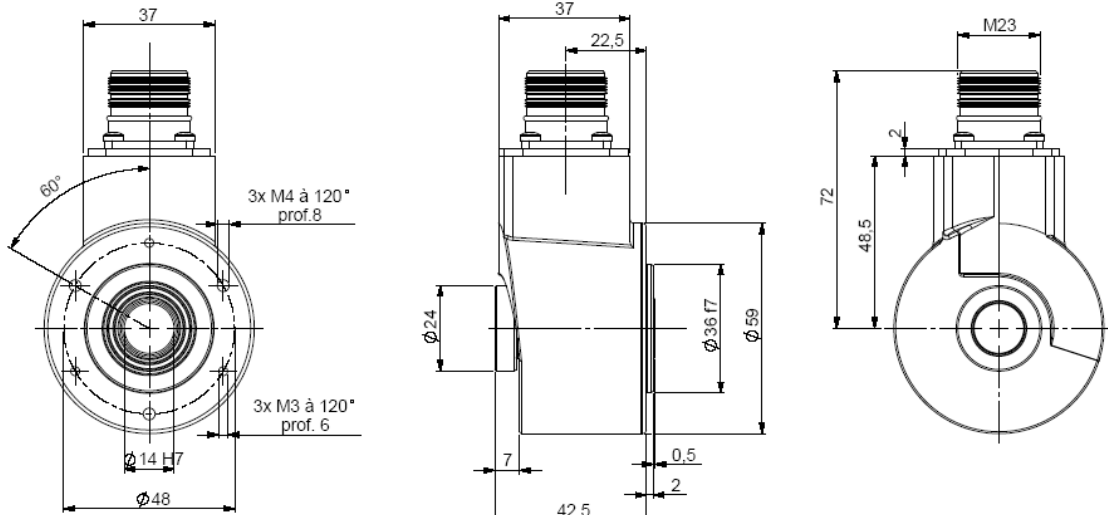


ABSOLUTE MULTITURN ENCODER, PHM5 RANGE

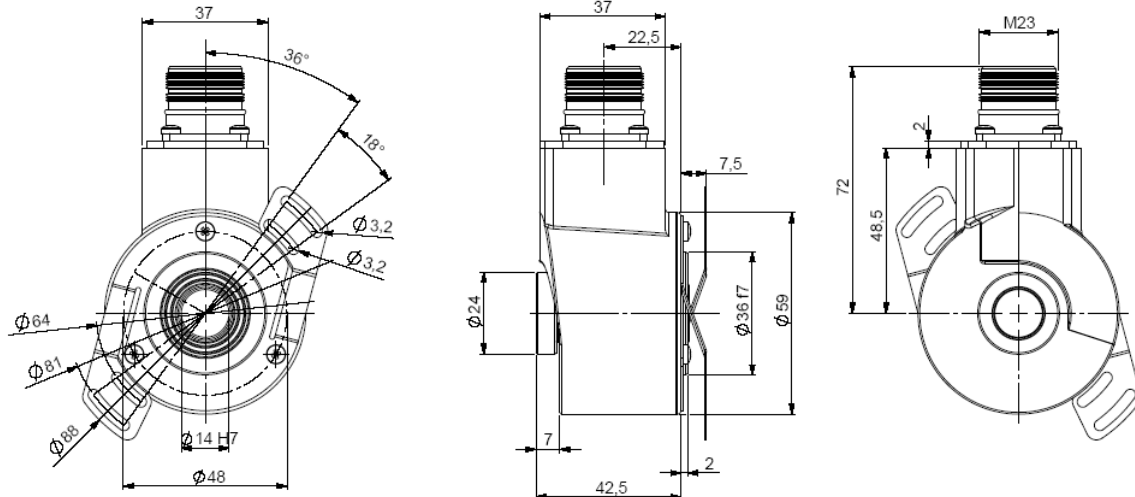
- Extra-flat encoder, through shaft $\varnothing 14$ mm, reduction hubs available: 6, 8, 10, 12mm
- Robustness and excellent resistance to shocks / vibrations
- High performances in temperature -20°C to $+85^{\circ}\text{C}$
- Isolated SSI interface, clock from 100 to 500 kHz
- Universal electronic circuits from 5 to 30Vdc
- Protection against short-circuits and inversion of polarity
- High resolutions available: 8192 (13 bits) per turn
- Turn counting up to 65 536 (16 bits)
- 2 inputs : DIRECTION and RAZ
- Available with incremental channels – 2048 points – 5 to 30 Vdc



PHO5_14 connection S6R / S8R (M23 radial)



