



Condensation Protection up to SIL3, PLe
CDV75MM Ethernet Powerlink and PROFINET

Condensation Protection up to SIL3 / PLe

TR-Electronic's proven absolute rotary encoders with integrated safety are now also available in a condensation-proof version. The entire scanning process is achieved without using optical components, and still able to meet the high safety standard requirement for Safety Integrity Level (SIL) 3 or Performance Level (PL) e applications.

For applications with high levels of air humidity and temperature variations (especially hovering around the freezing point), condensation of components within the housing of the rotary encoder can pose a challenge. The position within each revolution, and the number of revolutions, are detected magnetically; there are no optical components which could potentially be damaged by the introduction of condensation onto these components.

Scanning is accomplished using two channels. For instance, both single-turn and multi-turn positions are detected twice through two independent systems. As a result, the measured values generated are compared with each other and transmitted through a protected bus system. Safety controllers have direct access to the actual position and the actual velocity, thus forming the basis for decisions that ensure safety for man and machine. During fast automation tasks, both values are also transmitted via non-protected telegrams which are processed in a shorter cycle time depending on the control system. The position and velocity values are therefore immediately available, e.g. axis control. The encoders within the CDV75MM family are available with Ethernet/IP, Powerlink, and PROFINET. Within the Powerlink network, the open transmission standard, openSAFETY, delivers the safety standard required during transmission; in the PROFINET network, transmission follows the PROFIsafe standard.

www.tr-electronic.com/s/S010753

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