × D)	100 mm x 370 mm x 96 mm
Mounting	hook mounting in the streetlight pole
Weight	1.900 g
Protection Class	IP42
Housing Material	polycarbonate (PC GF 6-7)
Approvals	
Base Standards	DIN EN 55032:2022-08 – class A/DIN EN 61000-6-2:2019-11
Streetlight Pole Standards	DIN EN 40-5, DIN 49778
Scope of Delivery/Accessories	
Scope of Delivery	pole connection box with splice cassette, connection terminals, fuse, power supply unit and GE switch, operating instructions
Accessories (available separately)	patch cables, connection cables, 4-pole/5-pole connection terminals

* splice holder for heat-shrink splice protectors available on request

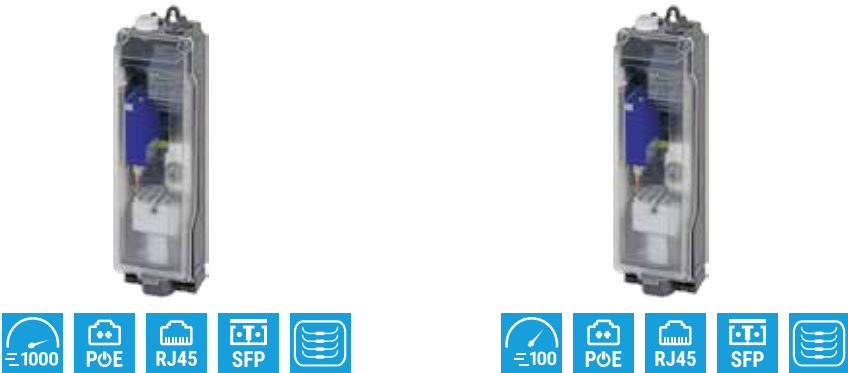
SAP No.	MM-50-OM3	SM-09-OS2
pe-light S2/1000-PoE++ (850 nm/550m)	—	—
pe-light S2/1000-PoE++ (1310 nm/10km)	—	—

New development,
available on request



pe-light S2
(wide housing),
Illustration for
reference only

pe-light M



Description	Pole Connection box Gigabit Ethernet PoE++ with SFP		Pole Connection box Fast Ethernet PoE++ with SFP
Product No.	0686 F941 1120 x 02		0686 F841 1120 x 02
Port Type and Quantity	1 × 10/100/1000 BASE-X: RJ45, PoE++: IEEE 802.3bt, type 4, 1 × 1000 BASE-FX SFP: LC, 1 × splice cassette, 1 × splice holder (max. 12 crimp splice protectors)*, pigtails		1 × 10/100 BASE-X: RJ45, PoE++: IEEE 802.3bt, type 4, 1 × 100 BASE-FX SFP: LC, 1 × splice cassette, 1 × splice holder (max. 12 crimp splice protectors)*, pigtails
Interfaces			
Fuse	4 A		
Connection Terminals	0,5 mm²–10 mm²		
Top Connector	1 × M20 × 1.5 blind plug / 1 × M20 × 1.5 split cable gland		
Fibre Type / Range / Optical Budget			
Twisted Pair	0 m–100 m (Cat 6)		
Multimode 50/125 μm (1 dB/km)	0 m–550 m, optical budget: 7,5 dB with 850 nm	0 m–5 km, optical budget: 13 dB with 1300 nm	
Singlemode 9/125 μm (0,3 dB/km)	0 m–10 km, optical budget: 10,5 dB with 1310 nm	0 m–30 km, optical budget: 16 dB with 1310 nm	
Power Supply			
Supply Voltage	230 VAC/50/60 Hz		
Power Consumption at 230 VAC	max. 95 W (400 mA at 230 VAC)		
Power Supply Unit	54 VDC/2,5 A		
Environmental Conditions			
Operating Temperature	-30 °C to +60 °C (max. +50 °C for PoE output above 60 W)		
Mechanical Design			
Dimensions (W × H × D)	pe-light M2: 100 mm x 370 mm x 95 mm		
Mounting	hook mounting in the streetlight pole		
Weight	1.860 g		
Protection Class	IP54		
Housing Material	polycarbonate (PC GF 6-7)		
Approvals			
Base Standards	DIN EN 55032:2022-08 - class A/DIN EN 61000-6-2:2019-11		
Streetlight Pole Standards	DIN EN 40-5, DIN 49778		
Scope of Delivery/Accessories			
Scope of Delivery	pole connection box with splice sassette, connection terminals, fuse, power supply unit and media converter, operating instructions		
Accessories (available separately)	patch cables, connection cables, 5-pole connection terminal, etc.		

