OMRON Launches Mobile Robot MD-650 with Medium Payload Range

- Provides increased efficiency, intelligent and autonomous material transport through integrated control technology

Mumbai, Sep 22, 2023: OMRON, a global leader in factory automation including Industry 4.0 solutions has announced the launch of MD-650 autonomous mobile robot (AMR), that provides greater efficiency at production sites. With the addition of this medium-payload (650 kg) mobile robot, OMRON has expanded the lineup of autonomous robots to appeal to a wider variety of part and material transport applications.

OMRON's existing lineup of mobile robots ranges from 60 to 1500 kg, and the MD-650 provides a mid-weight range option (650 kg). Its unique control technology enables safe and smooth transport that can be easily implemented at production sites where people and machines work in the same area.

According to Mr. Sameer Gandhi, MD, OMRON Automation, India, “Matching the pace and needs of the industry for high-speed pick & place, and human collaborative robotics solutions, OMRON Automation Business in India is expanding its diversified Robotics portfolio. This new addition to our AMR family is to strengthen & enhance the solution for warehousing (pallet transfer to warehouse), line side replenishment as well as aid flexible manufacturing thus generating value for our customers to make hassle free & automated material movement. It provides operators relief from manual tasks for transferring material while ensuring safety of human beings working in the same space. We look forward to collaborating with the right solution partners to co-create & develop advanced industrial solutions based on the human- machine collaborative technology the robot offers.”

In recent years, manufacturing sites have become increasingly important not only in pursuit of productivity and quality, but also in creating workplaces that reduce the

burden of repetitive work for workers. There are increasing demands to improve efficiency in part- and material-transport operations that repeatedly carry heavy materials, work-in-process products, and finished products through automation to reduce the heavy physical burden on the workers. In the automotive industry, for example, the development of a high-mix, low-volume production system needs dispersal of materials to multiple locations, and the increased frequency of inter-process transfer of small lots of work-in-process has increased the physical burden on workers.

However, even if the optimal robot for each process is selected, controlling a large fleet of mobile robots requires different management systems and processes for each robot model. This requires investment in each system and management to ensure smooth transportation of a wide variety of heavy objects.

The unique "OMRON Fleet Manager" software enables integrated control of up to 100 mobile robots on a single system, eliminating the need for multiple fleet management systems, and automatically selects the optimal mobile robot for each process based on payload and availability.

OMRON aims to add another model with a medium payload range of up to 900 kg in the near future to further strengthen the product lineup.

<Product Features>

1. High speed and safety with top-level transfer speed*2 in the medium payload range*1 and unique obstacle avoidance algorithm.

OMORN MD-650 has proven experience, based on the implementation of several thousand units at manufacturing sites around the world. The new system operates smoothly even in narrow aisles thanks to its maximum speed of 2.2 m/sec, advanced navigation functions, and obstacle avoidance algorithms. In addition, the introduction of advanced battery and charging technology enables 8 hours of operation on a 30-minute charge.

2. Integrated control of all mobile robots using proprietary software technology

A single system can provide integrated transfer routes for up to 100 mobile robots with different payloads and control the transfer sequence in real time. The advanced linkage within a single system enables real-time routing, even for inter-process

transfers at different production speeds, to achieve efficient transfers with minimal retention.

3. High level of safety in accordance with international standard ISO3691-4*3.

It is designed for compliance with ISO 3691-4 (enacted in 2020), the latest safety standard for industrial Automated Guided Vehicles (AGVs).

OMRON will continue to expand its existing product lineup to contribute to the creation of safe factory environments and to robots to help reduce the burden of material transport processes across various industries. Further developments to its proprietary software control will promote safe and optimized transport paths at sites across industries. The company's vision is to develop solutions that maximize the value of people and create a prosperous future for people, industry, and the earth.

*1Mobile robot with payload range model from 500 to 900 kg

*2As of June 2023, according to internal research.

*3 International safety standard applicable to AGV (Automated Guided Vehicle), AMR (Autonomous Mobile Robot) and other unmanned vehicles and systems. It defines requirements for safety functions and methods of validation of automatic vehicle functions, and compliance with these requirements is required to meet the standard.

About OMRON Automation India Business

Headquartered in Kyoto, Japan, OMRON Corporation is a multi-billion-dollar, diversified company with business units producing industrial automation products, device & module solutions, healthcare and social system solutions. The Industrial Automation business unit of OMRON is a global leader providing complete automation solutions for industrial applications. It brings innovation to manufacturing sites through automation with "Integrated", "Intelligent" and "Interactive" concepts with one of the world's most sophisticated and wide product range encompassing panel components, smart sensors, Vision technologies, PLCs, Servos, Drives, Robots & Cobots and Machine safety solutions (ILOR+S) technology.

OMRON Automation – India, now more than two decades old in the country, caters to varied industrial applications encompassing the wide requirements of packaging, automotive, material handling, food & beverages, digital and panel building applications. The company is focusing on the solution business, including Robotics and IIoT, providing "One Stop" solutions to improve the overall efficiency on diverse

production sites. Focusing on the themes of quality, safety and the environment, it supports manufacturing innovation with its unique sensing & controlling technologies and caters to customers across the country via its strong network of offices, application, service and sales engineers supported by an automation technology center (for demos), PoC lab, training centers as well as channel partners to address the ever-challenging requirements. A major factor in OMRON's progress globally & locally has been the strong commitment to provide solutions to its customers' unique challenges.

To learn more, please visit: www.omron-ap.co.in


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