

TS58

solid shaft

Ø 58



Italsensor Quality System certified according to the UNI EN ISO 9001



Features:

TS58 - an economic incremental optical encoder suitable for different industrial applications. Thanks to its versatility and reliability, this model allows to reduce costs of production, ensuring completely controlled manufacturing process and significantly reducing downtime – a very important factor for continuous production process.

- economic, versatile and reliable encoder for various applications;
- wide range of flanges;
- resolution up to 20.000 ppr, others on demand;
- high protection degree up to IP66;
- 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 inertial/ *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/ *brevi periodi*) 6.000 RPM (continuous/ *continui*)
 2.000 turn/min with protection shaft/ *giri/min con asse stagno*
 0,025 Nm; 0,040 Nm with proof shaft /*con asse stagno** (1)
 40 g cm²
 5 x 10⁹ 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*

up to 20.000, others on demand/ *fino a 20.000 ppr, altri a richiesta*
 5 V; 5÷28 V; 11÷30 V
 up to 300 kHz/ *fino a 300 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, 5/28 V) - available on demand/
 contro il cortocircuito (solo elettronica LD2 e PP2);
 contro inversione di polarità (escluso 5V, 5/28V) - disponibile su richiesta;

MATERIALS/ MATERIALI UTILIZZATI

Flange/ *Flangia*

Housing/ *Corpo*

Shaft/ *Albero*

aluminum non corroding/ *in alluminio anticorrosivo*
 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 ÷ +85 °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)

*(1) Not a test parameter, information only/ *Valore indicativo*

ORDER CODE

TSXXX . XXX . XXXXX . XXXXX . X . XX . XX,XX . XXnn . XXX-XXXX . Xnnn

a b c d e f g h i j

a MODEL/ MODELLO

TS580 bidirectional / bidirezionale
 TS581 bidirectional + index/ bidirezionale + zero

b ASSEMBLY/ MONTAGGIO

F1 Square flange / flangia quadra (TK40)
 F2 Square flange / flangia quadra (TK45)
 F3 Square flange / flangia quadra (TK50)
 SG1 Servo-clip / servo-graffe (TK50)
 SG2 Servo-clip / servo-graffe (TK45)
 SG3 Servo-clip / servo-graffe
 S1 Servo flange / flangia servo
 S2 Servo flange / flangia servo (TK45)
 FRE Flange REO - REO 444 (TK50)

c PULSE RATE/ IMPULSI GIRO

4 - 25 - 50 - 60 - 100 - 140 - 150 - 200 - 250 - 300 - 360 - 400 - 500 - 600 - 625 - 635
 - 720 - 1000 - 1024 - 1200 - 1250 - 1440 - 1500 - 1600 - 1800 - 2000 - 2048 - 2500
 - 3600 - 4096 - 5000 - 9000 - 10.000 - 20.000

others on demand/ altri a richiesta

d POWER SUPPLY/ ALIMENTAZIONE

5 +5 V ±5 %
 5/28 +5 ÷ 28 V
 11/30 +11 ÷ 30 V

e OUTPUT FREQUENCY/ FREQUENZA IN USCITA

S from 0 a - up to 100 kHz / da 0 a 100 kHz
 V from 0 a - up to 300 kHz / da 0 a 300 kHz

f PROTECTION DEGREE/ GRADO DI PROTEZIONE

K4 IP 64 (EN60529) (F1-F2-F3-SG1-SG2-SG3-S1-S2-FRE)
 K5 IP 65 (EN60529) (F1-F3-SG1-S1-FRE)
 K6 IP 66 (EN60529) (F1-F3-SG1-S1-FRE)

g SHAFT/ ALBERO

6 Ø 6 mm ((Flange F1- F2 - F3 - SG1 - SG2 - SG3 - S1 - S2)
 8 Ø 8 mm (Flange F1- F2 - F3 - SG1 - SG2 - S1 - S2)
 9,52 Ø 9,52 mm (Flange F1- F2 - F3 - SG1 - SG2 - S1 - S2)
 10 Ø 10 mm (Flange F1- F2 - F3 - SG1 - SG2 - S1 - S2)
 11 Ø 11 mm (Flange FRE - SG1)
 11R Ø 11 mm (Flange FRE - SG1)

