



# Model MA63S Multiturn Absolute

## Model MA63S 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)  
 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 VDC for CCW  
 (when viewed from shaft end)  
 Set to Zero ..... Apply VDC for 2 sec

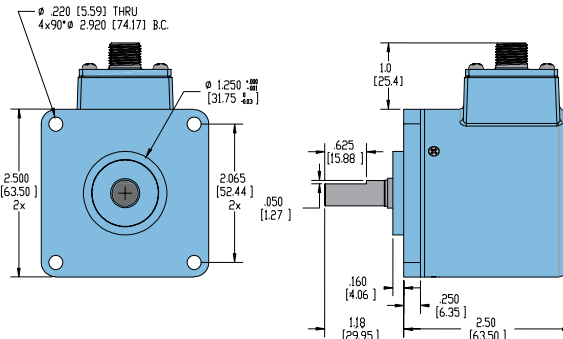
### Mechanical

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

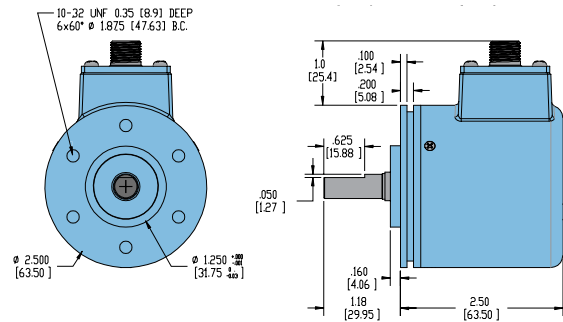
### Environmental

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 MA63S Flange Mount (MA)



## Model MA63S 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 <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