

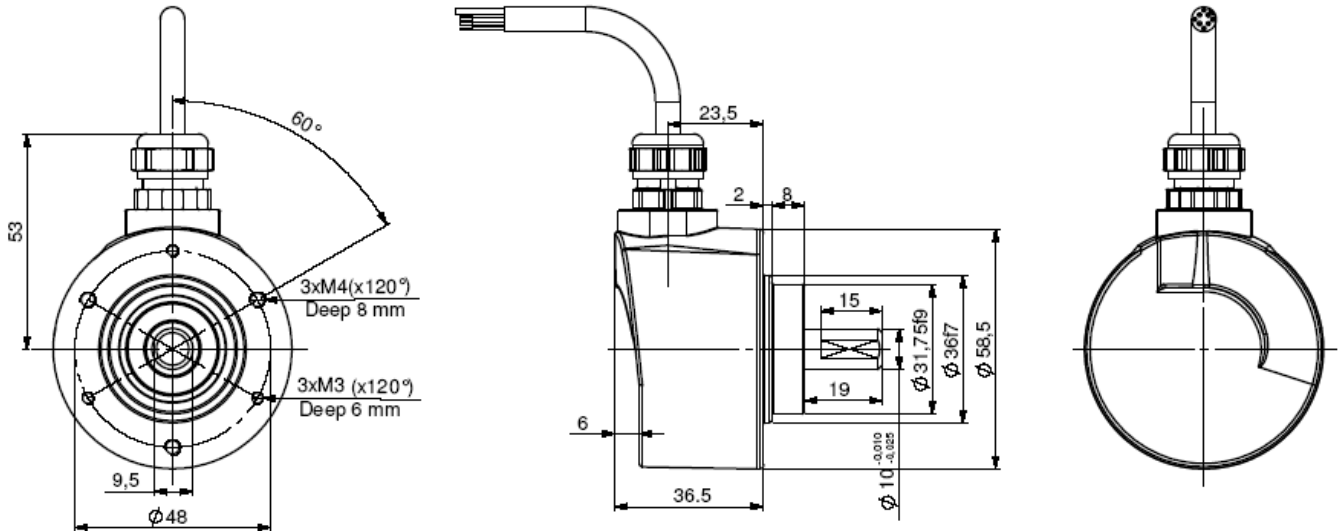
## FIXED RESOLUTION INCREMENTAL ENCODERS, DHM5 RANGE, DIGISINE™ 100°C

**DIGISINE**, universal encoders :

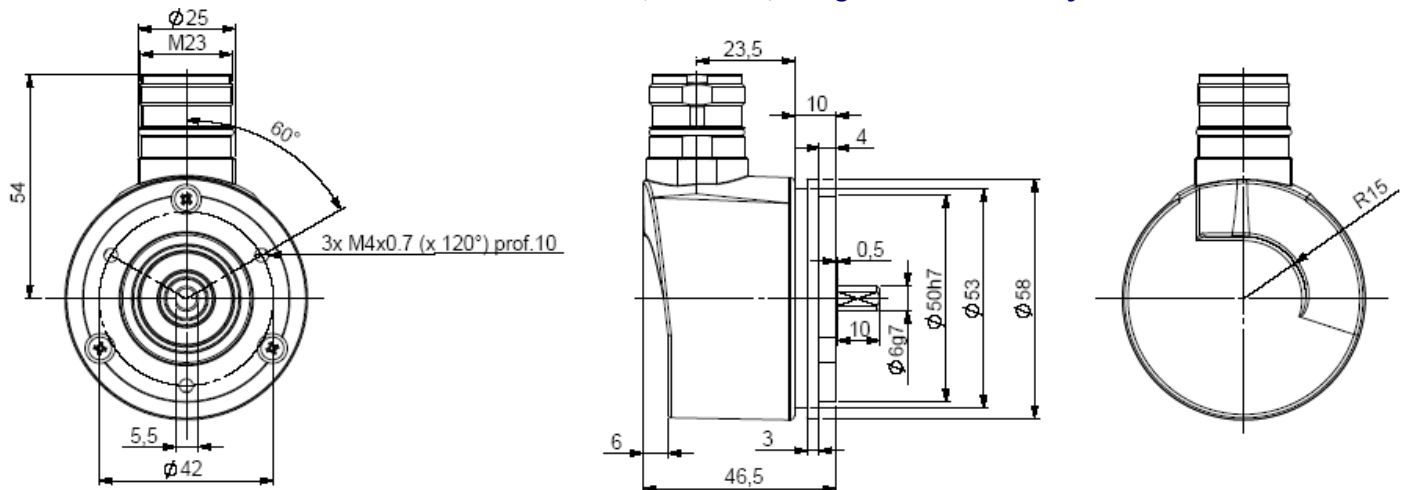
- Robustness and excellent resistance to shocks / vibrations
- High protection level IP65, IP67 feasible with a sealing flange
- High resolutions : up to 80 000 cpt
- Universal electronic circuits from 5 to 30 Vdc (option 5 to 36Vdc)
- High performances in temperature -30°C to 100°C (option -40°C)
- High performances in frequency of exit signals : 300 kHz



