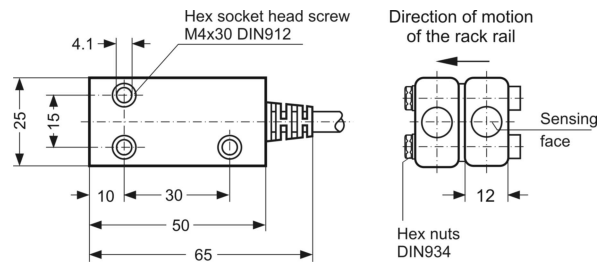


Characteristics

Rated operating distance 0.4 mm, flush mounting
DC three-pole, push-pull output (plus- and minus-switching)
High operating frequency (up to 12 kHz)¹⁾ with high geometrical resolution (module ≥ 1)
Hall element sensors are unsuitable for detecting slots, for axial approach, and for non-magnetic materials.

¹⁾ 12 kHz corresponds to a speed of 48 m / s with a tooth pitch of 4 mm.

Dimensions

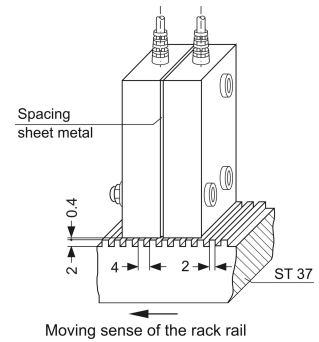


Technical Data

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

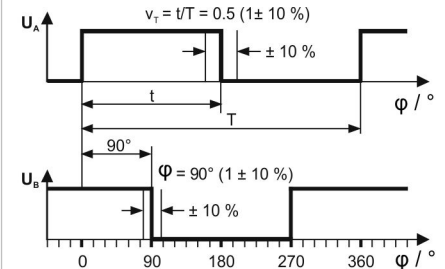
Rated operating distance s_n	0.4 mm
for rack rail as specified in the mounting instructions	
Duty cycle v_T	0.5 (1 \pm 10 %)
Phase shift ϕ	90° (1 \pm 10 %)
Operating voltage U_B	10 ... 24 ... 30 VDC
Permissible ripple voltage	10 %
Current consumption without load	≤ 25 mA
Maximum current load capacity of the outputs	≤ 25 mA
Residual current (locked output)	plus-switching ≤ 0.3 mA minus-switching ≤ 0.3 mA
Voltage drop (conductive output; $I_L = 25$ mA)	plus-switching ≤ 12 V minus-switching ≤ 10 V
Output	push-pull, short-circuit protection ≤ 20 s
Operating frequency f	0 ... 12 kHz
Ambient temperature range T_U	- 25 ... + 75 °C
Reverse polarity protection	yes
Connection	PVC lead, LiYY 3 x 0.34 mm ²
Maximum lead length	≤ 150 m
Weight	90 g + lead weight
Design	50 x 25 x 12 mm
Housing material / sensing face	aluminium / plastic (PBT)
Protection rating according to EN 60529	IP 67

Mounting Instructions



Pulse Diagram

Rated operating distance 0.4 mm with rack rail and direction of motion as specified in the mounting instructions.



Duty cycle v_T and phase shift ϕ of the output signals depend directly on:

- the direction of motion of the rack rail
 - the switching distance
 - the ratio tooth - gap
 - as well as the material of the rack rail
- Any deviation from the instructions can lead to a modification of the specifications.

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 ≥ 30 cm. Use a shielded lead for lead length > 10 m. Apply shield only device-sided on L- (0 V).
The hall element is self-calibrating making necessary several operating cycles to become adapted to the geometry of the application when connected to power supply. After this phase the distance between sensor and actuator must, as a matter of principle, not be changed again. 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 changes!

Connection

For each sensor: DC voltage, three-pole, push-pull output, outgoing PVC lead

