

225 Series

Incremental Encoder



Ø2.25"

FEATURES

- Single Channel & Quadrature Models
- Easy to Mount Economical Thru-Bore Design
- Metal Construction
- Bore Sizes to 0.875" or 22 mm

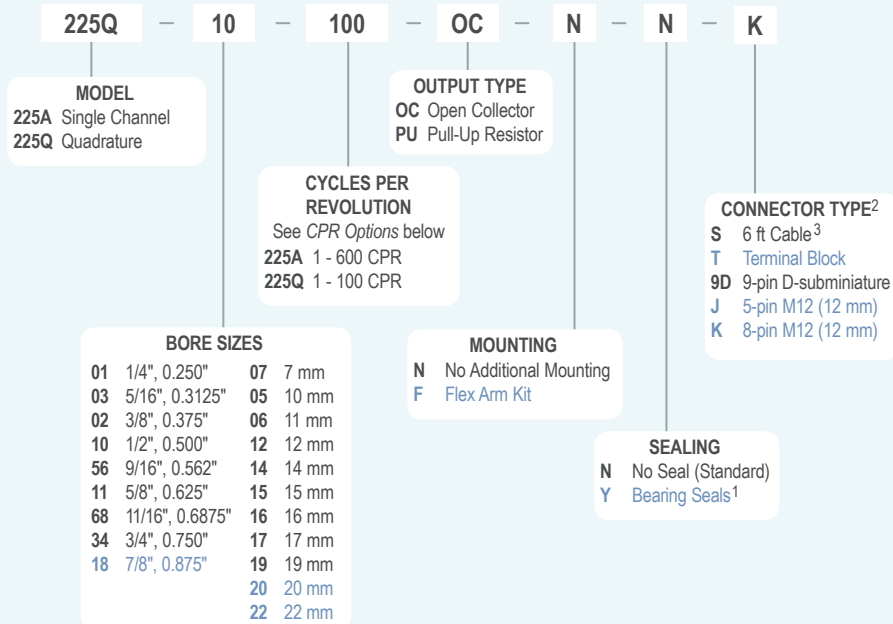
Controlling motor speed is essential for many production assembly machines or robotic equipment. For tachometer feedback, or motor speed control applications, the Model 225 is the ideal encoder choice. The Model 225 is a thru-bore encoder available in both single channel (225A) and quadrature (225Q) models that provides a cost-effective solution for simple measurement. Features including an all metal housing, a variety of connector options, and easy installation due to the thru-bore design, make the Model 225 ideal for many motion control and manufacturing applications.

COMMON APPLICATIONS

Brushless Servo Motor Commutation, Robotics, Motor-Mounted Feedback, Assembly Machines, Digital Plotters, High Power Motors

MODEL 225A/Q ORDERING GUIDE

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



MODEL 225A/Q CPR OPTIONS

225A
1-600 CPR, all resolutions

225Q							
001	002	003	004	005	006	010	011
015	016	020	022	025	030	032	040
048	050	060	062	080	083	090	099
100							

Contact Customer Service for other disk resolutions.

NOTES:

- Shaft speed limited to 400 RPM.
- For mating connectors, cables, and cordsets see Accessories or visit www.encoder.com. For Connector Pin Configuration Diagrams, see Technical Information or visit www.encoder.com.
- For Non-Standard Cable Lengths add a forward slash (/) plus cable length expressed in feet. Example: S/12 = 12 feet of cable.

MODEL 225A SPECIFICATIONS SINGLE CHANNEL

Electrical

Input Voltage.....4.75 to 24 VDC
 Input Current 32 mA max with Pull-Up option
 Input Ripple..... 100 mV peak-to-peak at 0 to 100 kHz
 Output Format Square wave 50% duty cycle
 Output Types..... Open Collector – 100 mA max
 Pull-Up – Open Collector with 1.5K ohm
 internal resistor, 20 mA max per channel
 Max Frequency 0 to 6 kHz
 Rise Time..... Less than 1 microsecond
 Cycles per Rev 1 to 600

Mechanical

Max. Shaft Speed 4000 RPM
 400 RPM with bearing seal option
 Bore Tolerance Bore H7 fit for g6 shaft Class LC5
 per ANSI B-4.1 Standard
 Running Torque..... 10 oz-in typical
 Housing Black non-corrosive finish
 Bearings..... Precision ABEC ball bearings
 Weight..... 8 oz typical

Environmental

Storage Temp -25° to 85° C
 Humidity..... 95% RH non-condensing
 Vibration..... 3 g @ 5 to 1000 Hz
 Shock..... 20 g @ 10 ms duration

MODEL 225Q SPECIFICATIONS QUADRATURE

Electrical

Input Voltage..... 4.75 to 24 VDC
 Input Current 64 mA max with Pull-Up option
 Input Ripple..... 100 mV peak-to-peak at 0 to 100 kHz
 Output Format Square wave 50% duty cycle in quadrature
 Output Types..... Open Collector – 100 mA max per channel
 Pull-Up – Open Collector with 1.5K ohm
 resistor, 20 mA max per channel

Max Frequency 0 to 6 kHz
 Electrical Protection .. Reverse voltage and output short circuit
 protected. NOTE: Sustained reverse
 voltage may result in permanent
 damage.

