

**CARATTERISTICHE MECCANICHE - MECHANICAL SPECIFICATIONS**

**Dimensioni - Dimensions:** vedi disegni - see drawings  
**Albero - Shaft:** acciaio inox - stainless steel  
**Carico sull'albero - Shaft loading:** assiale - axial: 200 N; radiale - radial 200 N  
**Numero giri - Shaft rotational speed:** 10.000 RPM per brevi periodi - to short cycle time; 6.000 RPM continui - continuous;  
 2.000 RPM con asse stagno - with proof shaft  
**Vita dei cuscinetti - Bearings life:** 5 x 10<sup>8</sup> giri (minimo) - rev. min.  
**Peso - Weight:** ~ 0,5 kg

**CARATTERISTICHE ELETTRICHE - ELECTRICAL SPECIFICATIONS**

**Codici STD - STD codes:** GRAY - BINARIO - BCD - ANALOGICO; GRAY - BINARY - BCD - ANALOG  
**Frequenza in uscita - output frequency:** da 0 a 20 kHz (L.S.B. senza errore); from 0 to 20 kHz (L.S.B. without error)  
**Protezione - Protection:** contro inversione di polarità (escluso 5Vcc); against inversion of polarity (except 5Vcc)

**MATERIALI UTILIZZATI - MATERIALS**

**Corpo - Flange:** in alluminio anticorrosione - aluminium non corroding  
**Custodia - Housing:** Alluminio verniciato con trattamento termico a 180° C; Aluminium painted with inhibiting treatment 180° C

**CARATTERISTICHE AMBIENTALI - ENVIRONMENTAL SPECIFICATIONS**

**Temperatura di lavoro - Operating temperature range:** -10°C + +70°C  
**Temperatura di stoccaggio - Storage temperature range:** -30°C + +80°C  
**Umidità relativa - Relative humidity:** 98% RH senza condensazione - RH without condensing  
**Vibrazioni - Vibrations:** 10 g (da 10 a 2.000 Hz) - (From 10 up to 2.000 Hz)  
**Schock - Shock:** 20 g (per 11 ms) - (for 11 ms)



**CODICE DI ORDINAZIONE - ORDERING CODE**

**(TKC60) (XX) (XXXX) (XXXX) (XXXXX) (XX) (6) (XXnn) (XX) (XXXX) (Xnnn)**

**MONTAGGIO - ASSEMBLY**

H Flangia servo - Servo flange Ø 58/60  
 SG Servo-Graffe - servo-clip

**PASSI PER GIRO - STEPS**

Vedi elenco delle possibili configurazioni  
 see the list of the possible configurations

**CODICE - CODE**

<b>A</b>	Uscita analogica (1024/360°-180°-90°-45°) Analog output (1024/360°-180°-90°-45°)	
<b>B</b>	codice Binario naturale Binary code natural	
<b>B/0</b>	codice Binario troncato al centro Binary code centrally cut	
<b>B/7</b>	codice Binario /eccesso (18) Binary code/exc (18)	
<b>B/14</b>	codice Binario /eccesso (36) Binary code/exc (36)	
<b>B/19</b>	codice Binario /eccesso (90) Binary code/exc (90)	
<b>B/28</b>	codice Binario /eccesso (72) Binary code/exc (72)	
<b>B/38</b>	codice Binario /eccesso (180) Binary code/exc (180)	
<b>B/76</b>	codice Binario /eccesso (360) Binary code/exc (360)	
<b>B/152</b>	codice Binario /eccesso (720) Binary code/exc (720)	
<b>B/304</b>	codice Binario /eccesso (1440) Binary code/exc (1440)	
<b>D</b>	codice BCD (100+2000) BCD code (100+2000)	
<b>E</b>	codice Gray Exc 3 (100+2000) Excess 3 Gray code (100+2000)	
<b>G</b>	codice Gray naturale Natural Gray code	
<b>G/0</b>	codice Gray troncato al centro Centrally cutted Gray code	
<b>G/7</b>	codice Gray /eccesso (18) Gray code/exc (18)	
<b>G/14</b>	codice Gray /eccesso (36) Gray code/exc (36)	
<b>G/19</b>	codice Gray /eccesso (90) Gray code/exc (90)	
<b>G/28</b>	codice Gray /eccesso (72) Gray code/exc (72)	
<b>G/38</b>	codice Gray /eccesso (180) Gray code/exc (180)	
<b>G/76</b>	codice Gray /eccesso (360) Gray code/exc (360)	
<b>G/152</b>	codice Gray /eccesso (720) Gray code/exc (720)	
<b>G/304</b>	codice Gray /eccesso (1440) Gray code/exc (1440)	

