

Model MA36H MultiTurn Absolute



**BRITISH
ENCODER**
PRODUCTS COMPANY



Features

- Standard Size 36 mm Package
- Durable Magnetic Technology
- Multiturn Absolute Encoder (14 Bit/40 Bit)
- *SSI and CANopen* Communications
- Proven New Turns Counting Technology - No Gears or Batteries
- Flex Mount Eliminates Couplings and is Ideal for Motors or Shafts

The Model MA36H Multiturn Absolute Encoder is ideal for a wide variety of industrial applications that require an encoder with the capability of absolute positioning output. Its fully digital output and innovative use of battery-free multiturn technology make the Model MA36H an excellent choice for all applications, especially ones with a high presence of noise. Its durable magnetic technology and high sealing make it a perfect choice for dirty industrial environments. Available with a 1/4" or 6 mm hollow bore and a selection of flexible mounting options, the Model MA36H is easily designed into a variety of applications.

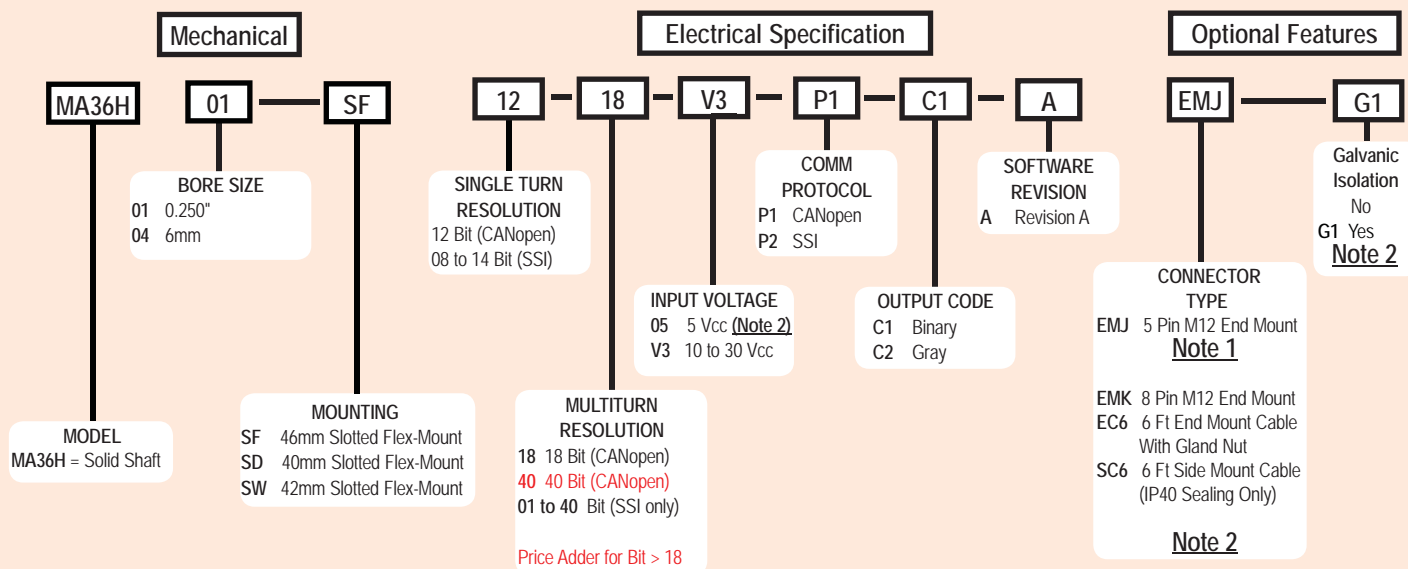
Common Applications

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

Model MA36H Ordering Guide

For Single turn applications see Model SA36H

Red type indicates price adder options. Not all configuration combinations may be available. Contact Customer Service for details.



For specification assistance call
Customer Service at
+44 (0)1978 262100

Notes:

- 1 Available with CANopen only
- 2 Available with SSI only

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Model MA36H Specifications

Electrical

Input Voltage 10 to 30 Vcc max SSI or CAN
5 Vcc SSI Only
Input Current 50 mA max with no external load
Power Consumption 0.5 W max
Resolution (Single) 12 bit (CAN)
8 to 14 bit (SSI)
Resolution (Multi) Up to 40 bit multiturn (CANopen or SSI)
Accuracy Less than .15° (CANopen)
Less than .35° (SSI)

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

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 CAN Transmission Modes

Synchronous When a synchronisation 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 Vcc for 2 sec

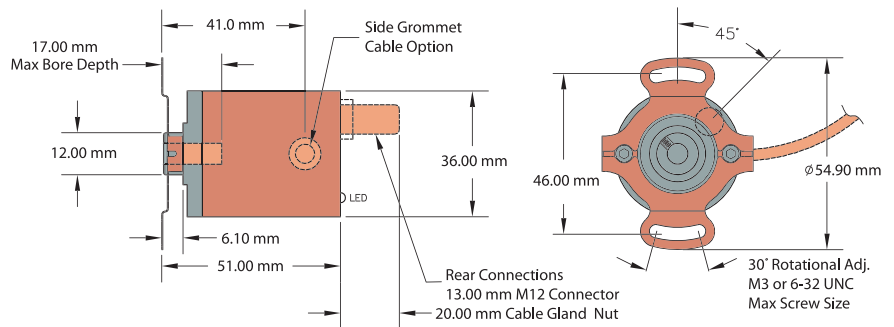
Mechanical

Max Shaft Speed 12,000 RPM
Bore Size 6 mm, .250"
Bore Depth 17 mm
User Shaft
Radial Runout 0.005" max
Starting Torque <0.45 oz-in typical
Housing Ferrous chrome-plated magnetic screening
Mounting Hollow shaft with flex mount
Weight 630 gms typical

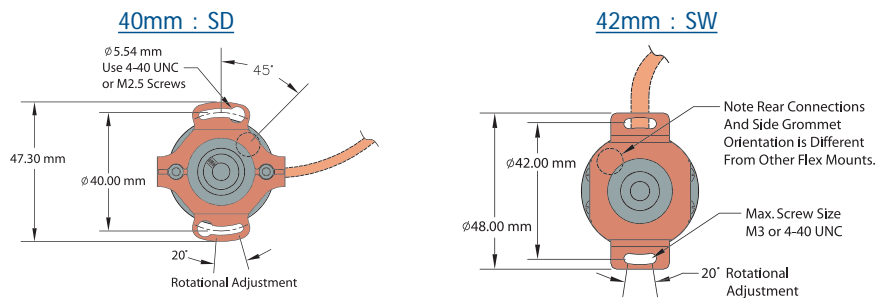
Environmental

Operating Temp -40° to +80° C
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 IP64, shaft sealed to IP65

Model MA36H 46mm Slotted Flex Mount (SF)



Model MA36H Optional Flex Mounts



Wiring Table

CANopen Encoders

Function	Pin
U _B	2
Ground (GND)	3
CAN _{High}	4
CAN _{Low}	5
CAN _{GND} / shield	1

SSI Encoders

	8-pin M12	Cable
Function		
Ground (GND)	1	White
+Vcc	2	Brown
SSI CLK+	3	Green
SSI CLK-	4	Yellow
SSI DATA+	5	Gray
SSI DATA-	6	Pink
PRESET	7	Blue
DIR	8	Red
Shield	housing	Side Exit - Housing End Exit - N/C