

TSW58HS

hollow through shaft

Ø 58



Italsensor Quality System certified according to the UNI EN ISO 9001



Features:

TSW58HS - incremental optical encoder suitable for different industrial applications. Thanks to its versatility and reliability, this model allows to reduce costs of production and maximize functionality; guarantees completely controlled manufacturing process significantly reducing downtime – a very important factor for continuous production process.

- fixing system through antirotation pin or springs;
- resolution up to 10.000 ppr, others on demand;
- shaft diameters changeable through reducing bushes;
- protection degree IP64;
- cable and connector outputs.



MECHANICAL SPECIFICATIONS/ CARATTERISTICHE MECCANICHE

Dimensions/ Dimensioni

Hollow through shaft with collar clamp/ *Albero cavo passante chiusura a collare*

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*
stainless steel/ *acciaio inossidabile*

axial/ *assiale* 40 N; radial/ *radiale* 60 N
6.000 RPM (continuous/ *continui*)
0,025 Nm; *(1)
40 g cm²
5 x 10⁹ rev. min/ *giri (minimo)*
~ 0,25 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*

10.000 ppr; others on demand/ 10.000 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 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 ÷ +85 °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)*

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

ORDER CODE

TSWXXXHS . XXX . XXXXX . XXXXX . X . XX . XXXX . XXnn . XXX-XXXX . Xnnn
a b c d e f g h i j

a MODEL/ MODELLO

TSW580HS bidirectional / bidirezionale
TSW581HS bidirectional + index/ bidirezionale + zero

b ASSEMBLY/ MONTAGGIO

M0 Without spring/ senza molla
M1 With spring type M1/ Con molla M1
M2 With spring type M2/ Con molla M2

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

other values on demand/ altri valori 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)

g SHAFT/ ALBERO

B060 ∅ 6 mm
B080 ∅ 8 mm
B952 ∅ 9,52 mm
B100 ∅ 10 mm
B110 ∅ 11 mm
B120 ∅ 12 mm
B127 ∅ 12,7 mm
B140 ∅ 14 mm
15 ∅ 15 mm

Clamp with collar/ Chiusura tramite collare
 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

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 TSW581HS with LD, LD2 electronic output/ L10: solo versione TSW581HS con elettronica LD, LD2

i OUTPUT CIRCUITS/ CIRCUITI DI USCITA

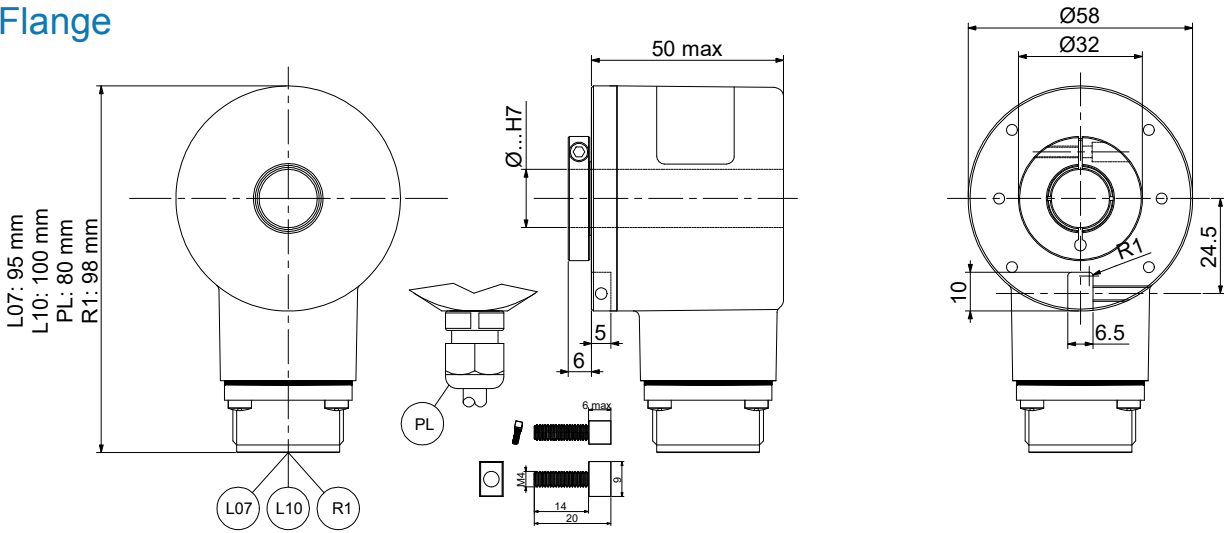
S NPN standard (resistor included- resistenza di pull-up inclusa)
OC NPN open collector
P PNP (resistor included resistenza di pull-down inclusa)
OP PNP open collector
PP2-5 Push-Pull 5 V output only - solo 5 V
PP2-1130 Push-Pull 11/30 Vcc output (only with voltage supply - solo con alimentazione 11/30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

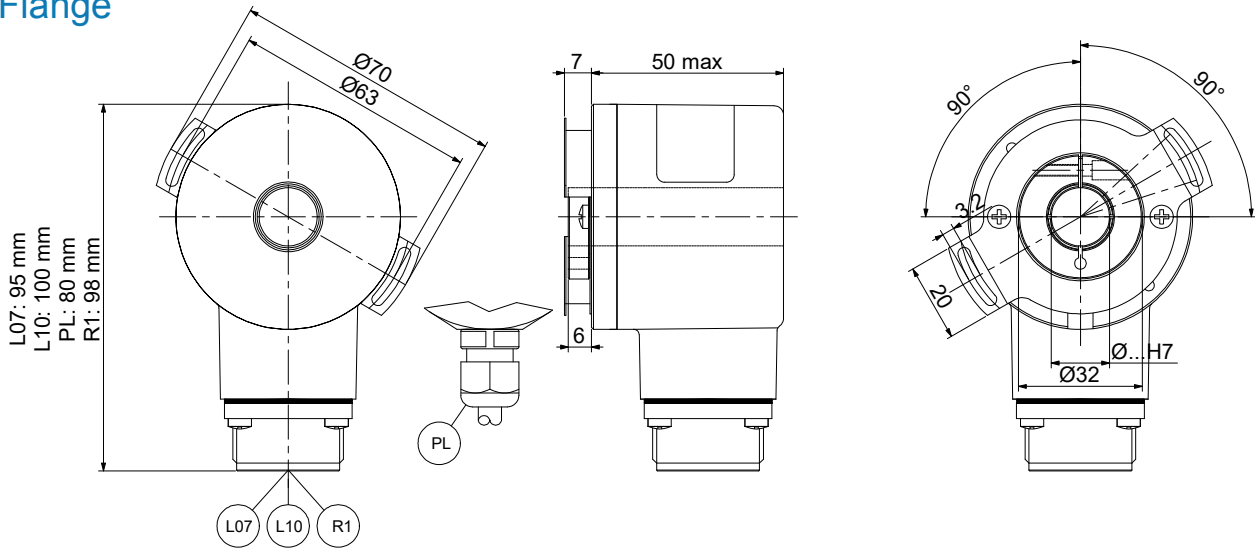
CUSTOM custom execution/ esecuzione custom

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

M0 Flange



M1 Flange



M2 Flange

