

Characteristics

Rated operating distance 1.3 ... 2.5 mm for module 1 ... 4

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

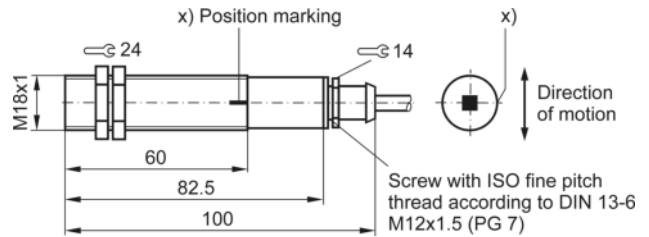
DC three-pole, push-pull output (plus- and minus-switching)

Speed detection with high operating frequency (up to 20 kHz *) and high geometrical resolution (module ≥ 1)

Hall element switches are not suitable for the detection of slots, axial approaching and for not magnetizable 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 1 (100 teeth) with a speed of 12.000 rev./min, this corresponds to a switching distance of 20 kHz.

Dimensions



Technical Data

(with $U_B = 24$ V, $T_U \approx 23$ °C, and $I_L = 0$, unless otherwise specified)

Rated operating distances s_n (10 kHz)

- 1.3 mm with module 1
- 1.8 mm with module 2
- 2.4 mm with module 3
- 2.5 mm with module 4

Effective operating distance s_r (1 ± 10 %)

Operating voltage U_B 8 ... 24 ... 30 VDC

Permissible ripple voltage 10 %

Current consumption without load ≤ 10 mA

Maximum current-carrying capacity of the output ≤ 25 mA

Residual current (locked output)

- plus-switching ≤ 0.5 mA
- minus-switching ≤ 2.5 mA

Voltage drop (conductive output; $I_L = 25$ mA)

- plus-switching ≤ 12 V
- minus-switching ≤ 10 V

Output 1 push-pull,
temporary short-circuit protection ≤ 20 s

Operating frequency f 1 Hz ... 20 kHz *)

Time delay before availability < 2.5 s

Ambient temperature range T_U - 40 ... + 100 °C

Switching point modification over the temperature - 4 μ m / °C

Reverse polarity protection yes

Connection outgoing lead, SiHF 3 x 0.75 mm²

Maximum lead length ≤ 150 m

Weight 150 g

Design M18

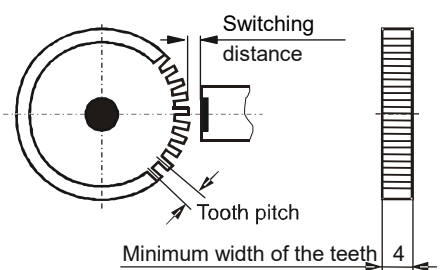
Housing material / sensing face steel / plastic (PBT)

Maximum torque 34 Nm

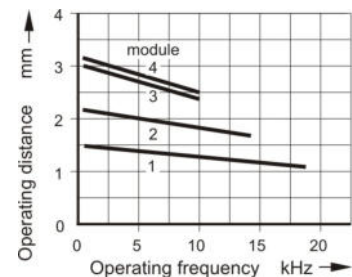
Protection rating according to EN 60529 IP 67

Mounting Instructions

Gear wheel St37 / C45



Operating distance as a Function of Module and Switching Frequency



Notes

When mounting, the housing has to be aligned vertically to the tooth centres. The switching point is not in the geometric axis of the hall element switch. Keep away metal splinters from the sensing face. Avoid operation near strong magnetic fields. The distance of the connecting lead to the control leads of inductive consumers should be ≥ 30 cm. In case of lead length > 10 m, use a shielded lead. After having been switched on the output signal may show a low or high status without having been actuated.

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, Silicone outgoing lead