* splice holder for heat-shrink splice protectors available on request

SAP No.	MM-50-OM3	SM-09-OS2
pe-light M2-SFP/1000-PoE++	10009013	10009014
pe-light M2-SFP/100-PoE++	10009011	10009012

others
available on request



Description	Pole Connection box Gigabit Ethernet PoE+		Pole Connection box Gigabit Ethernet
Product No.	068 x F441 1130 x 02		068 x F341 1130 x 02
Port Type and Quantity	1 × 10/100/1000 BASE-X: RJ45, PoE+: IEEE 802.3at, 1 × 1000 BASE-SX or LX: SC, 1 × splice cassette, 1 × splice holder (max. 12 crimp splice protectors)*, pigtails		1 × 10/100/1000 BASE-X: RJ45, 1 × 1000 BASE-SX or LX: SC, 1 × splice cassette, 1 × splice holder (max. 12 crimp splice protectors)*, pigtails
Interfaces			
Fuse	6 A		4 A
Connection Terminals	1,5 mm²–25 mm²		
Top Connector	1 × M20 × 1.5 blind plug / 1 × M20 × 1.5 split cable gland		
Fibre Type / Range / Optical Budget			
Twisted Pair	0 m–100 m (Cat 6)		
Multimode 50/125 µm (1 dB/km)	0 m–550 m, optical budget: 7,5 dB with 850 nm		
Singlemode 9/125 µm (0,3 dB/km)	0 m–10 km, optical budget: 10,5 dB with 1310 nm		
Power Supply			
Supply Voltage	230 VAC/50 Hz – 60 Hz		
Power Consumption at 230 VAC	3 W und PoE+	3 W	
Power Supply Unit	48 V/1,25 A	24 V/2,5 A	
Environmental Conditions			
Operating Temperature	-30 °C to +60 °C		
Mechanical Design			
Dimensions (W × H × D)	pe-light M: 82 mm x 369 mm x 84 mm pe-light M2: 100 mm x 370 mm x 96 mm		
Mounting	hook mounting in the streetlight pole		
Weight	pe-light M: 1.410 g, pe-light M2: 1.860 g		
Protection Class	IP54		
Housing Material	polycarbonate (PC GF 6-7)		
Approvals			
Base Standards	DIN EN 55032:2022-08 - class A / DIN EN 61000-6-2:2019-11		
Streetlight Pole Standards	DIN EN 40-5, DIN 49778		
Scope of Delivery/Accessories			
Scope of Delivery	pole connection box with splice cassette, connection terminals, fuse, power supply unit and media converter, operating instructions		
Accessories (available separately)	patch cables, connection cables, 5-pole connection terminal, etc.		

* splice holder for heat-shrink splice protectors available on request

SAP No.	MM-50-OM3	MM-50-OM4	SM-09-OS2
pe-light M/1000	10007411	10008374	10007410
pe-light M/1000-PoE+	10007413	10008379	10007412
pe-light M2/1000	10008717	10008712	10008719
pe-light M2/1000-PoE+	10008718	10008713	10008720

