

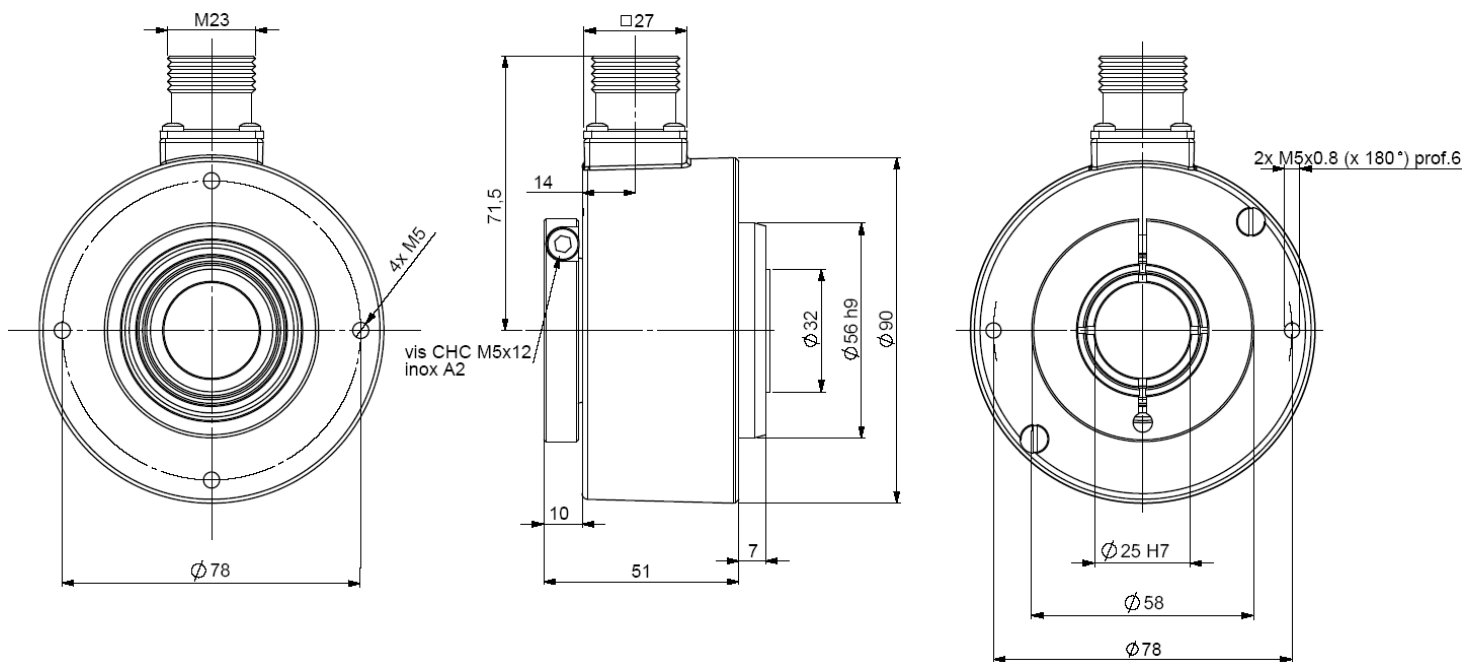
SSI ABSOLUTE SINGLE TURN ENCODERS, CHU9 RANGE

CHU9, 90mm SSI absolute single turn encoders :

- Especially designed for heavy-duty (steel, paper, wood – mills, cranes ...) Compact and robust conception. Excellent resistance to shocks/vibrations and to high axial/radial loads.
- Through hollow shaft 30mm, reduction hubs available from 10 to 28mm
- High protection level IP65.
- High performances in temperature -20°C to 90°C.
- Universal power supply from 5 to 30 Vdc – SSI output.
- High resolutions possibility, up to 16 bits (Gray or binary).
- Standard DIRECTION and RESET input.
- Double/triple mounting in combinations of incremental, absolute, analogue signals.
- Digital or sine incremental outputs option.



CHU9_25 connection S6R (radial M23), with reduction hub 9418/I25 (25mm) mounted on the shaft



