

TKW615C

hollow shaft

Ø 63,5



Italsensor Quality System certified according to the UNI EN ISO 9001



## Features:

TKW615C - an incremental optical encoder suitable for different industrial applications.  
This model is a very attractive solution for industrial application and often selected for feedback requirements due to its precision when an application requires accuracy combined with a demanding environment.

- reliable encoder for various applications;
- resolution up to 5.000 ppr, others on demand;
- protection degree IP64;
- cable and connector outputs.



## MECHANICAL SPECIFICATIONS/ CARATTERISTICHE MECCANICHE

Dimensions/ *Dimensioni*

Shaft loading/ *Carico sull'albero*

Shaft Rotation Speed/ *Numero giri*

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

Moment of inertia/ *Momento di inerzia*

Bearing life/ *Vita dei cuscinetti*

Weight/ *Peso*

see drawings/ *vedi disegni*  
axial/ *assiale* 200 N; radial/ *radiale* 200 N  
10.000 RPM - short cycle time/ *per brevi periodi*;  
6.000 RPM (continuous/ *continui*)  
0,035 Nm; \*(1)  
60 g cm<sup>2</sup>  
5 x 10<sup>9</sup> rev. min/ *giri (minimo)*  
~ 0,30 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*

5.000 ppr; others on demand/ 5.000 ppr; altri a richiesta  
5 V; 24/5 V; 11÷30 V  
up to 100 kHz/ *fino a 100 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 11S/ *in alluminio 11S*  
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  
IP64  
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)*

**TKW615C**

**hollow shaft**

**Ø 63,5**

## ORDER CODE

**TKWXXXXX. X . XXXX . XXXXX . X . XX . XXXX . XXnn . XXX-XXXX . Xnnn**

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

### a MODEL/ MODELLO

TKW6151C unidirectional with collar / monodirezionale con collarino  
TKW6152C unidirectional + index with collar / monodirezionale + zero con collarino  
TKW6161C bidirectional with collar / bidirezionale con collarino  
TKW6162C bidirectional + index with collar / bidirezionale + zero con collarino

### b ASSEMBLY/ MONTAGGIO

= Standard flange / flangia standard  
N without threaded holes / senza fori filettati  
M with spring anti-rotation spring/ con molla antirrotazione

### 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

other values on demand/ altri valori a richiesta

### d POWER SUPPLY/ ALIMENTAZIONE

5 +5 V  $\pm 5\%$   
11/30 +11 $\div$ 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  
V from 0 a - up to 100 kHz / da 0 a 100 kHz

### f PROTECTION DEGREE/ GRADO DI PROTEZIONE

K1 IP 55 (EN60529)  
K4 IP 64 (EN60529)

### g SHAFT/ ALBERO

B080 Ø 8 mm  
B952 Ø 9,52 mm  
B100 Ø 10 mm  
B110 Ø 11 mm  
B120 Ø 12 mm  
B127 Ø 12,7 mm  
B140 Ø 14 mm  
15 Ø 15 mm (without bushing/ senza boccole)

Reduction bushing for shaft diameter less than 15 mm/  
Boccole di riduzione per diametro inferiore a 15 mm

### h ELECTRICAL CONNECTIONS/ CONNESSIONI ELETTRICHE

OUTPUT S ; P ; OC ; OP ; PP2 ; LD ; LD2 ( except TKW6162C, escluso TKW6162C)

Pnn on axial cable gland with cable 1  $\div$  6 m long /pressacavo assiale con cavo da 1 a 6 m;  
PLnn radial cable gland with cable 1  $\div$  6 m long /pressacavo radiale con cavo da 1 a 6 m;  
PSnn cap radial cable gland with cable 1  $\div$  6 m long /  
gommino pressacavo radiale con cavo da 1 a 6 m  
S07 on 7 pins axial MIL connector /connettore circolare militare assiale a 7 poli  
L07 on 7 pins radial MIL connector /connettore circolare militare radiale a 7 poli

OUTPUT LD ; LD2 ( only TKW6162C, solo TKW6162C)

