

# ROTAMAG

Magnetic incremental encoders

Series

MI58 • MI58S • MC58 • MC59 • MC60



- Magnetic sensing technology
- Solid and through hollow shaft design
- Resolution up to 10000 PPR (others on request)
- High protection degree with sealed circuits



MI58 • MI58S

## ENVIRONMENTAL SPECIFICATIONS

Shock:	100 g, 6 ms
Vibrations:	10 g, 5-2000 Hz
Protection:	IP65
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)
Option:	• IP67 protection (with sealed circuits)

## MECHANICAL SPECIFICATIONS

Dimensions:	see drawing
Shaft diameter:	Ø 6, 8, 9.52, 10, 12 mm
Hollow shaft diameter:	Ø 14, 15 mm
Reducing sleeves BR1-xx from Ø 15 mm to:	Ø 6, 8, 9.52, 10, 11, 12 mm
Shaft loading (axial, radial):	100 N max.
Shaft rotational speed:	MI58, MI58S: 12000 rpm max. MC58, MC59, MC60: 3000 rpm (typ), 6000 rpm max.
Starting torque at 20°C:	MI58, MI58S: ≤ 0,4 Ncm (typical) MC58, MC59, MC60: 1 Ncm (typical)
Bearings life:	400 x 10 <sup>6</sup> rev. min. (10 <sup>9</sup> rev. min. with 20 N shaft loading max.)
Electrical connections:	M23 plug or cable output 1 m (3.3 ft)
Weight:	~ 300 g (10,6 oz)
Option:	• additional cable

## ELECTRICAL SPECIFICATIONS

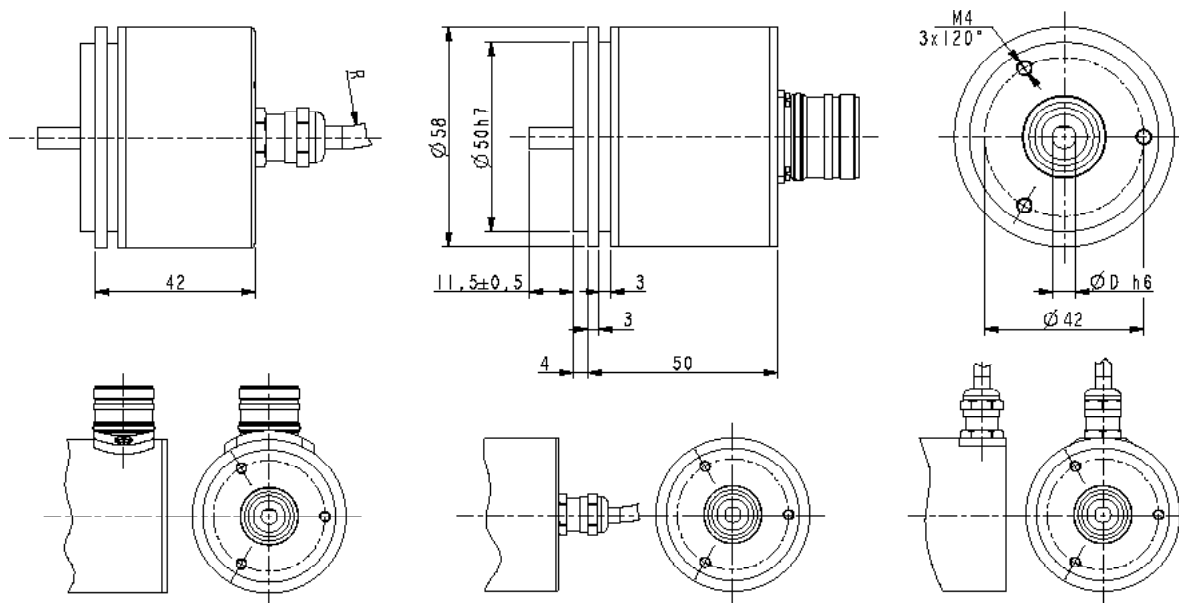
Resolution (PPR):	20-40-80-160-200-320-400-500-640-800-1000 1280-1600-2000-2500-2560-5000-10000
Accuracy:	± 0,5°
Counting frequency:	500 kHz max.
Output circuits:	Push-Pull, Line Driver, Universal circuit
Power supply:	+5V±5%, +10V +30V, +5V +30V
Consumption:	60 mA max.
Output current (per channel):	40 mA max.
Protection:	against inversion of polarity and short-circuit (except L circuit)
EMC:	electro-magnetic immunity, according to: EN 61000-4-2 EN 61000-4-4

