

INCREMENTAL ENCODERS, DHM5 RANGE, 100°C

DIGISINE™ universal encoders :

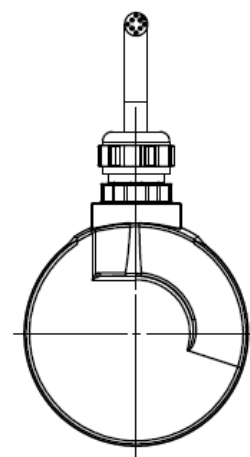
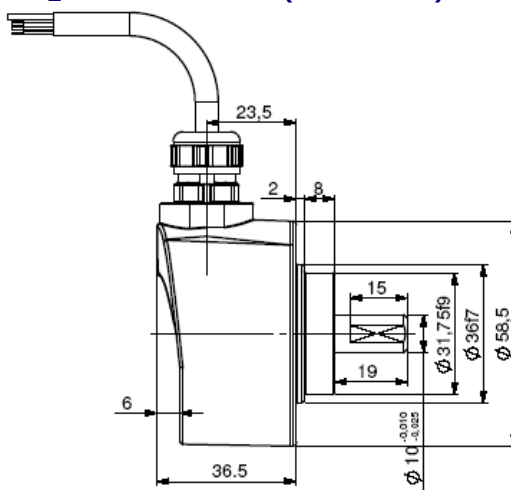
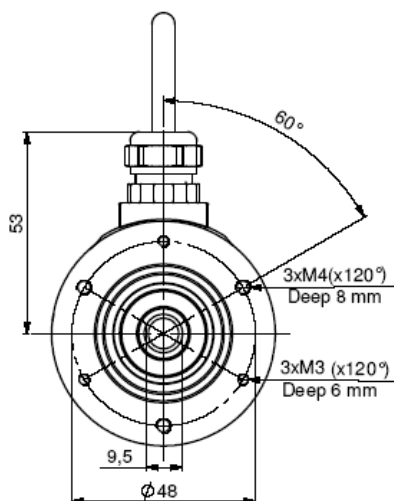
- Robustness and excellent resistance to shocks / vibrations
- High protection level IP65, IP67 option with a sealing flange
- High resolutions available : up to 80 000 cpt
- Universal electronic circuits from 4.75 to 30 Vdc
- High performances in temperature -30°C to 100°C (option -40°C)
- High performances in frequency of output signals : 300 kHz



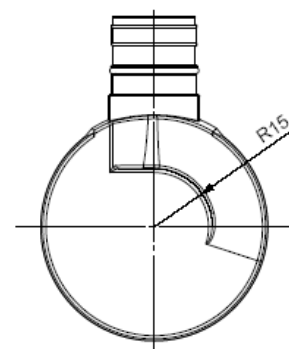
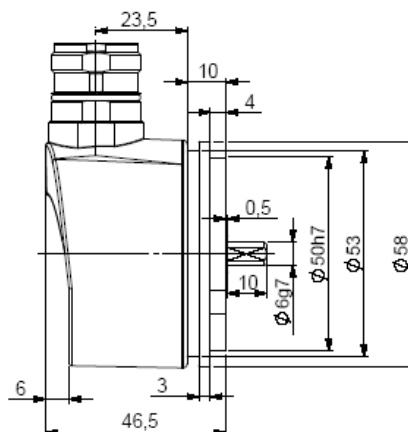
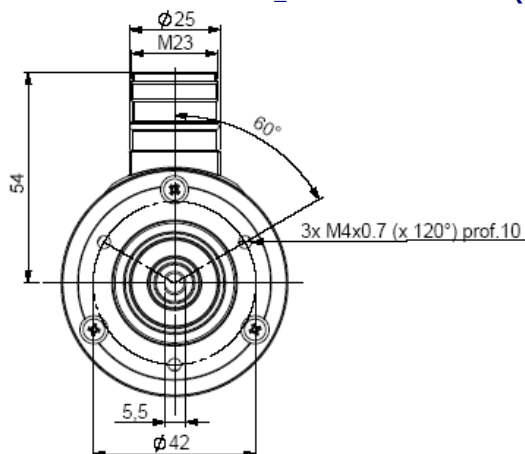
2004/108/CE



DHM5_10 connection U3R (radial cable)



DHM5_06 connection G6R (radial M23), flange 9500/003 mounted on the body



Mechanical Characteristics:

