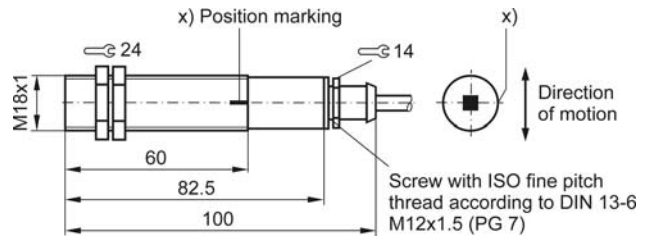


**Characteristics**

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  $\geq 1$ )  
 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**



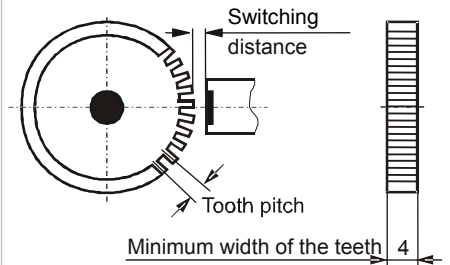
**Technical Data**

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

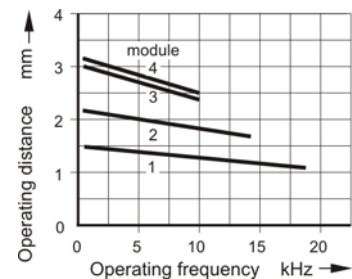
Rated operating distances $s_n$ (10 kHz)	1.3 mm with module 1 1.8 mm with module 2 2.4 mm with module 3 2.5 mm with module 4
Effective operating distance $s_r$	$s_n (1 \pm 10\%)$
Operating voltage $U_B$	8 ... 24 ... 30 VDC
Permissible ripple voltage	10 %
Current consumption without load	$\leq 10\text{ mA}$
Maximum current-carrying 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	1 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 $T_U$	$-40 \dots +100\text{ }^\circ\text{C}$
Switching point modification over the temperature	$-4\text{ }\mu\text{m} / ^\circ\text{C}$
Reverse polarity protection	yes
Connection	outgoing lead, SiHF $3 \times 0.75\text{ mm}^2$
Maximum lead length	$\leq 150\text{ m}$
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  $\geq 30\text{ cm}$ . In case of lead length  $> 10\text{ m}$ , 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

