

MODEL SA36H – SINGLE TURN ABSOLUTE ENCODER



Ø36 mm

FEATURES

- Standard Size 36 mm Package (1.42")**
- Durable Magnetic Technology**
- Up to 14 Bits of Single Turn Resolution**
- SSI and CANopen Communications**
- Proven Turns Counting Technology – No Gears or Batteries**
- Flex Mount Eliminates Couplings and is Ideal for Motors or Shafts**

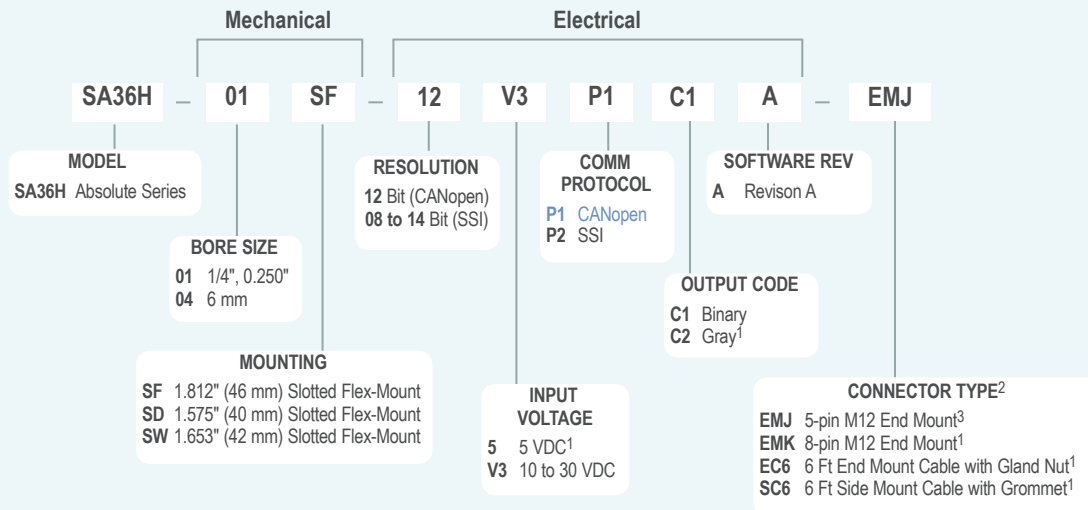
The Model SA36H Single Turn Absolute Encoder is ideal for a wide variety of industrial applications that require an encoder with the capability of absolute positioning output, even in power off scenarios. Its fully digital output, rugged magnetic technology and high IP rating make the Model SA36H an excellent choice for all applications, especially ones with a high presence of noise. Available with a 1/4" or 6 mm hollow bore and a wide selection of flexible mounting options, the Model SA36H is easily designed into a variety of applications.

COMMON APPLICATIONS

Robotics, Telescopes, Antennas, Medical Scanners, Windmills, Elevators, Lifts, Motors, Automatic Guided Vehicles, Rotary and X/Y Positioning Tables

MODEL SA36H ORDERING GUIDE

Blue type indicates price adder options. Not all configuration combinations may be available. Contact Customer Service for details. For multi-turn applications see Model MA36H.



NOTES:

- 1 Available with SSI only.
- 2 For mating connectors, cables, and cordsets see Accessories or visit www.encoder.com. For Connector Pin Configuration Diagrams, see Technical Information or visit www.encoder.com.
- 3 Available with CANopen only.

Please note that configuration options for this product have changed. Confirm configuration options before ordering or contact Customer Service for assistance.

MODEL SA36H SPECIFICATIONS

Electrical

Input Voltage..... 10 to 30 VDC max SSI or CANopen
5 VDC SSI Only

Input Current 50 mA max with no external load

Power

Consumption..... 0.5 W max

Resolution 12 bit (CANopen)
8 to 14 bit (SSI)

Accuracy..... $\pm 0.35^\circ$

Repeatability..... $\pm 0.2^\circ$

CANopen Interface

Protocol..... CANopen:

Communication profile CiA 301
Device profile for encoder CiA 406
V3.2 class C2

Node Number 0 to 127 (default 127)

Baud Rate..... 10 Kbaud to 1 Mbaud with automatic
bit rate detection

Note: The standard settings as well as any customization in the software can be changed via LSS (CiA 305) and the SDO protocol (e.g. PDOs, scaling, heartbeat, node-ID, baud rate, etc.)

