

## BISS ABSOLUTE SINGLE TURN ENCODERS, CHO5 RANGE

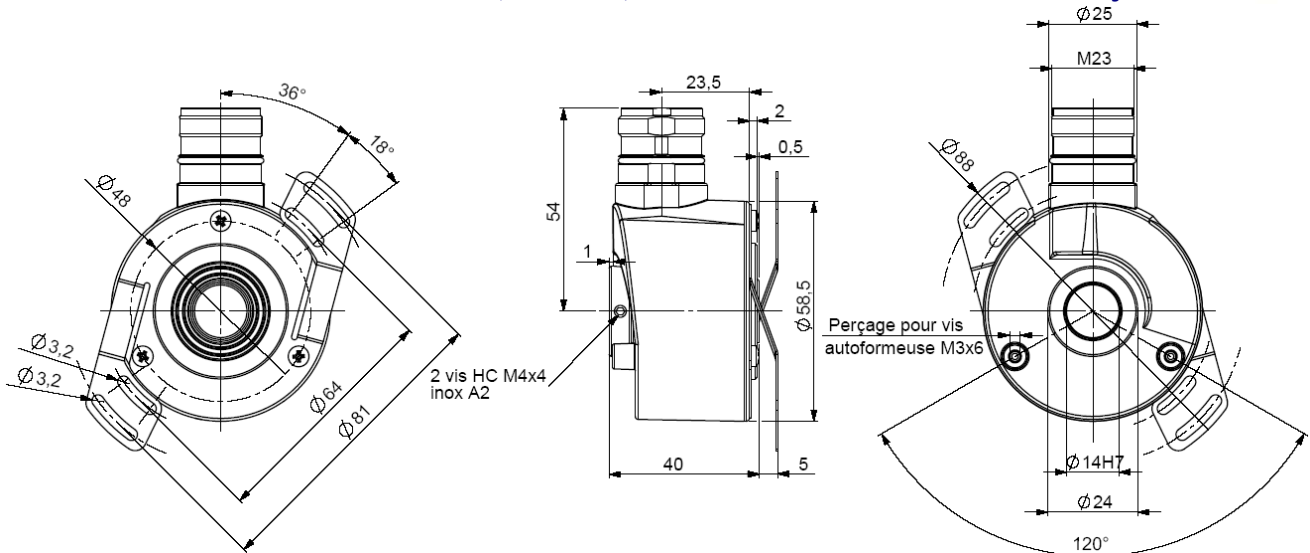
CHO5 the new generation of absolute single turn encoders :

- Robustness and excellent resistance to shocks / vibrations
- High protection level IP65
- High resolutions, up to 16 bits (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 entry, RESET option
- Digital or sine incremental outputs option

