

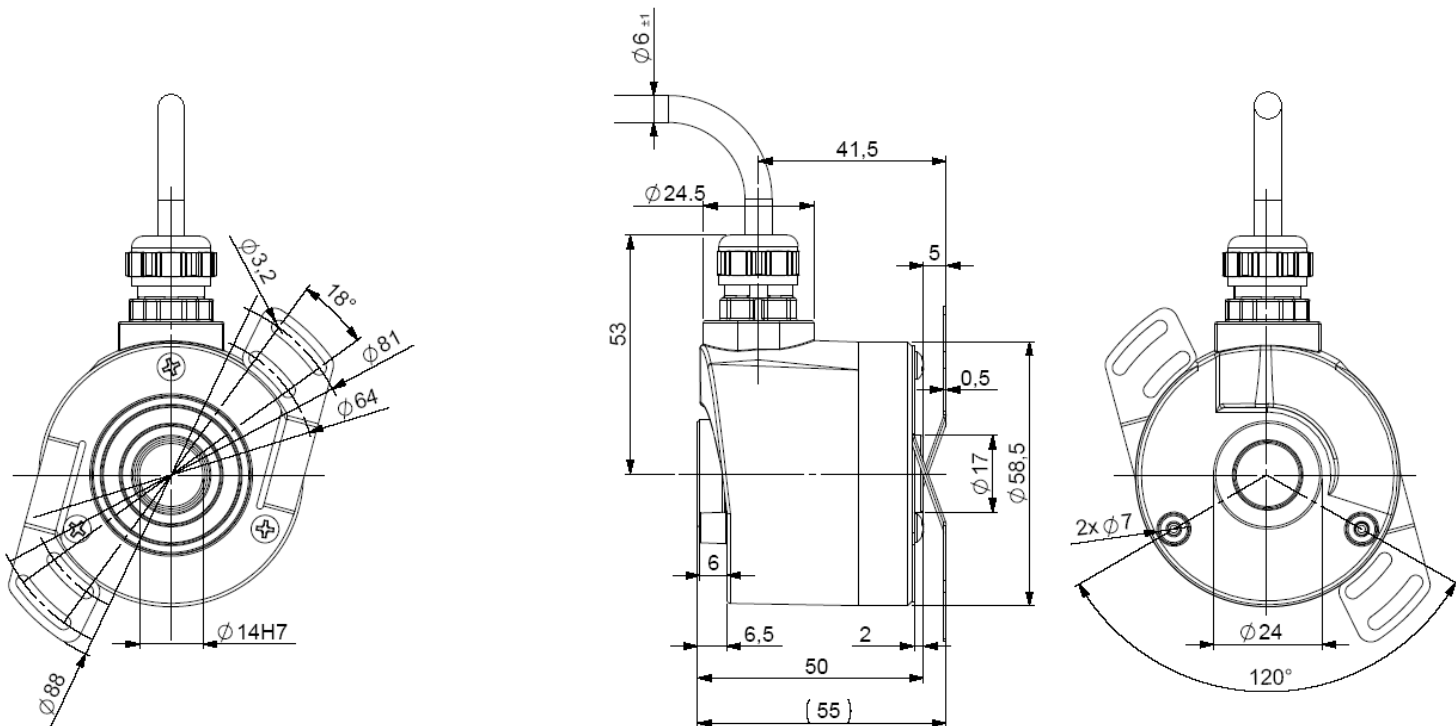
## INCREMENTAL ENCODERS, GHT5\_1 RANGE

GHT5S14 encoders are specially designed for motorist application – heavy industry

- Ø14mm through shaft
- Easy mounting with DAC (Anti Coupling Device)
- Robustness and good resistance to shocks and vibrations
- High protection level IP65
- Resolution up to 2 500 ppr
- Universal electronic circuits 5V RS 422 and Push Pull 11 to 30Vdc



