

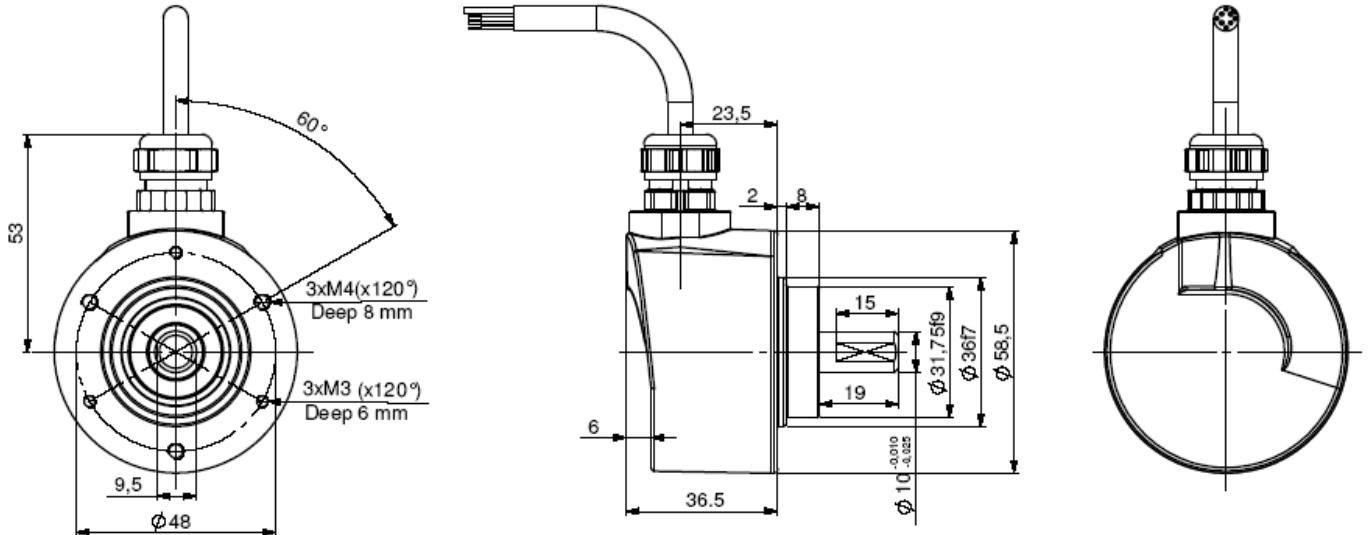
SSI ABSOLUTE SINGLE TURN ENCODERS, CHM5 RANGE

CHM5, the new generation of SSI absolute single turn encoders :

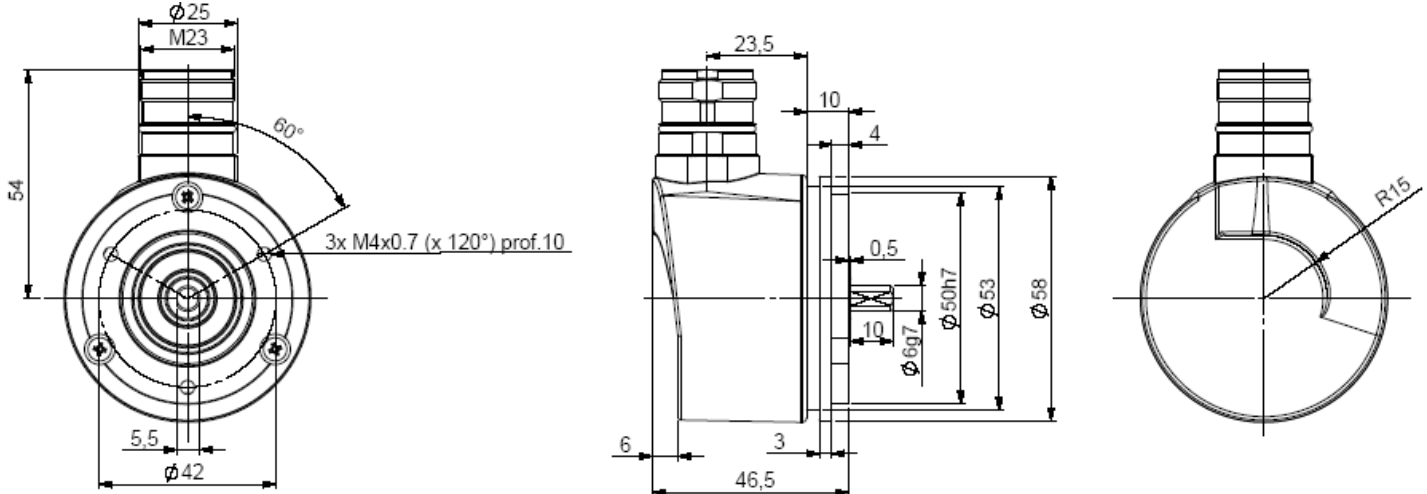
- Robustness and excellent resistance to shocks / vibrations
- High protection level IP65, IP67 option with a sealing flange
- High resolutions possibility: up to 16bits (Gray or binary)
- Universal power supply from 5 to 30 Vdc
- High performances in temperature -20°C to 90°C (option -40°C to 100°C)
- Standard DIRECTION and RESET input
- Digital or sine incremental outputs option



