

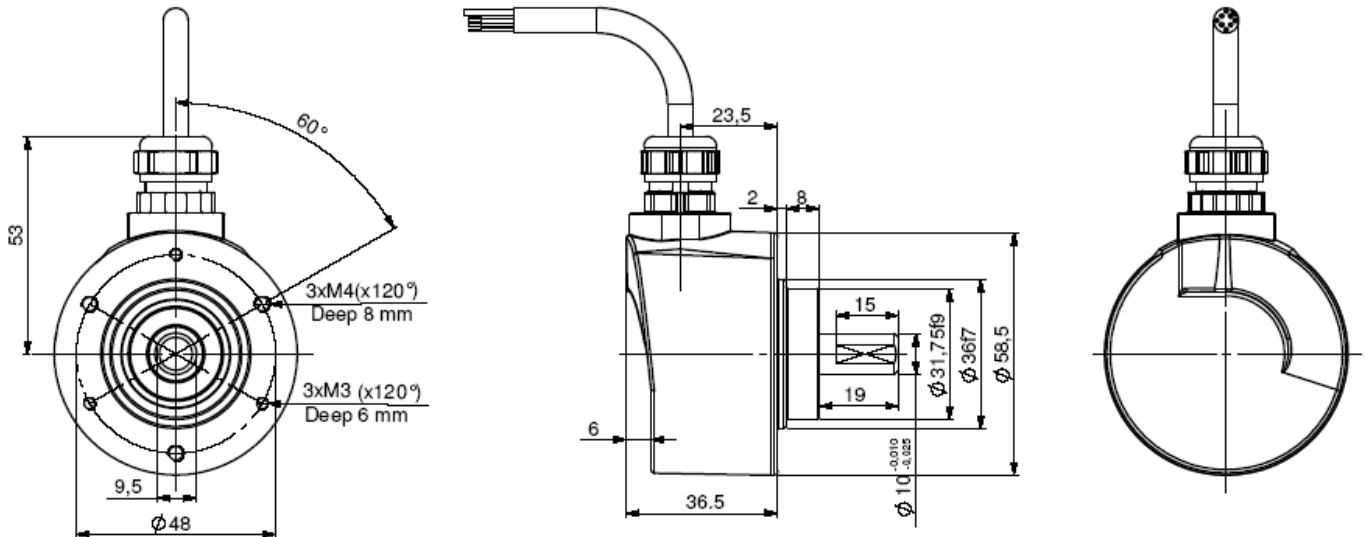
## SSI ABSOLUTE SINGLE TURN ENCODERS, CHM5 RANGE

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

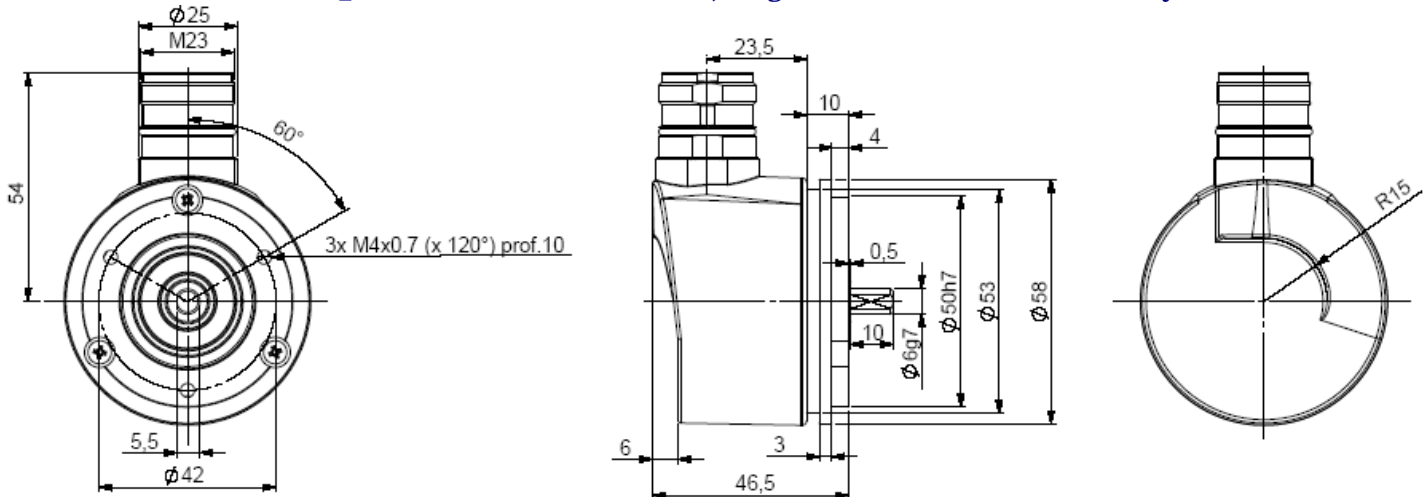
- Robustness and excellent resistance to shocks / vibrations
- High protection level IP65, IP67 option with a sealing flange
- High resolutions possibility: up to 16bits (Gray or binary)
- Universal power supply from 5 to 30 Vdc
- High performances in temperature  $-20^{\circ}\text{C}$  to  $90^{\circ}\text{C}$  (option  $-40^{\circ}\text{C}$  to  $100^{\circ}\text{C}$ )
- 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

