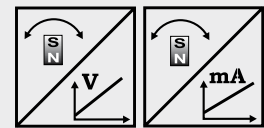




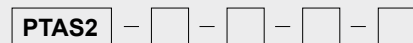
**Magnetic inclination sensor in a 36 mm housing**

- 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



<b>Specifications</b>	Outputs	Voltage: 0.5 ... 4.5 V; 0.5 ... 10 V Current: 4 ... 20 mA, 3 wire
	Resolution	0.03 % ( $\pm 30$ ... $\pm 180$ ); 0.1 % ( $\pm 15^\circ$ )
	Repeatability	$\pm 0.03$ % ( $\pm 30$ ... $\pm 180^\circ$ ); $\pm 0.1$ % ( $\pm 15$ )
	Linearity	$\pm 0.3$ % 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**



**Model name**

**Measurement range  $\pm 15$  ...  $\pm 180^\circ$  in steps of  $15^\circ$**

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)

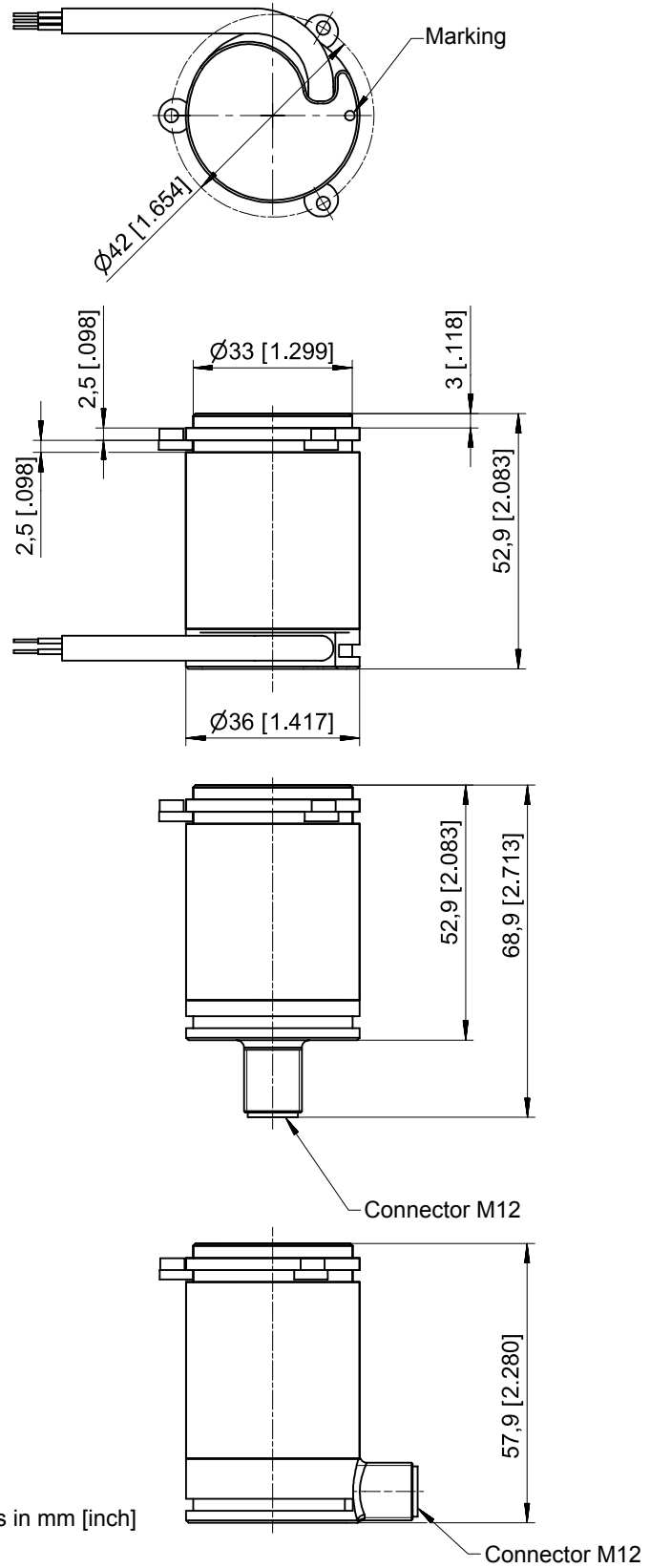
**KAB-2M-M12/4F/G-LITZE**

**Order example: PTAS2 - 180 - I1 - CW - KAB3M**

**POSITILT<sup>®</sup>**  
**PTAS2**  
**Dimensions**



Outline drawing  
 sensor

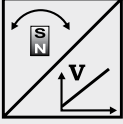
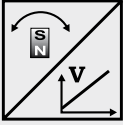
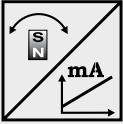


Dimensions informative only.  
 For guaranteed dimensions please consult factory.

# POSIROT® – PRAS, POSITILT® – PTAS

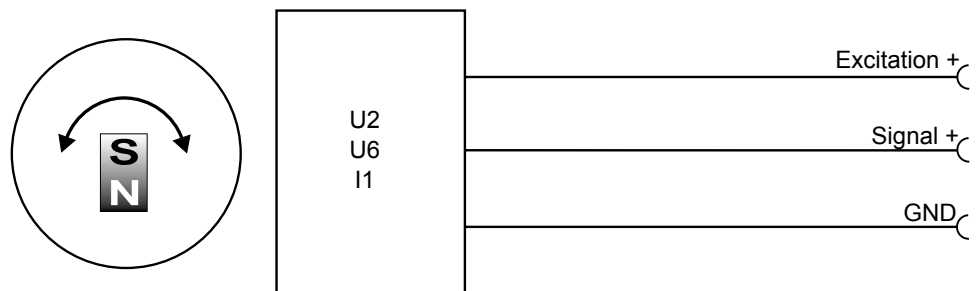
