

Industry Sector Industry Automation Division

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Adapter integrates standard sensors in the IO-Link

A new adapter from the Siemens Industry Automation Division makes it easy to integrate standard sensors into the IO-Link, the communication standard for the sensor/actuator level. This means that the majority of sensor types available on the market can utilize the benefits of the IO-Link without any special modification, facilitating integration in the central diagnosis and detection of errors, for example. The Simatic PX130C adapter features a number of signal conditioning functions and extensive diagnostics functions. It is especially suitable for drive solutions such as speed control and monitoring as well as rotational direction recognition, and for fast counters.

The Simatic PX130C adapter with high IP67 protection rating functions as an adapter plug for the connection of up to two binary proximity switches or a single analog sensor to the control level. For this purpose the adapter features two inputs which can be set to pnp or npn, one of which is digital, the other being either analog or digital. The analog input can be set to 0-20 mA, 4-20 mA or 0-10V. Most commonly-available sensor types can be connected to the adapter, which also applies to the more than 500 standard proximity switches of the Simatic PX portfolio from Siemens.

The Simatic PX130C adapter is equipped with a variety of functions. These include signal conditioning functions such as A/D conversion, rotational direction recognition, speed monitoring, input inversion, switching time measurement and timers with extended pulses, for example. The diagnostic functions monitor connected sensors for wire breaks, short-circuits and overcurrent/undercurrent. Configuration takes place in the standard engineering tool using the supplied IODD (IO-Link Device Description). Settings can be made for signal conditioning functions, for example and it is also possible to parameterize averaging values or switch-on muting and determine whether the positive edge or the falling edge of a connected sensor should be detected.

The new adapter is especially advantageous when it is used in more sophisticated sensor applications. Typical areas of application include speed control and monitoring, standstill and slip monitoring or switchover and monitoring of start-up processes on drives. The wide range of functions means that the adapter can be used in all types of machines and plants, for example in wind power stations or CHP plants, belt conveyors and test stands or in large drives. In addition a combination of simple proximity switches enables detection of rotational direction in elevator systems, stirrers, pumps or fans, or the slip monitoring of belt and hydraulic drives. The sensor adapter can detect both measure rapid counting processes up to five kilohertz as well as switching frequencies, thus also making it suitable for open and closed-loop control of agitators or oscillating conveyors. Since it is so versatile, the compact IO-Link Adapter PX130C makes additional speed monitors and counter modules in the control cabinet superfluous, and there is also no need for extra rotary encoders for speed detection and rotational direction recognition.

Further information can be found on the Internet at: www.siemens.com/io-link

You can find the text on the Internet at: www.siemens.com/automation/press



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