Rise Time..... Less than 1 microsecond
 Cycles Per Rev 1 to 100

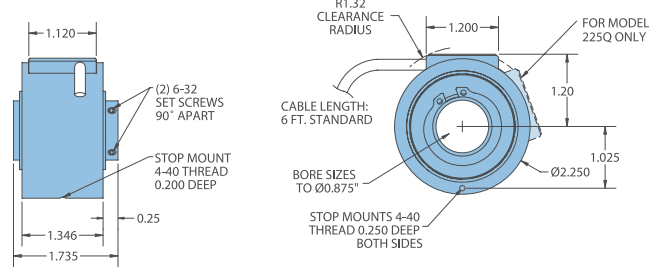
Mechanical

Max. Shaft Speed 4000 RPM
 400 RPM with bearing seal option
 Bore Tolerance Bore H7 fit for g6 shaft Class LC5 per
 ANSI B-4.1 Standard
 Running Torque..... 10 oz-in typical
 Housing Black non-corrosive finish
 Bearings..... Precision ABEC ball bearings
 Weight..... 10 oz typical

Environmental

Storage Temp -25° to 85° C
 Humidity..... 95% RH non-condensing
 Vibration..... 3 g @ 5 to 1000 Hz
 Shock..... 20 g @ 10 ms duration

MODEL 225

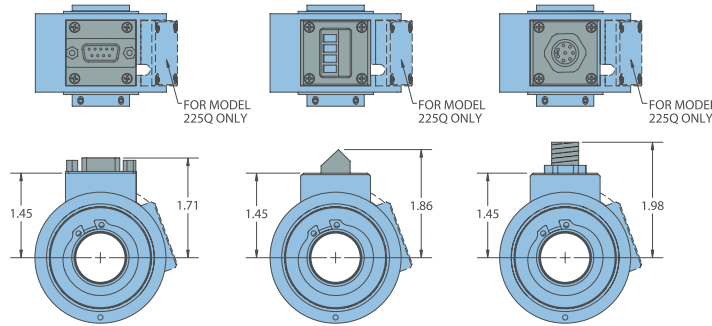


MODEL 225 CONNECTOR OPTIONS

9D 9-pin D-Subminiature

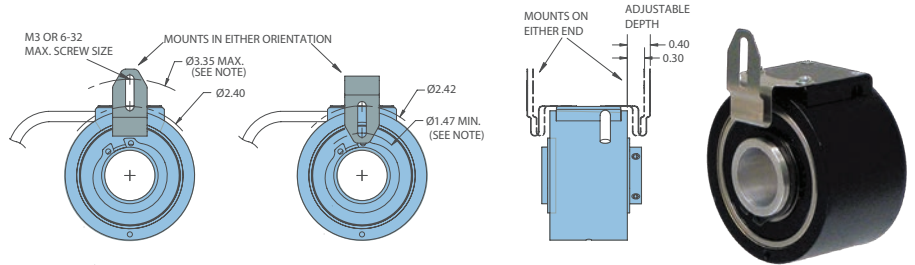
T Terminal Block

J 5-pin M12 (12 mm)
K 8-pin M12 (12 mm)



MODEL 225 MOUNTING OPTION (F) FLEX ARM KIT

To order Model 225 Flexible Mounting Arm Kit as an accessory, order part #140106-01.
 Kit may be mounted in either an up or down orientation.



NOTE: FOR ANY CONNECTOR OPTION, THE BOLT CIRCLE RANGE IS FROM 0.172" TO 0.360" DUE TO THE INCREASED CAP HEIGHT

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

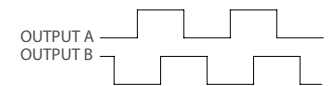
WIRING TABLE

For EPC-supplied mating cables, refer to wiring table provided with cable.

Function	Flying Leads Wire Color	5-pin M12	8-pin M12	Term Block	9-pin D-Sub
Com	Black	3	7	1	9
+VDC	Red	1	2	2	1
A	White	4	1	3	2
B	Green	2	4	4	4
Shield	Bare	--	--	--	--

†Standard cable is 24 AWG conductors with foil and braid shield.

WAVEFORM DIAGRAM MODELS 225A/Q



NOTE: MODEL 225A INCLUDES OUTPUT A ONLY