

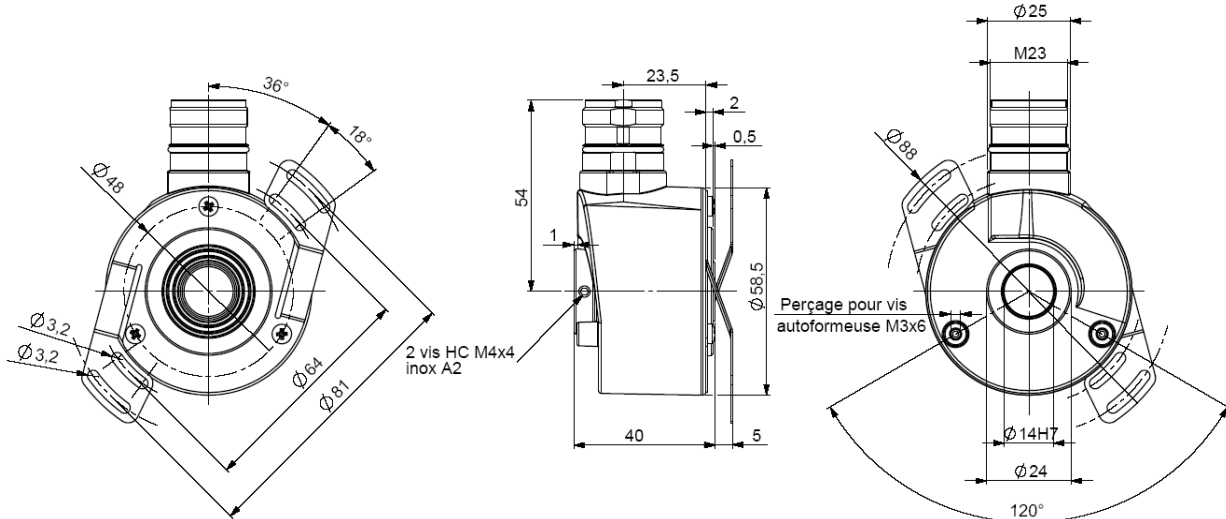
## PARALLEL SINGLE TURN ABSOLUTE ENCODER, CHO5 RANGE

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

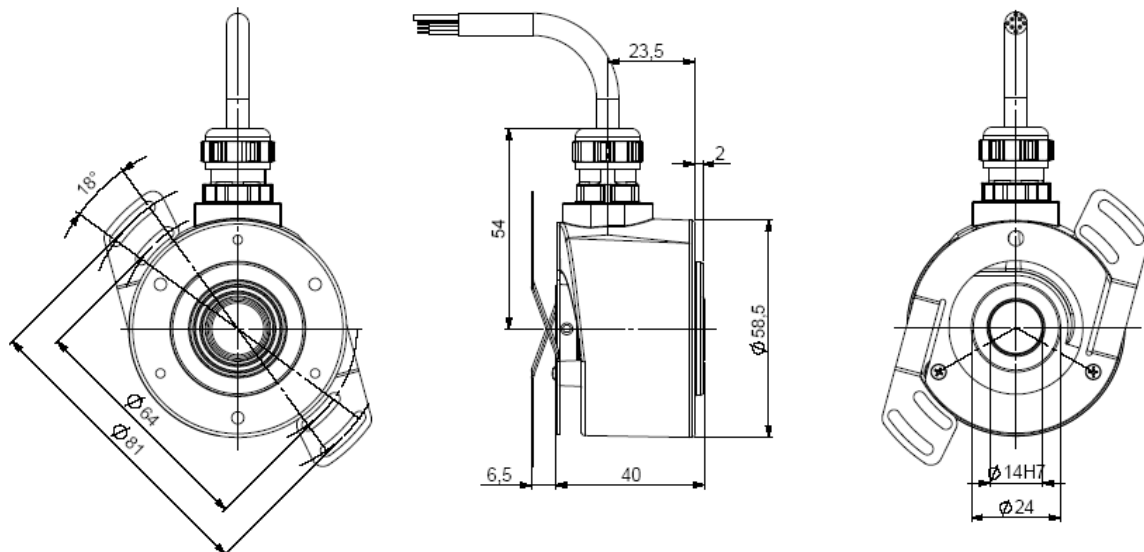
- Through hollow shaft version Ø14mm, with reduction hubs in aluminium of 6, 8, 10 and 12 mm
- Robustness and excellent resistance to shocks / vibrations
- High protection level IP65
- High resolutions possibility, up to 15 bits (Gray or binary)
- Universal electronic circuits from 5 to 30 Vdc
- High performances in temperature -20°C to 90°C (option -40°C to 100°C)
- Standard DIRECTION entry, LATCH option



