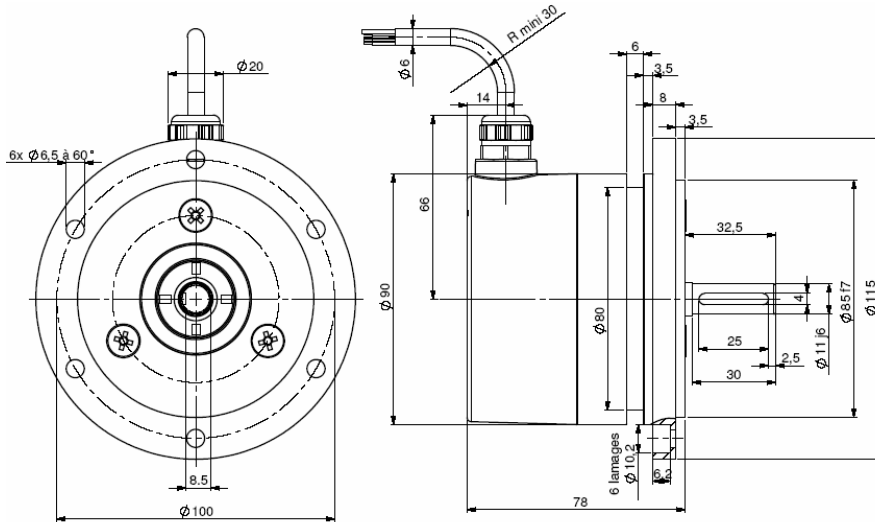


INCREMENTAL ENCODERS, DHM9 RANGE 100°C

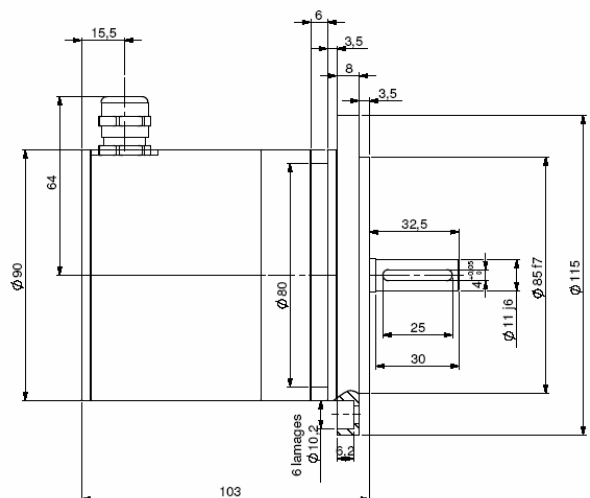
- Especially designed for heavy-duty (steel, paper, wood – mills, cranes ...) Compact and robust conception. Excellent resistance to shocks/vibrations and to extreme axial/radial loads
- High performances in temperature -30°C to 100°C (option -40°C)
- High protection level: IP 67 (cable), IP 66 (connector)
- Universal electronic circuits from 5 to 30 Vdc (option 5 to 36Vdc)
- High resolutions: up to 80 000 cpt (Programmable resolutions option)
- Connection with terminal box, cable or connector output
- Square or sine wave available
- Mechanical overspeed switch option
- 12mm solid shaft or 11mm with REO 115mm flange (Euroflange B10) for tachogenerator mounting



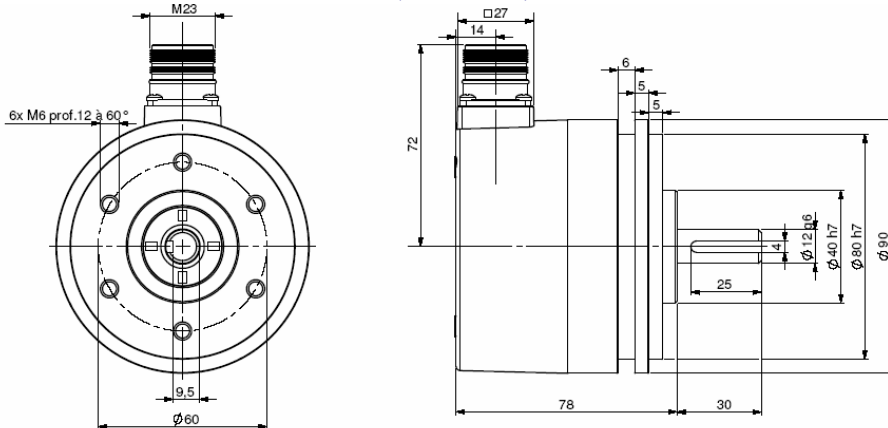
DHM9_11 connection G3R (radial cable)



