

Model SA36S Single Turn Absolute



Features

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

The Model SA36S Single Turn Absolute 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.

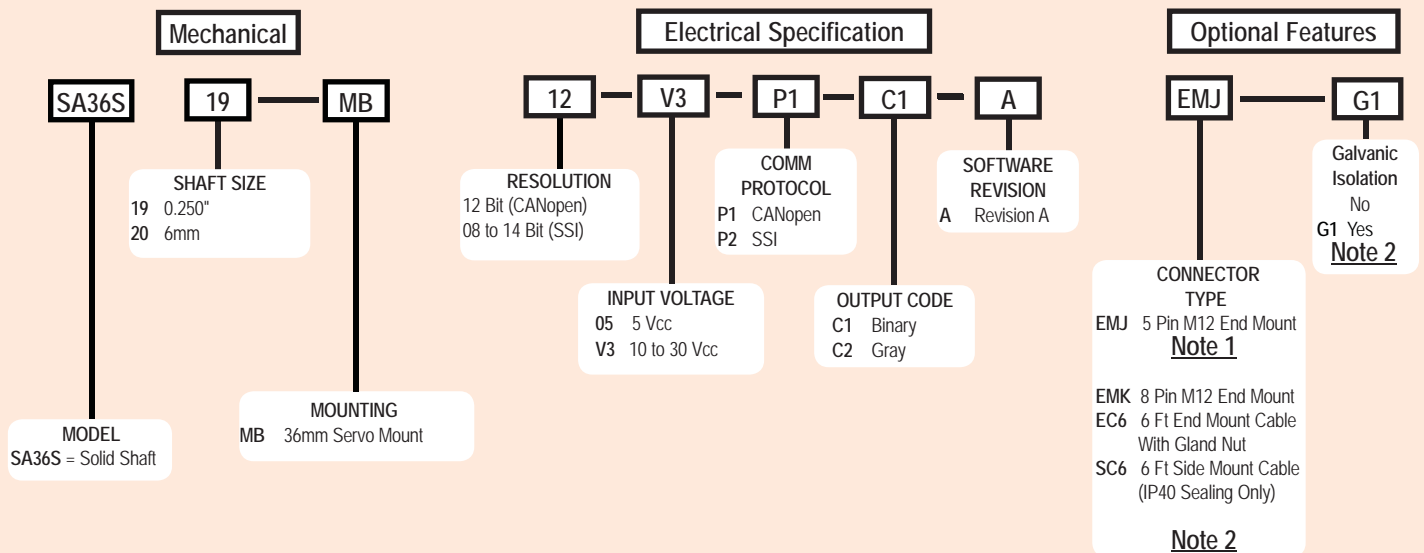
Common Applications

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

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



For specification assistance call Customer Service at +44 (0)1978 262100

Notes:

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

Model SA36S

Single Turn Absolute



Model SA36S Specifications

Electrical

Input Voltage..... 10 to 30 Vcc max SSI or CAN
5 Vcc 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 Vcc for 2 sec

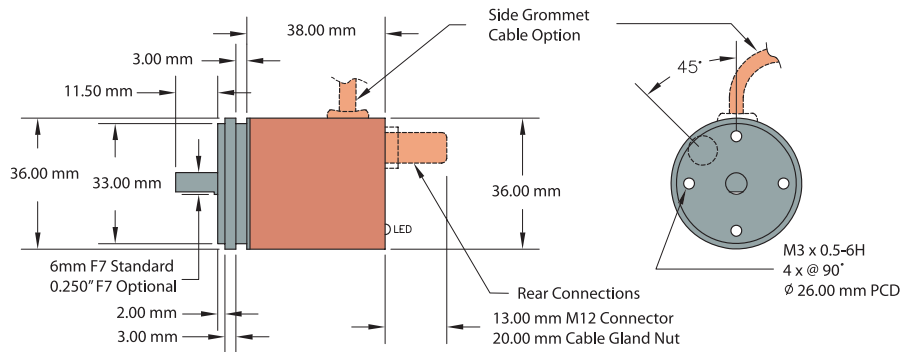
Mechanical

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..... 630 gms 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..... IP64, shaft sealed to IP65

Model SA36S Solid Shaft



Wiring Table

CANopen Encoders

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

SSI Encoders

Function	8-pin M12	Cable
Ground (GND)	1	White
+Vcc	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