

MODEL MA63S MULTITURN ABSOLUTE ENCODER



FEATURES

Standard Size 25 Package (2.5" x 2.5") **Durable Magnetic Technology—No Gears or Batteries Servo and Flange Mounting** Multiturn Absolute Encoder (14 Bit/40 Bit) **SSI and CANopen Communications IP67 Sealing Available**

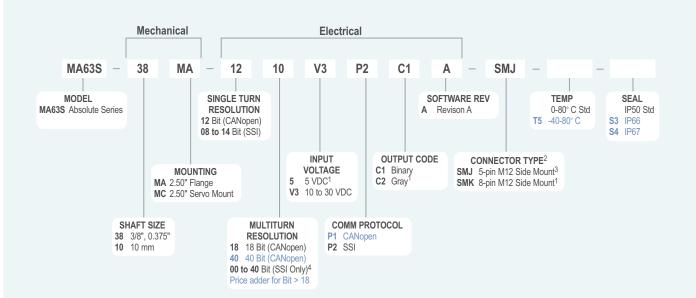
The Model MA63S Multiturn Absolute Accu-Coder™ is ideal for a wide variety of industrial applications that require an encoder with the capability of absolute positioning output, even in power-off scenarios. Its fully digital output and innovative use of battery-free multiturn technology make the Model MA63S exceptionally reliable. The MA63's robust and durable magnetic technology and available IP67 seal readily handle the harshest industrial environments, including those with elevated electrical noise. Available with several shaft sizes and mounting styles, the Model MA63S is easily designed into OEM and aftermarket applications.

COMMON APPLICATIONS

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

MODEL MA63S ORDERING GUIDE

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



NOTES:

- Available with SSI only.
- For mating connectors, cables, and cordsets see Encoder Accessories on page 102 or visit www.encoder.com. For Pin Configuration Diagrams, see page 107 or visit www.encoder.com.
- Available with CANopen only. For single-turn resolution, enter '00' (SSI only).



MODEL MA63S SPECIFICATIONS

Electrical

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

5 VDC SSI Only

Input Current50 mA max with no external load

Power Consumption0.5 W max Resolution (Single)12 bit (CANopen) 8 to 14 bit (SSI)

Resolution (Multi)......Up to 40 bit multiturn

(CANopen or SSI)

Accuracy.....+/- 0.35° Repeatability....+/- 0.2°

CANopen Interface

Protocol......CANopen:

Communication profile CiA 301 Device profile for encoder CiA 406

V3.2 class C2

Node Number0 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

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 DirConnect DIR to GND for C	
	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	.8,000 RPM
Shaft Material	.303 Stainless Steel
Radial Shaft Load	.80 lb maximum
Axial Shaft Load	.80 lb maximum
Starting Torque	.1.0 oz-in typical wit

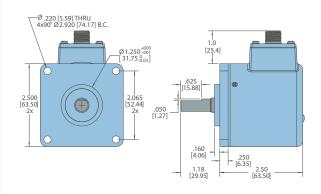
HousingBlack non-corrosive finish

Weight.....20 oz typical

Environmental

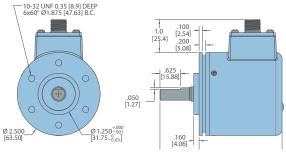
Storage Temp	25° to +100° C
Humidity	.95% RH non-condensing
Vibration	.5 g @ 10 to 2000 Hz
Shock	.100 g @ 6 ms duration
Sealing	.IP50 standard; IP66 or IP67 optiona

MODEL MA63S 2.5" FLANGE MOUNT (MA)





MODEL MA63S 2.5" SERVO MOUNT (MC)





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

WIRING TABLES

SSI ENCODERS

Function	Pin
Ground (GND)	1
+VDC	2
SSI CLK+	3
SSI CLK-	4
SSI DATA+	5
SSI DATA-	6
PRESET	7
DIR	8
Shield	Housing

CANOPEN ENCODERS

Function	Pin
+VDC	2
Ground (GND)	3
CAN _{High}	4
CAN Low	5
CAN _{GND} / Shield	1