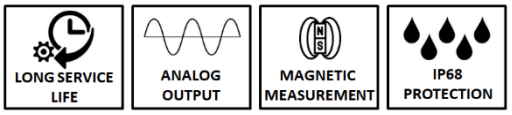
IP68 MULTITURN ABSOLUTE ROTARY ENCODER

"Magnetic Measurement, 58 mm Body Diameter, Semi-Hollow Shaft"

MAH B 58
Analog Output

GENERAL FEATURES

- Absolute measurement with magnetic principle
- 58 mm body diameter
- 6, 8, 10, 12, 14 or 15 mm semi hollow shaft options
- 4-20 mA, 0-5 V, 0.5-4.5 V or 0-10 V analog output options
- 0.02 ° accuracy in multiple turns of the desired number
- 16 bit resolution
- High sensitivity
- IP68 protection class



The MAH B 58 series encoders operate absolute. In other words, unlike the incremental systems, they do not lose their positions in power outages and continue to measure from where they left off.
They are with semi hollow shaft and they have 58 mm body diameter. The MAH series multi-turn absolute rotary encoders offer highly flexible solutions in use, with different analog output signals, hollow diameters and flange types. With its IP68 protection class, it is resistant to harsh environmental conditions and vibrations.
The MAH multi-turn absolute rotary encoder with integrated reference provides high quality feedback.

APPLICATION FIELDS

Speed and position accuracy in one application; If it is more important than fault tolerance and system simplicity, absolute encoders should be used. Absolute encoders provide precise operation in applications.

- Identifying multi-axis orientation in CNC machines used in component manufacturing
- Automatically determine the height of the scissor bearings used in hospitals
- Correct placement of multiple stabilizers for large vehicles such as cranes or air lifts
- Automatic doors or slots to move without limiting key
- Continue robotic movement even after a power failure

TECHNICAL SPECIFICATIONS

Electrical Specifications	
Working Principle	Hall Effect
Measuring Range	2…2^{17} turns
Supply Voltage	15 … 26 VDC
Current Consumption	60 mA
Reverse Polarity Protection	Yes, there is
Accuracy	±0,5°
Repeatability	0,1°
Angular Resolution	16 Bit
Response Frequency	500 Hz
***Electrical Interface**	4-20 mA, 0-10 V, 0-5 V, 0.5-4.5 V
***Electrical Connection**	M12 5 pin male socket or 5 x 0,14 mm^2 shielded cable
Output Load	For current output model; min 250 Ω For voltage output model; min 1 KΩ

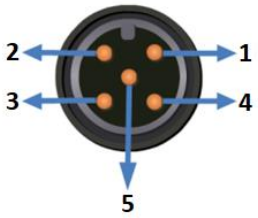
Mechanical Specifications	
Maximum Speed	3000 RPM
***Body Diameter**	58 mm
***Hollow Diameter**	6 mm, 8 mm, 10 mm, 12 mm, 14 mm, 15 mm
Weight	≈400 gr
Protection Class	IP68
Operating Temp.	-45°C … +85°C
Relative Humudity	%10 … %90
Material	Shaft: Stainless Steel Body: Aluminium

Note: The specifications indicated by (*) vary according to the model selected. The detailed code table for product selection is shown on page 4.
The product is mechanically non-stop.

ELECTRICAL CONNECTIONS

Signal	Cable	M12 Socket
V+ (15...26 VDC)	Red	Pin 1
Output: 0-10V / 0-5V / 0.5-4.5V / 4-20mA	Yellow	Pin 2
GND (0V)	Black	Pin 3
Direction Change	Green	Pin 4
Reset	Pink	Pin 5

