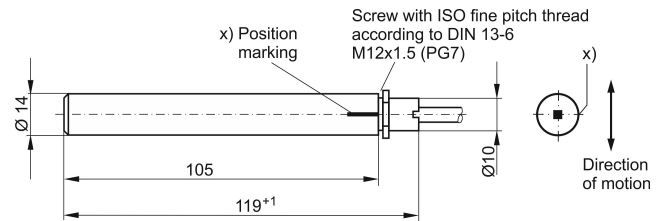


**Characteristics**

Rated operating distance 1 mm, flush mounting  
 Static version, 0 ... 12 kHz  
 DC three-pole, push-pull output (plus- and minus-switching)  
 High geometrical resolution power (module  $\geq 1$ )  
 Hall element sensors are unsuitable for detecting slots, for axial approach, and for non-magnetic materials

**Dimensions**



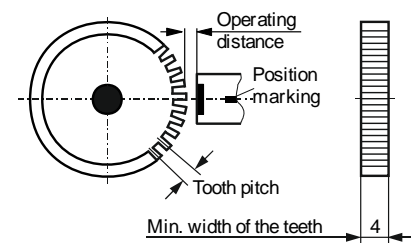
**Technical Data**

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

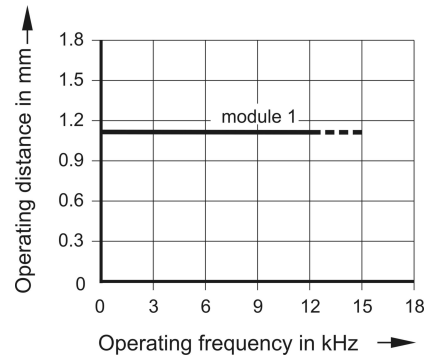
Rated operating distance $s_n$ (10 kHz)	1 mm for module 1
Effective operating distance $s_r$	$s_n (1 \pm 10\%)$
Operating voltage $U_B$	10 ... 24 ... 30 VDC
Permissible ripple voltage	10 %
Current consumption without load	$\leq 25\text{ mA}$
Maximum current-carrying capacity of the output	1 ... 10 mA
Residual current (locked output)	plus-switching $\leq 0.3\text{ mA}$ minus-switching $\leq 0.3\text{ mA}$
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 $f$	0 Hz ... 12 kHz
Ambient temperature range $T_U$	- 25 ... + 100 $^\circ\text{C}$
Switching point modification over the temperature	- 4 $\mu\text{m} / ^\circ\text{C}$
Reverse polarity protection	yes
Connection	shielded Teflon lead 2 x 0.34 mm <sup>2</sup>
Maximum lead length	$\leq 150\text{ m}$
Weight	160 g
Design	$\varnothing 14$
Housing material / sensing face	stainless steel / plastic (PBT)
Protection rating according to EN 60529	IP 67

**Mounting Instructions**

Gear wheel St37 / C45



**Operating Distance as 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  $\geq 30\text{ cm}$ . 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. 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.

**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 change!

**Wiring**

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

