

# TGR38 Series



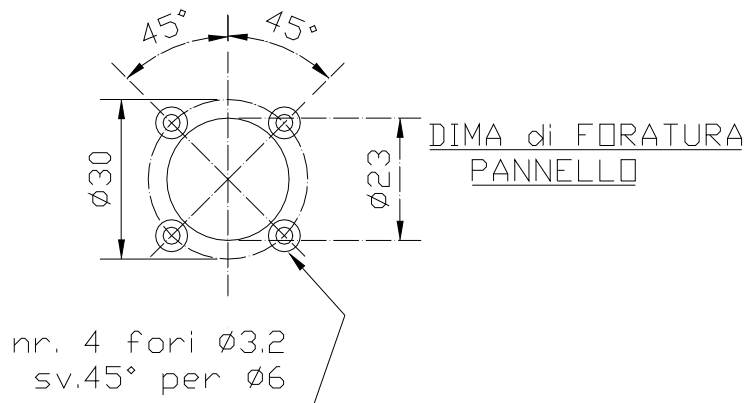
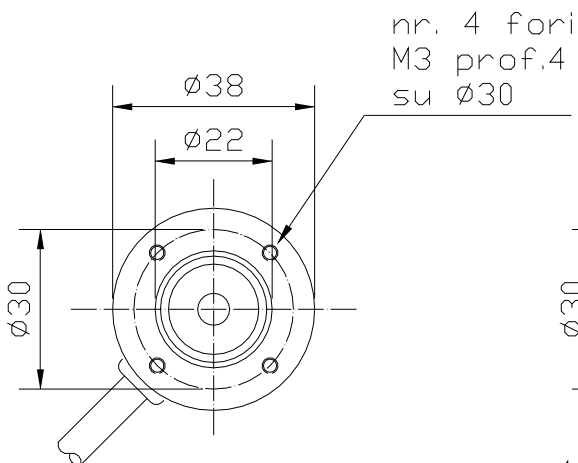
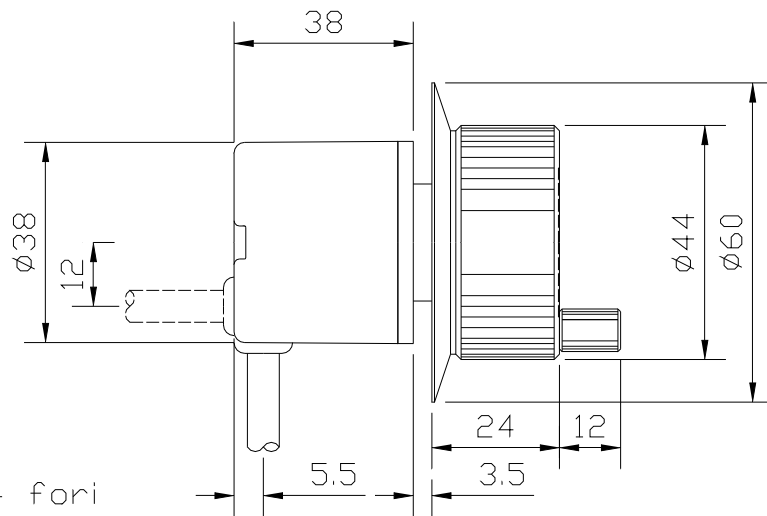
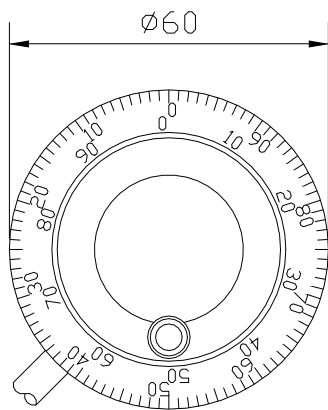
## *Main features*

The handwheel pulse generator is a special type of bi-directional incremental encoder through which it is possible to manually change the axis movement on a numerical control machine.

Counting rotation can be carried out clockwise or anti-clockwise. Rotation positions are shown with different colours: clockwise direction in Black colour, while counter-clockwise direction in Red. Generally a complete rotation of the shaft (corresponding to 360 mechanical degrees) gives a resolution of 100 points. The pulse generator is equipped with handle for high speed rotation and a knob for fine positioning.

A self-blocking special internal device fixes the gained positioning avoiding

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# TECHNICAL DATA SHEET: TGR38 Series

## TECNICAL CHARACTERISTICS

**Model** bidirectional

**Standard nr. of increments per revolution** 25, 100

## MECHANICAL CHARACTERISTICS

### Mounting

**Dimensions** See drawings

**Mass** 0,3 kg

**Slewing speed** 250 rpm

**Shaft diameter** -

**Hollow shaft** Not available

**Shaft seal** Not available

**Starting torque at 25 °C** -

**Starting inertia** -

**AccelerationB** -

**Bearing life** 10<sup>8</sup> revolutions (min.)

**Low torque** Not available

**Maximum shaft loading** -

## MATERIALS

**Mainframe** "Al" anticorrosion anodised

**Housing** "Al" anticorrosion

**Shaft** -

**Light** GaAsAl diodes - MTBF 10<sup>5</sup> h min

**Receivers** iDifferential reading system

## ENVIRONMENTAL CHARACTERISTICS

**Operating temperature** -10 ÷ +70 °C

**Storing temperature** -30 ÷ +80 °C

**Humidity** 98 % RH without condensation

**Protection** K1 IP 55 per DIN 40050

**Vibration** 10 g (from 10 to 2000 Hz)

**Shock** 20 g for 11 ms

## ELECTRICAL CHARACTERISTICS

**Zero index** Gated on channel A, B, A&B depending on models

**Power supply (c.c.)** 5 V ± 5 %, 12 V ± 5 %, 15 V ± 5 %  
11/30 V

**Power consumption** 120 mA max

**Protections** Against polarity reverse (not with 5 Vcc)

**Frequency (T = -10 °C ÷ +70 °C)** -

**Output electronics (\*)**

- S** NPN standard (pull-up resistance incl.) (5 V, 12 V, 15 V, 11 ÷ 30 V)
- OC** NPN open collector (5 V, 12 V, 15 V, 11 ÷ 30 V)
- P** PNP pull down resistance included (5 V, 12 V, 15 V, 11 ÷ 30 V)
- OP** PNP open collector (5 V, 12 V, 15 V, 11 ÷ 30 V)
- LD** line driver RS422 at 5 V (26LS31) only with 5 V power supply

## ELECTRICAL CONNECTIONS

**For S, OC, P, OP outputs** PS only radial with 1 to 6 m cable

**For LD output** PS only radial with 1 to 6 m cable;

(\*) For other versions please contact our sales dept.

# Ordering code: TGR38 Series

