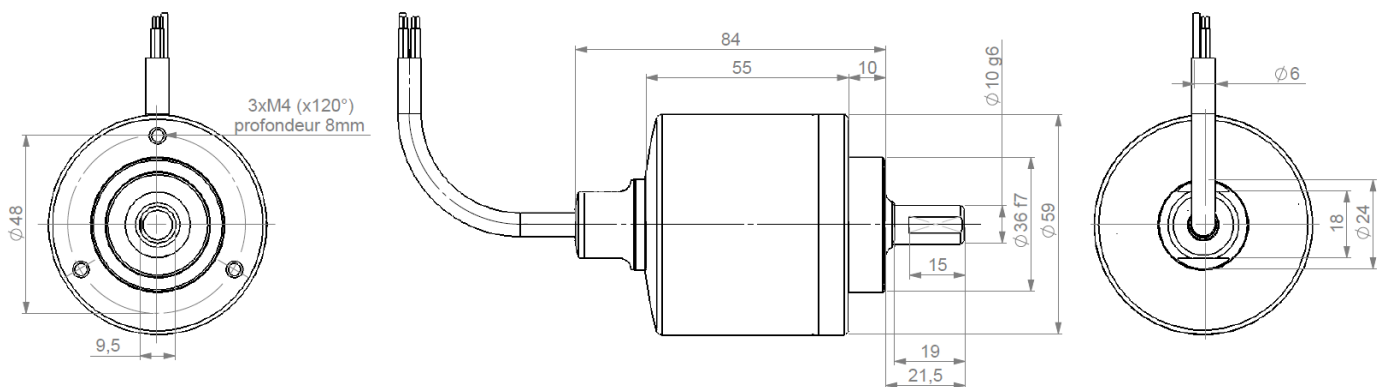


OPTICAL SSI MULTI-TURN ENCODERS, PXM5S – STAINLESS STEEL 316 - IP69K

- Adapted to food and beverage – pharmaceutical - river – offshore applications,
- Stainless steel encoder (316) with hygienic design,
- Flanges and shaft adapted to the market needs,
- Robustness and excellent resistance to shocks / vibrations,
- Double ball bearings with safety lock system,
- Solid shaft version 10mm,
- High protection level IP69K,
- Universal electronic circuits from 5 to 30Vdc,
- Isolated SSI interface, clock from 100 to 500 kHz,
- Protection against short-circuits and inversion of polarity,
- Available with incremental channels – 2048 points – 5 to 30 Vdc,
- 2 inputs : DIRECTION and RAZ,
- High performances in temperature –20°C to +85°C
- Optical technology, contactless,
- High resolutions available: 8192 (13 bits) per turn,
- Turn counting up to 65 536 (16 bits),
- Adapted axial cable gland output.