## MATERIALS

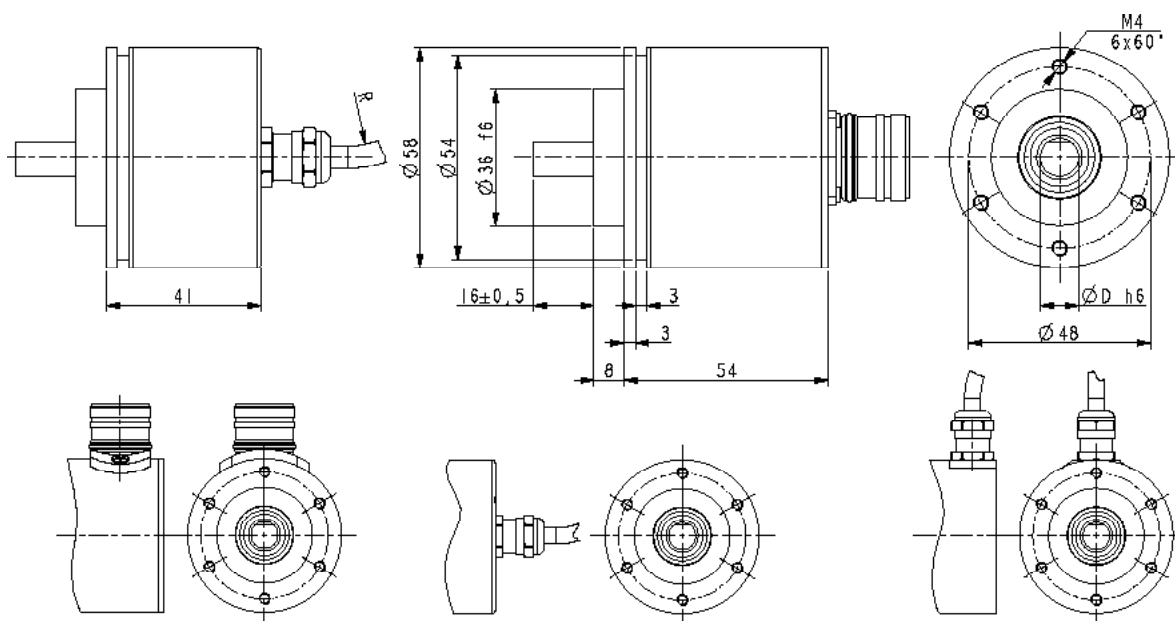
Flange:	anticorrosive, UNI EN AW-6082
Housing:	anticorrosive, UNI EN AW-6082
Bearings:	ABEC 5
Shaft:	stainless steel, non-magnetic, UNI EN 4305

## ACCESSORIES

EPFL 121:	12 pin M23 mating connector
EC-C12F-LK-I8-x:	cordset x meter with M23 conn.
PAN/PGF:	flexible couplings
LKM-386:	fixing clamps
BR1:	Reducing sleeves



MI58



MI58S

Order code

MI58	-	X	-	XXXXX	XXX	X	XX	X	X	X	/Sxxx
MI58S		Ⓐ		Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	Ⓖ	Ⓗ	Ⓘ

Ⓐ OUTPUT CIRCUITS

Y = Push Pull  
L = Line Driver (RS422)  
H = PP/LD universal circuit

Ⓑ RESOLUTION (PPR)

See electrical specifications

Ⓒ OUTPUT SIGNALS / CONNECTIONS

BNF = AB, cable output  
BCU = AB /AB, cable output  
BCZ = AB /AB, M23 12 pin plug  
ZNF = ABO, cable output  
ZCU = ABO /ABO, cable output  
ZCZ = ABO /ABO, M23 12 pin plug

Ⓓ SUPPLY VOLTAGE

1 = +5V±5% (L output circuit)  
2 = +10V÷ +30V (Y output circuit)  
4 = +5V÷ +30V (H output circuit)

Ⓔ SHAFT DIAMETER

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

Ⓕ CONNECTION POSITION

- = axial  
R = radial

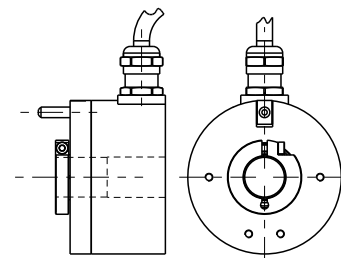
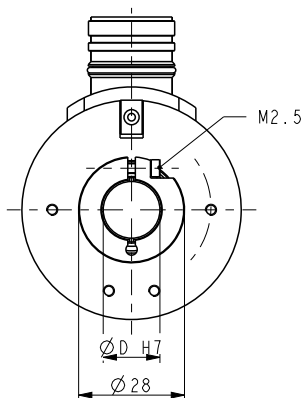
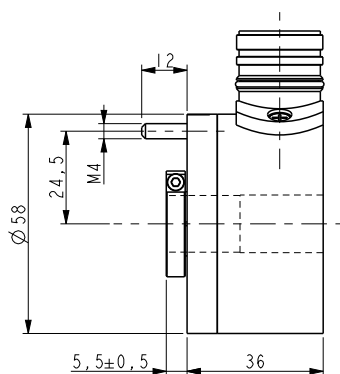
Ⓖ PROTECTION

