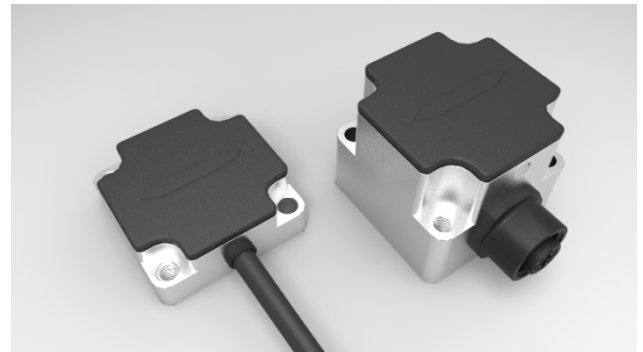


Features

- Dual Hall Effect Sensors
- High Sensitivity
- 3 Types of output: PNP, NPN, RS422
- M12 or Cable connections
- Strong CNC machined housing

Applications

- Shaft movement detection using magnets
- Linear movement detection using magnets
- Speed and direction sensing



General Description

The HS-DUAL-X-X sensors can detect magnetic flux in the vicinity of the sensing elements. If a certain amount of flux is detected, the output will turn on. Using two sensing elements, makes it possible to detect which direction a magnet is moving as well as speed.

Specifications

- 7-30V supply voltage
- 30mA supply current
- CNC machined aluminum / stainless steel housing (Stainless steel housing on request only)
- Housing size 35x35x30.9mm (M12 version), 35x35x13.4mm (Cable version)

1 Ordering information

Part Number	Package	Interface	Output Type
HS-DUAL-PNP-M12	35x35x29.7mm Anodized aluminum	M12, 5pin Female connector.	PNP
HS-DUAL-NPN-M12	35x35x29.7mm Stainless steel 316	M12, 5pin Female connector.	NPN
HS-DUAL-RS-M12	35x35x12.2mm Anodized aluminum	M12, 8pin Female connector.	RS422
HS-DUAL-PNP-C	35x35x12.2mm Anodized aluminum	2m cable, 4 wires and 1 shield	PNP
HS-DUAL-NPN-C	35x35x12.2mm Anodized aluminum	2m cable, 4 wires and 1 shield	NPN

For a stainless steel housing add an -S suffix to the above part number e.g. HS-DUAL-PNP-M12-S for stainless steel casing for M12 connector and PNP output. For other specific packages please contact us. We have other materials / coatings available not listed here.

Specifications for
(HS-DUAL-X-X)
High Sensitivity Dual Hall Effect Sensor

Version 1.01
27/5 2013

2 Document tracking control

VERSION	SECTION	CHANGED BY	DATE	CHANGE
1.00	All	JL	01-02-2012	Initial Version
1.01		JL	12-04-2013	Updated pictures

Contents

1	Ordering information	2
2	Document tracking control	4
3	Specifications.....	5
4	Mechanical Drawing.....	6
4.1	M12 Version	6
4.2	Cable Version.....	7

