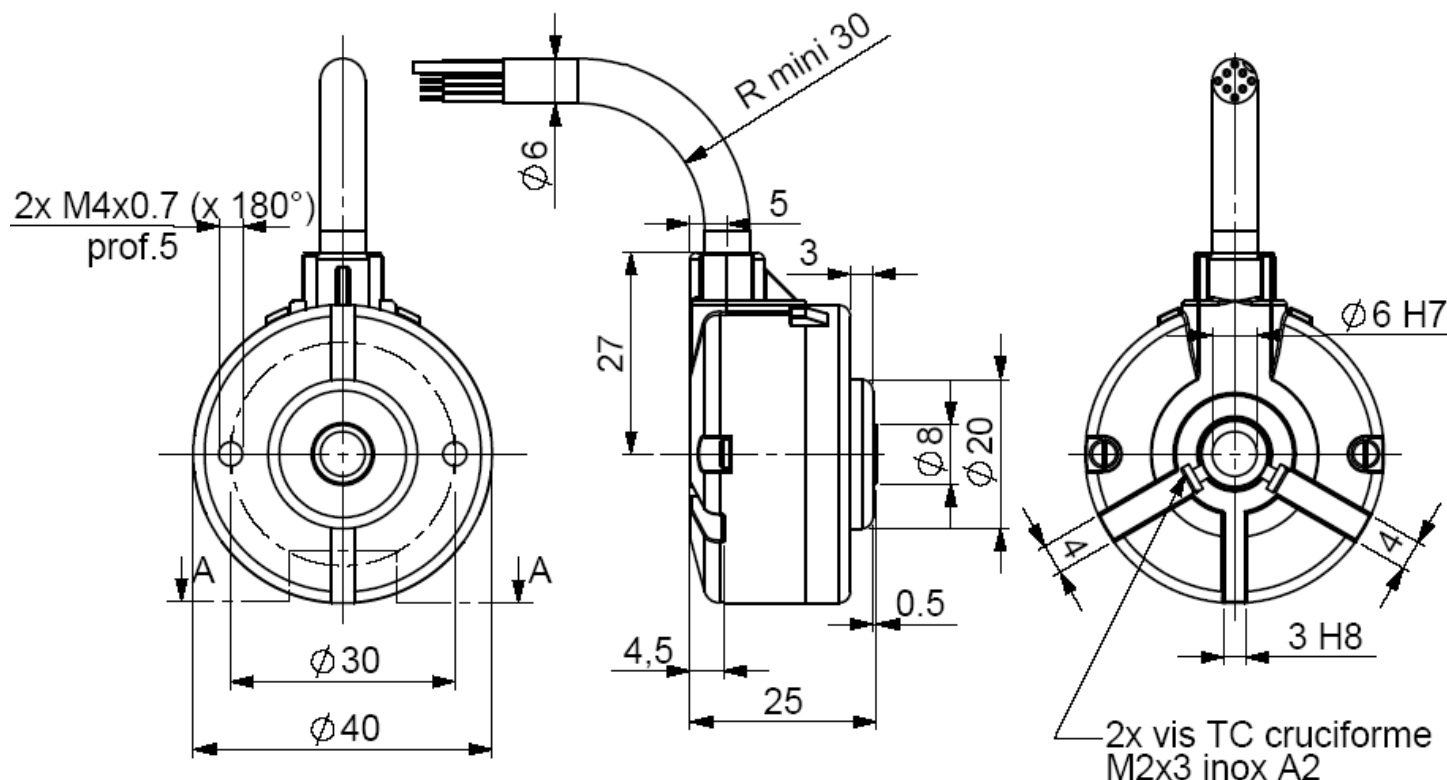


## INCREMENTAL ENCODERS, GZ4 RANGE

- With its 40mm size and a 6mm through shaft, this encoder characterizes itself by its strength and robustness of the mechanical and opto-electronic parts, it's the most compact truly industrial encoder with a through shaft
- Coded discs in synthetic material are used: stable and unbreakable (Polyfuss™, Mylar-Myc a composite)
- Available resolution up to 1 024 counts per turn (GZ4 option, up to 2 500 counts per turn)
- Universal electronics 5 to 24Vdc available
- Application fields: micro-robotics, printing machines, low power DC motors, shears...



### GZ4 connection G3R (radial cable)



## CHARACTERISTICS

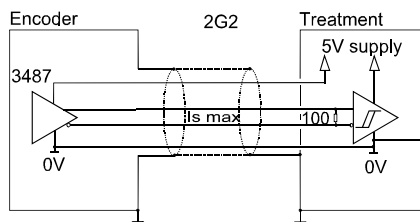
|                          |                                                      |
|--------------------------|------------------------------------------------------|
| Material                 | Axe : aluminium                                      |
|                          | Capot : zamac                                        |
|                          | Embase : zamac                                       |
| Bearings                 | 688 serie                                            |
| Maximum loads            | Axial : 10 N                                         |
|                          | Radial : 20 N                                        |
| Shaft inertia            | $\leq 0,1 \cdot 10^{-6} \text{ kg} \cdot \text{m}^2$ |
| Torque                   | $\leq 2 \cdot 10^{-3} \text{ N} \cdot \text{m}$      |
| Permissible max. speed   | 12 000 min <sup>-1</sup>                             |
| Continuous max. speed    | 9 000 min <sup>-1</sup>                              |
| Encoder weight (approx.) | 0,240 kg                                             |

