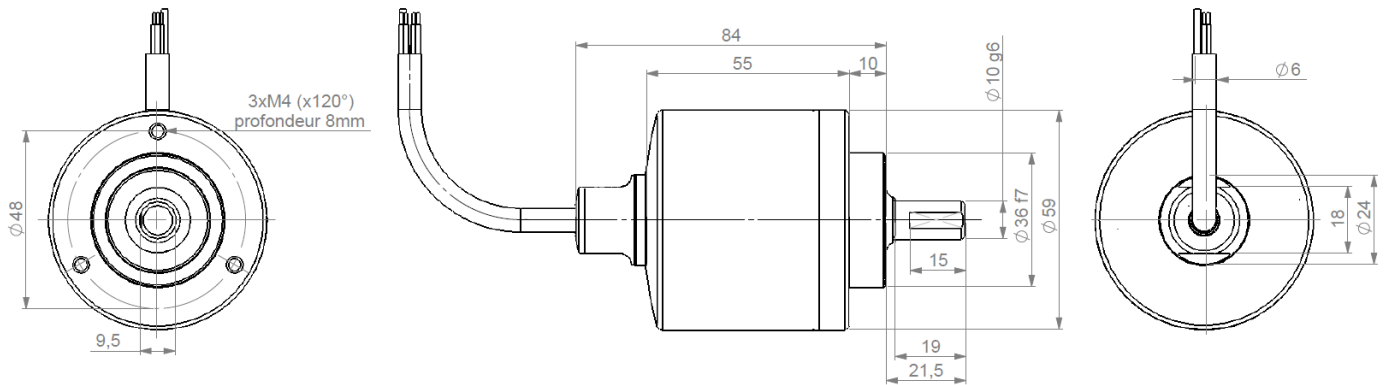


SIL3 PLe - INCREMENTAL ENCODERS - DSM5X RANGE

- Usable up to SIL 3 / PLe according to IEC 61508 / IEC 13849.
- Suitable for safe motor feedback according to IEC 61800-5-2.
- Robustness and excellent resistance to shocks / vibrations.
- 316 Stainless steel material.
- 58mm encoder solid shaft 10mm.
- High protection level: IP68 / 69K.
- High performances in temperature -20°C to $+85^{\circ}\text{C}$.
- Power supply 5Vdc or 11/30Vdc.
- Digital TTL/RS422 or HTL or sine/cosine 1Vpp output.
- Available resolution up to 2500ppr.
- Cable output, end orientation.



DSM5X10 – cable



MECHANICAL CHARACTERISTICS

Material	Cover : stainless steel	Shaft inertia	< 2 500 g.mm ²
	Body : stainless steel	Static/Dynamic torque	10 / 45 mN.m
	Shaft : AISI 303 stainless steel	Permissible max. speed	6 000 min ⁻¹
Bearings	6 000 serie	Continuous max. speed	3 000 min ⁻¹
Maximum loads	Axial : 100 N	Theoretical mechanical lifetime L _{10h} *	4,71.10 ⁹ turns / 26 150 hours
	Radial : 200 N	Encoder weight (approx.)	0,750 kg

* continuous max. speed – ½ max. load – according to ISO 281 : 1990, L₁₀

TEMPERATURE CONDITIONS

Operating temperature	- 20 ... + 85 °C (encoder T°)	Storage temperature	- 20 ... + 85 °C
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SIL3 PLe - INCREMENTAL ENCODERS - DSM5X RANGE

ELECTRICAL CHARACTERISTICS / FUNCTIONAL SAFETY PARAMETERS

Electronic Version	Output signals	Operating Voltage +V	Supply current	Current per channel pair	Short circuits proof	Reverse polarity protected	PFD	PFH	MTTFd	DC
2G2	Digital	5V +/-5%	100mA with no load	40mA	Yes	Yes	7,51E-05	8,58E-10	1331	HIGH
5G2	TTL RS422	11-30V			Not to +V		9,52E-05	1,09E-09	1050	
5G5	Digital HTL				Yes		9,52E-05	1,09E-09	1050	
2WT	Sine Cosine	5V +/-5%	70mA with no load	10mA	Yes		4,29E-05	4,90E-10	2328	
5WT	1Vpp	11-30V			Not to +V		6,60E-05	7,53E-10	1515	

Safety mission time: 20 years

STANDARDS CONFORMITY

Protection(EN 60529)	IP 68 / 69K	Functional safety	IEC 61508	
Humidity (EN 60068-2-38)	93% @ 65°C		IEC 62061	
Shock (EN60068-2-27)	≤ 500m.s ⁻² (during 6 ms)		ISO 13849-1	
Vibration (EN60068-2-6)	≤ 200m.s ⁻² (10 ... 2 000 Hz)		IEC 61800-5-2	
EMC Immunity Test	EN 61000-6-2,increased levels		IEC 62061	
EMC Emission Test	EN 61000-6-4,increased levels		Encoders usable up to SIL3 / PLe with external specific requirements, see safety user manual for details.	
Isolation	1000 Veff		ZZ/ are not safety signals.	
Salt Sparay (EN 60068-2-11 part 2)	168h			

ELECTRICAL CONNECTIONS

Type	Cable	0V	+V	A or S	B or C	Z	A/ or S/	B/ or C/	Z/	Ground
TE	8230/005	WH white	BN brown	GN green	YE yellow	GY grey	PK pink	BU blue	RD red	General shielding

AVAILABLE RESOLUTION

250 256 360 500 512 1000 1024 2048 2500

ORDERING REFERENCE (Contact the factory for special versions, ex: resolution, connection)

	Shaft Ø	Mechanics	Supply	Output stage	Output signals	Resolution	Connection	Orientation	
DSM5X	10: 10mm	AA IP69K conception	Digital signals: 2G2, 5G2, 5G5			9: AA/ BB/ ZZ/ N: SS/ CC/ ZZ/	2500 max	TE Cable	Example A050 : end cable 5m
			2:5Vdc	G2 : TTL RS422	5: 11- 30Vdc				
			Analog Sine Cosine signals: 2WT, 5WT						
			2: 5Vdc	WT: sine 1Vpp	5: 11- 30Vdc				
Ex:DSM5X	10	/ AA	/ 5	G2	9 //	01024 //	TE	A050	

Made in France