

Characteristics

Rated operating distance 1.3 ... 2.4 mm for modules 2 ... 4.

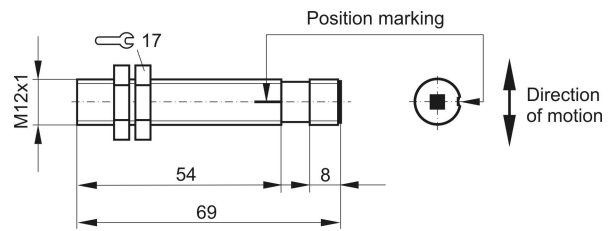
Dynamic version, 1 Hz ... 20 kHz *).

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

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

*) The evaluation electronics of the sensor is configured for a bandwidth of 1 Hz to 20 kHz. If used with the gear wheel module 2 (80 teeth) with a speed of 15,000 rev./min, this corresponds to a switching distance of 20 kHz.

Dimensions



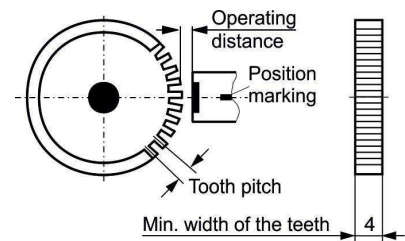
Technical Data

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

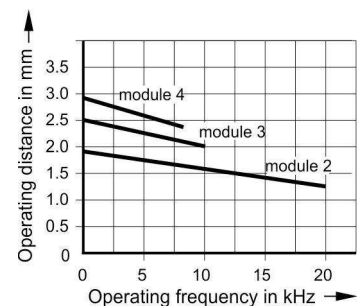
Rated operating distances s_n (10 kHz)	1.3 mm for module 2 2.0 mm for module 3 2.4 mm for module 4
Effective operating distance s_r	$s_n (1 \pm 10\%)$
Operating voltage U_B	8 ... 24 ... 30 VDC
Permitted ripple voltage	10 %
Current consumption without load	$\leq 10\text{ mA}$
Maximum current load capacity of the output	$\leq 25\text{ mA}$
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	M12 connector, 4-pole
Maximum lead length	$\leq 150\text{ m}$
Weight	50 g
Design	cylinder, M12 x 1
Housing material / sensing face	brass / plastic (PBT)
Maximum tightening torque	9 Nm
Protection rating according to EN 60529	IP 65

Mounting Instructions

Gear wheel St37 / C45



Operating 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 switch. 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 $\geq 30\text{ cm}$. Use a shielded lead for lead length $> 10\text{ m}$. 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

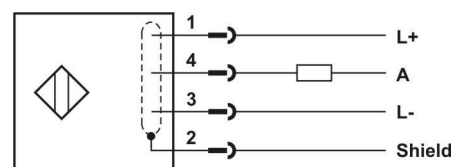
Connection, commissioning and maintenance may only be accomplished by qualified or instructed staff.

We are certified according to DIN EN ISO 9001

Subject to technical changes!

Wiring

DC voltage, 3-pole,
push-pull output, plug-in connection



Plug