h ELECTRICAL CONNECTIONS/ CONNESSIONI ELETTRICHE

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

PLnn radial cable gland with cable 1 ÷ 6 m long /pressacavo radiale con cavo da 1 a 6 m;
 L07 on 7 pins radial MIL connector /conn. circolare militare radiale a 7 poli (TYPE "A", "B")
 L10 on 10 pins radial MIL connector /conn. circolare militare radiale a 10 poli (TYPE "C")
 R1 on 12 pins radial "contact" connector /conn. circolare radiale antiorario a 12 poli (TYPE "D" CCW)

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

Note: L10: only for TS581 with LD, LD2 electronic output/ L10: solo versione TS581 con elettronica LD, LD2

i OUTPUT CIRCUITS/ CIRCUITI DI USCITA

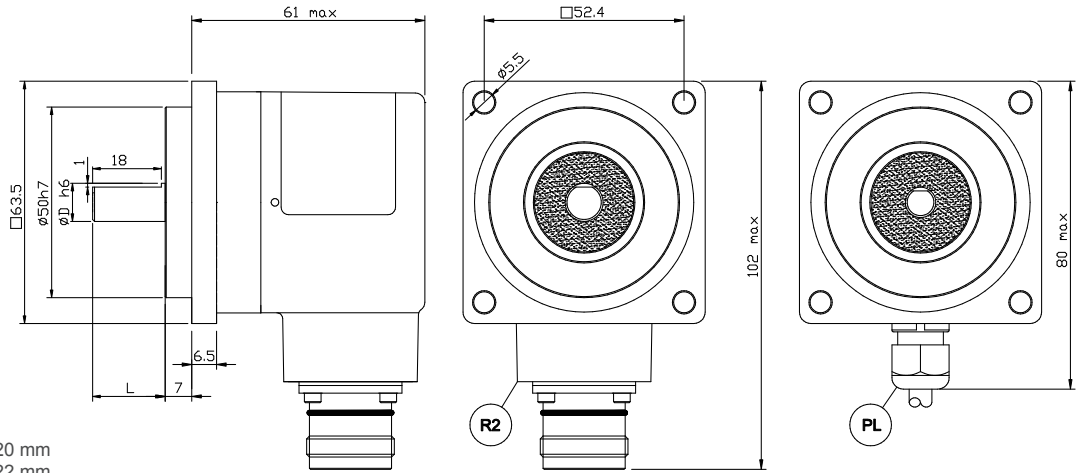
S NPN standard (resistor included- resistenza di pull-up inclusa)
 OC NPN open collector
 P PNP (resistor included resistenza di pull-down inclusa)
 OP PNP open collector
 PP2-5 Push-Pull 5 V output only - solo 5 V
 PP2-1130 Push-Pull 11/30 Vcc output (only with voltage supply - solo con alimentazione 11/30 V)
 PP2-528 Push-Pull 5/28 Vcc output (only with voltage supply - solo con alimentazione 5/28 V)
 LD Line driver RS422 (26LS31) only - solo 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)
 LD2-528 Line driver 5/28 Vcc output (only with voltage supply - solo con alimentazione 5/28 V)