**GHT5\_14 connection G3R (cable output), DAC 9445/015\* mounted on the bearing housing**



\* to be order separately

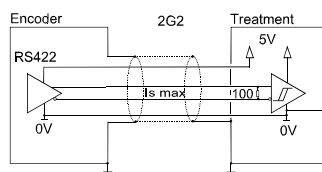
58mm GHT5S14 encoders are designed to accept shaft sizes up to 14mm and can be mounted without fixation flange. Immobilization is achieved by a controlled deformation "DAC" with 2 fixation points (ref : M9445/015, accessory to be order separately) which allows an axial misalignment ( $\pm 2\text{mm}$ ), angular ( $\pm 3^\circ$ ) and radial ( $\pm 0,2\text{ mm}$ ). The "DAC" also allows for  $\pm 10^\circ$  of rotational adjustment for the alignment of the marker pulse, with the two "DAC" oblong holes at  $180^\circ$ . The final mounting is realised with 2 CHC M3 screws

### CHARACTERISTICS

|                          |                                        |                                                                                                   |                   |                                            |  |
|--------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------|--|
| Material                 | Cover : zamac                          | Shock (EN60068-2-27)                                                                              |                   | < 500 m.s <sup>-2</sup> (during 6ms)       |  |
|                          | Body: aluminium                        | Vibration (EN60068-2-6)                                                                           |                   | < 100 m.s <sup>-2</sup> (55Hz ... 2 000Hz) |  |
|                          | Shaft : stainless steel                | EMC                                                                                               |                   | EN 61000-6-4, EN 61000-6-2                 |  |
| Ball bearings            | 6003 serie                             | Isolation voltage                                                                                 |                   | 1 000 V eff                                |  |
| Maximal loads            | Axial : 50 N                           | Weight                                                                                            |                   | 0,450 kg                                   |  |
|                          | Radial : 100 N                         | Operating temperature                                                                             |                   | - 20... + 80°C (encoder T°)                |  |
| Shaft inertia            | ≤ 5.10 <sup>-6</sup> kg.m <sup>2</sup> | Storage temperature                                                                               |                   | - 30... + 80°C                             |  |
| Torque                   | ≤ 15 .10 <sup>-3</sup> N.m             | Protection (EN 60529)                                                                             |                   | IP 65                                      |  |
| Max. speed (permissible) | 9 000 min <sup>-1</sup>                | Torque (pressure screw ring)                                                                      |                   | nominal: 1,5N.m, breaking: 2N.m            |  |
| Max. speed (continuous)  | 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                                  | 25 N / 50 N : 228                                                                                 | 50 N / 100 N : 28 | 75 N / 150 N : 8                           |  |

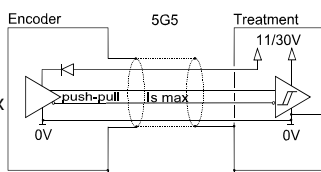
## INCREMENTAL ENCODERS, GHT5\_1 RANGE

### DIGITAL OUTPUT SIGNALS (SQUARE WAVE SIGNALS)



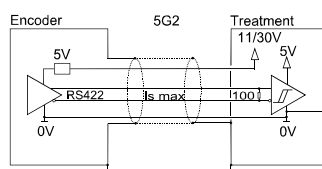
#### 2G2 electronic

Supply : 5Vdc  $\pm 10\%$   
Cons. without load : 75mA max  
Current per channel : 40mA max  
0 max ( $I_s=20mA$ ) :  $V_{ol} = 0,5Vdc$   
1 min ( $I_s=20mA$ ) :  $V_{oh} = 2,5Vdc$



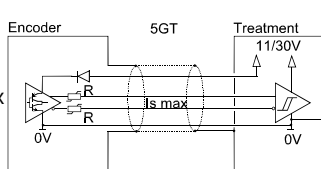
#### 5G5 electronic

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



#### 5G2 electronic

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



#### 5GT electronic

Supply : 11 to 30Vdc  
Cons. without load : 75mA max  
Current per channel : 40mA max  
0 max ( $I_s=20mA$ ) :  $V_{ol} = 1,5Vdc$   
1 min ( $I_s=20mA$ ) :  $V_{oh} = V_{cc}-2,5Vdc$

The 5GT electronic can drive long length of cables (consult us)

