AGE60 ABSOLUTE ENCODER WITH INDEPENDENT CAN SIGNALS
Part No.: 2107794



DESCRIPTION

Encoder for an absolute angle measurement, based on wear free HALL-sensorics. Redundant signal processing and output is done by two independent CAN controller. For this model you have a usable range of +/- 90 degrees, but this value is customizable, because there is no stop on plus or minus 90°. A rentable and cost-effective use in harsh environments is guaranteed by an aluminum housing, a stainless steel shaft, a PUR insulated cable and the use of special sealing to cover the back.

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TECHNICAL DATA

CONSTRUCTION AND MECHANICAL DATA

DETENT ANGLE	±90° , without stop
DETENT GRADUATION	n.a.
MOUNTING	2x M5 (10 mm thread length)
PROTECTION CLASS	IP67
DETENT MECHANISM	n.a.
DETENT TORQUE WITH INDEX	n.a.
BEARING	ball bearing
ACTIVATING BUTTON	n.a.
ACTUATING PATH	n.a
FASTENING TORQUE MAX.	tbd.
MAX. LOAD ON SHAFT	axial: tbd. radial: tbd.
LIFE EXPECTANCY	30 million revolutions
REVOLUTION SPEED MAX.	tbd.
SHAFT LENGTH	acc. drawing
SHAFT DESIGN	acc. drawing
PUSHBUTTON / SWITCHING FUNCTION	n.a.

ELECTRICAL DATA IN THE OPERATING TEMPERATURE RANGE

OPERATION VOLTAGE	7,0 to 18,0 V DC
CURRENT CONSUMPTION	typ. 70 mA (max. 90 mA)
SWITCHING VOLTAGE MAX.	n.a.
SWITCHING CURRENT MAX.	n.a.
RESOLUTION	14 bit / revolution 10 bit / 90°
OUTPUT SIGNAL	2 * CAN, 250 kbaud
INDICATOR OF REVOLUTION DIRECTION	n.a.
POLARITY PROTECTION	yes
IMPULSES PER OUTPUT	n.a.
CONNECTOR	open wire

ENVIRONMENTAL CONDITIONS

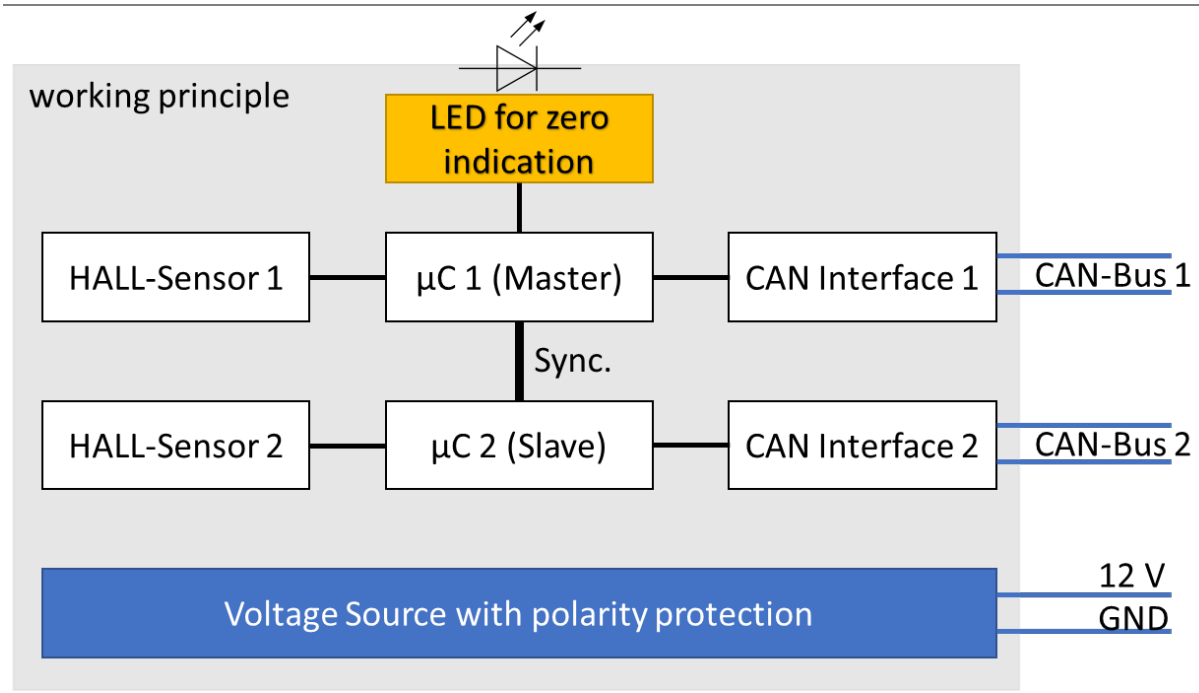
OPERATING TEMPERATURE	-40 °C to +85 °C
STORAGE TEMPERATURE	-40 °C to +105 °C
HUMIDITY MAX.	95 % RH condensing (48h tested)

