

TK25

solid shaft

Ø 44



Italsensor Quality System certified according to the UNI EN ISO 9001



## Features:

TK25 - an economic incremental optical encoder suitable for different industrial applications, thanks to its versatility, compact design and high protection degree.

- compact and economic encoder for various applications;
- wide range of flanges;
- resolution up to 2.000 ppr; others on demand;
- protection degree up to IP66;
- cable and connector outputs.



## MECHANICAL SPECIFICATIONS/ CARATTERISTICHE MECCANICHE

Dimensions/ *Dimensioni*

Shaft/ *Albero*

Shaft loading/ *Carico sull'albero*

Shaft Rotation Speed/ *Numero giri*

Starting torque at 25°C/ *Coppia di partenza a 25 °C*

Moment of inertial/ *Momento di inerzia*

Bearing life/ *Vita dei cuscinetti*

Weight/ *Peso*

see drawings/ *vedi disegni*  
 stainless steel/ *acciaio inossidabile*  
 axial/ *assiale* 40 N; radial/ *radiale* 40 N  
 10.000 RPM (short cycle time/ *brevi periodi*) 6.000 RPM (continuous/ *continui*)  
 2.000 turn/min with protection shaft/ *giri/min con asse stagno*  
 0,005 Nm; 0,006 Nm with proof shaft /*con asse stagno*  
 6 g cm<sup>2</sup>  
 5 x 10<sup>9</sup> rev. min./ *giri (minimo)*  
 ~ 0,23 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*

2.000 ppr; others on demand/ 2.000 ppr; altri a richiesta  
 5 V; 24/5 V; 11÷30 V  
 up to 50 kHz/ *fino a 50 kHz*  
 on A default, B- A+B optional/ *su canale A predefinito - B- A+B a richiesta*  
 100 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 S11/ *in alluminio S11*  
 polyamid 6 (PA6)/ *poliammide 6 (PA6)*;  
 stainless steel/ *acciaio inossidabile*

## 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  
 up to IP66/ *fino a IP66*  
 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)*

### ORDER CODE

TKXXX . XX . XXXX . XXXXX . X . XX . 6 . XXnn . XXX-XXXX . Xnnn

a      b      c      d      e      f      g      h      i      j

#### a MODEL/ MODELLO

TK251	unidirectional / monodirezionale
TK252	unidirectional + index/ monodirezionale + zero
TK262	bidirectional / bidirezionale
TK263	bidirectional + index/ bidirezionale + zero

#### b ASSEMBLY/ MONTAGGIO

##### MONTAGGIO - ASSEMBLY

P	Standard flange Ø 44/ flangia standard Ø 44
PX	Proxy flange Ø 44/ flangia Proxy Ø 44
SE	Servo flange Ø 44
SI	Servo flange Ø 44
SG	Servo-clip / servo-graffe

#### c PULSE RATE/ IMPULSI GIRO

2 - 3 - 5 - 10 - 15 - 20 - 25 - 32 - 36 - 40 - 50 - 60 - 64 - 72 - 78 - 100 - 108 - 125 - 128 - 132 - 150 - 156 - 168 - 176 - 180 - 188 - 192 - 200 - 216 - 239 - 250 - 254 - 256 - 300 - 314 - 360 - 400 - 500 - 512 - 600 - 625 - 720 - 800 - 900 - 1000 - 1024 - 1250 - 1440 - 2000

#### 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 50 kHz / da 0 a 50 kHz

#### f PROTECTION DEGREE/ GRADO DI PROTEZIONE

K1	IP 55 (EN60529) only for output / solo per uscita "PS", "DB9", "S05", "S08"
K4	IP 64 (EN60529)
K5	IP 65 (EN60529) only with "P" assembly / solo con montaggio "P"
K6	IP 66 (EN60529) only with "P" assembly / solo con montaggio "P"

#### g SHAFT/ ALBERO

6 Ø 6 mm

#### h ELECTRICAL CONNECTIONS/ CONNESSIONI ELETTRICHE

##### OUTPUT S ; P ; OC ; OP ; PP2

Pnn	on axial cable gland with cable 1 ÷ 6 m long /pressacavo assiale con cavo da 1 a 6 m;
PLnn	radial cable gland with cable 1 ÷ 6 m long /pressacavo radiale con cavo da 1 a 6 m;
PSnn	on radial cable gland with cable 1 ÷ 6 m long /gommino passacavo radiale con cavo da 1 a 6 m;
S05	on 5 pins axial MIL connector /conn. circolare militare assiale a 5 poli
D09	on 9 pins axial DB9 connector /conn. submin assiale a 9 poli

##### OUTPUT LD ; LD2

Pnn	on axial cable gland with cable 1 ÷ 6 m long /pressacavo assiale con cavo da 1 a 6 m;
PLnn	radial cable gland with cable 1 ÷ 6 m long /pressacavo radiale con cavo da 1 a 6 m;
PSnn	on radial cable gland with cable 1 ÷ 6 m long /gommino passacavo radiale con cavo da 1 a 6 m;
S08	on 8 pins axial MIL connector /conn. circolare militare assiale a 8 poli
D09	on 9 pins axial DB9 connector /conn. submin assiale a 9 poli

