

GHM4 SERIES

INCREMENTAL ENCODERS, GHM4 RANGE



Features

- 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™, MylarMyca composite)
- Available resolution up to 2 500 counts per turn
- Universal electronics 5 to 24Vdc available
- Application: micro-robotics, printing machines, low power DC motors, shears and others

SPECIFICATIONS

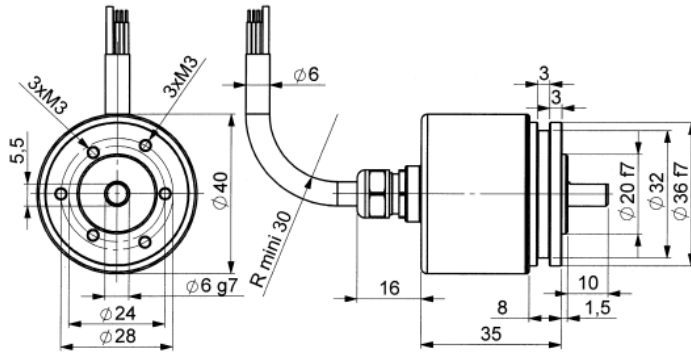
Material	Shaft: Stainless Steel Cover: Aluminum Body: Aluminum
Bearings	688 Series
Maximum Loads	Axial: 10 N Radial: 20 N
Shaft Inertia	$\leq 0,2 \cdot 10^{-6} \text{ kg.m}^2$
Torque	$\leq 2 \cdot 10^{-3} \text{ N.m}$
Permissible Max. Speed	12 000 min ⁻¹
Continuous Max. Speed	9 000 min ⁻¹
Encoder Weight (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)	$\leq 300 \text{ m.s}^{-2}$ (during 11 ms)
Vibrations (EN60068-2-6)	$\leq 100 \text{ m.s}^{-2}$ (10 ... 500 Hz)

Theoretical Mechanical Lifetime 10 ⁹ Turns (F _{axial} / F _{radial})	
5 N / 10 N	263
10 N / 20 N	33

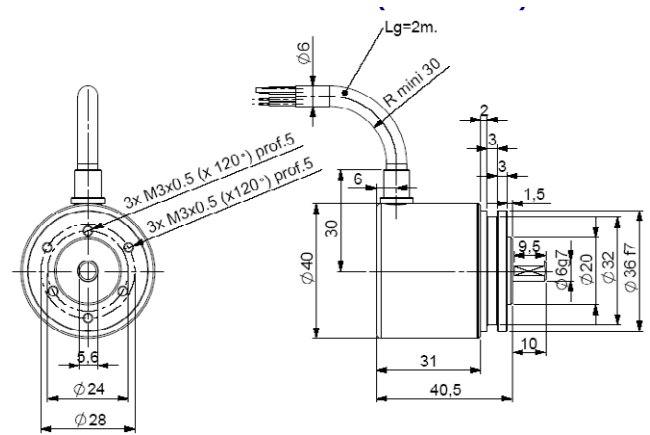
DIMENSIONS

All dimensions are in millimeters.

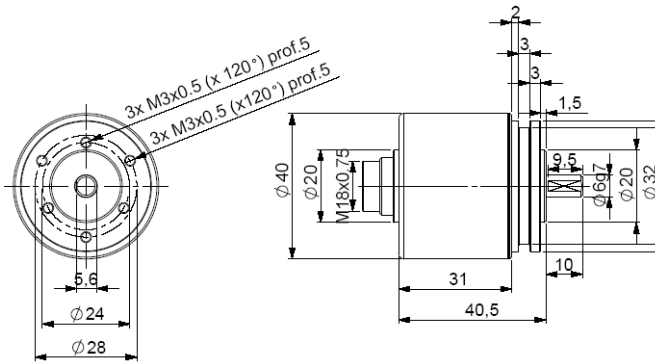
GHM4 Connection G3A (Axial Cable)



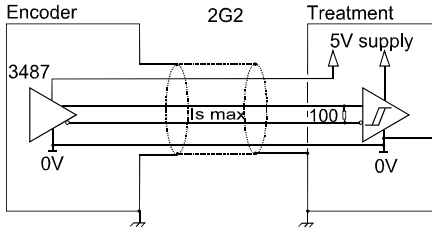
GHM4 Connection G3R (Radial Cable)



GHM4 Connection G2A / GDA (Axial DIN)

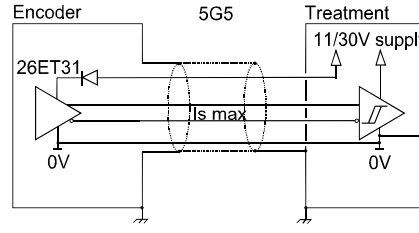


OUTPUT ELECTRONIC / SUPPLY



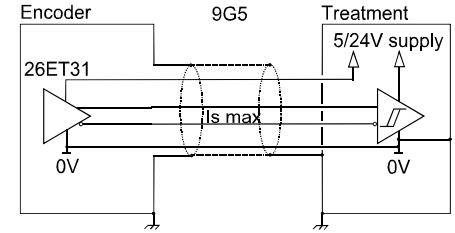
2G2 Electronic (100kHz)

Supply : 5Vdc \pm 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	General Shield
GD	DIN Connector 8 Pinouts	1	2	3	4	5	6	7	8	Connector Body
G2	DIN Connector 5 Pinouts	1	2	3	4	5	/	/	/	Connector Body

ORDERING OPTIONS

Example : GHM4_06 // 5G5 // 9 // 2500 // G3 // R020

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

Family	GHM4	06	//	5G5	9	//	2500	//	G3	R020
GHM4										
Shaft										
06: 6mm										
L6: 6mm 16mm Length (option)										
Supply + Output stage										
2: 5Vdc										
G2: 5Vdc RS422										
5: 11 to 30Vdc										
G5: Push-Pull										
9: 5 to 24Vdc										
G5: Push-Pull										
Output Signal										
9: A,A/,B,B/,0,0/(0 gated A & B)										
A: A,A/,B,B/,0,0/(0 gated A)										
N: A,A/,B,B/,0,0/(0 ungated)										
Resolution ^(A)										
1-2500: Max										
Connection										
GD: DIN 8 Pins										
G2: DIN 5 Pins										
G3: PVC Cable 8 Wires										
Connection Orientation										
R: Radial Cable (0 + meters + 0)										
A: Axial Cable (0 + meters + 0)										

GENERAL NOTES

^(A) **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

AGENCY APPROVALS & CERTIFICATIONS



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