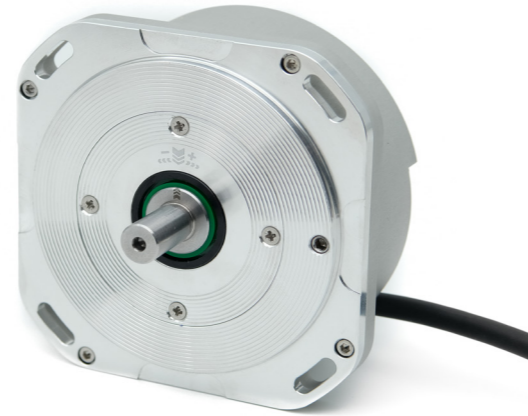


# ABSOLUTE ANGLE ENCODER AK110

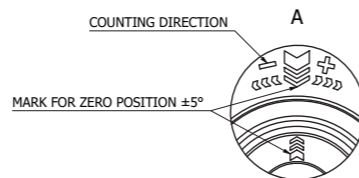
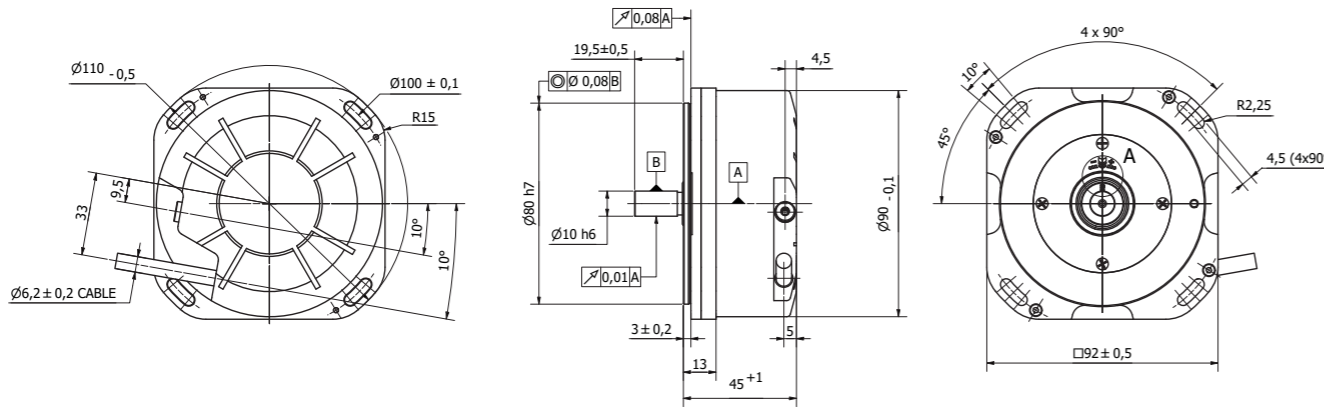
-   
 Absolute Encoder
-   
 SSI protocol
-   
 High Resolutions
-   
 High Precision
-   
 BiSS protocol



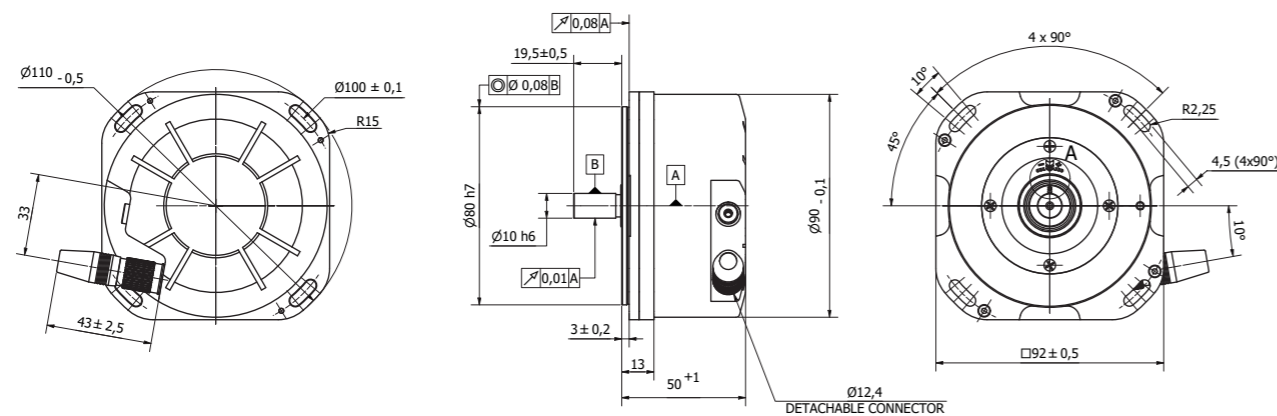
Absolute angle optical encoder AK110 is a high-end device that enables high accuracy angular measurement up to  $\pm 5''$ . Encoder design with integral bearings, solid  $\varnothing 10$  mm shaft for a separate shaft coupling makes it ideal for demanding applications such as machine tools.

