

**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 up 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-cup

**PASSI PER GIRO - STEPS**

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

**CODICE - CODE**

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

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

|      |                             |                        |      |                         |                    |
|------|-----------------------------|------------------------|------|-------------------------|--------------------|
| 18   | 18 passi/giro G/7;B/7       | steps/turn G/7;B/7     | 90   | 90 passi/giro G/0;B/0   | steps/turn G/0;B/0 |
| 36   | 36 passi/giro G/14;B/14     | steps/turn G/14;B/14   | 180  | 180 passi/giro G/0;B/0  | steps/turn G/0;B/0 |
| 72   | 72 passi/giro G/28;B/28     | steps/turn G/28;B/28   | 250  | 250 passi/giro G/0;B/0  | steps/turn G/0;B/0 |
| 90   | 90 passi/giro G/19;B/19     | steps/turn G/19;B/19   | 360  | 360 passi/giro G/0;B/0  | steps/turn G/0;B/0 |
| 180  | 180 passi/giro G/38;B/38    | steps/turn G/38;B/38   | 500  | 500 passi/giro G/0;B/0  | steps/turn G/0;B/0 |
| 360  | 360 passi/giro G/76;B/76    | steps/turn G/76;B/76   | 720  | 720 passi/giro G/0;B/0  | steps/turn G/0;B/0 |
| 720  | 720 passi/giro G/152;B/152  | steps/turn G/152;B/152 | 1000 | 1000 passi/giro G/0;B/0 | steps/turn G/0;B/0 |
| 1440 | 1440 passi/giro G/304;B/304 | steps/turn G/304;B/304 | 1440 | 1440 passi/giro G/0;B/0 | steps/turn 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)

**CIRCUITI DI USCITA - OUTPUT CIRCUITS**

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

**CONNESSIONI ELETTRICHE - ELECTRICAL CONNECTIONS**

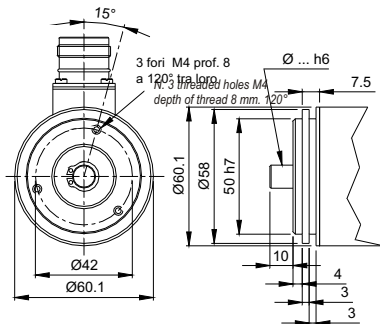
- Pnn pressacavo assiale con cavo da 1 a 6 m; on axial cable gland with cable 1 + 6 m long
- PLnn pressacavo radiale con cavo da 1 a 6 m; radial cable gland with cable 1 + 6 m long
- S 07 connettore circolare militare assiale a 7 poli; on 7 pins axial MIL connector
- S 10 connettore circolare militare 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**

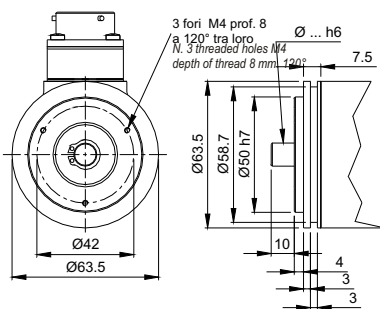
- K1 IP 55 (EN60529) solo con D25 - with D25 only
- K4 IP 64 (EN60529) - K5 IP 65 (EN60529) - K6 IP 66 (EN60529)

|     |                    |                |          |   |      |                     |                |
|-----|--------------------|----------------|----------|---|------|---------------------|----------------|
| 100 | 100 passi/giro E;D | steps/turn E;D | 1024/360 | 1024 passi/360° (solo uscita analogica)<br>1024 steps/360° (analog output only) | 400  | 400 passi/giro E;D  | steps/turn E;D |
| 250 | 250 passi/giro E;D | steps/turn E;D | 512/180  | 512 passi/180° (solo uscita analogica)<br>512 steps/180° (analog output only)   | 500  | 500 passi/giro E;D  | steps/turn E;D |
| 360 | 360 passi/giro E;D | steps/turn E;D | 256/90   | 256 passi/90° (solo uscita analogica)<br>256 steps/90° (analog output only)     | 720  | 720 passi/giro E;D  | steps/turn E;D |
| 400 | 400 passi/giro E;D | steps/turn E;D | 128/45   | 128 passi/45° (solo uscita analogica)<br>128 steps/45° (analog output only)     | 900  | 900 passi/giro E;D  | steps/turn E;D |
| 500 | 500 passi/giro E;D | steps/turn E;D |          |   | 1000 | 1000 passi/giro E;D | steps/turn E;D |
| 720 | 720 passi/giro E;D | steps/turn E;D |          |   | 1440 | 1440 passi/giro E;D | steps/turn E;D |
| 900 | 900 passi/giro E;D | steps/turn E;D |          |   | 2000 | 2000 passi/giro E;D | steps/turn E;D |

## MONTAGGIO MECCANICO MECHANICAL ASSEMBLY

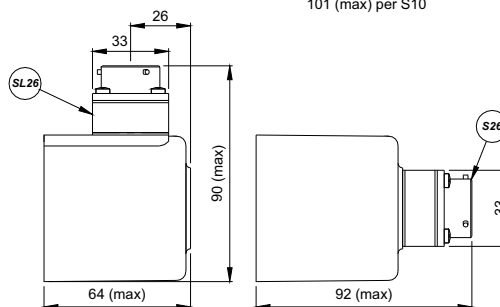
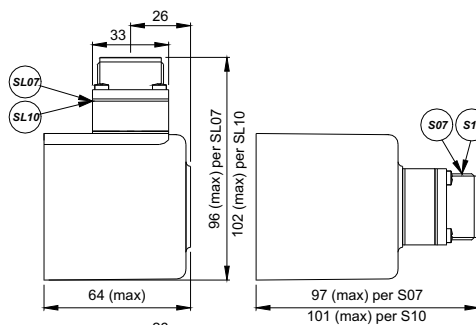
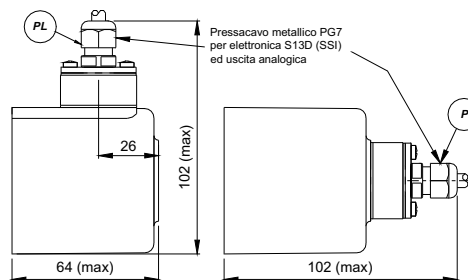
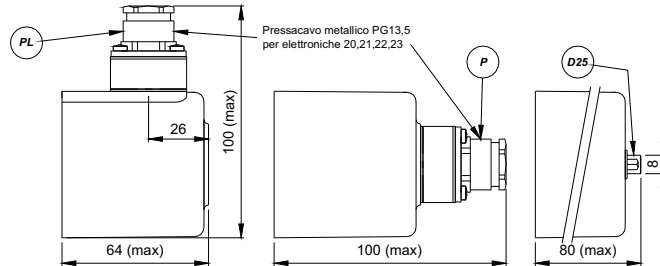


**H Flangia**  
**H Flange**



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

## CONNESSIONI ELETTRICHE ELECTRICAL CONNECTIONS



### VALORI STROBE - STROBE VALUE

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