BEI SENSORS

LP series

Programmable Absolute Encoder Cable or M12 connection

c UL us CE

- Low profile package saves space

- Excellent resistance to shock and vibration

- 30mm standard through shaft, PEEK reduction hub available

- High protection level of IP66

- High performance in temperatures from –40°C to +100°C

- SSI output

- Programmable resolution up to 16 bits

Certifications:

The LP35 Absolute Encoder is available with the following certifications

CE   2004/108/CE

c UL us
LISTED
Proc. Cont. Eq.
E477663

Output:

SSI
SYNCHRONOUS SERIAL INTERFACE

Serial Synchronous Interface SSI output provides effective synchronisation in a closed-loop control system. A clock pulse train from a controller is used to shift out sensor sensor data: one bit of position data is transmitted to the controller per clock pulse received by the sensor.
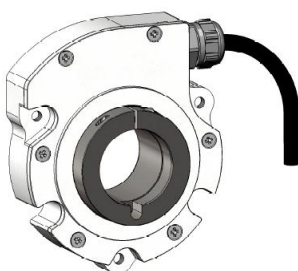
Mechanical Characteristics:

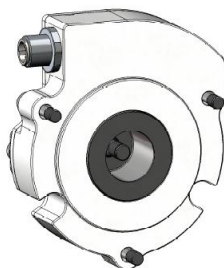| Material	Cover : anodised aluminum	Vibrations (EN60068-2-6)	$\leq 200 m.s^{-2}$ (55 … 2 000 Hz)
	Body : anodised aluminum	Shaft inertia	< 84000 $g.mm^2$
	Shaft : AISI 303 stainless steel	Static/Dynamic torque	30 / 300 mN.m
Ball bearings	6807 - Sealed	Permissible max. speed	6000 min^{-1}
Maximum loads	Axial: 40 N	Continuous max. speed	4000 min^{-1}
	Radial: 80 N	Theoretical mechanical lifetime $L_{10}h$*	> 18.10^9 turns / 100000 hours
Shocks (EN60068-2-27)	$\leq 3000 m.s^{-2}$ (during 5 ms)	Encoder weight (approx.)	450g

* continuous max. speed – ½ max. load – ISO 281, L_{10}

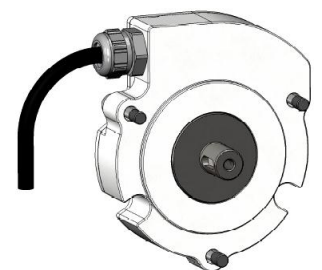## Available mechanics – shaft options:

AHU9: Through Hollow Shaft
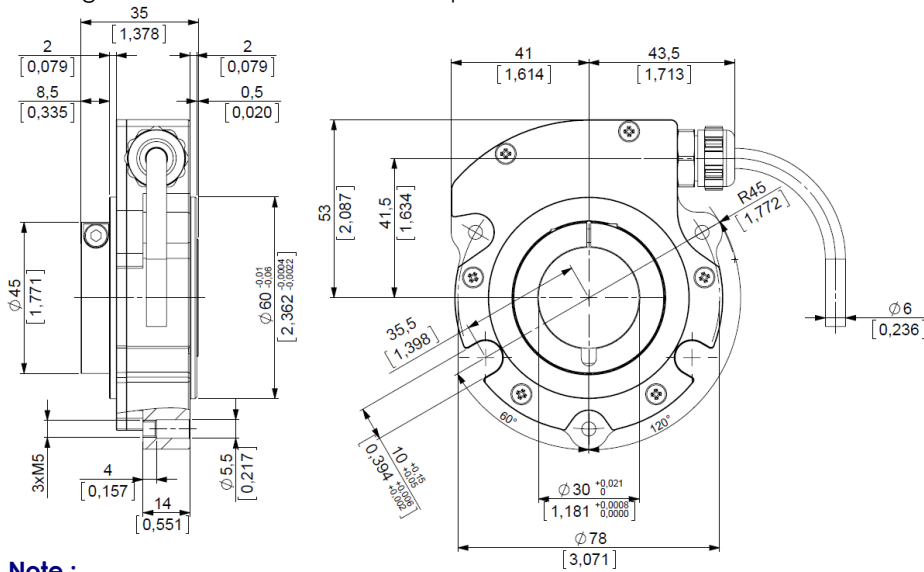
AHK9: Blind Hollow Shaft

