

GHM9

INCREMENTAL ENCODERS, GHM9 RANGE



Features

- Especially designed for heavy duty: steel and paper mills, lumber, cranes, etc.
- Excellent resistance to shocks/vibrations and to extreme axial/radial loads
- Connection with terminal box with LED option, cable or connectors output
- Digital incremental output, optional analog output (tachocoders, optotacho)
- Mechanical over-speed switch: optional
- Max control option : detection of shocks, vibrations, temperatures...
- Solid shaft of 12 mm or 11 mm with RE0 115 mm flange (Euroflange B10) for tachogenerator type mounting

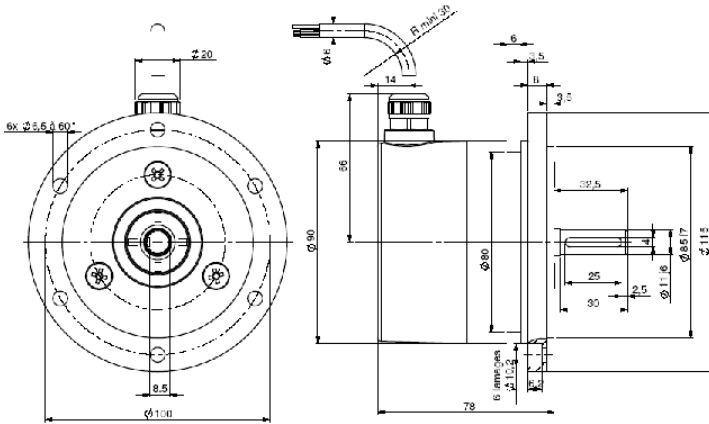
SPECIFICATIONS

Material (connector or cable output version) Stainless steel option	Cover: zinc alloy Body: aluminium
Material (terminal box version) Stainless steel option	Cover: aluminium Body: aluminium
Shaft	Stainless steel
Bearings	6001 serie
Maximum Loads	Axial: 100 N Radial: 200 N
Shaft Inertia Moment	$\leq 15 \cdot 10^{-6} \text{ kg.m}^2$
Torque	$\leq 10 \cdot 10^{-3} \text{ kg.m}^2$
Permissible max. Speed	9 000 min ⁻¹
Continuous max. speed	6 000 min ⁻¹
Shaft seal	Viton double lips
Shock (EN60068-2-27)	$\leq 2\,000 \text{ m.s}^{-2}$ (during 6ms)
Vibrations (EN60068-2-6)	$\leq 200 \text{ m.s}^{-2}$ (10 ... 1 000 Hz)
EMC	EN 50081-1, EN 61000-6-2
Isolation	1 000 V eff

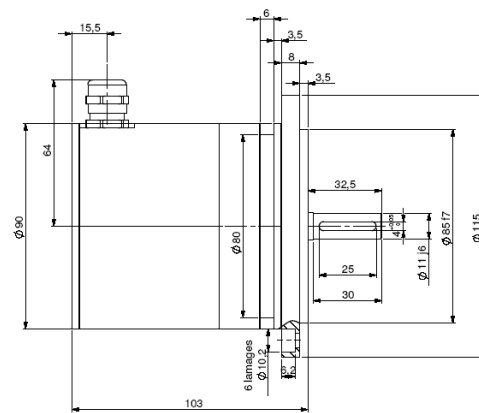
Weight (connector or cable version)	1,3kg alu cover, alu body
	2,6kg alu cover, stainless steel body
	2,8kg stainless steel cover and body
Weight (terminal box version)	1,3kg alu cover, alu body
	2,6kg alu cover, stainless steel body
	2,8kg stainless steel cover and body
Operating temperature	- 20 ... + 80 °C (Encoder T°)
Storage temperature	- 40 ... + 80 °C
Protection(EN 60529)	IP 65
Theoretical mechanical lifetime 10⁹ turns (F_{axial} / F_{radial})	
20 N / 30 N: 360	50 N / 100 N: 30
	100 N / 200 N: 2,5

