



Features:

Absolute multiturn encoder **TSMWL58P-PRNET-IO** with **PROFINET IO output interface** is an ideal solution for use in harsh environmental conditions thanks to its robust design, high resolution up to 28 bit and high protection degree up to IP67.

- resolution singleturn: 1,...,65536 ppr (up to 16 bit);
- number of turn: max. 4096 ppr (12 bit);
- total resolution: 1,...,268435456 (28 bit) programmable;
- high protection degree up to IP 67;
- easy setting of a preset value using a control bit.



MECHANICAL SPECIFICATIONS/ CARATTERISTICHE MECCANICHE

Dimensions/ *Dimensioni*

see drawings / vedi disegni

Max Axial and Radial Misalignment
massimo disallineamento assiale e radiale

Static / Statico: $\pm 0,3\text{mm} / \pm 0,5\text{mm}$
Dynamic / Dinamico: $\pm 0,1\text{mm} / \pm 0,2\text{mm}$

Moment of inertial/ *Momento di inerzia*
Shaft Rotation Speed/ *Numero giri*
Weight/ *Peso*

$\leq 30\text{g cm}^2$
12.000RPM
< 400g

ELECTRICAL SPECIFICATIONS/ CARATTERISTICHE ELETTRICHE

Power supply/ *Alimentazione*
Diagnostic / Status LED
Protection/ *Protezione*
Power dissipation/ *Potenza assorbita*
Start-up time

10÷30 V
see pag. 4 of datasheet / vedere pagina 4 del datasheet
against inversion of polarity/ contro inversione di polarità
 $\leq 2,5\text{W}$
<1s

MATERIALS/ MATERIALI UTILIZZATI

Flange/ *Flangia*
Housing/ *Corpo*
Shaft/ *Albero*

aluminum non corroding/ in alluminio anticorrosivo
zinc die-cast/ pressofusione alluminio
stainless steel/ acciaio inossidabile

ENVIRONMENTAL SPECIFICATIONS/ CARATTERISTICHE AMBIENTALI

Operating temperature range/ *Temperatura di lavoro*
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)

-40 °C ÷ +85 °C
up to IP67
98% RH without condensing/ senza condensazione
 $\leq 10\text{g}$ (10Hz - 1000Hz)
 $\leq 100\text{g}$ (half sine 6ms)

ORDER CODE

TSMWL58P . XX . 65536 . 4096 . B . 10/30 . XX . XX . L= . PRNET.

a

b

c

d

e

f

g

h

i

j

a MODEL/ MODELLO

TSMWL58P

f POWER SUPPLY/ ALIMENTAZIONE

10/30 +10÷30 V

b ASSEMBLY/ MONTAGGIO

M1 Flange with stator coupling/ con molla antirotazione Ø63 mm

g PROTECTION DEGREE/ GRADO DI PROTEZIONE

K5 IP65 (EN 60529)
K7 IP67 (EN 60529)

c STEPS/ PASSI PER GIRO

65536 from 1 up to 65536 steps/turn programmable
da 1 a to 65536 passi/giro programmabile

h SHAFT/ ALBERO

10 Ø10 mm
12 Ø12 mm
14 Ø14 mm
15 Ø15 mm

d TURNS/ NUMERO GIRI

4096 from 1 to 4096 revolutions programmable (12 bit)
da 1 a 4096 giri programmabili

Max. depth/ profondità mass. 28 mm, min 20mm

e CODE/ CODE

B Binary/ binario

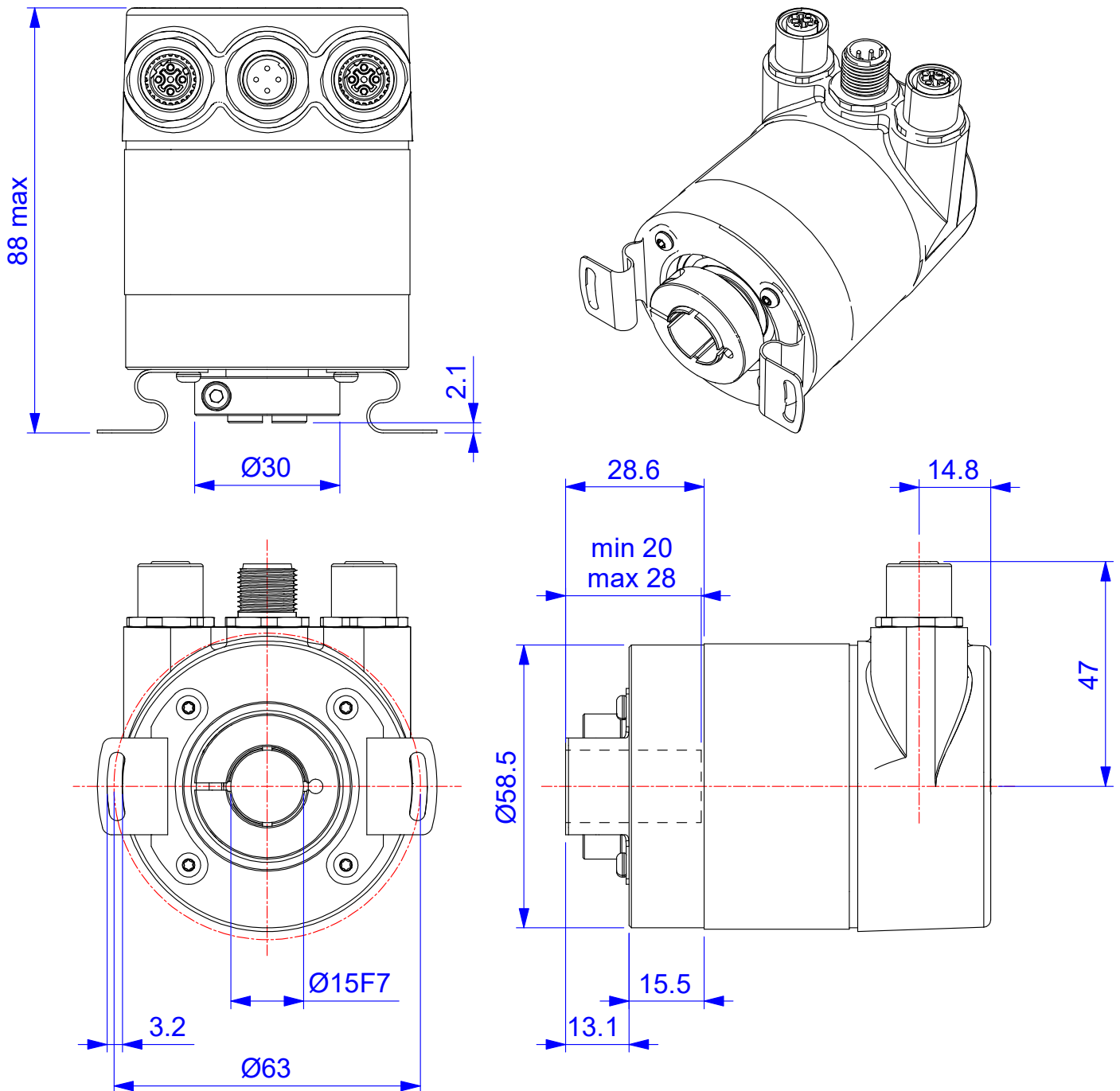
i ELECTRICAL CONNECTIONS/ CONNESSIONI ELETTRICHE

