

general characteristics

product description Wear-free, programmable, magnetic Hall sensors for measuring angles. A magnetic field generated by a permanent magnet is outputted according to the rotation in a linear output voltage. Available with connecting cable (200mm or 1000mm) with or without M8 Connector.

highlights

- > High tolerance to misalignment
- > Max. Air gap of 5.2mm
- > Different magnets available
- > Custom programming available
- > Detection face side and longitudinal side possible
- > Sensor in normal and supine mountable

Position sensing in vehicles
throttle valves
pivot points
alternative for encoders

electrical characteristics	5V variants	36V variants
min. operating voltage	4,5V	9V
max. operating voltage	5,5V	36V
max. current draw	at operating voltage not burdened output	VDD=5V 10mA
output signal	ratiometrisches, analoges Spannungssignal	
min. output signal	10 kΩ load resistor (PULL- Down)	10%VDD
max. output signal	10 kΩ load resistor (PULL- Down)	90%VDD
diagnostic ranges	10 kΩ load resistor (PULL- Down)	0 - 4 / 96 - 100%VDD
max. output current	5mA	5mA
min. load output	∞Ω	∞Ω
max. load output	1kΩ	1kΩ
output short circuit protected	✓	✓
output overload protected	✓	✓
reverse polarity safety on the supply side	✓	✓
max. overvoltage on the supply side	24V	40V
max. reverse polarity voltage on the supply side	-12V	-40V
max. overvoltage on the output side	18V	18V
max. reverse polarity voltage on the output side	-0,3V	-0,3V

max. signal deviation measuring range 360° / eccentricity sensor - magnet ± 1mm / HIS - ring magnet / -40°C ... 85°C depending on the magnet; typ. ±7,5%VDD depending on the magnet; typ. ± 8%5V

ESD- resistance air discharge 16kV 16kV

ESD- resistance contact discharge 8kV 8kV

fulfilled EMC-standards EN13309:2010 EN13309:2010
EN60947-5-2:2007 Teil 5-2 EN60947-5-2:2007 Teil 5-2
Info: additional components req.

