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Technical Bulletin

STANDARD OPERATING CHARACTERISTICS

Code: Incremental
 Resolution: 1 to 600 PPR (pulses/revolution)
 Accuracy: (Worst case any edge to any other edge) ± 7.5 arc-min.
 Format: Two channel quadrature (AB) with complementary outputs
 Phase Sense: A leads B for CW shaft rotation as viewed from the shaft end of the encoder; see Ordering Information
 Quadrature Phasing: $90^\circ \pm 20^\circ$ electrical
 Symmetry: $180^\circ \pm 18^\circ$ electrical
 Waveforms: Squarewave with rise and fall times less than 1 microsecond into a load capacitance of 1000 pf

ELECTRICAL

Input Power:
 4.5 min. to 26 VDC max. at 90 mA max., not including output loads
 Outputs:
 7272 Push-Pull and Differential Line Driver: 40 mA sink or source
 Frequency Response: 100 kHz min.
 Electrical Protection: Overvoltage, reverse voltage and output short circuit protected
 Noise Immunity: Tested to EN61326 (Industrial) for Electro Static Discharge, Radio Frequency Interference, Electrical Fast Transients, Conducted and Magnetic Interference

CONNECTIONS

Connector Termination:
 7 pin, style MS3102E-16S-1P
 Mating Connector:
 7 pin, style MS3106A-16S-1S (MCN-N5);

ELECTRICAL CONNECTIONS

With Line Driver Output		
Pin	Function (If Used)	#108596-0010* Cable Accessory Color Code
A	Signal A	RED
B	Signal B	BLUE
C	Signal A	YELLOW
D	Power Source	WHITE
E	Signal B	GREEN
F	Common	BLACK
G	Case	SHIELD

*This is a mating connector/cable assembly described in the Encoder Accessories section of this catalog. Color-coding information is provided here for reference.

MECHANICAL

Shaft Loading: (at 0.25" from encoder face) 80 lbs. radial, 80 lbs. axial
 Shaft Speed: 7200 RPM max.
 Shaft Runout: 0.001" max. TIR
 Moment of Inertia: 3.0×10^{-4} oz-in-sec²
 Weight: 13 oz.

ENVIRONMENTAL

Operating Temperature: 0 to +70 °C
 Storage Temperature: -40 to +90 °C
 Shock: 50 G's for 11 milliseconds duration
 Vibration: 5 to 2000 Hz at 20 G's
 Humidity: to 98% without condensation
 Enclosure Rating: NEMA12/IP54 (dirt tight, splashproof)

ARE YOU AWARE THAT WE NOW SELL DYNAPAR BRAND COUPLINGS?



Our CPL Series of flexible shaft couplings ensures long encoder life by restricting transfer of mechanical, thermal, and electrical stress.

A full range of models is available. Each is designed to match specific encoders and is supplied with input-shaft size adaptors.

Contact your local Danaher Controls Sales Office or our Customer Service Department 800.873.8731 for more information.

IMPORTANT ENCODER INSTALLATION INFORMATION

Mounting the Encoder: The encoder should be mounted such that its shaft is in close as possible alignment with the axis of the driving machine or motor shaft. The two shafts should then be joined using a suitable, instrument grade, flexible shaft coupling.

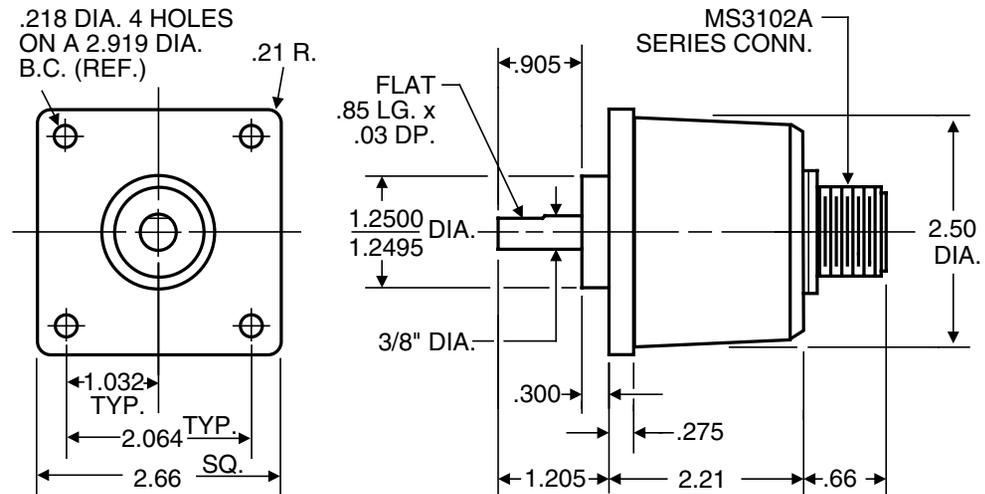
CAUTION: Rigidly coupling the encoder shaft to the driving shaft will cause failure of the encoder's or driving shaft's bearings.

Important Wiring Instructions: Use of shielded cable is recommended for all encoder installations. The shield should be connected to signal-ground at the receiving device only. **Connecting the shield at both ends can cause grounding problems that degrade system performance.** If possible, run the encoder cable through a dedicated conduit (not shared with other wiring). Use of conduit will protect the cable from physical damage and provide a degree of electrical isolation. Do not run the cable in close proximity to other conductors that carry current to heavy loads such as motors, motor starters, contactors, solenoids, etc. This practice can induce electrical transients in the encoder cable, potentially interfering with reliable data transmission.

Refer to Electrical Connections table for wiring information. To avoid possible damage, do not connect or disconnect the encoder connector or wiring while power is applied to the system.

CAUTION: Unused encoder signal wires must be individually insulated and under no circumstances be in contact with ground, voltage sources, or other signal lines.

DIMENSIONS



Ordering Information

To order, complete the model number with code numbers from the table below:

Code 1: Model	Code 2: Pulses/Rev
H42	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
H42 Size 25, Economical	0001 0012 0060 0100 0120 0500 0600

10 foot Cable Assembly with MS Connector

108596-0010 7 Pin MS, Cable Assy. For Use with Differential Line Driver Outputs



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