**Alimentazione (Vdc) - Voltage supply**

**5** +5 V ± 5% ; **11/30** +11V +30 V  
**18/30** +18V +30 V solo analogico - only analog

**PASSI PER GIRO - STEPS**

<b>16</b>	16 passi/giro G;B	steps/tum G;B	<b>360</b>	360 passi/giro G;B	steps/tum G;B
<b>18</b>	18 passi/giro G;B	steps/tum G;B	<b>400</b>	400 passi/giro G;B	steps/tum G;B
<b>32</b>	32 passi/giro G;B	steps/tum G;B	<b>500</b>	500 passi/giro G;B	steps/tum G;B
<b>36</b>	36 passi/giro G;B	steps/tum G;B	<b>512</b>	512 passi/giro G;B	steps/tum G;B
<b>64</b>	64 passi/giro G;B	steps/tum G;B	<b>720</b>	720 passi/giro G;B	steps/tum G;B
<b>90</b>	90 passi/giro G;B	steps/tum G;B	<b>900</b>	900 passi/giro G;B	steps/tum G;B
<b>100</b>	100 passi/giro G;B	steps/tum G;B	<b>1000</b>	1000 passi/giro G;B	steps/tum G;B
<b>128</b>	128 passi/giro G;B	steps/tum G;B	<b>1024</b>	1024 passi/giro G;B	steps/tum G;B
<b>180</b>	180 passi/giro G;B	steps/tum G;B	<b>1440</b>	1440 passi/giro G;B	steps/tum G;B
<b>200</b>	200 passi/giro G;B	steps/tum G;B	<b>2000</b>	2000 passi/giro G;B	steps/tum G;B
<b>250</b>	250 passi/giro G;B	steps/tum G;B	<b>2048</b>	2048 passi/giro G;B	steps/tum G;B
<b>256</b>	256 passi/giro G;B	steps/tum G;B			

<b>18</b>	18 passi/giro G/7;B/7	steps/tum G/7;B/7	<b>90</b>	90 passi/giro G/0;B/0	steps/tum G/0;B/0
<b>36</b>	36 passi/giro G/14;B/14	steps/tum G/14;B/14	<b>180</b>	180 passi/giro G/0;B/0	steps/tum G/0;B/0
<b>72</b>	72 passi/giro G/28;B/28	steps/tum G/28;B/28	<b>250</b>	250 passi/giro G/0;B/0	steps/tum G/0;B/0
<b>90</b>	90 passi/giro G/19;B/19	steps/tum G/19;B/19	<b>360</b>	360 passi/giro G/0;B/0	steps/tum G/0;B/0
<b>180</b>	180 passi/giro G/38;B/38	steps/tum G/38;B/38	<b>500</b>	500 passi/giro G/0;B/0	steps/tum G/0;B/0
<b>360</b>	360 passi/giro G/76;B/76	steps/tum G/76;B/76	<b>720</b>	720 passi/giro G/0;B/0	steps/tum G/0;B/0
<b>720</b>	720 passi/giro G/152;B/152	steps/tum G/152;B/152	<b>1000</b>	1000 passi/giro G/0;B/0	steps/tum G/0;B/0
<b>1440</b>	1440 passi/giro G/304;B/304	steps/tum G/304;B/304	<b>1440</b>	1440 passi/giro G/0;B/0	steps/tum G/0;B/0

**Albero - Shaft**  
**6** Ø 6 mm

**OPZIONI - OPTIONS**

- U** Up/Down NPN
- D** Up/Down PNP
- S** Strobe standard (NO x SSI)  
vedi tabella pag. seg. ; see table next page
- I** Strobe invertito - Strobe inverted (NO x SSI)  
vedi tabella pag. seg. ; see table next page
- Z** Segnale di zero - Zero signal (NO x SSI)
- V** Zero visualizzato - Zero displayed (NO x SSI)
- E** "Even" o parità Pari - Even parity (NO x SSI)
- O** "Odd" o parità Dispari - Odd parity (NO x SSI)

