



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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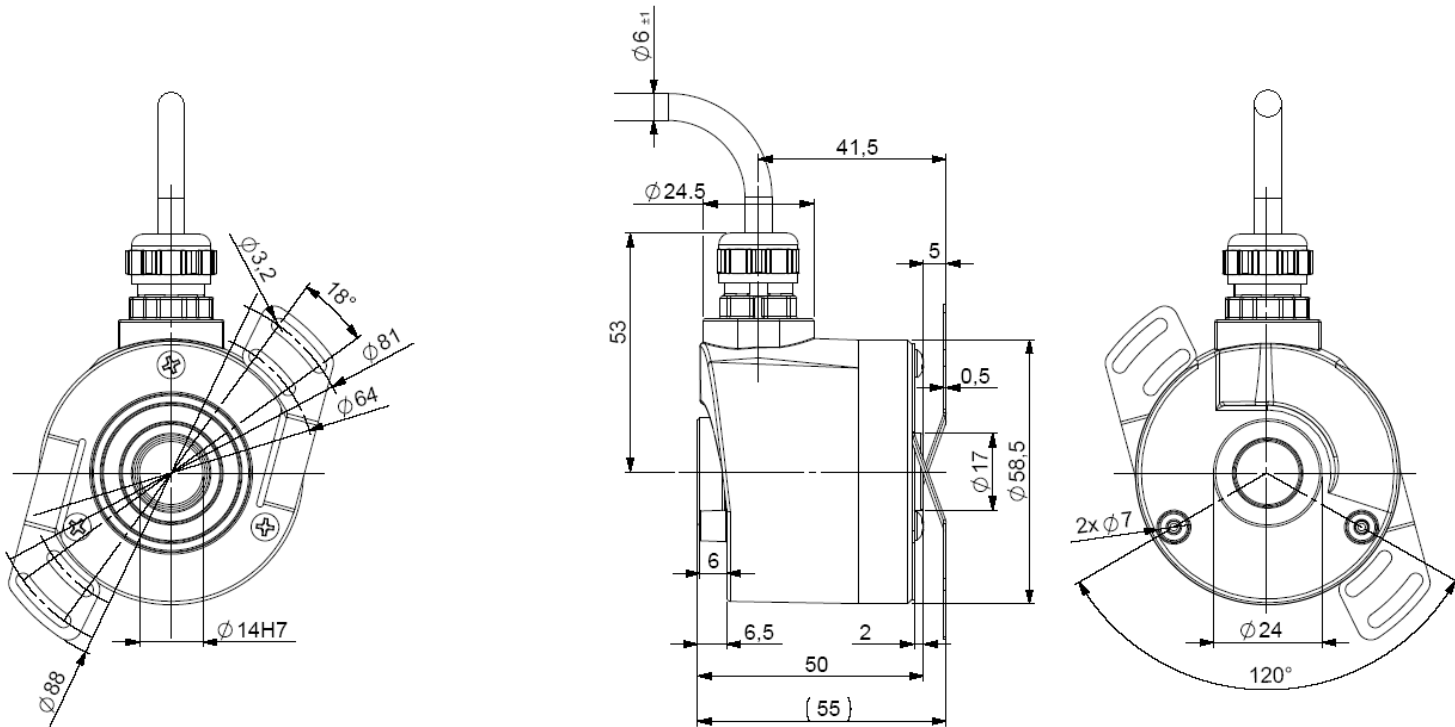
## INCREMENTAL ENCODERS, GH15\_1 RANGE

GH15S14 encoders are specially designed for motorist application – heavy industry

- Ø 14mm through shaft
- Easy mounting with DAC (Anti Coupling Device)
- Robustness and good resistance to shocks and vibrations
- High protection level IP65
- Resolution up to 2 500 ppr
- Universal electronic circuits 5V RS 422 and Push Pull 11 to 30Vdc



GH15\_14 connection G3R (cable output), DAC 9445/015\* mounted on the bearing housing



\* to be order separately

58mm GH15S14 encoders are designed to accept shaft sizes up to 14mm and can be mounted without fixation flange. Immobilization is achieved by a controlled deformation "DAC" with 2 fixation points (ref: M9445/015, accessory to be order separately) which allows an axial misalignment ( $\pm 2$ mm), angular ( $\pm 3^\circ$ ) and radial ( $\pm 0,2$  mm). The "DAC" also allows for  $\pm 10^\circ$  of rotational adjustment for the alignment of the marker pulse, with the two "DAC" oblong holes at  $180^\circ$ . The final mounting is realised with 2 CHC M3 screws

