PLP | MICOS

EBOOK



10 MISTAKES WHEN DESIGNING OPTICAL INFRASTRUCTURE – AND HOW TO AVOID THEM

PLP Czech Republic (MICOS)

Since 1990, we've been a trusted provider of passive components for fiber networks, injection molding and metal processing.

As part of the global Preformed Line Products (PLP) group, we deliver precision-engineered solutions for telecommunications, energy and military industries, ensuring quality, reliability and innovation in every project.

Manufacturing Excellence
With 18 clean room facilities, an advanced internal testing lab and a strong focus on customized manufacturing, we provide tailored solutions that meet the most demanding industry standards.

R&D and Innovation
Our commitment to research and development drives continuous improvement, allowing us to deliver high-performance, long-lasting solutions that shape the future of critical infrastructure worldwide.

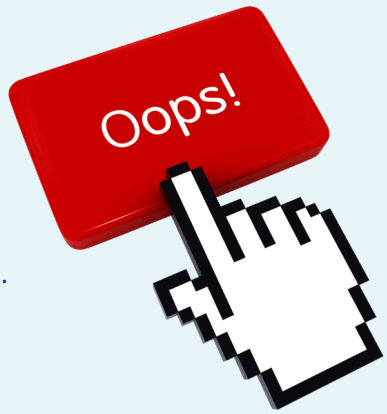
Certified Quality
As an EU-based company, we uphold the highest certification standards (ISO 9001, ISO 14001, ISO 45001), ensuring sustainable development, workplace safety and cost-efficient project execution.

A Global Network
With operations in over 20 countries, PLP is a recognized leader in network protection and reliability. Our solutions are trusted by telecom and energy providers worldwide.

Our vision: The Connection You Can Count On. ®



List of 10 Mistakes



1. Underestimating Future Network Capacity
Proposal only for current needs → in a few years the network will be full.
Solution: Think about scalability and use enclosures with a margin.

2. Inappropriate Choice of Enclosure Type
Using a universal product regardless of the environment (indoor vs. outdoor installation).
Solution: Choose enclosures according to the environment (resistance, IP protection level, wall-mounted or rack-mounted design).

3. Insufficient Protection of Fibers against Mechanical Damage
Sharp bends, poor patchcord management.
Solution: Use the correct bend radius and quality fiber management.

4. Missing Documentation and Markings
Without clear cable and port labeling, a network quickly becomes a mess.
Solution: Implement standardized labeling and digital documentation.

5. Underestimating Space Requirements
Lack of space in the enclosure, cables squeezed together.
Solution: Allow for capacity reserves and use a modular solution.

6. Ignoring Norms and Standards
The design does not comply with telecommunications or data standards (TIA/EIA, ISO/IEC).
Solution: Check compliance with applicable standards already in the design.

7. Choosing the Cheapest Possible Manufacturer of Enclosures
Poor quality product without certifications.
Solution: Buy from trusted manufacturers and require certifications.

8. Overlooking IP68 Protection Requirements
Water ingress into a product designed for underground installation.
Solution: Use these products only where needed and follow all manufacturer recommendations.

9. Providing Incomplete Information to the Supplier
Incomplete information leads to dissatisfaction with the delivered product on both sides.
Solution: Try to share all the information about your project with your supplier, who will design a product that will meet your needs.

10. Products from Multiple Suppliers
Network inconsistency leading to installation and maintenance challenges.
Solution: Choose only a few verified vendors to ensure compatibility and easier management.

1. Underestimating Future Network Capacity

What is a typical mistake?

Many projects are designed only according to the customer's current needs – "48 ports are enough, we don't need more". But capacity and connection demands grow faster than expected. After a few years, the network becomes full and improvisation begins: more enclosures are added, cables pulled over each other, and infrastructure becomes confusing and unreliable.

What are the consequences?

- Costly expansions – additional installations cost more than a well-planned solution.
- Downtime and outages when adding new lines.
- Risk of errors in documentation and management when the network is 'patched together'.
- Loss of flexibility – the network hinders business or service development.

How to avoid this?

- Plan with a margin – choose enclosures and modules so that the capacity is at least 30–50 % higher than the current need.
- Consider scalability – modular enclosures that allow for easy expansion without complete replacement.
- Analyze trends – take into account future increases in capacity demand (cloud, IoT, 5G, new services) when designing.
- Think about physical limits – enough rack space, proper cable management, cooling and power reserve.

Practical example

A telecommunications operator planned an FTTH network with enclosures for 72 fibers. After three years, the capacity was exhausted, new boxes had to be installed and cables had to be rerouted, which meant downtime and additional costs.

If they had used a modular enclosure with a capacity of 144 fibers right from the start, the costs would have been only 15 % higher, but the network would have easily handled expansion and customer growth.



What solution do we have?

FibeRoad™... A system that is designed to grow with your network and adapt to its changing needs.