Measuring standard	Glass scale with absolute and incremental tracks (16 384 lines)
System accuracy	$\pm 5''$

## AK110 VERSION S STANDARD CABLE OUTLET



## AK110 VERSION C DETACHABLE CABLE OUTLET



## MECHANICAL DATA

Shaft	Solid shaft 10 mm
Moment of inertia	$50 \times 10^{-6} \text{ kgm}^2$
Starting torque	$\leq 0.02 \text{ Nm}$
Maximum mechanical speed	$\leq 3000 \text{ rpm}$
Permissible shaft load:	
- axial	30 N
- radial (at shaft end)	30 N
Vibrations (55 Hz to 2000 Hz)	$\leq 200 \text{ m/s}^2$
Shock (6 ms)	$\leq 200 \text{ m/s}^2$
Operating temperature	$0^\circ\text{C} - 60^\circ\text{C}$
Storage temperature	$-20^\circ\text{C} - 60^\circ\text{C}$
Ingress Protection (EN 60529)	IP64
Mass (without cable)	$\sim 1 \text{ kg}$

## ELECTRICAL DATA

Electrical Interface <sup>1)</sup>	SSI	BISS-C
Resolution (positions per turn)	up to 26 bits (67 108 864 positions)	
Clock frequency	$\leq 4 \text{ MHz}$	$\leq 10 \text{ MHz}$
Calculation time	$\leq 5 \text{ us}$	$\leq 5 \text{ us}$
Additional output signals	1 Vpp: 16 384 pulses/turn	Optional <sup>2)</sup>
Cutoff frequency of incremental signals (-3 dB)	$\geq 200 \text{ kHz}$	$\geq 200 \text{ kHz}$

ELECTRICAL SPECIFICATIONS	
Electrical connection <sup>1)</sup> :	Version S: standard cable outlet Version C: detachable cable outlet
Supply voltage <sup>1)</sup> :	DC 5 V DC 10...30 V
Current consumption	Max 200 mA

- 1) Select when ordering.
- 2) Contact the manufacturer.

## MORE INFORMATION



You can find more information about Precizika Metrology encoder products on the official website: [precizika.com/products](http://precizika.com/products)

For more information about optical glass grating products refer to: [precisionportal.eu](http://precisionportal.eu)



## ORDER FORM

AK110 - X1 - X2 - X3 - X4 - X5/X6					
Output signals Interface (serial) (X1):	Bit number* (X2):	Power supply (X3):	Electrical connection (X4):	Cable length (X5):	Connector type (X6):
S - SSI (binary) B - BiSS C	B1 - 1 ... B26 - 26	05V - DC 5 V 30V - DC 10...30 V	S - version S (standard cable outlet) C - version C (detachable cable outlet)	AR01 - 1 m ... AR02 - 2 m ... AR03 - 3 m	W - without connector D9 - flat, 9 pins (standard) D15 - flat, 15 pins B12 - round, 12 pins C17T - round, 17 pins
ORDER EXAMPLE: 1) AK110-S-B26-05V-S-AR01/D9 2) AK110-B-B24-30V-C-AR01/W					