L= 3 x radial M12 connector 4-pin
uscita radiale su n° 3 connettori M12 a 4-pin

j OUTPUT CIRCUITS/ CIRCUITI DI USCITA

PRNET PROFINET IO

M1 Flange with stator coupling, Ø63



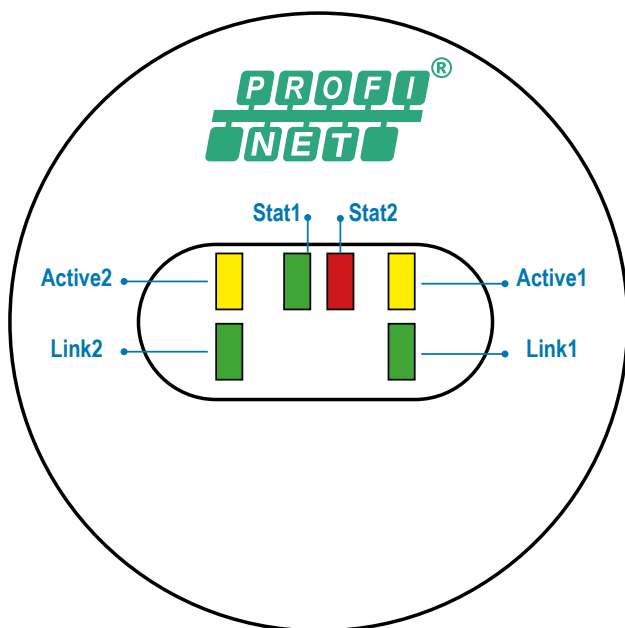
L = max. depth 28 mm. / profondità massima 28 mm. (blind hollow shaft/ albero cavo cieco)
min depth 20mm / profondità minima 20mm

Terminal assignment/ schema connessioni

Interface	Type of connection	Function	M12 connector, 4-pin				
PRNET	Bus Port 1	M12 Female 4 pin D-coded	Signal:	Transmit data +	Receive data +	Transmit data -	Receive data -
			Abbreviation:	TxD+	RxD+	TxD-	RxD-
			Pin:	1	2	3	4
	Power Supply	M12 Male 4 pin A-coded	Signal:	Transmit data +	Receive data +	Transmit data -	Receive data -
			Abbreviation:	+ V	-	0V	-
			Pin:	1	2	3	4
	Bus Port 2	M12 Female 4 pin D-coded	Signal:	Transmit data +	Receive data +	Transmit data -	Receive data -
			Abbreviation:	TxD+	RxD+	TxD-	RxD-
			Pin:	1	2	3	4



Diagnostic and Status LED / LED di diagnostica e stato



Diagnostic LEDs		
LED	Color	Description for LED = on
Active1	Yellow	Incoming and outgoing traffic at port 1
Link1*	Green	Link to another Ethernet component via port 1
Active2	Yellow	Incoming and outgoing traffic at port 2
Link2*	Green	Link to another Ethernet component via port 2
Stat1	Green	Status 1, details see next table
Stat2	Red	Status 2, details see next table

Status LED indication			
Status 1 Green	Status 2 Red (Bus Faullire)	Meaning	Cause
OFF	OFF	No power	Fuse blown or cable defect
ON	ON	No connection to controller Criteria: no data exchange	- Bus disconnected - IO-Controller not available / switched off / not in run
ON	BLINKING 1	Parameterization fault, no data exchange Criteria: connection available. However, the slave did not switch to the data exchange mode.	- Slave not configured yet or wrong configuration
ON	OFF	Data exchange. Slave and operation ok	- Wrong station address assigned (but not outside the permitted range) - Actual configuration of the slave differs from the nominal configuration