

**CARATTERISTICHE MECCANICHE - MECHANICAL SPECIFICATIONS**

**Dimensioni - Dimensions:** vedi disegni - see drawings  
**Albero - Shaft:** acciaio inox - stainless steel  
**Carico sull'albero - Shaft loading:** assiale - axial: 25 N; radiale - radial 25 N  
**Numero giri - Shaft rotational speed:** 6.000 RPM continui - continuous  
**Vita dei cuscinetti - Bearings life:** 5 x 10<sup>6</sup> giri (minimo) - rev. min.  
**Peso - Weight:** ~1,1 kg Assiale - Axial; 1,3 Kg Radiale (senza flangia) - Radial (without flange)

**CARATTERISTICHE ELETTRICHE - ELECTRICAL SPECIFICATIONS**

**Codici STD - STD codes:** GRAY - BINARIO - BCD - ECCESSO 3 - ANALOGICO; GRAY - BINARIO - BCD - EXCESS 3 - 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 anticoroda anodizzato - aluminium non corroding passived  
**Custodia - Housing:** in alluminio anticoroda anodizzato - aluminium non corroding passived

**CARATTERISTICHE AMBIENTALI - ENVIRONMENTAL SPECIFICATIONS**

**Temperatura di lavoro - Operating temperature range:** -20°C ÷ +45°C  
**Temperatura di stoccaggio - Storage temperature range:** -30°C ÷ +85°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)



ATEX



**CODICE DI ORDINAZIONE - ORDERING CODE**

**TIAEEX70** . **XXX** . **XXXX** . **XXXX** . **XXXXX** . **K4** . **XX** . **XXnn** . **XXXX** . **XXXX** . **Xnnn**

**MONTAGGIO - ASSEMBLY**

**F** Flangia Quadra - Square flange  
**SG** Servo-Graffe - servo-clip  
**FRE** Flangia - Flange REO 444

**Albero - Shaft**

**10** Ø 10 mm  
**11** Ø 11 mm x 28 mm

**OPZIONI - OPTIONS**

**U** Up/Down NPN  
**D** Up/Down PNP  
**S** Strobe standard (vedi tabella - see table; NO x SSI)  
**V** Segnale di zero - Zero out (NO x SSI)  
**E** Parità "Even" o parità Pari - Even parity (NO x SSI)  
**O** Parità "Odd" o parità Dispari - Odd parity (NO x SSI)  
**L** Latch NPN - Latch NPN

**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 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+7200) BCD code (100+7200)  
**E** codice Gray Exc 3 (100+7200) Excess 3 Gray code (100+7200)  
**G** codice Gray naturale Natural Gray code  
**G/0** codice Gray troncato centr 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)

**VALORI STROBE - STROBE VALUE**

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

**CIRCUITI DI USCITA - OUTPUT CIRCUITS**

<b>10</b> NPN 40 mA Open Collector log+	<b>31</b> Uscita analogica 4+20 mA (solo 18/30V) Analog output 4+20 mA (18/30V only)
<b>11</b> NPN 40 mA pull-up log+ (solo 11/30V - 11/30V only)	<b>32</b> Uscita analogica 1+5 V (solo 18/30V) Analog output 1+5 V (18/30V only)
<b>12</b> NPN 40 mA Open Collector log-	<b>33</b> Uscita analogica 0+10 V (solo 18/30V) Analog output 0+10 V (18/30V only)
<b>13</b> NPN 40 mA pull-up log- (solo 11/30V - 11/30V only)	
<b>20</b> PNP 100 mA Open Collector log+	
<b>21</b> PNP 100 mA pull-down log+ (solo 11/30V - 11/30V only)	
<b>22</b> NPN 100 mA Open Collector log-	
<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) Push Pull cc protect (11/30V only)	<b>S13D</b> SSI 13 bit allin destra (solo 11/30V) SSI 13 bit right alignment (11/30V only)

**Alimentazione (Vdc) - Voltage supply**

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

**IMPULSI GIRO - PULSE RATE**

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

**CONNESSIONI ELETTRICHE - ELECTRICAL CONNECTIONS**

**P** pressacavo assiale con cavo da 1 a 6 m; on axial cable gland with cable 1 ÷ 6 m long  
**PL** pressacavo radiale con cavo da 1 a 6 m; radial cable gland with cable 1 ÷ 6 m long  
**RA** raccordo ½" GAS maschio assiale con cavo da 1 a 6 m;  
 on axial tap nipple ½" GAS with cable 1 ÷ 6 m long  
**RL** raccordo ½" GAS maschio radiale con cavo da 1 a 6 m;  
 on radial tap nipple ½" GAS with cable 1 ÷ 6 m long  
**GA** raccordo ½" GAS femmina assiale con cavo da 1 a 6 m;  
 on axial female nipple ½" GAS with cable 1 ÷ 6 m long  
**GL** raccordo ½" GAS femmina radiale con cavo da 1 a 6 m;  
 On radial female nipple ½" GAS with cable 1 ÷ 6 m long  
**nn** Lunghezza cavo - Cable length (es. PL10 = 1 m ... PL60 = 6 m)