Programmable CANopen Transmission Modes

Synchronous..... When a synchronization telegram (SYNC) is received from another bus node, PDOs are transmitted independently

Asynchronous..... A PDO message is triggered by an internal event (e.g. change of measured value, internal timer, etc.)

SSI Interface

Clock Input Via opto coupler

Clock Frequency..... 100KHz to 500KHz

Data Output RS485 / RS422 compatible

Output Code Gray or binary

SSI Output Angular position value

Parity Bit..... Optional (even/odd)

Error Bit..... Optional

Turn On Time < 1.5 sec

Pos. Counting Dir..... Connect DIR to GND for CW
Connect DIR to VDC for CCW
(when viewed from shaft end)

Set to Zero..... Apply VDC for 2 sec

Protection Galvanic Isolation

Mechanical

Max Shaft Speed..... 12,000 RPM

Bore Depth..... 17 mm (.669")

User Shaft

Radial Runout..... 0.005" max

Starting Torque < 0.45 oz-in typical

Housing Ferrous chrome-plated magnetic
screening

Weight..... 5 oz typical

Environmental

Storage Temp -40° to 100° C

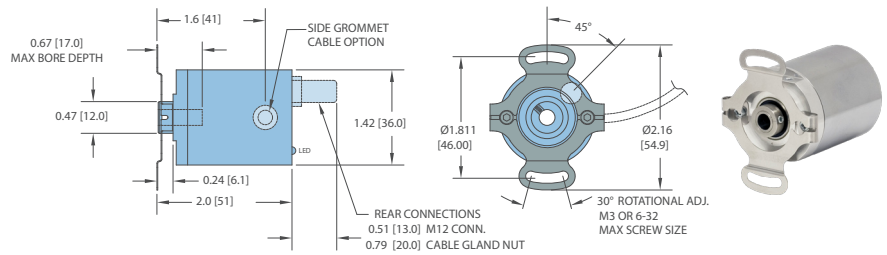
Humidity..... 95% RH non-condensing

Vibration..... 5 g @ 10 to 2000 Hz

Shock..... 100 g @ 6 ms duration

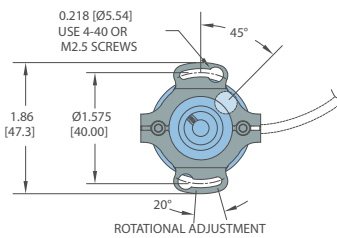
Sealing..... IP67, shaft sealed to IP65

MODEL SA36H 1.812" (46 MM) SLOTTED FLEX MOUNT (SF)

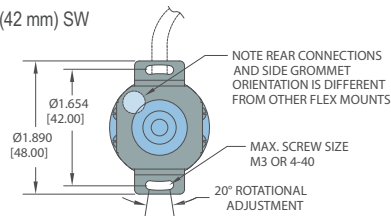


MODEL SA36H OPTIONAL FLEX MOUNTS

1.575" (40 mm) SD



1.653" (42 mm) SW



All dimensions are in inches with a tolerance of $+0.005"$ or $+0.01"$ unless otherwise specified. Metric dimensions are given in brackets [mm].

WIRING TABLE

For EPC-supplied mating cables, refer to wiring table provided with cable.

SSI ENCODERS			CANOPEN ENCODERS	
Function	Gland Cable† Wire Color	8-pin M-12	Function	Pin
Ground (GND)	White	1	+VDC	2
+VDC	Brown	2	Ground (GND)	3
SSI CLK+	Green	3	CAN _{High}	4
SSI CLK-	Yellow	4	CAN _{Low}	5
SSI DATA+	Gray	5	CAN _{GND} / Shield	1
SSI DATA-	Pink	6		
PRESET	Blue	7		
DIR	Red	8		
Shield	Side - Exit Housing End - Exit N/C	Housing		

†Standard cable is 24 AWG conductors with foil and braid shield.