M12 5 PIN MALE SOCKET

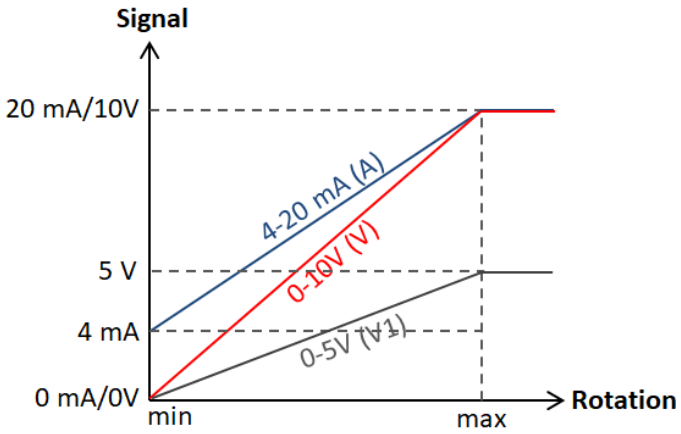


RESET: With the reset function you can set the desired location to 0. The reset terminal and GND are short-circuited for about 5 seconds and then disconnected. The sensor then accepts the current position as zero.

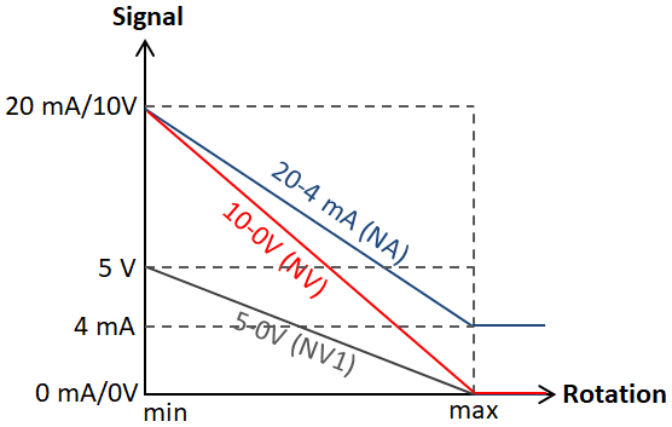
DIRECTION CHANGE: You can change the angle increase direction with the direction change function. The direction change terminal and GND are short-circuited for about 5 seconds and then disconnected.Thus, the sensor reverses the angle direction (CW is CCW and CCW is CW).

OUTPUT SIGNAL GRAPHICS

Output Signal (V, V1, A, V3)

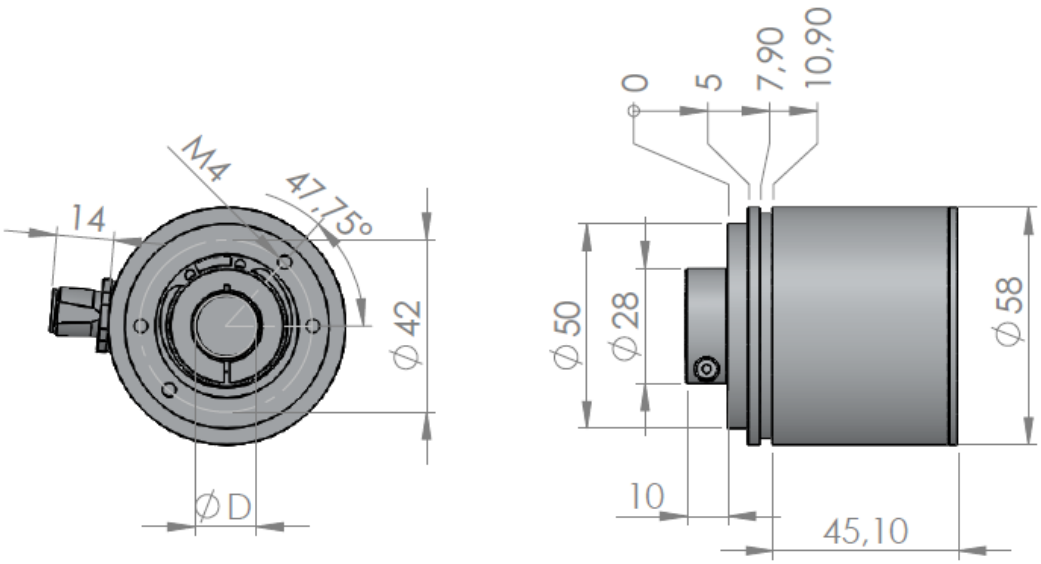


Reverse of Output Signal (NV, NV1, NA, NV3)

