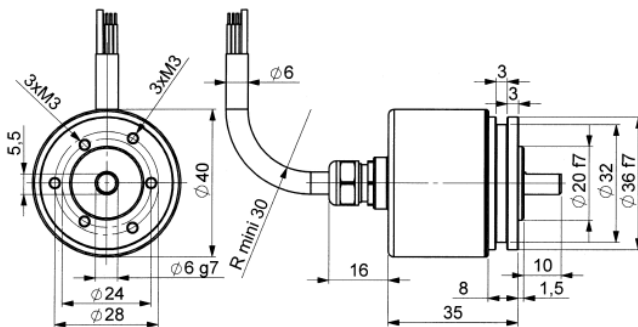


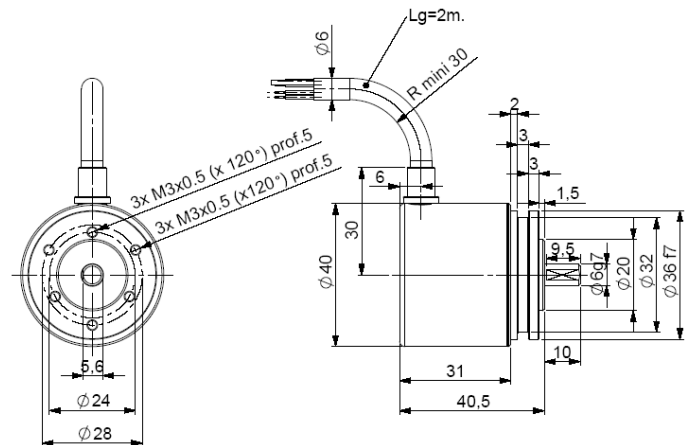
- With its 40mm size and a 6mm solid shaft, this encoder characterizes itself by its strength and robustness of the mechanical and opto-electronic components, it's the most compact truly industrial encoder with a solid shaft
- Coded discs in synthetic material are used: stable and unbreakable (Polyfass™, 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...



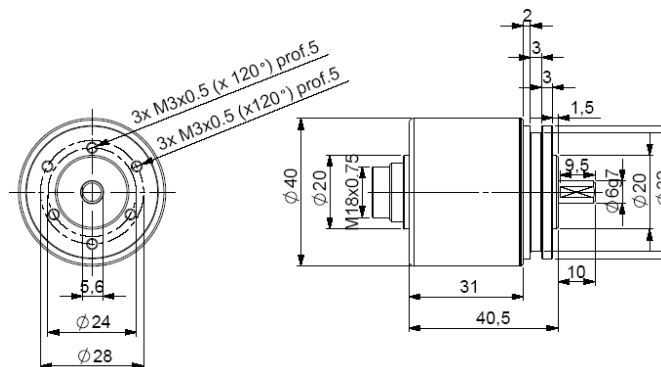
**GHM4 connection G3A (axial cable)**



**GHM4 connection G3R (radial cable)**



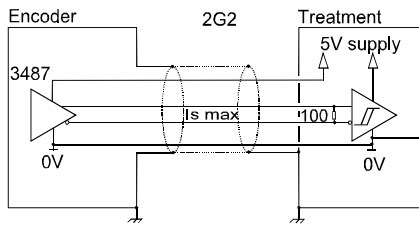
**GHM4 connection G2A / GDA (axial DIN)**



## CHARACTERISTICS

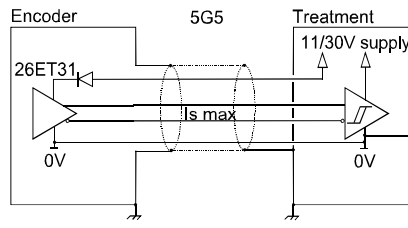
Material	Shaft: stainless steel	EMC	EN 50082-2 (1995)
	Cover: aluminium		EN 50081-1 (1992)
	Body: aluminium		
Bearings	688 serie	Isolation	1 000 Veff
Maximum loads	Axial : 10 N	Operating temperature	- 20... + 80 °C (encoder T°)
	Radial : 20 N	Storage temperature	- 40... + 80 °C
Shaft inertia	$\leq 0,2 \cdot 10^{-6}$ kg.m <sup>2</sup>	Protection CEI60529 (1989)	IP 54
Torque	$\leq 2 \cdot 10^{-3}$ N.m	Shocks (EN60068-2-27)	$\leq 300$ m.s <sup>-2</sup> (during 11 ms)
Permissible max. speed	12 000 min <sup>-1</sup>	Vibrations (EN60068-2-6)	$\leq 100$ m.s <sup>-2</sup> (10 ... 500 Hz)
Continuous max. speed	9 000 min <sup>-1</sup>	Theoretical mechanical lifetime 10 <sup>9</sup> turns (F <sub>axial</sub> / F <sub>radial</sub> )	
Encoder weight (approx.)	0,190 kg	5 N / 10 N	263
		10 N / 20 N	33

## OUTPUT ELECTRONIC / POWER SUPPLY



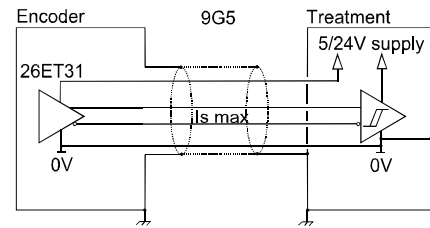
### 2G2 electronic (100kHz)

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) :  $V_{oh} = V_{cc} - 3Vdc$



### 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) :  $V_{oh} = V_{cc} - 3Vdc$

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	General shielding
GD	DIN Connector 8 pinouts	1	2	3	4	5	6	7	8	Connector socket
G2	DIN connector 5 pinouts	1	2	3	4	5	/	/	/	Connector socket

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

	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) N: A, A/, B, B/, 0, 0/ (0 ungated)		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				
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