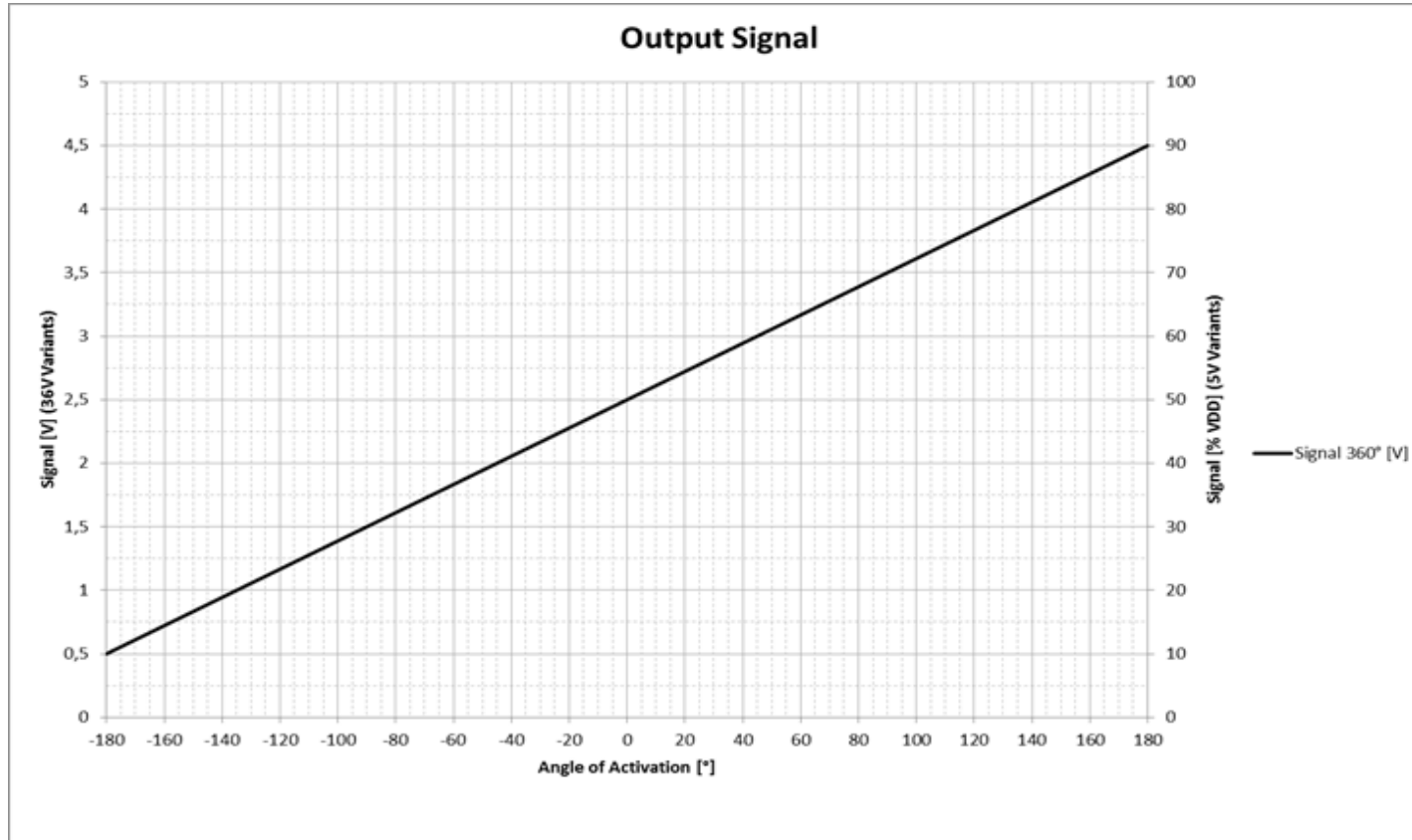
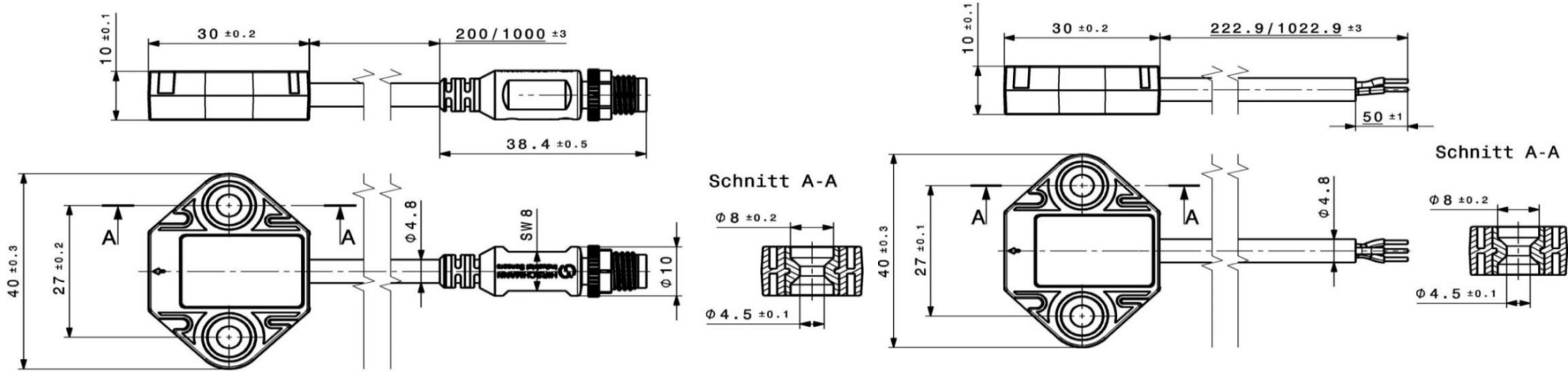
mechanical characteristics: sensor