## Outputs U2, U6 and I1



<b>U2</b> 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 <sup>-6</sup> / °C f.s. (typ.) for 90°...360° ±100 x 10 <sup>-6</sup> / °C f.s. (typ.) for <90°
	Operating temperature	-40 ... +85 °C (+105 °C as option)
	Protection	Reverse polarity, short circuit
EMC	According to EN 61326:2004	
<b>U6</b> Voltage Output 0.5 ... 4.5 V ratiometric 	Excitation voltage	+ 5V DC ±10 %
	Excitation current	40 mA max.
	Output voltage	0.5 ... 4.5 V DC
	Output current	2 mA max.
	Output load	> 1 kΩ
	Measuring rate	1 kHz standard
	Stability (temperature)	±50 x 10 <sup>-6</sup> / °C f.s. (typ.) for 90°...360° ±100 x 10 <sup>-6</sup> / °C f.s. (typ.) for <90°
	Operating temperature	-40 ... +85 °C (+105/125 °C as option)
	Protection	Reverse polarity, short circuit
EMC	According to EN 61326:2004	
<b>I1</b> 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 <sup>-6</sup> / °C f.s. (typ.) for 90°...360° ±100 x 10 <sup>-6</sup> / °C f.s. (typ.) for <90°
	Operating temperature	-40 ... +85 °C
	Protection	Reverse polarity, short circuit
	EMC	According to EN 61326:2004

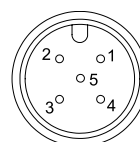
Other outputs available on request.

