

general characteristics

product description Wear-free, programmable, magnetic Hall sensors for length measurement. A magnetic field generated by a permanent magnet is outputted according to a longitudinal motion 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	# Position sensing in vehicles
	> Different magnets available	# Length measuring system up to 40mm
	> Custom programming available	# Position monitoring for short-stroke cylinders
	> Detection face side and longitudinal side possible	# Position measurement chain tensioners
	> Sensor in normal and supine mountable	

electrical characteristics

		5V variants	36V variants
min. operating voltage		4,5V	9V
max. operating voltage		5,5V	36V
max. current draw	operating voltage VDD = 5V not burdened output	10mA	10mA
output signal	ratiometric, analog - voltage signal		
min. output signal	10 kΩ load resistor (PULL- Down)	10%VDD	0,5V
max. output signal	10 kΩ load resistor (PULL- Down)	90%VDD	4,5V
Diagnosebänder	10 kΩ load resistor (PULL- Down)	0 - 4 / 96 - 100%VDD	0-0,2 / 4,8-5V
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 40mm / mech. positioning accuracy ± 0,1mm / HIS - magnet/ -40°C ... 85°C	± 2%VDD	± 2,5%5V
ESD - resistance	air discharge	16kV	16kV
ESD - resistance	contact discharge	8kV	8kV
fulfilled EMC - standards		EN13309:2010 EN60947-5-2:2007 Teil 5-2	EN13309:2010 EN60947-5-2:2007 Teil 5-2