Pnn on axial cable gland with cable 1  $\div$  6 m long /pressacavo assiale con cavo da 1 a 6 m;  
PLnn radial cable gland with cable 1  $\div$  6 m long /pressacavo radiale con cavo da 1 a 6 m;  
PSnn cap radial cable gland with cable 1  $\div$  6 m long /  
gommino pressacavo radiale con cavo da 1 a 6 m  
S10 on 10 pins axial MIL connector /conn. circolare militare assiale a 10 poli  
L10 on 10 pins radial MIL connector /connettore circolare militare radiale a 10 poli

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

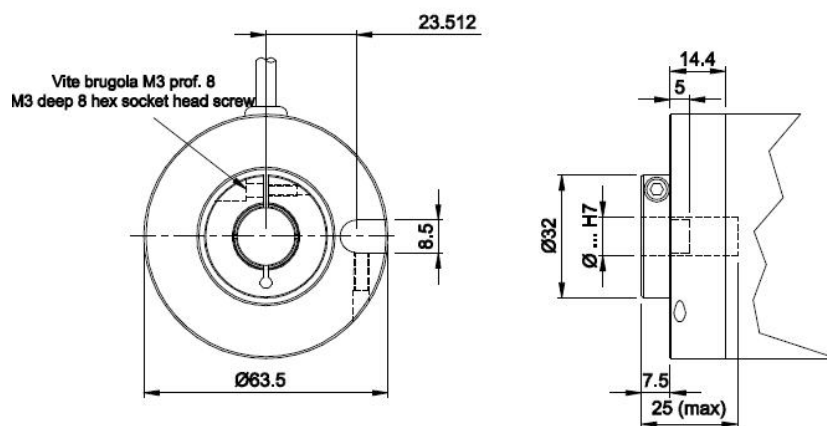
### i OUTPUT CIRCUITS/ CIRCUITI DI USCITA

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 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 24/5 V  
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)

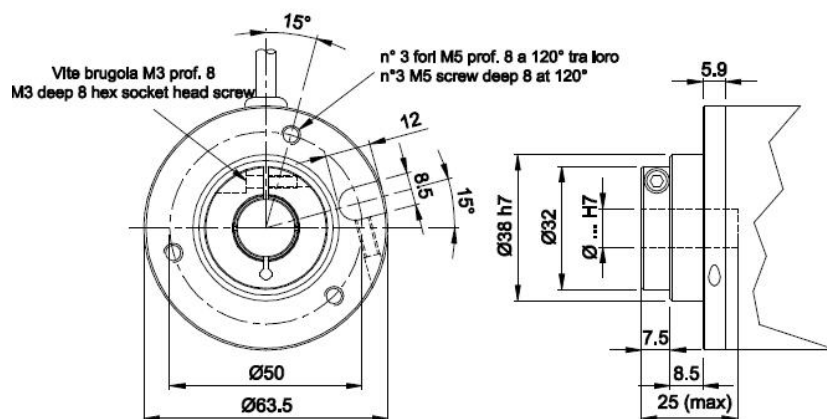
### j CUSTOM

CUSTOM custom execution/ esecuzione custom

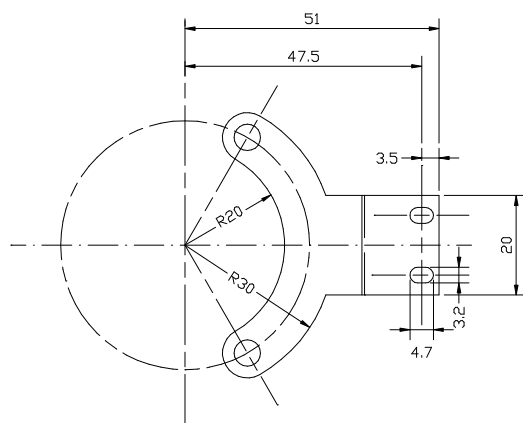
## N Flange



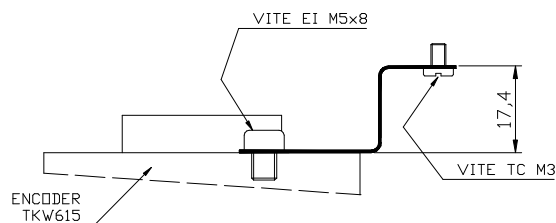
= Standard Flange (Default)



## M Flange with anti-rotation spring



## SCHEMA DI MONTAGGIO ASSEMBLY INSTRUCTION



## Electrical connections/ connessioni elettriche

