

# Model 775 Slim Thru-Bore Encoder



Ø109.22mm

Incremental Thru-Bore & Motor Mount Encoders

## Features

- Thru-Bore Design For Easy Mounting
- Bore Options to 1.375"
- Incorporates Opto-ASIC Technology
- Resolutions to 4096 PPR
- 100° C Operating Temperature Available

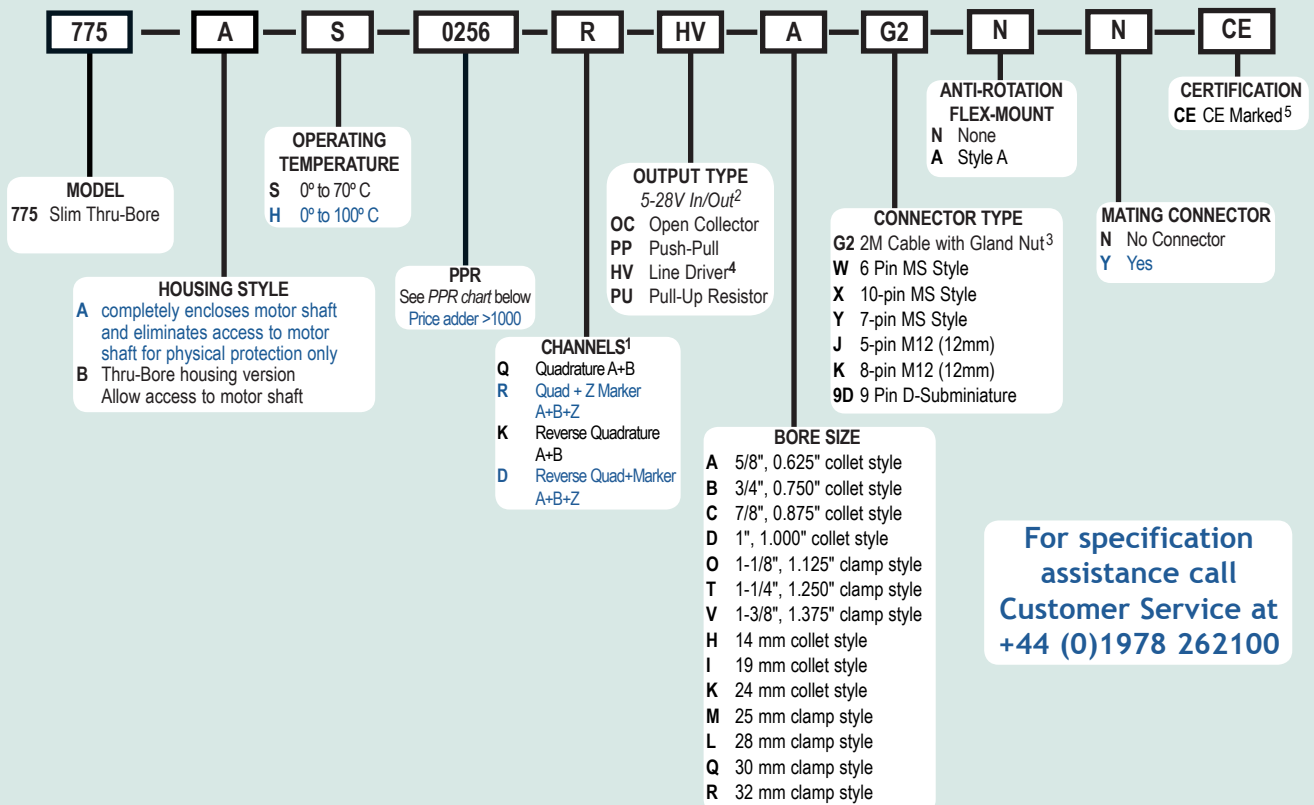
The sleek design of the Model 775 Thru-Bore Series makes form and function a successful reality. The slim profile and Thru-Bore design, makes installation easy by simply slipping the bore over motor shafts up to 1.375" in diameter. The advanced Opto-ASIC based electronics provide the superior noise immunity necessary in many industrial applications. With a variety of bore sizes, resolutions, and connector types, application possibilities are endless.

## Common Applications

Motor Feedback, Velocity & Position Control, Food Processing, Robotics, Material Handling

## Model 775 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  
**+44 (0)1978 262100**

### Model 775 PPR 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 Contact Customer Service for index/Marker gating options.
- 2 5 to 24 VCC max for high temperature option.
- 3 For non-standard cable lengths, Please contact the sales office.
- 4 Not available with 5-pin M12 or 6-pin MS connector. Available with 7-pin MS connector only without Index Z.
- 5 For 4096ppr - Please be aware that CE is not available if choosing High Temp option and over 2 Metre Cable Length.

