

AHM5 RANGE

CANOPEN ABSOLUTE SINGLE TURN ENCODERS



Features

AHM5 characterizes itself by its strong robustness of the mechanical and electro-magnetic parts:

- Application Fields: agriculture, construction, forestry vehicles, medical applications, solar panels...
- Magnetic technology, contactless.
- Strong robustness with its reinforced bearing block and its stopped bearings.
- Available resolution up to 12 bits.
- Universal supply from 5 to 30Vdc.
- Also Available: analog, PWM, and SSI outputs.
- Available in Options : Extended temperature range (up to -40..+125°C), IP67/IP69K...

SPECIFICATIONS

Mechanical

Material	Shaft: Stainless Steel, Cover: Zinc Alloy, Body: Aluminium
Bearings	6 000 series
Maximal Loads	Axial: 100 N, Radial: 200 N
Shaft Inertia	$\leq 0,4 \cdot 10^{-6} \text{ kg} \cdot \text{m}^2$
Torque	$\leq 7 \cdot 10^{-3} \text{ N} \cdot \text{m}$
Nominal Max. Speed	6 000 min^{-1}
Encoder Weight (Approx.)	0,300 kg
Isolation	500 Veff
EMC	EN 61000-6-4, EN 61000-6-2
Operating Temperature	- 40... + 85 °C (T° encoder)
Storage Temperature	- 40... + 85 °C
Protection	IP 65
Shocks (EN60068-2-27)	$\leq 2000 \text{m} \cdot \text{s}^{-2}$ (during 6 ms)
Vibrations (EN60068-2-6)	$\leq 200 \text{m} \cdot \text{s}^{-2}$ (55 ... 2 000 Hz)
Theoretical Mechanical Lifetime	10^9 Turns ($F_{\text{axial}} / F_{\text{radial}}$)
100 N / 200 N	$3 \cdot 10^9$ Turns

Electrical

Power Supply	5-30Vdc
Consumption Without Load	< 40mA (at 24Vdc)
Resolution	4096 (2 ¹²)
Accuracy	± 0.3 % (on 360°)
Repeatability	± 0.1 % (on 360°)
Introduction	< 1s
Refresh Rate	< 400 s

TECHNICAL SPECIFICATIONS

Programmable Parameters

Resolution : Defines the resolution per revolution (0 à 4 096).

Transmission Speed: Programmable from 10kbaud (1 000m) to 1 Mbaud (25 m) ; value per default : 20 Kbaud.

Address: Defines the software address of the encoder on the bus (1 à 127, Value per default : id = 1).

Direction: Defines the direction of count of the encoder.

RAX: Define the value of the current position (stationary shaft).

Games : High and low limits.

Communication Modes

Encoder Configuration : Reading/Writing of the encoder objects dictionary (SDO mode).

3 modes are available to interrogate the encoder position/speed :

CYCLIC Mode : the encoder transmits its position in an asynchronous manner. The frequency of the transmission is defined by the programmable cyclic timer register from 0 to 65 535 ms,

SYNCHRO Mode : the encoder transmits its position on a synchronous demand by the master.

POOLING Mode (Answer to a RTR signal) : the encoder only answers to a request.

CANopen Connection, Cable + DB9 Connector

		N.C.	CAN LOW	CAN GND	N.C.	N.C.	0V	CAN HIGH	N.C.	5/30Vdc	Ground
BB	PVC Cable + DB9	1	2	3	4	5	6	7	8	9	General Shielding
BC	M23 12 Pinouts	1	2	3	4	5	10	7	6, 8, 9, 11	12	Connector Body