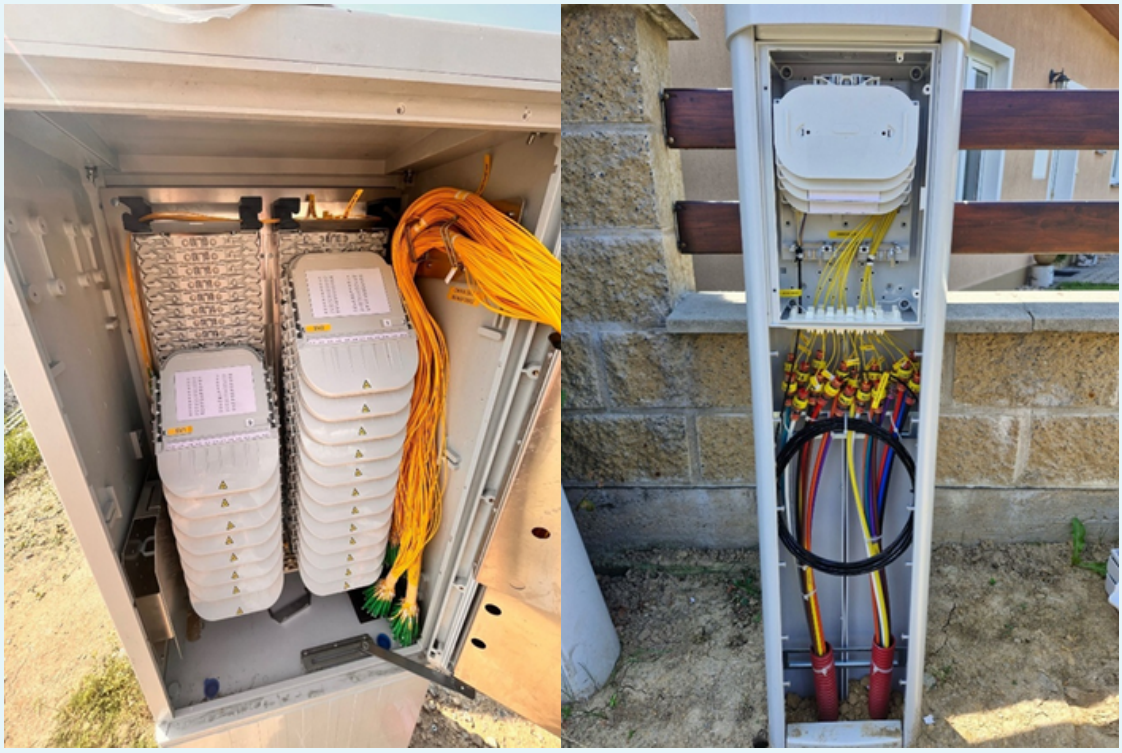
Future growth without limits
Thanks to the modular architecture of the FibeRoad™ System, you don't have to invest in a fully equipped enclosure right from the start. The enclosure can be expanded gradually as your network grows and more customers are connected.

Cost savings and effective investment
Instead of high upfront costs, you invest only in what you currently need. This keeps your initial CAPEX low while ensuring the enclosure is ready for future upgrades.

Compatibility and flexibility
The FibeRoad™ System is compatible with multiple tray types, allowing you to configure flexibly. There are trays with connector panels, splice-only trays, splitter trays, combination trays and more.

A unified solution for the entire network
The modular system ensures that from the home outlet to the outdoor box and all the way to the data center, you use a consistent and proven platform that is easy to expand and maintain.

FibeRoad™ provides a stable, unified, yet highly flexible optical infrastructure that eliminates compatibility issues and reduces the total cost of network ownership.



2. Inappropriate Choice of Enclosure Type

What is a typical mistake?

Companies often reach for a “universal” enclosure with the idea that it will be suitable for any application. The problem arises when the same type of enclosure is used

- indoors, where there are no high demands on the type of material used,
- and in outdoor installations, where resistance to weather, temperature fluctuations or vandalism is critical.

In the end, it suits neither use case: it’s oversized indoors and lacks resilience outdoors.

What are the consequences?

- Reduced lifespan – using an indoor box in an outdoor environment degrades the material.
- Higher failure rate – insufficient IP protection leads to damage to fibers and connectors.
- Difficult maintenance – poor access to ports complicates servicing.
- Additional costs – the need to replace or modify enclosures during operation.

How to avoid this?

- Consider the environment when designing your network:
  - FTTH/FTTB – compact wall boxes, clear management, easy installation.
  - Outdoor installation – enclosures with IP65+, resistance to temperatures and UV radiation.
  - Industrial environment – anti-vibration design, increased mechanical resistance.
- Require certifications – follow standards and testing from the manufacturer.
- Think about servicing – accessibility, clear markings and easy component replacement.

Practical example

An ISP installed universal indoor boxes on poles in an outdoor environment. After two winters, the boxes began to fall apart, and due to insufficient IP protection, there were signal losses and damage to internal components (pigtails, splitters and adapters).

The result was the need for a complete replacement with outdoor boxes with IP65 - double the cost - and a negative customer experience due to outages.

Choosing the right outdoor boxes would have ensured reliable operation and lower long-term costs.



What solution do we have?

PLP Czech Republic (MICOS) is built on a philosophy of partnership and open communication with customers. Our goal is to deliver not only the product itself, but also the assurance that it exactly meets the needs and standards of our customers.

