



## CHO5

### CANOPEN ABSOLUTE SINGLE TURN ENCODERS



#### Features

- Through hollow shaft version Ø14mm, 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° (-30°C option)
- Universal power supply from 5 to 30 Vdc
- High resolutions up to 8192 points per turn (2<sup>13</sup>)



#### SPECIFICATIONS

<b>Material</b>	<b>Cover:</b> Zinc Alloy <b>Body:</b> Aluminum <b>Shaft:</b> Stainless Steel
<b>Bearings</b>	6803 series
<b>Maximal Loads</b>	<b>Axial:</b> 20 N <b>Radial:</b> 50 N
<b>Shaft Inertia</b>	$\leq 2,2 \cdot 10^{-6}$ kg.m <sup>2</sup>
<b>Torque</b>	$\leq 6 \cdot 10^{-3}$ N.m
<b>Permissible Max. Speed</b>	9,000 min <sup>-1</sup>
<b>Continuous Max. Speed</b>	6,000 min <sup>-1</sup>
<b>Shaft Seal</b>	Viton
<b>Shocks (EN60068-2-27)</b>	$\leq 500$ m.s <sup>-2</sup> (during 6 ms)
<b>Vibrations (EN60068-2-6)</b>	$\leq 100$ m.s <sup>-2</sup> (10 ... 2,000 Hz)
<b>EMC</b>	EN 61000-6-4, EN 61000-6-2
<b>Isolation</b>	500V (1min)
<b>Encoder Weight (Approx.)</b>	0,300 kg
<b>Operating Temperature</b>	- 20 ... 85°C (encoder T°)
<b>Storage Temperature</b>	- 40 ... + 85°C
<b>Protection (EN 60529)</b>	IP 65
<b>Torque (Ring Pressure Screw)</b>	0,7 .. 0,9 N.m
<b>Theoretical mechanical lifetime 10<sup>9</sup> turns (<math>F_{axial} / F_{radial}</math>)</b>	
<b>10 N / 25 N</b>	230
<b>25 N / 50 N</b>	29

## Electrical Data

<b>Power Supply</b>	5 - 30Vdc
<b>Introduction</b>	< 1 s
<b>Consumption (Without Load)</b>	< 50mA (at 24Vdc)
<b>Accuracy</b>	± ½ LSB (13 bits)

## Programmable Parameters

**Resolution:** defines the resolution per revolution (0 to 8 192),

**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 RTR 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 cyclical 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 LOW	CAN GND	Reserved	Reserved	Reserved	CAN HIGH	Reserved	0V	+ 5/30Vdc

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

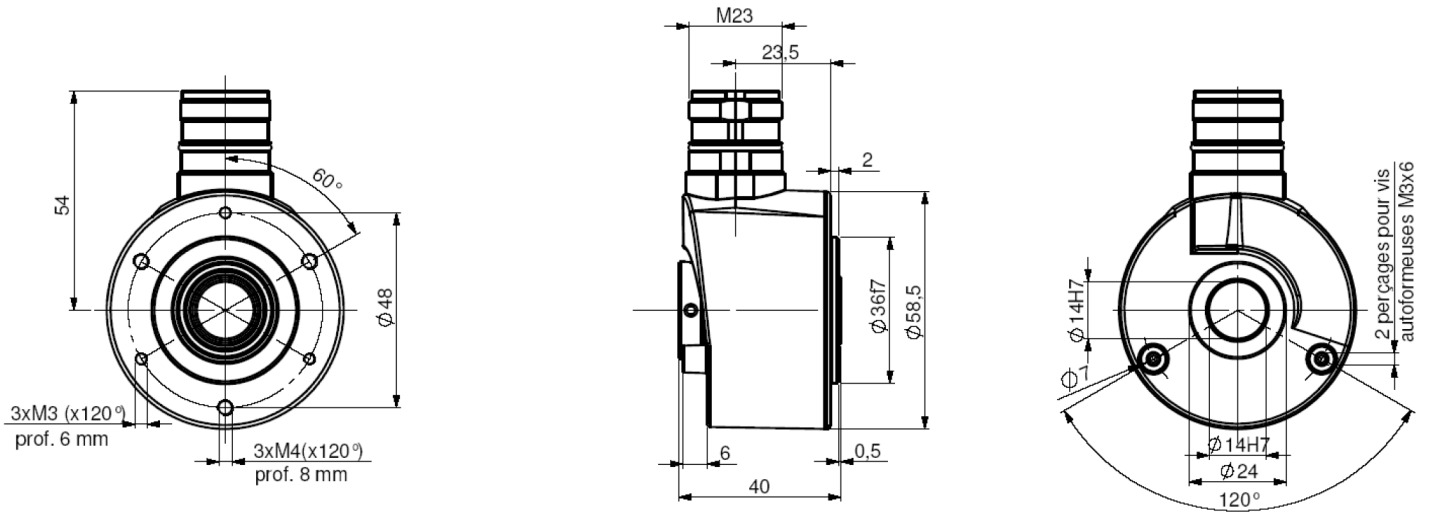
Note: Refer to the bus standards for the maximal derivation length.