mechanical characteristics: sensor

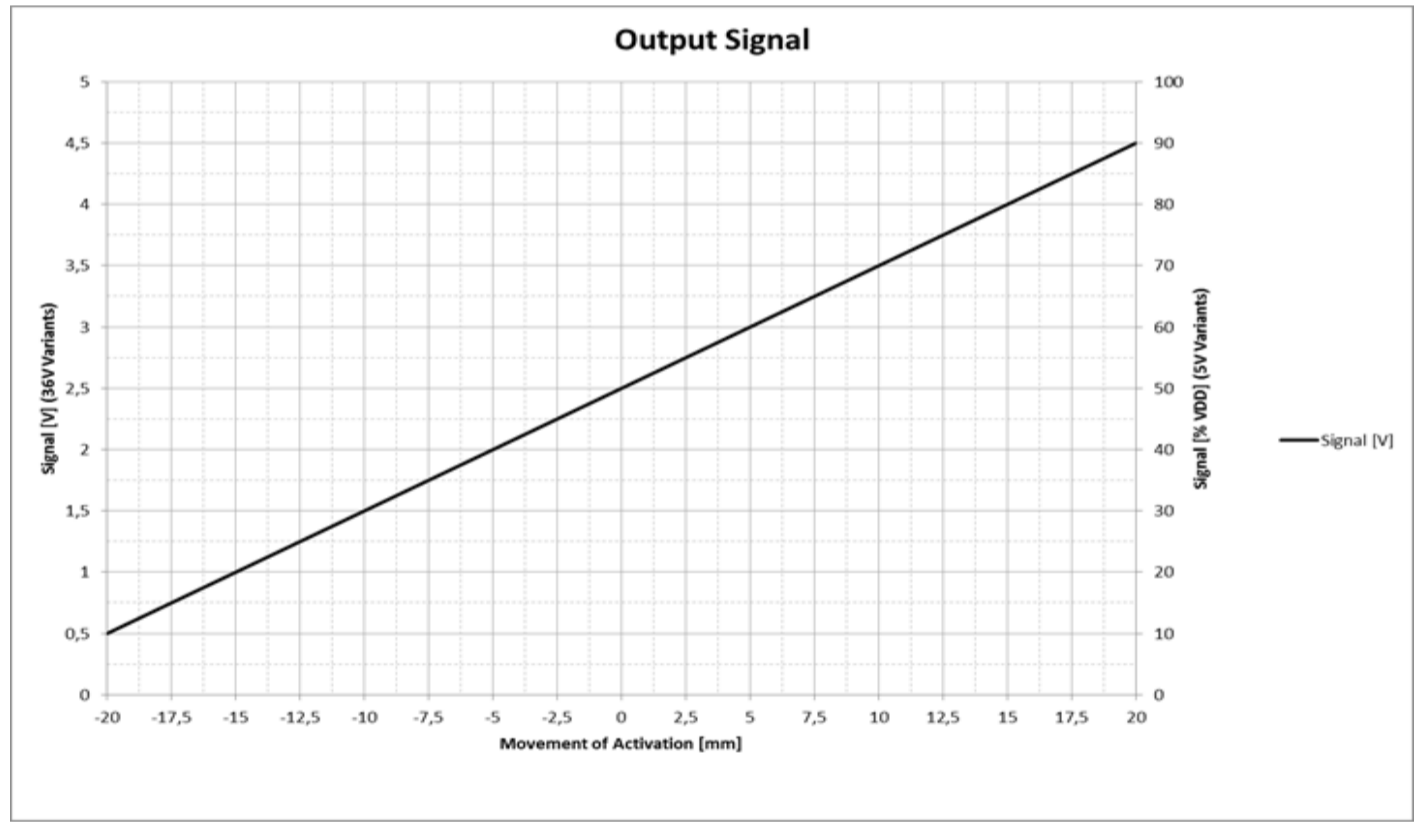
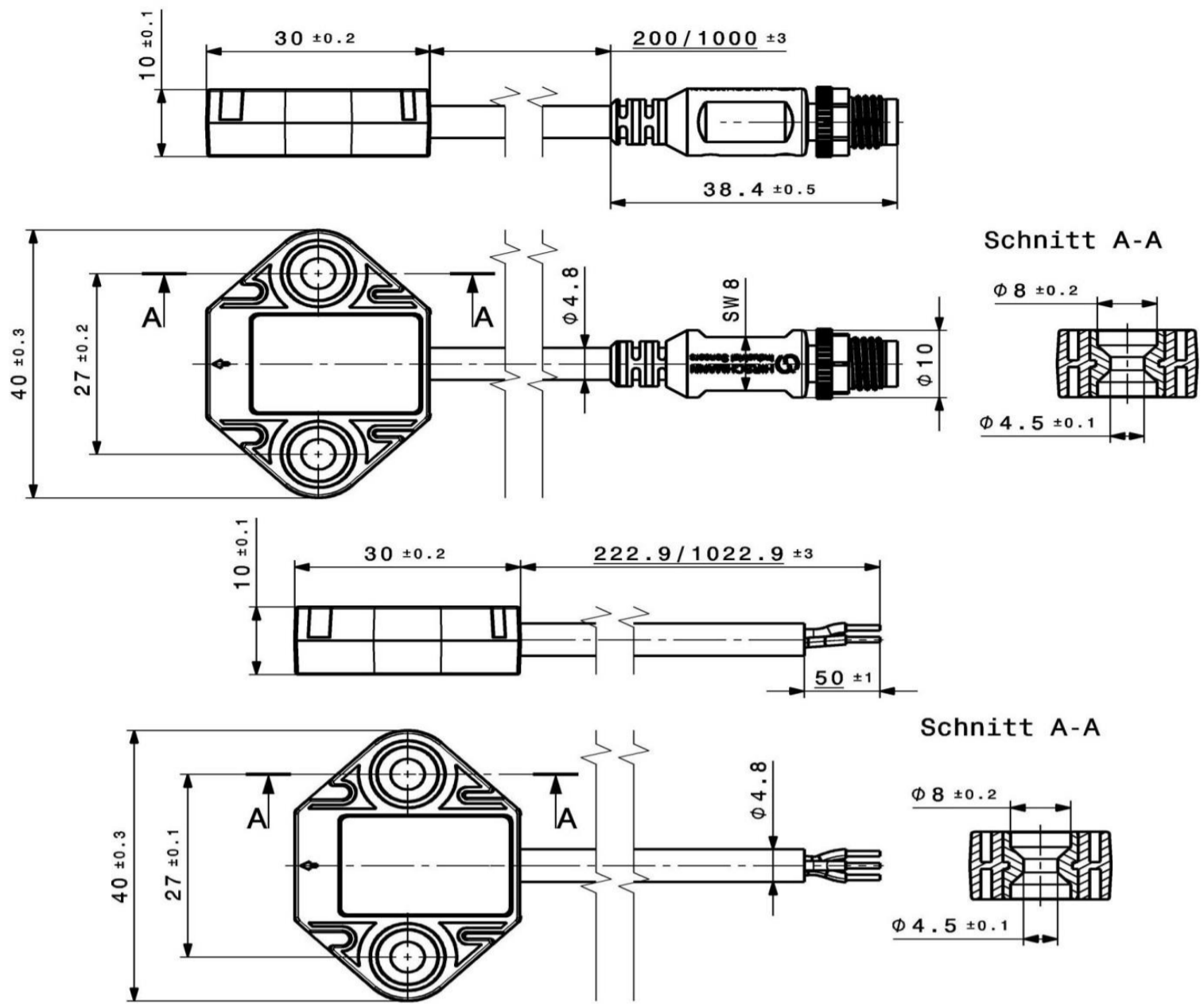
length	30 mm
width	40 mm
height	10 mm
cable diameter	4,8 mm
cable length with M8 connector	200 oder 1000 mm
cable length without M8 connector	222,9 oder 1022,9 mm
type of connector	M8x1
housing material	PA-6 GF30
cable jacket material	TPE, PUR
protection class / IEC 60529	IP 6K9K
vibration with connector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