Individual approach to the project
Don't hesitate to contact our sales department. Together we will go through all the details of your project – from the installation environment, through the required coverage, to the capacity and type of cabling. Then we will recommend the optimal product that addresses your requirements.

Possibility to test a free sample
We understand that investing in optical infrastructure is a long-term investment, which is why we offer you the opportunity to request a free product sample to verify whether it fits your application and environment.

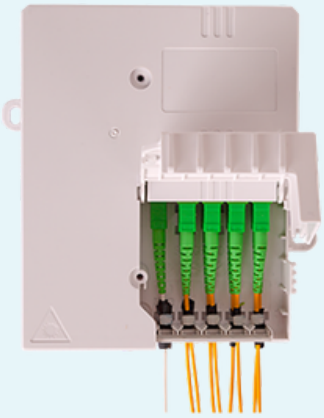
Flexibility and custom manufacturing
If you do not choose from our standard product range, we can design and manufacture a solution exactly to your specifications. This ensures that the enclosure or component will fit your project.

Full quality transparency
We provide test reports and material sheets with our products so you can be sure that the product meets the required standards and quality.

Technician support and training
To ensure proper installation, we also offer training for your technicians, which will help you avoid installation errors and ensure your network is stable and reliable from day one.



With us, you get a partner, not just a supplier – from product selection and testing to its installation and operation.



3. Insufficient Protection of Fibers against Mechanical Damage

What is a typical mistake?

Optical fibers are extremely sensitive to mechanical stress. Poor enclosure design or improper installation often results in:

- The fiber bend radius is too small.
- Patchcords are installed without structure – resulting in a tangled cable nest.
- Missing guiding rails, grommets or organizers.

These mistakes can significantly affect the reliability and lifespan of the entire installation.

What are the consequences?

- Increased optical attenuation – fibers no longer meet the required parameters.
- Frequent malfunctions and complaints – unexpected connection failures.
- Higher service costs – problem localization and repairs are time-consuming.
- Short lifespan – the fiber may break under repeated bending.

How to avoid this?

- Observe the minimum bending radius – generally min. 30 mm for singlemode fibers (follow the manufacturer's recommendations).
- Use quality fiber management – guiding rails, holders, trays and patch panels that prevent sharp bends.
- Ensure clear patchcord routing – correct lengths, no unnecessary crossings.
- Train field workers – most damage occurs due to improper handling.
- Choose the right type of enclosure – modular systems with integrated management minimize the risk of bends.

Practical example

In one company's server room, patchcords were routed without organizers – the cables hung over each other and broke when the enclosure door was closed. After a few months, attenuation began to increase and the connection became unstable.

After installing trays and proper routing, the attenuation was reduced by 40 % and the network was stable.



What solution do we have?

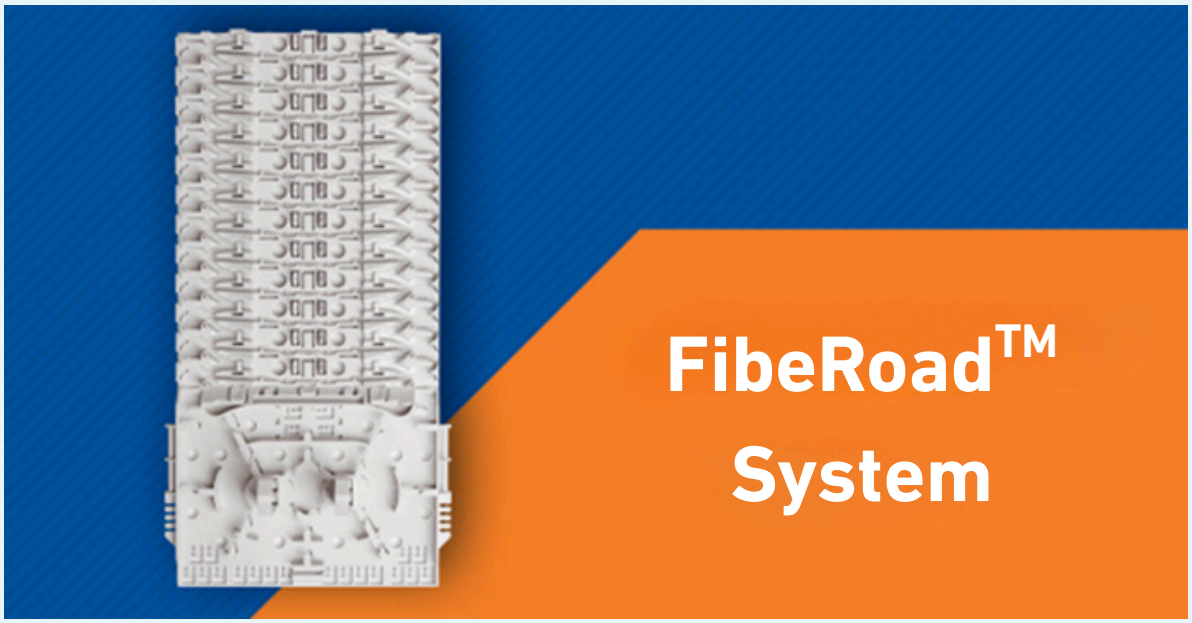
Our products are created based on years of experience directly from the field. The team of product managers is not just developers "at the desk" – most of them have worked as technicians in real installations in the past. Thanks to this, we understand practical needs and mistakes that commonly occur in practice, and we are able to prevent them in the design.

