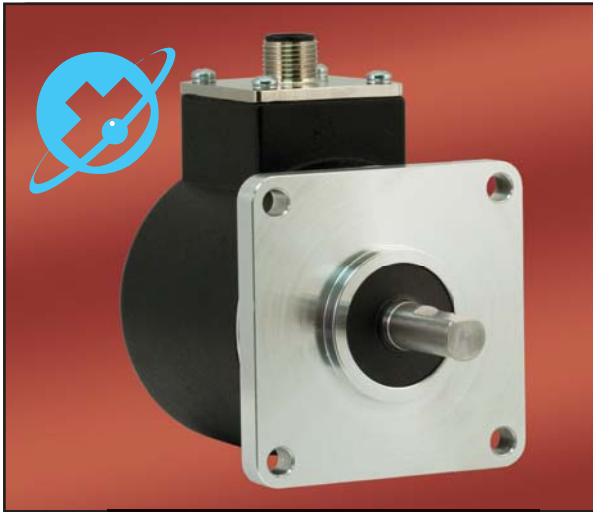


# Model MA63S MultiTurn Absolute



## Features

- Standard Size 25 Package 63.50mm Diameter
- Durable Magnetic Technology
- Servo and Flange Mounting
- Multiturn Absolute Encoder (14 Bit/40 Bit)
- SSI and CANopen Communications
- Proven New Turns Counting Technology - No Gears or Batteries

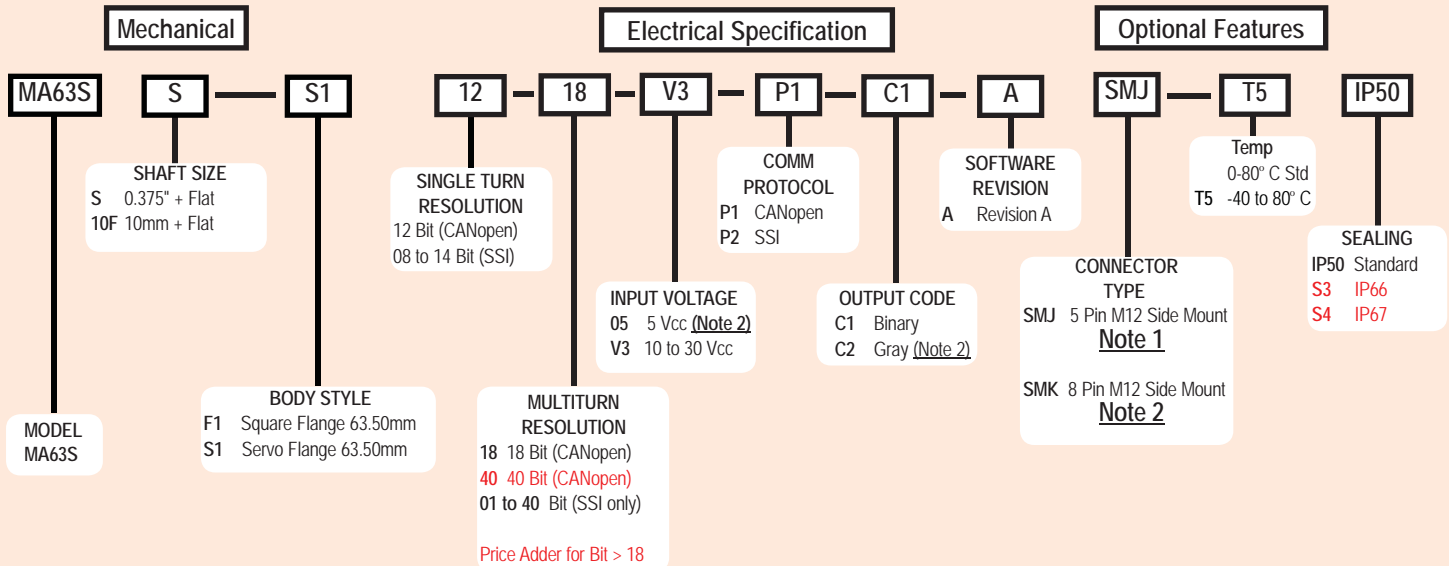
The Model MA63S Multiturn Absolute is ideal for a wide variety of industrial applications that require an encoder with the capability of absolute positioning output, even in power-off scenarios. Its fully digital output and innovative use of battery-free multiturn technology make the Model MA63S exceptionally 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 in to 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