mechanical characteristics: magnet

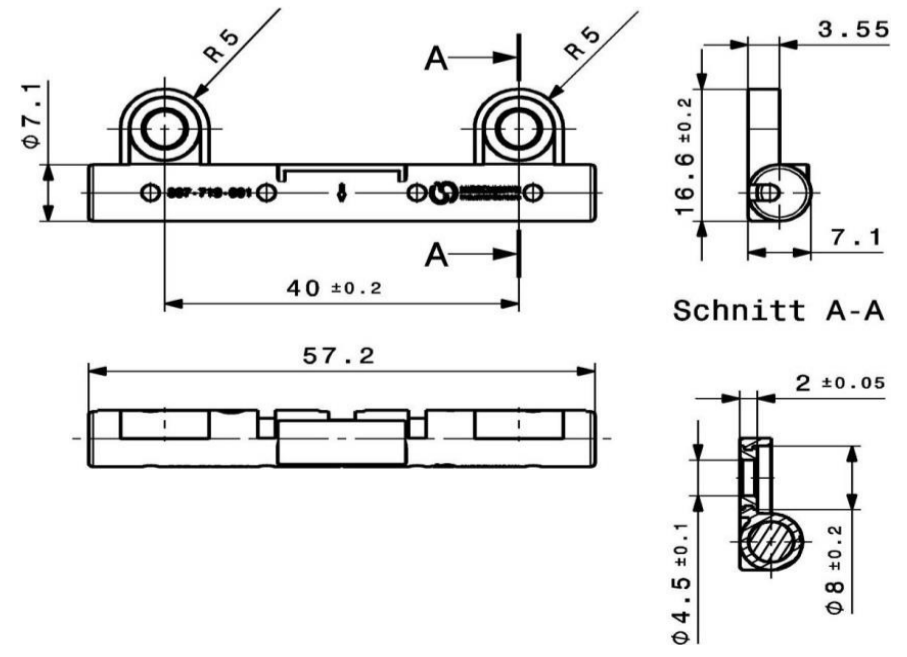
width	7,1 mm
length	57,2 mm
height	16,6 mm
magnet diameter	5 mm
magnet length	25 mm
housing material	PA-66 GF25
magnet material	N42SH
min. ambient temperature	-40 °C
max. ambient temperature	125 °C