Material	Cover : zinc alloy	Shock (EN60068-2-27)	≤ 500m.s ⁻² (during 6 ms)
	Body : aluminum	Vibration (EN60068-2-6)	≤ 100m.s ⁻² (55 ... 2 000 Hz)
	Shaft : stainless steel	EMC	EN 50081-1, EN 61000-6-2
Ball bearings	6000 series	Isolation	1 000 Veff
Maximum loads	Axial: 50 N	Encoder weight (approx.)	0,300 kg
	Radial: 100 N	Operating temperature	- 30 ... + 100 °C (encoder T°)
Shaft inertia	≤ 1.10 ⁻⁶ kg.m ²	Storage temperature	- 40 ... + 100 °C
Torque	≤ 4.10 ⁻³ N.m	Protection(EN 60529)	IP 65 (IP67 with flange option)
Permissible max. speed	12 000 min ⁻¹	Theoretical mechanical lifetime 10 ⁹ turns (F _{axial} / F _{radial})	
Continuous max. speed	9 000 min ⁻¹	25 N / 50 N : 99	50 N / 100 N : 12

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Electrical Characteristics:

Version	Output signals	Resolution	Operating Voltage V _{Cl}	Supply current (no loads)	Current per channel pair	Output Levels (I _s =20mA)	Frequency capability	Short circuits proof	Reverse polarity tolerant	Temperature range
5GT	HTL	Up to 5000	11-30V --- 250mA	75mA	40mA	High min: V _{Cl} – 2.5V Low max: 1.5V	Up to 120kHz	Yes	Yes	-30°C +70°C (¹)
RG5		See available resolutions below	4.75-30V --- 250mA			High min: V _{Cl} – 0.5V Low max: 0.5V	Up to 300kHz			Yes (except to V _{Cl})
RG2	TTL RS422					High min : 4.5V Low max: 0.5V				
2G2			5V+/-5% --- 250mA		8mA			1Vpp ± 20%		
2WT	1Vpp	Up to 2500								

(1) UL listed: -20°C +70°C. Device must be supplied by a Class 2, LPS or SELV limited energy source.

(2) UL listed: -20°C +80°C. Device must be supplied by a Class 2, LPS or SELV limited energy source.

Connections:

		-	+	A or S	B or C	Z	A/ or S/	B/ or C/	Z/	Ground
GM	M12 - 8 pins	1	2	3	4	5	6	7	8	Connector Body
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
U3	PVC cable 8 wires	WH white	BN brown	GN green	YE yellow	GY grey	PK pink	BU blue	RD red	General shielding
GC	PUR cable 8 wires	BK black	RD red	GN green	BN brown	VT violet	YE yellow	OG orange	BU blue	General shielding
G3	PVC cable 8 wires (not UL)	WH white	BN brown	GN green	YE yellow	GY grey	PK pink	BU blue	RD red	General shielding
GP	PUR cable 12 wires (not UL)	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
TE	Silicone cable (³) 8 wires (not UL)	WH white	BN brown	GN green	YE yellow	GY grey	PK pink	BU blue	RD red	General shielding

(3) Advised cable for mobile application, in extreme temperature from -40°C to +100°C

Available resolutions:

Available resolutions digital signals: 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

Interpolated available resolutions digital signals (limited to 70°C): 1080 1536 2560 2880 3072 4320 4500 5120 5400 5760 6000 6144 7200 7500 8000 8192 9000 10000 10240 10800 12000 12500 12288 14400 15000 16000 16384 18000 20000 20480 21600 24000 24576 25000 28800 30000 32000 32768 36000 40000 40960 43200 48000 49152 50000 57600 60000 64000 65536 80000

Available resolutions sine wave signals (2WT electronic) : 250 256 360 500 512 1000 1024 1500 1800 2000 2048 2500

Ordering Options:

Use this diagram, working from left to right to construct your model number (Example : **DHM5_06//RG59//01024//G6R//**03****)

DHM5	--	//	---	-	//	-----	//	---	---	//	**_**
TYPE:	SHAFT BORE:		VOLTAGE/ OUTPUT:	CHANNELS:		CYCLES/ TURN:		OUTPUT TERMINATION:	CABLE LENGTH:		FLANGE:
DHM5 = Solid shaft encoder	06 = 6mm		5GT = 11-30V voltage and push- pull output	9 = AA/ BB/ ZZ/ B before A Z gated A&B For 2WT electronic, N= SS/ CC/ ZZ/ C before S Z ungated	(Enter Cycles) See available resolutions above		G3R = PVC cable (not UL)	xxx = cable length ex. 020 = 2meters	**03** = synchro flange		
	09=9.52mm		RG5 = 4.75-30V voltage and push- pull output				GCR = PUR cable				
	10 = 10mm		2G2 = 5V voltage and RS422 output				GPR = PUR cable (not UL)				
	08 = 8mm (option)		RG2 = 4.75-30V voltage and RS422 output				TER = Silicone cable (not UL)				
			2WT = 5V voltage and 1Vpp output				U3R = PVC cable				
							GMR = M12	Blank (no cable)			
							G6R = M23 12 pins CW				
							G8R = M23 12 pins CCW				

Made in France