**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 Only available with CANopen.
- 2 Only available with SSI.

# Model MA63S MultiTurn Absolute



## Model MA63S 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 0.15° (CANopen) Less than 0.35° (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 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 VCC for CCW (when viewed from shaft end)
Set to Zero .....	Apply Vcc for 2 sec

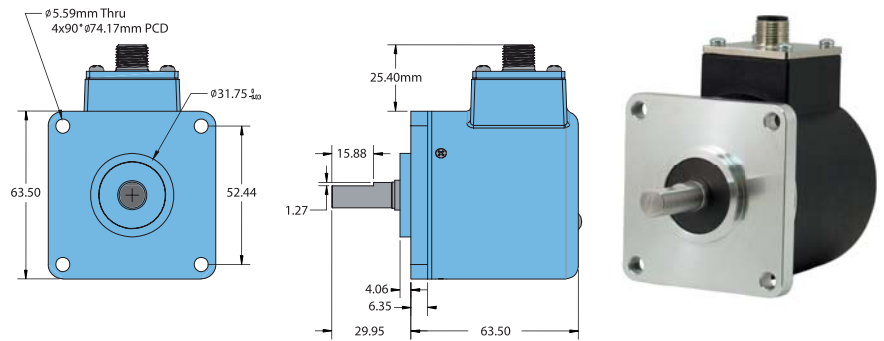
### Mechanical

Max Shaft Speed..	8,000 RPM
Shaft Size.....	10 mm, 0.375"
Shaft Material.....	303 Stainless Steel
Radial Shaft Load..	80 lb maximum
Axial Shaft Load ..	80 lb maximum
Starting Torque.....	0.007061 Nm typical with no seal 0.021183 Nm typical with seal
Housing.....	Black non-corrosive finish
Mounting .....	Flange or Servo type
Weight.....	570gms typical

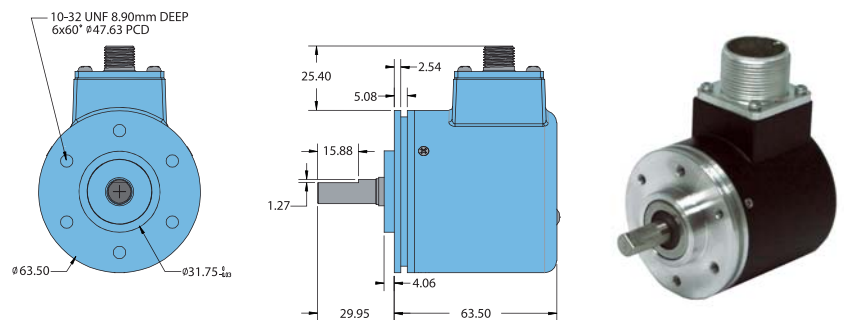
### Environmental

Operating Temp ....	0° to +80° C standard -40° to +80° C extended temperature option
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, IP66, IP67

## Model MA63S Flange Mount (F1)



## Model MA63S Servo Mount (S1)

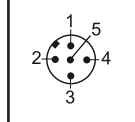


All dimensions are in mm with a tolerance of  $\pm 0.127$  or  $\pm 0.254$  unless otherwise specified.

## Wiring Table

### CANopen Encoders

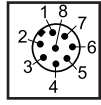
Function	Pin
+VDC	2
Ground (GND)	3
CAN <sub>High</sub>	4
CAN <sub>Low</sub>	5
CAN <sub>GND</sub> / shield	1



5-pin M12

### 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



8-pin M12