

| DHM5

PROGRAMMABLE INCREMENTAL ENCODERS



Features

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

- Easy programming without any specific software or hard-ware
- 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 5 to 30 Vdc
- High performances in temperature -30°C to $+70^{\circ}\text{C}$ (option -40°C)
- High performances in frequency of output signals : 300 kHz



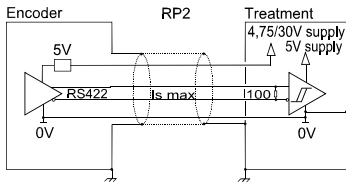
SPECIFICATIONS

Material	Cover: Zinc alloy Body: Aluminium Shaft: Stainless steel
Bearings	6,000 series
Maximum Loads	Axial: 50 N Radial: 100 N
Shaft Inertia	$\leq 1.10^{-6} \text{ kg.m}^2$
Torque	4.10^{-3} N.m
Permissible Max. Speed	12 000 min^{-1}
Continuous Max. Speed	9, 000 min^{-1}
Shocks (EN60068-2-27)	$\leq 500 \text{ m.s}^{-2}$ (during 6 ms)
Vibrations (EN60068-2-6)	$\leq 100 \text{ m.s}^{-2}$ (55 ... 2 000 Hz)
EMC	EN 50081-1, EN 61000-6-2
Isolation	1 000 V eff
Encoder Weight (Approx.)	0,300 kg
Operating Temperature	$-30 \dots +100^{\circ}\text{C}$ (encoder T°)
Storage Temperature	$-40 \dots +800^{\circ}\text{C}$
Protection (EN 60529)	IP 65 (IP67 with flange option)

Theoretical Mechanical Lifetime 109 Turns ($F_{\text{axial}} / F_{\text{radial}}$)	
25 N / 50 N	99
50 N / 100 N	12



DIGITAL OUTPUT SIGNALS (SQUARE WAVE SIGNALS)



RP2 Electronic (300kHz)

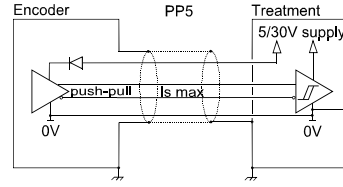
Supply: 4,75 to 30Vdc

Cons. without Load: 75mA max

Current Per Channel: 40mA max

0 Max (Is=20mA): $V_{ol} = 0,5Vdc$

1 Min (Is=20mA): $V_{oh} = 4Vdc$



PP5 Electronic (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): $V_{oh} = V_{cc}-2,5Vdc$

Protection against short circuits and against reverse polarity for all the electronics.



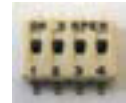
STANDARD CONNECTIONS

		-	+	A or S	B or C	0 or Z	A/ or S/	B/ or C/	0/ or Z/	Ground
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



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.



Interpolation Factor	Basic Resolutions										
	250	256	360	500	1024	2500	3000	3600	4000	4096	5000
X 1	250	256	360	500	1024	2500	3000	3600	4000	4096	5000
X 2	500	512	720	1000	2048	5000	6000	7200	8000	8192	10000
X 3	750	768	1080	1500	3072	7500	9000	10800	12000	12288	15000
X 4	1000	1024	1440	2000	4096	10000	12000	14400	16000	16384	20000
X 5	1250	1280	1800	2500	5120	12500	15000	18000	20000	20480	25000
X 8	2000	2048	2880	4000	8192	20000	24000	28800	32000	32768	40000
X 10	2500	2560	3600	5000	10240	25000	30000	36000	40000	40960	50000
X 12	3000	3072	4320	6000	12288	30000	36000	43200	48000	49152	60000
X 16	4000	4096	5760	8000	16384	40000	48000	57600	64000	65536	80000

switchs position

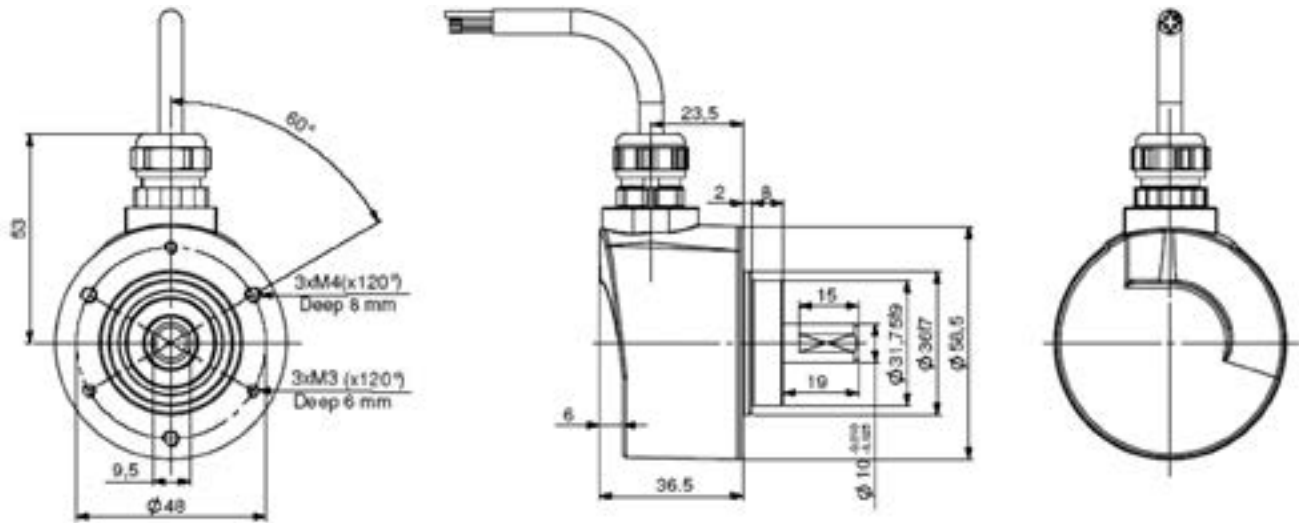
factor	CODE SWITCH			
	1	2	3	4
x 1	ON	ON	ON	ON
x 2	ON	ON	ON	ON
x 3	ON	ON	ON	ON
x 4	ON	ON	ON	ON
x 5	ON	ON	ON	ON
x 8	ON	ON	ON	ON
x 10	ON	ON	ON	ON
x 12	ON	ON	ON	ON
x 16	ON	ON	ON	ON



