

TDT100

solid shaft

Ø 115



Italsensor Quality System certified according to the UNI EN ISO 9001



Features:

TDT100 - Heavy duty encoder with integrated tachogenerator.

- resolution up to 10.000 ppr;
- protection degree up to IP65;
- connector output;



MECHANICAL SPECIFICATIONS/ CARATTERISTICHE MECCANICHE

Dimensions/ *Dimensioni*

Shaft loading/ *Carico sull'albero*

Shaft Rotation Speed/ *Numero giri*

Bearing life/ *Vita dei cuscinetti*

Weight/ *Peso*

see drawings/ vedi disegni
axial 200 N; radial 200 N/ assiale 200 N; radiale 200 N
5.000 RPM (continuous/ continui)
5 x 10⁹ rev. min./ giri (minimo)
~ 1,1 kg

ELECTRICAL SPECIFICATIONS/ CARATTERISTICHE ELETTRICHE

Resolution/ *Risoluzione*

Power supply/ *Alimentazione*

Output frequency/ *Frequenza in uscita*

Synchronous index output/ *Sincronismo di zero*

Supply current without load/ *Assorbimento in corrente*

Protection/ *Protezione*

10.000 ppr; others on demand/ 10.000 ppr; altri a richiesta
5 V; 24/5 V; 11÷30 V
up to 300 kHz/ fino a 300 kHz
on A default, B- A+B optional/ su canale A predefinito - B- A+B a richiesta
150 mA max
short circuit protection, no limit duration (only output LD2 and PP2);
against inversion of polarity (except 5V) /
contro il cortocircuito (solo elettronica LD2 e PP2);
contro inversione di polarità (escluso 5V)

MATERIALS/ MATERIALI UTILIZZATI

Flange/ *Flangia*

Housing/ *Corpo*

Shaft/ *Albero*

aluminum anticorodal thermally stabilized/
in aluminium anticorodal stabilizzato termicamente
aluminum painted with inhibited treatment 180°C /
aluminium verniciato con trattamento termico 180°C
stainless steel/ acciaio inox

ENVIRONMENTAL SPECIFICATIONS/ CARATTERISTICHE AMBIENTALI

Operating temperature range/ *Temperatura di lavoro*

Storage temperature range/ *Temperatura di stoccaggio*

Protection degree/ *Grado di protezione* (EN 60529)

Relative humidity/ *Umidità relativa*

Vibrations/ *Vibrazioni* (EN 60068-2-6)

Shock resistance/ *Resistenza a shock* (EN 60068-2-27)

-10°C ÷ +70 °C
-30°C ÷ +80 °C
IP65
98% RH without condensing/ senza condensazione
10 g (from 10 up to 2.000 Hz) / (da 10 a 2.000 Hz)
20 g (for 11 ms) / (per 11 ms)

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ORDER CODE

TDTXXX. FRE . XXXXX . XXXXX . X . XX . 11 . XXX . XXX-XXXX . Xnnn

a

b

c

d

e

f

g

h

i

j

a MODEL/ MODELLO

| | |
|---------------|--|
| TDT110 | unidirectional / monodirezionale |
| TDT111 | unidirectional + index/ monodirezionale + zero |
| TDT120 | bidirectional / bidirezionale |
| TDT121 | bidirectional + index/ bidirezionale + zero |

b ASSEMBLY/ MONTAGGIO

| | |
|------------|----------------------|
| FRE | Flange REO - REO 444 |
|------------|----------------------|

c PULSE RATE/ IMPULSI GIRO

2 - 5 - 10 - 20 - 25 - 30 - 32 - 36 - 40 - 50 - 60 - 64 - 72 - 80 - 88 - 90 - 100 - 120 - 125 - 127 - 128 - 150 - 162 - 180 - 183 - 200 - 240 - 250 - 254 - 256 - 300 - 314 - 360 - 375 - 390 - 400 - 500 - 512 - 576 - 600 - 625 - 635 - 720 - 750 - 800 - 900 - 1000 - 1024 - 1200 - 1250 - 1270 - 1440 - 1500 - 1800 - 2000 - 2048 - 2500 - 2540 - 2700 - 3600 - 4096 - 5000 - 9000 - 10.000

