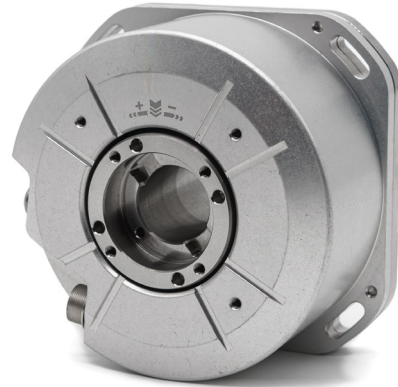


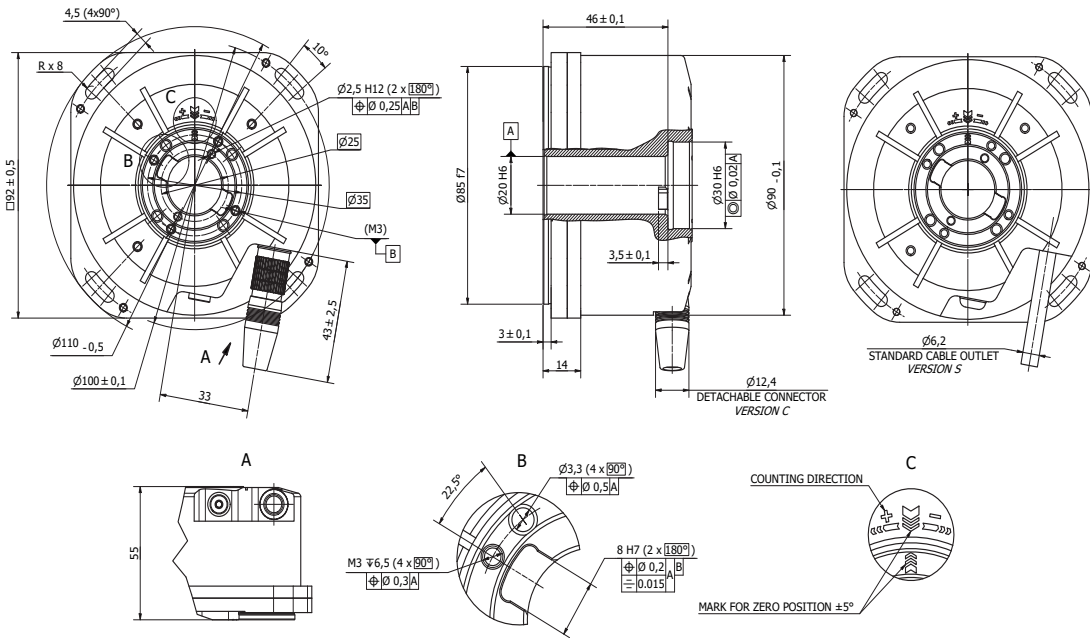
ABSOLUTE ANGLE ENCODER AK90H

-  Absolute Encoder
-  SSI Protocol
-  High Resolutions
-  Hollow Shaft
-  BiSS Protocol
-  High Precision

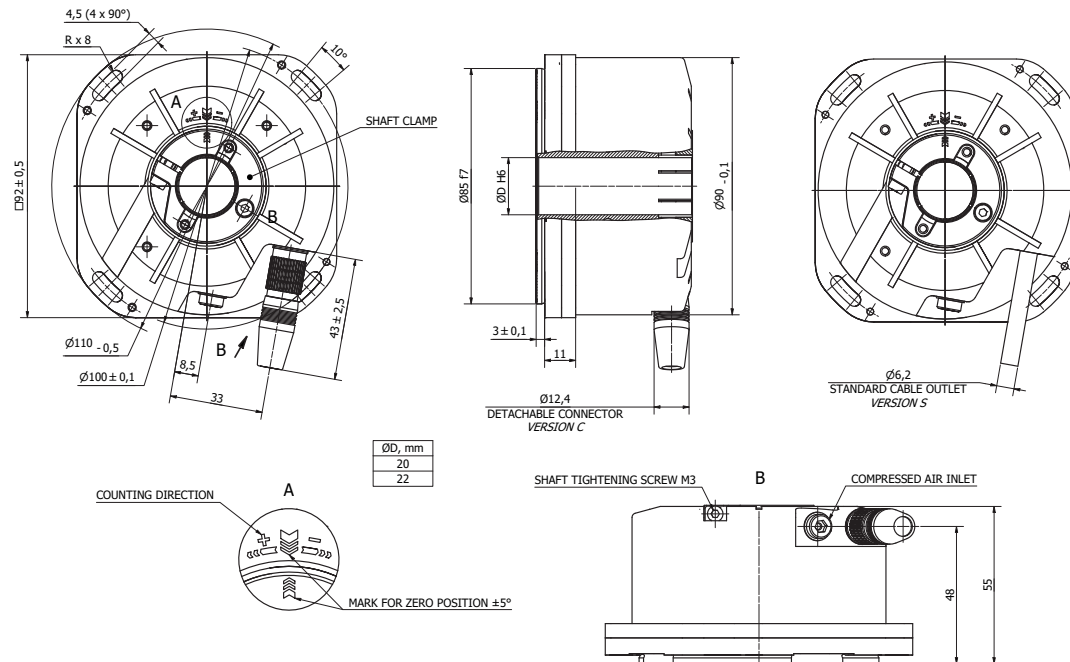


Absolute angle optical encoder AK90H is a high-end device that enables high accuracy angular measurement up to $\pm 5''$. Encoder design with integral bearings, hollow-through shaft and integrated stator coupling makes it ideal for demanding applications such as machine tools.

AK90H TYPE H SHAFT COUPLING WITH RING NUT



AK90H TYPE P SHAFT COUPLING WITH CLAMP



SYSTEM SPECIFICATIONS

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

MECHANICAL DATA

Mounting type ¹⁾	With ring nut (type H)	With shaft clamp (type P)
Shaft ¹⁾	hollow-through shaft 20 mm	hollow-through shaft 20mm hollow-through shaft 22 mm
Moment of inertia	$80 \times 10^{-6} \text{ kgm}^2$	$85 \times 10^{-6} \text{ kgm}^2$ (of 20 mm shaft) $80 \times 10^{-6} \text{ kgm}^2$ (of 22 mm shaft)
Starting torque	$\leq 0.01 \text{ Nm}$	$\leq 0.01 \text{ Nm}$
Maximum mechanical speed		$\leq 3000 \text{ rpm}$
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 ¹⁾	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	
Cutoff frequency of incremental signals (-3 dB)	$\geq 200 \text{ kHz}$	$\geq 200 \text{ kHz}$

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

1) Select when ordering.

2) Contact the manufacturer.

MOUNTING ACCESSORIES

Ring nut, fault exclusion washer and mounting aid accessories are optional and ordered separately. Please indicate separately when ordering. Refer to the encoder manual for accessories' mounting instructions and drawings.

ORDER FORM

AK90H	- X1	- X2	- X3	- X4	- X5	- X6	- X7/X8
Output signals Interface (serial) (X1):	Bit number* (X2):	Shaft coupling (X3):	Shaft diameter (X4):	Power supply (X5):	Electrical connection (X6):	Cable length (X7):	Connector type (X8):
S - SSI (binary) B - BiSS C	B1 - 1 ... B26 - 26	H - type H (coupling with ring nut) P - type P (coupling with clamp)	20 - 20 mm 22 - 22 mm (only for type P)	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) AK90H-S-B26-H-20-05V-S-AR01/D9 2) AK90H-B-B26-P-22-30V-C-AR02/W							