**CHO5\_14 connection CPR / C1R (radial M23), DAC 9445/015\* mounted on the body**



**CHO5\_14 connection C3R (radial cable), DAC 9445/015\* mounted on the cover**



\* Accessory to be ordered separately

|                        |  |   |   |
|------------------------|--|---|---|
| Material               | Cover : zinc alloy                       | Shocks (EN60068-2-27)   | ≤ 500 m.s <sup>-2</sup> (during 6 ms)     |
|                        | Body: aluminium                          | Vibrations (EN60068-2-6)  | ≤ 100 m.s <sup>-2</sup> (10 ... 2 000 Hz) |
|                        | Shaft : stainless steel                  | EMC   | EN 61000-6-4, EN 61000-6-2                |
| Bearings               | 6 803 serie                              | Isolation   | 1 000 V eff                               |
| Maximum loads          | Axial : 20 N                             | Encoder weight (approx.)  | 0,270 kg                                  |
|                        | Radial : 50 N                            | Operating temperature   | - 20 ... + 90°C (Encoder T°)              |
| Shaft inertia          | ≤ 2,2.10 <sup>-6</sup> kg.m <sup>2</sup> | Storage temperature   | - 40... + 100°C                           |
| Torque                 | ≤ 6.10 <sup>-3</sup> N.m                 | Protection(EN 60529)  | IP 65                                     |
| Permissible max. speed | 9 000 min <sup>-1</sup>                  | Torque (ring pressure screw)  | nominal: 1.5 N.m, break: 2.0 N.m          |
| Continuous max. speed  | 6 000 min <sup>-1</sup>                  | Theoretical mechanical lifetime 10 <sup>9</sup> turns (F <sub>axial</sub> / F <sub>radial</sub> ) |   |
| Shaft seal             | Viton                                    | 10N / 25N : 230   | 20N / 50N : 29                            |

## PARALLEL SINGLE TURN ABSOLUTE ENCODER, CHO5 RANGE

### CONNECTION

|    | color                 | 13 bits +<br>DIRECTION<br>CP or C3 | 14 bits +<br>DIRECTION<br>C1 |
|----|-----------------------|------------------------------------|------------------------------|
| 1  | white<br>WH           | 0V                                 | 0V                           |
| 2  | brown<br>BN           | +Vcc                               | +Vcc                         |
| 3  | green<br>GN           | D0                                 | D0                           |
| 4  | yellow<br>YE          | D1                                 | D1                           |
| 5  | grey<br>GY            | D2                                 | D2                           |
| 6  | pink<br>PK            | D3                                 | D3                           |
| 7  | blue<br>BU            | D4                                 | D4                           |
| 8  | red<br>RD             | D5                                 | D5                           |
| 9  | black<br>BK           | D6                                 | D6                           |
| 10 | violet<br>VT          | D7                                 | D7                           |
| 11 | white/brown<br>WH/BN  | D8                                 | D8                           |
| 12 | white/green<br>WH/GN  | D9                                 | D9                           |
| 13 | white/yellow<br>WH/YE | D10                                | D10                          |
| 14 | white/grey<br>WH/GY   | D11                                | D11                          |
| 15 | white/pink<br>WH/PK   | D12                                | D12                          |
| 16 | white/blue<br>WH/BU   | DIRECTION                          | D13                          |
| 17 | White/red<br>WH/RD    | /                                  | DIRECTION                    |

Example, 10 bits encoder : only MSB will be supplied (D3 to D12)

**ORDERING REFERENCE** (Contact the factory for special versions, ex: special flanges, connections, electronics...)

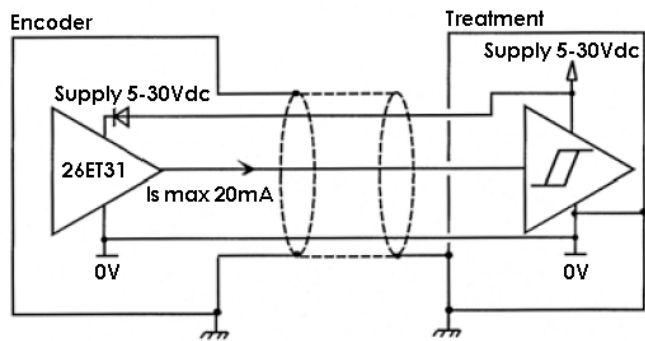
|                                      | Shaft Ø  | Supply            | Output stage                    | Code                           | Resolution   | Connection                              | Orientation                            |
|--------------------------------------|--|-------------------|---------------------------------|--------------------------------|--|---|--|
| CHO5                                 | 14 :<br>14mm<br><br>Shaft<br>reduction<br>hubs<br>available up<br>to 6mm | P :<br>5 to 30Vdc | C5 :<br>push pull<br>5 to 30Vdc | B:<br>Binary<br><br>G:<br>Gray | Power of 2:<br><br>1: 1 bit<br>to<br>14: 14 bits<br><br>Max: 15 bits<br>Consult us | CP : M23 16 pins<br>13 bits + direction | R : radial                             |
|                                      |  |                   |                                 |                                |  | C1 : M23 17 pins<br>14 bits + direction |  |
|                                      |  |                   |                                 |                                |  | C3 : cable gland + 16<br>wires cable    | Example :<br>R020 : radial<br>cable 2m |
| CHO5 _ 14 // P C5 G // 13 // C3 R020 |  |                   |                                 |                                |  |   |  |

### Monitoring function available as option :

- of the code coherence
- of the LED internal regulated current loop
- of temperature range with 2 limits

Consult us

### ELECTRONIC



Power supply : 5 to 30Vdc  
Consumption without load : 100mA max  
Current output per channel : Is=20mA max  
Level "0" (Is=20mA) max : V<sub>ol</sub> = 0,5Vdc  
Level "1" (Is=20mA) min : V<sub>oh</sub> = Vcc-2,5Vdc

Protection against short circuits and inversion of polarity

### DIRECTION

CW increasing code: DIRECTION pin to +Vcc  
CCW increasing code : DIRECTION pin to 0Vdc

### LATCH (option)

Active data on the outputs : LATCH pin to 0V  
Frozen data on the outputs: LATCH pin to +Vcc

Consult us for the connection of an encoder with this option

Made in FRANCE