SUNSTAR传感与控制 http://www.sensor-ic.com/ TEL:0755-83376549 FAX:0755-83376182 E-MAIL:szss20@163.com

Model 770

Features

- Slim Profile - Only 1.00" Deep
- Fits NEMA Size 56C Thru 184C Motor Faces (4.5" AK)
- Incorporates Opto-ASIC Technology
- Resolutions to 4096 CPR

The Model 770 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 mounted to this encoder. Unlike many C-face kit type encoders, the Model 770 contains precision bearings and an internal flex mount, virtually eliminating encoder failures and inaccuracies induced by motor shaft runout or axial end-play. The advanced Opto-ASIC design provides advanced noise immunity necessary for many industrial applications. This encoder is ideal for applications using induction motors and flux vector control. The Model 770 provides speed and position information for drive feedback in a slim profile - only 1.00" thick. The Thru-Bore design allows fast and simple mounting of the encoder directly to the accessory shaft or to the drive shaft of the motor, using the standard motor face (NEMA sizes 56C - 184C). The tough, all metal housing resists the vibration and hazards of an industrial environment.

Common Applications

Motor Feedback, Velocity & Position Control, Conveyors, Variable Speed Drives, Mixing & Blending Motors, Assembly & Specialty Machines

Model 770 Ordering Guide

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

770 - A - H - 1024 - Q - OC - A - Y - N - N - CE

MODEL
770 4.5" NEMA "AK" Dimension

OPERATING TEMPERATURE
S 0° to 70° C
H 0° to 100° C

HOUSING STYLE
A Cover completely encloses motor shaft and eliminates access to motor shaft. IP65 rated. Includes C-face Gasket Kit.
B Thru-Bore housing version with IP50 dust seal[1]

CYCLES PER REVOLUTION
1 - 4096
See *CPR Options* below for available resolutions.
Price adder for CPR >1024

NUMBER OF CHANNELS[2]
Channel A Leads B
Q Quadrature A & B
R Quadrature A & B with Index
Channel B Leads A
K Reverse Quadrature A & B
D Reverse Quadrature A & B with Index
See http://www.encoder.com/literature/index-phasing.pdf for additional options, and waveforms.

OUTPUT TYPE
5 - 28V In/Out[3]
OC Open Collector
PU Pull-Up Resistor
PP Push-Pull
HV Line Driver[6]

BORE SIZE
A 5/8", 0.625"
B 3/4", 0.750"
C 7/8", 0.875"
D 1", 1.000"
H 14 mm
I 19 mm
K 24 mm

CONNECTOR TYPE
P 24" Cable with Gland Nut[4]
B Terminal Strip in Conduit Box
X 10-pin MS Style on Conduit Box
Y 7-pin MS Style on Conduit Box
J 5-pin M12 on Conduit Box
K 8-pin M12 on Conduit Box
L 10-pin Industrial Clamp

C-FACE GASKET KIT OPTION[1]
"B" HOUSING ONLY
N No
Y Yes

MATING CONNECTOR
N No Connector
Y Yes

CERTIFICATION
N None
CE CE Marked[5]

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

Model 770 CPR Options

0060	0100	0120	0240	0250	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

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 For non-standard cable lengths, add a forward slash (/) plus cable length expressed in feet. Example: P/6 = 6 feet of cable.
5 Please refer to Technical Bulletin TB100: *When to Choose the CE Option* at www.encoder.com.
6 Not available with 5-pin M12 connector. Available with 7-pin MS connector only without Index Z.

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Model 770 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* below.
- Output Types: Open Collector- 100 mA max per channel
  Pull-Up- 100 mA max per channel
  Push-Pull- 20 mA max per channel
  Line Driver- 20 mA max per channel (Meets RS 422 at 5 VDC supply)
- Index: Once per revolution.
  0475 to 4096 CPR: Gated to output A
  0001 to 0474 CPR: Ungated
  See *Waveform Diagrams* below.
- 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; BS EN50081-2
- Quadrature: 67.5° electrical or better is typical, 54° electrical minimum at temperatures > 99° C
- Edge Separation
- Rise Time: Less than 1 microsecond