j CUSTOM

CUSTOM custom execution/ esecuzione custom

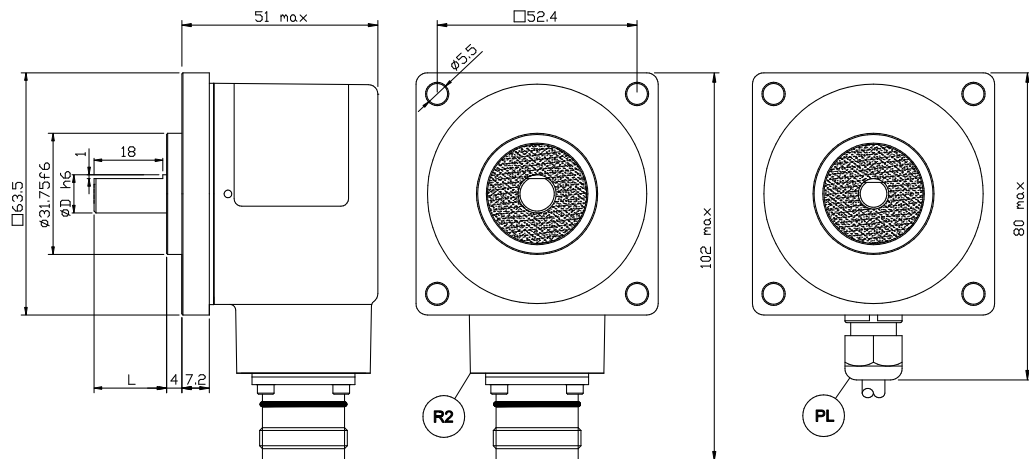
*(1) Not a test parameter, information only / Valore indicativo.

F1 Flange



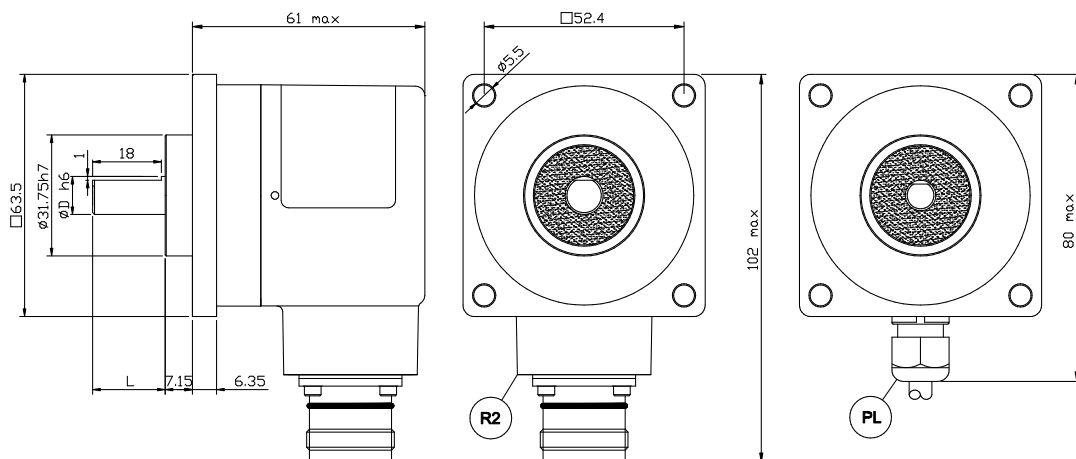
Shaft/ Albero $\varnothing 6,8,10$: L=20 mm
 Shaft/ Albero $\varnothing 9,52$: L=22 mm

F2 Flange



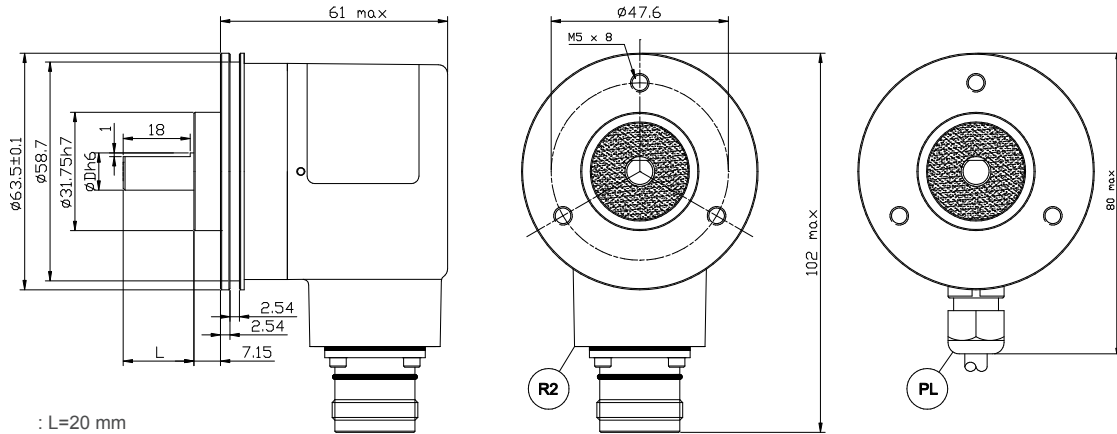
Shaft/ Albero $\varnothing 6,8,9,52,10$: L=20 mm