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

PRODUCT DRAWING



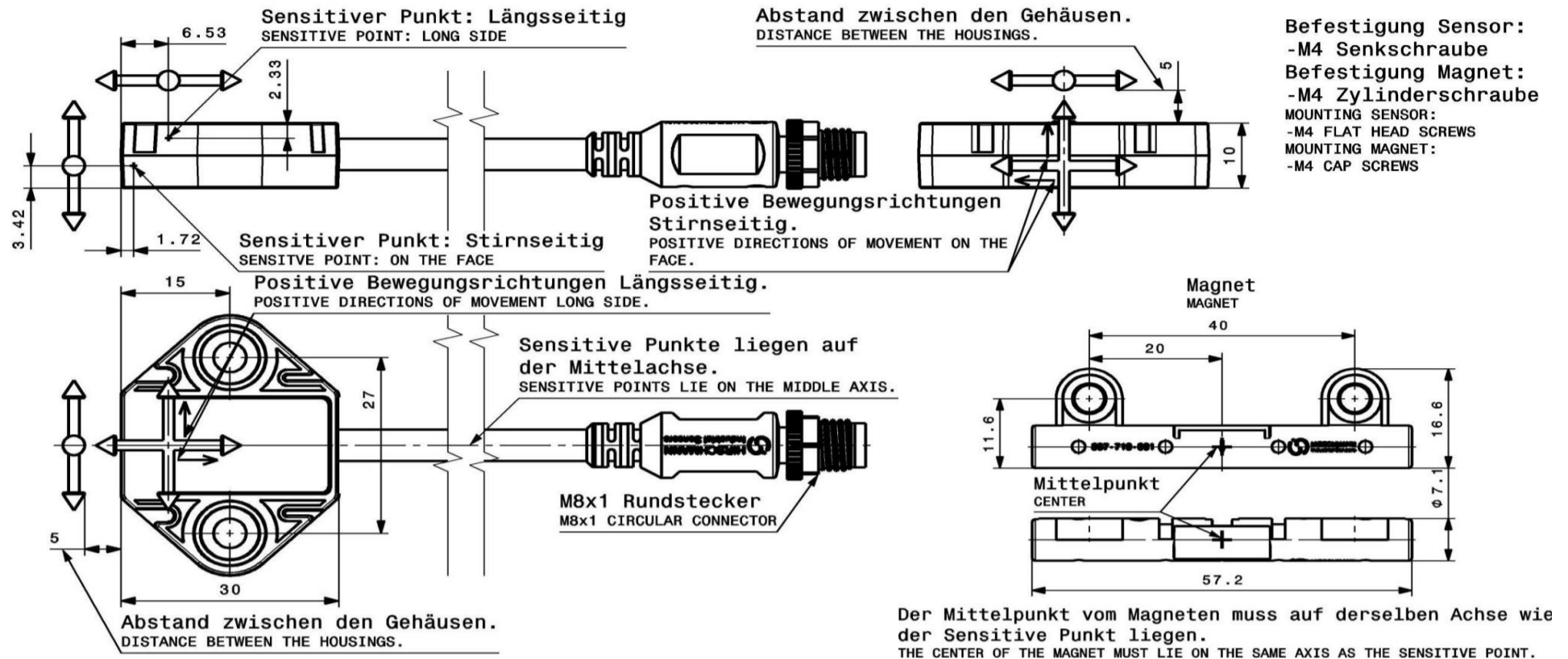
MAGNET DRAWING



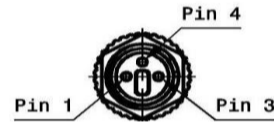
MOUNTING DESCRIPTION

Die Bewegungsrichtungen vom Magneten sind schematisch dargestellt und veranschaulichen ebenfalls die Montagepositionen.

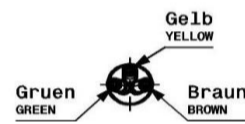
THE MOVING DIRECTION OF THE MAGNETS ARE SHOWN SCHEMATICALLY AND ALSO ILLUSTRATE THE MOUNTING POSITIONS.



