

DHM9

INCREMENTAL ENCODERS, DHM9 RANGE 100°C, DIGISINE™

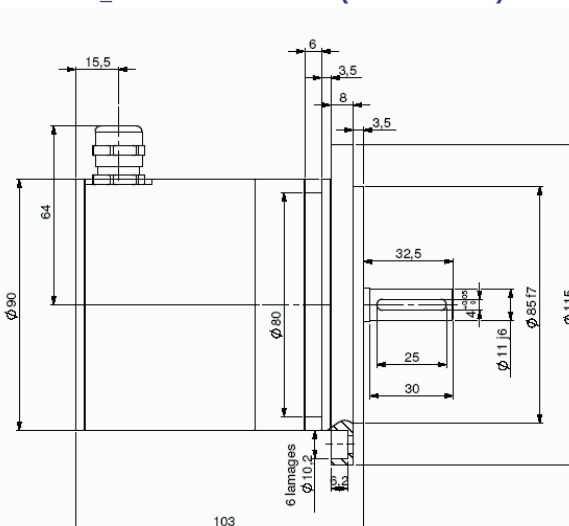
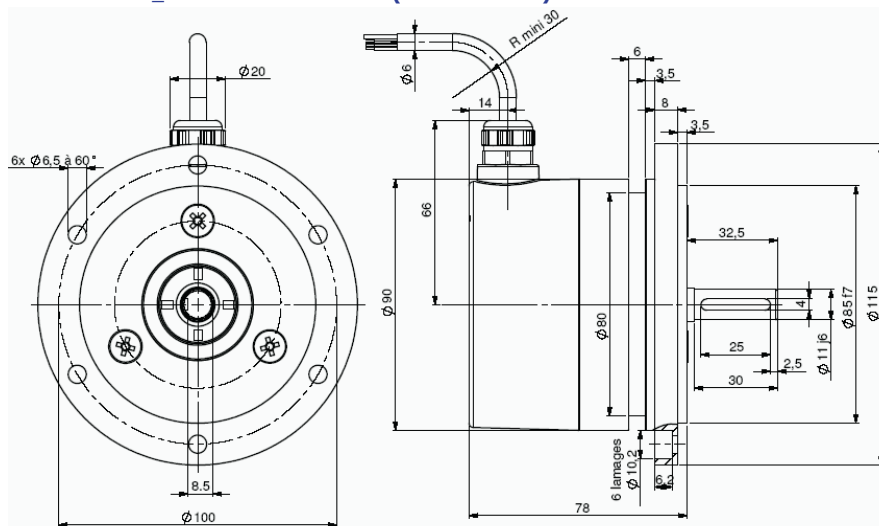


- Especially designed for heavy-duty (steel, paper, wood – mills, cranes ...) Compact and robust conception. Excellent resistance to shocks/vibrations and to extreme axial/radial loads
- High performances in temperature -30°C to 100°C (option -40°C)
- High protection level: IP 67 (cable), IP 66 (connector)
- 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



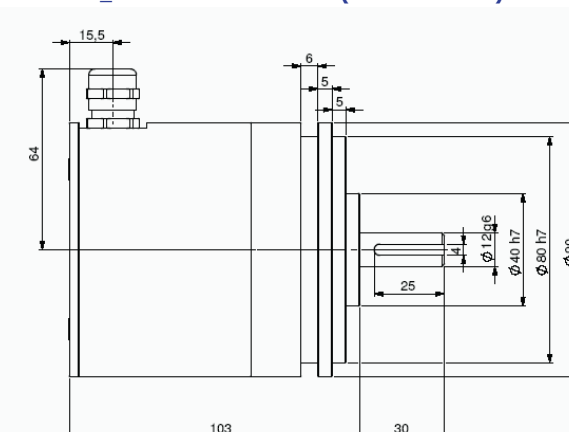
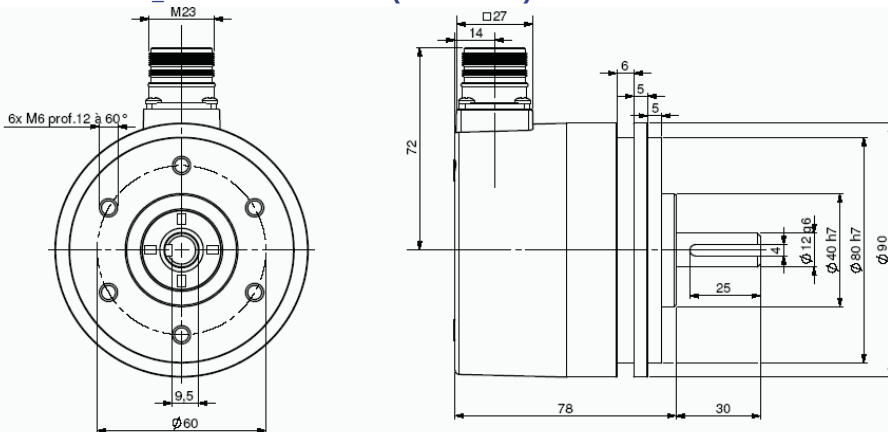
DHM9_11 connection G3R (radial cable)