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OTHER	
CABLE	PUR insulated cable with 6 wires AWG 21 ca. 700 mm

DRAWINGS / OTHER INFORMATION

WORKING PRINCIPLE



CONNECTION DIAGRAMM (END OF CABLE)

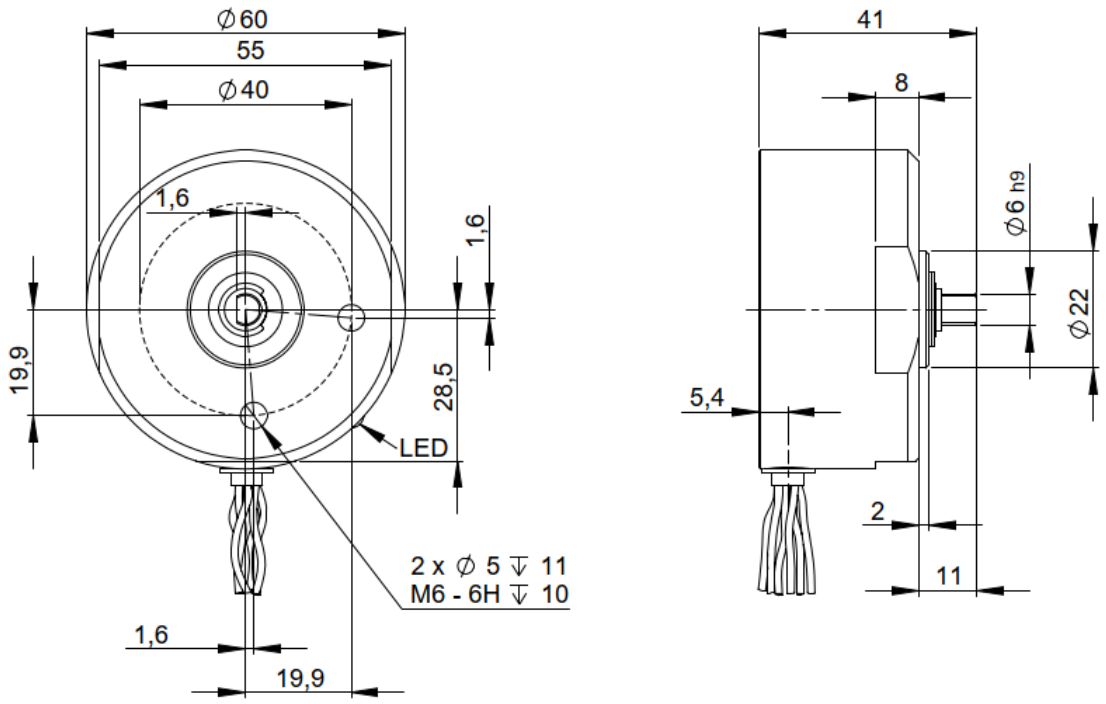
YELLOW	CAN2-L	CAN-Low
GREEN	CAN2-H	CAN-High
BROWN	GND	ground (supply and CAN)
WHITE	+Ub	supply
ROSE	CAN1-L	CAN-low
GREY	CAN1-H	CAN-High

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WORKING PRINCIPLE

CAN2.0 WITH 29-BIT ID:
250 KBAUD (MAX. 500 KBAUD)
TRANSCEIVER: CF151 (BOSCH) OR SIMILAR
CHOKE: B82799 OR SIMILAR
TERMINATION: 120 OHMS
SENDING CYCLE: CA. 15 MS

