

CANopen ABSOLUTE SINGLE TURN ENCODERS, CHO5 RANGE

CHO5, the new generation of CANopen absolute single turn encoders :

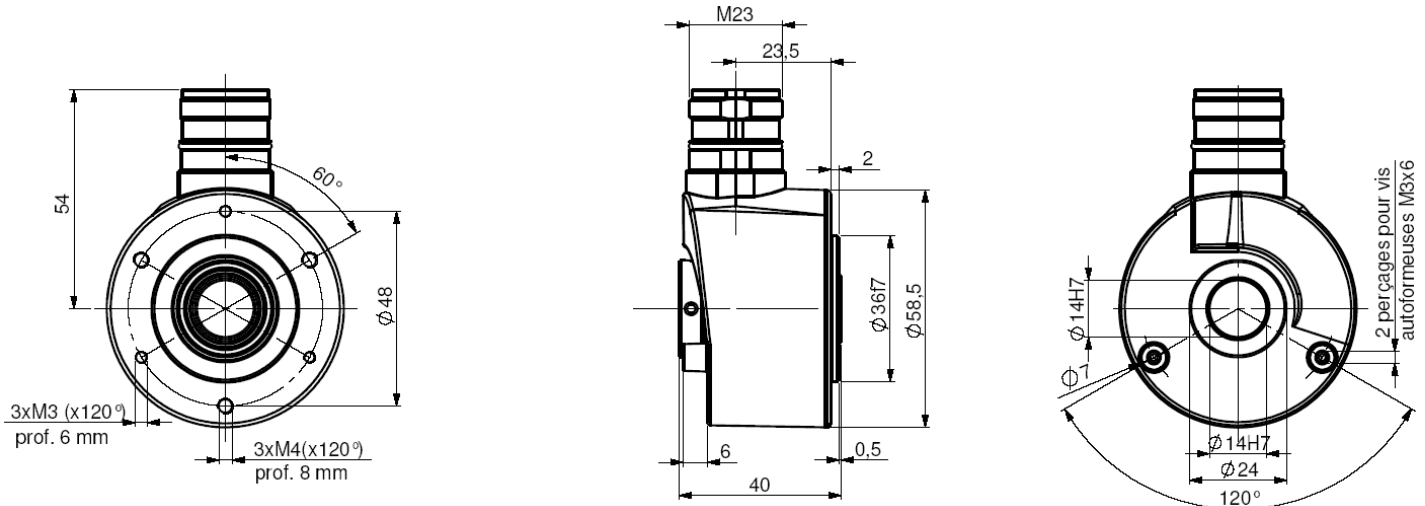
- Through hollow shaft version $\varnothing 14\text{mm}$, with reduction hubs in aluminium of 6, 8, 10 and 12 mm,
- 58mm encoder, extra-flat,
- Robustness and excellent resistance to shocks/vibrations,
- High protection level IP65,
- High performances in temperature -20°C to 85°C (-30°C option),
- Universal power supply from 5 to 30 Vdc,
- High resolutions up to 8192 points per turn (2^{13}).

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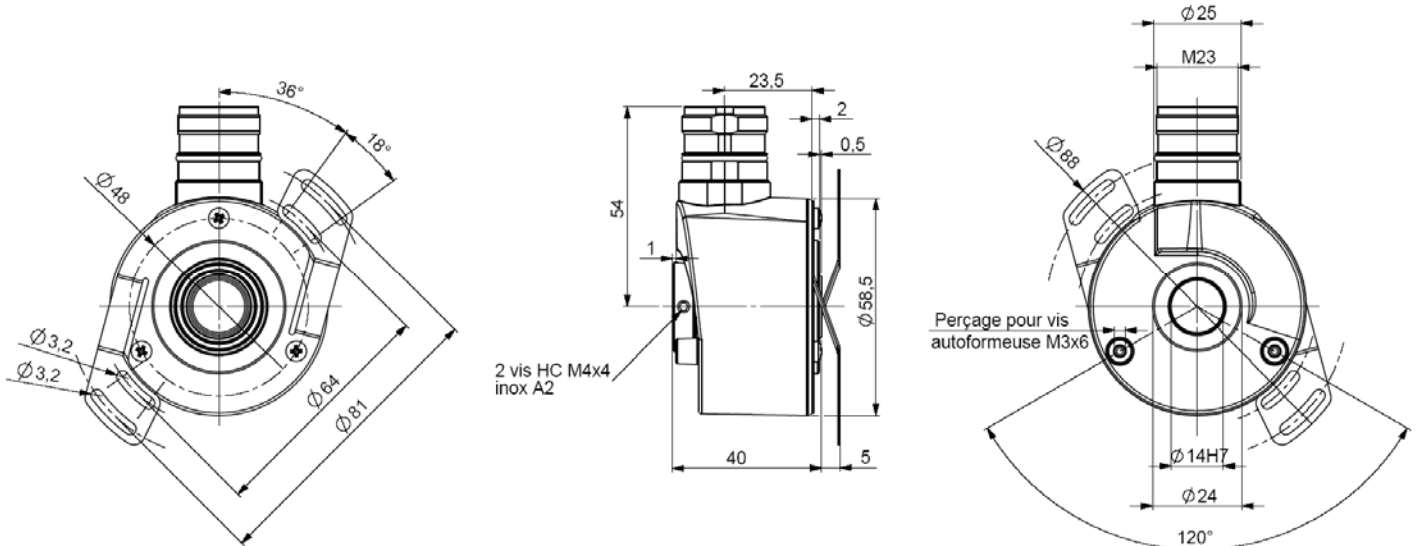
DS 301 V4.02
DS 406 V3.1



