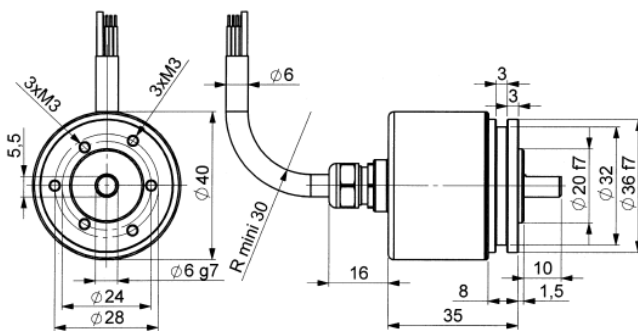


## INCREMENTAL ENCODERS, GHM4 RANGE

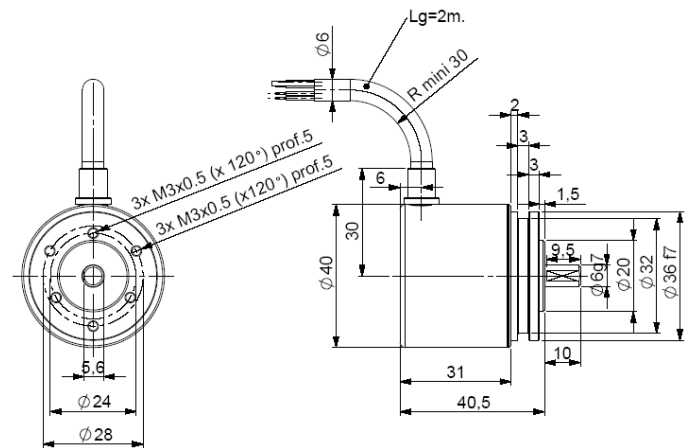
- With its 40mm size and a 6mm solid shaft, this encoder characterizes itself by its strength and robustness of the mechanical and opto-electronic components, it's the most compact truly industrial encoder with a solid shaft
- Coded discs in synthetic material are used: stable and unbreakable (Polyfass™, Mylar-Myca composite)
- Available resolution up to 2 500 counts per turn
- Universal electronics 5 to 24Vdc available
- Application fields : micro-robotics, printing machines, low power DC motors, shears...



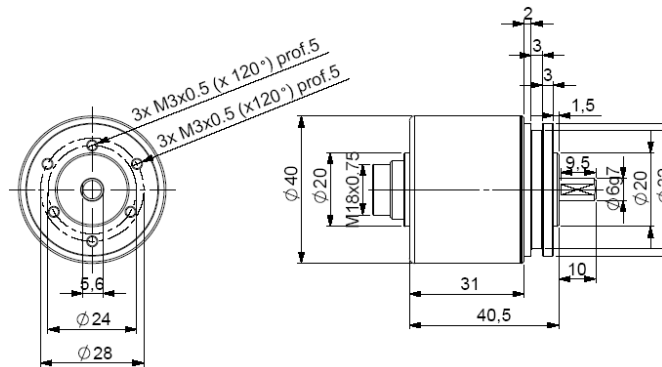
GHM4 connection G3A (axial cable)



GHM4 connection G3R (radial cable)



GHM4 connection G2A / GDA (axial DIN)



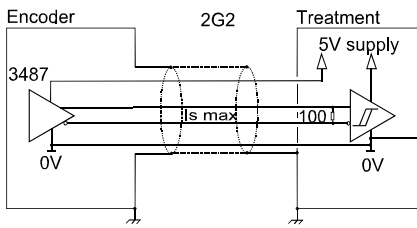
## CHARACTERISTICS

Material	Shaft: stainless steel
	Cover: aluminium
	Body: aluminium
Bearings	688 serie
Maximum loads	Axial : 10 N
	Radial : 20 N
Shaft inertia	$\leq 0,2 \cdot 10^{-6} \text{ kg} \cdot \text{m}^2$
Torque	$\leq 2 \cdot 10^{-3} \text{ N} \cdot \text{m}$
Permissible max. speed	12 000 $\text{min}^{-1}$
Continuous max. speed	9 000 $\text{min}^{-1}$
Encoder weight (approx.)	0,190 kg

