

**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:** 10<sup>8</sup> giri (minimo) - rev. min.  
**Peso - Weight:** ~1,0 Kg.

**CARATTERISTICHE ELETTRICHE - ELECTRICAL SPECIFICATIONS**

**Codici STD - STD codes:** GRAY - BINARIO - BCD - ECCESSO 3 - ANALOGICO; GRAY - BINARIO - BCD - ECCESSO 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 anticorrosivo anodizzato - aluminium non corroding passived  
**Custodia - Housing:** in alluminio anticorrosivo 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:** -40°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)



HAZARDOUS LOCATIONS CLASS I,  
DIV. 1, GROUPS C AND D



CE 0539 II 2 G  
EEEx d IIB T6  
05 ATEX 140087

**CODICE DI ORDINAZIONE - ORDERING CODE**

**TIAEEX70W** . **X** . **XXXX** . **XXXX** . **XXXXX** . **K4** . **XX** . **XXnn** . **XXXX** . **XXXX** . **Xnnn**

**MONTAGGIO - ASSEMBLY**

**M** Fissaggio con molle antirotazione  
Flange with antirotation springs  
**S** Standard senza molle antirotazione  
Standard without antirotation springs

**Albero cavo - Hollow shaft**

**8** Ø 8 mm  
**10** Ø 10 mm  
**11** Ø 11 mm  
**12** Ø 12 mm  
**12,7** Ø 12,7 mm  
**15** Ø 15 mm

**Custom**

**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+2000) Excess 3 Gray code (100+2000)  
**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)
<b>11</b> NPN 40 mA pull-up log+ (solo 11/30V - 11/30V only)	<b>Analogue output 4÷20 mA (18/30V only)</b>
<b>12</b> NPN 40 mA Open Collector log-	<b>32</b> Uscita analogica 1÷5 V (solo 18/30V)
<b>13</b> NPN 40 mA pull-up log- (solo 11/30V - 11/30V only)	<b>Analogue output 1÷5 V (18/30V only)</b>
<b>20</b> PNP 100 mA Open Collector log+	<b>33</b> Uscita analogica 0÷10 V (solo 18/30V)
<b>21</b> PNP 100 mA pull-down log+ (solo 11/30V - 11/30V only)	<b>Analogue output 0÷10 V (18/30V only)</b>
<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>S13D</b> SSI 13 bit allin destra (solo 11/30V)
<b>30</b> Push Pull protetto cc (solo 11/30V)	<b>SSI 13 bit right alignment (11/30V only)</b>
<b>Push Pull cc protect (11/30V only)</b>	

**CONNESSIONI ELETTRICHE - ELECTRICAL CONNECTIONS**

**RA nn** raccordo 1/2" GAS maschio assiale con cavo da 1 a 6 m;  
on axial tap nipple 1/2" GAS with cable 1 + 6 m long  
**RL nn** raccordo 1/2" GAS maschio radiale con cavo da 1 a 6 m;  
on radial tap nipple 1/2" GAS with cable 1 + 6 m long  
**GA nn** raccordo 1/2" GAS femmina assiale con cavo da 1 a 6 m;  
on axial female nipple 1/2" GAS with cable 1 + 6 m long  
**GLnn** raccordo 1/2" GAS femmina radiale con cavo da 1 a 6 m;  
on radial female nipple 1/2" 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)

**Alimentazione (Vdc) - Supply voltage**

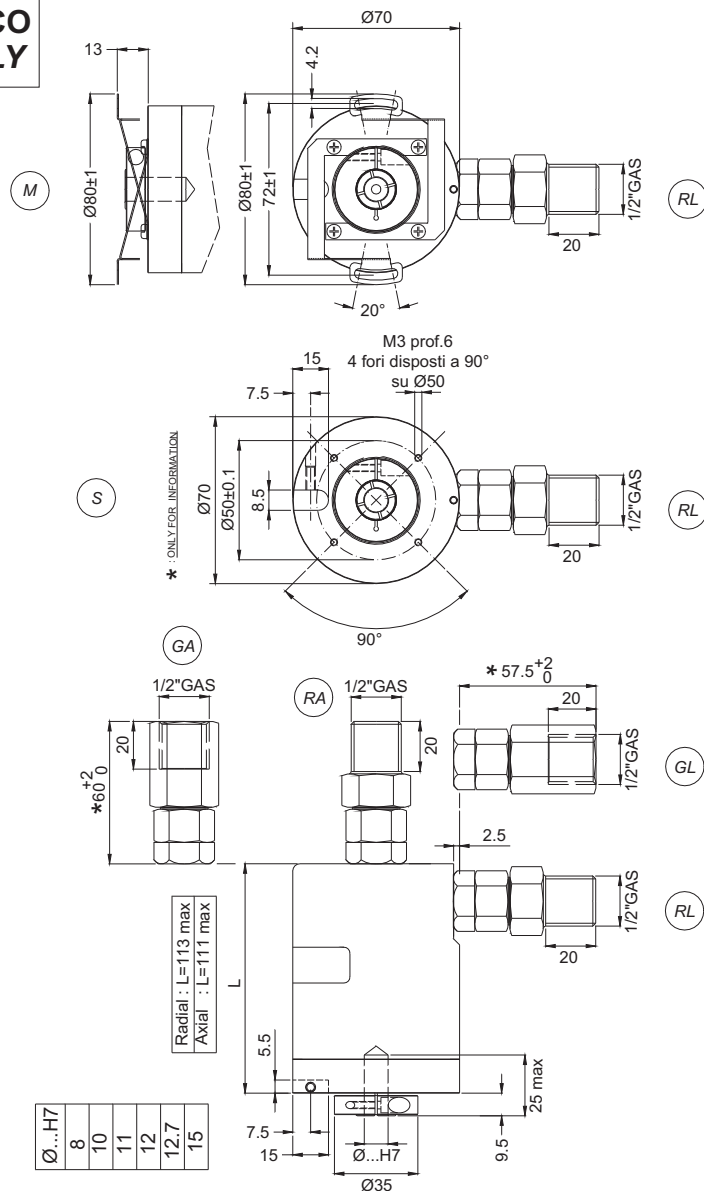
**5** +5 V ±5 % ; **11/30** +11V ±30 V  
**18/30** +18V ±30 V solo analogico - only analog

