

- Standard encoder for general industrial application
- Pulse rates up to 10000 PPR (real)
- Servo or clamp flange mounting
- High operating temperature range (optional)
- Unbreakable disk for standard resolutions
- High accuracy versions with precise optical sensing

ENVIRONMENTAL SPECIFICATIONS

Shock:	250 g, 6 ms acc. to CEI EN 60068-2-27
Vibrations:	10 g, 5-2000 Hz acc. to CEI EN 60068-2-6
Protection:	IP64
Operating temperature range:	-25°C +85°C (-13°F +185°F)
Storage temperature range:	-25°C +85°C (-13°F +185°F) (98% R.H. without condensation)
Options:	• Operating temperature range: -40°C +100°C (-40°F +212°F) • IP65 Protection

MECHANICAL SPECIFICATIONS

Dimensions:	see drawing
Shaft diameter:	Ø 6, 8, 9.52, 10, 12 mm
Shaft loading (axial, radial):	100 N max.
Shaft rotational speed:	typ. 6000 rpm / 12000 temporary
Starting torque at 20°C:	I58: 0,15 Ncm / I58S: 0,4 Ncm (typical)
Bearings life:	400 x 10 ⁶ rev. min. (10 ⁹ rev. min. with 20 N shaft loading max.)
Electrical connections:	M12, M23 plug or cable output 1 m (3.3 ft)
Weight:	~ 200 g (7 oz)
Options:	• additional cable • DSub 9 pin inline plug

ELECTRICAL SPECIFICATIONS

Standard resolution with magnetic sensing (PPR): (output circuits N, P, Y, L, H)	2-4-5-6-8-10-12-15-16-20-24-25-30-35-36-40-50-60-64-70 80-90-120-125-127-142-150-160-180-216-230-236-240-254 256-267-270-314-375-400-410-435-471-635-800-1068 1270-1400-2250 (other on request)
Standard resolution with unbreakable disk (PPR): (output circuits N, P, Y, L, H)	100-200-250-300-360-500-512-600-720-750-900-1000 1024-1200-1250-1440-1500-1800-2000-2048-2500-3000 3600-4000-4096-5000
High accuracy glass disk (PPR): (output circuits N, P, Y, L, H)	5K=5000, 6K=6000, 9K=9000, 10K=10000 4KB=4096, 8KB=8192
Resolution (PPR): (only output circuit V)	1024-2048
Counting frequency:	300 kHz max.
Output circuits:	NPN, PNP, Push-Pull, Line Driver, Universal circuit, Sine/cosine
Power supply:	+5V±5%, +10V +30V, +5V +30V (sine/cosine only +5V±5%)
Consumption:	70 mA (typical)
Output current (each channel):	40 mA max.
Protection:	against inversion of polarity and short-circuit (except L and V circuit)
EMC:	electro-magnetic immunity, according to: EN 61000-4-2 EN 61000-4-4
Option:	• Line Driver 24/5V

MATERIALS

Flange:	anticorodal, UNI EN AW-6082
Housing:	anticorodal, UNI EN AW-6082
Bearings:	ABEC 5
Shaft:	stainless steel, non-magnetic - UNI EN 4305