others
available on request



Description	Pole Connection box Fast Ethernet PoE+		Pole Connection box Fast Ethernet
Product No.	068 x F241 1130 x 02		068 x F141 1130 x 02
Port Type and Quantity	1 × 10/100 BASE-TX: RJ45, PoE+: IEEE 802.3at, 1 × 100 BASE-FX MM or SM: SC, 1 × splice cassette, 1 × splice holder (max. 12 crimp splice protectors)*, pigtails		1 × 10/100 BASE-TX: RJ45, 1 × 100 BASE-FX MM or SM: SC, 1 × splice cassette, 1 × splice holder (max. 12 crimp splice protectors)*, pigtails
Interfaces			
Fuse	6 A		4 A
Connection Terminals			1,5 mm ² –25 mm ²
Top Connector			1 × M20 × 1.5 blind plug / 1 × M20 × 1.5 split cable gland
Fibre Type / Range / optical budget			
Twisted Pair			0 m–100 m (Cat5e)
Multimode 50/125 μm (1 dB/km)			0 m–5 km, optical budget: 13 dB with 1300 nm
Singlemode 9/125 μm (0,3 dB/km)			0 m–30 km, optical budget: 16 dB with 1310 nm
Power Supply			
Supply Voltage			230 VAC/50 Hz–60 Hz
Power Consumption at 230 VAC	3 W und PoE+		2,5 W
Power Supply Unit	48 V/1,25 A		24 V/2,5 A
Environmental Conditions			
Operating Temperature			-30 °C to +60 °C
Mechanical Design			
Dimensions (W × H × D)			pe-light M: 82 mm x 369 mm x 84 mm pe-light M2: 100 mm x 370 mm x 96 mm
Mounting			hook mounting in the streetlight pole
Weight			pe-light M: 1.410 g, pe-light M2: 1.860 g
Protection Class			IP54
Housing Material			polycarbonate (PC GF 6-7)
Approvals			
Base Standards			DIN EN 55032:2022-08 - class A/DIN EN 61000-6-2:2019-11
Streetlight Pole Standards			DIN EN 40-5, DIN 49778
Scope of Delivery/Accessories			
Scope of Delivery			pole connection box with splice cassette, connection terminals, fuse, power supply unit and media converter, operating instructions
Accessories (available separately)			patch cables, connection cables, 5-pole connection terminal, etc.

* splice holder for heat-shrink splice protectors available on request

SAP No.	MM-50-OM3	MM-50-OM4	SM-09-OS2
pe-light M/100	10007406	—	10007405
pe-light M/100-PoE+	10007458	—	10007459
pe-light M2/100	10008710	10008712	10008715
pe-light M2/100-PoE+	10008711	10008713	10008716

others
available on request

pe-light P



Splice box with
Convenient Access



Description	Pole Connection box Passive
Product No.	0685 0000 0000 x 02
Port Type and Quantity	1 x splice tray, 1 x splice holder (max. 12 crimp splice protectors)*, pigtails
Interfaces	
Fuse	—
Connection Terminals	—
Top Connector	1 × M20 × 1.5 blind plug / 1 × M20 × 1.5 split cable gland
Mechanical Design	
Dimensions (W × H × D)	82 mm x 369 mm x 84 mm
Mounting	hook mounting in the streetlight pole
Weight	720 g
Protection Class	IP54
Housing Material	polycarbonate (PC GF 6-7)
Approvals	
Base Standards	DIN EN 55032:2016-02 - class A/ DIN EN 61000-6-2:2005
Streetlight Pole Standards	DIN EN 40-5, DIN 49778
Scope of Delivery/Accessories	
Scope of Delivery	pole connection box with splice cassette, pigtails, fibre-optic coupling with mounting bracket, 5-pole connection terminal