AHA9: Shaft with Integrated coupling

AHM9: Solid Shaft

BEI SENSORS

Programmable Absolute Encoder

Floating Mountings

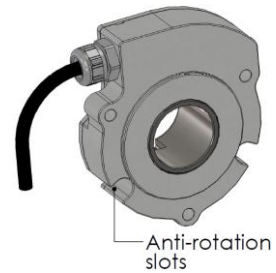**Cable or M12 connection**

LP series

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Dimensions

AHU9 – Through hollow shaft – with cable output
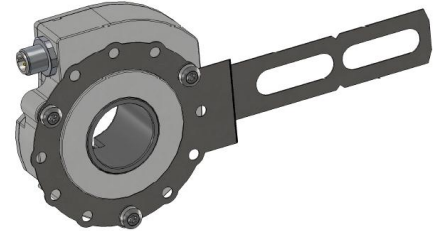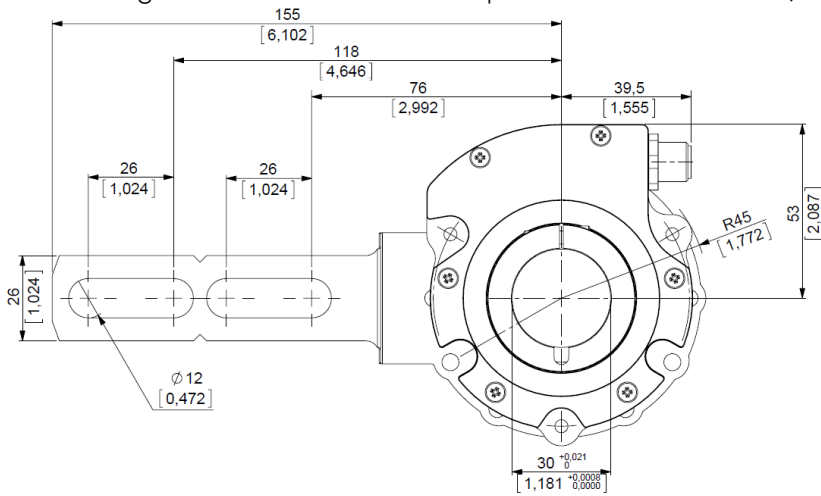

CHc M4 Screw (SW3)

Anti-rotation slots
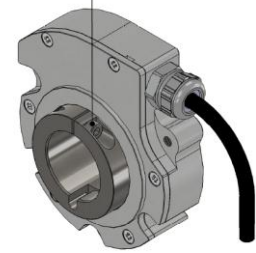
Note :

CHc : Hexagonal Socket head cap screws   HC : Hexagonal socket set screws

Dimensions

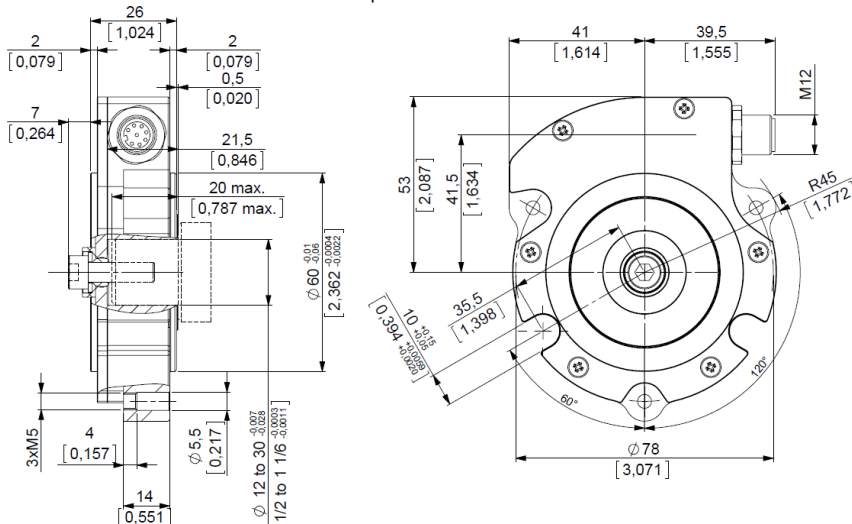AHU9 – Through hollow shaft – with M12 output and anti-rotation 9445/053

Dimensions

AHK9 – Blind hollow shaft – with cable output

Chc M6x20 Screw

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Programmable Absolute Encoder