EMC	EN 50082-2 (1995)
	EN 50081-1 (1992)
Isolation	1 000 Veff
Operating temperature	- 20... + 80 °C (encoder T°)
Storage temperature	- 40... + 80 °C
Protection CEI60529 (1989)	IP 54
Shocks (EN60068-2-27)	$\leq 300 \text{ m} \cdot \text{s}^{-2}$ (during 11 ms)
Vibrations (EN60068-2-6)	$\leq 100 \text{ m} \cdot \text{s}^{-2}$ (10 ... 500 Hz)
Theoretical mechanical lifetime $10^9$ turns ( $F_{\text{axial}} / F_{\text{radial}}$ )	
5 N / 10 N	263
10 N / 20 N	33

Changes possible without further notice V2.0

### OUTPUT ELECTRONIC / POWER SUPPLY



#### 2G2 electronic (100kHz)

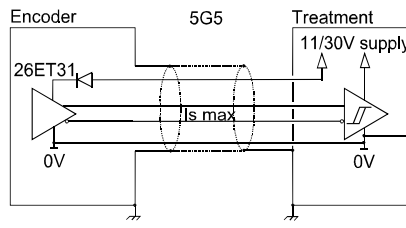
Supply : 5Vdc ± 10%

Cons. without load : 100mA max

Current per channel : 40mA max

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

1 min (Is=20mA) :  $V_{oh} = 2,5Vdc$



#### 5G5 electronic (100kHz)

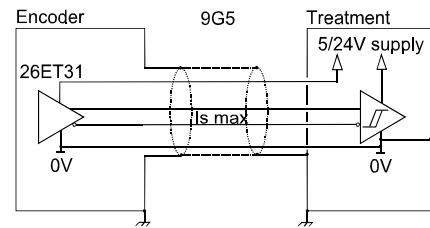
Supply : 11 to 30Vdc

Cons. without load: 75mA max

Current per channel : 40mA max

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

1 min (Is=20mA) :  $V_{oh} = Vcc-3Vdc$



#### 9G5 electronic (100kHz)

Supply : 5 to 24Vdc

Cons. without load : 75mA max

Current per channel : 40mA max

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

1 min (Is=20mA) :  $V_{oh} = Vcc-3Vdc$

Protection against short circuits of the electronics : 5G5 and 9G5

Protection against inversion of polarity for the electronics : 5G5

### STANDARD CONNECTION

		-	+	A	B	0	A/	B/	0/	Ground
G3	PVC cable, 8 wires 8230/020	WH white	BN brown	GN green	YE yellow	GY grey	PK pink	BU blue	RD red	Blindage général
GD	DIN Connector 8 pinouts	1	2	3	4	5	6	7	8	Embase connectique
G2	DIN connector 5 pinouts	1	2	3	4	5	/	/	/	Embase connectique

**ORDERING REFERENCE** (Contact the factory for special versions, ex: special flanges, electronics, connections...)

	Shaft Ø	Available electronics		Output signals	Resolution	Connection	Connection orientation
GHM4	06 : 6mm L6: 6mm 16mm length (option)	2G2, 5G5, 9G5		9:A,A/,B,B/,0,0/ (0 gated A & B)	2 500 max	GD : DIN 8pins G2 : DIN 5pins	A : axial
		Supply	Output stage	A:A,A/,B,B/,0,0/ (0 gated A)		G3 : PVC cable 8 wires	Example : R020: radial cable 2m A020: axial cable 2m
		2 : 5Vdc 5 : 11 to 30Vdc 9 : 5 to 24Vdc	G2 : 5Vdc RS422 G5 : push-pull	N:A,A/,B,B/,0,0/ (0 ungated)			
Ex:GHM4	06 //	5	G5	9 //	2 500//	G3	R020

**Available resolutions :** 1 2 4 5 6 10 15 16 20 24 25 27 30 35 36 40 50 60 64 75 80 90 96 100 120 125 127 128 150 160 180 200 250 256 300 360 384 400 480 500 512 517 600 720 750 800 1000 1024 2500

Made in FRANCE

Changes possible without further notice V2.0