



Omron helps automaker quickly and painlessly replace legacy MS4800 safety light curtains with the brand new F3SG-SR safety light curtains.

A major automotive manufacturer needed to replace a legacy safety light curtain from Omron (the MS4800) on an engine casting production line, an application that involves tapping holes into the engine heads for mounting. Since the MS4800 is set to be discontinued in March 2021, the automaker needed to evaluate an adequate solution that would be easy to install within the existing system. Any equipment upgrade requires a certain amount of machine downtime, which in itself is a significant expense and must be kept to a minimum.

When replacing any light curtains, there are many concerns end users need to review to ensure the same form, fit, and function. Mounting holes and wiring are just a few of the considerations when performing a light curtain retrofit. With the F3SG-SR Safety Light Curtain, Omron has made conversion from the MS4800 Safety Light Curtain simple. Off the shelf conversion cables and conversion brackets help make the retrofit simple and expedient. The manufacturer also liked several features of Omron's newer light curtains, such as the three-color area beam indicators (ABIs) that simplify alignment and the IP67G oil-resistant rating.

Business need

An automotive manufacturer needed to replace a legacy Omron MS4800 light curtain for its engine casting production line while incurring the minimum possible amount of machine downtime.

Unique solution

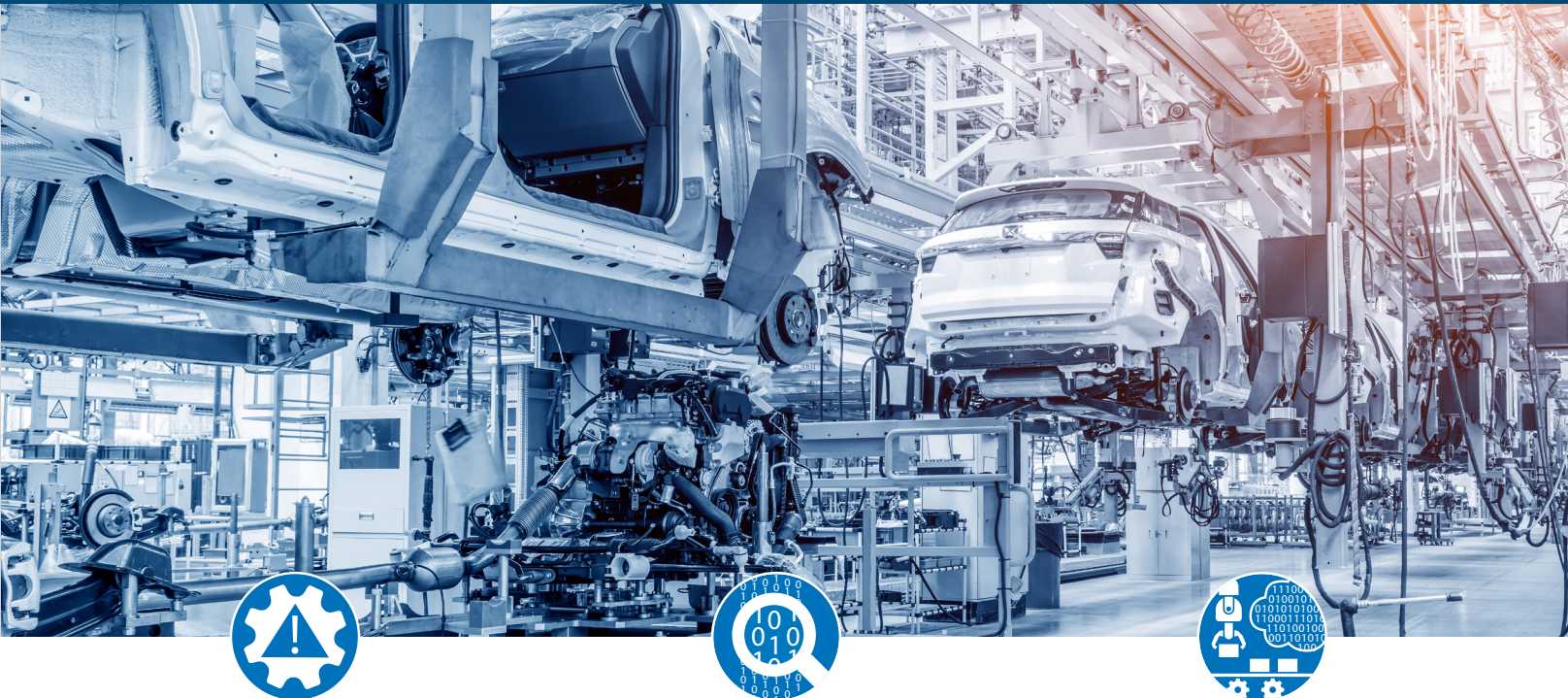
Omron provided the manufacturer with a new F3SG-SR Series safety light curtain, F39-LSGTB-MS conversion brackets, and the F39-JGR3K-MS-L/D conversion cables to make the replacement quick and easy by not requiring a complete rewiring of the existing system.

Customer benefits

The F3SG-SR's area beam indicators sped up installation and alignment, while the light curtain's IP67G rating made it ideal for long-term use in the somewhat oily engine casting application.

The solution

The new F3SG-SR safety light curtain



The need

The manufacturer's challenges with the MS4800 replacement were threefold. First of all, it was necessary to keep the production line running with minimal downtime while protecting employees. Replacement parts for the discontinued MS4800 will not be available after March 31, 2021, so this needed to be taken into consideration. Secondly, the manufacturer's current control methodology was antiquated and needed to be updated.

Finally, the manufacturer needed to make sure that the engine casting machine was up to current OSHA standards, since the application involves many moving parts. These include a skid that arrives and then moves into a cell where a six-axis robot picks the engine heads from a pallet and places them onto a conveyor. Up-to-date safety technology is necessary to protect operators from all hazardous machine motion.

The technology

Omron provided the automotive manufacturer with a new F3SG-SR Series safety light curtain, F39-LSGTB-MS conversion brackets, and the F39-JGR3K-MS-L/D conversion cables to help make the conversion process quick and easy. The F3SG-SR is designed to simplify installation and minimize startup costs thanks to the ABLs, quick programming, and other features. During production, it provides the information necessary to avoid unplanned machine stoppages with preventive maintenance data available via IO-Link or Bluetooth and immediate status updates from the ABLs.

The F39-LSGTB-MS conversion brackets were important to the upgrade because they allowed the automaker to avoid drilling new holes for new light curtain mounting brackets. The ability to use F39-JGR3K-MS-L/D root conversion cables also shortened rewiring time and also helped minimize the downtime required to make the change.

The outcome

Thanks to a diverse machine safety technology portfolio with wide-ranging functionality, Omron was able to provide the manufacturer with a quick and easy way to replace its legacy light curtains in a relatively pain-free manner, since the ABLs made the light curtains very simple to install and align. On top of this, Omron's solution gave the company the option to use additional functionality to meet future needs if there's ever a desire to expand predictive maintenance with IO-Link.

The automaker isn't currently using IO-Link but did show interest in being able to remotely take a look at what's going on with equipment, so IO-Link could very well be an option for the future. Furthermore, customer appreciated the light curtain's construction with an improved seal that gives it an IP67G (oil-resistant) rating, since the engine casting application is somewhat oily.

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