**Custom**

**CIRCUITI DI USCITA - OUTPUT CIRCUITS**

- |  |  |
|--|--|
| <b>00</b> TTL log+ (solo 5V - 5 V only)              | <b>10</b> NPN 40 mA Open Collector log+                            |
| <b>01</b> TTL log- (solo 5V - 5 V only)              | <b>11</b> NPN 40 mA pull-up log+ (solo 11/30V - 11/30V only)       |
| <b>02</b> TTL 3-state log+ (solo 5V - 5 V only)      | <b>12</b> NPN 40 mA Open Collector log-                            |
| <b>03</b> TTL 3-state log- (solo 5V - 5 V only)      | <b>13</b> NPN 40 mA pull-up log- (solo 11/30V - 11/30V only)       |
| <b>50</b> TTL log+ Latch (solo 5V - 5V only)         | <b>60</b> NPN open collector + latch                               |
| <b>51</b> TTL log- Latch (solo 5V - 5V only)         | <b>61</b> NPN 40 mA pull-up log+ Latch (solo 11/30V - 11/30V only) |
| <b>52</b> TTL 3-state log+ Latch (solo 5V - 5V only) | <b>62</b> NPN 40 mA Open Collector log-                            |
| <b>53</b> TTL 3-state log- Latch (solo 5V - 5V only) | <b>63</b> NPN 40 mA pull-up log- Latch (solo 11/30V - 11/30V only) |
- 
- |   |   |
|---|---|
| <b>20</b> PNP 100 mA Open Collector log+  | <b>31</b> Uscita analogica 4+20 mA (solo 18/30V)<br>Analog output 4+20 mA (18/30V only) |
| <b>21</b> PNP 100 mA pull-down log+ (solo 11/30V - 11/30V only)                     | <b>32</b> Uscita analogica 1+5 V (solo 18/30V)<br>Analog output 1+5 V (18/30V only)     |
| <b>22</b> NPN 100 mA Open Collector log-  | <b>33</b> Uscita analogica 0+10 V (solo 18/30V)<br>Analog output 0+10 V (18/30V only)   |
| <b>23</b> NPN 100 mA pull-up log- (solo 11/30V - 11/30V only)                       |   |
| <b>30</b> Push Pull protetto cc (solo 11/30V)<br>Push Pull cc protect (11/30V only) |   |
| <b>70</b> PNP 100 mA Open Collector log+ Latch                                      | <b>73</b> NPN 100 mA pull-up log- Latch   |
| <b>71</b> PNP 100 mA pull-down log+ Latch (solo 11/30V-11/30V only)                 | <b>80</b> Push Pull protetto cc Latch (solo 11/30V-11/30V only)                         |
| <b>72</b> NPN 100 mA Open Collector log Latch                                       |   |
- S13D** SSI 13 bit allin destra (solo 11/30V) - SSI 13 bit right alignment (11/30V only)

**CONNESSIONI ELETTRICHE - ELECTRICAL CONNECTIONS**

- Pnn** pressacavo assiale con cavo da 1 a 6 m; on axial cable gland with cable 1 + 6 m long
- PLnn** pressacavo radiale con cavo da 1 a 6 m; radial cable gland with cable 1 + 6 m long
- S 07** connettore circolare militare assiale a 7 poli; on 7 pins axial MIL connector
- S 10** connettore circolare militare assiale a 10 poli; on 10 pins axial MIL connector
- S 26** connettore circolare militare assiale a 26 poli; on 26 pins axial MIL connector
- D 25** connettore submin. assiale a 25 poli; on 25 pins axial DB25 connector
- SL 07** connettore circolare militare radiale a 7 poli; on 7 pins radial MIL connector
- SL 10** connettore circolare militare radiale a 10 poli; on 10 pins radial MIL connector
- SL 26** connettore circolare militare radiale a 26 poli; on 26 pins radial MIL connector
- nn** Lunghezza cavo - Cable length (es. PL10 = 1 m. ... PL60 = 6 m)

**Grado di protezione - Protection class**

- K1** IP 55 (EN60529) solo con **D25** - with **D25** only
- K4** IP 64 (EN60529) - **K5** IP 65 (EN60529) - **K6** IP 66 (EN60529)

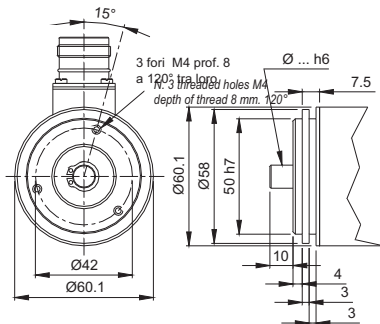
<b>100</b>	100 passi/giro E;D	steps/tum E;D
<b>250</b>	250 passi/giro E;D	steps/tum E;D
<b>360</b>	360 passi/giro E;D	steps/tum E;D
<b>400</b>	400 passi/giro E;D	steps/tum E;D
<b>500</b>	500 passi/giro E;D	steps/tum E;D
<b>720</b>	720 passi/giro E;D	steps/tum E;D
<b>900</b>	900 passi/giro E;D	steps/tum E;D
<b>1000</b>	1000 passi/giro E;D	steps/tum E;D
<b>1440</b>	1440 passi/giro E;D	steps/tum E;D
<b>2000</b>	2000 passi/giro E;D	steps/tum E;D

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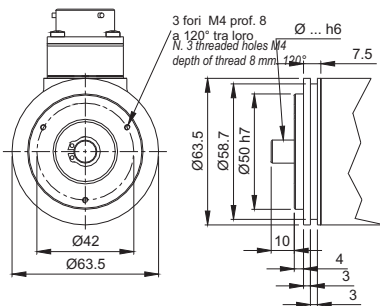
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**MONTAGGIO MECCANICO**  
**MECHANICAL ASSEMBLY**

