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PRESS RELEASE

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Robust ODU connectors and sealing technologies: corrosion resistance and reliability in military applications

Equipment deployed in military operations is often exposed to extreme conditions including adverse weather with a lot of moisture, salt water and other environmental influences. This can potentially result in corrosion problems with the equipment used and thereby lead to a loss of data and communication and, in the worst case, endanger the soldiers and the mission. The manufacturers choice of high-quality materials in combination with a suitable protective surface handling treatment and high specification interface sealants reduces corrosion susceptibility, extends the service life of equipment and increases the operational readiness of the troops.

Highest requirements for corrosion resistance of connectors

Connectors must meet the corrosion resistance requirements of electronic systems. Constant exposure to salty air and water, changing temperatures and mechanical stresses require robust solutions. In an extensive salt spray test, tin-nickel coated ODU AMC connectors were tested over an extended period of time under simulated military conditions. The results showed excellent corrosion resistance even under extreme conditions. Due to the high corrosion and oxidation resistance, the electrical performance is maintained, which leads to a significant reduction in maintenance costs and an increase in system availability in military use.

Sealing technology for extreme conditions

The connectors must also be effectively sealed to prevent water ingress. This requires the selection of highly resistant materials that can also withstand the aggressive environmental conditions in the maritime sector. Various seals are crucial to protect both the mechanical and the electrical components. A mix of sealing rings, potting compounds,



wire seals, sophisticated geometries and professional overmoulding for cable assemblies ensures that the connections remain reliable even under extreme conditions and that no damage occurs, e.g. due to salt water ingress. In addition, the connection solutions offer protection against mud, dust and various liquids in accordance with ISO 16750-5, including operating fluids and chemicals such as oil and fuel. They comply with protection class IP6K9K and are therefore also suitable for applications where contact with high-pressure cleaners occur. With a watertightness of up to 20 meters, these connectors are the ideal choice for demanding applications or vehicle systems that require a high level of protection against water.

ODU AMC® Series T - robust connectors for military applications

The ODU AMC® Series T is not only characterized by its robustness and tightness, but also ensures reliable sealing under extreme vibrations. These connectors have been specially developed for the high demands of military applications, such as use in vehicles and equipment that are frequently exposed to vibrations and shocks. The sophisticated sealing technology of the ODU AMC® Series T ensures that no moisture, dust or dirt can penetrate the connector even under these demanding conditions. This ensures consistent connector performance in environments where absolute reliability is essential.

ODU Group: global representation with perfect connections

The ODU Group is one of the world's leading suppliers of connector systems, employing 2,600 people around the world. In addition to its company headquarters in Muehldorf a. Inn (Germany), ODU also has an international distribution network and production sites in Sibiu/Romania, Shanghai/China, and Tijuana/Mexico. ODU combines all relevant areas of expertise and key technologies including design and development, machine tooling and special machine construction, injection, stamping, turning, surface technology, assembly and cable assembly. The ODU Group sells its products globally through its sales offices in China, Denmark, France, Germany, Hong Kong, Italy, Japan, Korea, Austria, Sweden, UK and the US, as well as through numerous international sales partners. ODU connectors ensure a reliable transmission of power, signals, data and media for a variety of demanding applications including medical technology, military and security, automotive, industrial electronics, and test and measurement.