

# Model 711

Now up to  
10,000 CPR!



## Features

- The Original Industry-Standard Cube
- Five Versatile Housing Styles
- Thousands of Configurations
- New Resolutions Available to 10,000!

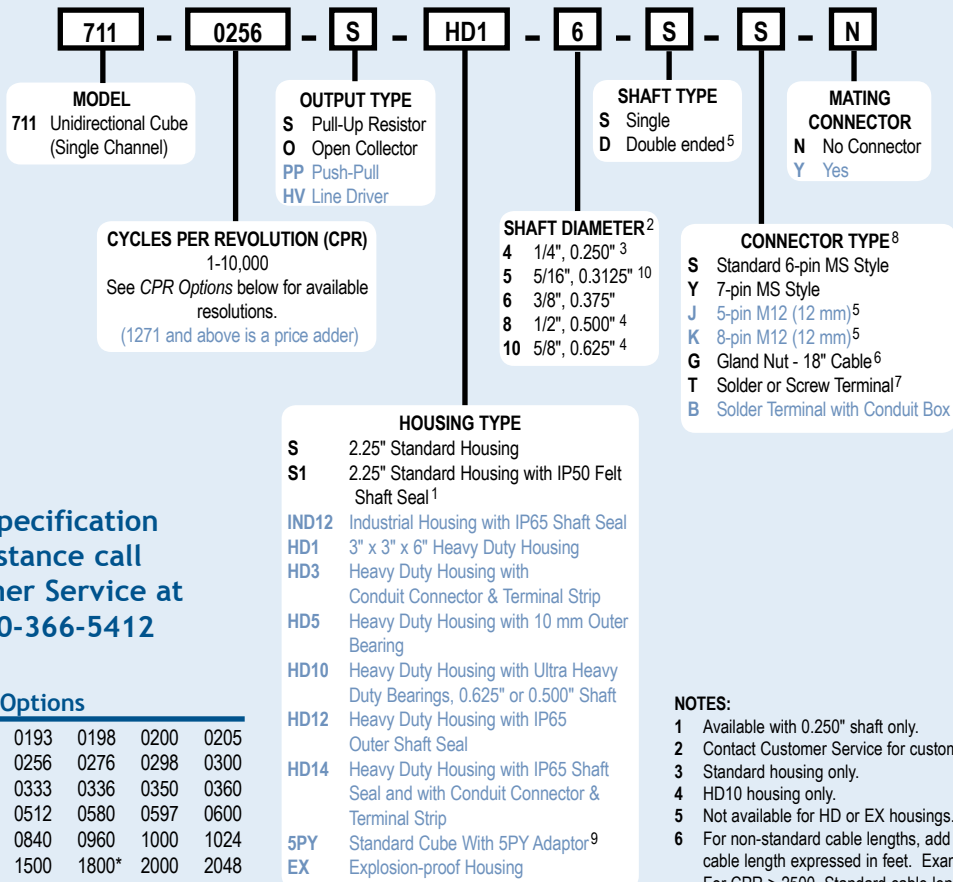
The Model 711 Accu-Coder™ is the original, industry standard Cube encoder. Designed for compatibility with most programmable controllers, electronic counters, motion controllers, and motor drives, it is ideally suited for applications that require a simple, symmetrical, unidirectional square wave output in a single channel format. Increasing critical performance specifications for the most popular resolutions and features advanced Opto-ASIC circuitry, a single chip design that eliminates many board level components. This increases the reliability of an already dependable and durable encoder. With new options continually being added, we just keep getting better, and better!

## Common Applications

Feedback For Counters, PLC's & Motors, Measuring For Packaging, Filling & Materials Handling Machines, Wire Winding, Film Extrusion

## Model 711 Ordering Guide

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



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

### Model 711 CPR Options

0001 thru 0189*	0193	0198	0200	0205
0210	0240	0250	0256	0276
0298	0300	0305	0308	0315
0333	0336	0350	0360	0400
0480	0500	0512	0580	0597
0600	0700	0720	0800	0840
0960	1000	1024	1200	1250
1270	1500	1800*	2000	2048
2500	3000	3600*	4096	5000
6000	7200*	8192	10,000	

\*Contact Customer Service For Availability

Contact Customer Service for other disk resolutions; not all disk resolutions available with all output types

### NOTES:

- 1 Available with 0.250" shaft only.
- 2 Contact Customer Service for custom shaft lengths and diameters.
- 3 Standard housing only.
- 4 HD10 housing only.
- 5 Not available for HD or EX housings.
- 6 For non-standard cable lengths, add a forward slash (/) plus cable length expressed in feet. Example: G/6 = 6 feet of cable. For CPR > 2500. Standard cable length only.
- 7 Screw terminals available for HD and EX housings. Solder terminals available for S and S1 housings.
- 8 For Mating Connectors, Cables, and Cordsets see www.encoder.com.
- 9 Only available with 5/16" (0.3125") shaft.
- 10 Standard or 5PY housing only.

