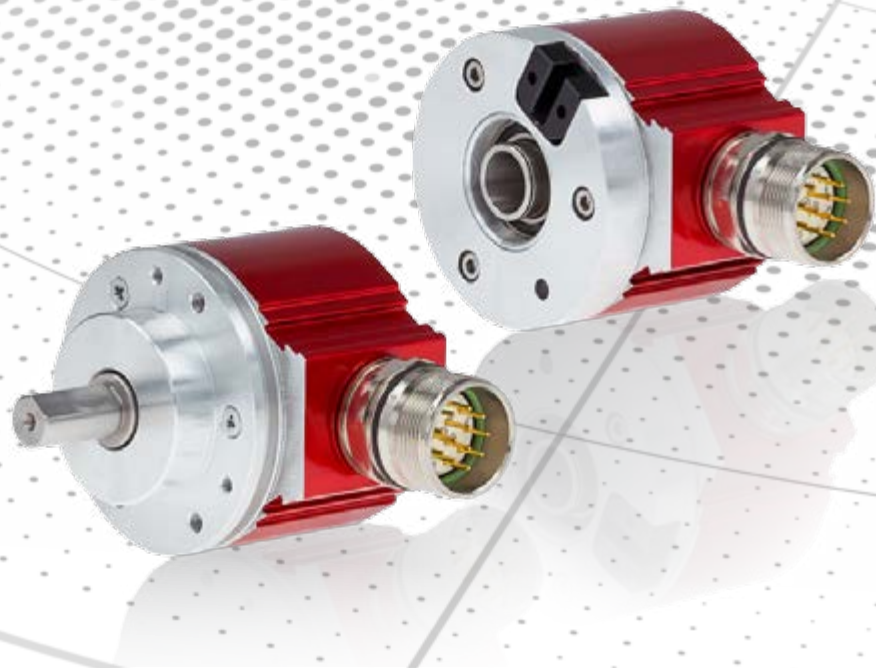
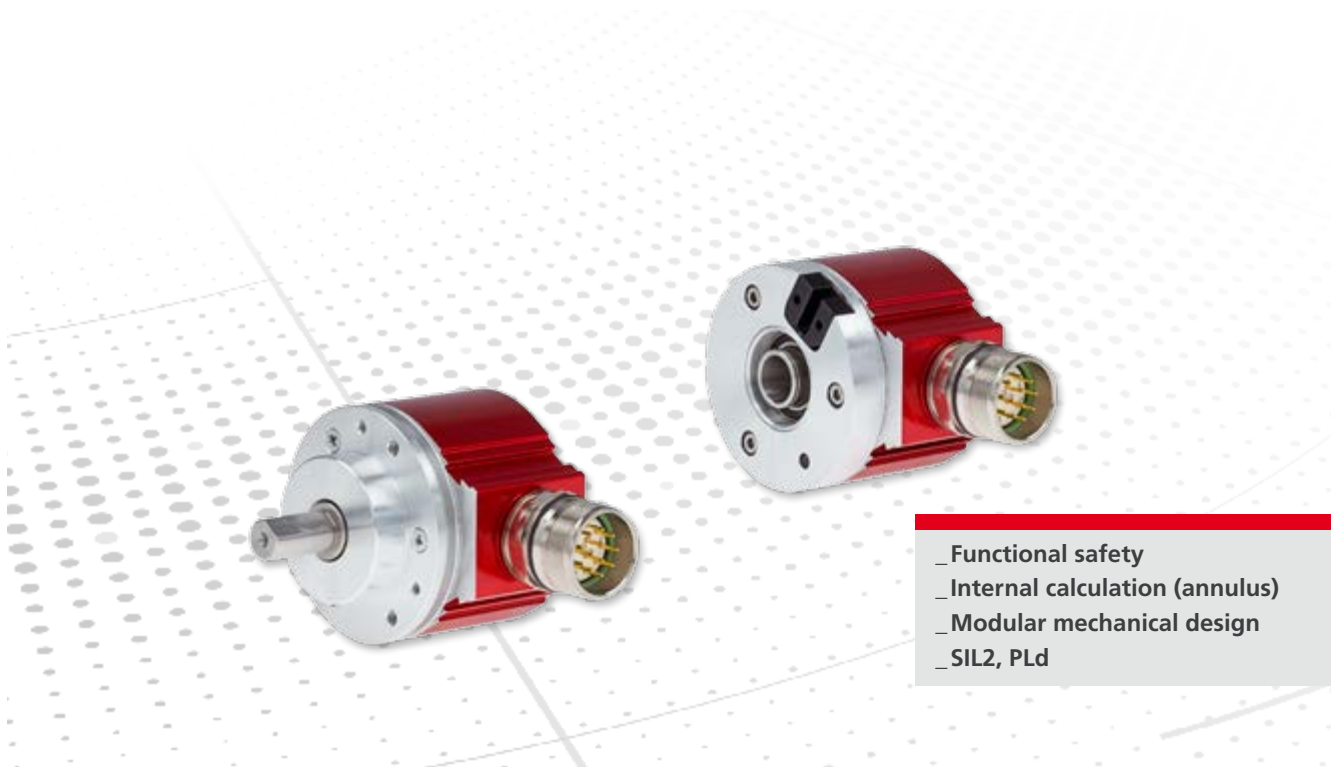


