ESC17 ENCODER WITH PUSHBUTTON



DESCRIPTION

Electronic rotary encoder with wear-free HALL-sensing module for signal generation and integrated push button function. Digit-exact fine adjustment through precise mechanical detent with high rotational life. Perfect for use in harsh environments like dust, aggressive atmosphere, etc.

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TECHNICAL DATA

CONSTRUCTION AND MECHANICAL DATA

DETENT ANGLE	22,5°
DETENT GRADUATION	16
MOUNTING	central mounting
PROTECTION CLASS	IP65
DETENT MECHANISM	mechanic
DETENT TORQUE WITH INDEX	approx. 4,5 Ncm ±30%
BEARING	friction
SWITCHING BUTTON ACTUATION FORCE	approx. 7 N
SWITCHING PATH	approx. 1,0 mm
FASTENING TORQUE MAX.	2,5 Nm
MAX. LOAD ON SHAFT	axial: tbd. radial: tbd.
LIFE EXPECTANCY	> 100.000 turns
REVOLUTION SPEED MAX.	tbd.
SHAFT LENGTH	customizable
SHAFT DESIGN	customizable
PUSHBUTTON / SWITCHING FUNCTION	available
ROHS AND REACH	conform

ELECTRICAL DATA

OPERATION VOLTAGE	5 VDC ± 10%
CURRENT CONSUMPTION	16 mA typ., (max. 20 mA)
OUTPUT SIGNALS	low: < 0,6 V @ no load high: > Vcc -0,7 V @ no load max. 5 mA per output
INDICATOR OF REVOLUTION DIRECTION	A/B + direction signal
IMPULSES PER OUTPUT	16 pulses per revolution
CONNECTOR	Customizable (standard = cable without connector)

ENVIRONMENTAL CONDITIONS

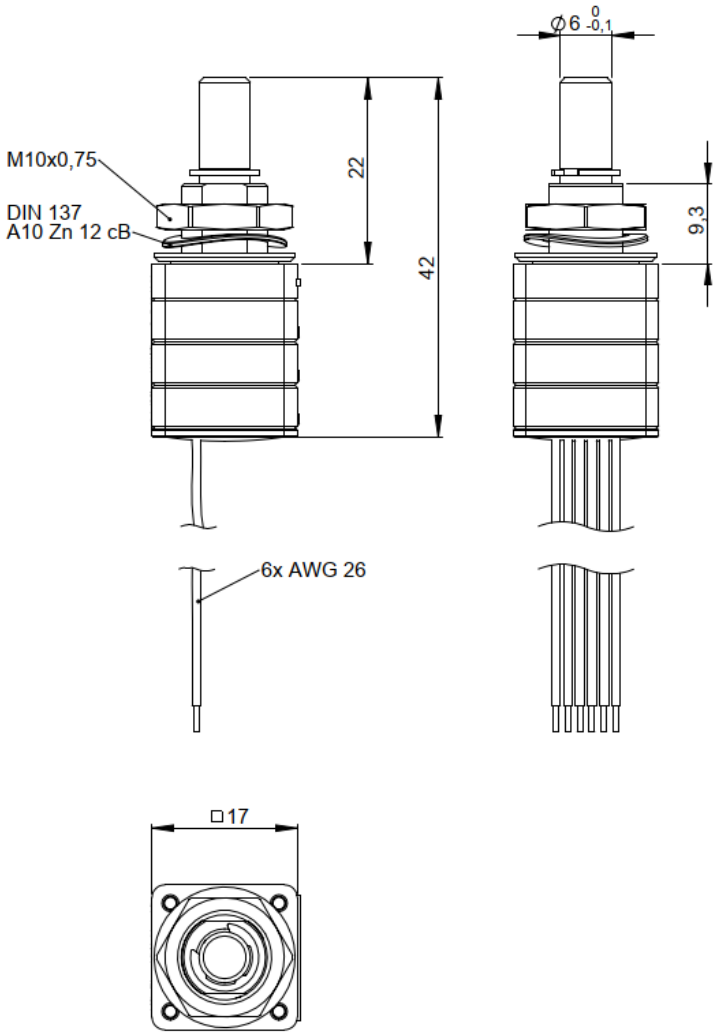
OPERATING TEMPERATURE	-20°C to +75°C
STORAGE TEMPERATURE	-40°C to +85°C

