Bringing everything safely into position

Safety encoders for mobile machines

- Integrated safety check, TÜV certificate and daisy chain option simplify system set-up

- Accurate position synchronisation in motion thanks to the "preset on the fly" function

- Additional ifm mode with active safe state e.g. for faster system response

IP69K   PL/SIL   CODESYS

ifm – close to you!

Safety for mobile machines

Whether in municipal vehicles, in AGVs in intralogistics, or in AMRs for heavy-duty use in mines or harbours: Wherever vehicles or superstructures are moved or steered automatically, the safety of the surroundings and the vehicle itself must be guaranteed at all times. The safety encoder from ifm can be used to record the position, angle and speed values of moving elements such as axles, turntable ladders, crane arms or tipping skips. This information can be used to derive steering, turning or tilting angles or the current height position of lifting elements. Continuous position synchronisation, for example, via RFID, is also possible thanks to the "preset on the fly" function.
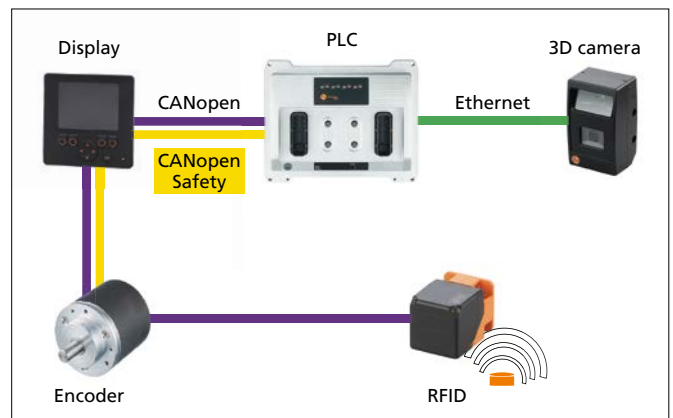
Fast integration, also in series

The sensor redundancy required to ensure safe operation is already integrated in the safety encoder. This and the corresponding continuous self-monitoring of safe operation have been tested and certified by TÜV Rheinland. The sensor is also integrated into the SISTEMA library. This immensely reduces the effort required to implement and subsequently accept safety-related automation. The safety encoder also has both a CAN input and a CAN output. Hence, several encoders or other compatible sensors can be connected in series, making the installation of safety sensors efficient and simple.

Seamless communication with the controller

The combination with the ifm controller also significantly reduces the programming effort in Codesys because the seamless connection of the encoder to the controller and secure communication between the two products is guaranteed by default.

Safety encoder, 58 mm	Order no.
Axial connection	
solid shaft 10 mm	**RM900S**
hollow shaft, 12 mm	**RM901S**
Radial connection	
solid shaft, 10 mm	**RM902S**
hollow shaft, 12 mm	**RM903S**

Technical data		
Operating voltage	[V DC]	8...36
Resolution	[bits]	29 (Multiturn: 16; single turn: 13)
M12 CANbus connections		1x in; 1x out
Communication protocols		CANopen, CANopen Safety
Safety level		SIL2; PLd; AgPLd*; MPLd*
Protection rating		IP69K

*in preparation

BEST FRIENDS

ecomatController
Controller for mobile applications, also for safety applications

Graphic display
Programmable HMI for the control of mobile machines

RFID read/write head
Antenna and evaluation in one device

For further technical details, please visit: ifm.com/fs/RM900S