DRAWING



units in mm

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CAN-BUS-ID

CAN-BUS A	CAN-BUS B	ID hex	Symbol-Name	DLC	Byte	Byte-Funktion	Bit Nr.	Function	Issue area	Update Rate
A	B	0CFF0200	Running set point	8	0	Mark 1			0x 01	15 ms +/- 2ms
					1	Zero position indicator			0x 05 = off 0x FA = on	
					2	Running set point lane low			0 - 1023	
					3	Running set point lane high				
					4	Message counter low		12 Bit synchron	12-Bit counter	
					5	Message counter high				
					6	Reserve			0xFF	
					7	Mark_2			0x FF	
A	B	0CFF0203	Adress	8	0	Mark_1			0x 03	30 ms +/- 2ms
					1	Digital signals	0	DIN _1	0 = not controlled 1 = controlled	
							1	DIN _2		
							2	DIN _3		
							3	DIN _4		
							4	DIN _5		
							5	DIN _6		
							6		0	
							7		0	
					2	Mark_2			0x FF	
					3	Mark_3 CAN-BUS A Ubat CAN-BUS B		Current in digit. 1 digit = ca. 0,11V	0x 00 0 - 255	
					4	Diagnostic_1	0	App data are not skripted		
							1	App data are false		
							2	Product data are not skripted		
							3	Communication error from sensor		
							4	Magnetic field to weak		
							5	Magnetic field to strong		
							6	Different error from sensor		
							7	Reserve		
					5	Diagnostic_2	0	Transmitter bus off		
							1	Transmitter error active		
							2	Transmitter error passive		
							3	Receiver error active		
							4	Receiver error passive		
							5	CAN _Overflow		
							6	RS232 error		
							7	HW diff. error		
					6	Diagnostic_3	0	Momentarily current under limit		
							1	Momentarily current over limit		
							2	Permanently current under limit		
							3	Permanently current over limit		
							4	Reserve		
							5	WDT Reset		
							6	Reserve		
							7	Reserve		
					7	Mark_4			0x FF	

CAN-BUS A	CAN-BUS B	ID hex	Symbol-Name	DLC	Byte-Function	
A	B	0CFF0206	EBE 1	8	used to compare or read for diagnostic	
A	B	0CFF0209	EBE 2	8	used to compare or read for diagnostic	

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SAFETY AND WARNING NOTES

The components are solely for use by technically qualified, professional electronics experts who are familiar to the dangers and application risks associated with handling electrical mechanical components, systems and subsystems. User assumes all responsibility and liability for proper and safe handling and use and agrees with the restrictions and disclaimer at the end of this document.

DISCLAIMER

The information contained in this document is for general guidance only. The user is responsible for determining the suitability of the technical information referred herein for his application. On delivery of the component, EBE is only obliged to implement those properties set out and agreed upon in this document. Further properties are not included. No guarantee is given. The component has been designed for installation in our customer's products. Manufacturer of the resulting product and consequent liability according to the Product Liability Act lies with the customer. Warranty is limited to below mentioned extent.

The component is not intended for installation in end products for medical, life-saving, or safety-related applications. The use of the component is also not permitted and expressly prohibited in vehicles of any kind (including trailers and watercraft), as a component in aerospace products (including radio transmitter for aerospace purposes), or in offshore structures.

User assumes all responsibility and liability to determine whether the component is subject to any applicable international, federal, state, or local laws and regulations related to user's handling and use of the component and, if applicable, user assumes all responsibility and liability for compliance in all respects with such laws and regulations.

Disclaimer for improper use

The manufacturer accepts no liability for damage resulting from improper, inappropriate, or non-compliant use of the component. Any liability for direct or indirect damage, consequential damage or loss resulting from improper use is excluded. The Customer (user) is obliged to use the component exclusively in accordance with the instructions and information given in this document.

The limitation of liability described above does not apply in the case of mandatory statutory liability such as under the German Product Liability Act (Produkthaftungsgesetz) or in the case that a guarantee is given or in the case of willful deceit or fraudulent misrepresentation or with regard to claims for an injury of the life or limb or health or in the case of intentional or grossly negligent breach of fundamental contractual duties (“wesentliche Vertragspflichten”).

REVISION

REVISION	DATE	DESCRIPTION
1.1	28.04.2026	Update legal notices
1.0	17.04.2023	Initial Data Sheet AGE60-W90-CAN2-6E / Change in Storage Temperature (125°C -> 105°C) and Humidity 100% -> 95%

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