

ROTAPULS

Incremental encoders

Series

I58 • I58S



- Standard encoder for general industrial application
- Pulse rates up to 10000 PPR (real)
- Servo or clamp flange mounting
- High operating temperature range (optional)
- Line Driver, HTL and sine/cosine output circuits



I58 • I58S

ENVIRONMENTAL SPECIFICATIONS

Shock:	100 g, 6 ms
Vibrations:	10 g, 5-2000 Hz
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:	<ul style="list-style-type: none"> • 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:	<ul style="list-style-type: none"> • additional cable • DSub 9 pin inline plug

ELECTRICAL SPECIFICATIONS

Resolution (PPR): (output circuit N, P, Y, L, H)	4-5-6-8-10-12-15-16-20-24-25-30-36-40-50-60-70-80 100-120-125-127-150-160-200-216-230-240-250-254-256 300-314-360-375-400-471-500-512-600-720-750-900 1000-1024-1068-1200-1250-1270-14001440-1500-1800 2000-2048-2250-2400-2500-3000-3600-4000-4096-5000 6000-8192-9000-10000
Resolution (PPR): (output circuit V)	500-512-1000-1024-1250-2000-2048-2500
Counting frequency:	100 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
Optoelectronic life:	100.000 hrs min.
Option:	<ul style="list-style-type: none"> • Counting frequency up to 300 kHz • Line Driver 24/5V

MATERIALS

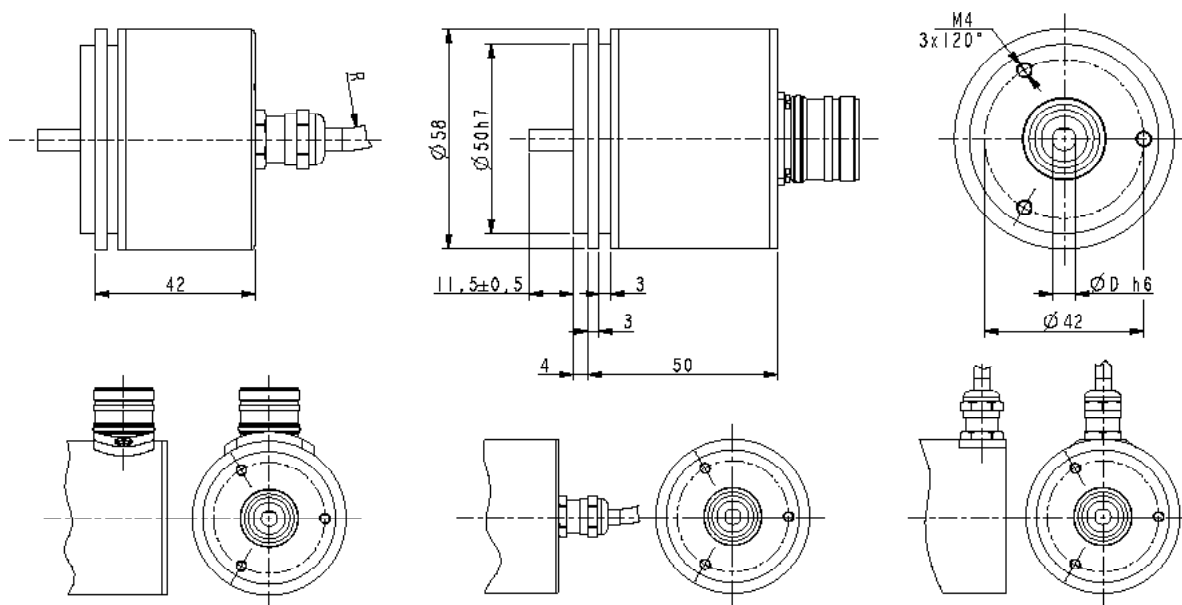
Flange:	anticorodal, UNI EN AW-6082
Housing:	anticorodal, UNI EN AW-6082
Bearings:	ABEC 5
Shaft:	stainless steel, non-magnetic - UNI EN 4305
Light source:	GaAl diodes