F3 Flange



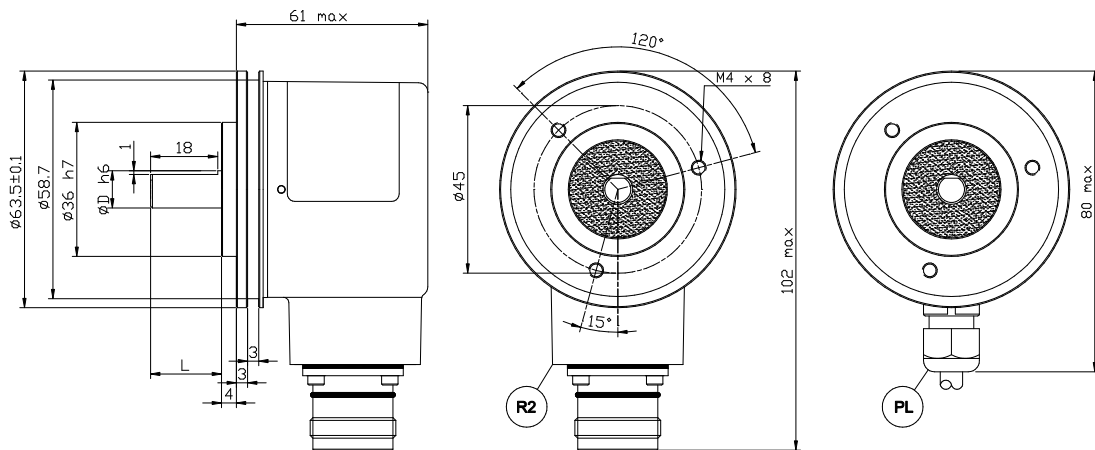
Shaft/ Albero $\varnothing 6,8,10$: L=20 mm
 Shaft/ Albero $\varnothing 9,52$: L=22 mm

SG1 Flange



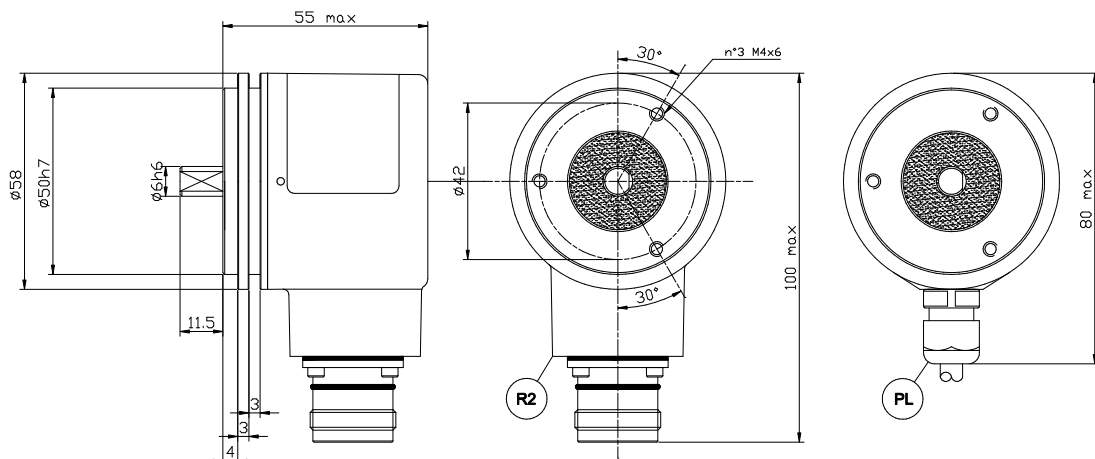
Shaft/ Albero ∅ 6,8,10 : L=20 mm
 Shaft/ Albero ∅ 9.52 : L=22 mm
 Shaft/ Albero ∅ 11 cod.11R : L=20 mm