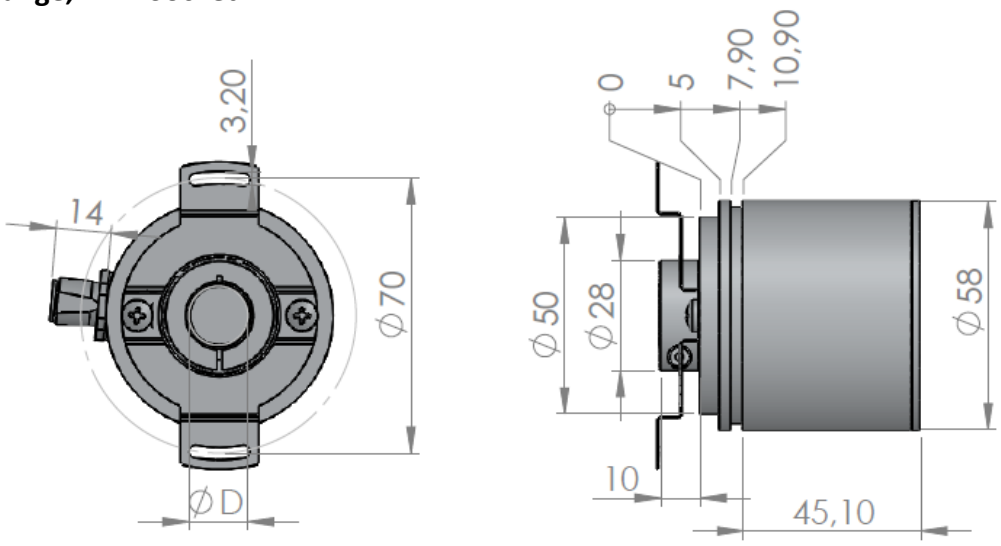


MECHANICAL DIMENSIONS (mm)