|                                                                                          |                                                          |
|------------------------------------------------------------------------------------------|----------------------------------------------------------|
| EMC                                                                                      | EN 50082-2 (1995)                                        |
|                                                                                          | EN 50081-1 (1992)                                        |
| Isolation                                                                                | 1 000 Veff                                               |
| Operating temperature                                                                    | - 20 ... + 80 °C (encoder T <sup>°</sup> )               |
| Storage temperature                                                                      | - 40 ... + 80 °C                                         |
| Protection                                                                               | CE 60529 (1989) IP 52                                    |
| Shocks (EN60068-2-27)                                                                    | $\leq 300 \text{ m} \cdot \text{s}^{-2}$ (during 11 ms)  |
| Vibrations (EN60068-2-6)                                                                 | $\leq 100 \text{ m} \cdot \text{s}^{-2}$ (10 ... 500 Hz) |
| Torque (shaft pressure screw)                                                            | Nominal: 0,3 N.m ; break: 0,5 N.m                        |
| Theoretical mechanical life time $10^9$ turns ( $F_{\text{axial}} / F_{\text{radial}}$ ) |                                                          |
| 5 N / 10 N : 260                                                                         | 10 N / 20 N : 33                                         |

## INCREMENTAL ENCODERS, GZ4 RANGE



### OUTPUT ELECTRONIC / POWER SUPPLY



#### 2G2 electronic (100kHz)

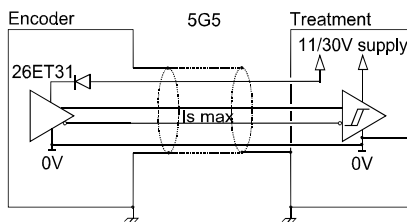
Supply : 5Vdc  $\pm 10\%$

Cons. without load : 100mA max

Current per channel : 40mA max

0 max ( $I_s=20mA$ ) :  $V_{ol}=0,5Vdc$

1 min ( $I_s=20mA$ ) :  $V_{oh}=2,5Vdc$



#### 5G5 electronic (100kHz)

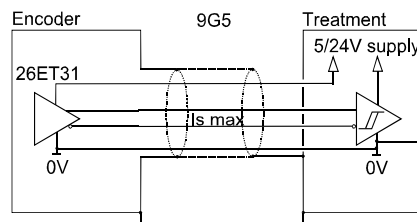
Supply : 11 to 30Vdc

Cons. without load : 75mA max

Current per channel : 40mA max

0 max ( $I_s=20mA$ ) :  $V_{ol}=0,5Vdc$

1 min ( $I_s=20mA$ ) :  $V_{oh}=V_{cc}-3Vdc$



#### 9G5 electronic (100kHz)

Supply : 5 to 24Vdc

Cons. without load : 75mA max

Current per channel : 40mA max

0 max ( $I_s=20mA$ ) :  $V_{ol}=0,5Vdc$

1 min ( $I_s=20mA$ ) :  $V_{oh}=V_{cc}-3Vdc$

Protection against short circuits of the electronics : 5G5 and 9G5

Protection against inversion of polarity for the electronics : 5G5

### STANDARD CONNECTION

|    |                                | -           | +           | A           | B            | 0          | A/         | B/         | 0/        | Ground            |
|----|--------------------------------|-------------|-------------|-------------|--------------|------------|------------|------------|-----------|-------------------|
| G3 | PVC cable,<br>8 wires 8230/020 | WH<br>white | BN<br>brown | GN<br>green | YE<br>yellow | GY<br>grey | PK<br>pink | BU<br>blue | RD<br>red | Connector<br>body |

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

|         | Shaft Ø                  | Available electronics |                 | Output signals                            | Resolution                                          | Connectique               | Connection orientation                   |
|---------|--------------------------|-----------------------|-----------------|-------------------------------------------|-----------------------------------------------------|---------------------------|------------------------------------------|
| GZ4     | 06 : 6mm                 | 2G2, 5G5, 9G5         |                 | 9: A, A', B, B', 0, 0/<br>(0 gated A & B) | 1 024<br>max<br><br>Nota :<br>2500 with<br>the GHT4 | G3 : PVC<br>cable 8 wires | Example :<br><br>R20: radial<br>cable 2m |
|         | 04: 4mm<br>(option)      | Supply                | Output stage    | A: A, A', B, B', 0, 0/<br>(0 gated A)     |                                                     |                           |                                          |
|         | 14 : 6.35 mm<br>(option) | 2 : 5Vdc              | G2 : 5Vdc RS422 | N: A, A', B, B', 0, 0/<br>(0 ungated)     |                                                     |                           |                                          |
|         |                          | 5 : 11 to 30Vdc       | G5 : push-pull  |                                           |                                                     |                           |                                          |
|         |                          | 9 : 5 to 24Vdc        |                 |                                           |                                                     |                           |                                          |
| Ex: GZ4 | 06 //                    | 5                     | G5              | 9 //                                      | 1 024 //                                            | G3                        | R20                                      |

**Available resolutions :** 1 2 4 5 8 10 16 20 24 25 27 30 36 40 50 60 64 90 100 120 125 128 144 150  
170 180 200 250 300 360 400 500 512 600 720 800 1000 1024

Made in France