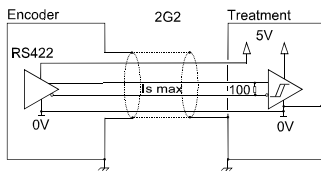
### CHARACTERISTICS

Material	Cover: zamac	Shock (EN60068-2-27)	< 500 m.s <sup>-2</sup> (during 6ms)	
	Body: aluminium	Vibration (EN60068-2-6)	< 100 m.s <sup>-2</sup> (55Hz ... 2 000Hz)	
	Shaft: stainless steel	EMC	EN 61000-6-4, EN 61000-6-2	
Ball bearings	6003 serie	Isolation voltage	1 000 V eff	
Maximal loads	Axial: 50 N	Weight	0,450 kg	
	Radial: 100 N	Operating temperature	- 20... + 80°C (encoder <sup>T</sup> )	
Shaft inertia	$\leq 5 \cdot 10^{-6}$ kg.m <sup>2</sup>	Storage temperature	- 30... + 80°C	
Torque	$\leq 15 \cdot 10^{-3}$ N.m	Protection (EN 60529)	IP 65	
Max. speed (permissible)	9 000 min <sup>-1</sup>	Torque (pressure screw ring)	nominal: 1,5N.m, breaking: 2N.m	
Max. speed (continuous)	6 000 min <sup>-1</sup>	Theoretical mechanical life time 10 <sup>9</sup> turns ( $F_{axial} / F_{radial}$ )		
Shaft seal	Viton	25 N / 50 N : 228	50 N / 100 N : 28	75 N / 150 N : 8

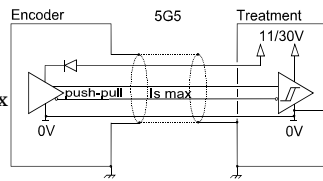


## INCREMENTAL ENCODERS, GHT5\_1 RANGE

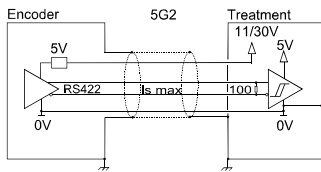
### DIGITAL OUTPUT SIGNALS (SQUARE WAVE SIGNALS)



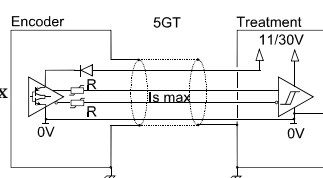
**2G2 electronic**  
Supply : 5Vdc ± 10%  
Cons. without load : 75mA max  
Current per channel : 40mA max  
0 max (I<sub>s</sub>=20mA) : V<sub>ol</sub> = 0,5Vdc  
1 min (I<sub>s</sub>=20mA) : V<sub>oh</sub> = 2,5Vdc



**5G5 electronic**  
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**  
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



**5GTelectronic**  
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> = 1,5Vdc  
1 min (I<sub>s</sub>=20mA) : V<sub>oh</sub> = V<sub>cc</sub>-2,5Vdc

The 5GTelectronic can drive long length of cables (consult us)

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

### STANDARD CONNECTION

		-	+	A	B	0	A/	B/	0/	Ground
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 REFERENCE** (Contact the factory for special versions, ex: electronics, special flanges, connections...)

GHT5	Shaft Ø	Digital signals			Connection	Orientation	
		Electronics : 2G2, PG5, RG2, 5GT	Output signals	resolution			
GHT5	14 : 14mm	2 : 5Vdc	G2 : 5Vdc driver RS422	2 500 max	G6: M23 12 pins CW G5 : M23 12 pins CW G8 : M23 12 pins CCW G2 : DIN 5 pin outs GD: DIN 8 pin outss	R : radial	
		5 : 11 to 30Vdc	G5 : push-pull 11-30Vdc GT: push-pull 11-30Vdc transistorised				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 gated B)
Ex:GHT5_	14 //	5	G5	9 //	1 024 //	G3	Example : R020 : radial cable 2m

**Available resolutions :** 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 19 20 21 23 24 25 26 27 28 29 30 32 33 34 35 36 37 38 40 41 42 43 44 45 48 49 50 52 53 54 55 56 57 58 60 61 62 63 64 66 67 68 69 70 71 72 73 75 78 80 81 84 85 86 87 90 91 92 94 95 96 97 99 100 104 108 109 110 113 114 119 120 122 125 127 128 129 130 131 132 140 147 150 152 155 157 160 167 168 170 176 179 180 182 183 185 188 190 191 192 194 196 200 205 208 209 215 216 217 220 223 226 230 236 240 243 245 246 248 250 251 254 255 256 260 264 273 280 284 285 290 292 300 305 310 314 318 320 325 330 331 333 334 335 340 343 350 355 360 364 367 370 375 380 381 385 392 393 397 400 408 410 420 427 430 450 452 455 470 471 475 480 489 500 512 515 516 520 521 530 534 545 560 565 572 580 600 620 625 628 635 660 672 675 700 712 720 722 730 745 750 754 762 768 785 792 800 819 840 850 864 880 889 895 900 914 927 942 960 1000 1016 1024 1100 1125 1131 1143 1147 1152 1200 1225 1250 1270 1280 1300 1440 1500 1524 1600 1680 1700 1750 1800 1872 1885 1895 1920 2000 2048 2064 2100 2160 2250 2256 2400 2480 2500

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