Flange Mountings

Cable or M12 connection

LP series

c(UL)us CE
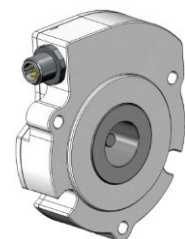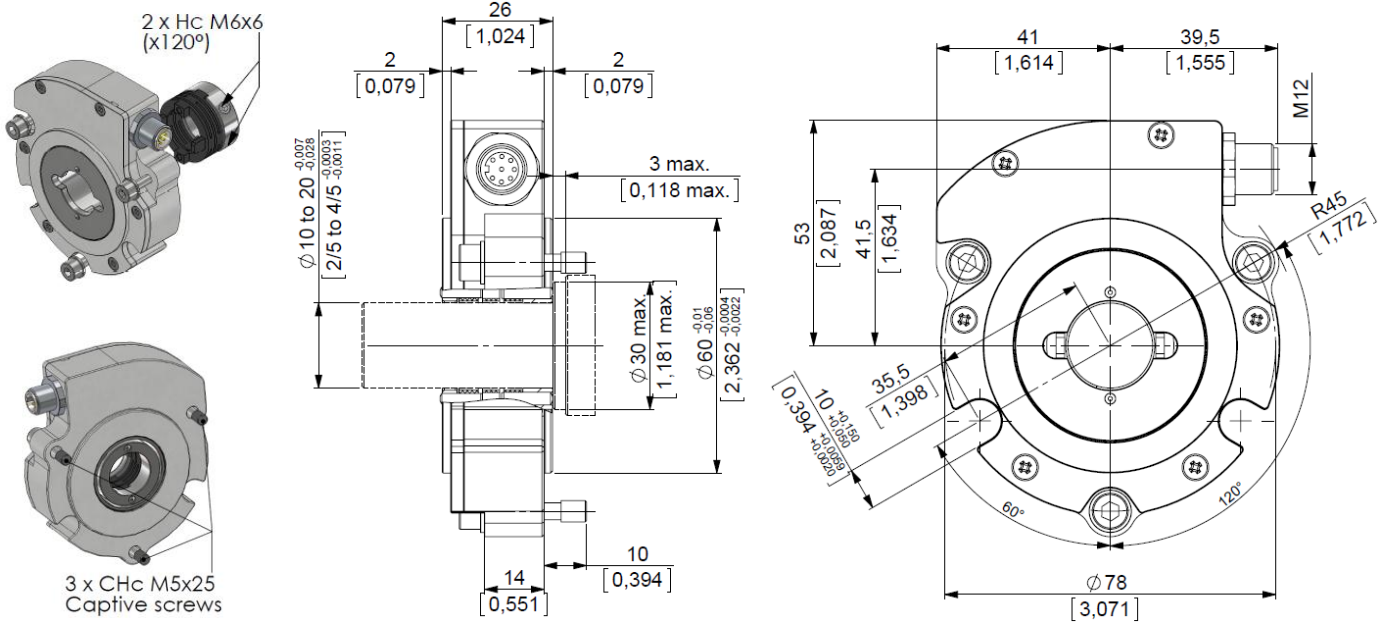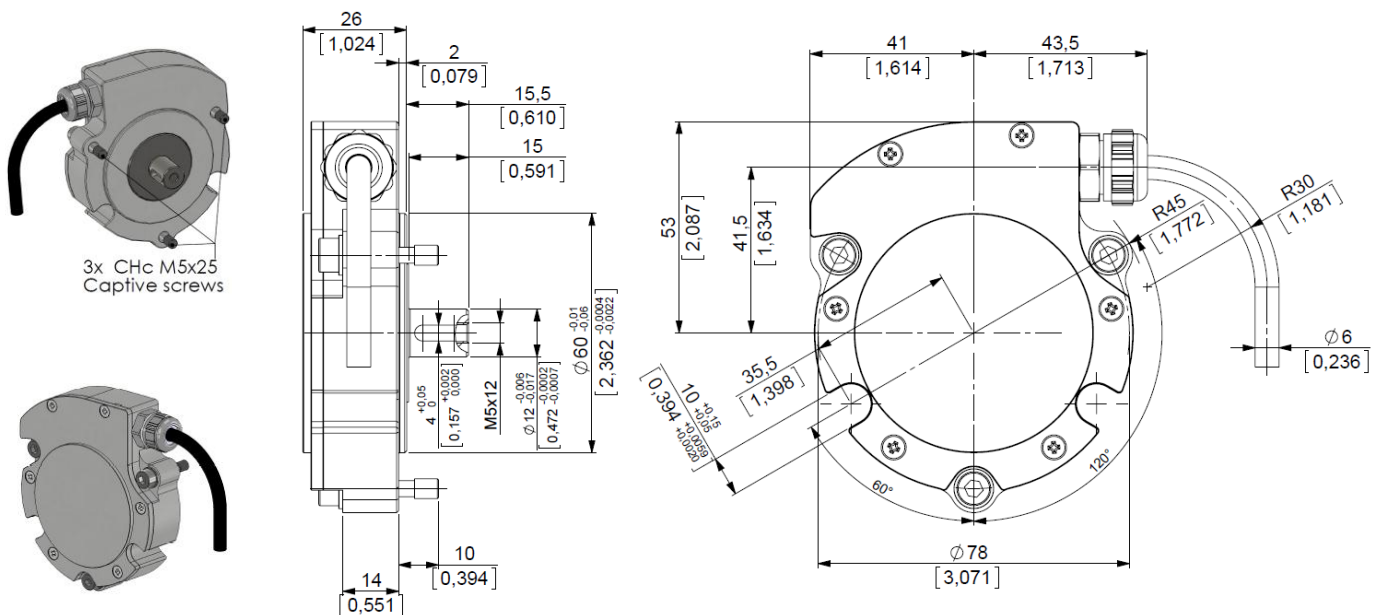
Dimensions