**DHM5\_10 connection G3R (radial cable gland)**



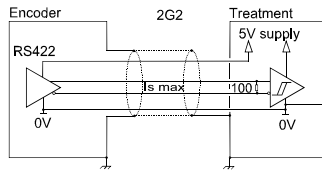
**DHM5\_06 connection G6R (radial M23), flange 9500/003 on body**



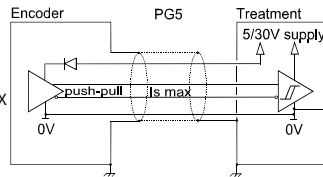
Material	Cover : zinc alloy	Shock (EN60068-2-27)	≤ 500m.s <sup>2</sup> (during 6 ms)
	Body : aluminium	Vibration (EN60068-2-6)	≤ 100m.s <sup>2</sup> (55 ... 2 000 Hz)
	Shaft : stainless steel	EMC	EN 50081-1, EN 61000-6-2
Bearings	6 000 serie	Isolation	1 000 Veff
Maximal load	Axial : 50 N	Weight (connector)	0,3 kg
	Radial : 100 N	Operating temperature	- 30 ... + 100 °C (encoder T°)
Shaft inertia moment	≤ 1.10 <sup>-6</sup> kg.m <sup>2</sup>	Storage temperature	- 40 ... + 100 °C
Torque	≤ 4.10 <sup>-3</sup> N.m	Protection(EN 60529)	IP 65 (IP67 with flange option)
Permissible max. speed	12 000 min <sup>-1</sup>	Theoretical mechanical lifetime 10 <sup>9</sup> turns (F <sub>axial</sub> / F <sub>radial</sub> )	
Continuous max. speed	9 000 min <sup>-1</sup>	25 N / 50 N: 99	50 N / 100 N: 12

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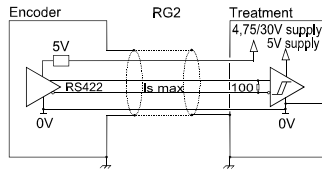
### DIGITAL OUTPUT SIGNALS (SQUARE WAVE SIGNALS)



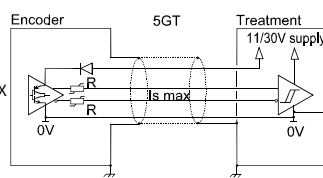
**Electronic 2G2 (100°C, 300kHz)**  
Supply : 5Vdc ± 10%  
Cons. without load : 75mA max  
Current per channel : 40mA max  
0 max (Is=20mA) :  $V_{ol} = 0,5Vdc$   
1 min (Is=20mA) :  $V_{oh} = 4Vdc$



**Electronic PG5 (100°C, 300kHz)**  
Supply : 5 to 30Vdc  
Cons. without load : 75mA max  
Current per channel : 40mA max  
0 max (Is=20mA) :  $V_{ol} = 0,5Vdc$   
1 min (Is=20mA) :  $V_{oh} = Vcc-2,5Vdc$

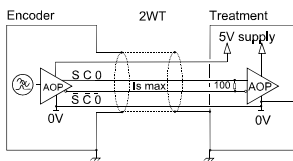


**Electronic RG2 (100°C, 300kHz)**  
Supply : 4,75 to 30Vdc  
Cons. without load : 75mA max  
Current per channel : 40mA max  
0 max (Is=20mA) :  $V_{ol} = 0,5Vdc$   
1 min (Is=20mA) :  $V_{oh} = 4Vdc$



**Electronic 5GT (70°C, 120kHz)**  
Supply : 11 to 30Vdc  
Cons. without load : 75mA max  
Current per channel : 40mA max  
0 max (Is=20mA) :  $V_{ol} = 1,5Vdc$   
1 min (Is=20mA) :  $V_{oh} = Vcc-2,5Vdc$

### 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

Contact the factory for special electronics, ex: 5-36V, 100mA...

### 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 5-36V, special flanges, connections...)

DHM5	Ø shaft	Digital signals			Connection	Orientation	
		Electronic : 2G2, PG5, RG2, 5GT		Output signals			Resolution
		Supply	Output stage				
		10 : 10mm	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 : push-pull 11-30Vdc transistorized			9 : A,A/,B,B/,0,0/ (0 gated A and B)
06 : 6mm	Sine-wave signals			GP : PUR cable 12 wires G3 : PVC cable 8 wires	Example : R020 : radial cable 2m		
		2 : 5Vdc	WT : sinus 1Vpp	9 : S,S/,C,C/,Z,Z/	2 500 max		
Ex: DHM5 _	10 //	P	G5	9 //	80 000 //	GP	R050

**Available resolutions (100°C electronic) :** 5 10 20 25 30 50 60 100 120 125 127 150 180 200 240 250 256 300 314 360 375 400 500 512 600 720 750 762 768 800 927 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 72000 80000

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