PREFERENTIAL MODELS

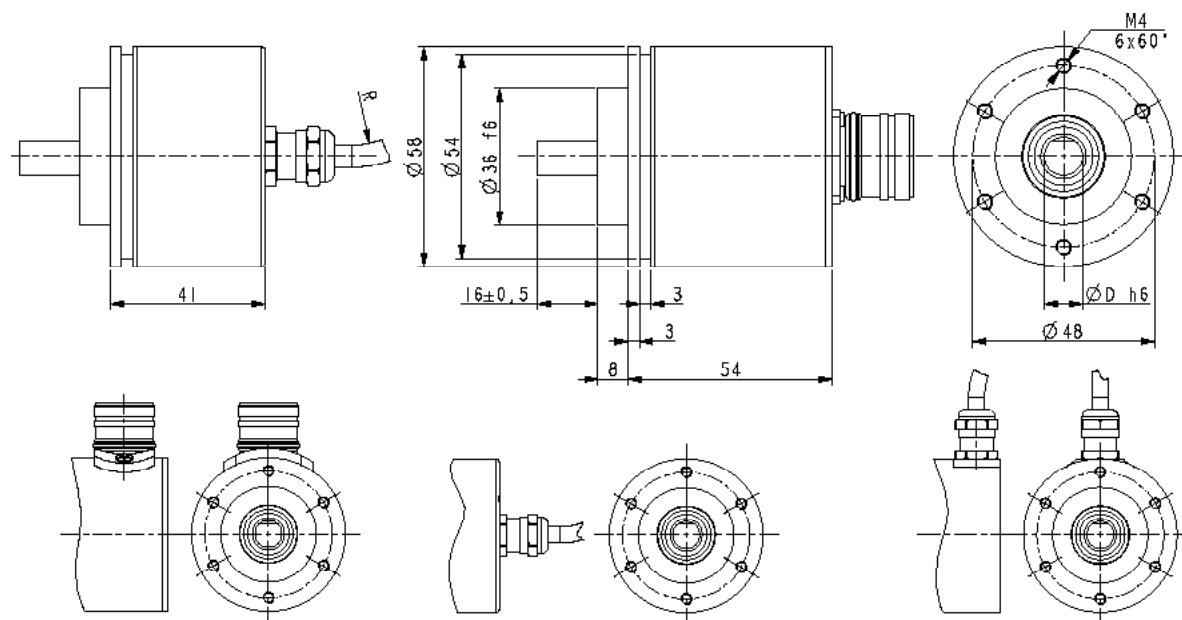
I58-H-500ZCU46RL2	I58-H-500ZCZ46R
I58-H-1000ZCU46RL2	I58-H-1000ZCZ46R
I58-H-1024ZCU46RL2	I58-H-1024ZCZ46R
I58-H-2048ZCU46RL2	I58-H-2048ZCZ46R
I58-H-2500ZCU46RL2	I58-H-2500ZCZ46R
I58-H-500ZCZ46	I58S-H-500ZCZ410R
I58-H-1000ZCZ46	I58S-H-1000ZCZ410R
I58-H-1024ZCZ46	I58S-H-1024ZCZ410R
I58-H-2048ZCZ46	I58S-H-2048ZCZ410R
I58-H-2500ZCZ46	I58S-H-2500ZCZ410R

ACCESSORIES

EPFL 121:	12 pin M23 mating connector
EC-C12F-LK-I8-x:	cordset x meter, M23 connector
EDE 9S:	9 pin DSub mating connector
PAN/PGF:	flexible couplings
LKM-386:	fixing clamps



158



158S

Order code

158	-	X	-	XXXXX	XXX	X	XX	X	X	X	X	XX	/Sxxx
158S		(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)

<p>(a) OUTPUT CIRCUITS N = NPN o.c. P = PNP o.c. Y = Push Pull L = Line Driver (RS422) H = PP/LD universal circuit V = 1 Vpp sine/cosine</p> <p>(b) RESOLUTION (PPR) See electrical specifications</p>	<p>(c) OUTPUT SIGNALS / CONNECTIONS BNF = AB, cable output (except V output) ZNF = ABO, cable output (except V output) BCU = AB /AB, cable output ZCU = ABO /ABO, cable output BCZ = AB /AB, M23 12 pin plug ZCZ = ABO /ABO, M23 12 pin plug ZCM = ABO /ABO, M12 8 pin plug</p> <p>(d) SUPPLY VOLTAGE 1 = +5V±5% (L, V output circuit) 2 = +10V÷ +30V (N, P, Y output circuit) 4 = +5V÷ +30V (H output circuit)</p>	<p>(e) SHAFT DIAMETER 6 = 6 mm 8 = 8 mm P9 = 9.52 mm - 3/8" 10 = 10 mm 12 = 12 mm</p> <p>(f) CONNECTION POSITION - = axial R = radial</p> <p>(g) PROTECTION - = IP64 (standard) P = IP65</p>	<p>(h) COUNTING FREQUENCY - = 100 kHz (standard) W = 300 kHz</p> <p>(i) OPERATING TEMPERATURE - = -25°C +85°C (-13°F +185°F) standard K = -40°C +100°C (-40°F +212°F)</p> <p>(j) CABLE LENGTH - = cable output 1 m (standard) L2 = cable output 2 m Lx = cable output x m CLx = x m cable with DSub 9 pin inline plug</p> <p>(k) CUSTOM VERSION</p>
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