length	30 mm
width	40 mm
height	10 mm
cable diameter D max.	4,8 mm
cable length with M8 connector	200 oder 1000 mm
cable length without M8 connector	222,9 oder 1022,9 mm
type of connector	M8x1
housing material	PA-6 GF30
cable jacket material	TPE, PUR
protection class / IEC 60529	IP 6K9K
vibration with connector	2,83g RMS sinusoidally; 10 Hz - 1,0 kHz all 3 axes
Vibration ohne Stecker	10,75g RMS sinusoidally; 20 Hz - 1,5 kHz all 3 axes
min. ambient temperature	-40 °C
max. ambient temperature	125°C

On request custom connectors, output signal programming, shielding and custom magnet designs are possible.

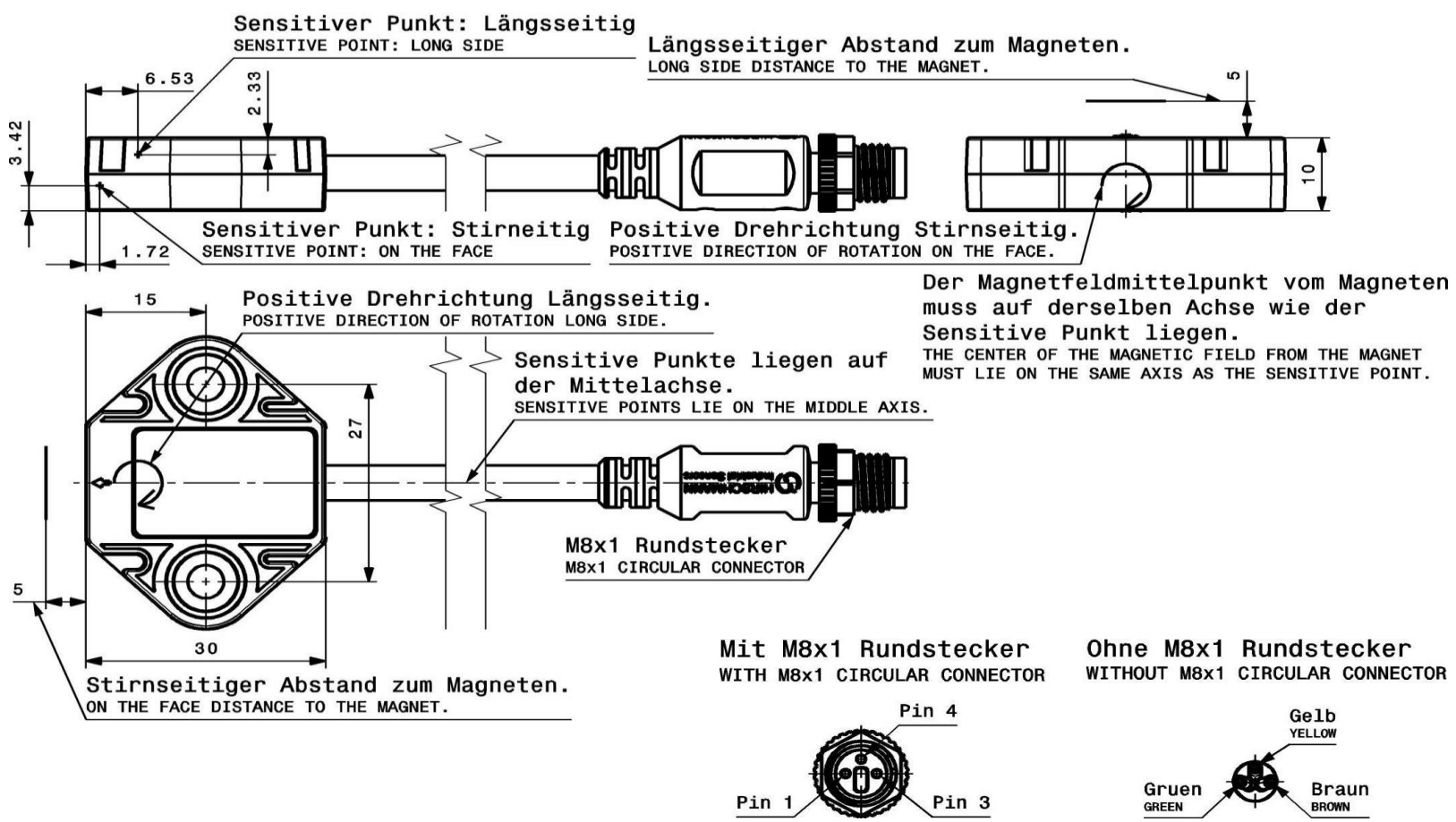
The sensor is programmed before delivery with a master magnet. The magnetic flux density in the sensitive area of the sensor is approx. 25 mT. This flux density can be achieved, for example, by installing a ring magnet with the dimensions $D_a = 17\text{mm}$, $D_i = 11\text{mm}$, $h = 4\text{mm}$ from the material N42SH. The magnet used, determines the accuracy of the sensor signal.