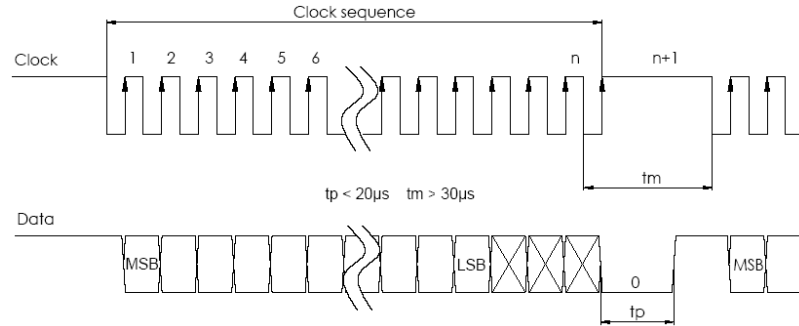
Material	Cover : zinc alloy	Shocks (EN60068-2-27)	$\leq 500 \text{ m.s}^{-2}$ (during 6 ms)
	Body: aluminium	Vibrations (EN60068-2-6)	$\leq 100 \text{ m.s}^{-2}$ (10 ... 2 000 Hz)
	Shaft : stainless steel	EMC	EN 61000-6-4, EN 61000-6-2
Bearings	6 000 serie	Isolation	1 000 Veff
Maximum loads	Axial : 50 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

## SSI ABSOLUTE SINGLE TURN ENCODERS, CHM5 RANGE

### 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 - $F_{max} = 10^4 / (\text{resolution in bits} - 10)$ 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



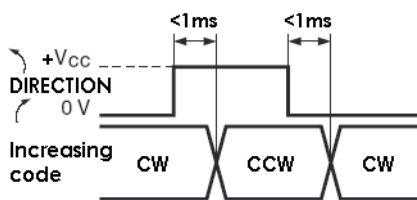
Transmission	Transmission up to 400m at 100kHz in function of the cable characteristics
Câble	High security of transmission by using shielded cable and twisted pairs

\* Consult us for length > 100m

### CONNECTIQUE STANDARD SSI

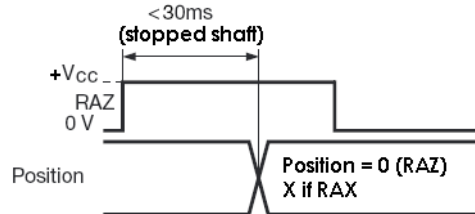
Type	+ Vcc	0 V	Clk+	Data+	RAZ	Data-	Clk-	DIRECTION
S6	1	2	3	4	5	6	7	9
S5	BN/GN Brown/Green	WH/GN White/Green	GN Green	GY Grey	BU Blue	PK Pink	BN Brown	WH White
S8	8	1	3	2	6	10	11	5

#### 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	$< 5\text{mA}$		

#### RAZ / RAX input



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

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			option: 14: 14 bits to 16: 16 bits	
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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