

Model SA36S Single Turn Absolute



Features

- Standard Size 36 mm Package (1.42")
- Durable Magnetic Technology
- Up to 14 Bits of Single Turn Resoluion
- SSI and CANopen Communications

The Model SA36S 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. Its fully digital output, rugged magnetic technology and high sealing make the Model SA36S an excellent choice for all applications, especially ones with a high presence of noise. Available with a 6 mm or 1/4" shaft and a servo mount, the Model SA36S is easily designed into a variety of applications.

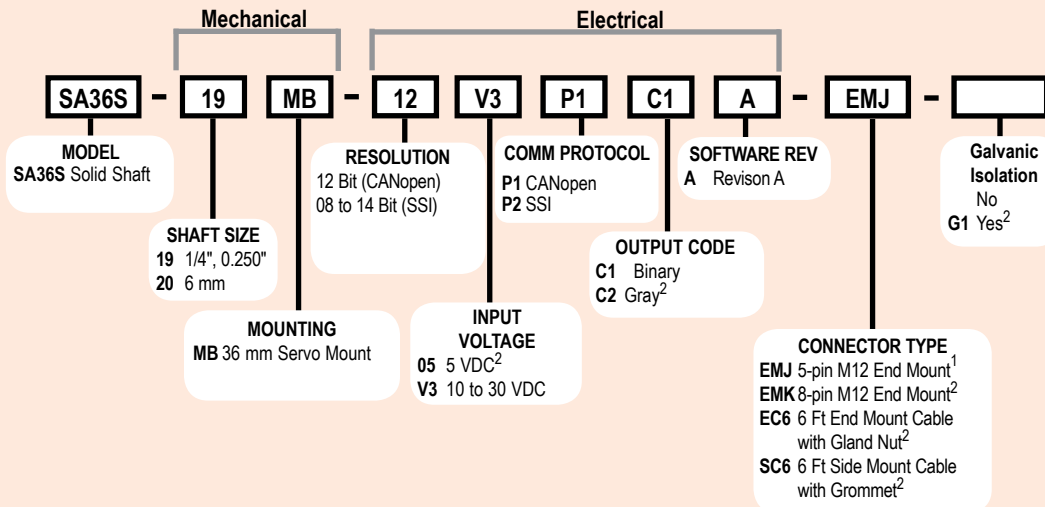
Common Applications

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

Model SA36S Ordering Guide

For Multiturn applications see Model MA36S

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



For specification assistance call
Customer Service at
1-800-366-5412

Notes:

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

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Model SA36S 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 12 bit (CAN)
 8 to 14 bit (SSI)
 Accuracy Less than .15° (CANopen)
 Less than .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 synchronisation 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

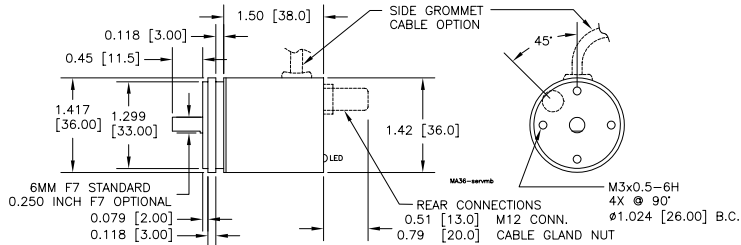
Mechanical

Max Shaft Speed 12,000 RPM
 Shaft Size 6 mm, 0.250"
 Radial Shaft Load 7 lb (32 N) = bearing life 1.10¹⁰ revs
 3.6 lb (16 N) = bearing life 1.10¹¹ revs
 Axial Shaft Load 5 lb (20 N) = bearing life 1.10¹⁰ revs
 2.3 lb (10 N) = bearing life 1.10¹¹ revs
 Starting Torque <0.45 oz-in typical
 Housing Ferrous chrome-plated magnetic screening
 Mounting Flange or servo type
 Weight 5 oz typical

Environmental

Operating Temp -40° to +80° C
 Storage Temp -40° to +100° C
 Humidity 95% RH non-condensing
 Vibration 5 g @ 10 to 2000 Hz
 Shock 100 g @ 6 ms duration
 Sealing IP67, shaft sealed to IP65

Model SA36S Solid Shaft



Wiring Table

CANopen Encoders

Function	Pin
+VDC	2
Ground (GND)	3
CAN _{High}	4
CAN _{Low}	5
CAN _{GND} / shield	1

SSI Encoders

	8-pin M12	Cable
Function		
Ground (GND)	1	White
+VDC	2	Brown
SSI CLK+	3	Green
SSI CLK-	4	Yellow
SSI DATA+	5	Gray
SSI DATA-	6	Pink
PRESET	7	Blue
DIR	8	Red
Shield	housing	Side Exit - Housing End Exit - N/C