

### FEATURES:

- Resolution up to 2048 lines
- Heavy duty
- Shaft sizes to 3/8 inches
- Low cost & Low profile
- Unlimited mounting patterns
- Environmentally sealed
- Easy to install
- Line driver output optional

### Electrical Specifications (Line Driver Optional):

Resolution	Up to 180 lines/revolution
Power Requirements	4 to 18 VDC, 5mA no load
Output	Open collector, 10K int pullup
Output Current	16mA sink, 0.5 mA source
Frequency	50 KHz

### Electrical Specifications (Line Driver Optional):

Resolution	200 to 2048 lines/revolution
Power Requirements	5 ± 0.5 VDC, 5mA no load
Output	Open collector, 10K int pullup
Output Current	10mA sink, 0.5 mA source
Frequency	125 KHz

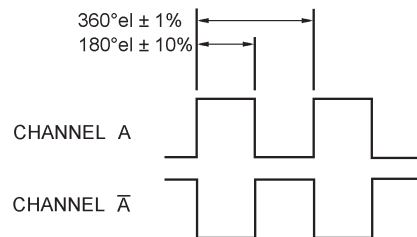
### Mechanical Specifications:

Starting Torque	0.1 oz-in
Moment of Inertia	6x10 <sup>-6</sup> oz-in-sec <sup>2</sup>
Shaft Speed	10,000 RPM max
Shaft Diameter	0.3745 / 0.3748 standard
Shaft Material	416 stainless
Shaft Runout	0.001 T.I.R. max at shaft end
Weight	6.5 oz

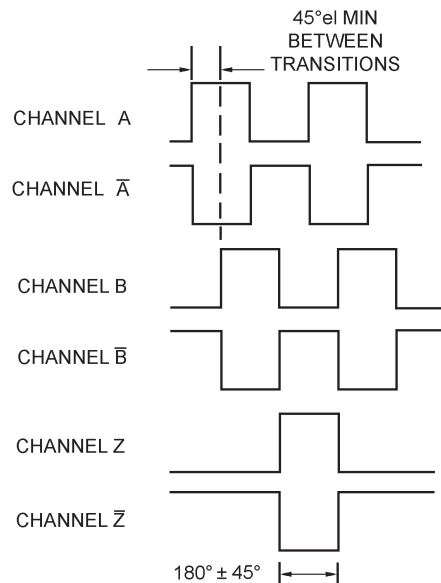
### Environmental Specifications:

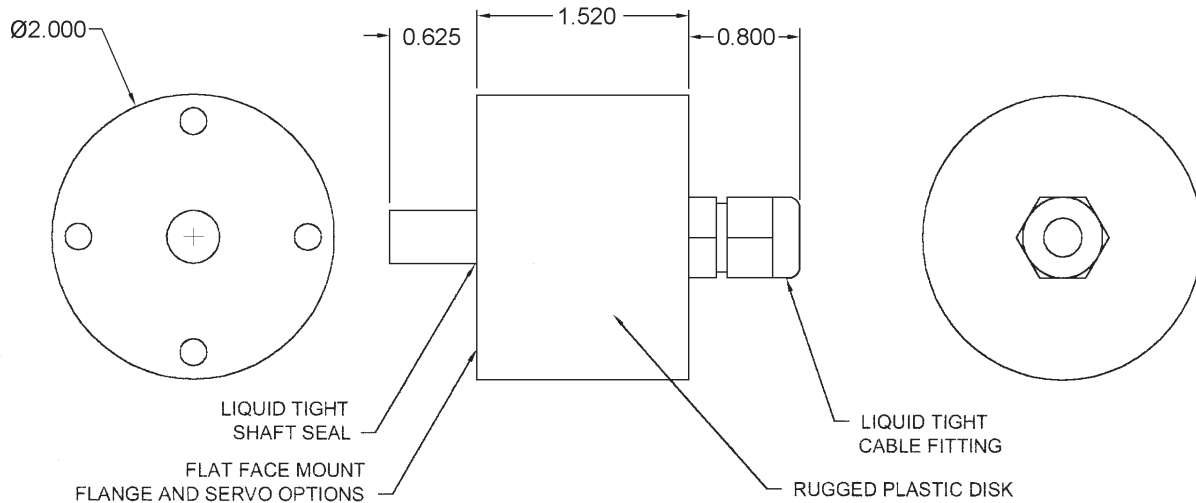
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Relative Humidity	90% RH non-condensing
Mechanical Shock	50 G for 11 ms
Vibration	5 to 2000 Hz @ 20 G
Environmental Protection	From IP50 to IP65

### OUTPUT SIGNAL: INCREMENTAL SQUAREWAVE



### QUADRATURE OUTPUT SIGNAL (RS422)





The flexible design concept of the ST20 allows for a great variety of encoder applications while maintaining cost and quality. The model numbering system can be used to configure encoder types using the standard options currently available. However, new models may be configured, by consulting the factory, for specific options not listed here. Almost any line count and shaft are possible within the limits listed. Virtually any electronic circuit or mounting pattern can be made available.

## ST20-XXXX-X-XXX-XX-X

### Line Count

0010 - 10  
0030 - 30  
0050 - 50  
0060 - 60  
0064 - 64  
0100 - 100  
0128 - 128  
0180 - 180  
0200 - 200  
0250 - 250  
0256 - 256  
0360 - 360  
0500 - 500  
0512 - 512  
1000 - 1000  
1024 - 1024  
2000 - 2000  
2048 - 2048

### Channel

1 - Single  
2 - Dual  
3 - Dual with index  
4 - Single with compliment  
5 - Dual with compliments  
6 - Dual with index & comp.

### Cable Length Specify in inches

### Shaft Size

-.0004 / +.0000

250 - .2498  
312 - .3124  
315 - .3150 (8mm)  
375 - .3748

### Mounting Pattern

#### Face Mount

A - #10-32 x 4 on 1.625 BC  
B - #6-32 x 3 on 1.75 BC  
C - #4-40 x 3 on 1.50 BC  
D - #4-40 x 4 on 1.25 BC

#### Flange Mount

E -  $\varnothing$  0.125 x 4 on 1.75 SQ  
F -  $\varnothing$  0.156 x 4 on 1.75 SQ  
G -  $\varnothing$  0.218 x 4 on 2.064 SQ

#### Servo Mount

(Consult Sales Department)

### Load Rating

20 lb. radial and 20 lb. axial combined for  $1 \times 10^9$  revolutions.  
Maximum 35 lb. radial and 50 lb. axial combined for  $1.7 \times 10^8$  revolutions.