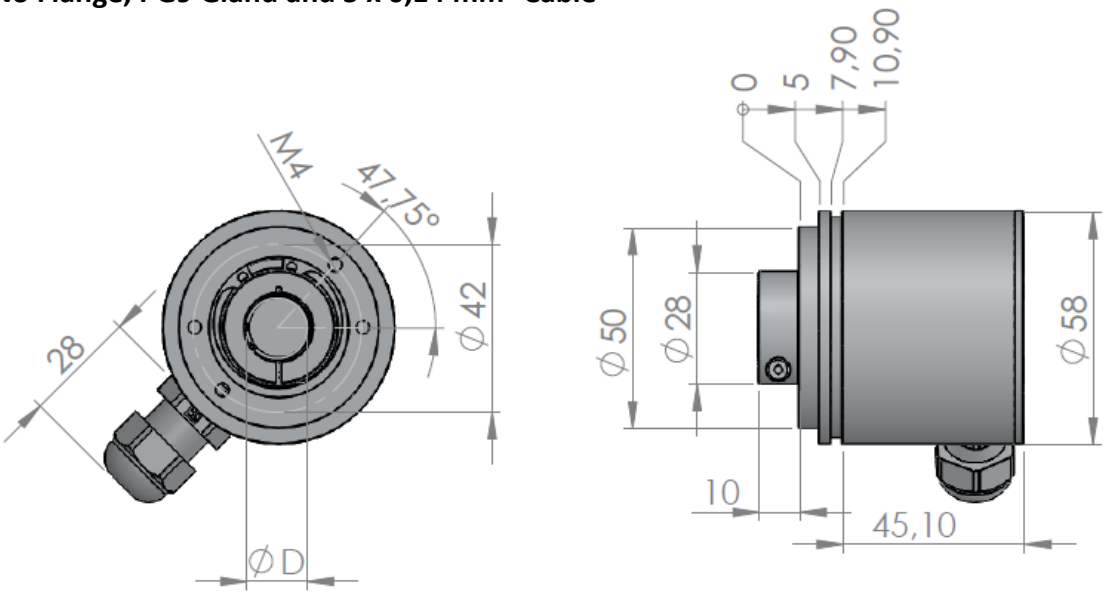
No Flange, M12 Socket



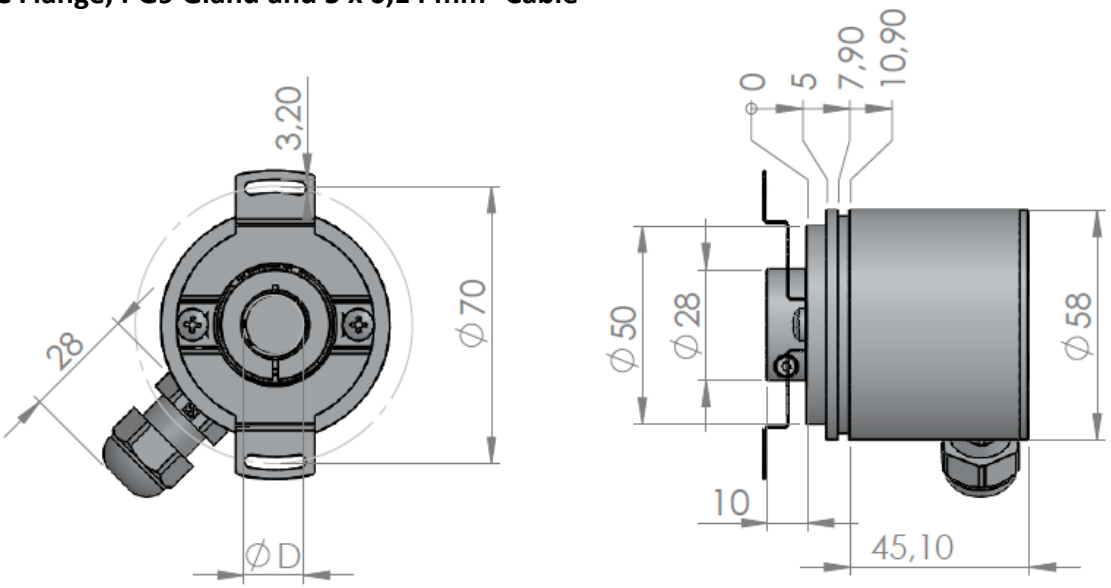
FC Flange, M12 Socket



No Flange, PG9 Gland and 5 x 0,14 mm² Cable



FC Flange, PG9 Gland and 5 x 0,14 mm² Cable



D	6	8	10	12	14	15

PRODUCT CODE

Model		Body Diameter		Supply Voltage	Signal Increasing Direction		Cable or Socket Direction		Flange Type		
MAH	X	XXX	XX	XXX	XXX	X	XXX	XXX	X	X
	Shaft Type **B** : Semi hollow shaft		**Turn Number** The desired number of turns between 2 and 2^{17} can be selected.		**Output Signal** (1) **V** : 0-10 VDC **V1** : 0-5 VDC **A** : 4-20 mA **V3** : 0.5-4.5 VDC **NV** : 10-0 VDC **NV1** : 5-0 VDC **NA** : 20-4 mA **NV3** : 4.5-0.5 VDC		**Electrical Connection** (2) **1.5M :** 1.5 m PUR cable **S13M :** M12 / 5 pin male socket		**Hollow Diameter** **6 :** 6 mm **8 :** 8 mm **10:** 10 mm **12:** 12 mm **14:** 14 mm **15:** 15 mm	

(1) The direction of the output signals can be changed optionally. In the coding, when 'N' is placed at the beginning of the normal signal, it refers to the opposite. For example; in case of **V:** 0-10 VDC, then **NV:** 10-0 VDC
(2) Cable length can be requested to a minimum of 1.5 m.

*** Please contact us for your non-standard (special production) product requests.**

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