Application example
Supervision of multiple hatches for food and beverage industry with Eden and Pluto

Segment: Food and beverage industry and packaging industry
Application: Multiple hatches
Customer: GEA Food Solution

Customer and application description
GEA Food Solution (formerly CFS Convenient Food Solution) is a German company known as a producer of packaging machines. The machines can be anything from 5 to 25 meters long by connecting different modules that e.g. cut, vacuum, thermoforms, portions or labels the food.

Problem and requirements
A machine could have 30 to 50 different covers and hatches to safely monitor. Using a conventional safety solution at least 60 to 100 safety inputs would be required. In addition comes high requirements of the IP protection class because of rigorous cleaning with cleanser. The status of each sensor must be given to the control system of the machine.

Solution
The Eden safety sensors (Adam and Eva) connected to Pluto safety PLC using the dynamic circuit is the perfect solution for GEA. Up to 10 sensors can be connected in series to one safety input. The information outputs of the sensors are connected to a separate module that informs the machine PLC of the status. This means that a small Pluto S20 with 16 safety inputs is sufficient for almost all machine sizes. If more inputs are necessary a Pluto S46 is used. Standard E-stops are connected to the dynamic circuit using Tina 2B. To increase the number of safe outputs from Pluto, a BT51 expansion relay is used.

Products used

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<tr>
<th>Product</th>
<th>Article no.</th>
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<tr>
<td>Pluto S20 v2</td>
<td>2TLA020070R4700</td>
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<td>Adam DYN-Info M12-5</td>
<td>2TLA020051R5100</td>
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<td>Eva General code</td>
<td>2TLA020046R0800</td>
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<td>BT51 24DC</td>
<td>2TLA010033R2000</td>
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<tr>
<td>Tina 2B</td>
<td>2TLA020054R1100</td>
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Advantages
Cost effective solution using a minimum number of inputs while flexible to enable easy future modifications
Reliable in harsh environment thanks to sensors with the highest IP rating
Continuous operation guaranteed by well tried components in food and beverage industry

Conclusion
By using Pluto and Eden with the dynamic circuit, GEA gets a well tried product, perfectly suited for the harsh environment in food and beverage industry, while saving money by minimizing the safety inputs needed.

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