PXM5S10 DIMENSIONS



MECHANICAL CHARACTERISTICS

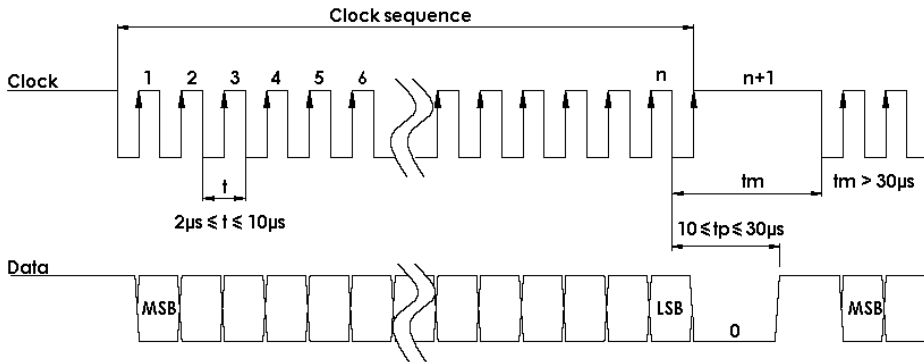
Material	Shaft: Stainless steel 316	Shaft inertia	$\leq 1,2 \cdot 10^{-6} \text{ kg.m}^2$
	Cover: Stainless steel 316	Torque	$\leq 90 \cdot 10^{-3} \text{ N.m}$
	Body: Stainless steel 316	Shock (EN60068-2-27)	$\leq 500 \text{ m.s}^{-2}$ (during 6 ms)
Bearings	Double ball bearings	Vibration (EN60068-2-6)	$\leq 100 \text{ m.s}^{-2}$ (10... 2 000 Hz)
Maximal loads	Axial : 250 N	Encoder weight (approx.)	0,600 kg
	Radial : 500 N	Protection(EN 60529)	IP 69K
Theoretical mechanical lifetime 10^9 turns (F_{axial} / F_{radial}) 50 N / 100 N : 12 250 N / 500 N : 0,5		EMC	EN 61000-6-4, EN 61000-6-2
Permissible max. speed	4 000 min^{-1}	Isolation	100V (1 min.)
Continuous max. speed	3 000 min^{-1}	Operating temperature	-20 ... + 85 °C (encoder T°)
		Storage temperature	-20 ... + 85 °C

OPTICAL SSI MULTI-TURN ENCODERS, PXM5S – STAINLESS STEEL 316 - IP69K

ELECTRICAL CHARACTERISTIC

Input signal clock CLK	per opto-coupleur	Power supply	5 – 30Vdc
Output signal DATA	line - driver selon RS422	Introduction	< 1 s
Clock frequency CLK	100kHz – 500kHz	Cons. without load	< 100mA (typically 50-60mA at 24Vdc)
Precision	± ½ 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 cable and twisted pairs

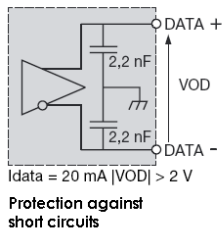
*Consult us for length > 100m

CONNECTION

Type	Vcc	Gnd	Clk+	Data+	RAZ	Data-	Clk-	DIRECTION
S5	Red RD	Black BK	Green GN	Brown BN	Blue BU	Orange OR	Yellow YE	Violer VT

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

Data output RS422

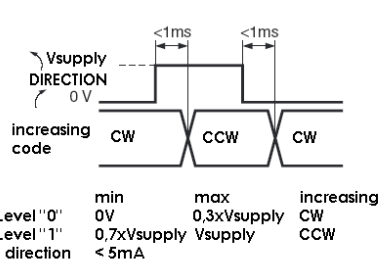


Isolated Clk input

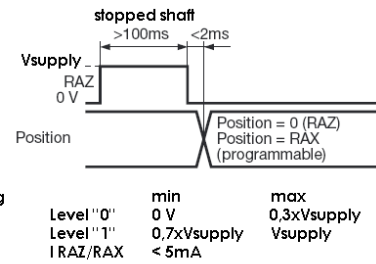
Power supply: 5 to 30 V
Max ond. : 500mV for 11 to 30Vdc power supply
Protection against inversion of polarity
Cons. without load: 100mA max.

The diagram shows an isolated clock input circuit. It features a differential input with 100 Ω resistors and 1 nF capacitors. The input voltage is VID and the input current is Iclk. The maximum VID is 5 V and the maximum Iclk is 15 mA.

DIRECTION input



RAZ / RAX input



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

Range	Shaft Ø	Mechanics	Supply	Output	Code	Resolution			Cable	Orientation	
PXM5S Optical – stainless steel 58mm encoder	10 10mm	AA 316 stainless steel IP69K Hygienic design	P 5 to 30Vdc	SS SSI without parity	B binary	13 B12 D5			S5 Cable output	Example A020 : axial 2 meters	
							Resolution	Turn			Data
						G Gray	13 13 bits	B12 12 bits			D5 25 bits frame

Ex : PXM5S 10 / AA / P SS G // 13 B12 D5 // S5 A050