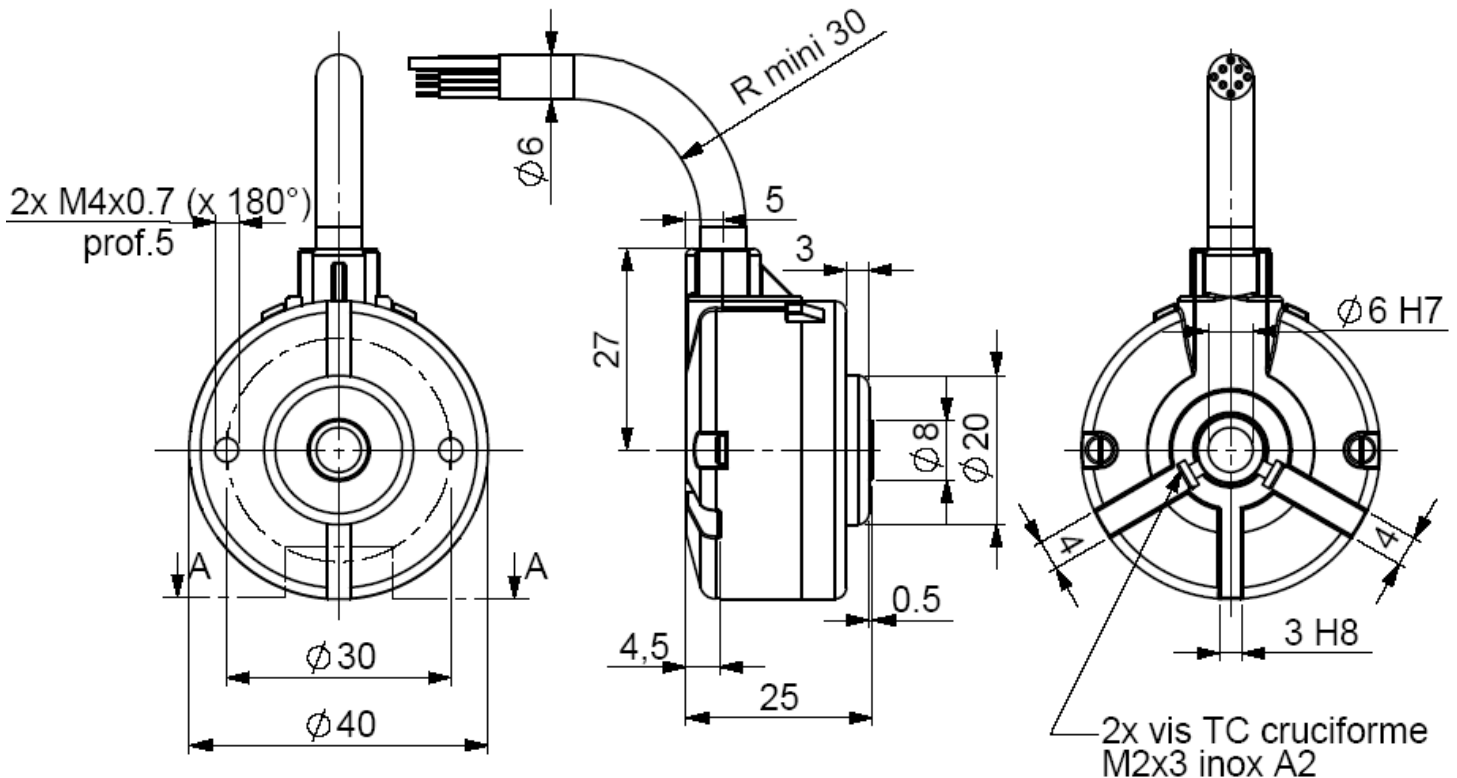


## INCREMENTAL ENCODERS, GZ4 RANGE

- 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 (Polyfass™, Mylar-Myc a composite)
- Available resolution up to 1 024 counts per tum (GZ4 option, up to 2 500 counts per tum)
- Universal electronics 5 to 24Vdc available
- Application fields: micro-robotics, printing machines, low power DC motors, shears...



