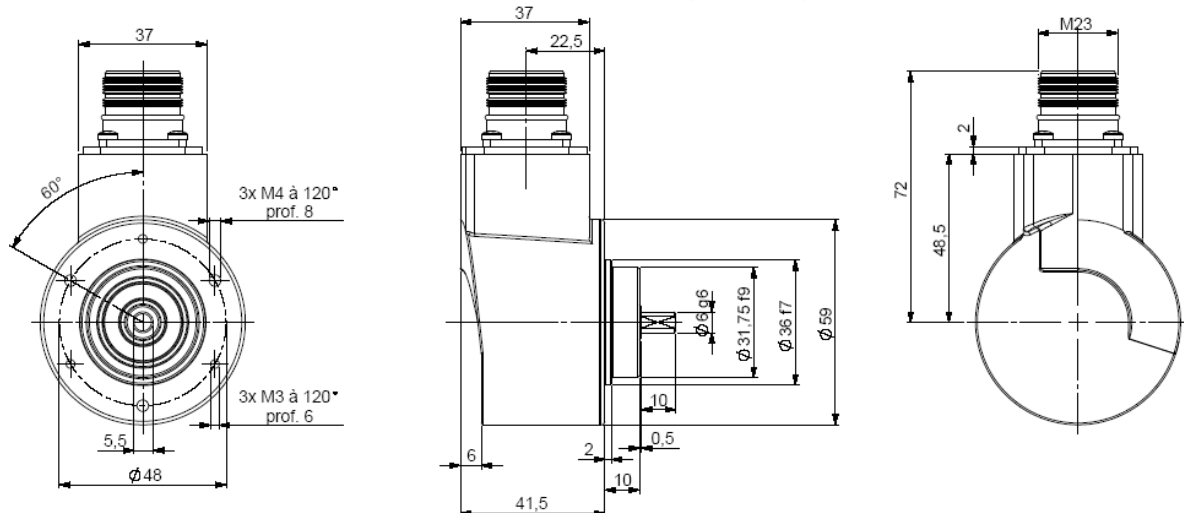


## MAGNETIC SSI ABSOLUTE MULTI TURN ENCODER, THM5 RANGE

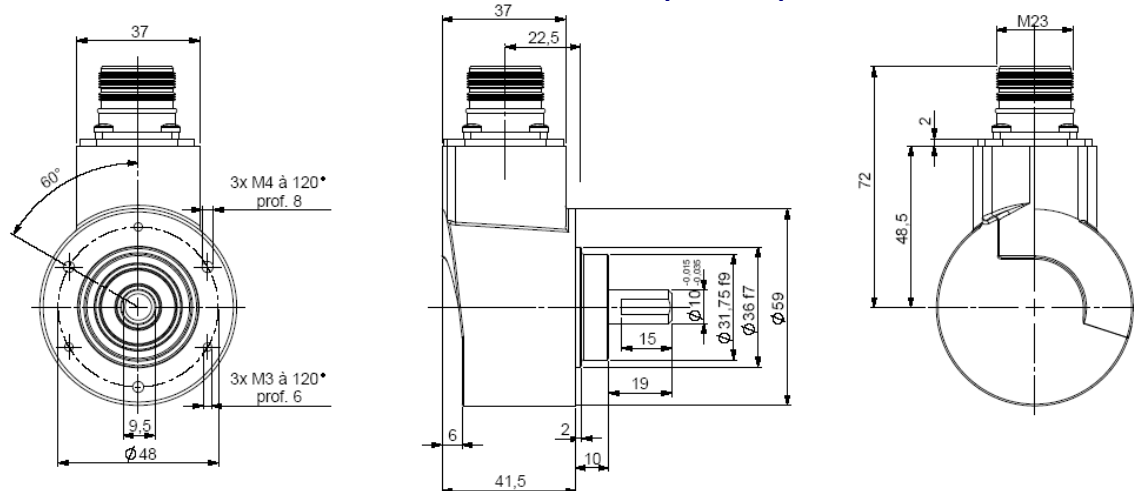
- Solid shaft  $\varnothing 6$  and  $\varnothing 10$  mm.
- Robustness and excellent resistance to shocks / vibrations.
- High protection level IP65, IP67 option with a sealing flange.
- High performances in temperature  $-20^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ .
- Isolated SSI interface, clock from 100 to 500 kHz.
- Universal electronic circuits from 5 to 30Vdc.
- Protection against short-circuits and inversion of polarity.
- High resolutions available: 4096 (12 bits) per turn.
- Turn counting up to 65 536 (16 bits).
- 2 inputs : DIRECTION and RAZ.