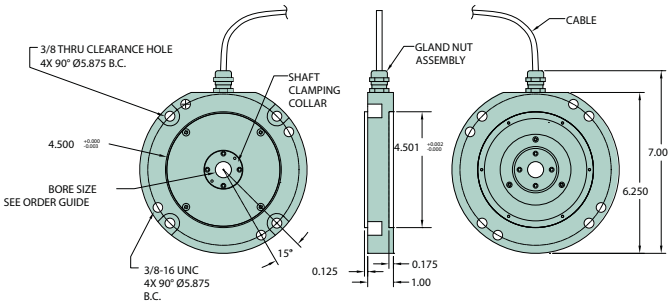
Mechanical

- Max Shaft Speed: 6000 RPM. Higher shaft speeds may be achievable, contact Customer Service.
- Bore Size: 0.625", 0.750", 0.875", 1.000", 14 mm, 19 mm, and 24 mm
- Bore Tolerance: +0.0015"/-0.000"
- User Shaft Tolerances
  - Radial Runout: 0.005"
  - Axial Endplay: ±0.050"
- Moment of Inertia: 3.3 x 10^{-3} oz-in-sec^2 typical
- Electrical Conn: Gland nut with 24" cable (foil and braid shield, 24 AWG conductors), Terminal Strip in conduit box, 7- or 10-pin MS Style, 5- or 8-pin M12 (12 mm), 10-pin Industrial Clamp
- Housing: All metal construction
- Mounting: NEMA 56C to 184C
- Weight: 2.60 lb with gland nut
  3.00 lb with all other connector options
  Note: All weights typical

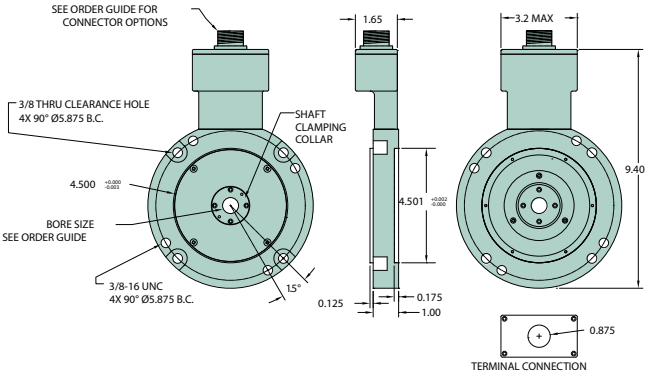
Environmental

- Operating Temp: 0° to 70° C for standard models
  0° to 100° C for high temperature option
- 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: IP65 for Option A housing style with gasket kit IP50 for Option B housing style

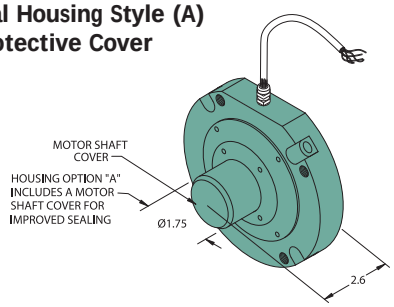
Model 770 With Gland Nut (P)



Model 770 With Conduit Box (B, X, Y, J, K)



Optional Housing Style (A) Protective Cover

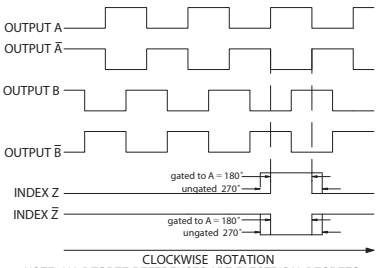


CONNECTOR TYPE	HEIGHT
6- or 7-PIN MS	0.67"
10-PIN MS	0.90"
5- or 8-PIN M12	0.50"

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

Waveform Diagrams

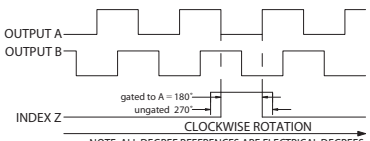
Line Driver and Push-Pull



NOTE: ALL DEGREE REFERENCES ARE ELECTRICAL DEGREES

NOTE: PUSH-PULL OUTPUT DOES NOT INCLUDE COMPLIMENTARY CHANNELS

Open Collector and Pull-Up



NOTE: ALL DEGREE REFERENCES ARE ELECTRICAL DEGREES
NOTE: INDEX IS POSITIVE GOING

Wiring Table

Function	Gland Cable Wire Color	5-pin M12[4] PU, PP, OC	8-pin M12[4]	10-pin MS	7-pin MS HV	7-pin MS PU, PP, OC	Term. Block	10-pin Indust. Clamp
Com	Black	3	7	F	F	F	2	1
+VDC	Red	1	2	D	D	D	1	6
A	White	4	1	A	A	A	3	3
A'	Brown	----	3	H	C	----	4	8
B	Blue	2	4	B	B	B	5	2
B'	Violet	----	5	I	E	----	6	7
Z	Orange	5	6	C	----	C	7	4
Z'	Yellow	----	8	J	----	----	8	9
Shield	Bare[1]	----	----	----	----	----	----	----
Case	----	----	----	G[2]	G[2]	G[2]	9[3]	10[3]

[1]CE Option: Cable shield (bare wire) is connected to internal Case
[2]CE Option: Pin G is connected to Case
Non CE Option: Pin G has No Connection
[3]CE Option: Pin 10 is connected to Case
Non CE Option: Pin has No Connection
[4]CE Option: Read Technical Bulletin "TB111" at www.encoder.com

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