# Model 711

## Model 711 Specifications Common to All Cube Housing Styles

### Electrical

Input Voltage.....4.75 to 28 VDC max for temperatures up to 85° C  
4.75 to 24 VDC for temperatures between 85° C and 100° C.

Input Current.....80 mA maximum with no output load

Input Ripple .....100 mV peak-to-peak at 0 to 100 kHz

Output Format.....Incremental- Square wave with single channel

Output Types.....Open Collector- 250 mA max per channel  
Pull-Up- 250 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)

Max Frequency.....1 to 2500 CPR 125 kHz, 2501 to 5000 CPR 250 kHz, 5001 to 10,000 CPR 500 kHz  
Standard Cube- 0 to 20 kHz

Symmetry .....180° (±18°) electrical

Rise Time.....Less than 1 microsecond

Accuracy.....Within 0.05° mechanical from one cycle to any other cycle, or 3 arc minutes.

Electrical Conn.....6-, 7-, or 10-pin MS Style, 5-, or 8-pin M12 (12 mm), Gland with 18" cable (foil and braid shield, 24 AWG conductors), Solder Terminal, or Solder Terminal with conduit box

### Mechanical

Max Speed.....6000 RPM. Higher shaft speeds achievable, contact Customer Service.

Shaft Material.....303 stainless steel

Housing.....Black non-corrosive finished 6063-T6 aluminum

Bearings .....Precision ABEC Ball Bearings

### Environmental

Operating Temp.....0° to 85° C or 0° to 100° C at 5 to 24 VDC

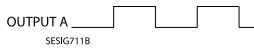
Storage Temp.....-25° to +85° C

Humidity.....98% RH non-condensing

Vibration.....10 g @ 58 to 500 Hz

Shock.....50 g @ 11 ms duration

### Waveform Diagram



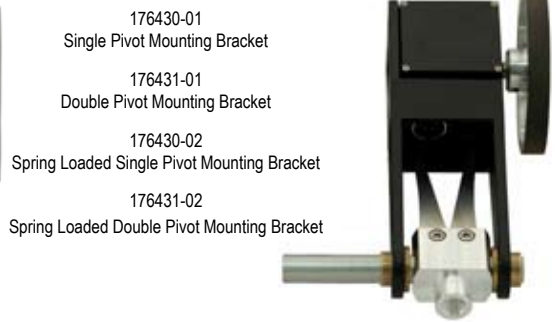
### Wiring Table

Function	Gland Cable Wire Color	5-pin M12	8-pin M12	10-pin MS	7-pin MS HV	7-pin MS O, S PP	6-pin MS HV No Index	6-pin MS O, S PP	Term. Block HV No Index	Term. Block O, S, HV, PP
Com	Black	3	7	F	F	F	A	A, F	1	1, 6
+VDC	Red	1	2	D	D	D	B	B	2	2
A	White	4	1	A	A	A	C	D	3	4
A'	Brown	---	3	H	C	---	D	---	4	---
Case	---	---	---	G	G	G	---	---	---	---
Shield	Bare	---	---	---	---	---	---	---	---	---

## Cube Pivot Bracket



Dual Wheel



Single Wheel, Stainless Steel Spring, Mounting Bracket

176430-01  
Single Pivot Mounting Bracket

176431-01  
Double Pivot Mounting Bracket

176430-02  
Spring Loaded Single Pivot Mounting Bracket

176431-02  
Spring Loaded Double Pivot Mounting Bracket

## Standard Cube Housing (S, S1)

### Standard Cube Housing (S, S1) Specifications

#### Mechanical

Shaft Size.....0.250" or 0.375"

Shaft Type.....Single or double-ended (specify choice)

Radial Loading .....15 lb maximum (0.250" diameter shaft)  
40 lb maximum (0.375" diameter shaft)

Axial Loading.....10 lb maximum (0.250" diameter shaft)  
30 lb maximum (0.375" diameter shaft)

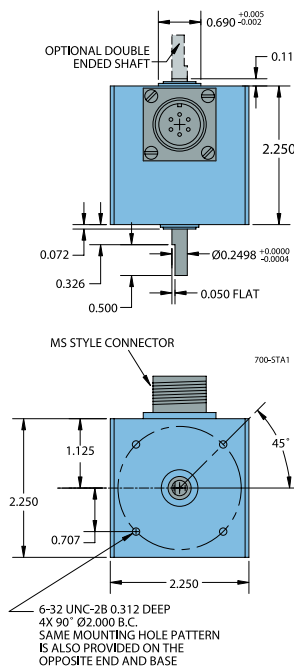
Starting Torque.....0.13 oz-in typical for 0.250" shaft  
0.38 oz-in typical for 0.375" shaft

Moment of Inertia..... $6.5 \times 10^{-6}$  oz-in-sec<sup>2</sup>

Mounting.....Tapped mounting holes on three sides for base or face mounting

Weight.....10 oz for standard housing

#### Cube Housing With 1/4" Shaft (4)



#### Cube Housing With 3/8" Shaft (6)