DIMENSIONS

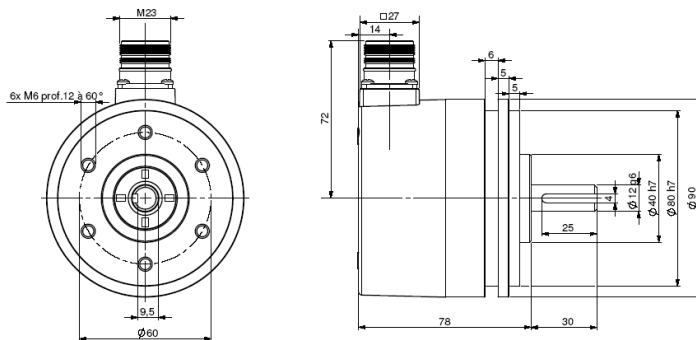
GHM9_11 connection G3R (radial cable gland)



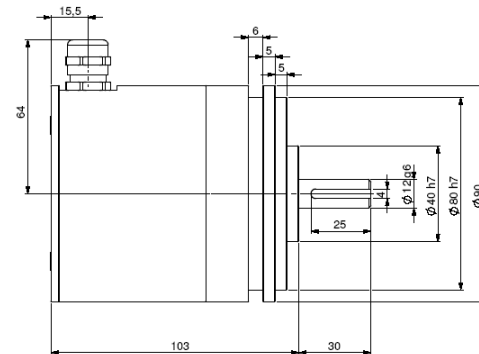
GHM9_11 connection GBR (terminal box)



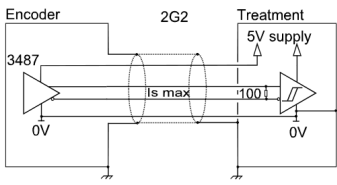
GHM9_12 connection G6R (radial M23)



GHM9_12 connection GBR (terminal box)

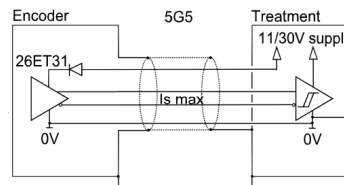


Output Electronic / Supply



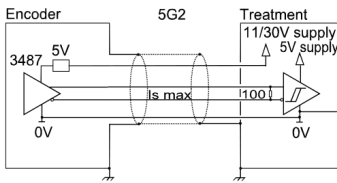
2G2 electronic (100kHz)

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) : $V_{oh} = 2,5Vdc$



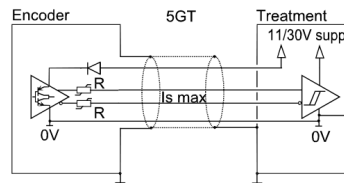
5G5 electronic (100kHz)

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



5G2 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) : $V_{oh} = 2,5Vdc$



5GT electronic, optional (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) : $V_{oh} = V_{cc}-2,5Vdc$

5GT electronic permits to drive very long (contact our factory)

Available in option:

- 3G3 electronic, supply between 15 and 30Vdc, push-pull output regulated 12Vdc
- 5GH electronic permits to drive different inputs (PLC + display for example)

Protection against short circuits for electronics: 5G5, 5GT, 3G3

Protection against polarity inversion for all electronics 2G2

"Option "Max control" : the encoder gives on real time its physical environment parameters: shocks and vibrations, too high or too low temperature, too low or too high supply, quality of the output signals : upon request.

Standard Connection

		-	+	A	B	0	A/	B/	0/	Ground
GB	Terminal Box	1	2	3	4	5	6	7	8	On cable gland
G6	12 pins CW	1	2	3	4	5	6	7	8	Connector body
G8	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



ORDERING OPTIONS

Example : GHM9 11 - 5 G5 9 - 5000 - GP R050

Special versions upon request, for ex. over-speed switches, special flanges/ electronics/connections...