* splice holder for heat-shrink splice protectors available on request

SAP No.	MM-50-OM3	SM-09-OS2
pe-light P/Passiv	10007403	10007400

pe-light O



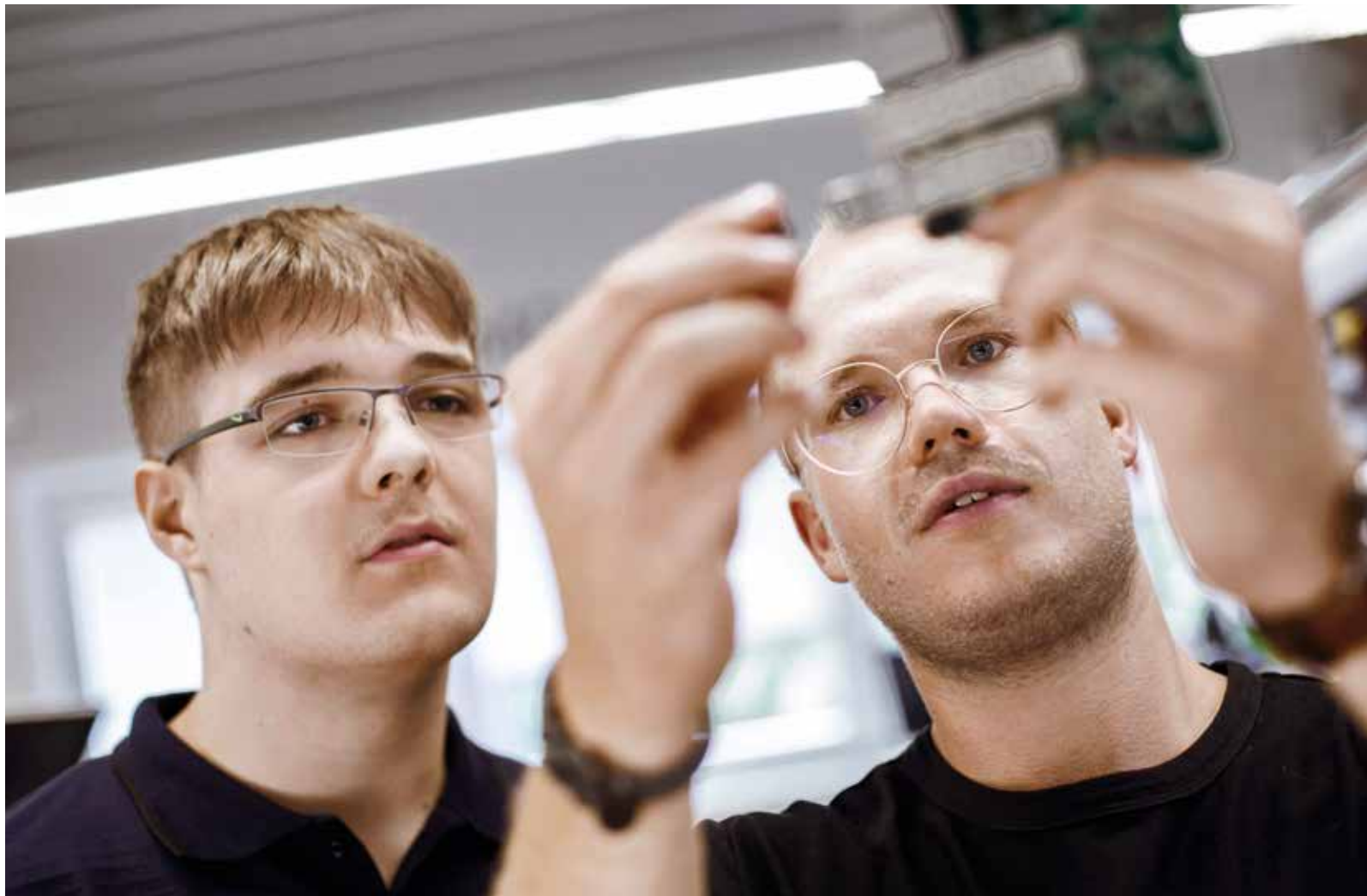
Customised
Solutions,
Including External
Enclosures

Description	Custom-Engineered Solution
Product No.	—
Port Type and Quantity	Custom-built solution configured to your require- ments (including customer-specific developments), as well as a selection of enclosures for external mounting where required.

others
available on request

**Secure Connections with eks Engel –
Data Connectivity for the Future**

Made in Germany



Security Begins Where Data Arrives Reliably.

Since 1931, eks Engel FOS GmbH & Co. KG has stood for entrepreneurial vision and reliability. As a third-generation family-owned company, we develop and manufacture highly reliable network infrastructures at our headquarters in Wenden, Germany – Made in Germany, backed by a commitment we have upheld for generations.

Our long history is also a history of embracing change. More than 40 years ago, we strategically repositioned our company and focused on fibre-optic technology for industrial networking at a time when copper was still the industry standard.

Since then, we have stood for innovation and secure connectivity. This forward-thinking approach continues to define us today. Fibre optics deliver capabilities that copper-based alternatives cannot provide by design: inherent resistance to eavesdropping, immunity to interference, galvanic isolation and superior transmission distances.

As digitalisation continues to advance, these advantages are becoming increasingly important factors for both competitiveness and security.

Custom Solutions Are Our Strength.

Every communication infrastructure has its own specific requirements. That is why we support our customers not only with high-quality products, from media converters and switches to serial interface systems and modular cabling solutions, but also with expert engineering support for the design of complex communication infrastructures.

