

Industry: **Material Handling**
Products: **Robots**

Setting signals: enthusiasm for innovation

WERMA Signaltechnik is one of the world's leading manufacturers of optical and acoustic signal devices. With its KombiSIGN modular signal tower, WERMA has become European market leader. The assembly of the modular elements has been fully automated since 2006. With the highly complex SAP-controlled solution, WERMA became a pioneer in Industry 4.0. The highly flexible assembly line can produce 2500 variants up to lot size 1 without the need for additional set-up work – while maintaining optimum production efficiency and product quality.

The challenge: 50 per cent faster

When the installation reached its maximum capacity in three-shift operation, another wire-bending station was added and the electronic station modified in 2013. The new wire-bending machine is 50 per cent faster than its predecessor. In order to achieve the optimum process flow and minimum down time, the handling robots have to operate at least twice as fast while keeping the same level of accuracy. The new F series from Mitsubishi Electric fulfils that requirement. It has a minimum cycle time of 0.32 seconds.

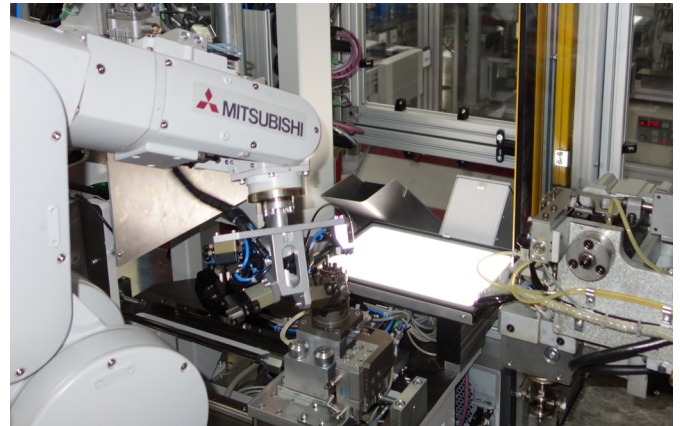
The solution: The latest generation of robots

An RV-7FM 6-axis articulated arm robot is responsible for handling in the new wire-bending station. It has been designed especially for use in flexible production processes like the ones used for small series production at WERMA and is equipped with highly dynamic drive technology.

An RH-12FH SCARA robot performs palletising and transfer functions in the electronics assembly unit. It is mainly intended for the high-speed handling and installation of electronic components and operates with a repeat accuracy of ± 0.01 millimetres.

The result: Making use of superior performance

By using the F-series robots for handling, WERMA has been able to make use of the superior performance of the new wire-bending machine. With the same level of precision, the models of the the F series are 50 per cent faster than the robots in the existing wire-bending and electronic stations. Production efficiency and output have been increased significantly.



“The Mitsubishi Electric robots have had key role in the modification of the installation. The new F-series generation of robots is 50 per cent faster than the older models which has enabled us to keep pace in handling too and actually increase the output of the wire-bending machine.”

Ronny Lauer,
Production Engineer, WERMA Signaltechnik

The SAP-controlled system allows real-time communication between the whole installation and the robot. Their high degree of flexibility makes the Mitsubishi Electric robots the perfect choice for such kind of installations.

WERMA is so pleased with the result of the modification that the robots from the older units are due to be replaced by models from the F series very soon. Now the signal device manufacturer is ideally prepared and equipped for the future.