

PROGRAMMABLE INCREMENTAL ENCODERS, DHO5 RANGE

The programmable **DIGISINE™** encoder, unique combination of performance and flexibility:

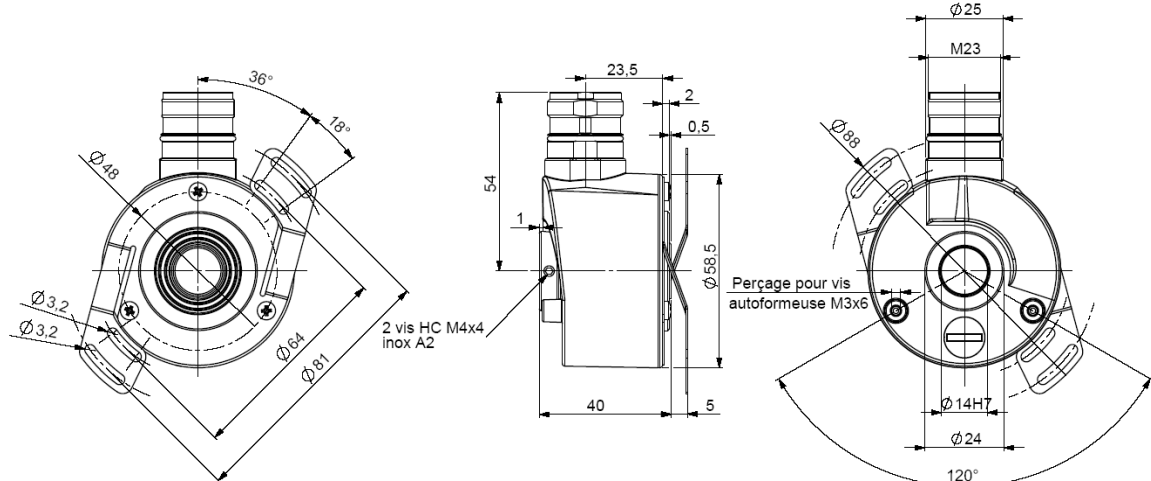
- Easy programming without any specific software or hard-ware
- Through hollow shaft version Ø14mm, with reduction hubs in aluminium of 6, 8, 10 and 12 mm
- Easy mounting for the hollow shafts thanks to DAC (Anti-Coupling Device)
- Robustness and excellent resistance to shocks / vibrations
- High protection level IP65
- High resolutions available : up to 80 000 cpt
- Universal electronic circuits from 4.75 to 30 Vdc
- High performances in temperature -30°C to 70°C (option -40°C)
- High performances in frequency of output signals : 300 kHz



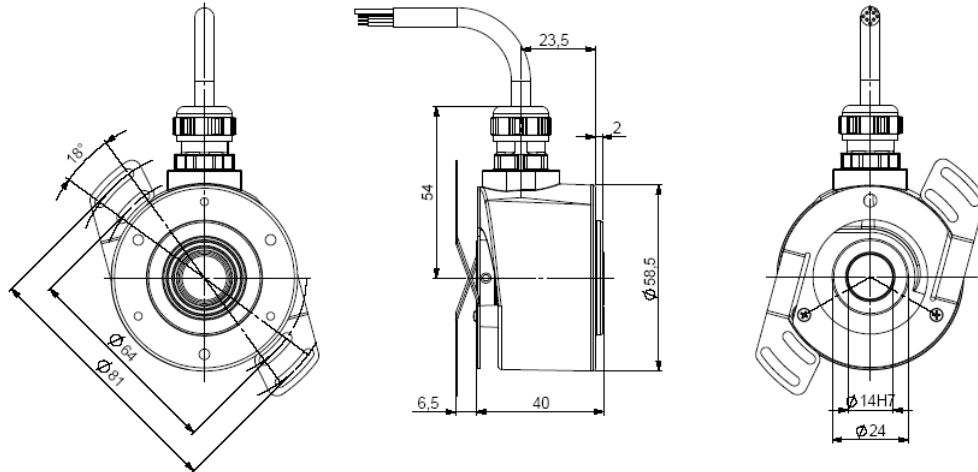
2004/108/CE



DHO5_14 connection G6R (radial M23), DAC 9445/015 mounted on body



DHO5_14 connection U3R (radial cable), DAC 9445/015 mounted on cover



Mechanical Characteristics:

