

TGR38

solid shaft

∅ 38



Italsensor Quality System certified according to the UNI EN ISO 9001



## Features:

Handwheel pulse generator TGR38 is a special type of bidirectional incremental encoder through which it is possible to change manually the axis movement on a numerical control machine.

Complete shaft rotation (360° mechanical degrees) gives a resolution of 100 points. Equipped with 2 different handles: for high speed rotation and a knob for fine positioning. A self-blocking internal device fixes the gained positioning avoiding casual slips.

- high reliability and long service life;
- resolution up to 100 ppr;
- counting rotation: clockwise/ counterclockwise;
- protection degree up to IP55;
- cable output;



## MECHANICAL SPECIFICATIONS/ CARATTERISTICHE MECCANICHE

Dimensions/ *Dimensioni*  
 Bearing life/ *Vita dei cuscinetti*  
 Weight/ *Peso*

see drawings/ *vedi disegni*  
 5 x 10<sup>9</sup> rev. min./ *giri (minimo)*  
 ~ 0,3 kg

## ELECTRICAL SPECIFICATIONS/ CARATTERISTICHE ELETTRICHE

Resolution/ *Risoluzione*  
 Power supply/ *Alimentazione*  
 Output frequency/ *Frequenza in uscita*  
 Supply current without load/ *Assorbimento in corrente*  
 Protection/ *Protezione*

up to 100 ppr; others on demand/ *fino a 100 ppr; altri a richiesta*  
 5 V; 24/5 V; 11÷30 V  
 up to 50 kHz/ *fino a 50 kHz*  
 80 mA max  
 short circuit protection, no limit duration (only output LD2 and PP2);  
 against inversion of polarity (except 5V) - available on demand/  
 contro il cortocircuito (solo elettronica LD2 e PP2);  
 contro inversione di polarità (escluso 5V) - disponibile su richiesta;

## MATERIALS/ MATERIALI UTILIZZATI

Flange/ *Flangia*  
 Housing/ *Corpo*  
 Shaft/ *Albero*

aluminum anticolorodal anodized/ *in alluminio anticorodal anodizzato*  
 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  
 IP55  
 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

**TGR38 . XX . XXX . XXXXX . = . K1 . = . XXnn . XXX-XXXX . Xnnn**  

**a**
**b**
**c**
**d**
**e**
**f**
**g**
**h**
**i**
**j**

### **a** MODEL/ MODELLO

TGR38    bidirectional / bidirezionale

### **b** ASSEMBLY/ MONTAGGIO

=            with knob/ con pomello  
 SP         without knob/ senza pomello

### **c** PULSE RATE/ IMPULSI GIRO

25 - 100  
 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

=            from 0 a - up to 50 kHz / da 0 a 50 kHz  
 Default/ Standard

### **f** PROTECTION DEGREE/ GRADO DI PROTEZIONE

K1            IP 55 (EN60529)

### **g** SHAFT/ ALBERO

=            Default/ Standard  
 Knob diameter ∅ 60 mm

### **h** ELECTRICAL CONNECTIONS/ CONNESSIONI ELETTRICHE

OUTPUT    S ; P ; OC ; OP ; PP2 ; LD ; LD2

PSnn        cap radial cable gland with cable 1 + 6 m long/ gommino passacavo radiale con cavo da 1 a 6 m;

nn            cable length/ lunghezza cavo (es. PS10 = 1 m. ...PS60 = 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 only - solo 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