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

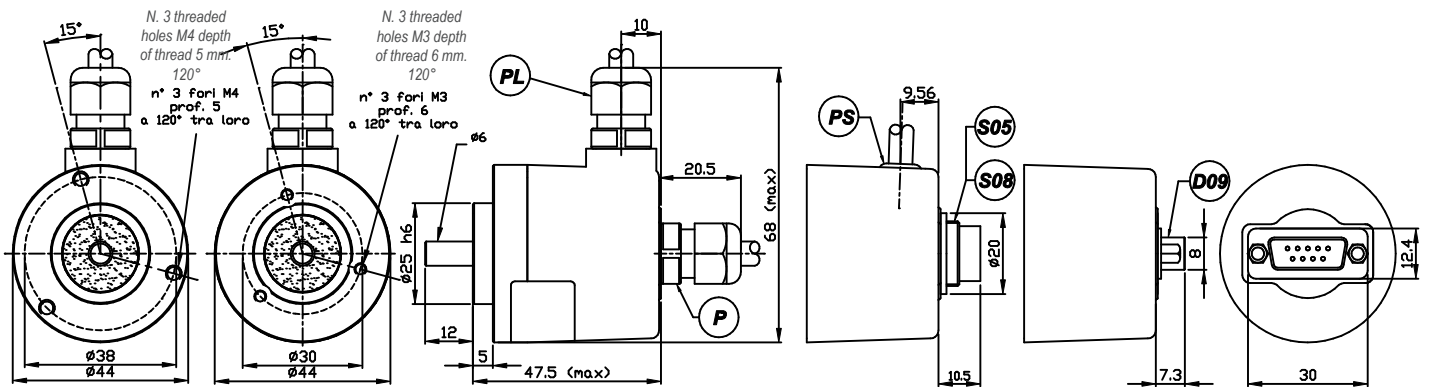
#### i OUTPUT CIRCUITS/ CIRCUITI DI USCITA

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 24/5 V
LD2-5	Line driver 5 Vcc output 5 V
LD2-1130	Line driver 11/30 Vcc output ( only with voltage supply - solo con alimentazione 11/30V)

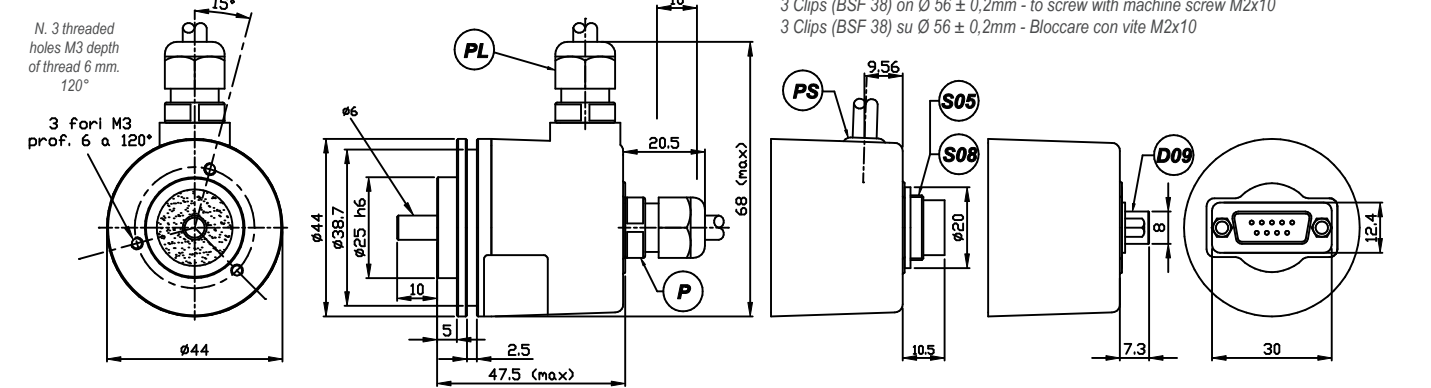
#### j CUSTOM

CUSTOM custom execution/ esecuzione custom

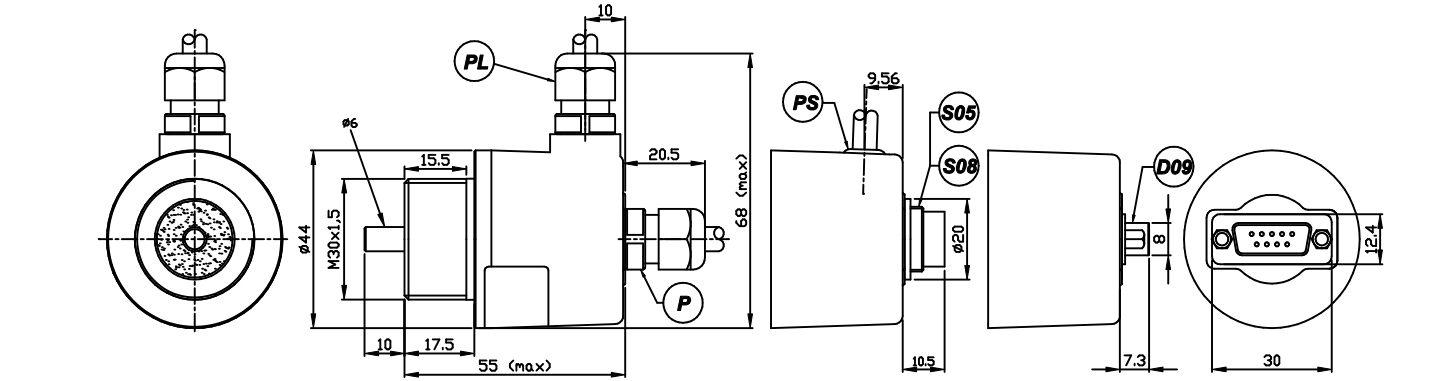
### SE Flange SI Flange



### SG Flange



### PX Flange



### P Flange

