

ESC17 mini 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.

TECHNICAL DATA

CONSTRUCTION AND MECHANICAL DATA (TYPICAL VALUES, ROOM TEMPERATURE)

DETENT ANGLE	22,5°
DETENT GRADUATION	16
MOUNTING	central mounting
PROTECTION CLASS	IP65 to the frontside
DETENT MECHANISM	mechanic
DETENT TORQUE WITH INDEX	4,5 Ncm ±30%
BEARING	friction
SWITCHING BUTTON ACTUATION FORCE	7 N ±30%
SWITCHING PATH	0.7 mm
FASTENING TORQUE MAX.	2,0 Nm
LIFE EXPECTANCY ROTATION	typ. > 1.000.000 turns
PUSH BUTTON	typ. > 1.000.000 pushes
SHAFT LENGTH	acc. drawing (customizable)
SHAFT DESIGN	acc. drawing (customizable)
PUSHBUTTON / SWITCHING FUNCTION	available

ELECTRICAL DATA (TYPICAL VALUES, ROOM TEMPERATURE)

OPERATION VOLTAGE	5 VDC ± 10 %
CURRENT CONSUMPTION	16 mA typ., max. 20 mA
OUTPUT SIGNAL	A/B-signal
OUTPUT VOLTAGE	TTL 5V DC, Push-Pull
OUTPUT CURRENT	max. 5 mA per output
INDICATOR OF REVOLUTION DIRECTION	A/B signal
IMPULSES PER OUTPUT	16 pulses per revolution
PUSHBUTTON	active low
CONNECTOR	ZIF (Molex 2005280060) other on request

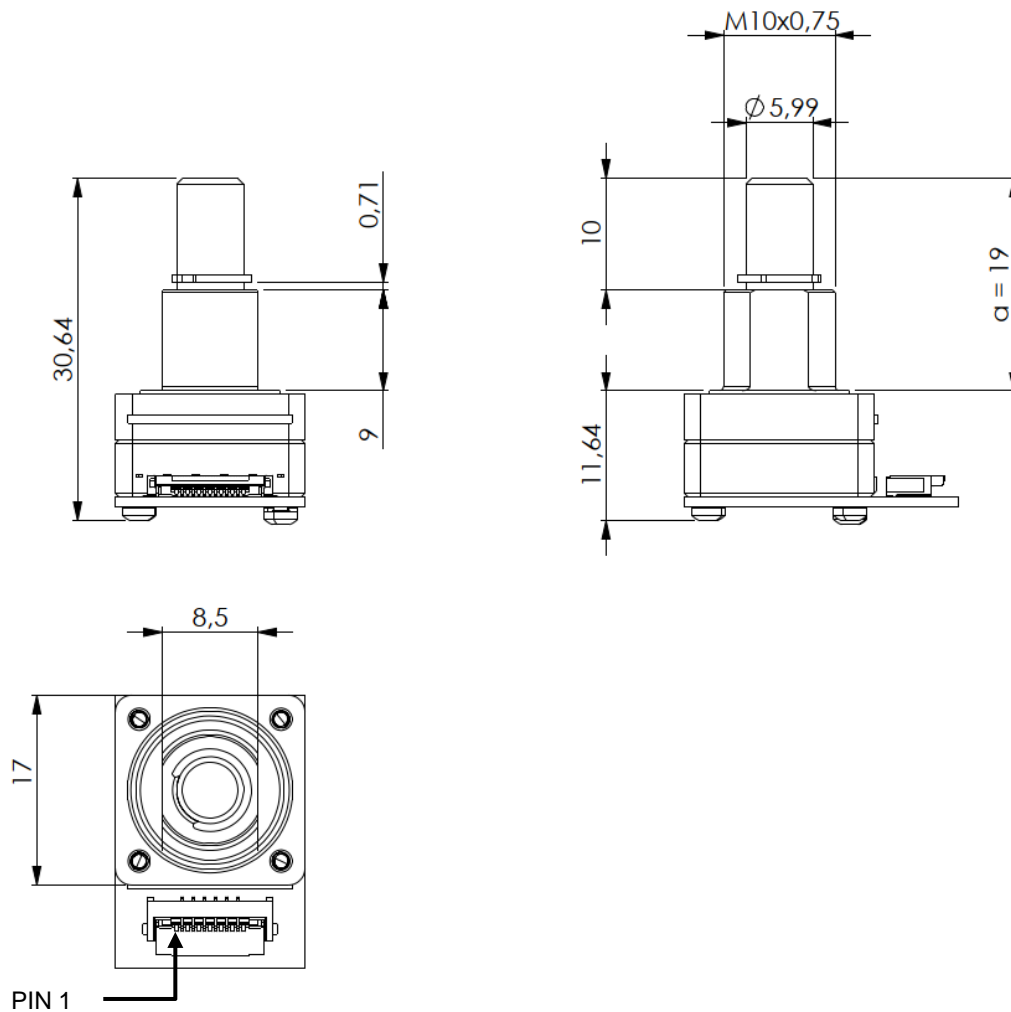
ENVIRONMENTAL CONDITIONS

OPERATING TEMPERATURE	-30°C to +85°C (others on request possible)
STORAGE TEMPERATURE	-40°C to +100°C
MAGNETIC INFLUENCE (EN 61000-4-8)	no influence
ESD (EN 61000-4-2)	15kV air, 8kV conducted
REACH AND ROHS	conform

