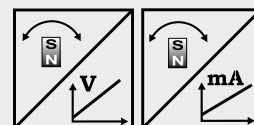



Magnetic inclination sensor in a 36 mm housing

- Protection class IP67/IP69K
- Magnetic measurement principle
- Outputs:
 - Voltage 0.5 ... 4.5 V; 0.5 ... 10 V
 - Current 4 ... 20 mA
- Redundant second channel as option
- Other outputs available on request



Specifications	Outputs	Voltage: 0.5 ... 4.5 V; 0.5 ... 10 V Current: 4 ... 20 mA, 3 wire
	Resolution	0.03 % (± 30 ... ± 180); 0.1 % ($\pm 15^\circ$)
	Repeatability	± 0.03 % (± 30 ... $\pm 180^\circ$); ± 0.1 % (± 15)
	Linearity	± 0.3 % f.s. (typ.)
	Measurement range	0 ... $\pm 15^\circ$ to 0 ... $\pm 180^\circ$, standard $\pm 180^\circ$
	Signal characteristics	CW, CCW
	Material	Stainless steel / aluminium / zinc (depends on the model)
	Mounting	Clamps, mounting plate
	Protection class	IP67 (IP67/IP69K option)
	Shock	EN 60068-2-27:1993, 100 g/11 ms, 100 shocks
	Vibration	EN 60068-2-6:1995, 20 g 10 Hz-2 kHz, 10 cycles

Order Code PTAS2
PTAS2 - - - -
Model name
Measurement range ± 15 ... $\pm 180^\circ$ in steps of 15°

15 / 30 / 45 / ... / 165 / 180

Output (see page 26)

U6 = 0.5 ... 4.5 V ratiometric

U2 = 0.5 ... 10 V

I1 = 4 ... 20 mA, 3 wire

Signal characteristics

CW = Signal increasing CW

CCW = Signal increasing CCW

Connection

KAB3M = Cable, standard length 3 m, IP67

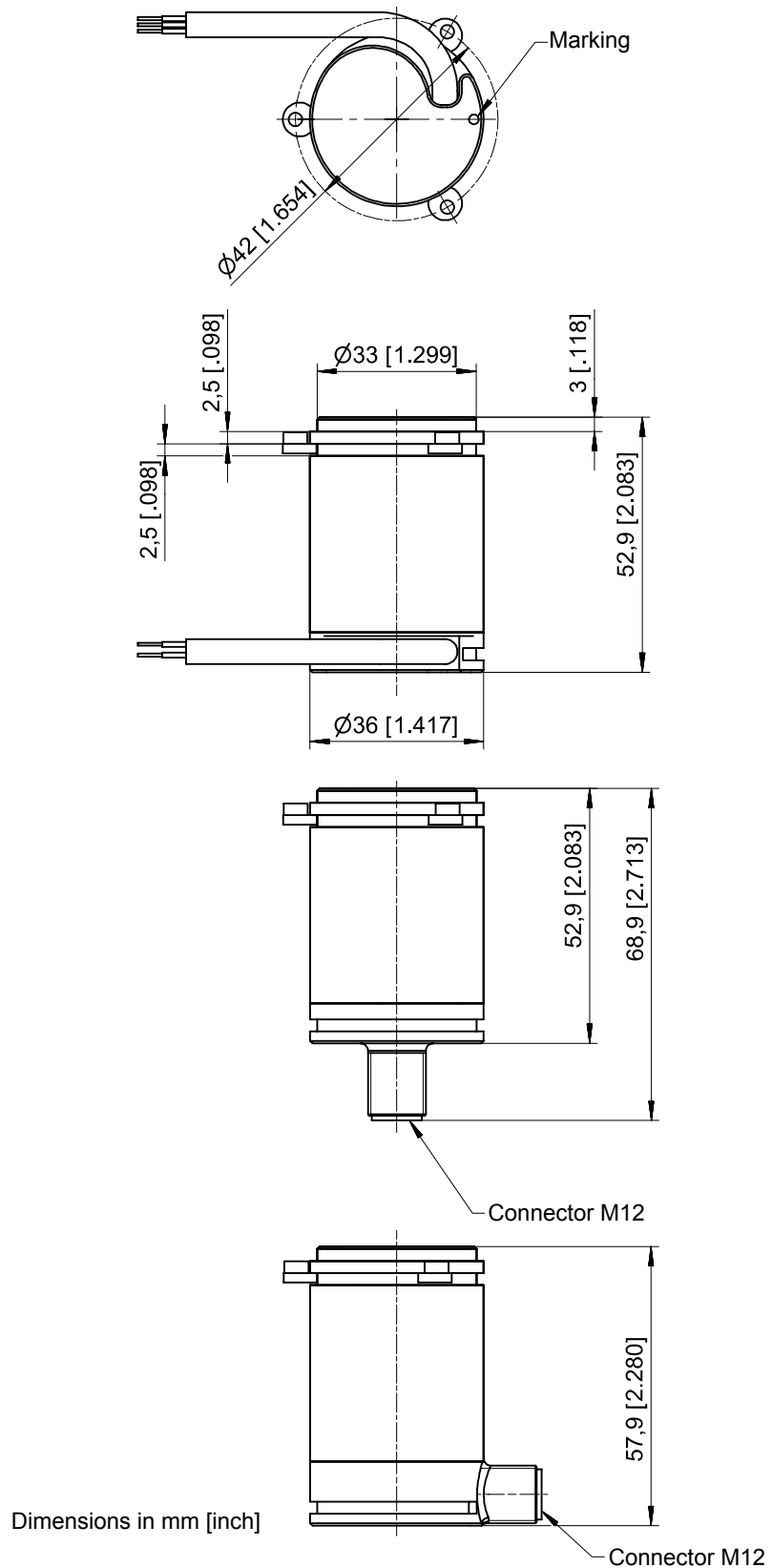
KAB3M69K = Cable, standard length 3 m, IP67/IP69K

