Characteristics

Rated switching distance 1 mm with module 1

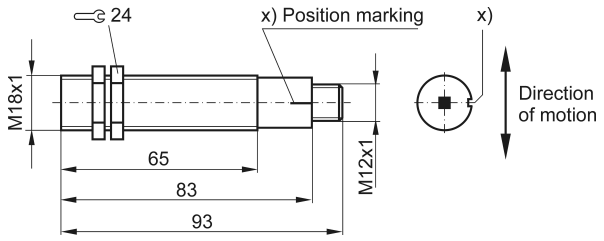
Static version, 0 ... 12 kHz

DC-three-pole, push-pull output (plus- and minus-switching)

High geometrical resolution power (module ≥ 1)

Hall element sensors are unsuitable for detecting slots, for axial approach, and for non-magnetic materials

Dimensions



Technical Data

(Unless otherwise specified U_B = 24 V, T_U ≈ 23 °C, I_L = 0)

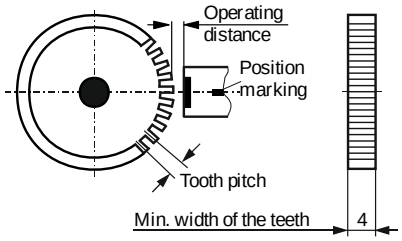
Rated switching distance s_n (10 kHz)	1 mm with module 1
Effective operating distance s_r	s_n (1 ± 10 %)
Operating voltage U_B	10 ... 24 ... 30 VDC
Permissible ripple voltage	10 %
Current consumption without load	≤ 25 mA
Maximum current load capacity of the output	≤ 25 mA
Residual current (locked output)	plus-switching ≤ 0.3 mA
	minus-switching ≤ 0.3 mA
Voltage drop (conductive output; I_L = 25 mA)	plus-switching ≤ 12 V
	minus-switching ≤ 10 V
Output	push-pull,
	temporary short-circuit protection ≤ 20 s
Operating frequency f	0 Hz ... 12 kHz
Ambient temperature range T_U	- 25 ... + 90 °C
Reverse polarity protection	yes
Connection	plug connection M12, 4-pole
Maximum lead length	≤ 150 m
Weight	160 g
Design	M18
Housing material / sensing face	brass, nickel-plated / plastic (PBT)
Maximum tightening torque	34 Nm
Protection rating according to EN 60529	IP 65

Notes

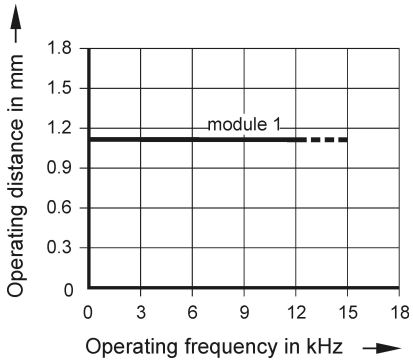
For mounting, a precise vertical alignment of the housing to the tooth flanks is necessary. The switching point is not in the geometric axis of the hall element sensor. Keep away metal cuttings from the sensing face. Avoid operation near strong magnetic fields. The distance between the connecting lead and the control leads of the inductive loads should be ≥ 30 cm. Use a shielded lead for lead length > 10 m. When the sensor is switched on but not activated, the output signal may adopt either the low or the high state. The pulse sensor is self-calibrating making necessary several operating cycles to become adapted to the geometry of the application when connected to power supply. When self-calibration is completed, the distance between sensor and actuator must not, as a basic rule, be changed anymore. The periodic changes of the operating distance (caused, for example, by vibrations of the plant), however, are compensated by the evaluation electronics.

Mounting Instructions

Gear wheel St37 / C45



Operating distance as a function of module and operating frequency



Certification

Complies with standard EN 60947-5-2

Safety regulations

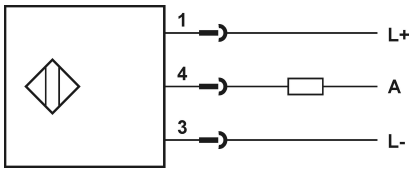
Connection, commissioning and maintenance may only be accomplished by qualified or instructed staff.

We are certified according to DIN EN ISO 9001

Subject to technical changes!

Connection

DC voltage, three-pole,
push-pull output, plug connection



Plug