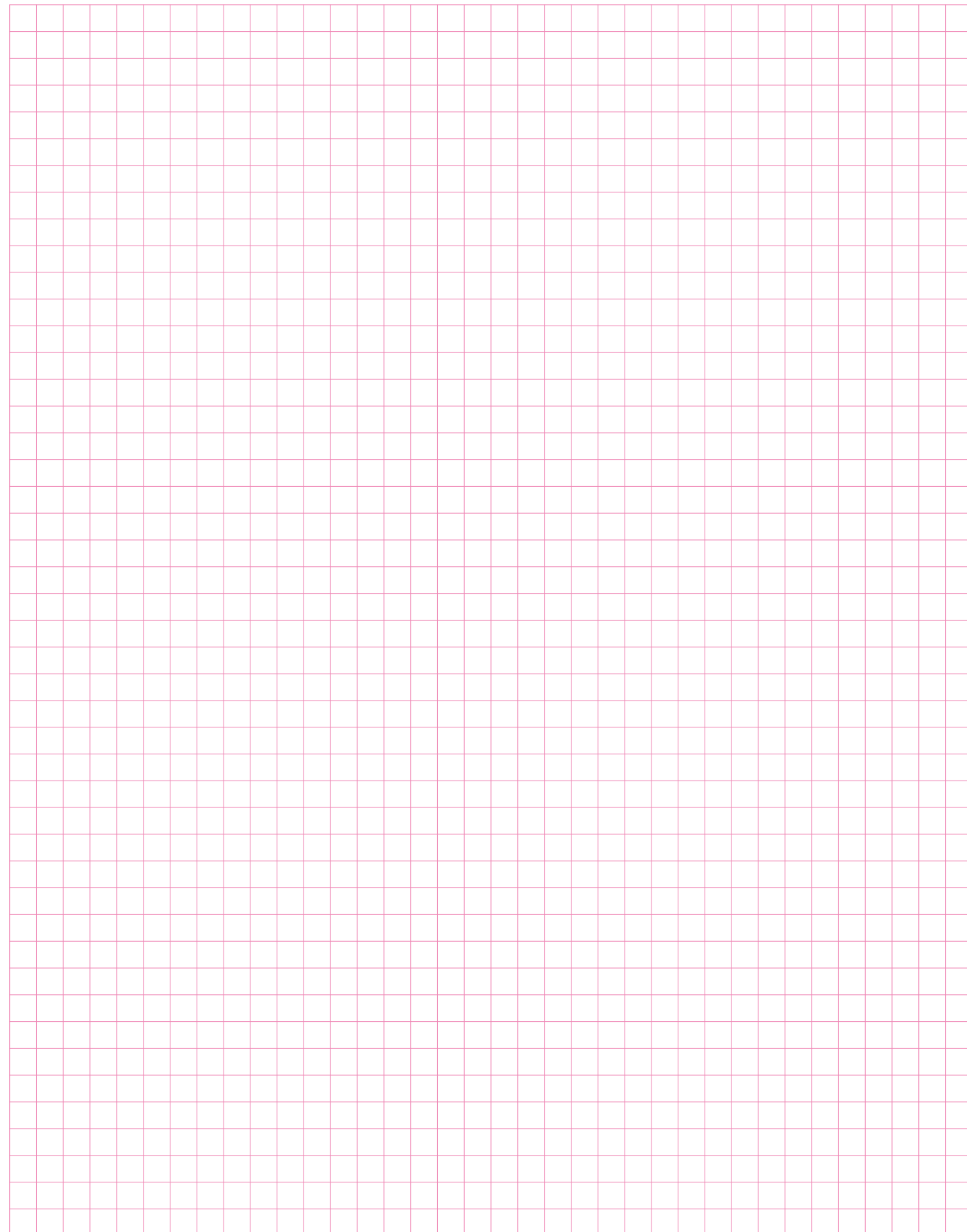
For decades, custom developments and bespoke solutions have been an integral part of our company DNA.

Connections You Can Trust.

Whether in industry, building and security technology, or public infrastructure, wherever reliable long-distance data communication is required, eks Engel delivers secure connectivity.

Made in Germany. Designed for Tomorrow.
That is eks Engel.

Get in touch with us. We are here to help:
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