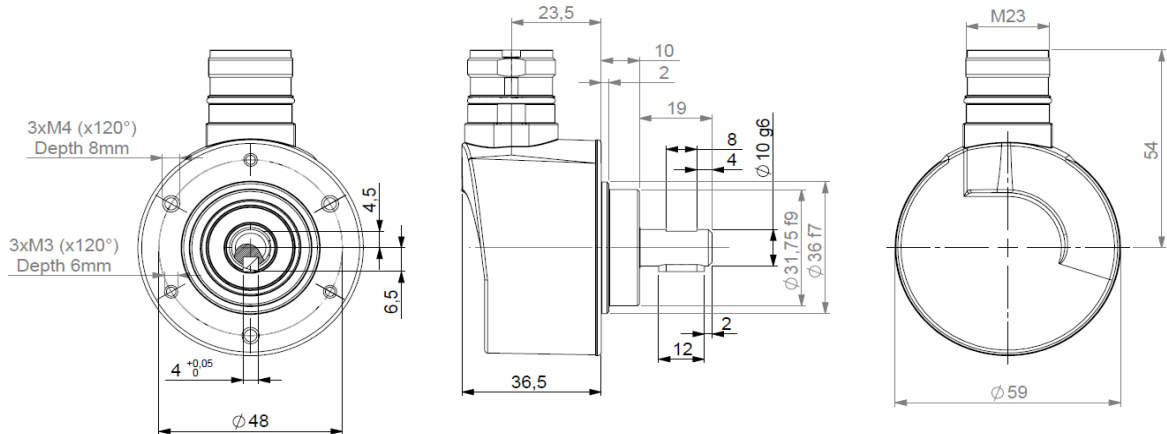


SIL3 PLe - INCREMENTAL ENCODERS - DSM5H RANGE

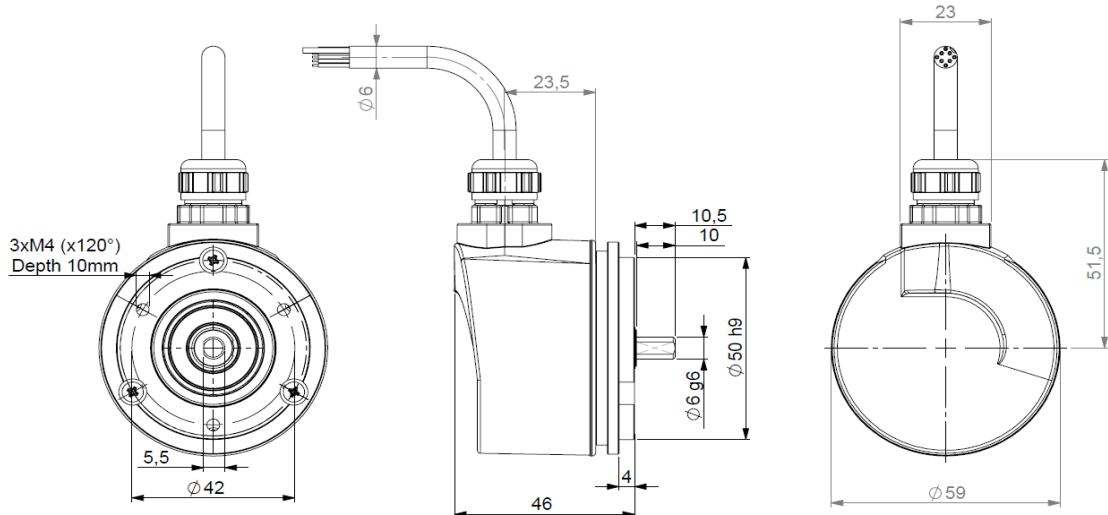
- Usable up to SIL 3 / PLe according to IEC 61508 / IEC 13849.
- Suitable for safe motor feedback according to IEC 61800-5-2.
- Robustness and excellent resistance to shocks / vibrations.
- 58mm encoder, solid shaft 6mm, 9.52mm or 10mm.
- High protection level: IP65.
- High performances in temperature -20°C to $+85^{\circ}\text{C}$.
- Power supply 5Vdc or 11/30Vdc.
- Digital TTL/RS422 or HTL or sine/cosine 1Vpp output.
- Resolution up to 2500ppr.
- Connector or cable output – side or end orientation.
- Stainless steel version available in option.



DSM5H10 – radial M23 connector



DSM5H06 radial cable - with 9500/003 flange



MECHANICAL CHARACTERISTICS

Material	Cover : powder coated zinc alloy	Shaft inertia	< 2 800 g.mm ²
	Body : aluminum	Static/Dynamic torque	5 / 35 mN.m
	Shaft : AISI 303 stainless steel	Permissible max. speed	9 000 min ⁻¹
Bearings	6 000 serie - sealed	Continuous max. speed	6 000 min ⁻¹
Maximum loads	Axial : 40 N	Theoretical mechanical lifetime L _{10h} *	29,7.10 ⁹ turns / 82 365 hours
	Radial : 80 N	Encoder weight (approx.)	0,300 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 - DSM5H 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 65
Humidity (EN 60068-2-38)	93% @ 65°C
Shock (EN60068-2-27)	≤ 500m.s ² (during 6 ms)
Vibration (EN60068-2-6)	≤ 200m.s ² (10 ... 2 000 Hz)
EMC Immunity Test	EN 61000-6-2,increased levels
EMC Emission Test	EN 61000-6-4,increased levels
Isolation	1000 Veff
Salt Spray (EN 60068-2-11 part 2)	96h

Functional safety	IEC 61508
	IEC 62061
	ISO 13849-1
	IEC 61800-5-2
	IEC 62061
Encoders usable up to SIL3 / PLe with external specific requirements, see safety user manual for details.	
ZZ/ are not safety signals.	

ELECTRICAL CONNECTIONS

		0V	+V	A or S	B or C	Z	A/ or S/	B/ or C/	Z/	Ground
G6	M23 - 12 pins CW	1	2	3	4	5	6	7	8	Connector Body
G8	M23 - 12 pins CCW	10 + 11	2 + 12	8	5	3	1	6	4	Connector Body
G3	PVC cable 8 wires 8230/020	WH white	BN brown	GN green	YE yellow	GY grey	PK pink	BU blue	RD red	General shielding
GP	PUR cable 12 wires 8230/050	WH white + WH/GN white/green	BU blue + BN/GN brown / green	GY grey	BN brown	RD red	PK pink	GN green	BK black	General shielding

AVAILABLE RESOLUTION

250 256 360 500 512 1000 1024 2048 2500

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

	Shaft Ø	Supply	Output stage	Output signals	Resolution	Connection	Orientation	Cover	Flange
DSM5H	06: 6mm	Digital signals: 2G2, 5G2, 5G5			2500 max	G6: M23 12 pins CW G8: M23 12 pins CCW	A : axial R : radial	1J Zinc alloy cover	**03** Servo flange
		2:5Vdc 5: 11- 30Vdc	G2:TTL RS422 G5:HTL	9: AA/ BB/ ZZ/					
	10: 10mm	Analog Sine Cosine signals: 2WT, 5WT							
		2: 5Vdc 5: 11- 30Vdc	WT: sine 1Vpp	N: SS/ CC/ ZZ/					
09: 9.52mm					GP: PUR cable 12 wires G3: PVC cable 8 wires	Example : R050 : radial cable 5m			
Ex: DSM5H	06 //	5	G2	9 //	01024 //	GP	R050 /	1J /	**03**

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