

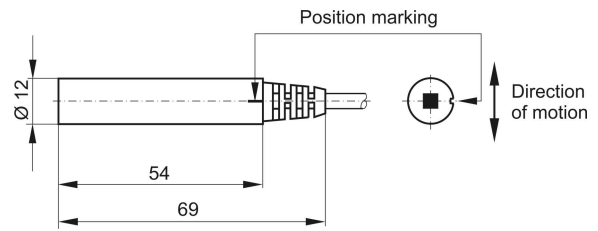
Characteristics

Rated operating distance 1.3 ... 2.5 mm for modules 1 ... 4.
Dynamic version, 1 Hz ... 20 kHz.
DC three-pole, push-pull output (plus-and-minus switching).
Rotation speed detection with high operating frequency (up to 20 kHz) and high geometrical resolution (module ≥ 1).
Tooth length should not exceed 3 mm.
Hall element sensors are unsuitable for detecting slots, for axial approach, and for non-magnetic materials.

Note

This Sensor is particularly suitable for sensing metal profiles with, for example, plastic or rubber coatings (see also ref. no. 13.21-68).

Dimensions



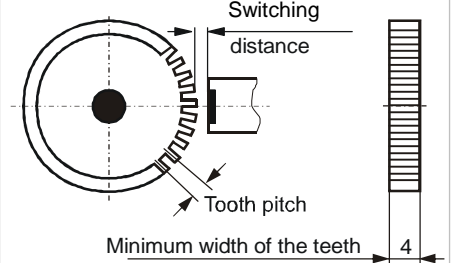
Technical Data

(Unless otherwise specified $U_B = 24\text{ V}$, $T_U \approx 23\text{ }^\circ\text{C}$, and $I_L = 0$)

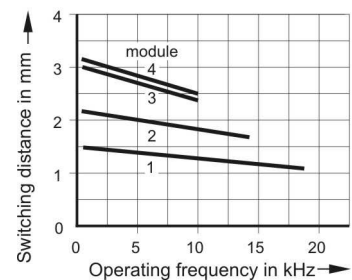
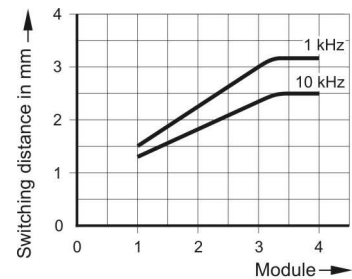
Rated operating distances s_n (10 kHz)	1.3 mm for module 1 1.8 mm for module 2 2.4 mm for module 3 2.5 mm for module 4
Effective operating distance s_r	$s_n (1 \pm 10\%)$
Operating voltage U_B	10 ... 24 ... 30 VDC
Permissible ripple voltage	10 %
Current consumption without load	$\leq 10\text{ mA}$
Maximum current load capacity of the output	$\leq 50\text{ mA}$
Residual current (locked output)	plus-switching $\leq 0.5\text{ mA}$ minus-switching $\leq 2.5\text{ mA}$
Voltage drop (conductive output; $I_L = 25\text{ mA}$)	plus-switching $\leq 12\text{ V}$ minus-switching $\leq 10\text{ V}$
Output	push-pull, temporary short-circuit protection $\leq 20\text{ s}$
Operating frequency f	1 Hz ... 20 kHz
Time delay before availability	$< 2.5\text{ s}$
Ambient temperature range T_U	$-25 \dots +80\text{ }^\circ\text{C}$
Reverse polarity protection	yes
Connection	shielded PVC lead, LiYCY 3 x 0.34 mm ²
Maximum lead length	$\leq 150\text{ m}$
Weight	30 g + lead weight
Design	cylinder, $\varnothing 12\text{ mm}$
Housing material / sensing face	stainless steel / plastic (PBT)
Protection rating according to EN 60529	IP 67

Mounting Instructions

Gear wheel St37 / C45



Switching Distance as a Function of Module and Operating Frequency



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 $\geq 30\text{ cm}$. When the sensor is switched on but not activated, the output signal may adopt either the low or the high state.

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!

Wiring

DC voltage, three-pole,
push-pull output, outgoing PVC lead