DHM9_11 connection GBR (terminal box)



DHM9_12 connection G6R (radial M23)

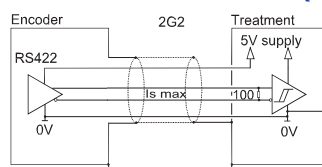
DHM9_12 connection GBR (terminal box)



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

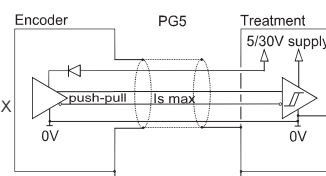
INCREMENTAL ENCODERS, DHM9 RANGE 100°C, DIGISINE™

DIGITAL OUTPUT SIGNALS (SQUARE WAVE SIGNALS)



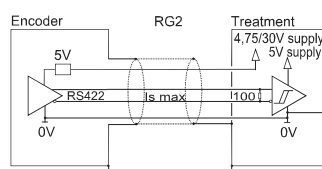
Electronic 2G2 (100°C, 300kHz)

Supply : 5Vdc $\pm$ 10%
 Cons. without load : 75mA max
 Current per channel : 40mA max
 0 max (Is=20mA) : $V_{ol} = 0,5Vdc$
 1 min (Is=20mA) : $V_{oh} = 4Vdc$



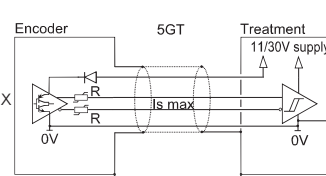
Electronic PG5 (100°C, 300kHz)

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) : $V_{oh} = V_{cc}-2,5Vdc$



Electronic RG2 (100°C, 300kHz)

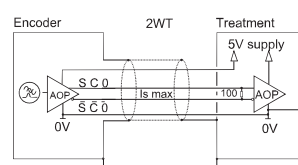
Supply : 4,75 to 30Vdc
 Cons. without load : 75mA max
 Current per channel : 40mA max
 0 max (Is=20mA) : $V_{ol} = 0,5Vdc$
 1 min (Is=20mA) : $V_{oh} = 4Vdc$



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) : $V_{oh} = V_{cc}-2,5Vdc$

SINE WAVE OUTPUT SIGNALS



Electronic 2WT (100°C)

Supply : 5Vdc $\pm$ 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...)

	Shaft Ø	Digital signals (Square wave)				Connection	Connection orientation			
DHM9	11:11mm	Electronics : 2G2, PG5, RG2 , 5GT		Output signals	resolution	G6: M23 12 pins CW	R : radial A : axial			
		Supply	Output stage	9 : A,A/,B,B/,0,0/ (0 gated A & B)	80 000 max	G5 : M23 12 pins CW				
		2 : 5Vdc	G2: driver 5Vdc RS422			G8 : M23 12 pins CCW				
		5 : 11 to 30Vdc	G5: push-pull 5-30Vdc			GB : terminal box				
		DXM9	12 : 12mm			P : 5 to 30Vdc		GT : transistorized push-pull 11-30Vdc	GP : PUR cable 12 wires	Example : R020 : radial cable 2m A020: axial cable 2m
R : 4.75 to 30Vdc				G3: PVC cable 8 wires						
Sine-wave signals										
		2: 5Vdc	WT: sine 1Vpp	9: S,S/,C,C/,Z,Z/	2 500 max					
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)

Made in France