

Model SA63S Single Turn Absolute



Features

- Standard Size 25 Package (2.5" x 2.5")
- Durable Magnetic Technology
- Servo and Flange Mounting
- SSI and CANopen Communications
- Proven New Turns Counting Technology - No Gears or Batteries

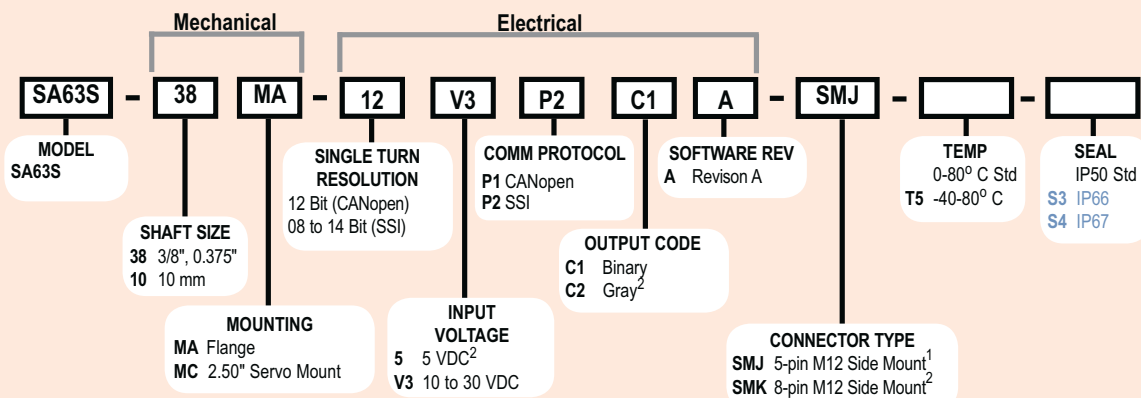
The Model SA63S Single Turn Absolute Accu-Coder™ is ideal for a wide variety of industrial applications that require an encoder with the capability of absolute positioning output, even in power-off scenarios. Its fully digital output and innovative use of battery-free technology makes the Model SA63S exceptionally reliable. The SA63'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 SA63S 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 SA63S Ordering Guide

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



Notes:

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

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Model SA63S Specifications

Electrical

Input Voltage 10 to 30 VDC max SSI or CAN
 5 VDC 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)
 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 VDC for CCW
 (when viewed from shaft end)
 Set to Zero..... Apply VDC for 2 sec

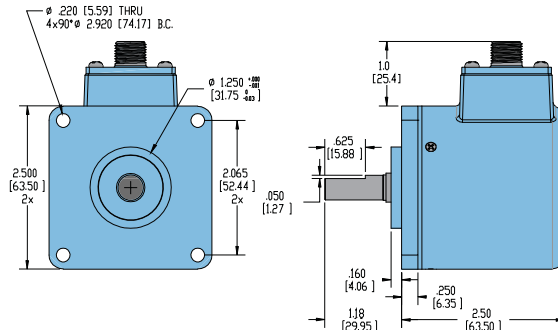
Mechanical

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..... 1.0 oz-in typical with no seal
 3.0 oz-in typical with seal
 Housing..... Black non-corrosive finish
 Mounting Flange or Servo type
 Weight..... 20 oz typical

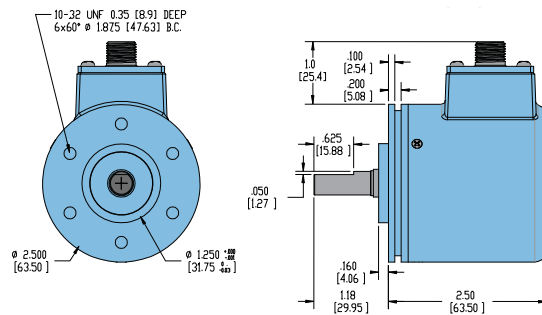
Environmental

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 SA63S Flange Mount (MA)



Model SA63S 2.5" Servo Mount (MB)




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

Wiring Table

CANopen Encoders


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