PINOUT AND DRAWINGS

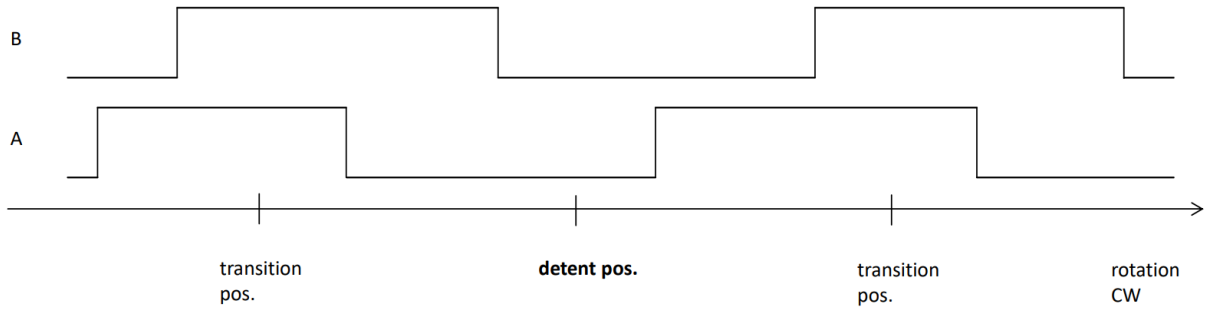
PINOUT

PIN	Signal	Description
1	+5V DC	Positive power supply
2	A	Output signal, track A
3	B	Output signal, track B
4	Pushbutton	Output signal pushbutton, active low
5	GND	Negative power supply
6	ESD	Connect to Protective Earth (PE) for best ESD protection



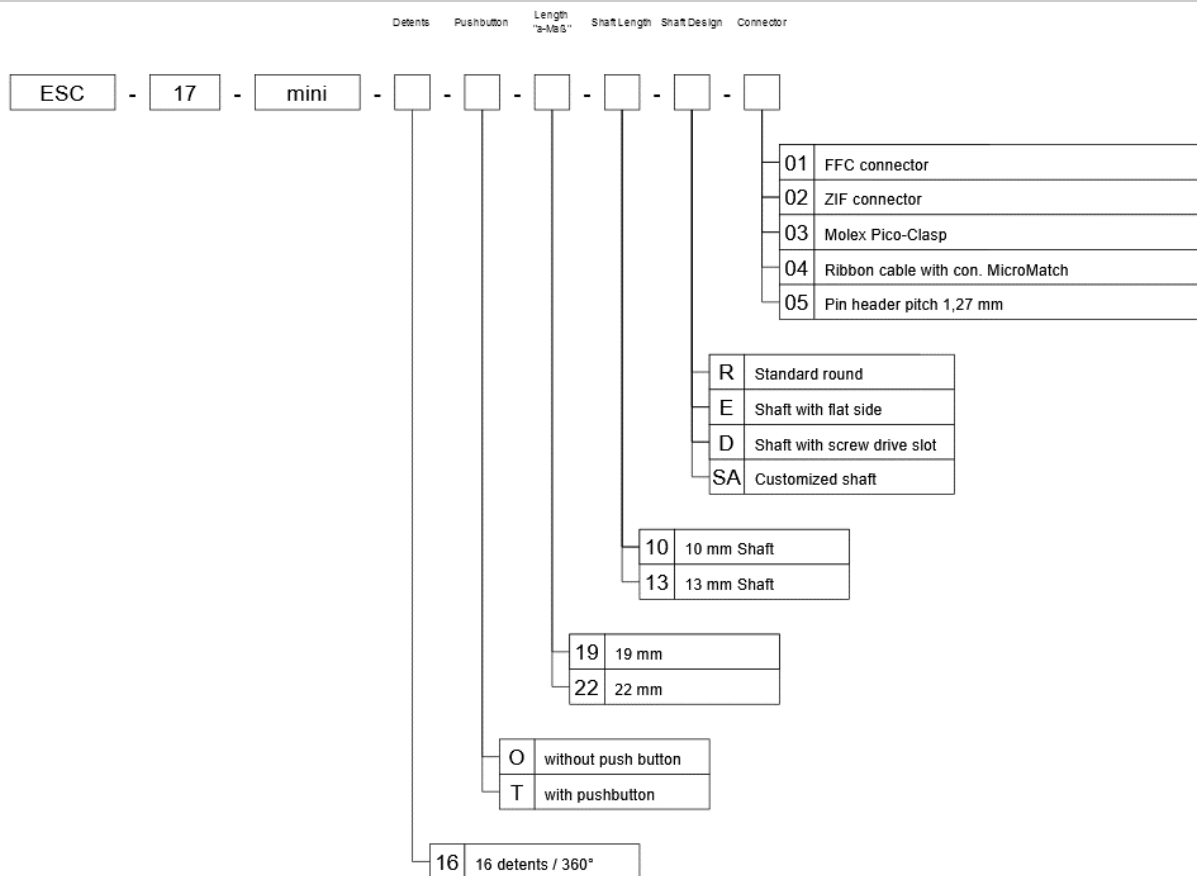
Units in mm

OUTPUT SIGNAL REVOLUTION CW



The rotary encoder is angle-accurate, therefore the timing of the track A/B signals depends on rotary speed.

PRODUCT VARIATIONS



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 to herein for his application. On delivery of the component, EBE is only obliged to implement those properties set out and agreed upon in this technical data sheet. 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.

REVISION

REVISION	DATE	DESCRIPTION
1.4	25.06.2024	Final release
1.3	12.02.2024	Connection Rec.; PIN1 on drawing; Environment Tests; Variants
1.2	07.11.2023	New Operating Temperature +85°C
1.1	08.05.2023	Insertion of Push Button life expectancy
1.0	11.04.2023	Initial Data sheet ESC17mini mT ZIF