Products designed for technicians
Every detail of our enclosures and accessories is designed to make field work as comfortable, intuitive and fast as possible. We also listen to feedback from our customers and incorporate their ideas directly into the design of our products.

FibeRoad™ – prevention of mechanical damage to fibers
A typical example is our modular FibeRoad™ System, which is designed to automatically prevent fiber handling errors.

- The system contains elements that prevent the fibers from being routed differently than prescribed in the manual.
- Every bend, routing path and storage point has a clearly defined space, eliminating the risk of sharp bends and improper fiber management.
- This significantly reduces the error rate and minimizes the need for additional repairs or reinstallations.

Our products are not just technical components – they are practical solutions designed by people in the field for people in the field, which will help you keep your network reliable and free of unnecessary service interventions.



4. Missing Documentation and Markings



What is a typical mistake?

Documentation and labeling are often overlooked when designing and installing optical networks. Cables are connected "as they fit", ports remain unmarked and all knowledge stays in one technician's head. That works – until the network expands or another team steps in.

Common issues:

- Cables and fibers are not clearly labeled.
- Ports lack systematic identification.
- Network changes are not recorded in the documentation.
- No digital connection map exists.



What are the consequences?

- Slow service – technicians lose valuable time tracing the right fiber or port.
- Risk of errors – reconnecting the wrong fiber can cause a complete service outage.
- Unclear accountability – without documentation, it is difficult to determine who did what when.
- Increased costs – service interventions take longer and require more people.



How to avoid this?

- Introduce standardized markings:
  - port numbering, fiber color coding, cable labeling,
  - using durable labels that can withstand temperature and humidity.
- Create and maintain digital documentation:
  - enclosure layout plans, fiber connection records, change history,
  - infrastructure management software (GIS, NMS, custom database).
- Keep it up to date – documentation must reflect the actual state of the network.
- Train technicians – so everyone knows how to properly mark and record changes.



Practical example

At one ISP, the network was not labeled – the cables in the distribution box were routed haphazardly and without documentation. When a fault occurred, it took more than 6 hours to locate and repair, as technicians had to test the cables one by one.

After the introduction of standardized markings and digital records, the time to diagnose a fault was reduced to less than 1 hour.

What solution do we have?

Documentation and markings are key to clear network management – while we can't force you to use software or keep documentation, we can provide you with tools that make it as easy as possible.

Integrated marking directly in products
Our enclosures are equipped with clear port markings and splicing diagrams stored directly inside. Thanks to this, the technician always has the necessary information immediately available. Just contact our sales representatives, who will be happy to advise you on the most suitable marking option for your project.

QR codes with online instructions
Our products also include QR codes located directly on the product. After scanning them, you will immediately get to the current online installation instructions for the product. This eliminates the need to search through paper manuals or the risk that technicians will have outdated versions of the documentation available.

Manuals tailored to your company
If your company uses its own internal procedures or installation standards, we can tailor a manual to exactly meet your requirements. This gives you fully customized documentation that ensures all technicians are following the same procedures and correctly.

With our solutions, you get not only quality hardware, but also smart marking and documentation tools that speed up installation, reduce the risk of errors and simplify the management of the entire network.



Example of online instructions

5. Underestimating Space Requirements

What is a typical mistake?

During optical infrastructure design, plans often account only for the current number of fibers and patchcords. The enclosure is designed “tight” – exactly for today’s needs, with no headroom. The result is crammed, overlapping cable runs and difficult maintenance.

Common symptoms:

- Cables are excessively bent and compressed.
- Insufficient space for additional patchcords or trays.
- No allowance for future expansion.
- Closing the enclosure doors is problematic due to cable bulk.

What are the consequences?

- Increased attenuation – fibers break or bend below the minimum radius.
- Limited serviceability – poor cable organization makes it hard to locate the right ports.
- Early enclosure replacement – modernisation becomes a complete overhaul.
- Rising costs – due to additional interventions and inefficient use of space.

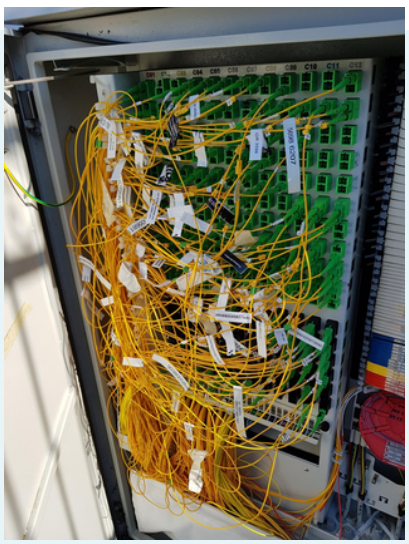
How to avoid this?