PRODUCT DRAWING

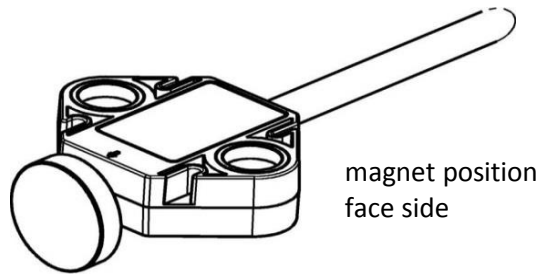


MOUNTING DESCRIPTION

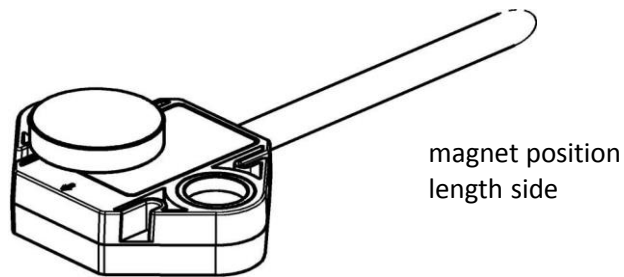
Dargestellt ist nur der Sensor ohne Magnet.
SHOWN IS THE SENSOR WITHOUT THE MAGNET.



PRODUCT OVERVIEW



art. Nr.:	detection side	cable end	measuring range
HISA-0101-V11-W02-CM8-00	face side	with connector 200 mm	360°
HISA-0101-V11-W10-CM8-00	face side	with connector 1000 mm	360°
HISA-0101-V11-W02-001-00	face side	without connector 222,9 mm	360°
HISA-0101-V11-W10-001-00	face side	without connector 1022,9 mm	360°
HISA-0101-V12-W02-CM8-00	face side	with connector 200 mm	360°
HISA-0101-V12-W10-CM8-00	face side	with connector 1000 mm	360°
HISA-0101-V12-W02-001-00	face side	without connector 222,9 mm	360°
HISA-0101-V12-W10-001-00	face side	without connector 1022,9 mm	360°



art. Nr.:	detection side	cable end	measuring range
HISA-0201-V11-W02-CM8-00	length side	with connector 200 mm	360°
HISA-0201-V11-W10-CM8-00	length side	with connector 1000 mm	360°
HISA-0201-V11-W02-001-00	length side	without connector 222,9 mm	360°
HISA-0201-V11-W10-001-00	length side	without connector 1022,9 mm	360°
HISA-0201-V12-W02-CM8-00	length side	with connector 200 mm	360°
HISA-0201-V12-W10-CM8-00	length side	with connector 1000 mm	360°
HISA-0201-V12-W02-001-00	length side	without connector 222,9 mm	360°
HISA-0201-V12-W10-001-00	length side	without connector 1022,9 mm	360°