# Model 775 Slim Thru-Bore Encoder



## Model 775 Specifications

### Electrical

Input Voltage.....4.75 to 28 VCC max for temperatures up to 70° C  
4.75 to 24 VCC 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 VCC supply)

Index .....Once per revolution.  
0475 to 4096 PPR: Gated to output A  
0001 to 0474 PPR: 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°

Edge Separation .....electrical minimum at temperatures > 99° C

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, 24 mm, 1.125", 1.250", 1.375", 25 mm, 28 mm, 30 mm, 32 mm  
Note: Bore sizes 1.125", 1.250", 1.375", 25 mm, 28 mm, 30 mm, 32 mm are clamp style. All others are collet style.

User Shaft Tolerances  
Radial Runout.....0.15mm TR  
Axial Endplay .....±0.70mm with appropriate flex mount

Electrical Conn .....Gland nut with 2M cable (foil and braid shield, 24 AWG conductors), 6-, 7-, or 10-pin MS Style, 5- or 8-pin M12 (12 mm), 9-pin D-subminiature

Housing.....All metal construction

Mounting.....Thru-Bore with collet clamp or single-screw clamp mount

Weight.....450 grams with gland nut or D-sub connector option / 680 grams with MS 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

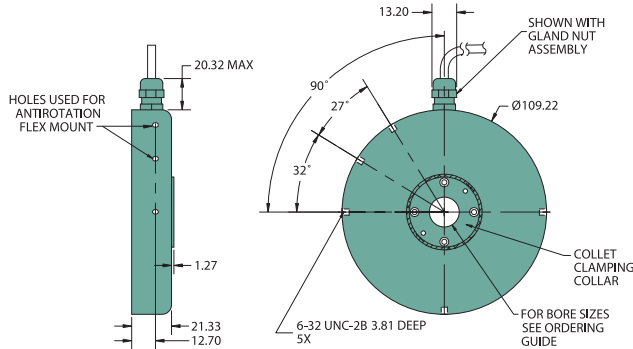
Humidity.....98% RH non-condensing

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

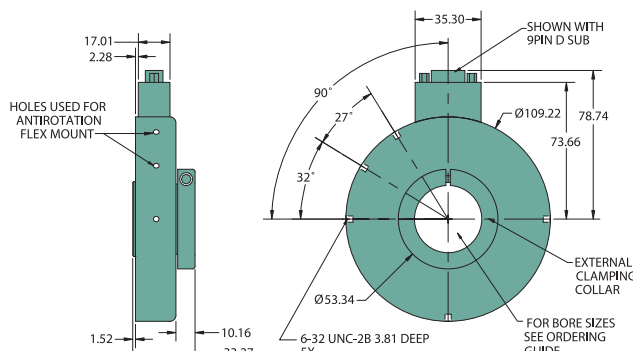
Shock.....50 g @ 11 ms duration

Sealing.....IP50

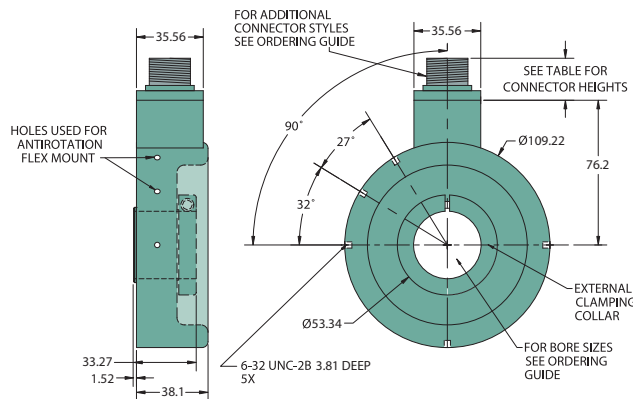
## Model 775 Collet Clamp (A, B, C, D, H, I, K)



## Model 775 Clamp Style (O, T, V, M, L, Q, R)



## Model 775 Extended Housing (W, X, Y, J, K)

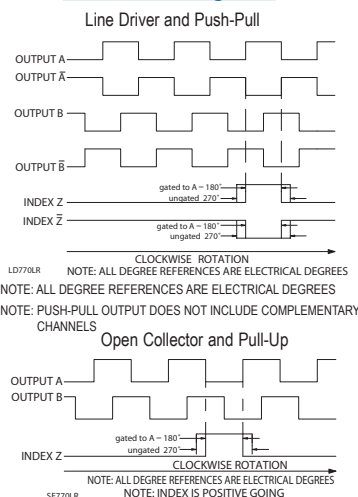


CONNECTOR TYPE	HEIGHT
6- or 7-PIN MS	17.00
10-PIN MS	22.86
5- or 8-PIN M12	12.70



All dimensions are in mm with a tolerance of ±0.254 unless otherwise specified.

### Waveform Diagrams



### Wiring Table

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

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