Incremental rotary encoders IE58+FS



Incremental rotary encoders – IE58+FS - Housing 58 mm



Safety-oriented incremental rotary encoder







The solution doesn't always have to be a big one. An incremental rotary encoder is sufficient for the safe detection of speed, direction of rotation or standstill. The use of certified components considerably facilitates validation of the complete application. TR-Electronic therefore offers the safety-certified incremental rotary encoder IE58+FS. The user can choose between square-wave signals (with TTL or HTL level) and sine-cosine interface. The rotary encoder is certified for applications with SIL 2 or PLd. The rotary encoder permits the operating modes SLS, SOS SSR, SDI and SSM in conjunction with an appropriate safety module.

With a sine-cosine interface, SIL3 or PLe is also possible for specific safety functions. This is partly due to the fact that the transmission channel can be checked by means of a simple calculation from the signal: The following must apply at any time: $\sin^2(t) + \cos^2(t) = 1$. If the calculated value differs, the safety module can go into a safe status. Another component of this high safety classification is the simple design with proven optical scanning with fixed resolution on the glass disk. 1024, 2048 and 4096 periods per revolution and

a zero pulse may be selected. The signal paths are designed differentially. As a result the signal is immune to disturbance and failure of a driver can be reliably detected. The incremental rotary encoder is connected to the driving axis either with a solid shaft, blind shaft (IS58+FS) or a hollow shaft (IH58+FS). The form closure necessary for reliable measurement is implemented through a groove in the shaft - in the case of solid-shaft rotary encoders the appropriate spring is included in the scope of supply.

To fulfill the safety functions, the safety-oriented incremental rotary encoder IE58+FS is connected to a safety module available on the market, which then performs the relevant inspection. For the development and certification of the IE58+FS, modules from different manufacturers have been examined and compatibility with the IE58+FS established. The IE58+FS supplement the series of safety-oriented products with integrated safety (CD_75) with an important component for a modular safety concept, which allows the user to select the required evaluation module according to his or her own requirements.

Optical

Products	IE58+FS	IH58+FS	IS58+FS
			
Detection	Optical	Optical	Optical
Supply	10...30 Vdc (SELV/PELV)	10...30 Vdc (SELV/PELV)	10...30 Vdc (SELV/PELV)
Steps per turn	1.024, 2.048, 4.096	1.024, 2.048, 4.096	1.024, 2.048, 4.096
Shaft type	Solid shaft with keyway/Groove	Hollow shaft with keyway	Blind shaft with keyway
Shaft diameter	10 mm	12 mm	12 mm
Connectors	M23 12-pin M12 8-pin cable radial or axial	M23 12-pin M12 8-pin cable radial	M23 12-pin M12 8-pin cable radial or axial
Ambient temperature	-40 ... +85 °C	-40 ... +85 °C	-40 ... +85 °C
Protection class	IP65	IP65	IP65
Interface	HTL TTL SIN/COS	HTL TTL SIN/COS	HTL TTL SIN/COS
possible Safety functions*	SS1, SS2, SLS, SOS SSR, SDI, SSM, SLA	SS1, SS2, SLS, SOS SSR, SDI, SSM, SLA	SS1, SS2, SLS, SOS SSR, SDI, SSM, SLA
maximum SIL/PL*	SIL2, PLd	SIL2, PLd	SIL2, PLd
Weblink	www.tr-electronic.com/s/S011005	www.tr-electronic.com/s/S011007	www.tr-electronic.com/s/S011008
QR-Code			

*depending on safety box used

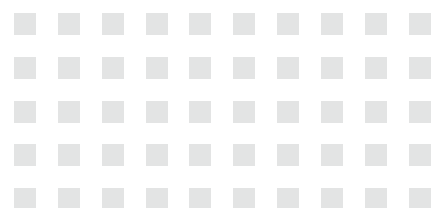
Can't find the right variant? Please contact us (info@tr-electronic.de)

TR-Electronic GmbH

Eglishalde 6
D - 78647 Trossingen

Tel. +49 7425 228-0
Fax +49 7425 228-33

info@tr-electronic.de
www.tr-electronic.de



Last update: November 2015

TR-V-PR-GB-0026-00

Subject to technology and design modifications.

Cover photo background: ©kras99-fotolia.com