PHO5_14 connection S6R / S8R (M23 radial), DAC 9445/015* mounted on the body



* Accessories to be ordered separately

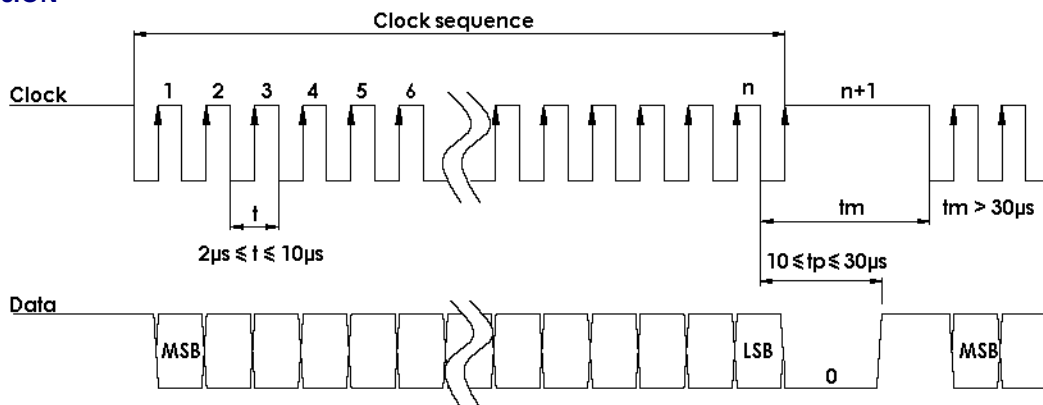
Material	Cover : treated steel	Shock (EN60068-2-27)	$\leq 500\text{m.s}^{-2}$ (during 6 ms)
	Body: aluminium	Vibration (EN60068-2-6)	$\leq 100\text{m.s}^{-2}$ (10 ... 2 000 Hz)
	Shaft : stainless steel	EMC	EN 61000-6-4, EN 61000-6-2
Bearings	6 803 serie	Isolation	100V (1 min)
Maximum load	Axial : 20 N	Weight	0,480 kg
	Radial : 50 N	Operating temperature	$-20 \dots +85^{\circ}\text{C}$ (encoder T°)
Shaft inertia	$\leq 2,2 \cdot 10^{-6} \text{kg.m}^2$	Storage temperature	$-20 \dots +85^{\circ}\text{C}$
Torque	$\leq 6 \cdot 10^{-3} \text{N.m}$	Protection(EN 60529)	IP 65
Permissible max. speed	6 000 min ⁻¹	Torque (ring pressure screw)	nominal: 1.5N.m, break: 2.0N.m
Continuous max. speed	6 000 min ⁻¹	Theoretical mechanical lifetime 10 ⁹ turns (F _{axial} / F _{radial})	
Shaft seal	Viton	10 N / 25 N : 185	20 N / 50 N : 24

ABSOLUTE MULTITURN ENCODER, PHO5 RANGE

ELECTRICAL CHARACTERISTIC

Input signal clock CLK	per opto-coupler	Power supply	5 – 30Vdc
Output signal DATA	line - driver RS422	Introduction	< 1 s
Clock frequency CLK	100kHz – 500kHz	Cons. Without load	< 100mA (typically 50-60mA at 24Vdc)
Precision	$\pm \frac{1}{2}$ LSB (13 bits)	Position refresh	< 200µs

SSI TRANSMISSION



Transmission	Transmission up to 400m* at 100kHz in function of the cable characteristics
Cable	High security of transmission by using shielded twisted pair cable

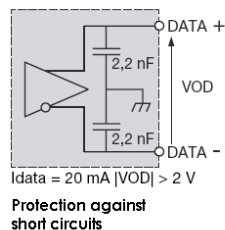
Consult us for length > 100m

SSI CONNECTION (TYPE S6 : BEI IDEACOD STANDARD)

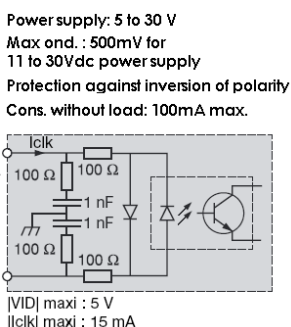
Type	Vcc	Gnd	Clk+	Data+	RAZ	Data-	Clk-	DIRECTION
S6	1	2	3	4	5	6	7	9
S8	8	1	3	2	6	10	11	5

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

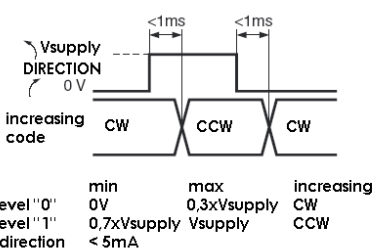
Data output RS422



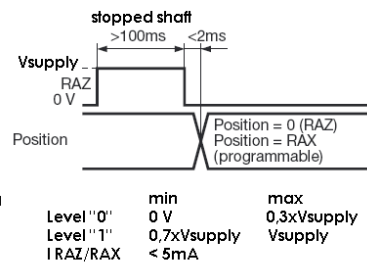
Isolated Clk input



DIRECTION input



RAZ / RAX input



ORDERING REFERENCE (Contact the factory for special versions, ex: special flanges, connections, electronics...)

	Shaft Ø	Supply	Output stage	Code	Resolution			Connection	Orientation
PHO5	14 : 14mm Nota: reduction hubs available	P : 5 to 30Vdc	SS : SSI without parity	B: binary G: Gray	13 B12 D5			S6 : M23 12pins CW for SSI transmission S8: M23 12pins CCW for SSI transmission	R : radiale
					Resolution	Nb of turn	Nb data		
					13: 13 bits	B12: 12 bits	D5: 25 bits		
PHO5_	14 //	P	SS	G //	13	B12	D5 //	S6	R

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Mouser Electronics

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Sensata:

[PHO514-1312-006](#)