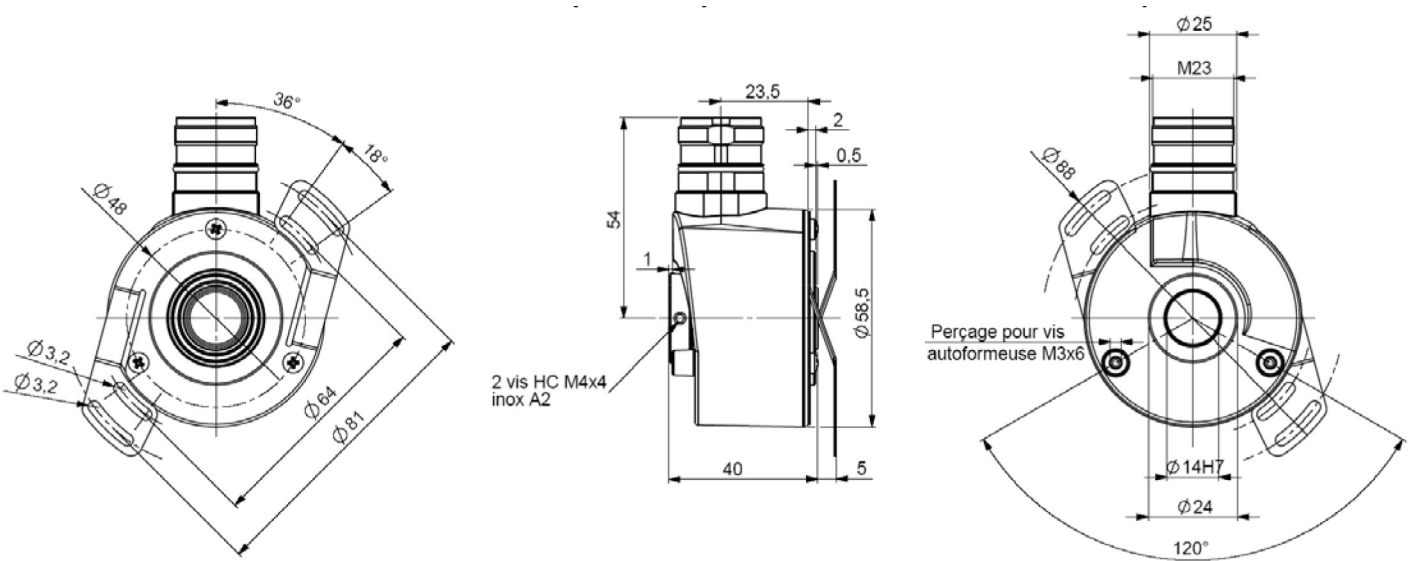
# DIMENSIONS

Dimensions in mm

## CH05\_14 connection BCR (radial M23)



## CH05\_14 connection BCR (radial M23), DAC 9445/015\* mounted on the body



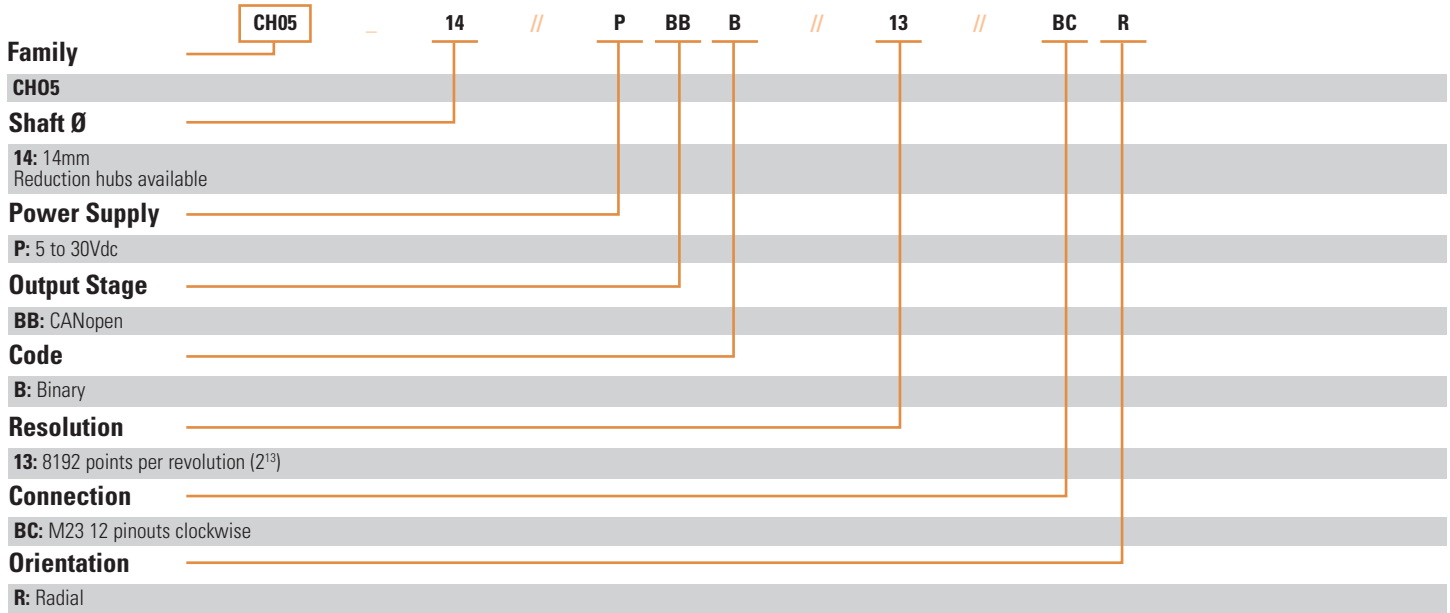
\* Accessory to be ordered separately.



## ORDERING OPTIONS

Example : CH05\_14//PBBB//13//BCR

Contact the factory for special versions, ex: special flanges, electronics, connections...



## AGENCY APPROVALS & CERTIFICATIONS



Made in France

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