

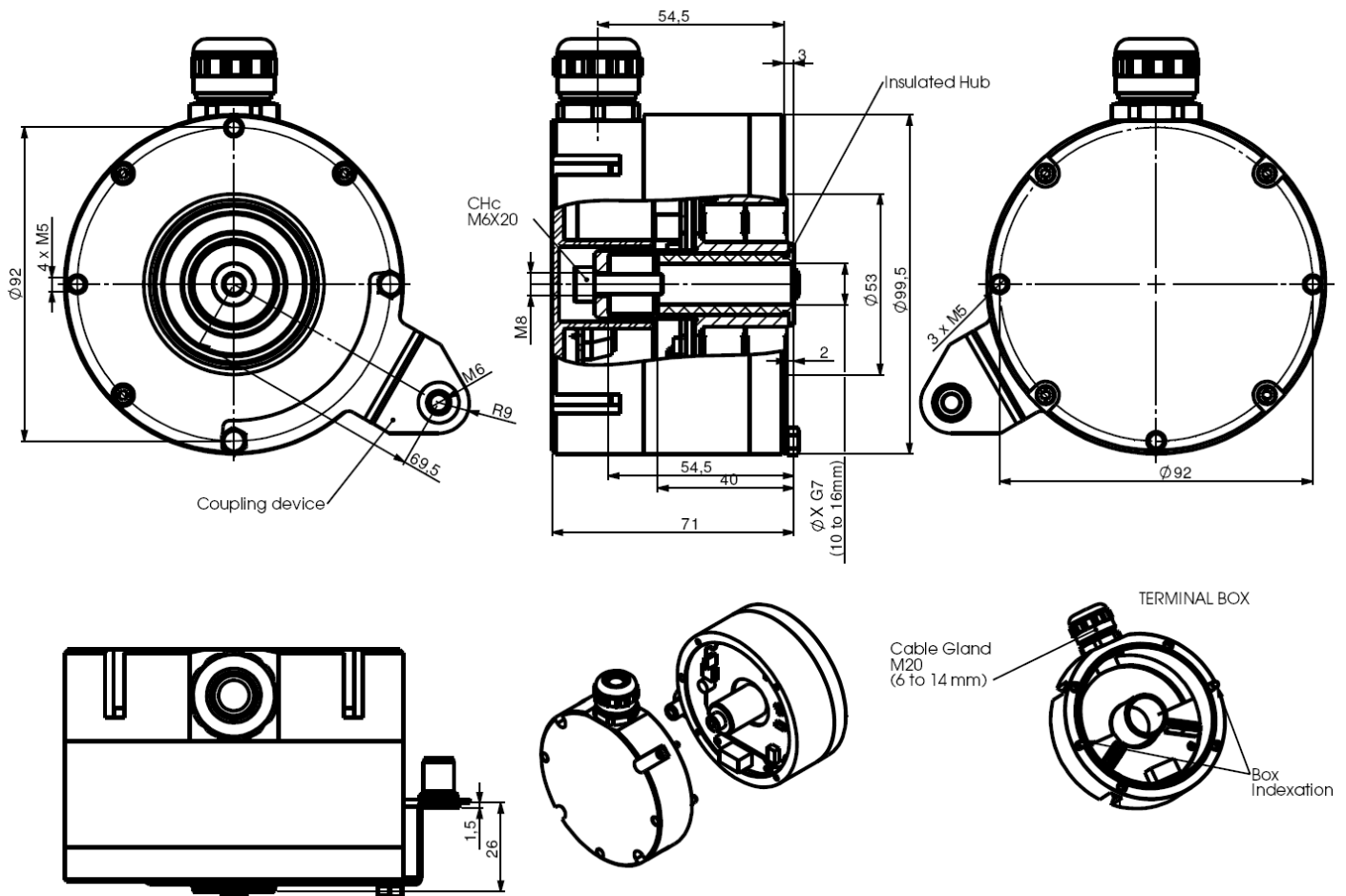
## INCREMENTAL ENCODERS, GHK9 RANGE



- Especially designed for heavy-duty application (steel, paper, wood – mills, cranes...).
- Compact and robust conception.
- Integrated connection cap.
- Hollow shaft of 16mm with insulated hub.
- Standard IP65.
- Unbreakable composite disk, Polyfass® technology.
- Digital incremental signals: A, A/, B, B/, 0, 0/.
- Various standard and specials electronics: push-pull 11-30V (HTL), 5VRS422 (TTL); for long of high capacity cables.



### GHK9\_16 with connection cap and coupling device (Coupling device accessory to be ordered separately)



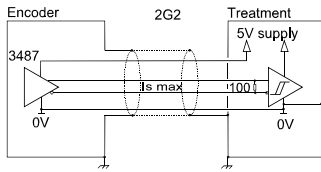
### MECHANICAL CHARACTERISTICS

Standard material	Cover : aluminium	Shocks (EN60068-2-27)	≤ 500 m.s <sup>-2</sup> (during 6 ms)
	Body : aluminium	Vibration (EN60068-2-6)	≤ 200 m.s <sup>-2</sup> (10 ... 1 000 Hz)
Shaft	Insulated hub	EMC	EN 50081-1, EN 61000-6-2
Bearings	Sealed ball bearings	Isolation	1 000 Veff
Maximal loads	Axial : 200N	Encoder weight (approx.)	0,950kg
	Radial : 500N	Operating temperature	- 20 ... + 80 °C (Encoder T°)
Shaft inertia moment	≤ 10.10 <sup>-6</sup> kg.m <sup>2</sup>	Storage temperature	- 40 ... + 80 °C
Torque	≤ 25.10 <sup>-3</sup> N.m	Protection(EN 60529)	IP 65
Permissible max. speed	4 000 min <sup>-1</sup>	Theoretical mechanical lifetime 10 <sup>9</sup> turns (F <sub>axial</sub> / F <sub>radial</sub> )	
Continuous max. speed	3 000 min <sup>-1</sup>	100 N / 250 N : 18	200 N / 500 N : 2,2