M12A5 = 5-pin socket M12 axial (compatible with 4-pin connector)

M12R5 = 5-pin socket M12 radial (compatible with 4-pin connector), (in preparation)

Order code mounting clamps (set of 3 pieces)
PRPT-BFS1
Order code connector cable (see accessories page 32)
KAB-2M-M12/4F/G-LITZE
Order example: PTAS2 - 180 - I1 - CW - KAB3M

**Outline drawing
 sensor**

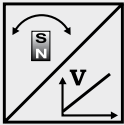
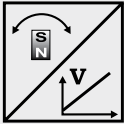
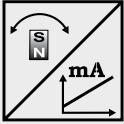


Dimensions informative only.
 For guaranteed dimensions please consult factory.

POSIROT® – PRAS, POSITILT® – PTAS

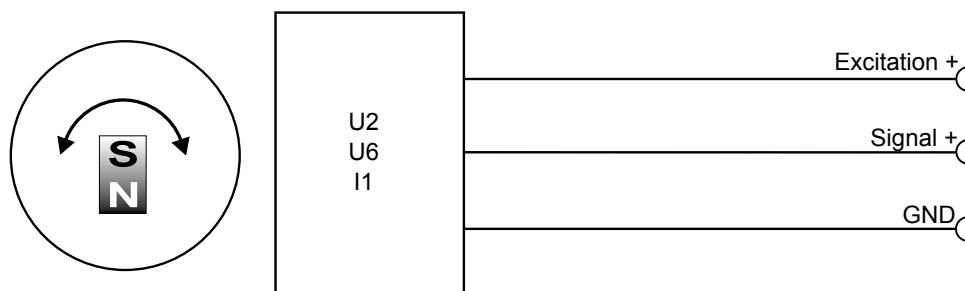
Outputs U2, U6 and I1



U2 Voltage Output 0.5 ... 10 V 	Excitation voltage	+18 ... +27 V DC (+36 V DC as option)
	Excitation current	40 mA max.
	Output voltage	0.5 ... 10 V DC
	Output current	2 mA max.
	Output load	> 5 kΩ
	Measuring rate	1 kHz standard
	Stability (temperature)	±50 x 10 ⁻⁶ / °C f.s. (typ.) for 90°...360° ±100 x 10 ⁻⁶ / °C f.s. (typ.) for <90°
	Operating temperature	-40 ... +85 °C (+105 °C as option)
U6 = U6/5 / U6/8,25 Voltage Output 10 ... 90 % ratiometric 	Excitation voltage	+5V DC ±10 % / +8.25 V DC ±10 %
	Excitation current	40 mA max.