### 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

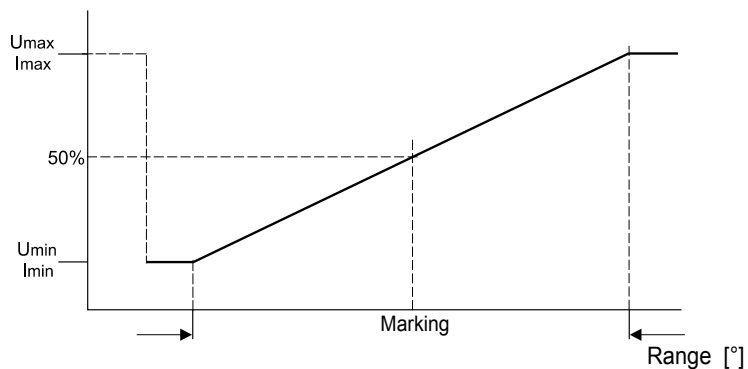
M12A5 / M12R5

# POSIROT<sup>®</sup>

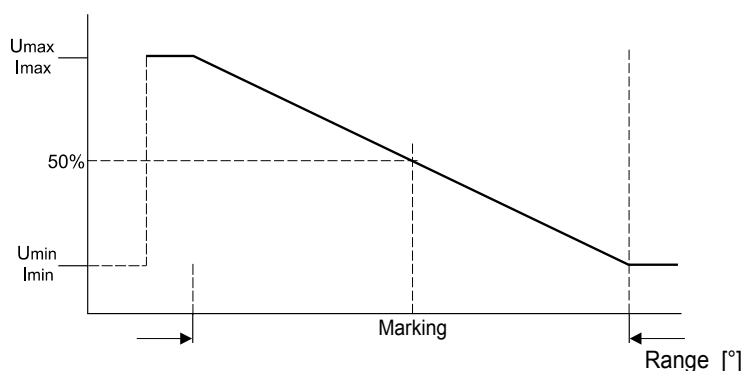
## Characteristics for magnetic angle sensors



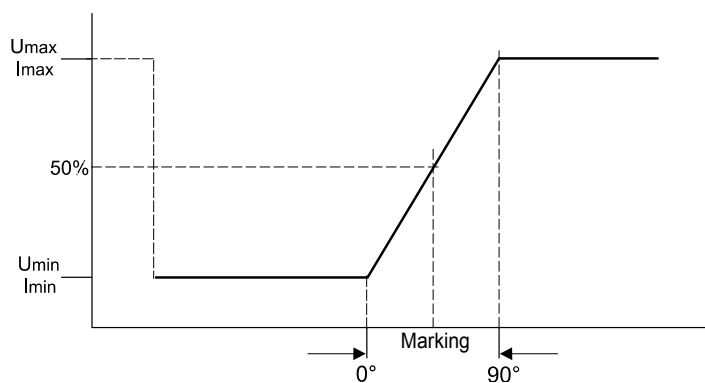
**Output signal**  
(CW increasing)



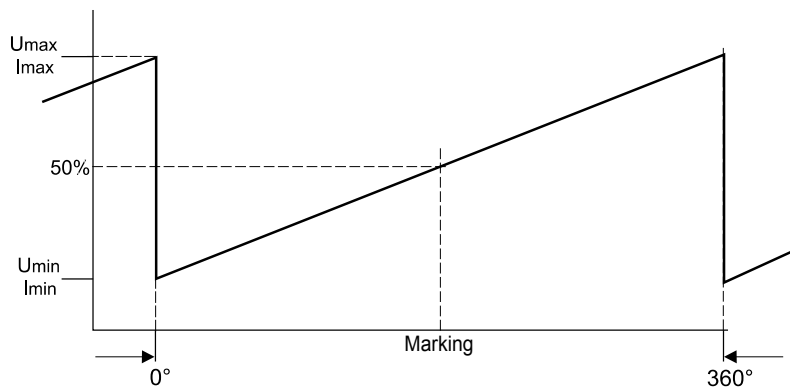
**Output signal**  
(CCW increasing)