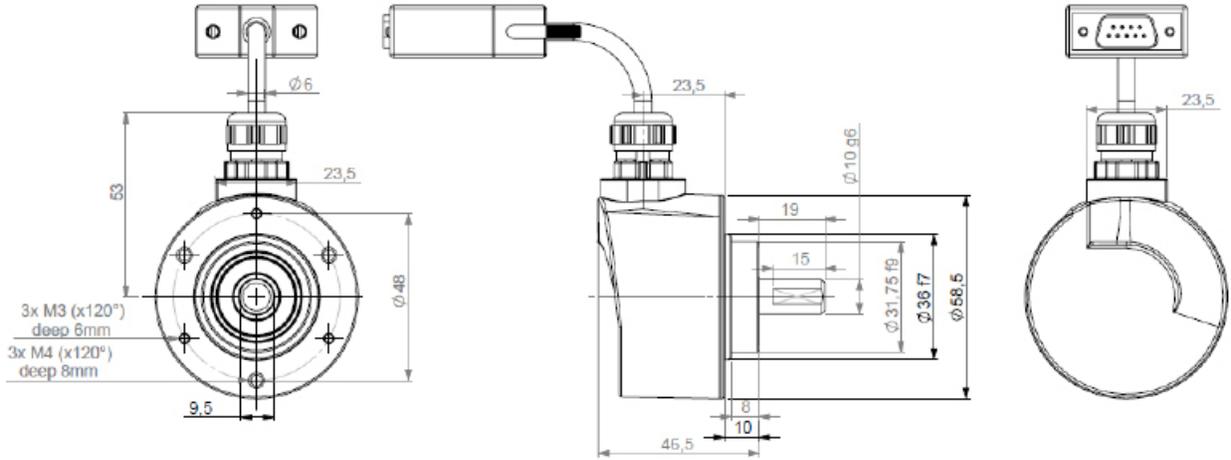
Note : Refer to the bus standards for the maximal derivation length.



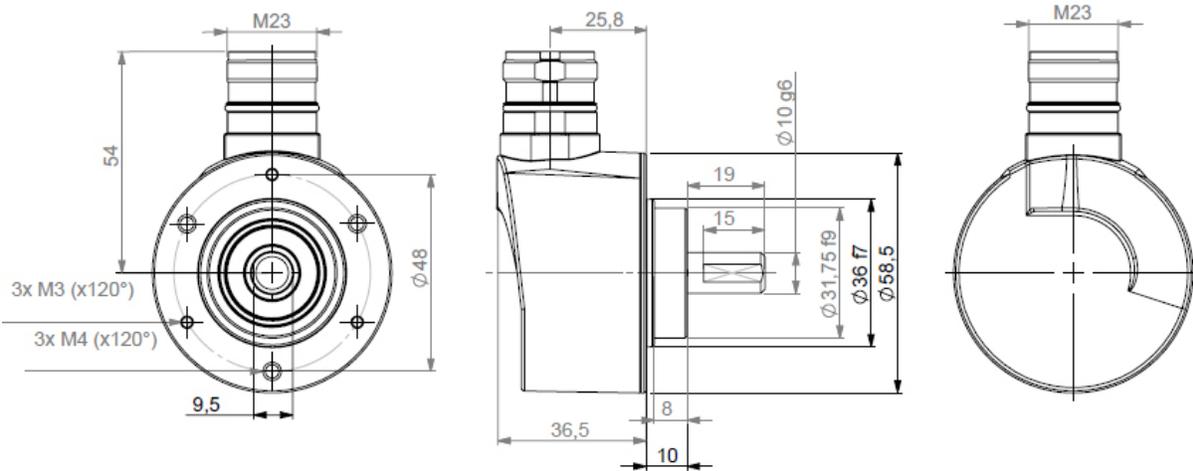
DIMENSIONS

All dimensions are in millimeters.

