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The development of new connection methods has
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MARCH 2017

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Zero-cabinet power supply

MURRELEKTRONIK'S EMPARRO67 HYBRID is the next logical step toward a goal of decentralized installations, states Florian Holzmann, product manager, power supplies, business unit power, at Murrelektronik. "It's not just a simple 10 A, single-phase power supply; it is a combination of power supply, load control and IP67-rated communication technology that makes the device strong, reliable and intelligent," he says. "This ensures trouble-free operation anywhere and at any time. This is an advantage for large-scale applications, especially in the logistics industry."

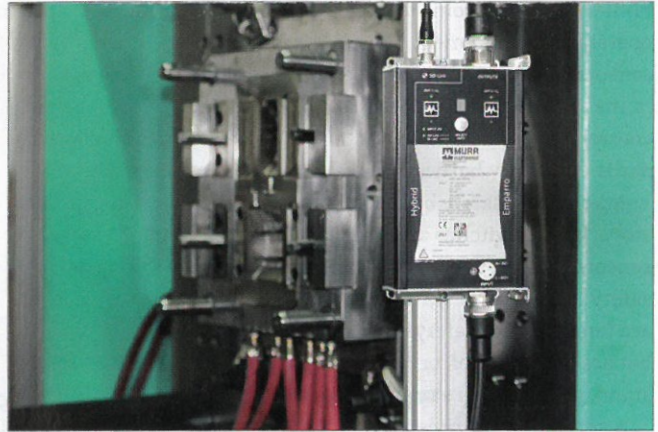
When the device was designed and built, it was based on Murrelektronik's existing knowledge in fieldbus technology, load control and power supplies, continues Holzmann. "Developing an IO-Link enabled device was a key requirement. This led to the highlight upgrade: IO-Link, which provides power supply status. This information can help perform maintenance, if needed, at an optimal time."

Apart from technical aspects, the device opens up a new way of thinking. "With this innovative IP67-rated power supply, we are now talking about the IoT and new business models," says Holzmann. "Murrelektronik's customers are able to offer more than different types of machines and applications."

As in the past, Murrelektronik works to make its customers' lives easier, says Holzmann. "That's why our customers get solutions designed for their applications that reduce their wiring efforts while maximizing application runtime," he says. "Using this decentralized approach, we are constantly striving to reach our vision of a zero cabinet for fieldbus technology, as well as power supplies and load control. For us, it's pretty clear; decentralization is both user-friendly and cost-efficient."

It is not efficient to convert power in a cabinet and spread it by expensive wires to big applications, continues Holzmann. "With the Emparro67 Hybrid, you've got a decentralized power supply," he says. "The transformation from 115/230 Vac to 24 Vdc takes place where it's needed—directly at the load. This reduces line losses to a minimum and allows cabinets to be smaller or even eliminated depending on the application."

More than a power supply, the device is also able to communicate with an IO-Link-master via an M12 connection. "That makes all the application connected and intelligent," says Holzmann. "You can get values like power supply lifetime or configure the two MICO channels. But, even if you don't use an IO-Link-master, you can take advantage of Murrelektronik's wide product portfo-



For more information

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lio and build the perfect system using M12 connectors and have a controllable, zero cabinet power supply in your application. Using preset I/O functions accessed through the M12 connector, you can switch it on or off or reset the channels."

Murrelektronik also added preventive diagnostics. Built into the module is a MICO (an intelligent power distribution module from Murrelektronik for 24 Vdc) load control system. It monitors currents, indicates when approaching the maximum load and makes targeted shutdowns during over-stress or short circuits.

"More than 6 million MICO channels have been sold to date worldwide," notes Holzmann. "Every Emparro67 Hybrid has two MICO channels built in."

Using the two output channels along with a fieldbus system, you can optimize the reliability of your system, continues Holzmann. "A different channel can supply actuators and sensors," he explains. "The integrated MICO channels allow separate load control of each branch, or channel, with selected loads up to 8A each. The loads can be adjusted at the unit using the built-in display or via the IO-Link port."

When the power supply is installed directly next to the load, it has to withstand extreme field applications. Emparro67 Hybrid is ideal for these conditions. "Our power supply is potted, and that protects the field-mounted power supply components against humidity or dust while ensuring heat dissipation." 