- Design with a margin – ideally 30–50 % of free space for future cabling.
- Use modular solutions – enclosures and trays that can be gradually added as needed.
- Plan for growth – if customer or service expansion is expected, size the infrastructure accordingly from the start.
- Ensure proper fiber management – use guiding rails, organizers and holders to keep cables from getting pinched.
- Allocate space not only for optical components, but also for active devices.

Practical example

An enclosure sized exactly for 48 fibers was installed in a company server room. After two years, service expansion required additional connections – but there was no space left. The result was improvisation: cables were added without any organization, and closing the door became impossible.

After a full replacement with a modular enclosure, sufficient space for future growth was secured, and maintenance became significantly easier.



What solution do we have?

We encounter this problem very often – when choosing an enclosure, customers primarily look at the price and choose the smallest model. While this saves budget in the short term, in practice it means complications during installation, limited space for cabling and significant difficulties in future maintenance or network expansion.

Consultation and optimal recommendations

That's why we strive to communicate openly with our customers on every project and find a solution that suits them both in terms of price and space. Together, we will assess not only current needs, but also expected network growth. This way, you will get a product that will make your technicians' work easier and will not hinder future development.

Modularity as the key to future expansion

This is where modularity comes in. The FibeRoad™ System is designed so that you only invest in the trays you really need. When it's time to expand your network, you can simply buy more trays and expand your enclosure modularly – without complicated interventions and buying a new enclosure.

Cost savings (CAPEX)

This approach means that you don't invest in a fully equipped enclosure right from the start, but spread the investment over time as your network grows. This significantly reduces initial capital expenditure while ensuring that the network remains flexible and ready for future upgrades.

Thanks to our modular system, you get a solution that won't strain your budget at the start of the project, makes installation easier for technicians and provides enough space for future expansion without compromise.



6. Ignoring Norms and Standards

What is a typical mistake?

In optical infrastructure design, time or cost pressure sometimes leads to solutions that don't meet telecom and data standards.

Common issues:

- Use of non-certified components.
- Failure to observe minimum distances and bend radii.
- Ignoring recommended capacity limits for cabling and enclosures.
- Lack of standardized markings and documentation.

Such a network may seem functional at first, but under load or audit, problems emerge.

What are the consequences?

- Network unreliability – higher attenuation, more outages and no guaranteed performance.
- Compatibility issues – components from different vendors may not work together.
- Legal and contractual risks – the project may fail to meet client or regulatory requirements.
- Higher long-term costs – repairs, replacements and certification cost significantly more later.

How to avoid this?

- Follow international standards:
  - TIA/EIA – standards for structured cabling,
  - ISO/IEC 11801 – global standard for telecommunications infrastructure,
  - EN 50173 – European standard for data networks.
- Use certified components.
- Include checks in design and installation – test and measure regularly during setup.
- Define internal standards – so all designers and technicians follow the same process.
- Plan for future development – the design should be compatible with newer technologies.

Practical example

A company built an optical network for a corporate client but used cheap, non-certified patchcords to save costs. After handover, the client requested certification testing – the network failed to meet ISO/IEC 11801. The result was a costly rework of the entire installation.

Had the standard been followed and certified components used from the start, costs would have been just 8 % higher.



What solution do we have?

Quality and compliance with standards are key for us. We want our customers to be confident that the product they receive from us meets not only European but also international standards and has been verified by independent authorities.

Certification from authorized laboratories

Our products are tested in independent accredited laboratories, where they undergo tests for mechanical resistance, IP protection and other parameters. We are able to provide internal test reports for the products, which prove their quality and long-term reliability.

Flexibility for international projects

If your project requires non-European standards (for example, UL certification for the USA), we can provide these tests – especially for larger orders where it is necessary to meet specific requirements of local standards.

Production in the Czech Republic with a quality system

Our production is located in Prostějov, Czech Republic. In addition to certifications for individual product lines, we also have international quality standards ISO 9001 (quality management), ISO 14001 (environmental management) and ISO 45001 (occupational health and safety). This guarantees not only the quality of our products, but also a responsible approach to production.

With us, you can be sure that the products are verified, certified and meet the requirements of your project – whether it is a local installation in the EU or an international order with different standards.





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CERTIFIKÁT / CERTIFICATE

Číslo / Number B-00559-22

www.szutest.cz

7. Choosing the Cheapest Possible Manufacturer of Enclosures



What is a typical mistake?

When purchasing enclosures, some designers or companies look for the lowest price and reach for cheap suppliers from Asia who do not have certifications or demonstrable quality tests.

- Enclosures are often poorly made and the materials are not durable.
- Missing IP/IK certifications and test reports; TIA/EIA or ISO/IEC standards undocumented.
- Design and installation may not comply with European or local standards.



What are the consequences?

- Unstable optical connection – higher attenuation, frequent failures and faster fiber wear.
- Short enclosure lifespan – plastic parts crack, seals fail and corrosion occurs.
- Higher service costs – frequent replacements and warranty claims.
- Certification and audit issues – unable to prove quality or compliance with standards.
- Reputation damage – dissatisfied customers and a harmed company image.