Protection against short circuits of the electronics: 5G5, 5GT

Protection against reverse polarity for all the electronics except 2G2

### STANDARD CONNECTION

|    |                             | -                              | +                             | A        | B         | 0       | A/      | B/       | 0/       | Ground            |
|----|-----------------------------|--------------------------------|-------------------------------|----------|-----------|---------|---------|----------|----------|-------------------|
| G6 | 12 pins CW                  | 1                              | 2                             | 3        | 4         | 5       | 6       | 7        | 8        | Connector Body    |
| G8 | 12 pins CCW                 | 10 + 11                        | 2 + 12                        | 8        | 5         | 3       | 1       | 6        | 4        | Connector Body    |
| G3 | PVC cable 8 wires 8230/020  | WH white                       | BN brown                      | GN green | YE yellow | GY grey | PK pink | BU blue  | RD red   | General shielding |
| GP | PUR cable 12 wires 8230/050 | WH white + WH/GN white / green | BU blue + BN/GN brown / green | GY grey  | BN brown  | RD red  | PK pink | GN green | BK black | General shielding |

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

|          | Shaft Ø   | Digital signals                                 |                                                                                                  |                                                                                                                  |              | Connection                                                                                                    | Orientation |    |    |      |
|----------|-----------|-------------------------------------------------|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------|-------------|----|----|------|
| GHT5     | 14 : 14mm | Electronics : 2G2, PG5, RG2 , 5GT               |                                                                                                  | Ouput signals                                                                                                    | resolution   | G6: M23 12 pins CW<br>G5 : M23 12 pins CW<br>G8 : M23 12 pins CCW<br>G2 : DIN 5 pinouts<br>GD: DIN 8 pinoutss | R : radial  |    |    |      |
|          |           | Supply                                          | Output stages                                                                                    | 9 : A,A/B,B/0,0/<br>(0 gated A & B)<br><br>A : A,A/B,B/0,0/<br>(0 gated A)<br><br>N: A,A/B,B/0,0/<br>(0 gated B) | 2 500<br>max |                                                                                                               |             |    |    |      |
|          |           | 2 : 5Vdc<br><br>5 : 11 to 30Vdc                 | G2: 5Vdc driver RS422<br><br>G5: push-pull 11-30Vdc<br><br>GT: push-pull 11-30Vdc transistorised |                                                                                                                  |              |                                                                                                               |             |    |    |      |
|          |           | G3 : cable PVC 8 fils<br>GP : cable PUR 12 fils | Exemple :<br>R020 : radial cable 2m                                                              |                                                                                                                  |              |                                                                                                               |             |    |    |      |
| Ex:GHT5_ | 14        | //                                              | 5                                                                                                | G5                                                                                                               | 9            | //                                                                                                            | 1 024       | // | G3 | R020 |

**Available resolutions :** 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 19 20 21 23 24 25 26 27 28 29 30 32 33 34 35 36 37 38 40 41 42 43 44 45 48 49 50 52 53 54 55 56 57 58 60 61 62 63 64 66 67 68 69 70 71 72 73 75 78 80 81 84 85 86 87 90 91 92 94 95 96 97 99 100 104 108 109 110 113 114 119 120 122 125 127 128 129 130 131 132 140 147 150 152 155 157 160 167 168 170 176 179 180 182 183 185 188 190 191 192 194 196 200 205 208 209 215 216 217 220 223 226 230 236 240 243 245 246 248 250 251 254 255 256 260 264 273 280 284 285 290 292 300 305 310 314 318 320 325 330 331 333 334 335 340 343 350 355 360 364 367 370 375 380 381 385 392 393 397 400 408 410 420 427 430 450 452 455 470 471 475 480 489 500 512 515 516 520 521 530 534 545 560 565 572 580 600 620 625 628 635 660 672 675 700 712 720 722 730 745 750 754 762 768 785 792 800 819 840 850 864 880 889 895 900 914 927 942 960 1000 1016 1024 1100 1125 1131 1143 1147 1152 1200 1225 1250 1270 1280 1300 1440 1500 1524 1600 1680 1700 1750 1800 1872 1885 1895 1920 2000 2048 2064 2100 2160 2250 2256 2400 2480 2500

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