3 Specifications

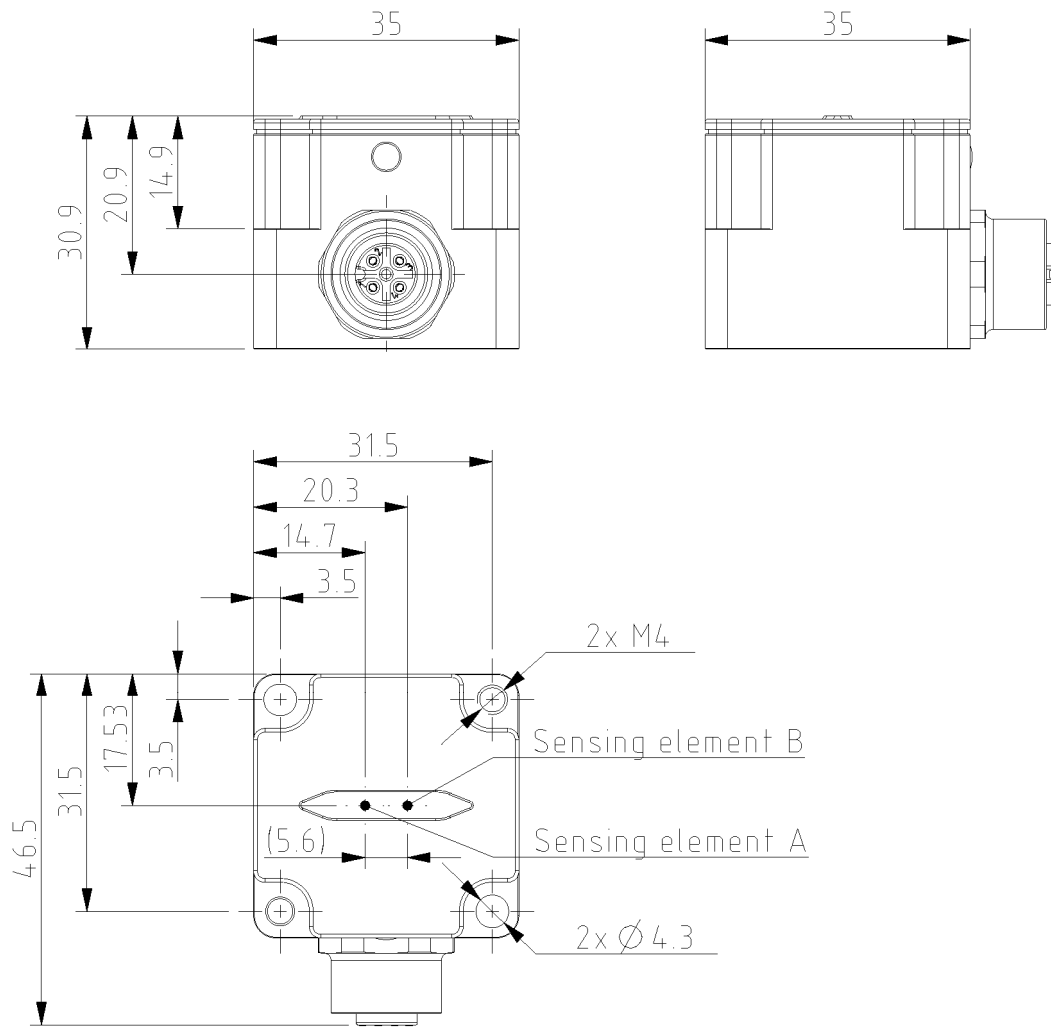
Parameter	Condition	Values			Unit
		Min	Typical	Max	
POWER SUPPLY					
Operating Voltage (Vin)		7		30	V
Supply Current	Vin = 24V		35		mA
Power consumption	Vin = 24V		0.45		W
Turn-On Time			250		ms
PNP / NPN OUTPUTS					
Maximum Collector Emitter Voltage					
Maximum continuous current			35		mA
Output Impedance @ DC			100		Ω
RS422 OUTPUT					
High Level Output Voltage		Min 2,5	Typical 3,5	Max	V
Low Level Output Voltage				0,5	V
Short Circuit Output Current – single output, max 1s		-50		-150	mA
MAGNETIC¹					
Minimum Operating Gauss		-40	+25	+85	Deg
Maximum Operating Gauss		110	110	90	GAUSS
Minimum Release Gauss		215	180	180	GAUSS
Maximum Release Gauss		80	75	70	GAUSS
Minimum Difference Gauss		190	155	165	GAUSS
Maximum Difference Gauss		25	25	15	GAUSS
HOUSING					
Housing Body Material – no suffix		Anodized Aluminum			
Housing Body Material –S suffix		Stainless steel 316			
Lid Material		ABS			
CONNECTIVITY					
M12 Female 5 pin Connector (PNP/NPN)					
M12 Female 8 pin Connector (RS422)					
Cable, 4 wires + shield (NPN / PNP)					
DIMENSIONS					
Length		Min 34,8	Typical 35	Max 35,2	mm
Width		34,8	35	35,2	mm
Height (M12 version)		30,7	30,9	31,1	mm
Height (cable version)		13,2	13,4	13,6	mm
Weight (M12 version)			70		gram
Weight (cable version)			Not Determined		gram
TEMPERATURE					
Operating Temperature Range		-20		80	Deg
Housing temperature rise			2		Deg

Conformity	
IEC 60721-3-5	
Climate	
Biological	
Chemically active substances	
Mechanically active substances	
Contaminating fluids	
Mechanical conditions	

¹ The magnetic field must be applied 1.5mm below the top surface of the sensor. An Ø7mm neodymium magnet can trigger the sensor at 8mm from the sensor. Different magnets / sizes should be tested to evaluate performance.

4 Mechanical Drawing

4.1 M12 Version



4.2 Cable Version

