TECH BRIEF:
ELECTRONIC SAFETY SENSORS AND LOCKING DEVICES

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Electronic safety devices feature redundant monitoring microprocessors and dual PNP semiconductor outputs to fulfill the highest level of safety of Category 4 / PLe to ISO 13849 and SIL3 to IEC 62061. The different variants of devices can also be wired in series without detriment to this safety level.

Device status can be determined via the 3 LED's which include various faults codes for quick diagnostics, or serial diagnostics (SD) which provides detailed-device specific information. Basic conventional diagnostics via a PNP semiconductor output is offered for non-SD models.

Some available options for these non-contact, low wear and tear technologies include ECOLAB approvals and IP69K ratings for high temperature, high pressure wash down applications and dual channel locking for PLe locking to ISO 14119.

Series connections via Y connectors

PULSE ECHO BASED

Pulse Echo is a Schmersal-patented non-contact microprocessor-based technology. Coded resonant frequencies oscillating from a target which are triggered from the mating sensor are evaluated to determine position of the guard. Only once the guard is closed (and locked for guard locking devices) will the dual safety outputs become enabled.

CSS180
Compact M18 diameter sensor suitable for flush mounting

CSS34
Rectangular safety sensor with 5 planes of actuation and option for External Device Monitoring (EDM)

CSS30S
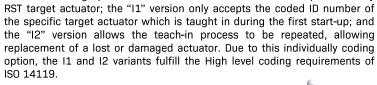IP69K - stainless steel M30 diameter sensor, suitable for hygienic or outdoor applications.

MZM100
Electromagnetic 500N locking with options for adjustable latching up to 100N

RFID BASED

Electronic Safety devices can also use enhanced Radio Frequency Identification (RFID) technology. This RFID system operates on a unique frequency, so sensors will disregard RFID signals that are not of the mating target. In addition, the passive RFID tag in the actuator target will not interfere with other RFID systems such as product trackers. The RFID system also allows for individually coded actuators, since the targets broadcast a unique code number read by the sensor.

Individual coding options: The basic version of the sensor responds to any RST target actuator; the "I1" version only accepts the coded ID number of the specific target actuator which is taught in during the first start-up; and the "I2" version allows the teach-in process to be repeated, allowing replacement of a lost or damaged actuator. Due to this individually coding option, the I1 and I2 variants fulfill the High level coding requirements of ISO 14119.

RSS36
ECOLAB approved and IP69K rated. Optional magnetic latch.

RSS260
Compact, universal mounting sensor

RSS16
AZ16 style housing with optional 60N magnetic latch

AZ201
Keyed interlock switch with door handle actuator

AZM201
2000N solenoid interlock with door handle actuator

AZM300
1000N IP69K solenoid interlock. Adjustable latching of 25N or 50N

AZM400
10,000N bi-stable locking bolt.

AZM40
Compact bi-stable solenoid interlock 2000N

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