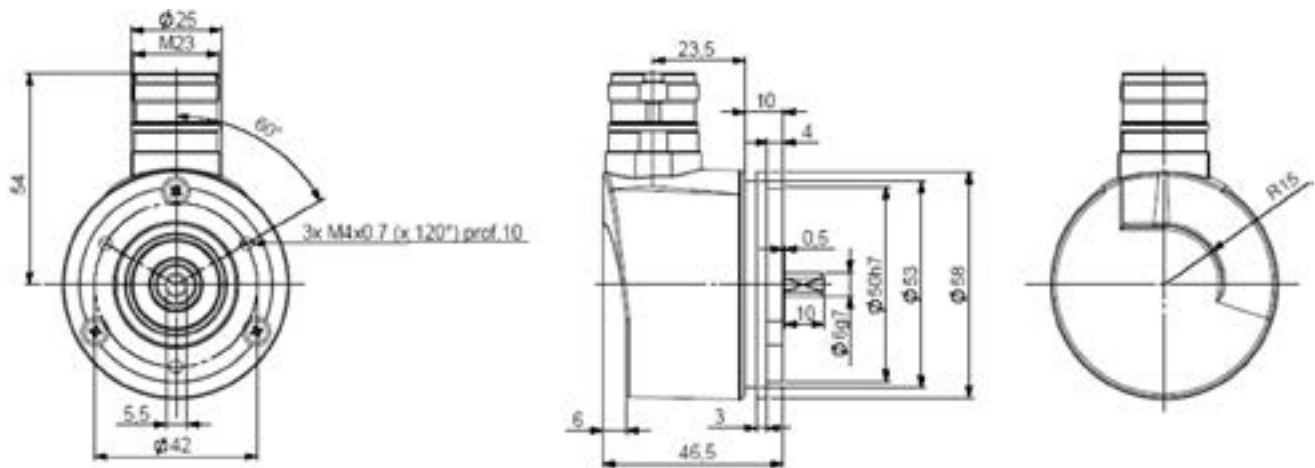
DIMENSIONS

All dimensions are in millimeters.

DHM5_10 Connection G3R (Radial Cable)



DHM5_06 Connection G6R (radial M23), Flange 9500/003* Mounted on the Body





ORDERING OPTIONS

Example : DHM5_06 // R P2 9 // 5000 // GP R020

Contact the factory for special versions, ex: electronics, special flanges, connections

	DHM5	06	//	R	P2	9	//	5000	//	GP	R020
Family											
DHM5											
Ø Axe											
06: 6mm											
10: 10mm											
08: 8mm (option)											
Supply											
Digital Signals (Square Wave)											
R: 4.75 to 30Vdc											
P: 5 to 30Vdc											
Output Stage											
Digital Signals											
P2: driver 5Vdc RS422											
P5: push-pull											
Output Signals											
Digital Signals											
9: A,A/,B,B/,0,0/ (0 gated A & B)											
Resolution											
Digital Signals											
5,000 (max)											
Basic resolution											
Connection											
G6: M23 12 pins CW											
G5: M23 12 pins CW											
G8: M23 12 pins CCW											
G1: Solenoid valve 4 pins											
G2: DIN 5 pins											
GD: DIN 8 pins											
GP: PUR cable 12 wires											
G3: PVC cable 8 wires											
Connection Orientation											
R: Radial											
Ex: R020: radial cable 2m											



AGENCY APPROVALS & CERTIFICATIONS



Made in France

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Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA.

CONTACT US

Americas

+1 (800) 350 2727

sensors@sensata.com

Europe, Middle East & Africa

+33 (3) 88 20 8080

position-info.eu@sensata.com

Asia Pacific

sales.isasia@list.sensata.com

China +86 (21) 2306 1500

Japan +81 (45) 277 7117

Korea +82 (31) 601 2004

India +91 (80) 67920890

Rest of Asia +886 (2) 27602006
ext 2808

Mouser Electronics

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