AHA9 – Shaft with integrated coupling – with M12 connection

Dimensions

AHM9 – Solid shaft – with cable output

BEI SENSORS

LP series

Programmable Absolute Encoder   Cable or M12 connection

c UL us   CE

Electrical Characteristics:

Version	Output signals	Resolution	Operating Voltage Vcl	Supply current (no loads)	Current per channel pair	Max Frequency capability	Encoder accuracy	Short circuits proof	Reverse polarity tolerant	Temperature range
PPX	RS422	up to 16 BITS	5-30V ⎓ 250mA	75mA	40mA	1MHz	+/-0.1°	Yes (except to Vcl)	Yes	-40°C +100°C

Connection:

		-	+	Clk+	Clk-	Data+	Data-	RAZ	Ground
SL	M12 ([1]) - 8 pins	1	2	3	4	5	6	7	Connector Body
SM	PUR cable ([1]) 8 wires	BK Black	RD Red	GN Green	YE Yellow	BN Brown	OG Orange	BU Blue	General shielding

([1]) UL listed : -20°C +80°C

Programmable possibility:

The programmable LP35 absolute encoder features a patented dynamic encoder resolution capability that allows users to easily program the encoder resolution to any value between 1 and 16bits per turn. The LP35 allows for virtually unlimited resolution variations.

Using the simple programming interface software and USB interface cable, users can program the encoder resolution on site as needed. In the software, type the encoder resolution and click 'Program'. A new resolution is now programmed. It's that easy!

With the LP35, resolution can be programmed and reprogrammed at any time by the user.

For users with multiple requirements, LP35 can be kept in stock and programmed as needed.

LP35 programming cable has to be ordered separately: consult us.

LP35 Absolute Ordering Options

Use this diagram, working from left to right to construct your model number (Example : **AHU9_E6//PPXx//xx//SLR//U6**)

AH _ 9	_ _	//	PPX	x	//	xx	//	_ _ _	_ _ _	//	_ _
TYPE:	**SHAFT BORE:**		**VOLTAGE/ OUTPUT:**	**CODE:**		**CYCLES PER TURN:**		**OUTPUT TERMINATION:**	**CABLE LENGTH:**		**HUB:**
AHU9 = hollow shaft	E5 = 5/8'' E6 = 3/4'' E8 = 1'' 30 = 30mm		PPX = 5-30V voltage and SSI output (without parity) Programmable electronic	Programmable code		Programmable resolution		SMR = PUR cable	xxx = cable length ex 020 = 2meters		U3 = With insulated sleeve
AHK9 = blind shaft											
AHA9 = hollow shaft with integrated coupling	E6 = 3/4'' 14 = 14mm 20 = 20mm							SLR = M12	Blank = No cable		U5 = Blind sleeve U6 = Through sleeve
AHM9 = solid shaft	E3 = 3/8'' 12 = 12mm										** = no sleeve

Stainless steel option available

Anti-rotation accessory: M9445/053 to be ordered separately