	Output voltage	10 ... 90 % of the excitation voltage
	Output current	2 mA max.
	Output load	> 1 kΩ
	Measuring rate	1 kHz standard
	Stability (temperature)	±50 x 10 ⁻⁶ / °C f.s. (typ.) for 90°...360° ±100 x 10 ⁻⁶ / °C f.s. (typ.) for <90°
	Operating temperature	-40 ... +85 °C (+105/125 °C as option)
I1 Current Output 4 ... 20 mA 	Excitation voltage	+18 ... +27 V DC (+36 V DC as option)
	Excitation current	60 mA max.
	Load resistor	500 Ω max.
	Output current	4 ... 20 mA
	Measuring rate	1 kHz standard
	Stability (temperature)	±50 x 10 ⁻⁶ / °C f.s. (typ.) for 90°...360° ±100 x 10 ⁻⁶ / °C f.s. (typ.) for <90°
	Operating temperature	-40 ... +85 °C
	Protection	Reverse polarity, short circuit
EMC		According to EN 61326:2004

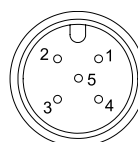
Other outputs available on request.

Output signals



Signal Wiring	Output signals	Connector pin	Cable color
	Excitation +	1	brown
	Signal	2	white
	GND	3	blue
	Do not connect!	4	black
	Do not connect!	5	–

Connection



View to sensor
connector

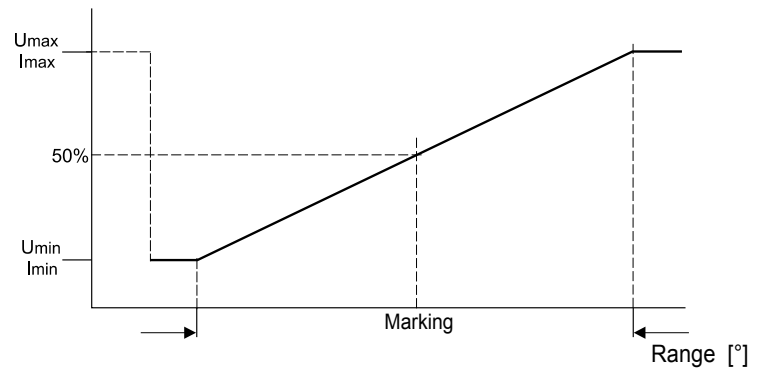
M12A5 / M12R5

POSIROT[®]

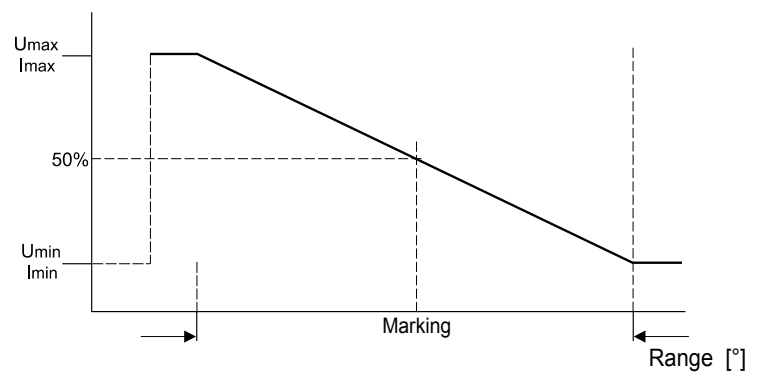
Characteristics for magnetic angle sensors



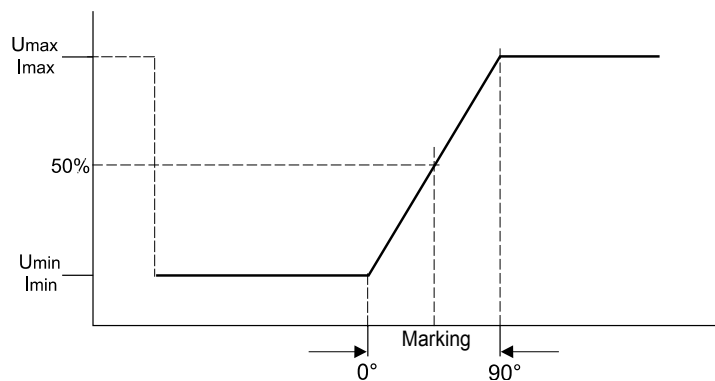
Output signal
(CW increasing)