MECHANICAL CHARACTERISTICS

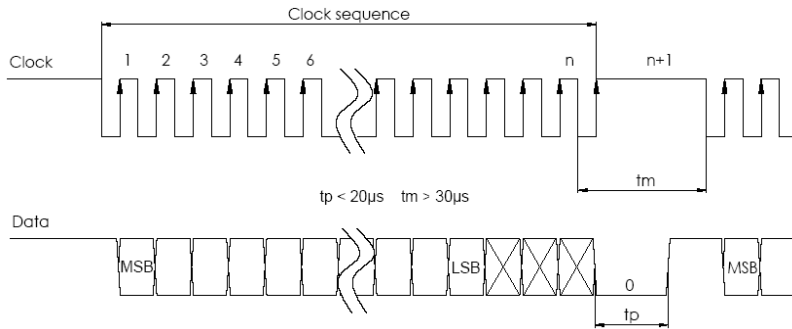
| | | | |
|------------------------|---|---|--|
| Material | Cover : zinc alloy | Vibrations (EN60068.2.6) | ≤ 200m.s ⁻² (10 ... 1 000Hz) |
| Stainless steel option | Body : aluminium | EMC | EN 61000-6-4, EN 61000-6-2 |
| Shaft | Stainless steel | Isolation | 1000 Veff |
| Bearings | 6807 serie | Encoder weight (approx.) | 0,700kg zinc alloy cover, alu body |
| Maximum loads | Axial : 50 N | | 1,000kg zinc alloy cover, stainless steel body |
| | Radial : 80 N | 1,200kg stainless steel cover and body | |
| Shaft inertia | ≤ 55.10 ⁻⁶ kg.m ² | Operating temperature | - 20 ... + 90 °C (encoder T°) |
| Torque | ≤ 25.10 ⁻³ N.m | Storage temperature | - 40 ... + 100 °C |
| Permissible max. speed | 6 000 min ⁻¹ | Protection(EN 60529) | IP 65 |
| Continuous max. speed | 3 600 min ⁻¹ | Torque (ring screw) | nominal: 3N.m, break: 4N.m |
| Shaft seal | Viton | Theoretical mechanical lifetime 10 ⁹ turns (F _{axial} / F _{radial}) | |
| Shocks (EN60068.2.27) | ≤ 500 m.s ⁻² (during 6 ms) | 25 N / 40 N : 140 | 50 N / 80 N : 17 |

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ELECTRICAL CHARACTERISTIC

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

SSI TRANSMISSION



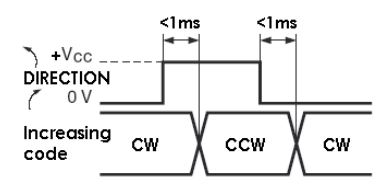
| | |
|--------------|--|
| Transmission | Transmission up to 400m at 100kHz in function of the cable characteristics |
| Cable | High security of transmission by using shielded cable and twisted pairs |

* Consult us for length > 100m

CONNECTION

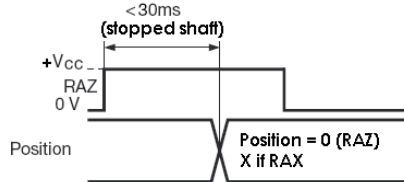
| Type | + Vcc | 0 V | Clk+ | Data+ | RAZ | Data- | Clk- | DIRECTION |
|------|----------------------|----------------------|-------------|------------|------------|------------|-------------|-------------|
| S6 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| S5 | BN/GN Brown/Green | WH/GN White/Green | GN Green | GY Grey | BU Blue | PK Pink | BN Brown | WH White |
| S8 | 8 | 1 | 3 | 2 | 6 | 10 | 11 | 5 |

DIRECTION input



| | min | max | Increasing |
|-------------|-----------------|-----------------|------------|
| Level "0" | 0 V | $0,3x(+V_{CC})$ | CW |
| Level "1" | $0,7x(+V_{CC})$ | $+V_{CC}$ | CCW |
| I direction | $< 5\text{mA}$ | | |

RAZ / RAX input



| | min | max |
|-----------|-----------------|-----------------|
| Level "0" | 0 V | $0,3x(+V_{CC})$ |
| Level "1" | $0,7x(+V_{CC})$ | $+V_{CC}$ |
| I raz/rax | $< 5\text{mA}$ | |

Nota : Do not connect other pinouts, connect DIRECTION and RAZ to a potential (RAZ at 0V if not used).

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

| | Ø shaft | Supply | Output stage | Code | Resolution | Connection | Connection orientation |
|---|-------------------------------------|----------------|-------------------------|------------------------|--|------------------------------|--------------------------|
| CHU9 Cover : zinc Body : alu | 30: 30mm | P : 5 to 30Vdc | CS : SSI without parity | B : binary G : Gray | Power of 2 13: 13 bits standard option: 14: 14 bits to 16: 16 bits | S6 : M23 12 pins CW for SSI | R : radial |
| CBU9 Cover : zinc Body : st. steel | Reduction hubs available 10 to 28mm | | CP : SSI even parity | | | S8 : M23 12 pins CCW for SSI | |
| CXU9 Stainless steel cover & body | | | CI : SSI odd parity | | | S5: cable | Ex: R020 Radial 2 meters |
| CHU9 | 30 // | 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.
- A & B incremental outputs without index, 2048ppr.

Made in FRANCE

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