

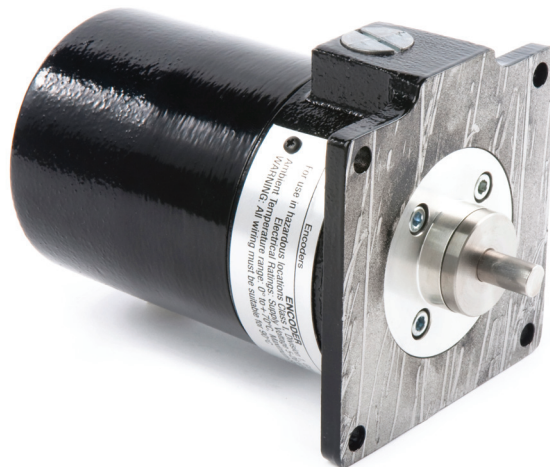
# SERIES X25

# Dynapar™ brand

## For Hazardous Location Application

### Key Features

- Approved for NEC Class 1&2, Div 1&2, Groups C,D,E,F,G
- Rugged Enclosure with 1/2" Conduit Entry
- High 5000 PPR Capability
- Environmentally Sealed
- Corrosion Resistant



CE  
EN 61326-1

UL US  
File No. E116133,  
Control No. 11X6

## SPECIFICATIONS

### STANDARD OPERATING CHARACTERISTICS

**Code:** Incremental, Optical

**Resolution:** 1 to 5000 PPR (pulses/revolution)

**Accuracy:** (Worst case any edge to any other edge)  $\leq 1024$  PPR (metal disk):  $\pm 7.5$  arc-min.

$> 1024$  PPR (glass disk):  $\pm 2.5$  arc-min.

**Format:** Two channel quadrature (AB) with optional Index (Z) and complementary outputs

**Phase Sense:** A leads B for CCW shaft rotation as viewed from the shaft end of the encoder

**Quadrature Phasing:**  $90^\circ \pm 25^\circ$  electrical

**Symmetry:**  $90^\circ \pm 25^\circ$  electrical

**Index:** 2540 PPR and below:  $180^\circ \pm 25^\circ$  electrical; Greater than 2540 PPR:  $90^\circ \pm 25^\circ$  electrical

**Waveforms:** Squarewave with rise and fall times less than 1 microsecond into a load capacitance of 1000 pf

### ELECTRICAL

**Input Power:**

5 to 26 VDC at 80 mA max., not including output loads

**Outputs:**

7273 Open Collector: 30 VDC max., 40 mA sink max.

7272 Push-Pull and Differential Line Driver: 40 mA sink or source

**Frequency Response:** 100 kHz min. (index 75 kHz min. for extended temperature range)

**Noise Immunity:** Tested to EN61326-1

**Electrical Immunity:** Reverse polarity and short circuit protected

**Termination:** Cable Exit

### MECHANICAL

**Shaft Sizes:** 1/4" or 3/8"

**Shaft Loading:** 40 lbs. radial, 40 lbs. axial

**Shaft Speed:** 5,000 RPM max.

**Shaft Runout:** 0.001" max. TIR

**Starting Torque:** (max at 25 °C) 2.0 oz.-in

**Moment of Inertia:**  $9.0 \times 10^{-4}$  oz.-in-sec<sup>2</sup>

**Housing and Cover:** Cast Aluminum

**Shaft Material:** Stainless Steel

**Disc Material:** Glass or Mylar (PPR Dependant)

**Weight:** 4.5 lbs. (2.0 kg)

### ENVIRONMENTAL

**Operating Temperature:** 0 to +70 °C;

**Storage Temperature:** -40 to +90 °C

**Shock:** 50 G's for 11 milliseconds duration

**Vibration:** 5 to 2000 Hz at 2 G's

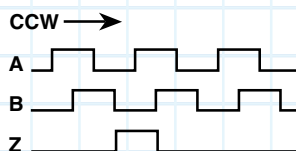
**Humidity:** Up to 98% (non-condensing)