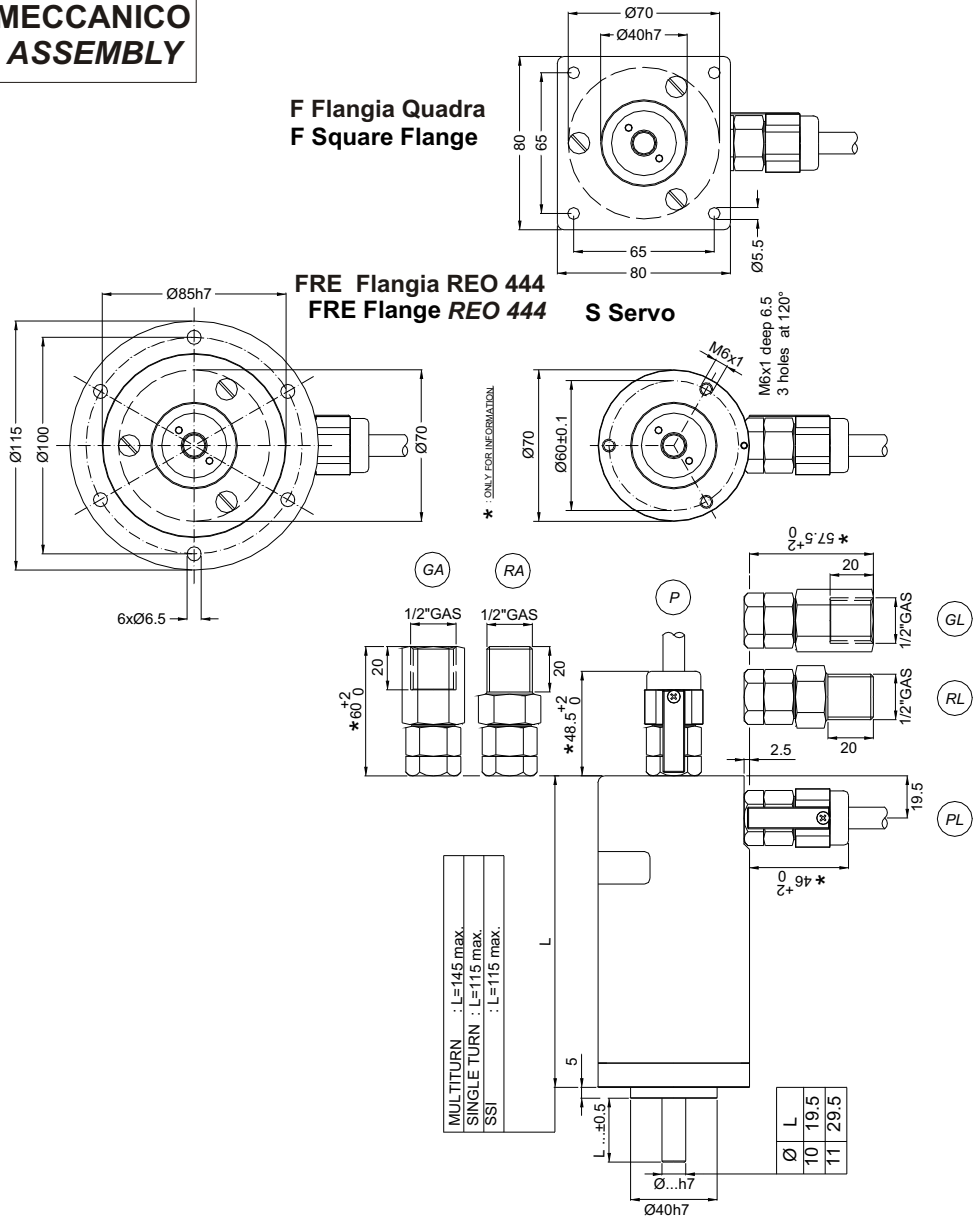
**Grado di protezione - Protection class**

**K4** IP 64 (EN60529)

<b>18</b> 18 passi/giro G/7;B/7 steps/turn G/7;B/7	<b>90</b> 90 passi/giro G/0;B/0 steps/turn G/0;B/0	<b>1024/360</b> 1024 passi/360° (solo uscita analogica) 1024 steps/360° (analog output only)
<b>36</b> 36 passi/giro G/14;B/14 steps/turn G/14;B/14	<b>180</b> 180 passi/giro G/0;B/0 steps/turn G/0;B/0	<b>512/180</b> 512 passi/180° (solo uscita analogica) 512 steps/180° (analog output only)
<b>72</b> 72 passi/giro G/28;B/28 steps/turn G/28;B/28	<b>250</b> 250 passi/giro G/0;B/0 steps/turn G/0;B/0	<b>256/90</b> 256 passi/90° (solo uscita analogica) 256 steps/90° (analog output only)
<b>90</b> 90 passi/giro G/19;B/19 steps/turn G/19;B/19	<b>360</b> 360 passi/giro G/0;B/0 steps/turn G/0;B/0	<b>128/45</b> 128 passi/45° (solo uscita analogica) 128 steps/45° (analog output only)
<b>180</b> 180 passi/giro G/38;B/38 steps/turn G/38;B/38	<b>500</b> 500 passi/giro G/0;B/0 steps/turn G/0;B/0	
<b>360</b> 360 passi/giro G/76;B/76 steps/turn G/76;B/76	<b>720</b> 720 passi/giro G/0;B/0 steps/turn G/0;B/0	
<b>720</b> 720 passi/giro G/152;B/152 steps/turn G/152;B/152	<b>1000</b> 1000 passi/giro G/0;B/0 steps/turn G/0;B/0	
<b>1440</b> 1440 passi/giro G/304;B/304 steps/turn G/304;B/304	<b>1440</b> 1440 passi/giro G/0;B/0 steps/turn G/0;B/0	

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

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



Execution according to:

**ATEX EN 50021**  
**UL1604**  
**CSA 22.2 N. 213 M1987.**

Certification code **EEx-nA IIC T6** means:

- **EEx** : means that the device has been certified according to the ATEX and UL/CSA safety rules;
- **nA** : n = type of protection "n" (EN50021); **A** = non sparking apparatus
- **II** : Device certified for operation in potentially explosive areas except the mines in which grisou gas is present;
- **C** : Engineered with an experimental interstice with the maximum security (MESG);
- **T6** : Maximum body surface temperature 85 °C as per En50014.