- = IP65 (standard)  
J = IP67 (only with cable output)

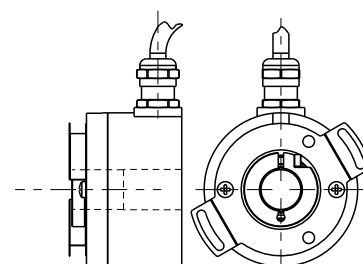
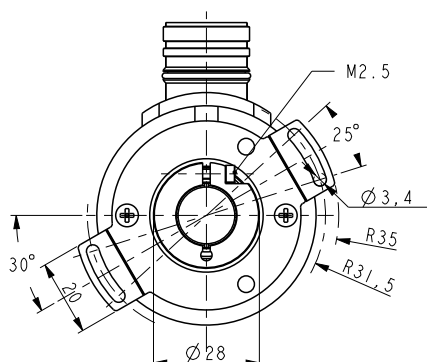
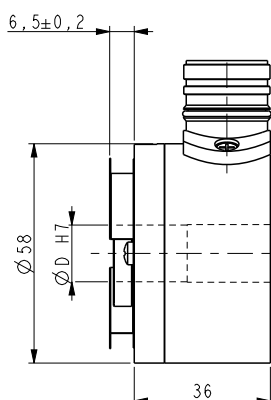
Ⓗ CABLE LENGTH

(not with BCZ, ZCZ)  
- = cable output 1 m (standard)  
L2 = cable output 2 m  
Lx = cable output x m

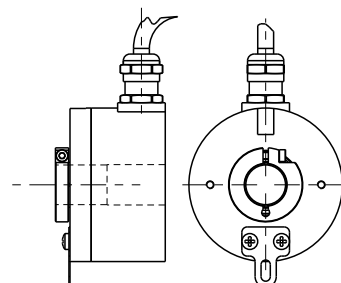
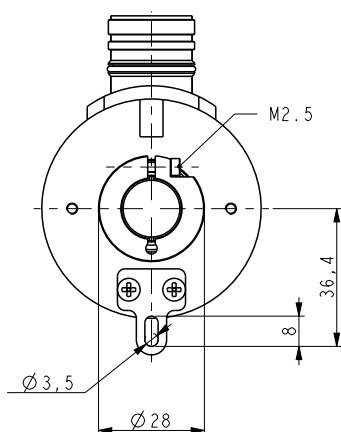
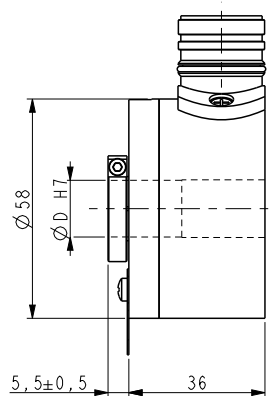
Ⓘ CUSTOM VERSION



MC58



MC59



MC60

Order code

MC58	-	X	-	XXXXX	XXX	X	XX	X	XX	/Sxxx
MC59		a		b	c	d	e	f	g	h
MC60										

Ⓐ OUTPUT CIRCUITS

Y = Push Pull  
L = Line Driver (RS422)  
H = PP/LD universal circuit

Ⓑ RESOLUTION (PPR)

See electrical specifications

Ⓒ OUTPUT SIGNALS / CONNECTIONS

BNF = AB, cable output  
BCU = AB /AB, cable output  
BCZ = AB /AB, M23 12 pin plug  
ZNF = ABO, cable output  
ZCU = ABO /ABO, cable output  
ZCZ = ABO /ABO, M23 12 pin plug

Ⓓ SUPPLY VOLTAGE

1 = +5V±5% (L output circuit)  
2 = +10V÷ +30V (Y output circuit)  
4 = +5V÷ +30V (H output circuit)

Ⓔ SHAFT DIAMETER

14 = 14 mm  
15 = 15 mm

Ⓕ PROTECTION

- = IP65 (standard)  
J = IP67 (only with cable output)

Ⓖ CABLE LENGTH (not with BCZ, ZCZ)

- = cable output 1 m (standard)  
L2 = cable output 2 m  
Lx = cable output x m

Ⓗ CUSTOM VERSION