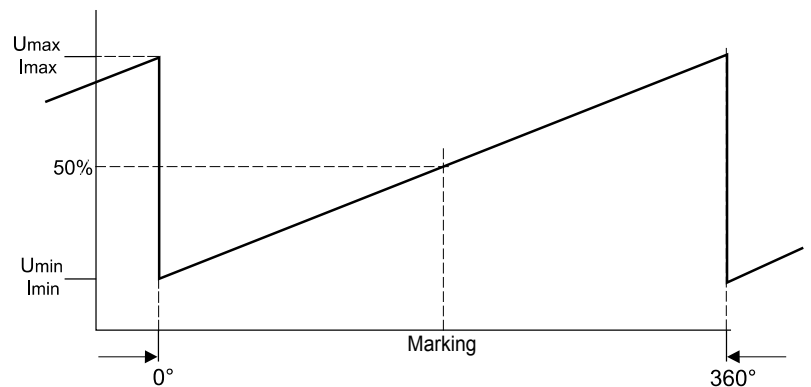
Output signal
(CCW increasing)



Example angular
range 90°

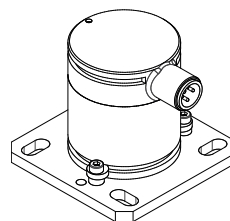
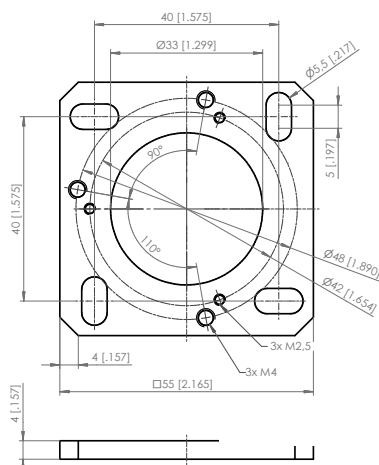


Example angular
range 360°

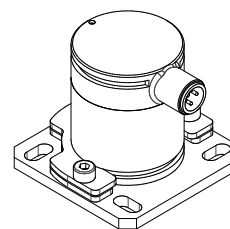


PRPT-BPL1

(screw mounting)
 For PRAS2, PRDS2,
 PRAS3, PRDS3, PTAS2



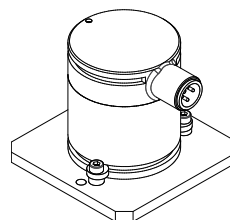
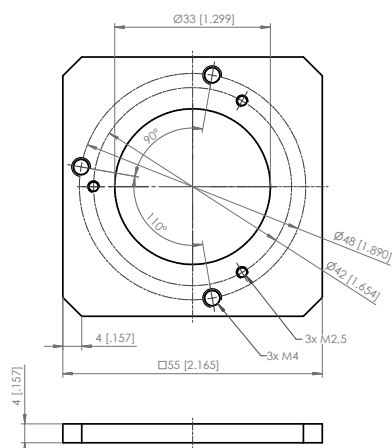
In combination with the
 mounting clamps
 PRPT-BFS1.



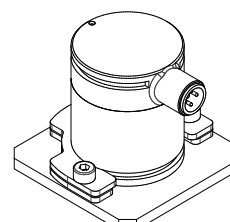
In combination with the
 mounting brackets
 PRPT-BFS2.

PRPT-BPL2

(welding assembly)
 For PRAS2, PRDS2,
 PRAS3, PRDS3, PTAS2



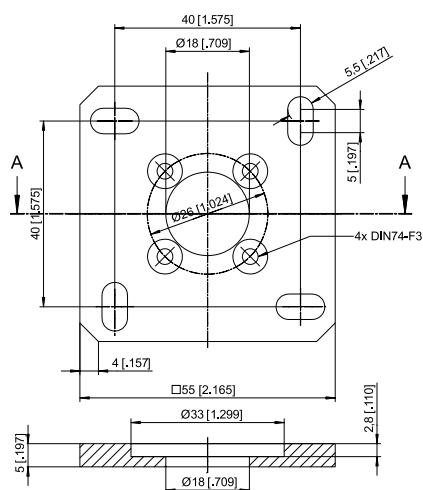
In combination with the
 mounting clamps
 PRPT-BFS1.