How to avoid this?

- Buy from verified manufacturers – with documented IP and IK tests, necessary certifications and references.
- Evaluate the price-to-quality ratio – the cheapest option may end up costing much more in service and maintenance.
- Check compatibility – the enclosures must match your choice of cables and other network components.



Practical example

A company wanted to save money and ordered cheap enclosures for outdoor installation of FTTH network. After the first winter, several enclosures cracked, water entered the system and more than 30 fibers failed. In addition, IP and IK test reports were missing, so the complaint was complicated and the supplier refused to take responsibility.

The company eventually switched to European-certified enclosures with IP65 and IK10.

- The network was stable and maintenance was simple.
- Repair and claim costs have been eliminated.
- Clients received clear proof of quality, which strengthened their trust in the company.

What solution do we have?

Our goal is to provide the customer with not only a product, but also the assurance that it is verified, manufactured to the highest standards, and with full support in case of any problems.

Test reports and certifications on request
We can provide test reports and certifications for our products, confirming their compliance with standards and quality requirements. This way, you know exactly what you are installing and are confident that the equipment will withstand real-world operation.

Production and design in the EU – credibility and support
Our production and development are located in the Czech Republic, right in the heart of the European Union. This means that we follow strict EU laws and regulations, which ensure fair treatment and transparent complaint handling. In contrast to non-EU suppliers, we stand by our customers – even when unforeseen problems occur.

Quality materials under strict standards
We use only high-quality materials – both plastics and metals – that meet strict European standards. This makes our products durable, long-lasting and ready to withstand the demands of operation in various types of environments.

Timestamps for lifecycle tracking
Our products include timestamps that facilitate their identification and lifecycle tracking. This makes it easier to plan maintenance, prevent outages and keep track of the product's current condition – while also enabling quick traceability of production batches in case of warranty claims.

With us, you get products that are certified, manufactured in the EU, made from quality materials and with full traceability, so you can rely on them and our support in every situation.



8. Overlooking IP68 Protection Requirements

What is a typical mistake?

Many designers or engineers when planning optical networks consider IP68 enclosures as "only water and dust resistant" and often:

- They will not take into account their specific installation requirements.
- Underestimating protection limits – max. pressure, immersion time or sealing needs.

IP68 is not just a marketing statement – the manufacturer has tested the enclosure to the maximum immersion depth and time limit. Imprecise use can lead to rapid damage.

What are the consequences?

- Failures due to improper installation – moisture seeps in, condenses and causes attenuation.
- Loss of warranty and support – manufacturers typically don't cover damage caused by misuse.
- Unnecessary additional costs – repairs often exceed the cost of the right solution.
- Increased network failure rate – an IP68 enclosure installed incorrectly becomes unreliable.

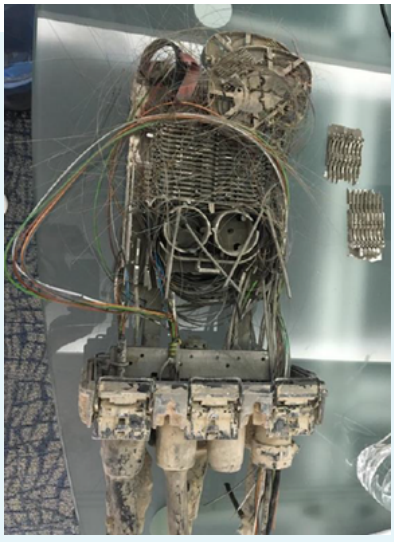
How to avoid this?

- Follow the manufacturer's installation instructions – correct screw torque, proper sealing of cable grommets, etc.
- Design according to the environment – if the box is permanently immersed in water, check whether the manufacturer has tested it for the required depth and duration.
- Use IP68 enclosures only where appropriate – overengineered components drive up costs, while undersized ones fail quickly.
- Check cable compatibility – some IP68 enclosures require specific types of grommets or cables to maintain sealing integrity.

Practical example

An ISP deployed IP68 enclosures for an outdoor FTTH installation, but technicians failed to seal the cable grommets properly and didn't lock the latches fully. After rain, water entered, condensation formed and several fibers failed. The warranty was denied due to non-compliance with installation guidelines.

After proper training, technicians followed the correct procedures. Subsequent installations were reliable – no water ingress, no failures.



What solution do we have?

Reliability is essential for outdoor installations – especially when it comes to protection against water, dust and other environmental influences. That's why we place great emphasis on testing and supporting the correct installation of our IP68 rated products.

Thorough testing in both the EU and the USA
Our IP68 enclosures undergo rigorous testing in our laboratories in Europe and the USA. Upon request, we are able to provide test reports that confirm their tightness and durability under practical operating conditions.

