Model A58SB Absolute Shaft Encoder





Model A58SB Ordering Guide

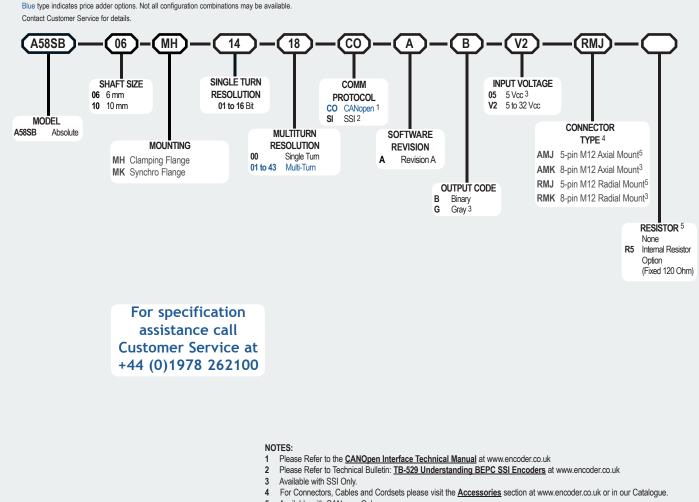
Features

- Single Turn/Multi-Turn Absolute Encoder (16 Bit ST / 43 Bit MT)
- SSI or CANopen Communication
- · Maintenance-Free and Environmentally Friendly Magnetic Design
- · Energy Harvesting Magnetic Multi-Turn Technology
- · No Gears or Batteries
- 58mm Diameter Solid Shaft Encoder
- Meets CE/EMC Standards for Immunity and Emissions

The Model A58SB Absolute Encoder offers a high performance solution for your absolute feedback needs. It provides maintenance-free feedback thanks to its innovative battery-free and gear-free multi-turn technology. This encoder is especially suited for applications where position information must be retained after loss of system power. Its rugged magnetic technology and high IP rating make the Model A58SB an excellent choice, even in tough industrial environments. Available with 2 shaft sizes, 6mm and 10mm and two mounting options, the Model A58SB is easily designed into a variety of applications.

Common Applications

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

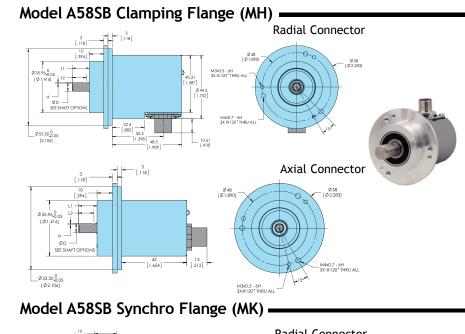


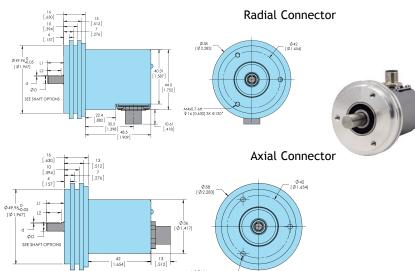
5 Available with CANopen Only.

Rev:

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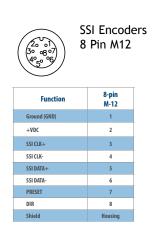






Primary dimensions are in mm, Secondary dimensions SI (Inches) in brackets for reference only

| | | <u>Shaft Sizes</u> | | |
|------------|------------|--------------------|--------------|------------|
| SHAFT SIZE | ØD | L1 | d | L2 |
| 6mm | 6 [0.236] | 12 [0.472] | 0.70 [0.028] | 10 [0.394] |
| 10mm | 10 [0.394] | 20 [0.787] | no flat | n/a |



Wiring Tables

 Function
 S-pin M-12

 +VDC
 2

 Ground (GND)
 3

 CAN High
 4

 CAN Low
 5

 CAN GND / Shield
 1

For BEPc supplied mating cables, refer to the wiring table provided with cable.

For CE requirements, use M12 cordset with shield connected to Connector Case.

Model A58SB Specifications

| Model AS | SD Specifications |
|------------------------|---|
| Electrical | |
| Input Voltage | 5 to 32 VDC max |
| input voitago | 5 VDC SSI Only |
| Input Current | 50 mA typical for 5 to 32 VDC |
| | |
| | 80 mA typical for 5 VDC |
| Power: Consumption . | 0.5 W max |
| Resolution (Single) | 01 to 16 bit |
| Resolution (Multi) | |
| Accuracy | <± 0.35° |
| Repeatability | <± 0.2° |
| CE/EMC | Immunity tested per EN 61000-6-2:2006 |
| | Emissions tested per EN 61000-6-3:2011 |
| CANonon Interface | |
| CANopen Interface | |
| Protocol | |
| | Communication profile CiA 301 |
| | Device profile for encoder CiA 406 V3.2 |
| | class C2 |
| Node Number | 1 to 127 (default 127) |
| | 10 Kbaud to 1 Mbaud with automatic bit |
| | rate detection |
| Note: The standard se | ttings, 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 CA | Nopen Transmission Modes |
| Svnchronous | When a synchronization telegram (SYNC) |
| -, | is received from another bus node, PDOs |
| | are transmitted independently. |
| Asynchronous | A PDO message is triggered by an internal |
| / toy non on ous | event (e.g., change of measured value, |
| | |
| | internal timer, etc.). |
| SSI Interface | |
| Clock Input | Via opto-coupler |
| Clock Frequency | 100 kHz to 500 kHz. Higher frequencies |
| | may be available. Contact Customer |
| | Service. |
| Data Output | RS485 / RS422 compatible |
| Output Code | Grav or binary |
| | Angular position value |
| Parity Bit | Ontional (over/odd) |
| | |
| Error Bit | |
| Turn On Time | |
| Pos. Counting Dir | Connect DIR to GND for CW |
| | Connect DIR to VDC for CCW |
| | (when viewed from shaft end) |
| Set to Zero | Yes, see Technical Bulletin TB529: |
| | Understanding EPC's SSI Encoders |
| Protection | Galvanic Isolation with SSI option |
| 1 10000011111111 | |
| | |
| Mechanical | |
| Max Shaft Speed | |
| Shaft Rotation | Bi-directional |
| Radial Shaft Load | Bearing life of 1x109 Revolutions: 6mm |
| | dia - 125N; 10mm dia - 220N |
| Axial Shaft Load | Bearing life of 1x109 Revolutions: 6mm |
| . Luar on art Loud min | dia - 120N; 10mm dia - 120N |
| Starting Tarque | 0.0162 N m typical |

| Axial Shaft Load | .Bearing life of 1x109 Revolutions: 6m |
|------------------|--|
| | dia - 120N; 10mm dia - 120N |
| Starting Torque | .0.0162 N-m typical |
| Housing | .All metal with protective finish |
| Bearings | .2 precision ball bearings |
| Weight | .210 grams typical |
| U | 0 11 |

Environmental

| Operating Temp40° to +85° C |
|-----------------------------------|
| Storage Temp25° to +100° C |
| Vibration5.1 g @ 10 Hz to 2000 Hz |
| Shock100 g @ 6 ms duration |
| SealingIP67, shaft sealed to IP65 |
| |