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PRESS RELEASE

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MORE DRIVING TIME, LESS DOWNTIME: RELIABLE CHARGING AND DOCKING INTERFACES FOR AGVS

ODU PROVIDES A CONNECTION OF HIGH LOAD CAPACITY, DURABILITY, AND FLEXIBILITY TO ENSURE MAXIMUM AVAILABILITY IN AUTOMATED LOGISTICS PROCESSES

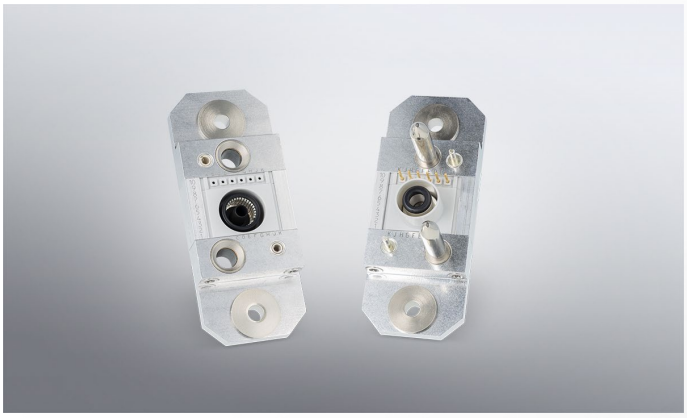
Every minute spent loading is lost transport time. To ensure that Automated Guided Vehicles (AGVs) and Autonomous Mobile Robots (AMRs) remain in service for as long as possible in production, intralogistics, and warehousing, they require high-performance, durable charging and docking interfaces. Short charging times, secure contacting, and reliable connections are crucial—even with frequent docking, vibrations, and mechanical tolerances.

The faster a vehicle is charged, the more time is available for the actual transport operation. At the same time, the interfaces must handle numerous automated connection operations every day. High insertion cycle counts and consistently stable electrical contacts are therefore crucial for high vehicle availability.

Positioning also poses significant requirements: AGVs do not always reach their docking position with millimeter precision. The interface must reliably compensate for deviations while also providing protection against accidental contact. Depending on the application, signals, data, or fluids may also need to be transmitted via the same connection.

A modular interface for a variety of requirements

For automated docking applications, ODU offers the modular connectors of the ODU-MAC® Silver-Line. Various transmission media can be combined into a single interface and flexibly adjusted to the specific application.



Possible ODU-MAC® Silver-Line configuration for AGVs: Power + Signals

High-performance LAMTAC® Flex modules can transmit up to 225 A per module. The built-in IP2X touch protection enhances user safety. During automated docking operations, the system compensates for radial positional deviations of up to 4 mm. With more than 100,000 mating cycles, the ODU-MAC® Silver-Line is designed for frequent automatic mating and disconnection operations.

Various fiber optic modules are also available for optical data rates, including solutions featuring Expanded Beam Performance technology. Since their contact areas do not need to be cleaned under normal conditions, maintenance requirements are reduced - and with them, the risk of maintenance-related downtime.

Up to 600 A for exceptionally short charging times

When maximum charging power is the priority, the ODU-MAC® Power Connector comes into play. When used with bridged busbars, the system transmits up to 600 A and is available with two or three power contacts. This helps reduce charging times and get vehicles back into the transportation process more quickly.

ODU-MAC® Power Connector: available with 2 or 3 power contacts

In addition, modules from the ODU-MAC® Blue-Line portfolio can be integrated. This means that a single connector system combines power transmission with signal, data, fluid, and other interface functions.

The right solution for every AGV application

The application profile determines which connection solution is best: For frequent automated docking operations, durability, blind-mating capability, and tolerance compensation are particularly important. In contrast, for particularly power-intensive applications, high current-carrying capacity is the top priority.

With the targeted combination of high current carrying capacity, long service life, mechanical tolerance compensation, contact protection, and compatibility with a wide range of media, AGV manufacturers and system integrators can make their charging and docking processes more reliable. The result: less downtime, lower

maintenance costs, and higher availability of the automated vehicle fleet.

For more information on ODU solutions for AGVs and AMRs, visit:

https://odu-connectors.com/industries/autonomous-mobile-robots/

ODU Group: global representation with perfect connections

The ODU Group is one of the world's leading suppliers of connector systems, employing 2,800 people around the world. In addition to its company headquarters in Muehldorf a. Inn (Germany), ODU also has an international distribution network, production and product development sites in Sibiu / Romania, Shanghai / China, Tijuana / Mexico and Camarillo / USA. 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 Austria, China, Denmark, France, Germany, Hong Kong, Italy, Japan, Korea, 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.