



## HXM5S – STAINLESS STEEL 316 - IP69K

MAGNETIC INCREMENTAL ENCODERS



### Features

- Adapted to food and beverage – pharmaceutical - river – offshore applications
- Stainless steel encoder (316) with hygienic design
- Flanges and shaft adapted to the market needs
- Robustness and excellent resistance to shocks / vibrations,
- Double ball bearings with safety lock system
- Solid shaft version Ø10mm
- High protection level IP69K
- Universal power supply 5 to 30Vdc
- Industrial standard electronic RS422/TTL and HTL,
- High performances in temperature –40°C to +85°C (100°C option)
- Magnetic technology, Hall effect contactless
- Resolutions available : up to 1,024ppr
- Adapted axial cable gland output.



### SPECIFICATIONS

<b>Material</b>	<b>Shaft:</b> Stainless Steel 316 <b>Cover:</b> Stainless Steel 316 <b>Body:</b> Stainless Steel 316
<b>Bearings</b>	Double Ball Bearings
<b>Maximal Loads</b>	<b>Axial:</b> 250 N <b>Radial:</b> 500 N
<b>Theoretical Mechanical Lifetime 10<sup>9</sup> Turns (F<sub>axial</sub> / F<sub>radial</sub>)</b>	<b>50 N / 100 N:</b> 12 <b>250 N / 100 N:</b> 0.5
<b>Permissible Max. Speed</b>	4,000 min <sup>-1</sup>
<b>Continuous Max. Speed</b>	3,000 min <sup>-1</sup>
<b>Shaft Inertia</b>	≤ 1,2.10 <sup>-6</sup> kg.m <sup>2</sup>
<b>Torque</b>	≤ 90.13 <sup>-3</sup> N.m
<b>Shocks (EN60068-2-27)</b>	≤ 2000m.s <sup>-2</sup> (during 6 ms)
<b>Vibrations (EN60068-2-6)</b>	≤ 200m.s <sup>-2</sup> (55 ... 2 000 Hz)
<b>Encoder Weight (Approx.)</b>	0.600 kg
<b>Protection (EN 60529)</b>	IP 69K
<b>EMC</b>	EN 61000-6-4 - EN 61000-6-2
<b>Isolation</b>	500 Veff
<b>Operating Temperature</b>	- 40... + 85°C (100 °C at 5 Vdc)
<b>Storage Temperature</b>	- 40... + 100 °C

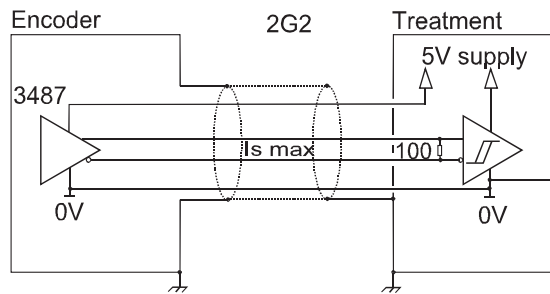
Type	Cable	-	+	A	B	0	A	B	0	Ground
G3	PVC 8 Wires 8230/020	WH White	BN Brown	GN Green	YE Yellow	GY Grey	PK Pink	BU Blue	RD Red	Main Shield

### Available Resolutions

32, 64, 128, 256, 1024


**FIGURES**

### Output Electric / Power Supply



#### 2G2 electronic (100kHz)

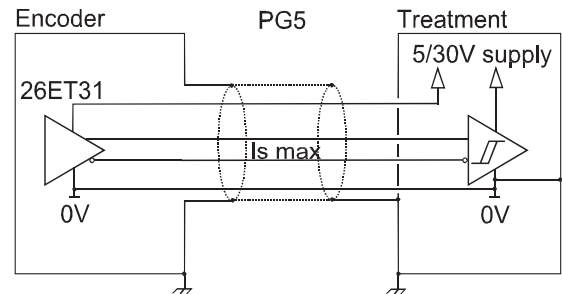
Supply : 5Vdc  $\pm$  10%

Cons. without load: 40mA max

Current per channel: 40mA max

0 max ( $I_s=20mA$ ):  $V_{ol} = 0.5Vdc$

1 min ( $I_s=20mA$ ):  $V_{ol} = 2.5Vdc$



#### PG5 electronic (100kHz)

Supply: 5 to 30Vdc

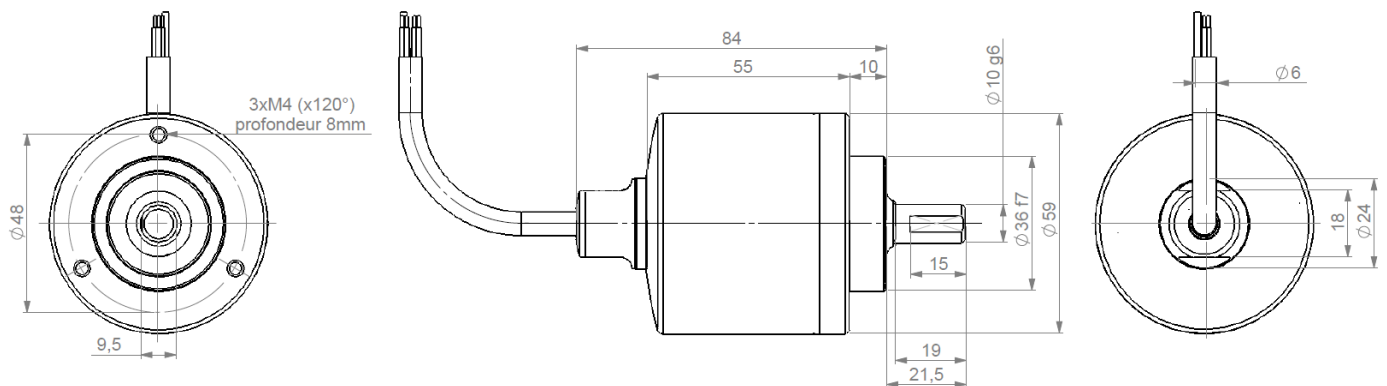
Cons. without load: 40mA max

Current per channel: 40mA max

0 max ( $I_s=20mA$ ):  $V_{ol} = 0.5Vdc$

1 min ( $I_s=20mA$ ):  $V_{ol} = V_{cc}-3Vdc$

Protection against short circuits and inversion of polarity for the electronic PG5.


**DIMENSIONS**  
 Dimensions in mm




## ORDERING OPTIONS

Example : HXM5S10/AA/PG5 9 // 01024 // G3 A020

**HXM5S** / **10** / **AA** / **P G5** **9** // **01024** // **G3** **A020**

**Range** ————— **HXM5S**

**Shaft Ø** ————— **10: 10mm**

**Mechanics** ————— **AA: 316 Stainless Steel**  
**IP69K: Hygienic Design**

**Available Electrocnics** ————— **2G2 or PG5**

Supply		Output	
<b>2</b>	4.5 - 5.5Vdc	<b>G2</b>	TTL / RS422
<b>P</b>	5 - 30Vdc	<b>G5</b>	Push-pull (TTL / RS422 if 5Vdc)

**Signals** ————— **9: A,  $\bar{A}$ , B,  $\bar{B}$ , 0,  $\bar{0}$ ,  
0 Gated A&B**

**Resolution** ————— **1024 (max)**

**Cable** ————— **G3: PVC Cable, 8 Wires**

**Orientation** ————— **(Example)**  
**A020: Axial Cable 2m**



## AGENCY APPROVALS & AVAILABLE CERTIFICATIONS



Made in France

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