In combination with the
 mounting brackets
 PRPT-BFS2.

PRPT-BPL3

For PRAS3, PRDS3



Dimensions in mm [inch]

Weight 30 g approx.
 Dimensions informative only.
 For guaranteed dimensions please consult factory.

POSIROT® Accessories Connector Cables

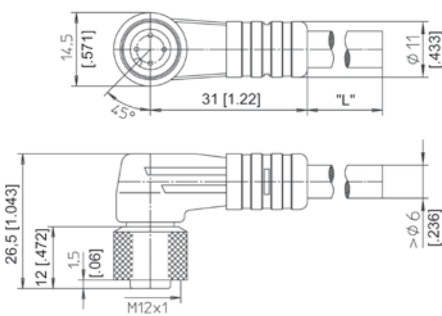


**Connector cable for
 POSIROT®
 angle sensors**
 4 pins M12

Suitable for 5-pin
 sensor connectors
 M12A5 and M12R5

The 4-core screened cable is supplied with a
 mating 4-pin 90° M12 connector at one end
 and 4 wires at the other end. Available lengths
 are 2, 5 and 10 m.

Order code:
KAB - XM - M12/4F/W - LITZE
 IP69K: **KAB - XM - M12/4F/W/69K - LITZE**
 Length in m

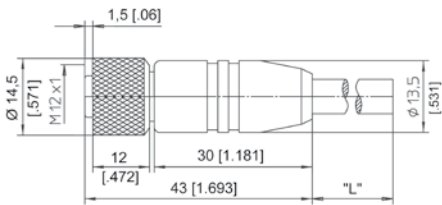


**Connector cable for
 POSIROT®
 angle sensors**
 4 pins M12

Suitable for 5-pin
 sensor connectors
 M12A5 and M12R5

The 4-core screened cable is supplied with a
 mating 4-pin M12 connector at one end and 4
 wires at the other end. Available lengths are 2,
 5 and 10 m.

Order code:
KAB - XM - M12/4F/G - LITZE
 IP69K: **KAB - XM - M12/4F/G/69K - LITZE**
 Length in m



Signal wiring M12, 4 pin	Connector pin / cable color			
	1	2	3	4
	Brown	White	Blue	Black

POSIROT® Accessories Connector Cables



**Connector cable for
 POSIROT®
 angle sensors**
 8 pins M12

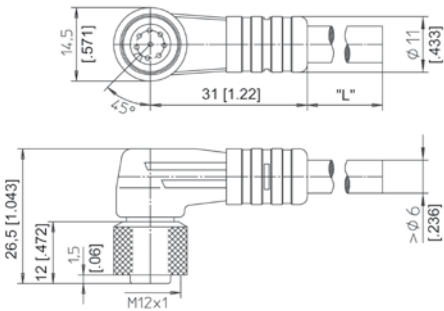
The 8-core screened cable is supplied with a
 mating 8-pin 90° M12 connector at one end
 and 8 wires at the other end. Available lengths
 are 2, 5 and 10 m.

Order code:

KAB - XM - M12/8F/W - LITZE

IP69K: **KAB - XM - M12/8F/W/69K - LITZE**

Length in m



**Connector cable for
 POSIROT®
 angle sensors**
 8 pins M12

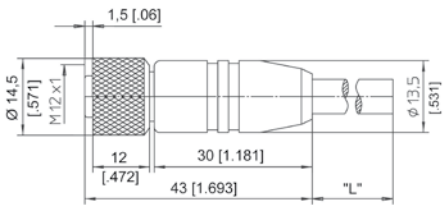
The 8-core screened cable is supplied with a
 mating 8-pin M12 connector at one end and 8
 wires at the other end. Available lengths are 2,
 5 and 10 m.

Order code:

KAB - XM - M12/8F/G - LITZE

IP69K: **KAB - XM - M12/8F/G/69K - LITZE**

Length in m



Signal wiring M12, 8 pin	Connector pin / cable color							
	1	2	3	4	5	6	7	8
	White	Brown	Green	Yellow	Grey	Pink	Blue	Red