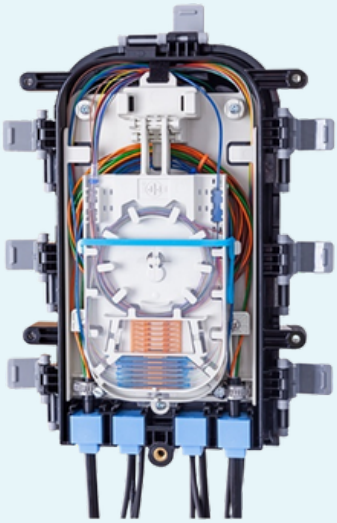
Installation support – video and online manuals
To ensure proper functionality, we provide video manuals and online tutorials. This way, the technician always has the exact procedures at hand and avoids errors.

On-site training
We go even further – our expert teams provide hands-on training directly in the field, allowing technicians to work with the products in real-world conditions. This results in faster, higher-quality installations with fewer complications.

Flush test for maximum tightness
The products feature a flush test, which checks the tightness of the enclosure using a pressure valve. This procedure ensures that no water or dust can enter the enclosure, even in harsh outdoor conditions.

With us, you get an IP68 solution with proven tightness, supported by tests, instructions and training – for long-term protection of your optical network.





9. Providing Incomplete Information to the Supplier

What is a typical mistake?

Many customers order components without sufficient information about the specific application, resulting in an enclosure that physically arrives but is not suitable for the intended installation.

Typical issues:

- Installation conditions (environment, climatic conditions, temperature range) are not specified.
- There are no requirements for IP protection and resistance to mechanical damage.
- Information about the required capacity of splices, connectors and fibers is not provided.
- Cable materials, diameter and quantity are left undefined.

What are the consequences?

- Unsuitable product – does not meet the requirements of the project or environment.
- Additional costs – replacement, modifications, service interventions.
- Loss of time and downtime – installation has to be postponed, waiting for the right product.
- Risk of network damage – forced improvisation can lead to errors and malfunctions.

How to avoid this?

- Share all key parameters with your supplier:
  - enclosure location – indoor, outdoor or industrial environments,
  - required protection – IP and IK ratings based on the environment,
  - capacity – number of splices and connectors, room for future growth,
  - cable material and diameter – to ensure enclosure compatibility,
  - number of cables and patchcords and planned routing.
- Support clear communication – align on requirements, check suitability, share drawings.
- Avoid improvisation – a properly specified enclosure saves time, money and network quality.

Practical example

A customer ordered outdoor enclosures without specifying climate or capacity requirements. The delivered units had only IP54 protection and held fewer cables than needed.

They were replaced with correctly sized IP65 enclosures with greater connector capacity. Installation went smoothly, and the network remained stable and ready for future expansion.



What solution do we have?

We want customers to always receive a solution that precisely matches their needs – without delays or the risk of buying sight unseen. That's why we've developed processes and tools to ensure maximum accuracy when selecting and approving products.

Question set and product configurators

We have prepared a set of targeted questions for our customers to help us identify the optimal product. In addition, we offer online configurators that guide customers to the right solution without the need for immediate consultation with a salesperson.

2D/3D drawings for approval

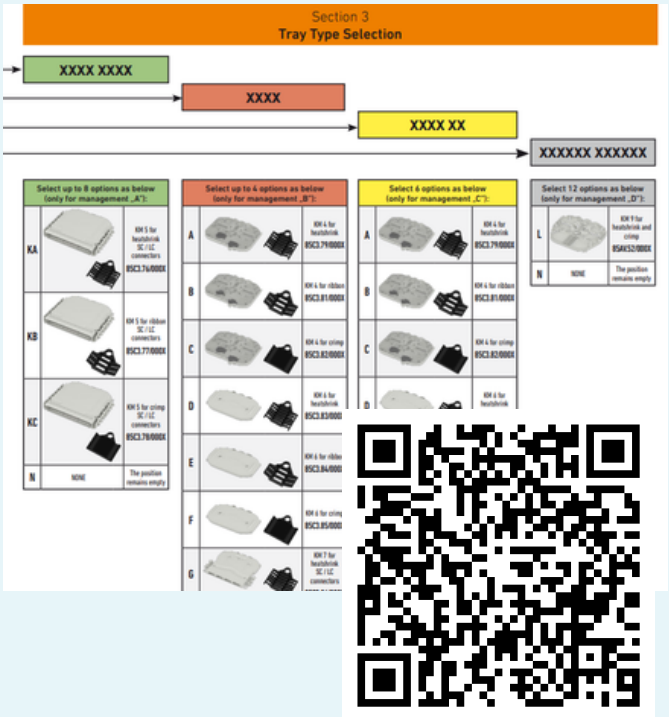
For tailor-made solutions, we send the customer detailed drawings in 2D and 3D. Thanks to this, they always have a clear idea of the final product and can confirm in time that everything meets their ideas and requirements.

Samples for larger projects

For larger projects, we send product samples to the customer for testing and approval. Only once the customer is fully satisfied do we proceed with serial production. This approach minimizes the risk of errors and ensures the final solution fully meets the project specification.

With us, you can be sure that each product meets your needs before production begins – whether thanks to configurators, drawings or product samples.





Configurator example

10. Products from Multiple Suppliers

What is a typical mistake?

Many companies select a supplier for each part of the network – one for home outlets, another for outdoor boxes, a different one for street cabinets and yet another for data centers.