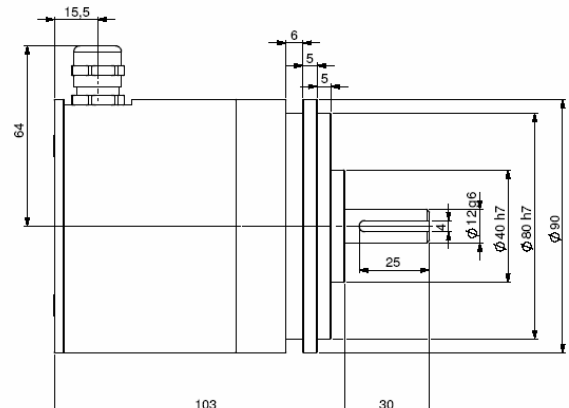
DHM9_11 connection GBR (terminal box)



DHM9_12 connection G6R (radial M23)



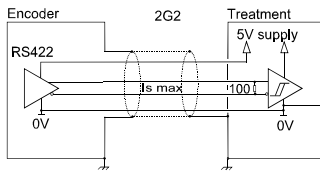
DHM9_12 connection GBR (terminal box)



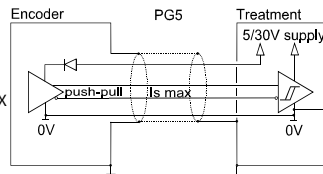
| | | | |
|---|---|---|--------------------------------------|
| Material (cable or connector version), Stainless steel option | Cover : zinc alloy | Shocks (EN60068-2-27) | ≤ 500 m.s ⁻² (during 6ms) |
| | Body : aluminium | | Vibrations (EN60068-2-6) |
| Material (terminal box version), Stainless steel option | Cover: treated alu. | EMC | EN 61000-6-4, EN 61000-6-2 |
| | Body: aluminium | Isolation | 1 000 V eff |
| Shaft material | Stainless steel | Encoder weight (approx.) | 1,100kg zinc alloy cover, alu. body |
| Bearings | 6001 serie | Cable or connector version | 2,600kg stainless steel cover & body |
| Maximal loads | Axial : 100 N | Encoder weight (approx.) | 1,300kg aluminium cover & body |
| | Radial : 200 N | Terminal box version | 2,800kg stainless steel cover & body |
| Shaft inertia | ≤ 15.10 ⁻⁶ kg.m ² | Operating temperature | - 30 ... + 100 °C (encoder T°) |
| Torque | ≤ 10.10 ⁻³ N.m | Storage temperature | - 40 ... + 100 °C |
| Permissible max. speed | 9 000 min ⁻¹ | Protection(EN 60529) | IP 67 (cable), IP 66 (connector) |
| Continuous max. speed | 6 000 min ⁻¹ | Theoretical mechanical lifetime 10 ⁹ turns (F _{axial} / F _{radial}) | |
| Shaft seal | Viton double lips | 20 N / 30 N : 360 | 50 N / 100 N : 18 |
| | | | 100 N / 200 N : 2,2 |

INCREMENTAL ENCODERS, DHM9 RANGE 100°C

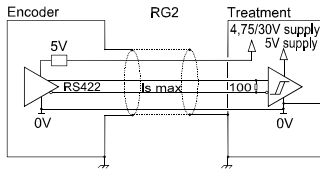
DIGITAL OUTPUT SIGNALS (SQUARE WAVE SIGNALS)