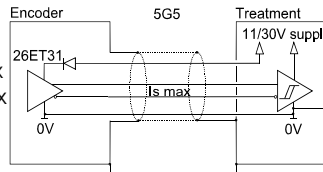
## INCREMENTAL ENCODERS, GHK9 RANGE



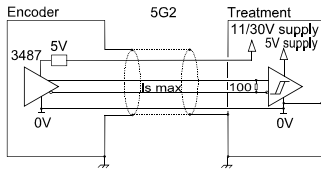
### OUTPUT ELECTRONIC / SUPPLY



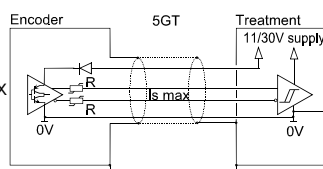
**2G2 electronic (100kHz)**  
Supply : 5Vdc ± 10%  
Cons. without load : 100mA max  
Current per channel : 40mA max  
0 max (I<sub>s</sub>=20mA) : V<sub>ol</sub> = 0,5Vdc  
1 min (I<sub>s</sub>=20mA) : V<sub>oh</sub> = 2,5Vdc



**5G5 electronic (100kHz)**  
Supply : 11 to 30Vdc  
Cons. without load : 75mA max  
Current per channel : 40mA max  
0 max (I<sub>s</sub>=20mA) : V<sub>ol</sub> = 0,5Vdc  
1 min (I<sub>s</sub>=20mA) : V<sub>oh</sub> = V<sub>cc</sub>-3Vdc



**5G2 electronic (100kHz)**  
Supply : 11 to 30Vdc  
Cons. without load : 75mA max  
Current per channel : 40mA max  
0 max (I<sub>s</sub>=20mA) : V<sub>ol</sub> = 0,5Vdc  
1 min (I<sub>s</sub>=20mA) : V<sub>oh</sub> = 2,5Vdc



**5GT electronic, optional (100kHz)**  
Supply : 11 to 30Vdc  
Cons. without load : 75mA max  
Current per channel : 40mA max  
0 max (I<sub>s</sub>=20mA) : V<sub>ol</sub> = 0,5Vdc  
1 min (I<sub>s</sub>=20mA) : V<sub>oh</sub> = V<sub>cc</sub>-2,5Vdc

Electronics 5GT is designed for long and high capacity cables (contact our factory)

Protection against short circuits for the electronics: 5G5, 5GT  
Protection against inversion of polarity for all the electronics except 2G2

### STANDARD CONNECTION

		-	+	A	B	0	A/	B/	0/	Ground
GB	Connection cap	1	2	3	4	5	6	7	8	Cable gland

### ORDERING REFERENCE (Contact the factory for special versions ex: electronics, torque arm ...)

	Shaft Ø	Available electronic		Output signal	Resolution	Connection	Connection orientation							
<b>GHK9</b> Aluminium cover and body	16: 16mm	<b>2G2, 5G2, 5G5, 5GT</b>		9 : A,A/,B,B/,0,0/ (0, A&B gated)	5 000 max	GB: Connection cap	R : radial							
		Supply	Output stages											
		2 : 5Vdc 5 : 11 to 30Vdc	G2 : driver 5Vdc RS422 G5 : push-pull GT : push-pull 11-30Vdc Transistorised											
Ex: GHK9	_	16	//	5		G5		9	//	5 000	//	GB		R

**Available resolutions :** 1 2 3 4 5 6 7 8 9 10 12 13 14 15 16 19 20 21 24 25 26 28 29 30 32 35 36 39 40 43 45 46 48 50 54 56 58 60 62 63 64 66 67 70 72 74 75 76 80 84 86 88 89 90 91 94 96 100 107 110 120 122 123 125 127 128 130 132 135 138 140 147 150 157 159 160 168 169 170 172 175 180 188 191 196 200 201 205 220 222 225 234 240 241 242 245 246 248 250 254 255 256 258 259 267 268 275 283 285 295 300 305 314 315 318 320 330 340 350 360 367 375 378 380 381 388 390 397 400 405 410 424 425 438 443 450 471 480 489 495 500 505 512 515 534 540 550 565 580 600 623 625 628 630 632 635 650 660 700 720 746 750 752 754 800 810 840 860 880 891 900 942 990 1000 1024 1080 1100 1131 1200 1225 1250 1260 1280 1290 1400 1414 1440 1500 1536 1570 1600 1620 1630 1750 1800 1885 2000 2048 2250 2400 2500 2640 3000 3456 3600 3680 3750 4000 4096 4500 4900 5000

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