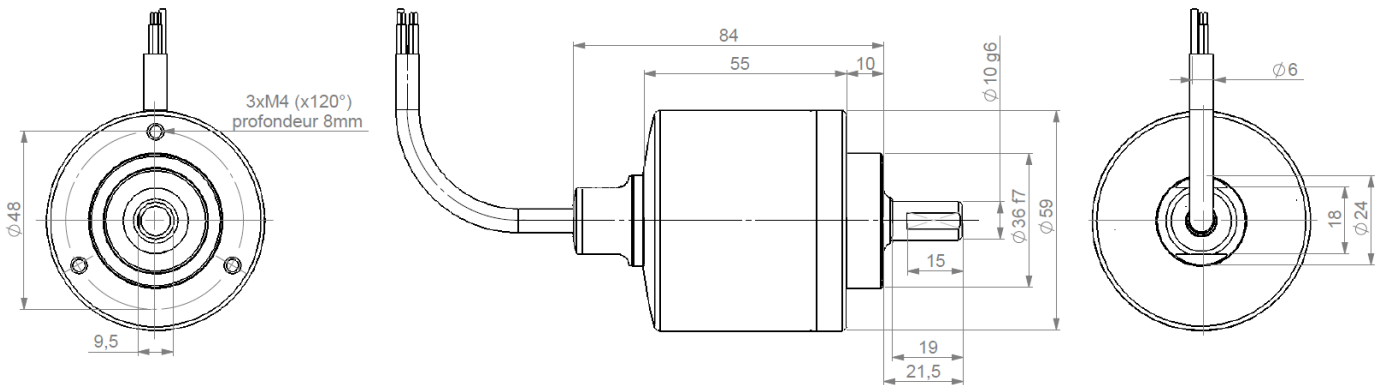


OPTICAL SSI SINGLE-TURN ENCODERS, CXM5S – STAINLESS STEEL 316 - IP69K

- 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 1MHz,
- Standard DIRECTION and RESET input
- Digital or sine incremental outputs option
- High performances in temperature -20°C to 90°C (option -40°C to 100°C),
- Optical technology, contactless,
- High resolutions up to 16bits (Gray or binary)
- Adapted axial cable gland output.



CXM5S10 DIMENSIONS



MECHANICAL CHARACTERISTICS

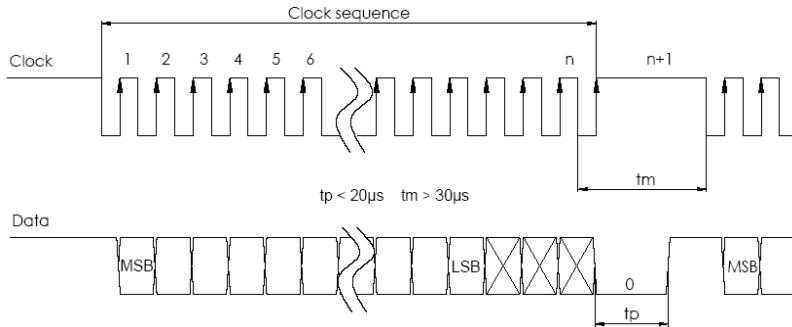
Material	Shaft: Stainless steel 316	Shaft inertia	$\leq 1,2 \cdot 10^{-6}$ kg.m ²
	Cover: Stainless steel 316	Torque	$\leq 90 \cdot 10^{-3}$ N.m
	Body: Stainless steel 316	Shocks (EN60068-2-27)	≤ 500 m.s ⁻² (during 6 ms)
Bearings	Double ball bearings	Vibrations (EN60068-2-6)	≤ 100 m.s ⁻² (10... 2 000 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	1 000 Veff
Continuous max. speed	3 000 min ⁻¹	Operating temperature	-20 ... + 90 °C (encoder T°)
		Storage temperature	- 40 ... + 100 °C

OPTICAL SSI SINGLE-TURN ENCODERS, CXM5S – STAINLESS STEEL 316 - IP69K

ELECTRICAL CHARACTERISTIC

Input signal clock CLK	per optocoupler	Clock frequency CLK	• 100kHz to 1MHz for 13 bits encoder
Output signal DATA	line - driver RS422		• 100kHz – $F_{max} = 10^6 / (\text{resolution in bits} - 10)$ for encoder >13bits, ex : $F_{max}=166\text{kHz}$ for 16 bits encoder
Power supply	5 – 30Vdc	Interrogation frame	n=13 bits for 13 bits resolution
Introduction	< 200ms		n=21bits for >13bits resolution
Consumption without load	Max. 100mA		

SSI TRANSMISSION



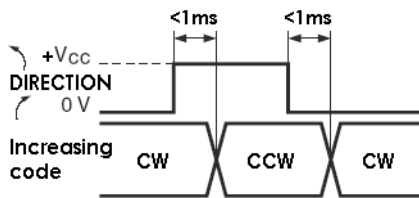
Transmission	Transmission up to 400m at 100kHz in function of the cable characteristics
Câble	High security of transmission by using shielded cable and twisted pairs

* Consult us for length > 100m

CONNECTIQUE

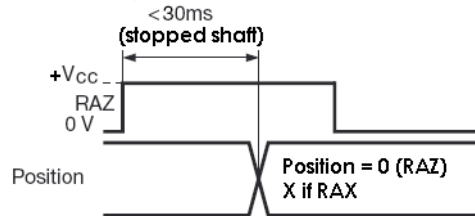
Type	Cable	+ Vcc	0 V	Clk+	Data+	RAZ	Data-	Clk-	DIRECTION
S5	8230/050 PUR 12 wires	BN/GN Brown/Green	WH/GN White/Green	GN Green	GY Grey	BU Blue	PK Pink	BN Brown	WH White

DIRECTION input



	min	max	Increasing
Level "0"	0 V	$0,3x(+V_{CC})$	CW
Level "1"	$0,7x(+V_{CC})$	$+V_{CC}$	CCW
I direction	< 5mA		

RAZ / RAX input



	min	max
Level "0"	0 V	$0,3x(+V_{CC})$
Level "1"	$0,7x(+V_{CC})$	$+V_{CC}$
I raz/rax	< 5mA	

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

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

Range	Shaft Ø	Mechanics	Supply	Output stage	Code	Resolution	Connection	Orientation
CXM5S	10	AA	P	CS : SSI without parity	B	13	S5	Example :
Optical – stainless steel 58mm encoder	10mm	316 stainless steel IP69K Hygienic design	5 to 30Vdc	CP : SSI even parity CI : SSI odd parity	Binary Gray	13 bits Standard option: 14 : 14 bits to 16 : 16 bits	PUR cable	A020 Axial cable of 2m
Ex:CXM5S	10 /	AA /	P	CS	G //	13 //	S5	A050

Monitoring function available as option:

- of the code coherence
- of the LED internal regulated current loop
- of temperature range with 2 limits

Consult us

Input / output available as option:

- RAX input (reset to a value X, manufacture setting)
- ERROR output for monitoring functions
- Sine & Cosine outputs without index, 2048ppr (option: 4096 ppr)
- A & B incremental outputs without index, 2048ppr (option: 4096 ppr)

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