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DRAWINGS / OTHER INFORMATION

SAMPLE PINOUT

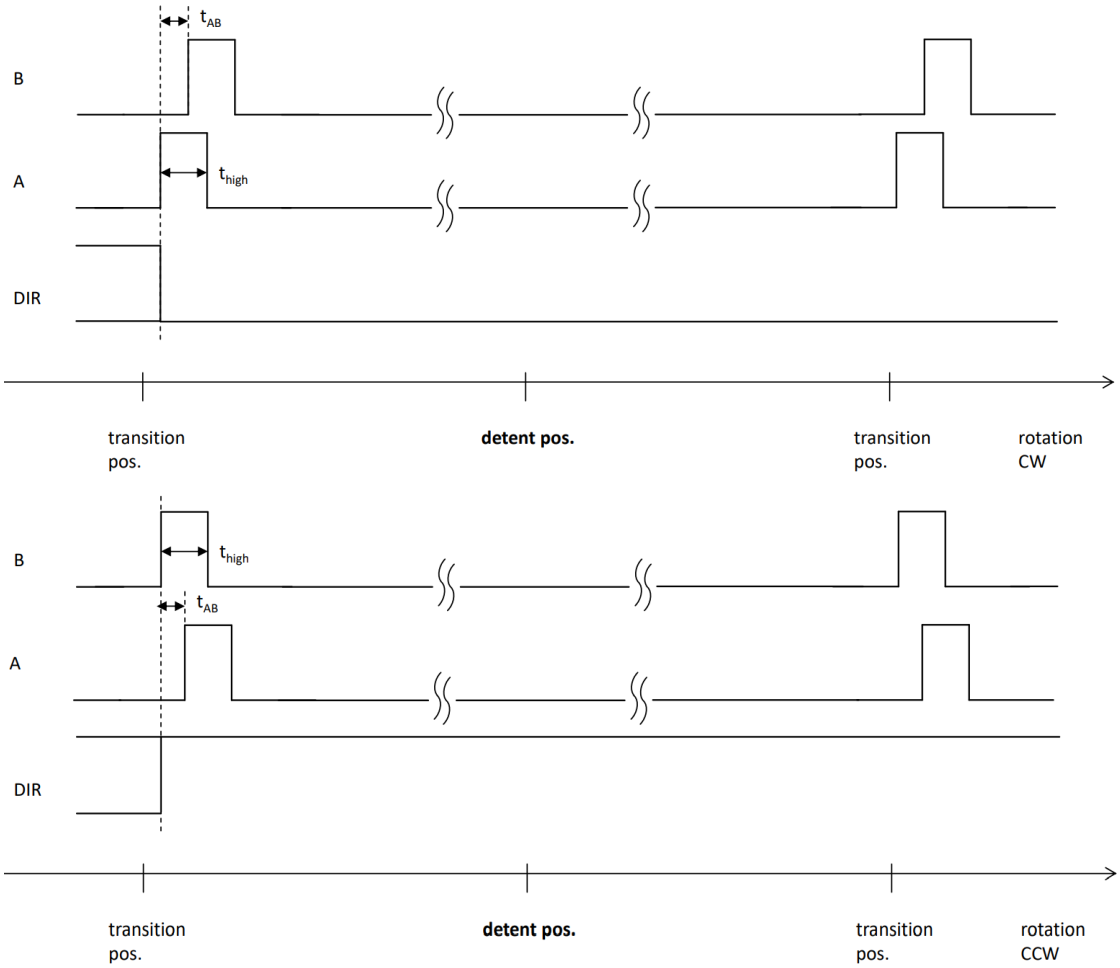
PIN	cable color	signal
1	yellow	B
2	green	A
3	blue	pushbutton
4	brown	direction
5	red	VCC
6	black	GND



units in mm

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OUTPUT SIGNALS



Pushbutton: active low

SYMBOL	CHARACTERISTIC	VALUE
t_{high}	Duration of high status of A and B	2 ms +/- 5%
t_{AB}	Delay A -> B (CW) Delay B -> A (CCW)	1 ms +/- 5%

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.

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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	07.05.2026	Update legal notices
1.0	11.04.2023	Initial Data Sheet ESC17 standard

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