



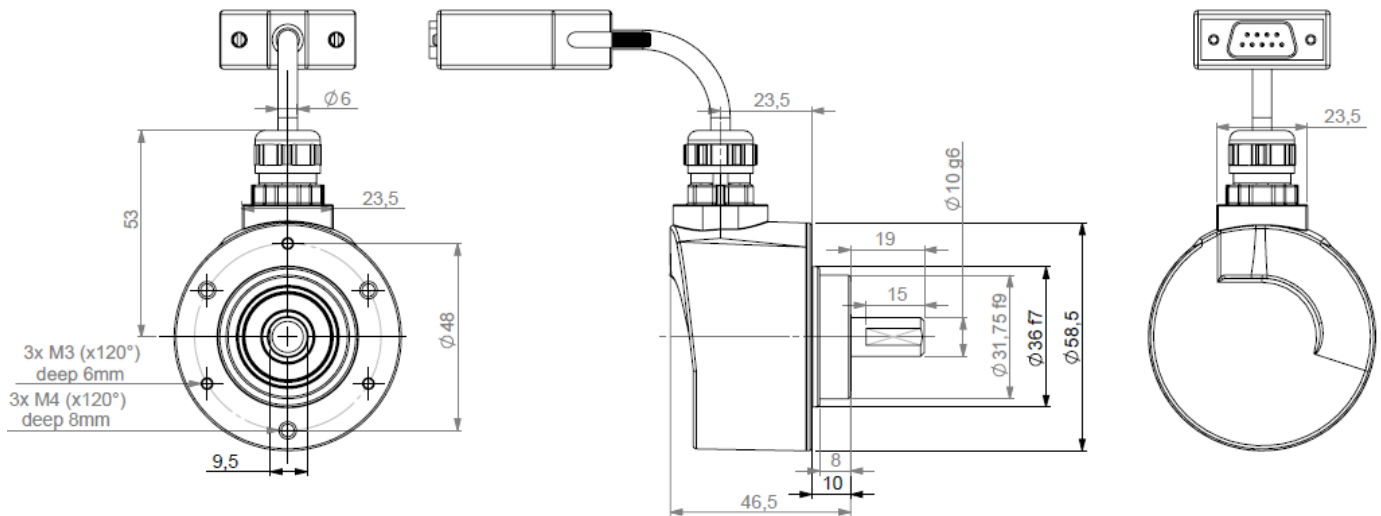
MAGNETIC CANOPEN ABSOLUTE SINGLE TURN ENCODERS, AHM5 RANGE

AHM5 is a new magnetic absolute single turn encoders generation. It characterizes itself by its strong robustness of the mechanical and electro-magnetic parts :

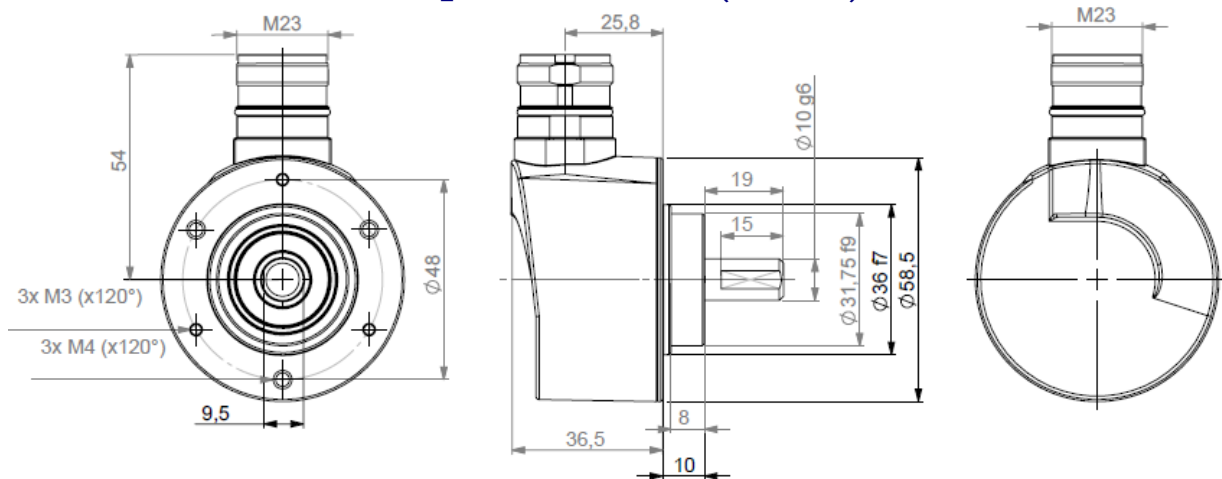
- Application fields : agriculture, construction, forestry vehicles, medical applications, solar panels...
- Magnetic technology, contactless.
- Strong robustness with its reinforced bearing block and its stopped bearings.
- Available resolution up to 12 bits per revolution.
- Universal supply from 5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



AHM5_10 with BB connection (radial cable)



AHM5_10 with BC connection (radial M23)



MECHANICAL DATA

Material	Shaft: Stainless steel	Isolation	500 Veff
	Cover: Zinc alloy	EMC	EN 61000-6-4
	Body: aluminium		EN 61000-6-2
Bearings	6 000 series	Operating temperature	- 40... + 85 °C (T° encoder)
Maximal loads	Axial : 100 N	Storage temperature	- 40... + 85 °C
	Radial : 200 N	Protection	IP 65
Shaft inertia	$\leq 0,4 \cdot 10^{-6} \text{ kg} \cdot \text{m}^2$	Shocks (EN60068-2-27)	$\leq 2000 \text{ m} \cdot \text{s}^{-2}$ (during 6 ms)
Torque	$\leq 7 \cdot 10^{-3} \text{ N} \cdot \text{m}$	Vibrations (EN60068-2-6)	$\leq 200 \text{ m} \cdot \text{s}^{-2}$ (55 ... 2 000 Hz)
Nominal max. speed	6 000 min ⁻¹	Theoretical mechanical lifetime 10° turns (F _{axial} / F _{radial})	
Encoder weight (approx.)	0,300 kg	100 N / 200 N	3



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ELECTRICAL DATA

Power supply	5-30Vdc	Introduction	< 1s
Consumption without load	< 40mA (at 24Vdc)	Refresh rate	< 400µs
Resolution	4096 (2 ¹²)		
Accuracy	± 0.3 %		
Repeatability	± 0.1 %		

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 (stationnary shaft).

Comes: 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

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

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

	Shaft Ø	Supply	Output stage	Code	Resolution	Connection	Connection orientation
AHM5	06 : Shaft 6mm	P : 5 to 30Vdc	BB : CANopen	B : Binary	12 : 4096 points per revolution (2 ¹²)	BB : PVC Cable + DB9 CAN-open	A020 : Axial Cable 2m
	R020 : Radial Cable 2m						
	10 : Shaft 10mm					BC : M23 12 pinouts	A : Axial R : Radial
Ex: AHM5_	06 //	3 L1	BB	B	// 12 //	BB	R020

Made in France