AHM5_10 with BB Connection (Radial Cable)



AHM5_10 with BC Connection (Radial M23)

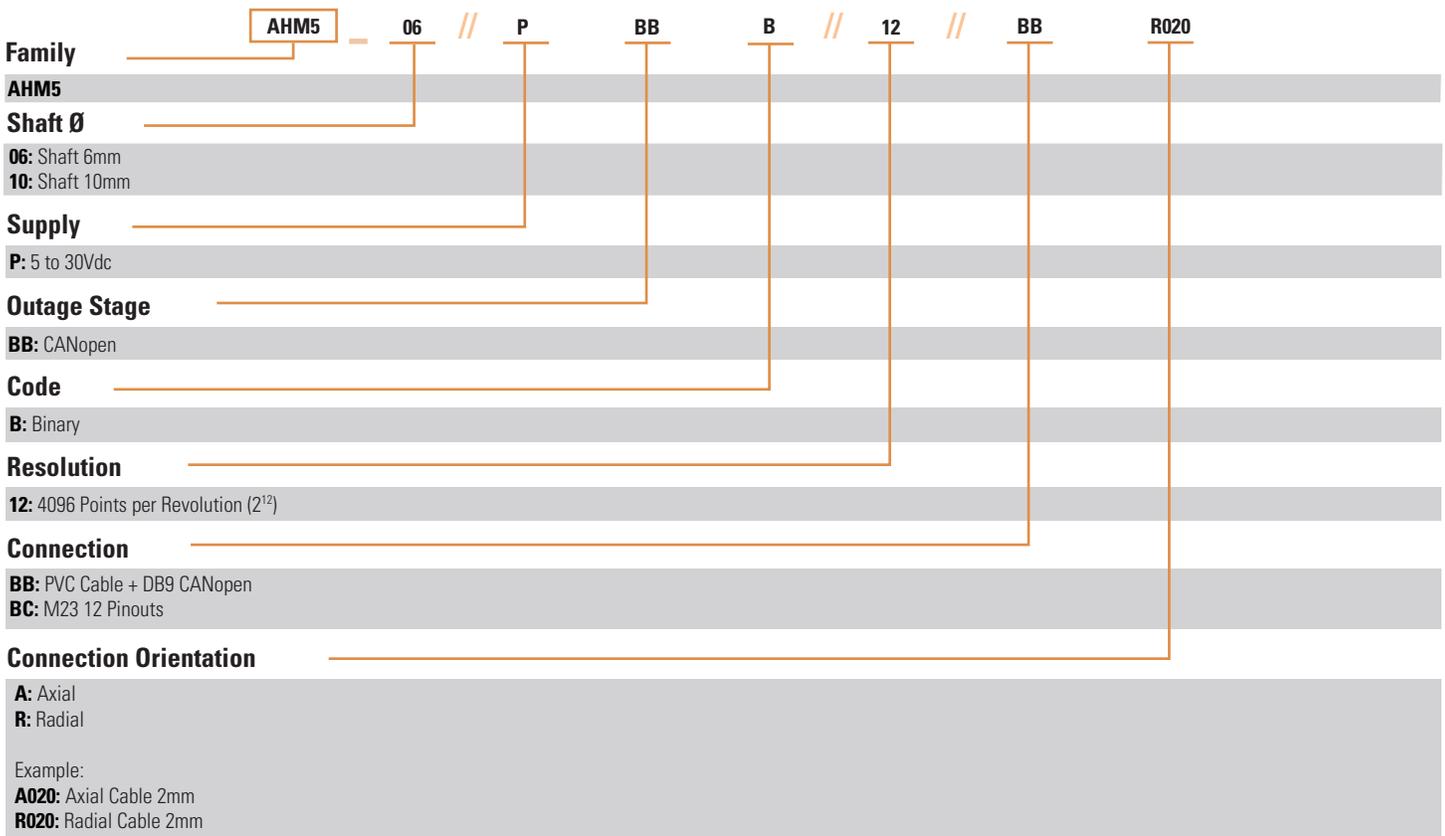




ORDERING OPTIONS

Example : AHM5_06//PBBB//12//BBR020

(Contact the factory for special versions , ex : stainless steel version, connections...)



AGENCY APPROVALS & CERTIFICATIONS



Made in France

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