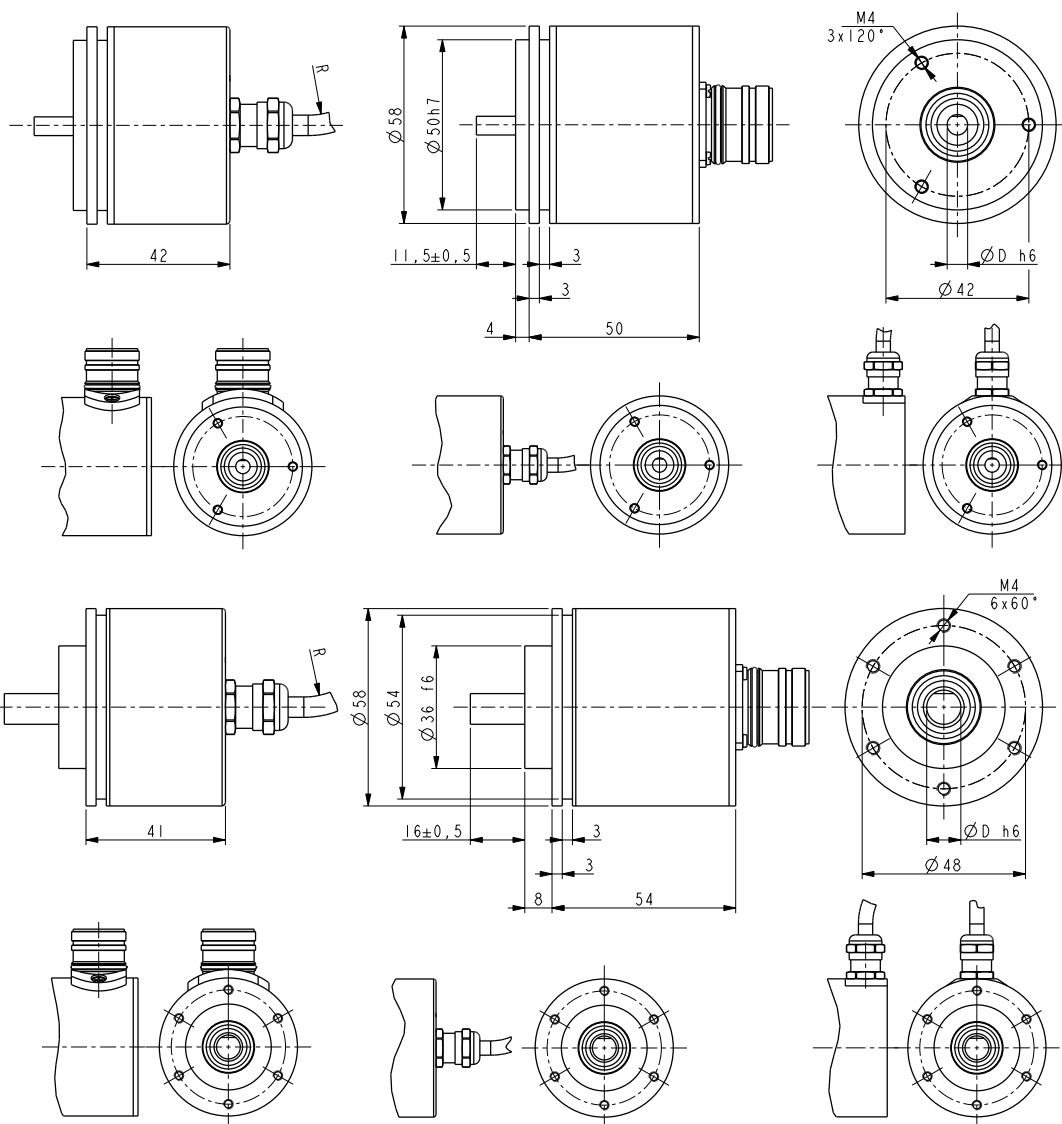
I58 • I58S

PREFERENTIAL MODELS

I58-H4-00500-ZCU-06-ST-RL020	I58-H4-00500-ZCZ-06-ST-R
I58-H4-01000-ZCU-06-ST-RL020	I58-H4-01000-ZCZ-06-ST-R
I58-H4-01024-ZCU-06-ST-RL020	I58-H4-01024-ZCZ-06-ST-R
I58-H4-02048-ZCU-06-ST-RL020	I58-H4-02048-ZCZ-06-ST-R
I58-H4-02500-ZCU-06-ST-RL020	I58-H4-02500-ZCZ-06-ST-R
I58-H4-00500-ZCZ-06-ST-A	I58S-H4-00500-ZCZ-10-ST-R
I58-H4-01000-ZCZ-06-ST-A	I58S-H4-01000-ZCZ-10-ST-R
I58-H4-01024-ZCZ-06-ST-A	I58S-H4-01024-ZCZ-10-ST-R
I58-H4-02048-ZCZ-06-ST-A	I58S-H4-02048-ZCZ-10-ST-R
I58-H4-02500-ZCZ-06-ST-A	I58S-H4-02500-ZCZ-10-ST-R

ACCESSORIES

E-M12F8:	M12 8 pin mating connector
EC-M12F8-LK-M8-050:	cordset 5 meters with M12 connector
EC-M12F8-LK-M8-100:	cordset 10 meters with M12 connector
EPFL 121:	12 pin M23 mating connector
EC-C12F-LK-I8-050:	cordset 5 meters, M23 connector
EC-C12F-LK-I8-100:	cordset 10 meters, M23 connector
EDE 9S:	9 pin DSub mating connector
PAN/PGF:	flexible couplings
LKM-386:	fixing clamps



I58

Order code

I58S

I58	-	XX	-	XXXXX	-	XXX	-	XX	-	X	X	-	X	XXXX	/Sxxx
I58S		(a)		(b)		(c)		(d)		(e)	(f)		(g)	(h)	(i)

a OUTPUT CIRCUITS / POWER SUPPLY

N2 = NPN o.c., +10V ÷ +30V
P2 = PNP o.c., +10V ÷ +30V
Y2 = Push Pull, +10V ÷ +30V
L1 = Line Driver (RS422), +5V ± 5%
H4 = PP/LD univ. circuit, +5V ÷ +30V
V1 = 1 Vpp sine/cosine, +5V ± 5%
L2 = Line Driver (RS422), +10V ÷ +30V

b RESOLUTION (PPR)

See electrical specifications

c OUTPUT SIGNALS / CONNECTIONS

BNF = AB, cable output (except V1 output)
ZNF = AB0, cable output (except V1 output)
BCU = AB /AB, cable output
ZCU = AB0 /AB0, cable output
BCZ = AB /AB, M23 12 pin plug
ZCZ = AB0 /AB0, M23 12 pin plug
ZCM = AB0 /AB0, M12 8 pin plug

d SHAFT DIAMETER

06 = 6 mm
08 = 8 mm
P9 = 9.52 mm - 3/8"
10 = 10 mm
12 = 12 mm

e PROTECTION

S = IP64 (standard)
P = IP65

f OPERATING TEMPERATURE

T = -25° + 85°C (-13°F + 185°F) std.
K = -40°C + 100°C (-40°F + 212°F)

g CONNECTION POSITION

A = axial
R = radial

h CABLE LENGTH

L010 = cable output 1 m (standard)
L020 = cable output 2 m
Lxx0 = cable output x m
(max. length 10 m)
Cxx0 = x m cable with DSub 9 pin
inline plug

i CUSTOM VERSION

Document release	Date	Description
1.4	19.06.2025	Resolution update (circuit V)
1.3	19.05.2025	Resolution update (256-360-400 PPR)
1.2	16.10.2024	Resolution update (circuit V)
1.1	December 2023	Accessories update
1.0	September 2023	New order code