

SSI ABSOLUTE SINGLE TURN ENCODERS, CHM5 RANGE

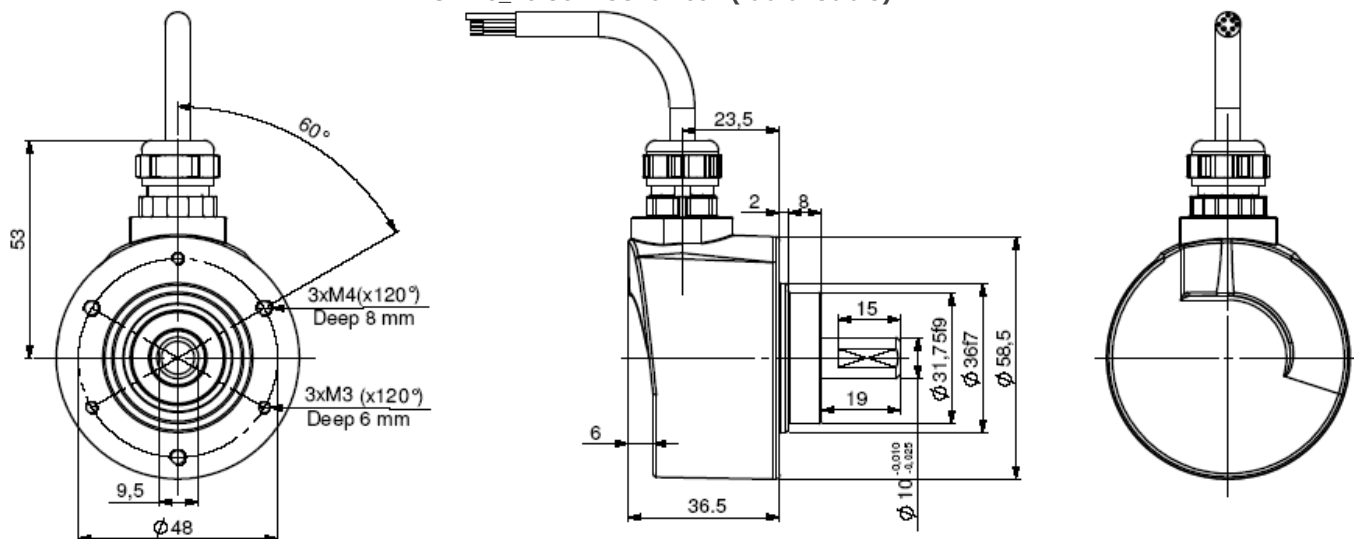
CHM5

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

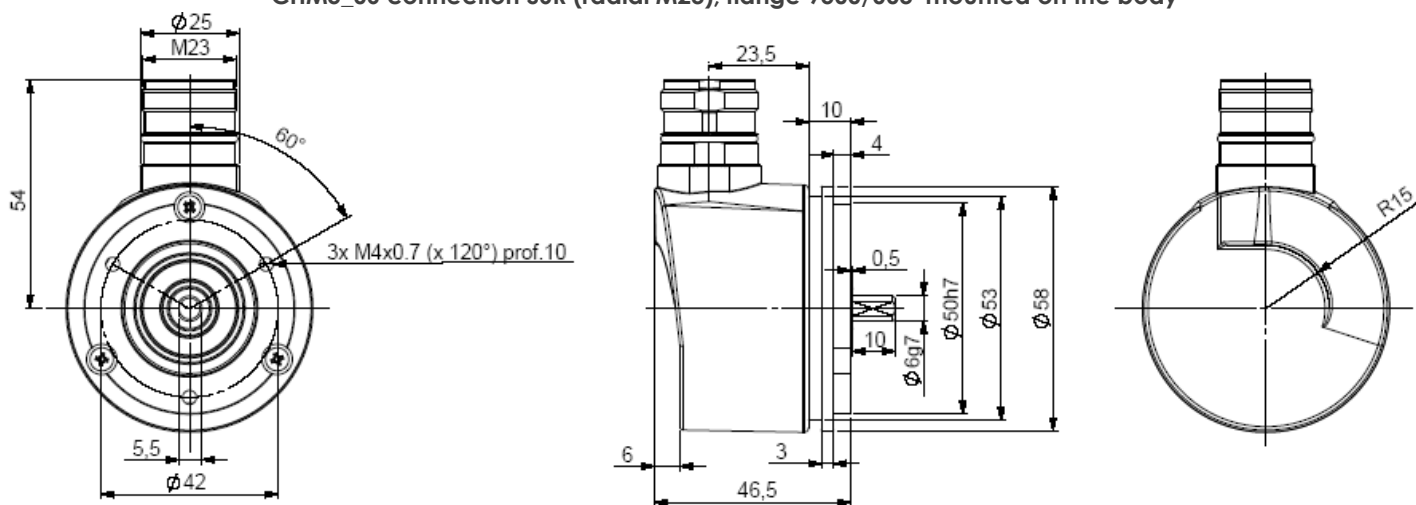
- Robustness and excellent resistance to shocks / vibrations
- High protection level IP65, IP67 option with a sealing flange
- High resolutions possibility: up to 16bits (Gray or binary)
- Universal power supply from 5 to 30 Vdc
- High performances in temperature -20°C to 90°C (option -40°C to 100°C)
- 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)	≤ 500 m.s ⁻² (during 6 ms)
	Body: aluminium	Vibrations (EN60068-2-6)	≤ 100 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 ... + 90 °C (encoder T°)
Shaft inertia	≤ 1.10 ⁻⁶ kg.m ²	Storage temperature	- 40 ... + 100 °C
Torque	≤ 4.10 ⁻³ N.m	Protection(EN 60529)	IP 65 (IP67 with flange option)
Permissible max. speed	12 000 min ⁻¹	Theoretical mechanical lifetime 10 ⁹ turns (F _{axial} / F _{radial})	
Continuous max. speed	9 000 min ⁻¹	25 N / 50 N : 99	50 N / 100 N : 12