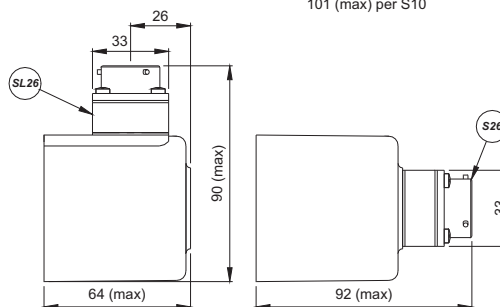
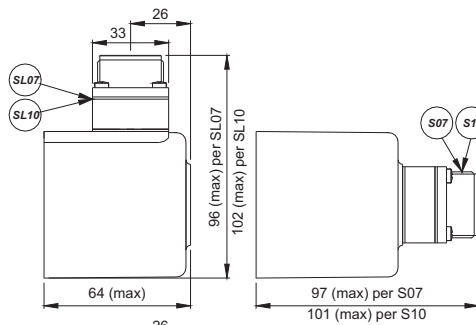
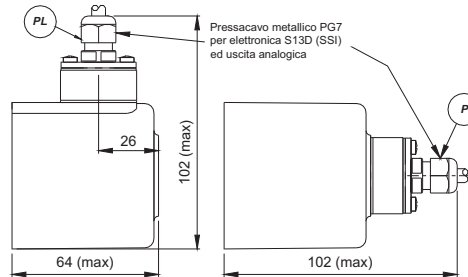
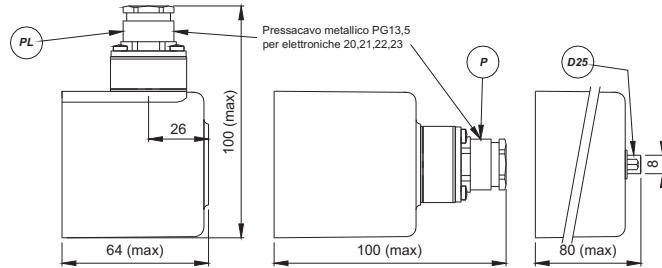


**H Flangia**  
**H Flange**



**SG Servo-graffe**  
**SG Servo-clip**

**CONNESSIONI ELETTRICHE**  
**ELECTRICAL CONNECTIONS**



**VALORI STROBE - STROBE VALUE**

<b>S=</b>	Strobe custom	Strobe custom	<b>S 200</b>	Strobe 20 µs	Strobe 20 µs
<b>I 200</b>	Strobe invertito 20 µs	Inverted strobe 20 µs	<b>S 500</b>	Strobe 50 µs	Strobe 50 µs
<b>I 500</b>	Strobe invertito 50 µs	Inverted strobe 50 µs	<b>S 101</b>	Strobe 100 µs	Strobe 100 µs
<b>I 101</b>	Strobe invertito 100 µs	Inverted strobe 100 µs	<b>S 201</b>	Strobe 200 µs	Strobe 200 µs
<b>I 201</b>	Strobe invertito 200 µs	Inverted strobe 200 µs	<b>S 501</b>	Strobe 500 µs	Strobe 500 µs
<b>I 501</b>	Strobe invertito 500 µs	Inverted strobe 500 µs	<b>S 102</b>	Strobe 1 ms	Strobe 1 ms
<b>I 102</b>	Strobe invertito 1 ms	Inverted strobe 1 ms	<b>S 202</b>	Strobe 2 ms	Strobe 2 ms
<b>I 202</b>	Strobe invertito 2 ms	Inverted strobe 2 ms	<b>S 502</b>	Strobe 5 ms	Strobe 5 ms
<b>I 502</b>	Strobe invertito 5 ms	Inverted strobe 5 ms	<b>S 103</b>	Strobe 10 ms	Strobe 10 ms
<b>I 103</b>	Strobe invertito 10 ms	Inverted strobe 10 ms	<b>S 203</b>	Strobe 20 ms	Strobe 20 ms
<b>I 203</b>	Strobe invertito 20 ms	Inverted strobe 20 ms	<b>S 503</b>	Strobe 50 ms	Strobe 50 ms
<b>I 503</b>	Strobe invertito 50 ms	Inverted strobe 50 ms	<b>S 104</b>	Strobe 100 ms	Strobe 100 ms
<b>I 104</b>	Strobe invertito 100 ms	Inverted strobe 100 ms	<b>S 204</b>	Strobe 200 ms	Strobe 200 ms
<b>I 204</b>	Strobe invertito 200 ms	Inverted strobe 200 ms			

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