SG2 Flange

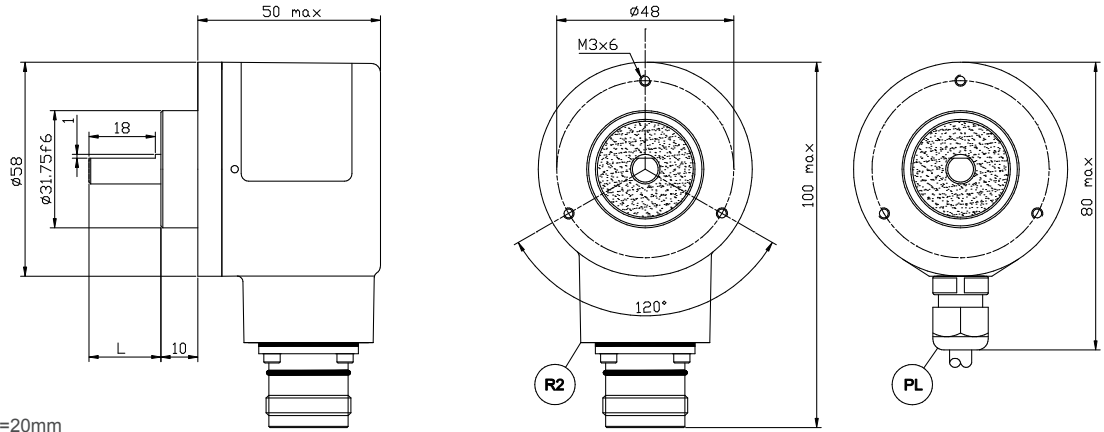


Shaft/ Albero ∅ 6,8,9.52,10 : L=20 mm

SG3 Flange

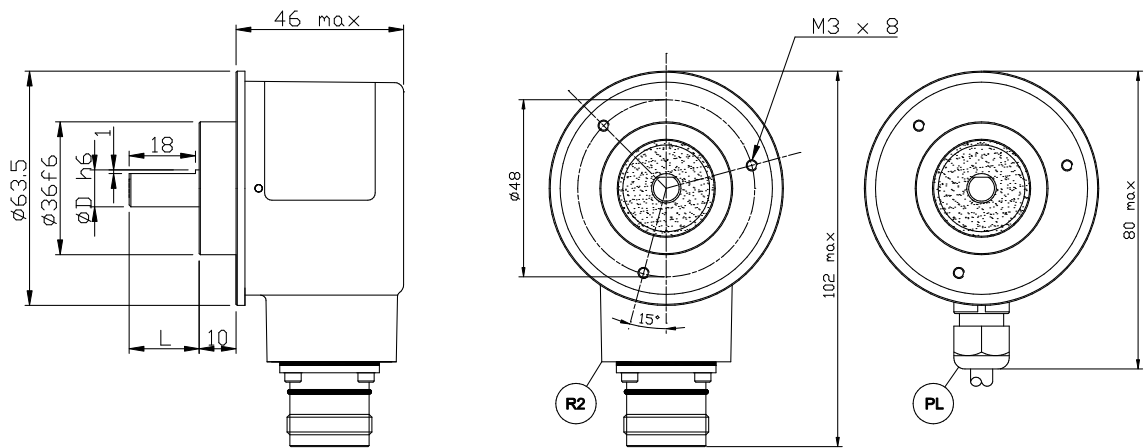


S1 Flange



Shaft/ Albero Ø 6,8,10 : L=20mm
 Shaft/ Albero Ø 9.52 : L=22mm

S2 Flange



Shaft/ Albero Ø 6,8,9,52,10 : L=20 mm

FRE Flange