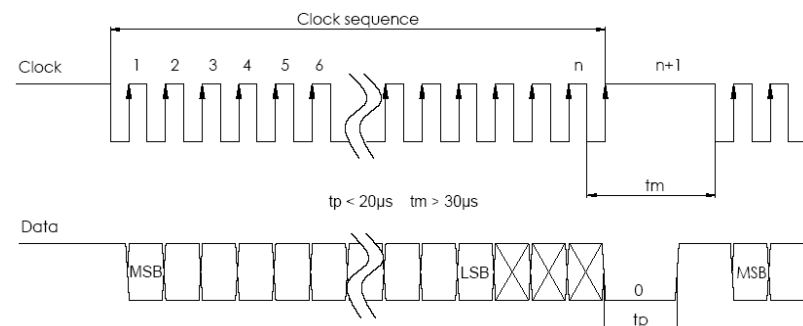
Tel : +33 (0)3 88 02 09 02 / Fax : +33 (0)3 88 02 09 03 / E-mail : info@ak-industries.com / Web : <http://www.ak-industries.com>

We reserve the right to make technical alterations without prior notice – Photos and drawings are not contractual – Version 2.0
Made in France

ELECTRICAL CHARACTERISTIC

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

SSI TRANSMISSION



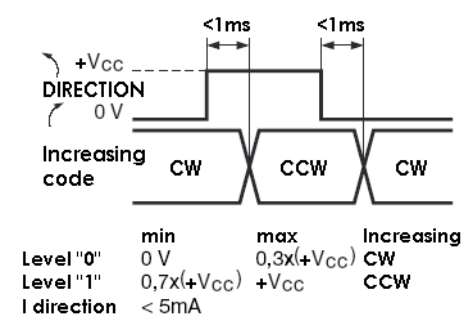
Transmission	Transmission up to 400m at 100kHz in function of the cable characteristics
Câble	High security of transmission by using shielded cable and twisted pairs

* Consult us for length > 100m

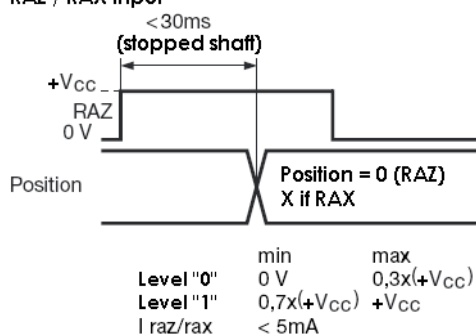
CONNECTIQUE STANDARD SSI

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



RAZ / RAX input



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 CP : SSI even parity CI : SSI odd parity	B : Binary G : Gray	Power of 2 13: 13 bits standard option: 14: 14 bits to 16: 16 bits	S6 : M23 12pins CW for SSI transmission S8: M23 12pins CCW for SSI transmission	R : radial
	06 : 6mm					S5 : SSI cable, cable gland output	Example : R020 : radial cable of 2m
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)