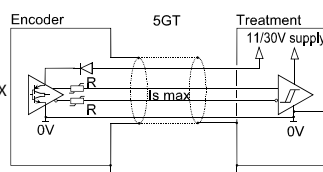
Electronic 2G2 (100°C, 300kHz)
Supply : 5Vdc ± 10%
Cons. without load : 75mA max
Current per channel : 40mA max
0 max (I_s=20mA) : V_{ol} = 0,5Vdc
1 min (I_s=20mA) : V_{oh} = 4Vdc



Electronic PG5 (100°C, 300kHz)
Supply : 5 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}-2,5Vdc

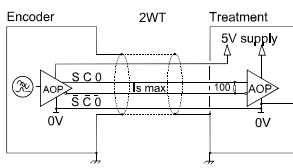


Electronic RG2 (100°C, 300kHz)
Supply : 4,75 to 30Vdc
Cons. without load : 75mA max
Current per channel : 40mA max
0 max (I_s=20mA) : V_{ol} = 0,5Vdc
1 min (I_s=20mA) : V_{oh} = 4Vdc



Electronic 5GT (70°C, 120kHz)
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

SINE WAVE OUTPUT SIGNALS



Electronic 2WT (100°C)
Supply : 5Vdc ± 10%
Cons. without load : 75mA max
Output signals :
1Vpp (peak to peak)

ELECTRONIC PROTECTIONS

Protection against short circuits of the electronics: 2G2, RG2, PG5, 5GT and 2WT
Protection against reverse polarity for all the electronics except 2G2 and 2WT

Consult us for special electronics : programmable resolution, 5 to 36Vdc, 100mA per channel...

STANDARD CONNECTIONS

| | | - | + | A | B | 0 | A/ | B/ | 0/ | Ground |
|----|-----------------------------|--------------------------------|-------------------------------|----------|-----------|---------|---------|----------|----------|-------------------|
| GB | Terminal box | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | On cable gland |
| G6 | M23 - 12 pins CW | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Connector Body |
| G8 | M23 - 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 5-36V, special flanges, connections...)

| Model | Shaft Ø | Digital signals (Square wave) | | | Connection | Connection orientation |
|--|----------|--|---|-----------------------------------|------------|---|
| | | Electronics : 2G2, PG5, RG2, 5GT | Output signals | resolution | | |
| DHM9 | 11:11mm | Supply | Output stage | 9: A,A/,B,B/,0,0/ (0 gated A & B) | 80 000 max | G6: M23 12 pins CW G5: M23 12 pins CW G8: M23 12 pins CCW GB: terminal box |
| | | 2: 5Vdc 5: 11 to 30Vdc P: 5 to 30Vdc R: 4.75 to 30Vdc | G2: driver 5Vdc RS422 G5: push-pull 5-30Vdc GT: transistorized push-pull 11-30Vdc | | | |
| DBM9 Stainless steel body | 12: 12mm | Sine-wave signals | | | 2500 max | GP: PUR cable 12 wires G3: PVC cable 8 wires |
| | | 2: 5Vdc | WT: sine 1Vpp | 9: S,S/,C,C/,Z,Z/ | | |
| DXM9 Stainless steel cover and body | | | | | | Example : R020: radial cable 2m A020: axial cable 2m |

Ex: DHM9 _ 12 // P G5 9 // 80 000// GP R020

Available resolutions (100°C electronic) : 50 60 100 120 125 127 150 180 200 240 250 256 300 314 360 375 400 500 512 600 720 750 768 800 927 1000 1024 1200 1250 1280 1440 1500 1800 2000 2048 2400 2500 3000 3600 4000 4096 5000 6000 7200 8000 8192 10000

Interpolated available resolutions (70°C electronic) : 1080 2560 2880 3072 4320 5120 7500 5760 9000 10240 10800 12000 12500 12288 14400 15000 16000 16384 18000 20000 20480 24000 25000 28800 30000 32000 32768 36000 40000 40960 43200 48000 49152 50000 57600 60000 64000 65536 80000

Available resolutions sine-wave signals (100°C electronic) : 250 256 360 500 1024 2500

Nota : The maximal resolution with the 5GT electronic is 5 000 pulses per turn (non available electronic with interpolation)

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