CHO5_14 connection BCR(radial M23)



CHO5_14 connection BCR(radial M23), DAC 9445/015* mounted on the body



* Accessory to be ordered separately

Material	Cover: zinc alloy
	Body: aluminium
	Shaft: stainless steel
Bearings	6 803 serie
Maximal loads	Axial: 20 N
	Radial: 50 N
Shaft inertia	$\leq 2,2 \cdot 10^{-6} \text{ kg} \cdot \text{m}^2$
Torque	$\leq 6 \cdot 10^{-3} \text{ N} \cdot \text{m}$
Permissible max. speed	$9\,000 \text{ min}^{-1}$
Continuous max. speed	$6\,000 \text{ min}^{-1}$
Shaft seal	Viton

Shocks (EN60068-2-27)	$\leq 500 \text{ m} \cdot \text{s}^{-2}$ (during 6 ms)
Vibrations (EN60068-2-6)	$\leq 100 \text{ m} \cdot \text{s}^{-2}$ (10 ... 2 000 Hz)
EMC	EN 61000-6-4, EN 61000-6-2
Isolation	500V (1min)
Encoder weight (approx.)	0,300 kg
Operating temperature	$-20 \dots +85^{\circ}\text{C}$ (encoder T _P)
Storage temperature	$-40 \dots +85^{\circ}\text{C}$
Protection (EN 60529)	IP 65
Torque (ring pressure screw)	nominal: 1.5 N.m, break: 2.0 N.m
Theoretic al mechanical life time 10^9 turns (F_{axial} / F_{radial})	
10N / 25N : 230	20N / 50N : 29

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ELECTRICAL CHARACTERISTICS

Power supply	5 – 30Vdc
Introduction	< 1 s
Consumption (without load)	< 50mA (at 24Vdc)
Accuracy	± ½ LSB (13 bits)

Programmable parameters

Resolution: defines the resolution per revolution (0 to 8192),

Transmission speed: programmable from 10kbaud (1000m) to 1 Mbaud (40 m); value per default: 20 Kbaud,

Address: define the software address of the encoder on the bus (1 to 127, value by default: id = 1),

Direction: define the direction of count of the encoder,

RAX: defines the value of its preset position (non turning shaft),

CAM: Low and High Limits.

Communication modes

3 modes are available to interrogate the encoder:

POLLING mode: (Response to a RIR message): The position value is only given upon request (SDO mode),

CYCLIC mode: the encoder transmits its position in an asynchronous manner. The frequency of the transmission is defined by the programmable cyclic timer register from 0 to 65 535 ms,

SYNCHRO mode: the encoder transmits its position on a synchronous demand by the master.

CANOPEN CONNECTION

1	2	3	4	5	6	7	8, 9, 11	10	12
Reserved	CAN IOW	CAN GND	Reserved	Reserved	Reserved	CAN HIGH	Reserved	0V	+ 5/30Vdc

Pinout 3 (CAN GND) and 10 (0V) are connected together (intern the encoder).

Nota : Refer to the bus standards for the maximal derivation length.

ORDERING CODE (Special versions upon request, for ex. special flanges/electronic s/connections...)

	Shaft Ø	Power supply	Output stage	Code	Resolution	Connection	Connection orientation
CHO5	14 : 14mm Reduction hubs available	P: 5 to 30Vdc	BB: CANopen	B Binary	13 : 8192 ppoints per revolution (2 ¹³)	BC: M23 12 pino uts clockwise	R: radial
CHO5 _	14 //	P	BB	B //	13 //	BC	R

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