**Example angular range 90°**

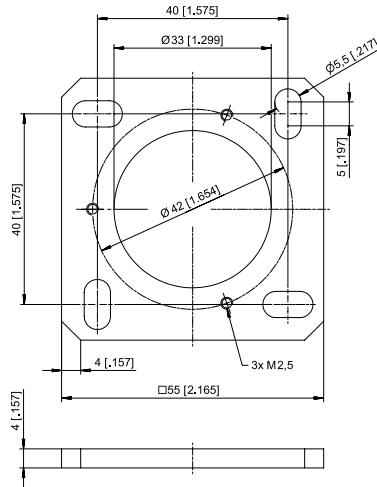


**Example angular range 360°**



**PRPT-BPL1**

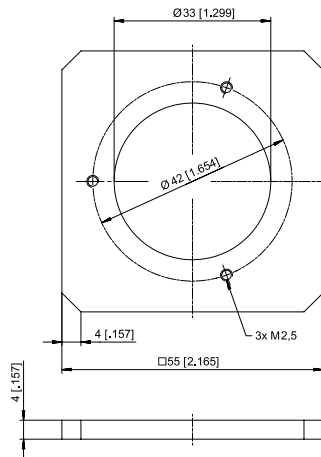
(screw mounting)  
 For PRAS2, PRDS2,  
 PRAS3, PRDS3, PTAS2



In combination with the mounting  
 clamps PRPT-BFS1.

**PRPT-BPL2**

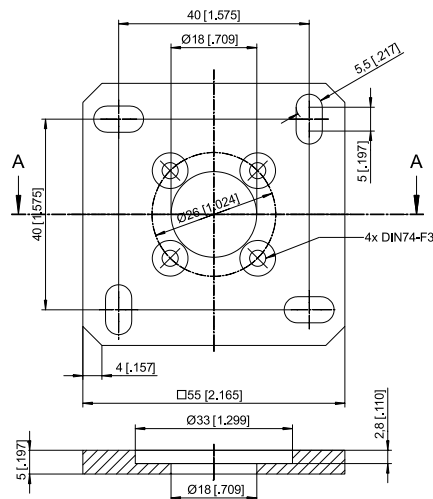
(welding assembly)  
 For PRAS2, PRDS2,  
 PRAS3, PRDS3, PTAS2



In combination with the mounting  
 clamps PRPT-BFS1.

**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

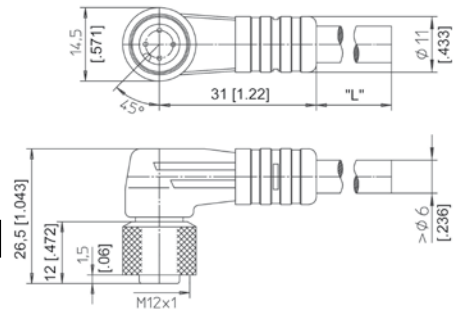
The 4-core screened cable is supplied with a mating 4-pin 90° M12 connector at one end and 4 wires at the other end. Available lengths are 2, 5 and 10 m.

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

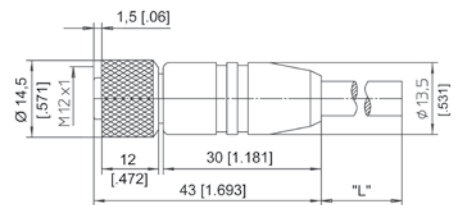
The 4-core screened cable is supplied with a mating 4-pin M12 connector at one end and 4 wires at the other end. Available lengths are 2, 5 and 10 m.

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

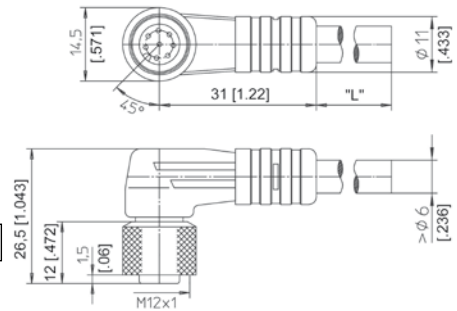
The 8-core screened cable is supplied with a mating 8-pin 90° M12 connector at one end and 8 wires at the other end. Available lengths are 2, 5 and 10 m.

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

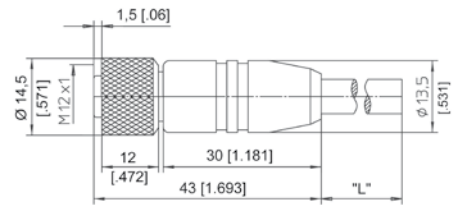
The 8-core screened cable is supplied with a mating 8-pin M12 connector at one end and 8 wires at the other end. Available lengths are 2, 5 and 10 m.

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