PHM5\_06 connection S6/S8R (M23 radial)



PHM5\_10 connection S6/S8R (M23 radial)



Material	Cover : steel	Shock (EN60068-2-27)	$\leq 500 \text{ m.s}^{-2}$ (during 6 ms)
	Body: aluminium	Vibration (EN60068-2-6)	$\leq 100 \text{ m.s}^{-2}$ (10... 2 000 Hz)
	Shaft : stainless steel	EMC	EN 61000-6-4, EN 61000-6-2
Bearings	6 000 série	Insulation	100V (1 min.)
Maximum load	Axial : 50 N	Weight (approx.)	0,500 kg
	Radial : 100 N	Operating temperature	$-20 \dots +85^{\circ}\text{C}$ (encoder $T^{\circ}$ )
Shaft inertia	$\leq 1.10^{-6} \text{ kg.m}^2$	Storage temperature	$-20 \dots +85^{\circ}\text{C}$
Torque	$\leq 4.10^{-3} \text{ N.m}$	Protection(EN 60529)	IP 65 (IP67 with flange option)
Permissible max. speed	$6\ 000 \text{ min}^{-1}$	Theoretical mechanical lifetime $10^9$ turns ( $F_{\text{axial}} / F_{\text{radial}}$ )	
Continuous max. speed	$6\ 000 \text{ min}^{-1}$	25 N / 50 N : 99	50 N / 100 N : 12

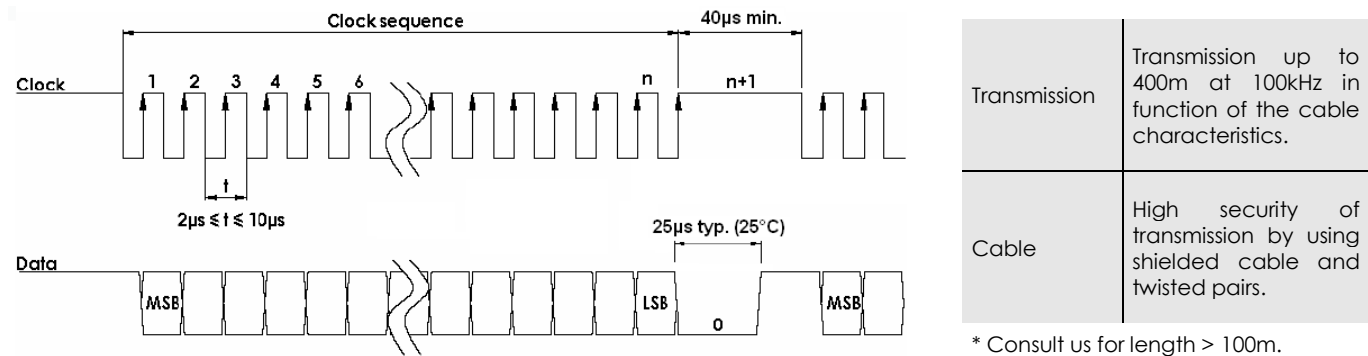
## MAGNETIC SSI ABSOLUTE MULTI TURN ENCODER, THM5 RANGE

### ELECTRICAL DATA

Power supply	5-30Vdc	Sampling rate*	1 kHz
Consumption without load	< 40mA (at 24Vdc)	Accuracy	± 0.3 %
Resolution in the turn	12 bits	Repeatability	± 0.1 %
Number of turns	16 bits max.	Introduction	< 1s
Total resolution	Up to 28 bits	Refresh rate	< 400µs

\* Nota : Internal data refresh rate

### SSI TRANSMISSION

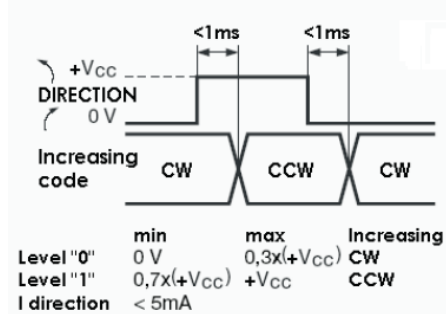


### STANDARD SSI CONNECTION

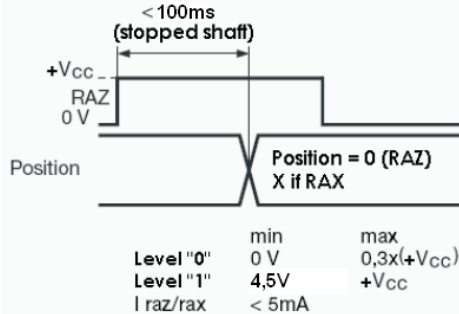
Type	Vcc	Gnd	Clk+	Data+	RAZ	Data-	Clk-	DIRECTION
S6	1	2	3	4	5	6	7	9
S8	8	1	3	2	6	10	11	5

Nota : Do not connect other pinouts, connect DIRECTION and RAZ to a potential (RAZ at 0V if not used)

#### DIRECTION input



#### RAZ / RAX input



Nota : Do not connect other pinouts, connect DIRECTION and RAZ to a potential (RAZ at 0V if not used)

### THM5 ORDERING REFERENCE (Contact the factory for special versions , ex : connection, flange...)

	Shaft	Supply	Output stage	Code	Resolution	Connection	Orientation
<b>THM5 :</b>	<b>10 :</b>	<b>P :</b>	<b>SS :</b>	<b>B :</b>	<b>12B13D5 :</b>	<b>S6 :</b>	<b>R :</b>
Magnetic Absolute multi-turn encoder	10mm	5 to 30Vdc	SSI without parity	Binary	25 bits	CW M23	radial
	<b>06 :</b>			<b>G :</b>	<b>12B12D4 :</b>	<b>S8 :</b>	
	6mm			Gray	24 bits	CCW M23	
<b>Ex: THM5_</b>	<b>10 //</b>	<b>P</b>	<b>SS</b>	<b>G //</b>	<b>12B13D5 //</b>	<b>S6</b>	<b>R</b>

Made in France