**PASSI PER GIRO - STEPS**

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

<b>18</b> 18 passi/giro G/7;B/7	<b>steps/turn G/7;B/7</b>	<b>90</b> 90 passi/giro G/0;B/0	<b>steps/turn G/0;B/0</b>	<b>1024/360</b> 1024 passi/360° (solo uscita analogica)	<b>100</b> 100 passi/giro E;D	<b>steps/turn E;D</b>
<b>36</b> 36 passi/giro G/14;B/14	<b>steps/turn G/14;B/14</b>	<b>180</b> 180 passi/giro G/0;B/0	<b>steps/turn G/0;B/0</b>	<b>1024 steps/360° (analog output only)</b>	<b>250</b> 250 passi/giro E;D	<b>steps/turn E;D</b>
<b>72</b> 72 passi/giro G/28;B/28	<b>steps/turn G/28;B/28</b>	<b>250</b> 250 passi/giro G/0;B/0	<b>steps/turn G/0;B/0</b>	<b>512/180</b> 512 passi/180° (solo uscita analogica)	<b>360</b> 360 passi/giro E;D	<b>steps/turn E;D</b>
<b>90</b> 90 passi/giro G/19;B/19	<b>steps/turn G/19;B/19</b>	<b>360</b> 360 passi/giro G/0;B/0	<b>steps/turn G/0;B/0</b>	<b>512 steps/180° (analog output only)</b>	<b>400</b> 400 passi/giro E;D	<b>steps/turn E;D</b>
<b>180</b> 180 passi/giro G/38;B/38	<b>steps/turn G/38;B/38</b>	<b>500</b> 500 passi/giro G/0;B/0	<b>steps/turn G/0;B/0</b>	<b>256/90</b> 256 passi/90° (solo uscita analogica)	<b>500</b> 500 passi/giro E;D	<b>steps/turn E;D</b>
<b>360</b> 360 passi/giro G/76;B/76	<b>steps/turn G/76;B/76</b>	<b>720</b> 720 passi/giro G/0;B/0	<b>steps/turn G/0;B/0</b>	<b>256 steps/90° (analog output only)</b>	<b>720</b> 720 passi/giro E;D	<b>steps/turn E;D</b>
<b>720</b> 720 passi/giro G/152;B/152	<b>steps/turn G/152;B/152</b>	<b>1000</b> 1000 passi/giro G/0;B/0	<b>steps/turn G/0;B/0</b>	<b>128/45</b> 128 passi/45° (solo uscita analogica)	<b>900</b> 900 passi/giro E;D	<b>steps/turn E;D</b>
<b>1440</b> 1440 passi/giro G/304;B/304	<b>steps/turn G/304;B/304</b>	<b>1440</b> 1440 passi/giro G/0;B/0	<b>steps/turn G/0;B/0</b>	<b>128 steps/45° (analog output only)</b>	<b>1000</b> 1000 passi/giro E;D	<b>steps/turn E;D</b>
					<b>1440</b> 1440 passi/giro E;D	<b>steps/turn E;D</b>
					<b>2000</b> 2000 passi/giro E;D	<b>steps/turn E;D</b>

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



Execution according to:

**ATEX EN 50018**  
**UL1203**  
**C22.2 N°. 30-M1986**

Certification code **EEx-d IIB T6** means:

- **EEx** : means that the device has been certified according to the ATEX and UL/CSA safety rules;
- **d** : custodia a prova di esplosione / flame proof case
- **II** : Device certified for operation in potentially explosive areas except the mines in which grisou gas is present; (hazardous locations)
- **B** : Suited for the use in environments containing gases/fumes of Ethylene,Propane
- **T6** : Maximum body surface temperature 40 °C as per EN50014.