

# PMA® Cable Protection for various rail infrastructure projects in Poland

Products made from polyamides help ensure the safety and reliability of railway systems

## PMA

Signal gates, traction poles and traffic control devices are crucial parts in rail operations.

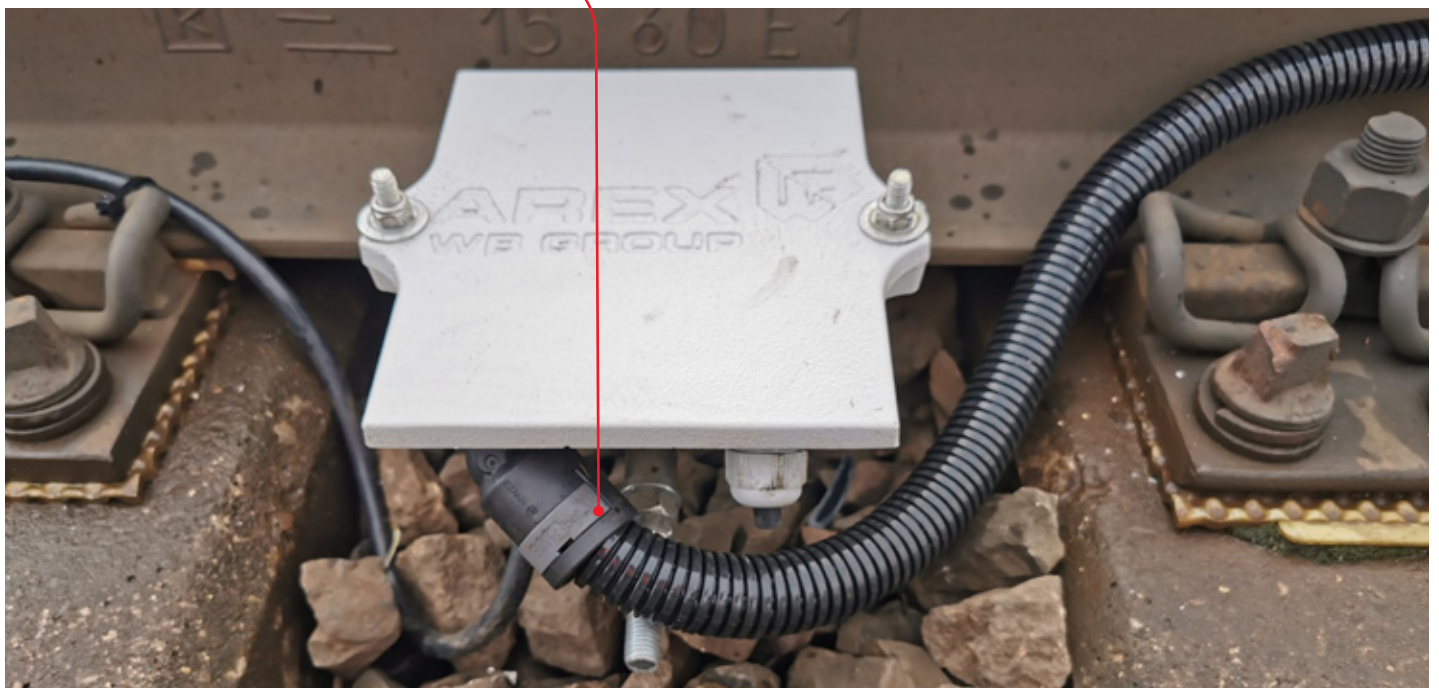
**Rail transportation is highly dependent on the quality of the infrastructure that supports it, and that includes cabling systems for communications and energy. Today, cable protection is becoming increasingly important in maintaining the safe and reliable operation of railway infrastructure worldwide.**

Modern rail systems require cables with different characteristics in terms of bandwidth, safety, electromagnetic immunity and resistance. Protecting cables from environmental factors such as moisture, extreme temperatures and physical damage due to weathering or rail operations ensures smooth rail transportation day in day out.