Material	Cover : zinc alloy	Shocks (EN60068-2-27)	≤ 500 m.s ⁻² (during 6 ms)
	Body : aluminum	Vibrations (EN60068-2-6)	≤ 100 m.s ⁻² (55 ... 2 000 Hz)
	Shaft : stainless steel	EMC	EN 50081-1, EN 61000-6-2
Bearings	6 803 serie	Isolation	1 000 V eff
Maximum loads	Axial : 20 N	Encoder weight (approx.)	0,300 kg
	Radial : 50 N	Operating temperature	-30 ... + 70°C (encoder T°)
Shaft inertia	≤ 2,2.10 ⁻⁶ kg.m ²	Storage temperature	- 40 ... + 80°C
Torque	≤ 6.10 ⁻³ N.m	Protection(EN 60529)	IP 65
Permissible max. speed	9 000 min ⁻¹	Torque (ring pressure screw)	0,7...0,9 Nm
Continuous max. speed	6 000 min ⁻¹	Theoretical mechanical lifetime 10 ⁹ turns (F _{axial} / F _{radial})	
Shaft seal	Viton	10N / 25N : 230	20N / 50N : 29

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Electrical Characteristics:

Version	Output signals	Resolution	Operating Voltage Vcl	Supply current (no loads)	Current per channel pair	Output Levels (Is=20mA)	Frequency capability	Short circuits proof	Reverse polarity tolerant	Temperature range
RP5	TTL RS422	See available resolutions below	4.75-30V --- 250mA	75mA	40mA	High min: Vcl - 0.5V Low max: 0.5V	Up to 300kHz	Yes	Yes	-30°C +70°C (1)
RP2						High min : 4.5V Low max: 0.5V		Yes (except to Vcl)		
2P2			5V+/-5% --- 250mA			Yes				

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

Connections:

		-	+	A	B	Z	A/	B/	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 (2) 8 wires (not UL)	WH white	BN brown	GN green	YE yellow	GY grey	PK pink	BU blue	RD red	General shielding

(2) Advised cable for mobile application, in extreme temperature from -40°C to +70°C

Available interpolated resolutions:

Easy multiplication of the basis resolution of the disk : 1, 2, 3, 4, 5, 8, 10, 12 and 16 times per dip-switch without specific software nor hardware.

Factor	Basis resolutions															Code switch				
	250	256	360	500	1000	1024	1500	1800	2000	2048	2500	3000	3600	4000	4096	5000	1	2	3	4
X1	250	256	360	500	1000	1024	1500	1800	2000	2048	2500	3000	3600	4000	4096	5000	ON	ON	ON	ON
X2	500	512	720	1000	2000	2048	3000	3600	4000	4096	5000	6000	7200	8000	8192	10000	ON	ON	ON	ON
X3	750	768	1080	1500	3000	3072	4500	5400	6000	6144	7500	9000	10800	12000	12288	15000	ON	ON	ON	ON
X4	1000	1024	1440	2000	4000	4096	6000	7200	8000	8192	10000	12000	14400	16000	16384	20000	ON	ON	ON	ON
X5	1250	1280	1800	2500	5000	5120	7500	9000	10000	10240	12500	15000	18000	20000	20480	25000	ON	ON	ON	ON
X8	2000	2048	2880	4000	8000	8192	12000	14400	16000	16384	20000	24000	28800	32000	32768	40000	ON	ON	ON	ON
X10	2500	2560	3600	5000	10000	10240	15000	18000	20000	20480	25000	30000	36000	40000	40960	50000	ON	ON	ON	ON
X12	3000	3072	4320	6000	12000	12288	18000	21600	24000	24576	30000	36000	43200	48000	49152	60000	ON	ON	ON	ON
X16	4000	4096	5760	8000	16000	16384	24000	28800	32000	32768	40000	48000	57600	64000	65536	80000	ON	ON	ON	ON

Ordering Options:

Use this diagram, working from left to right to construct your model number (Example : **DHO5_14//RP59//01024//G6R//**DD****)

DHO5	--	//	---	-	//	----	//	---	---	//	**_**
TYPE:	SHAFT BORE:		VOLTAGE/ OUTPUT:	CHANNELS:		CYCLES/ TURN:		OUTPUT TERMINATION:	CABLE LENGTH:		FLANGE:
DHO5 = Through shaft	14 = 14mm reduction hubs available up to 6mm		RP5 = 4.75-30V voltage and push-pull output 2P2 = 5V voltage and RS422 output RP2 = 4.75-30V voltage and RS422 output	9 = AA/ BB/ ZZ/ B before A Z gated A&B		(Enter Cycles) See available resolutions above		G3R = PVC cable (not UL) GCR = PUR cable GPR = PUR cable (not UL) TER = Silicone cable (not UL) U3R = PVC cable GMR = M12 G6R = M23 12 pins CW G8R = M23 12 pins CCW	xxx = cable length ex. 020 = 2meters Blank (no cable)		**DD** : 9445/015 anti-rotation

Made in France