**FEATURES**

- Large Bore Size to 1.875" or 43 mm
- Fits NEMA Size 182TC Thru 256TC Motor Faces (8.5" AK)
- Incorporates Opto-ASIC Technology
- Resolutions to 4096 CPR

The Model 771 C-Face encoder is a rugged, high resolution encoder designed to mount directly on NEMA C-Face motors. Both sides of the encoder are C-Face mounts, allowing additional C-Face devices to be easily mounted. Many competitive C-Face units are kit type encoders, but the Model 771 contains precision bearings and an internal flex mount that virtually eliminates encoder failures and inaccuracies induced by motor shaft runout or axial endplay. The advanced Opto-ASIC design provides superior noise immunity necessary for many industrial applications. This encoder is ideal for applications using induction motors and flux vector control. A Thru-Bore design allows fast and simple mounting of the encoder directly to the accessory shaft or drive shaft of a motor using a NEMA standard motor face (sizes 182TC - 256TC). The tough, all metal housing resists the vibration and hazards of an industrial environment.

**COMMON APPLICATIONS**

- Motor Feedback, Velocity & Position Control, Servo Control Systems, Assembly & Specialty Machines, Elevator Controls

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**MODEL 771 ORDERING GUIDE**

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

<table>
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<tr>
<th>MODEL</th>
<th>A</th>
<th>H</th>
<th>1024</th>
<th>Q</th>
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**OPERATING TEMPERATURE**

- S: 0° to 70° C
- H: 0° to 100° C

**Cycles Per Revolution**

- 1 - 4096

See CPR Options below for available resolutions. Price adder for CPR > 1024

**Output Type**

- 5 - 28V In/Out
- OC: Open Collector
- PU: Pull-Up Resistor
- PP: Push-Pull
- HV: Line Driver

**Bore Size**

- T: 5/8", 0.625"
- V: 7/8", 0.875"
- W: 1", 1.000"
- A: 1-1/8", 1.125"
- K: 1-1/4", 1.250"
- B: 1-3/8", 1.375"
- C: 1-1/2", 1.500"
- D: 1-5/8", 1.625"
- F: 1-3/4", 1.750"
- E: 1-7/8", 1.875"
- H: 28 mm
- Q: 30 mm
- R: 32 mm
- L: 35 mm
- I: 38 mm
- J: 40 mm
- M: 42 mm
- N: 43 mm

**CONNECTOR TYPE**

- P: Gland Nut with 24" cable
- B: Terminal Strip in Conduit Box
- X: 10-pin MS on Conduit Box
- Y: 7-pin MS on Conduit Box
- J: 5-pin M12 (12 mm) on Conduit Box
- K: 8-pin M12 (12 mm) on Conduit Box
- L: 10-pin Industrial Clamp

**C-FACE GASKET KIT OPTION**

- N: No
- Y: Yes

**MATING CONNECTOR**

- N: No Connector
- Y: Yes

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**NOTES:**

1. Thru-Bore version may be IP65 sealed if mounted between two C-Face devices with optional gasket kit. Select ‘Yes’ under C-Face Gasket Kit Option.
2. Contact Customer Service for index gating options.
3. 5 to 24 VDC max for high temperature option.
4. Not available with 5-pin M12 connector. Available with 7-pin MS connector only without Index Z.
5. For mating connectors, cables, and cordsets see Encoder Accessories on page 102 or visit www.encoder.com. For Pin Configuration Diagrams, see page 107 or visit www.encoder.com.
6. For non-standard cable lengths, add a forward slash (/) plus cable length expressed in feet. Example: P/6 = 6 feet of cable.

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**MODEL 771 CPR OPTIONS**

- 0060 0100 0120 0240 0256 0500
- 0512 0600 1000 1024 2048 2500 4096

Contact Customer Service for other disk resolutions; not all disk resolutions available with all output types.
MODEL 771 SPECIFICATIONS

**Electrical**

- **Input Voltage**: 4.75 to 28 VDC max for temperatures up to 70° C, 4.75 to 24 VDC for temperatures between 70° C to 100° C
- **Input Current**: 100 mA max with no output load
- **Input Ripple**: 100 mV peak-to-peak at 0 to 100 kHz
- **Output Format**: Incremental - Two square waves in quadrature with channel A leading B for clockwise shaft rotation, as viewed from the mounting face. See Waveform Diagrams.

- **Output Types**: Open Collector- 100 mA max per channel, Gated to A = 180°, Ungated = 270°
- **Index**: Once per revolution
- **Max Frequency**: 200 kHz
- **Noise Immunity**: Tested to BS EN61000-4-2; IEC801-3; BS EN61000-4-4; DDENV 50141; DDENV 50204; BS EN55022 (with European compliance option); BS EN61000-6-2

**Mechanical**

- **Max Shaft Speed**: 3500 RPM. Higher shaft speeds may be achievable, contact Customer Service.
- **6000 RPM for 1.125", 1.250", 1.375", 28 mm, 30 mm, 32 mm bore diameter
- **User Shaft Tolerances**
  - **Radial Runout**: 0.005" (for 1.125" and 28 mm bores)
  - **Axial Endplay**: +0.1" (for all bores)
  - **Moment of Inertia**: 3.3 x 10^-3 oz-in-sec^2 typical
  - **Housing**: All metal construction
  - **Weight**: 7.0 lb typical

**Environmental**

- **Storage Temp**: -25° to 100° C
- **Humidity**: 98% RH non-condensing
- **Vibration**: 10 g @ 58 to 500 Hz
- **Shock**: 50 g @ 11 ms duration
- **Sealing**: For Option A housing style, use IPS0 for Option A housing style with gasket kit IPS0 for Option B housing style

**Waveform Diagrams**

- **Line Driver and Push-Pull**
- **Open Collector and Pull-Up**
- **Connectors**:
  - **Gland**
  - **Cable**
  - **Wire**
  - **Color**
  - **5-pin M12**
  - **8-pin M12**
  - **10-pin MS**
  - **7-pin MS**
  - **Term Block**
  - **Clamp**

**Wiring Table**

- **Function**: All degree references are electrical degrees
- **Input Reference**: Option B housing style with gasket kit IPS0 for Option B housing style
- **Cable Shield**: Cable shield (bare wire) is connected to internal case.
- **CE Option**: Pin 10 has no connection.

All dimensions are in inches with a tolerance of ±0.005" or ±0.01" unless otherwise specified.