Compact speed sensors with IO-Link

Speed sensors

Various designs for different applications

Adjustable modes, e.g. single, two point or window mode

Many additional functions via IO-Link

Flush and non flush

Connector unit with 24 V DC supply voltage

IP 67

Stainless steel

IO-Link

Compact speed monitoring

The evaluation electronics are integrated in the sensor housing. This allows for low-cost and easy monitoring of rotating as well as linear movements regarding overspeed and underspeed. The limit of the speed at which the output switches is set via IO-Link.

Applications

Especially in the field of conveying technology the compact speed sensors can be used for various applications, for example for monitoring belt conveyors or bucket elevators. Here they are typically used to monitor underspeed, blockage or standstill. The different designs and the large speed range allow for an integration into almost any application.

Type	Installation	Setting range [pulses/min.]	Start-up delay [s]	Operating voltage [V DC]	Hysteresis [%]	Order no.
Inductive sensor · M12 connection · IO-Link						
M12	flush	5...24,000	0...30	10...30	10	**DI5027**
M12	non flush	5...24,000	0...30	10...30	10	**DI5028**
M18	flush	5...24,000	0...30	10...30	10	**DI5029**
M18	non flush	5...24,000	0...30	10...30	10	**DI5030**
M30	flush	5...14,400	0...30	10...30	10	**DI5031**
M30	non flush	5...14,400	0...30	10...30	10	**DI5032**
Rectangular	flush	5...9,600	0...30	10...30	10	**DI5033**
Rectangular	non flush	5...9,600	0...30	10...30	10	**DI5034**

Functions via IO-Link

The speed sensors incorporate complete speed monitoring. Additional values are provided via IO-Link, for example the current speed or the set switch point. Parameters such as the start-up delay can be set remotely using IO-Link. Besides, the "window mode" can be activated via IO-Link. Two switch points that can be set independently of each other provide added value. Teaching can also be done remotely via IO-Link.

Due to the optional background compensation it is possible to adjust the sensing range through "teaching" in order to suppress interfering elements in the background.

To increase plant transparency, a connection to the ifm SMARTOBSERVER is possible.

Of course it is also possible to operate the IO-Link enabled sensor in SIO mode.

Operating principle

The integrated inductive sensor is damped by passing cams or other metallic targets.
The evaluation unit determines the period duration or the frequency (actual rotational speed value) on the basis of the time interval between damping and compares it to the set switch point (preset value).

The output is switched during the start-up delay and when the rotational speed exceeds the set switching value. An LED signals underspeed and switch-off of the output.

Accessories

Type	Description	Order no.
	Target wheel	**E89010**
	Clamp with damping cams	**E89013**
	Angle bracket for M12 design, stainless steel	**E10735**
	Angle bracket for M18 design, stainless steel	**E10736**
	Angle bracket for M30 design, stainless steel	**E10737**
	Lock nuts M12 x 1, high-grade stainless steel (1.4571/316Ti)	**E10025**
	Lock nuts M18 x 1, high-grade stainless steel (1.4571/316Ti)	**E10028**
	Lock nuts M30 x 1.5, high-grade stainless steel (1.4571/316Ti)	**E10031**
	Mounting set, free-standing M8 Clamp mounting, Ø 12.2 mm, high-grade stainless steel	**E20861**
	Mounting set, free-standing M10 Clamp mounting, Ø 18.5 mm, high-grade stainless steel	**E20870**
	Mounting set, free-standing M12 Clamp mounting, Ø 30.2 mm, high-grade stainless steel	**E20874**
	USB IO-Link master for parameter setting and analysis of units Supported communication protocols: IO-Link (4.8, 38.4 and 230 kBit/s)	**E30390**
	LR DEVICE (supplied on USB flash drive) Software for online and offline parameter setting of IO-Link sensors and actuators	**QA0011**
	IO-Link master with PROFINET interface	**AL1100**

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