- Each supplier uses its own products, standards and procedures.
- Technicians constantly have to relearn and adapt to new systems.

What are the consequences?

- Increased complexity – components use various mounting and fiber management systems.
- Higher risk of installation errors – technicians are confused by varying systems and instructions.
- Rising training and service costs – repeated training needed for each component type.
- Difficult maintenance and expansion – modular elements from different sources may not work seamlessly together.

How to avoid this?

- Choose a supplier with a modular solution:
  - One supplier can cover everything from home outlets to data center solutions.
  - The products have consistent management, labeling and assembly principles.
  - The modular system supports scalable growth without requiring new procedures for technicians.
- Ensure uniform documentation and standards – easier planning, installation and service.
- Minimize the number of suppliers – less risk of errors, faster issue resolution.

Practical example

An ISP used separate suppliers for residential, outdoor and data center components. This caused inconsistent mounting, labeling and fiber management – leading to technician confusion, more errors and higher service costs.

After switching to a single supplier across the network, operations became simpler and more efficient:

- unified installation across sites,
- standardized labeling and processes,
- consistent fiber management,
- fewer errors, faster training and lower costs.



What solution do we have?

Consistency and modularity are key to efficient optical network management. With unified fiber management, you can simplify installation, maintenance and technician training, while gaining the ability to scale your solution across the entire network.

FibeRoad™ – unified fiber management
We offer a wide range of products equipped with our FibeRoad™ fiber management system – for example, the MDB outdoor boxes, the MDP pillars and the MDO data center cabinets. The system uses the same tray types across the entire portfolio, ensuring maximum flexibility and compatibility.

Universal trays for various applications
The trays can be used for splices, connectors or splitters. They can be combined as needed, allowing the solution to adapt to specific project requirements – from small installations to complex data centers.

Standardization even in custom solutions
When a custom product is required, we always aim to implement the same fiber management system. This ensures a unified approach and reduces the risk of errors throughout the entire network.

With us, you get a unified modular system that makes technicians' work easier, eliminates unnecessary complications and ensures that your entire network remains consistent – from the home outlet to the data center.

MDF 3U 288S SNP, MDF 3U 288S KM9




MDP OZ 144S, MDP OZ 288S, MDP OZ 432S
MDP OZ 24/48, MDP OZ 48/96, MDP OZ 72/144





MDP OZ 576S, MDP OZ 864S








MDP OZ 144/288, MDP OZ 288/576

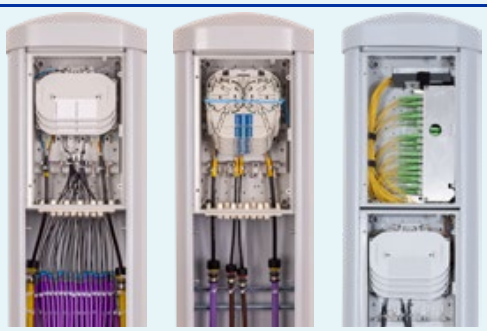



MDP EL 144/288, MDP EL 288/576,
MDP EL 432/864, MDP EL 576/1152





MDP S 96S 24/48, MDP S 96S SFMS, MDP S 96S 48/96



MDB XS, MDB S, MDB M



MDB FA 24/48, MDB FA 48/96, MDB FA 72/144



MDB FA 144S, MDB FA 192S, MDB FA 288S



MDO 300, MDO 600, MDO 900



FTTx Solutions



Central Office MDO Cabinet Solution



FibeRoad™ Solution



FTTA/5G RRH Connection Solution



FTTH GPON Spliceless Solution

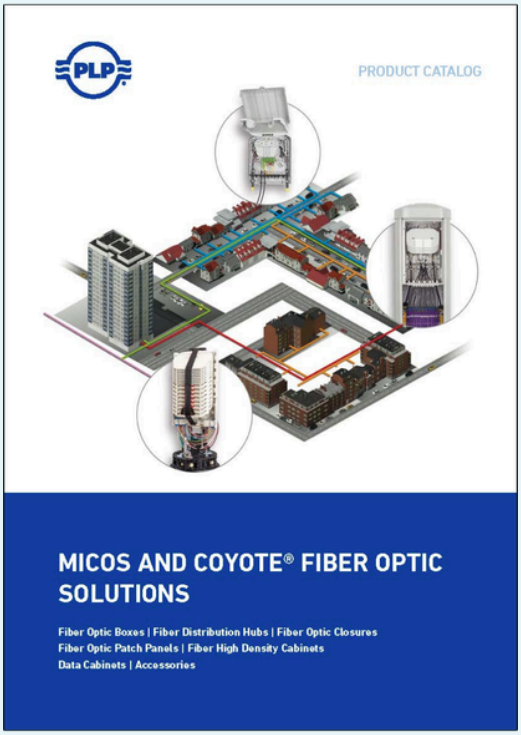


FTTH RISER Solution
with Floor Box



FTTH GPON Aerial Solution
with Asymmetric Splitter Plug & Play

Product Catalogs



MICOS AND COYOTE® FIBER OPTIC SOLUTIONS

FIBERLIGN® OVERHEAD NETWORKS

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