CHM5_10 connection S5R (radial cable)



CHM5_06 connection S6R (radial M23), flange 9500/003* mounted on the body



* Accessories to be ordered separately

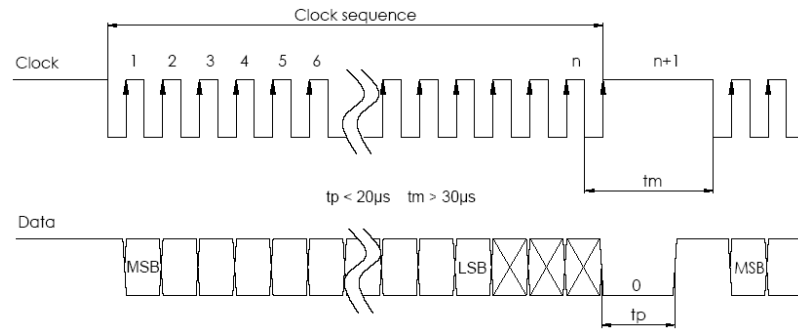
Material	Cover : zinc alloy	Shocks (EN60068-2-27)	$\leq 500 \text{ m.s}^{-2}$ (during 6 ms)
	Body: aluminium	Vibrations (EN60068-2-6)	$\leq 100 \text{ m.s}^{-2}$ (10 ... 2 000 Hz)
	Shaft : stainless steel	EMC	EN 61000-6-4, EN 61000-6-2
Bearings	6 000 serie	Isolation	1 000 Veff
Maximum loads	Axial : 50 N	Encoder weight (approx.)	0,300 kg
	Radial : 100 N	Operating temperature	$-20 \dots +90^{\circ}\text{C}$ (encoder T°)
Shaft inertia	$\leq 1.10^{-6} \text{ kg.m}^2$	Storage temperature	$-40 \dots +100^{\circ}\text{C}$
Torque	$\leq 4.10^{-3} \text{ N.m}$	Protection(EN 60529)	IP 65 (IP67 with flange option)
Permissible max. speed	$12\,000 \text{ min}^{-1}$	Theoretical mechanical lifetime 10^9 turns (F_{axial} / F_{radial})	
Continuous max. speed	$9\,000 \text{ min}^{-1}$	25 N / 50 N : 99	50 N / 100 N : 12

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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=21 bits for > 13bits resolution
Consumption without load	Max. 100mA		

SSI TRANSMISSION



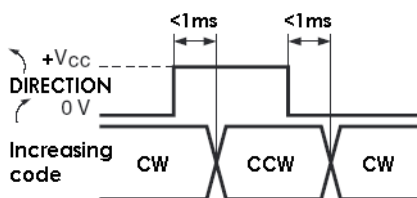
Transmission	Transmission up to 400m at 100kHz in function of the cable characteristics
Câble	High security of transmission by using shielded cable and twisted pairs

* Consult us for length > 100m

CONNECTIQUE STANDARD SSI

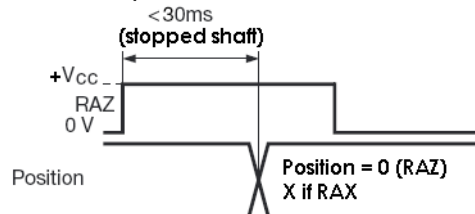
Type	+ Vcc	0 V	Clk+	Data+	RAZ	Data-	Clk-	DIRECTION
S6	1	2	3	4	5	6	7	9
S5	BN/GN Brown/Green	WH/GN White/Green	GN Green	GY Grey	BU Blue	PK Pink	BN Brown	WH White
S8	8	1	3	2	6	10	11	5

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 rax/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...)

	Shaft Ø	Supply	Output stage	Code	Resolution	Connection	Orientation
CHM5	10 : 10mm	P : 5 to 30Vdc	CS : SSI without parity	B : Binary	Power of 2 13: 13 bits standard	S6 : M23 12pins CW for SSI transmission	R : radial
	06 : 6mm		CP : SSI even parity			G : Gray	
CHM5	10	P	CS	G	13	S6	R

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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