

ENCODER AND INCLINOMETER

Combined position and inclination measurement

ASM (Germany) introduced the WST85 Posiwire Cable Extension sensor. Two CANopen interfaces (default and redundant) are integrated.



PBT and stainless-steel housing allows to use the IP67/IP69-rated sensor in harsh environments e.g. in mobile machines (Source: ASM)

A combined measurement of displacement and inclination in one device saves costs, installation space as well as cabling and installation time. The introduced sensor measures linear position up to 6000 mm and inclination between $\pm 180^\circ$ in one axis. A magnetic encoder and a Mems-based inclinometer are respectively used for this purpose.

The CANopen interface is implemented according to the CiA 301 v. 4.02. The encoder functionality accords to CiA 406 v. 3.2 CANopen profile for encoders. Both error control functions provided by CANopen (node guarding and heartbeat) are supported. The node-ID and the bit-rate (up to 1 Mbit/s) can be adjusted via layer setting services (LSS) or via SDO (service data object). CiA does not recommend to adjust the node-ID and the bit-rate via SDO as the unintended SDO access during device's operation could lead to a malfunction or a breakdown of the whole network. Three static TPDOs (transmit process data objects), no RPDO (receive process data object), and one SDO server are implemented. Additionally, the cam functionality (up to eight cams) as specified in CiA 406 is supported. The two CANopen interfaces are accessible via 5-pin M12 connectors. The user can adjust the integrated bus termination resistor of 120 Ω , if desired.

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