



**Description:**

Utilizing the SSI protocol to reduce cabling costs, the AMCI Multi-Turn SSI DuraCoder is a 24 bit absolute multi-turn resolver based shaft encoder. It provides a maximum resolution of 4096 counts per turn over a maximum of 4096 turns. The AMCI Multi-Turn SSI DuraCoder can interface with various networks and PLC's using products manufactured by AMCI:

- **NX2E4x** – Nexus 4 channel SSI Universal Network Interface (ControlNet, Ethernet, & Profibus Interfaces available)
- **7561** – One channel SSI Module for AB SLC platform
- **7264** – Four channel SSI Module for AB ControlLogix platform
- **7662** – Two channel SSI Module for AB CompactLogix and MicroLogix platforms
- **7761H** – One channel SSI Module for AB PLC-5 platform
- **7361** – One channel SSI Module for GE Series 90-30 platform
- **7961** – One channel SSI Module for GE Series 90-70 platform

Synchronous Serial Interface, or SSI, provides many advantages over traditional parallel wiring. SSI provides 24 bit resolution over 6 wires rather than the usual 26 wires. The use of SSI technology provides the following customer benefits:

- Reduced wiring cost and complexity that simplifies start up.
- Improved noise immunity achieved via differential communication format

**Specifications:**

**Electrical:**

Code Format	Natural Binary or Gray Code
Operating Voltage	4.5Vdc to 30Vdc
Power Requirements	1.7W max. 70mA @ 24Vdc optimal
Number of Turns	Programmable 2 to 4096
Counts per Turn	Programmable 2 to 4096
Full Scale Count	2 <sup>24</sup> maximum
Output Format	SSI (±clock ±data)
Reset Position to Zero	Connector pin to GND
Increasing Position Direction	Programmable CW/CCW
Options	Many options available. Send inquiry to <a href="mailto:sales@amci.com">sales@amci.com</a>

**Mechanical:**

Package Style	2.5 inch aluminum housing with flange or servo mounting
Connector Location	Side or End
Shaft	0.25", 0.375", or 10 mm
Max. Starting Torque @ 25°C	0.5 oz-in (bearing seal) 3.0 oz-in (shaft seal)
Operating Speed	6000 RPM max.
Max. Shaft Loading	Axial: 20lbs. (89N) Radial: 40lbs. (178N) At specified maximum loads, bearing life is 2X10 <sup>9</sup> revolutions minimum.

**Environmental:**

Temperature	-20°C to +85°C
Shock	50g, 11 millisecond duration
Vibration	20g, 5 to 2000 Hz
Protection	IP64 with bearing seal IP67 with shaft seal
Approx. Weight	1.4lbs (0.65kg)

**Typical Applications:**

- Punch press
- Cut to length
- Steel mills
- Transfer lines
- Machine tools
- Wind mills
- Overhead cranes
- Oil rigs
- Packaging