

**TGR38**

**solid shaft**

**Ø 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 anticorrosional anodized/ in alluminio anticorrosional 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)

Technical specifications subject to changes.

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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 Ø 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