others on demand/ altri a richiesta

d POWER SUPPLY/ ALIMENTAZIONE

| | |
|--------------|-----------------------------|
| 5 | +5 V ±5 % |
| 11/30 | +11÷30 V |
| 24/5 | +11/30 V supply +5 V output |

e OUTPUT FREQUENCY/ FREQUENZA IN USCITA

| | |
|----------|---|
| S | from 0 a - up to 100 kHz / da 0 a 100 kHz |
| V | from 0 a - up to 300 kHz / da 0 a 300 kHz |

f PROTECTION DEGREE/ GRADO DI PROTEZIONE

| | |
|-----------|-----------------|
| K4 | IP 64 (EN60529) |
| K5 | IP 65 (EN60529) |

g SHAFT/ ALBERO

| | |
|-----------|---------|
| 11 | Ø 11 mm |
|-----------|---------|

h ELECTRICAL CONNECTIONS/ CONNESSIONI ELETTRICHE

| | |
|---------------|--|
| OUTPUT | S ; P ; OC ; OP ; PP2 ; LD ; LD2 (except/ escluso TDT121) |
| L07 | on 7 pins radial MIL connector/ connettore circolare militare radiale a 7 poli; |
| R1 | on 12 pins radial "contact" connector/ connettore circolare "contact" radiale a 12 poli; |

| | |
|---------------|--|
| OUTPUT | LD ; LD2 (only/ solo TDT121) |
| L10 | on 10 pins radial MIL connector/ connettore circolare militare radiale a 10 poli; |
| R1 | on 12 pins radial "contact" connector/ connettore circolare "contact" radiale a 12 poli; |

| | |
|-----------|--|
| nn | cable length/ lunghezza cavo (es. PL10 = 1 m. ...PL60 = 6 m) |
|-----------|--|

i OUTPUT CIRCUITS/ CIRCUITI DI USCITA

| | |
|-----------------|---|
| S | NPN standard (resistor included- resistenza di pull-up inclusa) |
| OC | NPN open collector |
| P | PNP (resistor included resistenza di pull-down inclusa) |
| OP | PNP open collector |
| PP2-5 | Push-Pull 5 V output 5 V |
| PP2-1130 | Push-Pull 11/30 Vcc output (only with voltage supply - solo con alimentazione 11/30 V) |
| LD | Line driver RS422 (26LS31) only - solo 5 V or 24/5V |
| LD2-5 | Line driver 5 Vcc output only - solo 5 V |
| LD2-1130 | Line driver 11/30 Vcc output (only with voltage supply - solo con alimentazione 11/30V) |

j CUSTOM

| | |
|---------------|-------------------------------------|
| CUSTOM | custom execution/ esecuzione custom |
|---------------|-------------------------------------|

Technical drawing of a cylindrical component, showing two views: a side view and a front view.

Side View Dimensions:

- Total length: 140
- Shaft diameter: $\varnothing 11h7$
- Flange width: 3.5
- Main body diameter: $\varnothing 98$
- Distance from shaft center to top of main body: 72.6
- Top flange width: 35
- Offset of top flange: 29.5
- Top flange thickness: 8.5

Front View Dimensions:

- Total diameter: $\varnothing 115$
- Central bore diameter: $\varnothing 85h6$
- Distance from shaft center to top of main body: 63.6
- Distance from shaft center to top of top flange: 50
- 6 holes $\varnothing 6.5$ on $\varnothing 100$

| | |
|---|--------------------------|
| Voltage/ Tensione generata | 60V/1.000 turn/min. 5 mA |
| Max. current/ Corrente massima ammessa | 70 mA |
| Linear error/ Errore di linearità | max. 0,2% |
| Ripple peak-peak/ Ondulazione picco-picco | max. 1% |