FEATURES

58 mm Diameter Package
Durable Magnetic Technology
Up to 14 Bits of Single Turn Resolution
SSI and CANopen Communication
Flex Mount Eliminates Couplings and Is Ideal for Motors or Shafts
Meets CE/EMC Standards for Immunity and Emissions SSI and CANopen

The Model SA58H Single Turn Absolute Encoder offers a high performance solution for your absolute feedback needs. This encoder is especially suited for applications where position information must be retained after loss of system power (i.e., system resets, outages, etc.). Its rugged magnetic technology and high IP rating make the Model SA58H an excellent choice, even in the harshest industrial environments. Available with bores up to 3/8" or 14 mm and two flexible mounting options, the Model SA58H 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

DISCONTINUED - PLEASE SEE REPLACEMENT MODEL A58HB
MODELSA58H SPECIFICATIONS

Electrical
Input Voltage........10 to 30 VDC max
5 VDC SSI Only
Input Current ........50 mA typical for 10 to 30 VDC
80 mA typical for 5 VDC
Power: Consumption...0.5 W max
Resolution:
Single Turn..........14 bit (CANopen)
8 to 14 bit (SSI)
Accuracy.............<± 0.35°
Repeatability........<± 0.2°
CE/EMC..............Immunity tested per EN 61000-6-2:2006
Emissions tested per EN 61000-6-3:2011

CANopen Interface
Protocol.............CANopen:
Communication profile CIA 301
Device profile for encoder CIA 406 V3.2
class C2
Node Number.........1 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 proto-
col (e.g., PDOs, scaling, heartbeat, node-ID, baud rate, etc.).

Programmable CANopen 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.......100 kHz to 500 kHz
Higher frequencies may be available.
Contact Customer Service.
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 sec
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

Mechanical
Max Shaft Speed........6000 RPM
Shaft Rotation........Bi-directional
Radial Run-out.........0.007” max
Axial Endplay.........± 0.030” max
Radial Shaft Load......18 lb max. Max load bearing life of 1 x 10⁹
revolutions
Axial Shaft Load ......11 lb max. Max load bearing life of 1 x 10⁹
revolutions
Starting Torque.........2.3 oz-in typical
Housing..............All metal with protective finish
Bearings..............2 precision ball bearings
Weight...............7.5 oz typical

Environmental
Operating Temp ........-40° to 85° C
Storage Temp ..........-40° to 100° C
Vibration.............5.1 g (10 Hz up to 2000 Hz)
Shock..................100 g (6 ms)
Sealing..............IP67, shaft sealed to IP65

WIRING TABLE
For EPC-supplied mating cables, refer to wiring table provided with cable.
For CE (Conformity European) requirements, use M12 connector with shield connected to M12 coupling nut.
Trim back and insulate unused wires.
SSI ENCODERS

<table>
<thead>
<tr>
<th>Function</th>
<th>8-Pin M12</th>
<th>Canopen ENCODERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground (GND)</td>
<td>1</td>
<td>+VDC</td>
</tr>
<tr>
<td>+VDC</td>
<td>2</td>
<td>CAN</td>
</tr>
<tr>
<td>SSI CLK+</td>
<td>3</td>
<td>SSI CLK-</td>
</tr>
<tr>
<td>SSI DATA+</td>
<td>5</td>
<td>SSI DATA-</td>
</tr>
<tr>
<td>PRESET</td>
<td>7</td>
<td>PRES</td>
</tr>
<tr>
<td>DIR</td>
<td>8</td>
<td>SHIELD</td>
</tr>
</tbody>
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