OMRON to Introduce VT-M121 with Industry's First 2D Dimension and Visual Inspection Machine

KYOTO, Japan, Dec. 14, 2018 /Kyodo JBN/ --

- Contribution to Achieving "Zero Defect" with Full Inspection to Satisfy Quality Requirements of Automotive Industry -

OMRON Corporation based in Kyoto announced the global release in December 2018 of the automation industry's first "VT-M121: 2D dimension and visual inspection machine" that performs simultaneously dimension and visual inspection to detect scratches and cracks on products.

VT-M121 demonstrates the feasible full inspection to meet the required quality standard of the automotive industry in full cooperation with SIIX Corporation that is the nation's largest provider of EMS (*1) and works to improve the production quality of electronics components and to increase their reliability. Instead of the inspection process of the sampling inspection by operators, VT-M121 enables full inspection automatically in the production line and contributes to achieving "zero defect" in automotive electronics which are required to have high quality and high reliability.
(*1) EMS: electronics manufacturing service

Image: VT-M121 2D dimension and visual inspection machine
https://kyodonewsprwire.jp/img/201812121336-O1-lCP1vxbI

Along with the progress in the development of automotive technology such as ADAS (advanced driver-assistance system), self-driving, and EVs (electric vehicles), the installation rates of important electrical safety components have been increasing, such as millimeter-wave radar to detect vehicles and pedestrians with wireless connection, the electronics mirror that is mounted as replacement of the current sideview mirror and inside rearview mirror, and LED headlamps. However, these high-density and miniaturized automobile electric components require time to conduct visual inspection. Therefore, their current inspection process is the sampling inspection in each unit. To improve the quality and reliability of these important safety components, full inspection and the automation process are in urgent need.

VT-M121 enables the detection of defects like or even more precisely than the human

eye by using the sophisticated image-processing system “FH series” with the illumination pattern of the MDMC Light that can flexibly change the illumination color and the angle. Thanks to “NJ damping control” that integrates the sequence control and motion control, it can also minimize the camera vibration and realize high-speed and high-accuracy inspection. By the simultaneous dimension and visual inspection, the machine has reduced the inspection time and improved the dimension and inspection performance with “the repeat accuracy 10 um (*2).”

VT-M121 contributes to the safety and reliability of automobile manufacturing by achieving customers’ “zero defect” through full-scale guarantee and accumulation and management of inspection data in place of on-the-spot inspections.
(*2) Reference value

Specifications

Item	Description
Dimension	910（W）×1233（D）×1600（H）mm
Weight	Approx. 500kg
Power rating	AC200-240V (single-phase) voltage fluctuation range plus or minus 10%
Transfer height	900m plus or minus 20mm
Usage air pressure	0.3-0.6MPa

Features
Please refer to the following video for more information.
https://www.omron.co.jp/redirect/to_youtube/vt-m12_e.html

Collaboration with SIIX Corporation
The development of VT-M121 has been started to achieve “zero defect” in components related to the self-driving and ADAS. SIIX Corporation that has significant experience as an automotive component manufacturer and OMRON have had the collaborative partnership to focus on improvement in the quality performance. Through this corporation and based on technical know-how of SIIX Corporation, the duo found out three requirements: repeat accuracy of the dimension (repeat accuracy 10 um) /

simultaneous dimension and visual inspection / full inspection in the production line. Then the two companies achieved a full automation system of PCB dimension inspection (repeat accuracy 10 um (*3)) and visual inspection in the production line of SIIX Corporation.
(*3) reference value of verification by SIIX Corporation

NEPCON JAPAN 2019 (ELECTROTEST JAPAN)
VT-M121 will be exhibited at the trade fair. The dimension and visual inspection of PCB and components will be demonstrated at OMRON’s booth.
- Dates: January 16 (Wed.) -18 (Fri.)
- Venue: Tokyo Big Sight
- Booth No: East 3 hall E19-48
- Presentation (East-A): January 18 (Fri.), 11:00-12:00

About “innovative-Automation”
As a leader in industrial automation, OMRON has extensive lines of control components and equipment, ranging from vision sensors and other input devices to various controllers and output devices such as servomotors, as well as a range of safety devices and industrial robots. By combining these devices via software, OMRON has developed a variety of unique and highly effective automation solutions for manufacturers worldwide. Based on its reservoir of advanced technologies and comprehensive range of devices, OMRON set forth a strategic concept called "innovative-Automation!" consisting of three innovations or "i's": "integrated" (control evolution), "intelligent" (development of intelligence by ICT), and "interactive" (new harmonization between people and machines). OMRON is now committed to bringing innovation to manufacturing sites by materializing this concept.

About OMRON Corporation
OMRON Corporation is a global leader in the field of automation based on its core technology of "Sensing & Control + Think." Established in 1933, OMRON has over 36,000 employees worldwide, working to provide products and services in 117 countries. The company's business fields cover a broad spectrum, ranging from industrial automation and electronic components to automotive electronic components, social infrastructure systems, healthcare, and environmental solutions. In the field of industrial automation, OMRON supports manufacturing innovation by providing advanced automation technologies and products, as well as through extensive customer support,

in order to help create a better society. Its CEO is Yoshihito Yamada. For more information, visit OMRON's website at: https://www.omron.com/.

About SIIX Corporation

SIIX Corporation is a global business organizer providing support in various fields of manufacturers worldwide, including automotive parts, industrial-use equipment, and consumer electric devices. The company provides worldwide services to meet customer needs such as purchasing electronics components, board mounting, assembling end products, tooling, and molding. Its corporate target is to organize customer needs in all fields around the world based on its worldwide experience of over 60 years to give all stakeholders a sense of affinity and charm as a “global business organizer” that creates business.

For more information, visit SIIX’s website at: http://www.siix.co.jp/eg/

Source: OMRON Corporation