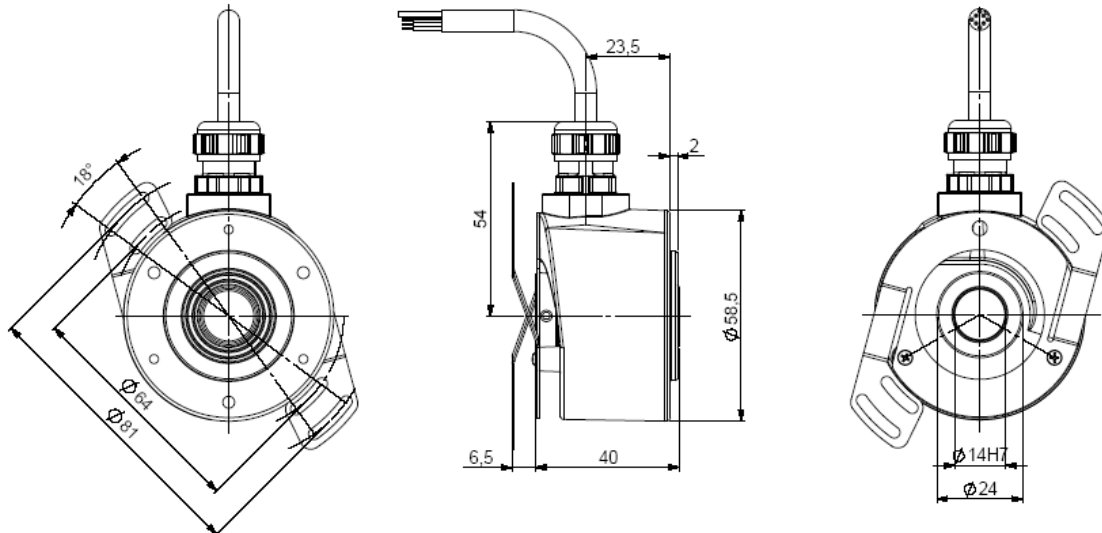
**BISS**  
INTERFACE



**CHO5\_14 connection C5R (radial M23), with DAC 9445/015 mounted on the body**



**CHO5\_14 connection C6R (radial cable), with DAC 9445/015 mounted on the cover**

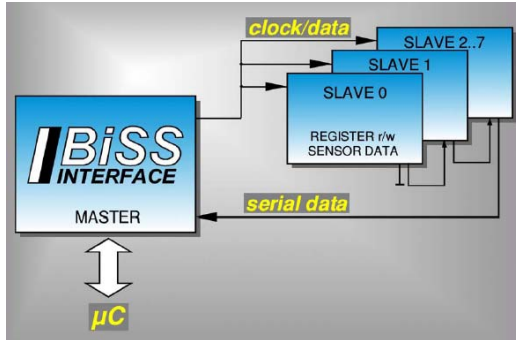


|                        |   |   |   |
|------------------------|---|---|---|
| Material               | Cover : zinc alloy                      | Shock (EN60068-2-27)  | $\leq 500 \text{ m.s}^{-2}$ (durant 6 ms)               |
|                        | Body: aluminium                         | Vibration (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               | 6 803 serie                             | Isolation   | 1 000 Veff  |
| Maximal load           | Axial : 20 N                            | Weight (connector)  | 0,270 kg  |
|                        | Radial : 50 N                           | Operating temperature   | - 20 ... $90^{\circ}\text{C}$ (encoder T <sup>o</sup> ) |
| Shaft inertia moment   | $\leq 2,2 \cdot 10^{-6} \text{ kg.m}^2$ | Storage temperature   | - 40... + $100^{\circ}\text{C}$                         |
| Torque                 | $\leq 6 \cdot 10^{-3} \text{ N.m}$      | Protection (EN 60529)   | IP 65   |
| Permissible max. speed | $9\,000 \text{ min}^{-1}$               | Torque (ring pressure screw)  | nominal: 1.5N.m, break: 2.0N.m                          |
| Continuous max. speed  | $6\,000 \text{ min}^{-1}$               | Theoretical mechanical lifetime $10^9$ turns ( $F_{axial} / F_{radial}$ ) |   |
| Shaft seal             | Viton                                   | 10 N / 25 N : 230   | 25 N / 50 N : 29  |

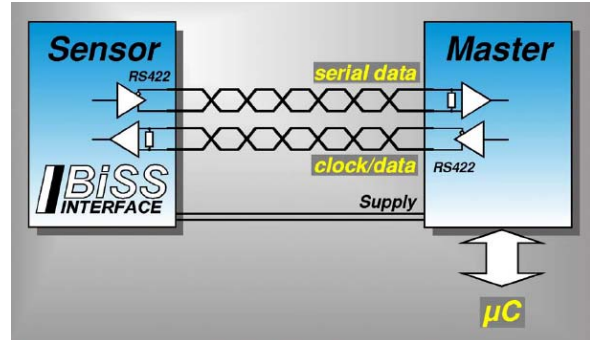
## BISS ABSOLUTE SINGLE TURN ENCODERS, CHO5 RANGE



- Bi-directional
- Synchronous-serial communication
- Short cycle times
- Up to 8 slaves with one master
- Multicycle data transmission



The BiSS Interface master-slave concept supports up to 8 data sources in one or more devices



BiSS Interface wiring with unidirectional lines (one sensor with several slave levels, for example)

|                          |   |  |
|--------------------------|---|--|
| Power supply Vcc         | 5 to 30Vdc (polarity protected)   |  |
| Consumption without load | Max 100mA   |  |
| Introduction             | <1s   |  |
| Inputs                   | DIRECTION and RESET option  |  |
| Outputs                  | Level high $\geq 2,5V$ (for I=20mA)<br>Load high $\leq -20mA$<br>BiSS: RS-422 | Level low $\leq 0,5Vdc$ (for I=20mA)<br>Load low $\leq 20mA$ |

For more information: [www.biss-interface.com](http://www.biss-interface.com)

### BISS STANDARD CONNECTION

| Type | Vcc        | 0V         | Clk+       | Data+     | Data-     | Clk-        | DIRECTION |
|------|------------|------------|------------|-----------|-----------|-------------|-----------|
| C6   | 1          | 2          | 3          | 4         | 6         | 7           | 9         |
| C5   | BN - Brown | WH - White | GN - Green | GY - Grey | PK - Pink | YE - Yellow | RD - Red  |
| C8   | 8          | 1          | 3          | 2         | 10        | 11          | 5         |

Direction :

- CW increasing code: DIRECTION to 0V
- CCW increasing code : DIRECTION to +Vcc

### 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>Reduction hubs available | P :<br>5 to 30Vdc | CB :<br>BiSS electronic | B:<br>Binary<br><br>G:<br>Gray | power of 2<br><br>13 : 13 bits to<br>16 : 16 bits | C6 : M23 12pins CW for SSI transmission<br>C8 : M23 12pins CW for SSI transmission | R : radial                             |
|        |  |                   |                         |                                |   | C5 : SSI cable, cable gland output   | Example :<br>R020 : radial cable of 2m |
| CHO5 _ | 14 //  | P                 | CB                      | G //                           | 13 //   | C5   | R050                                   |

#### Monitoring function available in option :

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

#### Input / output available in option:

- RESET input
- ERROR output for monitoring functions
- Sine & Cosine outputs without index, 2048ppr (option : 4096 ppr)
- A & B incremental outputs without index, 2048ppr (option : 4096 ppr)

Consult us