### GZ4 connection G3R (radial cable)



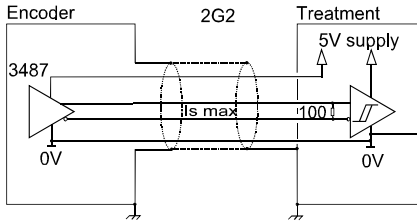
## CHARACTERISTICS

|                          |  |  |   |
|--------------------------|--|--|---|
| Material                 | Axe : aluminium                                      | EMC  | EN 50082-2 (1995)                                     |
|                          | Capot : zamac  |  | EN 50081-1 (1992)                                     |
|                          | Embase : zamac                                       | Isolation  | 1 000 Veff  |
| Bearings                 | 688 serie  | Operating temperature  | - 20 ... + 80 °C (encoder™)                           |
| Maximum loads            | Axial : 10 N   | Storage temperature  | - 40 ... + 80 °C                                      |
|                          | Radial : 20 N  | Protection CEM60529 (1989)   | IP 52   |
| Shaft inertia            | $\leq 0,1 \cdot 10^{-6} \text{ kg} \cdot \text{m}^2$ | Shocks (EN60068-2-27)  | $\leq 300 \text{ m} \cdot \text{s}^2$ (during 11 ms)  |
| Torque                   | $\leq 2 \cdot 10^{-3} \text{ N} \cdot \text{m}$      | Vibrations (EN60068-2-6)   | $\leq 100 \text{ m} \cdot \text{s}^2$ (10 ... 500 Hz) |
| Permissible max. speed   | 12 000 $\text{min}^{-1}$                             | Torque (shaft pressure screw)  | Nominal: 0,3N.m ; break: 0,5N.m                       |
| Continuous max. speed    | 9 000 $\text{min}^{-1}$                              | Theoretic al mecha nical life time $10^9$ turns ( $F_{axial} / F_{radial}$ ) |   |
| Encoder weight (approx.) | 0,240 kg   | 5 N / 10 N : 260   | 10 N / 20 N : 33                                      |

## INCREMENTAL ENCODERS, GZM RANGE



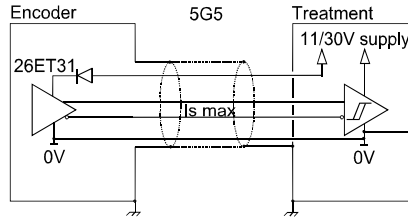
### OUTPUT ELECTRONIC / POWER SUPPLY



#### 2G2 electronic (100kHz)

Supply : 5Vdc ± 10%

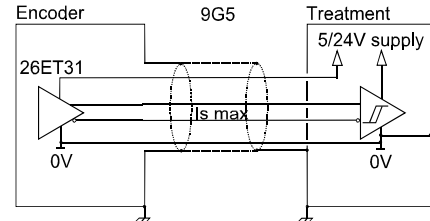
Cons. without load : 100mA max  
Current per channel : 40mA max  
0 max (I<sub>s</sub>=20mA) : V<sub>ol</sub> = 0,5Vdc  
1 min (I<sub>s</sub>=20mA) : V<sub>oh</sub> = 2,5Vdc



#### 5G5 electronic (100kHz)

Supply : 11 to 30Vdc

Cons. without load : 75mA max  
Current per channel : 40mA max  
0 max (I<sub>s</sub>=20mA) : V<sub>ol</sub> = 0,5Vdc  
1 min (I<sub>s</sub>=20mA) : V<sub>oh</sub> = V<sub>cc</sub> - 3Vdc



#### 9G5 electronic (100kHz)

Supply : 5 to 24Vdc

Cons. without load : 75mA max  
Current per channel : 40mA max  
0 max (I<sub>s</sub>=20mA) : V<sub>ol</sub> = 0,5Vdc  
1 min (I<sub>s</sub>=20mA) : V<sub>oh</sub> = V<sub>cc</sub> - 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, 8 wires 8230/020 | WH white | BN brown | GN green | YE yellow | GY grey | PK pink | BU blue | RD red | Connector body |

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

|         | Shaft Ø              | Available electronics |                 | Output signals                 | Resolution                            | Connectique            | Connection orientation             |
|---------|----------------------|-----------------------|-----------------|--------------------------------|---------------------------------------|------------------------|------------------------------------|
| GZM     | 06 : 6mm             | 2G2, 5G5, 9G5         |                 | 9:A,A',B,B',0/ (0 gated A & B) | 1 024 max<br>Nota : 2500 with the GHM | G3 : PVC cable 8 wires | Example :<br>R020: radial cable 2m |
|         | 04: 4mm (option)     | Supply                | Output stage    | A:A',B,B',0/ (0 gated A)       |                                       |                        |                                    |
|         | 4 : 6.35 mm (option) | 2 : 5Vdc              | G2 : 5Vdc RS422 | N:A,A',B,B',0/ (0 ungated)     |                                       |                        |                                    |
|         |                      | 5 : 11 to 30Vdc       | G5 : push-pull  |                                |                                       |                        |                                    |
|         |                      | 9 : 5 to 24Vdc        |                 |                                |                                       |                        |                                    |
| Ex: GZM | 06 //                | 5                     | G5              | 9 //                           | 1 024 //                              | G3                     | R020                               |

**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

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