

Sensors and actuators for harsh environments

Siko introduced several devices at the SPS Connect 2020 digital fair. The AP10 position indicator, AG03/1 actuator, IKM360R inclinometer, and WH5800M encoder are connectible via CANopen.



The AP10 position indicator uses a two-line LCD to show target and actual values (Source: Siko)

The AP10 position indicator serves for monitored format adjustment in order to reduce setup times and to enhance machine efficiency. The included sensor unit uses a magnetic scanning technology. The position indication is done via a backlit display. The two-line LCD shows target and actual values. The user guidance is possible through included status LEDs. Reset, incremental measurement, and offset adjustment is enabled via a keyboard. A 20-mm (optionally 25,4-mm) stainless-steel hollow shaft and IP53 (optionally IP65) protection are provided.

The AG03/1 actuator for positioning jobs features hollow shafts with up to 14-mm in diameter. It includes a brushless 50-W, 24-V_{DC} motor. Integrated power and control electronics feature inverse polarity and overload protection. An absolute position encoder on the output shaft is integrated.



IKM360R inclinometer is available with CANopen or CANopen Safety interfaces (Source: Siko)

The IKM360R is a redundant safety inclination sensor developed for use in mobile machines. It can be used in safety-critical applications up to PL d (performance level). An optionally redundant CANopen or CANopen Safety interface is available. One-axis or two-axis inclination measurements (0° to 360° or -80° to +80°) with a resolution of 0,001° are possible. IP6K9K or IP67 protected devices can work at temperatures from -40 °C to +85 °C.



The AG03/1 actuator for positioning jobs (Source: Siko)

The WH5800M magnetic absolute rotary encoder with a hollow shaft was also developed for use in mobile machines. Single-turn or multi-turn versions are available. CANopen or J1939 are supported. The CANopen version supports the layer setting services (LSS, CiA 305) for node-ID and bit-rate assignment. The implemented CANopen device profile for encoders (CiA 406) allows a standardized encoder-data exchange with the device. The pin-assignment of the 5-pin M12 connector accords to the CiA 303-1 recommendation for CANopen-related connectors. The device's functionality can be expanded with the Pure.Mobile extension boards for integration of inclination sensors, rotary switches (e.g. for CANopen node-ID adjustment), digital I/Os, etc. The encoder owns an E1 approval by the German Federal Office for Motor Vehicles.



The WH5800M single-turn or multi-turn encoder was developed for use in mobile machines (Source: Siko)

The SPS Connect 2020, the virtual platform of the exhibition SPS - Smart Production Solutions, is the digital version of the physical event (due to coronavirus). 239 exhibitors present products and services solutions from digital automation. 2019, 1 585 exhibitors were part of the SPS exhibition. The [tradeshow](#) takes part from November 16 to December 04.

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