Power supply cables at signal gates, traction poles, and traffic control devices are important rail infrastructure installations. Cable protection is



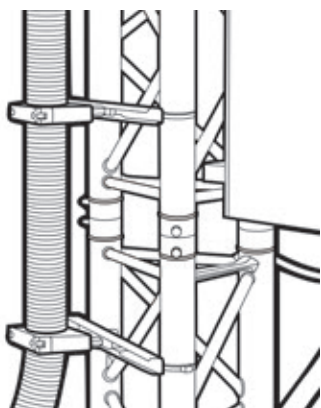
Cable protection for  
**trackside boxes**  
 using PMAFIX Fittings, XVCS1H conduits  
 with IP68 ingress protection





**PMA® BGPS holder with PMA® XSOL conduit to protect cables and wires for external applications, like**

## **signal gates**



essential in order to prevent downtime caused by malfunctioning and system failures.

Maintaining and upgrading rail infrastructure is an ongoing challenge for every rail organization worldwide. To ensure safety and efficiency, rail infrastructure components require regular maintenance, which can be technically demanding for rail operators.

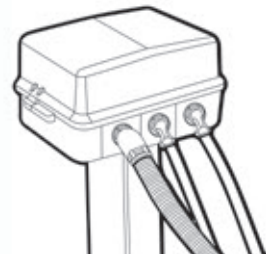
ASTE Sp. z o. o. in Poland is an importer of specialized cables and professional cable accessories. Since 1991, ASTE has been introducing modern technologies and easy-to-install products with a wide range of applications to the rail market in Poland. Over the last few decades, ASTE has built up a reputation based on the quality of its solutions, products and services. For more than two decades ASTE has been using the polyamide PMA cable protection system, mainly in rolling stock solutions.

Recently, ASTE has also started providing cable protection solutions in rail infrastructure installations using PMA® polyamide cable protection products. First of all, it needed to convince customers that polyamide conduits are as good or even better than metallic conduits. Metallic conduits manufactured in galvanized steel or steel pipes (painted) have been used in rail installations for many decades, even though new technologies such as polyamide products outperform them in many aspects by offering comparable or even better performance. Nowadays, the specially modified



Cable Protection plays a vital role in traction

## control devices of modern railway systems



polyamide cable protection technology is often the standard in conduits and fittings in rail industries worldwide. The highly engineered material provides many outstanding characteristics such as flexibility and excellent resistance to external conditions like impact, corrosion and UV.

### The weight of cable protection conduits can drastically be reduced and assembly time is significantly faster

Compared to metallic cable protection products, polyamide conduits significantly reduce assembly times and the low weight and high flexibility enables quick, safe and easy assembly while keeping the number of railway workers required to a minimum. Considering the amount of cable protection necessary in many projects, reduced transport costs due to the lower weight can be an important factor in rail infrastructure projects. Thanks to the easy modification and exchange of polyamide cable

protection on site without the need for heavy equipment and tools during assembly, the unavoidable blocking of rail operations can be reduced to the absolute minimum.

Beata Szulfer-Rosiak , ASTE Railway Market Manager, says: “When we first started working on rail infrastructure projects, the challenge was to convince our partners and customers in the rail industry of the superior performance characteristics of PMA® polyamide cable protection products. Flexibility, impact resistance, weight, ingress protection and corrosion resistance in particular were excellent arguments. With PMA® cable protection solutions we have also been able to reduce the weight of cable protection drastically compared to metallic products! And what’s more, the assembly time is significantly faster. PMA® provides a comprehensive portfolio of conduits, fittings and accessories, enabling us to find the best solutions for our customers in rail infrastructure projects. Thanks to our engineering skills and longstanding partnership with the PMA Team, we are literally able to provide solutions for even the most challenging cable protection application.”



With its PMA® cable protection range, ABB provides a comprehensive portfolio of conduits, screw connections and accessories for a wide range of markets and applications.

#### PMA® and ASTE

ASTE Sp. z o.o. is an importer of specialized cables and professional cable accessories. Since 1991, it has been introducing modern technologies and easy-to-install products with a wide range of applications to the market, including rolling stock, infrastructure, shipbuilding, automotive, industrial automation and machine construction, and energy. The high quality of services provided by ASTE is guaranteed by the Quality Management System compliant with the ISO 9001:2015 standard. ASTE was one of the first companies in Poland that certified its quality management system in accordance with the ISO standard (we received the Certificate of Compliance with the ISO 9002:1994 standard on May 19, 1998). Since 2000, ASTE, has been implementing the PMA system in the rail market.

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