

Magnet-Sensor KHS100-Serie

The very thin (3mm) magnet-sensor acts as either magnet- switch, distance-, angle- or rotation- measurement. It can be used for e.g. door-, rotation- or angle detection.

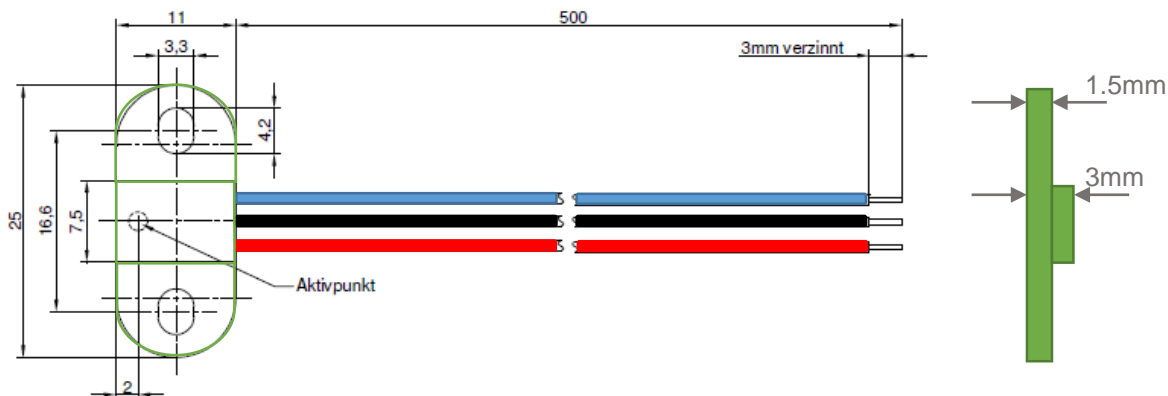
The extreme flat and simple design is ideal for cost sensitive and space conditions applications.

Benefits

- Long life operations
- Proximity-Magnet switch
- Distance or angle measurement
- Native construction

Options

- customized measurement range or switchpoint
- customized connector and cable length
- different magnets available



Specification

Parameter	KHS100-SN6C10L50	KHS100-A2C10L50	KHS100-RC10L50	Unit
Function	Switch	Distance	Angle	
Measuring range		5-13 (30)mm ⁸⁾	0...360°angle ⁴⁾	
Switch/measure-distance	g ⁵⁾⁷⁾		3 ⁴⁾	mm
Size (l x b x h)	11 x 25 x 3			mm
Body material	PA 66 plastic			
Cable length	500			mm
IP rating	sealed, IP 65 conform			
Operating temperature	-10...105°C moved, -30...105°C unmoved			°C
Mounting	M3 non magnetic screw, torque max. 0.5 Nm			
Termination	wire with tinned leads			
Supply Voltage	2.7 ... 24	5 ³⁾ +/- 0.5		V _{DC}
Current Consumption	Typ. 1.6	7 ... 10	8 ... 12	mA
Output Current	25	1	1	mA
Switching Speed	max 12	2	(T.B.A.)	kHz
Signal output	(NPN)	2.5, +/- 2V ⁹⁾	0.5...4.5 ³⁾	V
Repeatability	(0,1mm)	(T.B.A.) < 0.5 ¹⁾	up to 0.1 ⁴⁾	%
Resolution	n.r.	(T.B.A.) < 0.2 ¹⁾	approx. 0.1 ⁴⁾	%
Leadout	Red Black Blue		Red Black Blue Brown	V _{Sup} GND V _{Out} Test ²⁾

¹⁾ Negative exponential to distance between sensor and magnet/actuator

²⁾ "Testlead" should be connected to ground

³⁾ Radiometric: Smaller values of supply voltage reduce value of signal; supply voltage has to be stabilized

⁴⁾ Tested in 3mm distance to magnet 22P1005S

⁵⁾ With magnet (22P)0603

⁶⁾ With magnet (22P)1505.03N

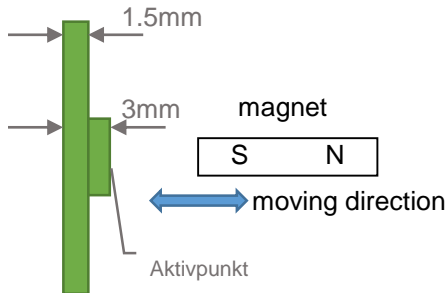
⁷⁾ Hysteresis (Difference of On/Off switching point) approx. 10%

⁸⁾ With south pole of Magnet Neodym round, 4 x 4mm: 5mm = 5.04V, 30mm = 2.6V (curve progression negative exponential)

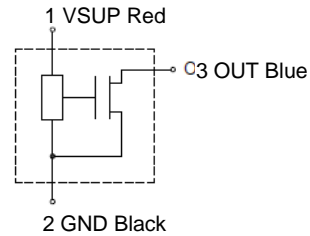
⁹⁾ Actuating with south pole: 2.5...5V, with north pole: 2.5 ...0.2 V

Application guide

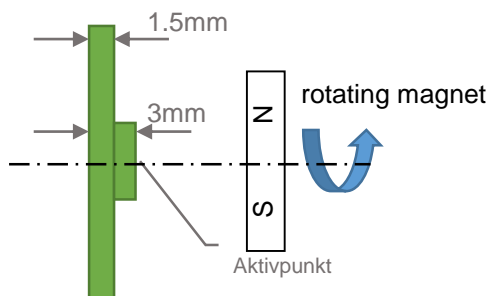
KHS100-SN6C10L50 and KHS100-A2C08L50



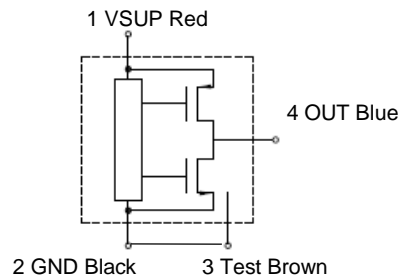
Leadout



KHS100-R1C08L50



Leadout



Please note:

The axe of the magnet should be in line / positioned to sensing area which is marked upside of the sensor.