Mit M8x1 Rundstecker
WITH M8x1 CIRCULAR CONNECTOR

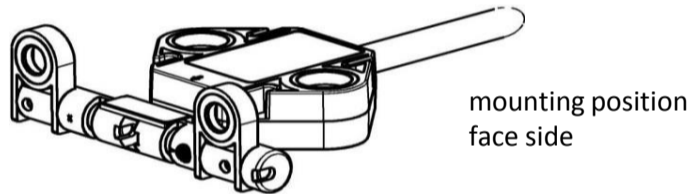


Ohne M8x1 Rundstecker
WITHOUT M8x1 CIRCULAR CONNECTOR

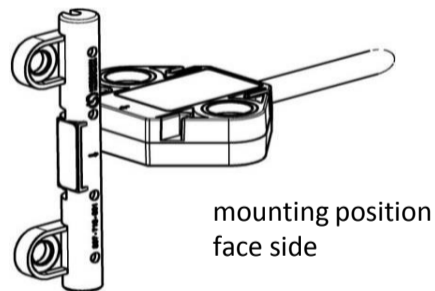


4	Gelb YELLOW	OUT
3	Braun BROWN	GND
1	Grün GREEN	VDD
PIN	Farbe COLOUR	Belegung PINNING

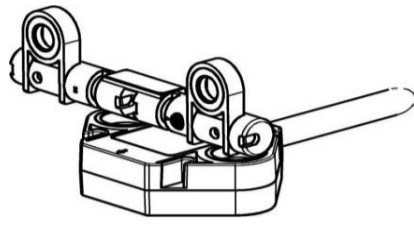
PRODUKT OVERVIEW



art. nr.:	magnet orientation	detection side	cable end
HISL-3115-V11-W02-CM8-00	parallel to mounting axis	face side	with connector 200mm
HISL-3115-V11-W10-CM8-00	parallel to mounting axis	face side	with connector 1000mm
HISL-3115-V11-W02-001-00	parallel to mounting axis	face side	without 222,9mm
HISL-3115-V11-W10-001-00	parallel to mounting axis	face side	without 1022,9mm
HISL-3115-V12-W02-CM8-00	parallel to mounting axis	face side	with connector 200mm
HISL-3115-V12-W10-CM8-00	parallel to mounting axis	face side	with connector 1000mm
HISL-3115-V12-W02-001-00	parallel to mounting axis	face side	without 222,9mm
HISL-3115-V12-W10-001-00	parallel to mounting axis	face side	without 1022,9mm

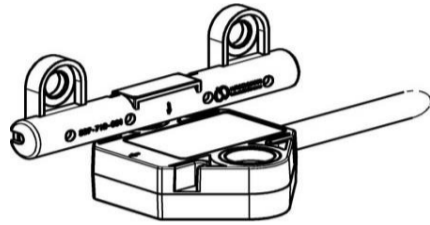


art. nr.:	magnet orientation	detection side	cable end
HISL-3125-V11-W02-CM8-00	transversely to mounting axis	face side	with connector 200mm
HISL-3125-V11-W10-CM8-00	transversely to mounting axis	face side	with connector 1000mm
HISL-3125-V11-W02-001-00	transversely to mounting axis	face side	without 222,9mm
HISL-3125-V11-W10-001-00	transversely to mounting axis	face side	without 1022,9mm
HISL-3125-V12-W02-CM8-00	transversely to mounting axis	face side	with connector 200mm
HISL-3125-V12-W10-CM8-00	transversely to mounting axis	face side	with connector 1000mm
HISL-3125-V12-W02-001-00	transversely to mounting axis	face side	without 222,9mm
HISL-3125-V12-W10-001-00	transversely to mounting axis	face side	without 1022,9mm



mounting position
length side

art. nr.:	magnet orientation	detection side	cable end
HISL-3215-V11-W02-CM8-00	parallel to mounting axis	length side	with connector 200mm
HISL-3215-V11-W10-CM8-00	parallel to mounting axis	length side	with connector 1000mm
HISL-3215-V11-W02-001-00	parallel to mounting axis	length side	without 222,9mm
HISL-3215-V11-W10-001-00	parallel to mounting axis	length side	without 1022,9mm
HISL-3215-V12-W02-CM8-00	parallel to mounting axis	length side	with connector 200mm
HISL-3215-V12-W10-CM8-00	parallel to mounting axis	length side	with connector 1000mm
HISL-3215-V12-W02-001-00	parallel to mounting axis	length side	without 222,9mm
HISL-3215-V12-W10-001-00	parallel to mounting axis	length side	without 1022,9mm



mounting position
length side

art. nr.:	magnet orientation	detection side	cable end
HISL-3225-V11-W02-CM8-00	transversely to mounting axis	length side	with connector 200mm
HISL-3225-V11-W10-CM8-00	transversely to mounting axis	length side	with connector 1000mm
HISL-3225-V11-W02-001-00	transversely to mounting axis	length side	without 222,9mm
HISL-3225-V11-W10-001-00	transversely to mounting axis	length side	without 1022,9mm
HISL-3225-V12-W02-CM8-00	transversely to mounting axis	length side	with connector 200mm
HISL-3225-V12-W10-CM8-00	transversely to mounting axis	length side	with connector 1000mm
HISL-3225-V12-W02-001-00	transversely to mounting axis	length side	without 222,9mm
HISL-3225-V12-W10-001-00	transversely to mounting axis	length side	without 1022,9mm