**Enclosure Rating:** NEMA4X/IP56 (dust proof, washdown)

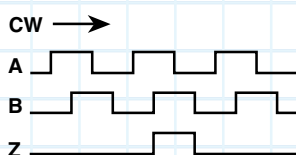
### OUTPUT FORMAT

#### Below 2540PPR

#### Format A

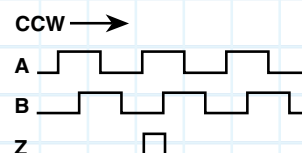


#### Format C

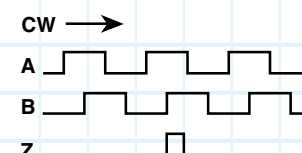


#### 2540PPR and Above

#### Format A



#### Format C



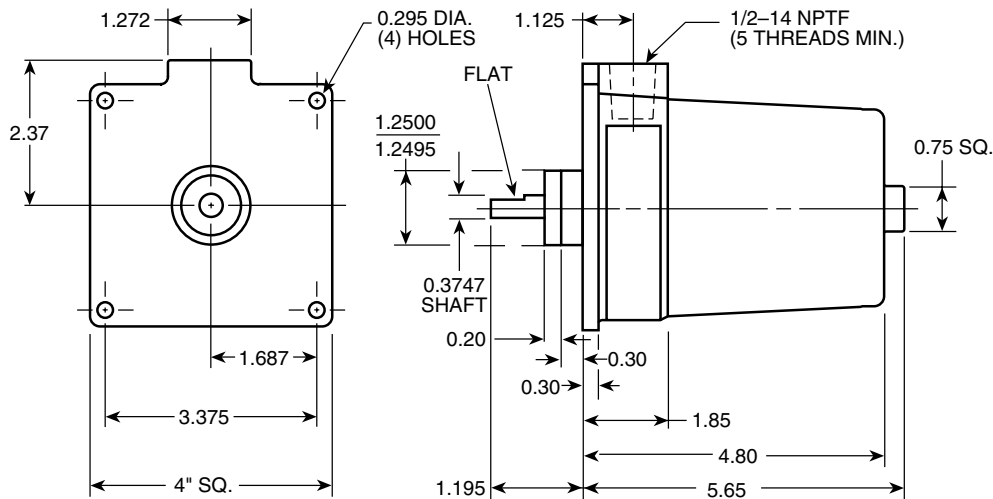
### Ordering Information

To order, complete the model number with code numbers from the table below:

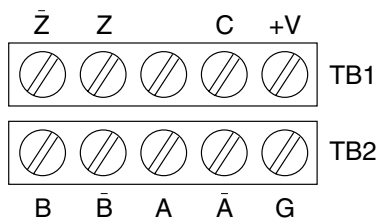
Code 1: Model	Code 2: Pulses/Rev	Code 3: Mechanical	Code 4: Output	Code 5: Electrical
<b>X25</b>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>X25</b> Explosion Proof, Shielded Bearings with Shaft Seal	<b>0001</b> <b>0500</b> <b>2000</b> <b>0010</b> <b>0600</b> <b>2048</b> <b>0012</b> <b>0720</b> <b>2400</b> <b>0050</b> <b>0768</b> <b>2500</b> <b>0060</b> <b>0800</b> <b>2540</b> <b>0086</b> <b>1000</b> <b>3000</b> <b>0100</b> <b>1024</b> <b>3400</b> <b>0120</b> <b>1200</b> <b>3600</b> <b>0200</b> <b>1250</b> <b>3750</b> <b>0240</b> <b>1270</b> <b>4000</b> <b>0250</b> <b>1500</b> <b>4096</b> <b>0300</b> <b>1600</b> <b>4800</b> <b>0360</b> <b>1800</b> <b>5000</b> <b>0400</b> <b>1968</b>	<b>0</b> 3/8" Shaft <b>1</b> 1/4" Shaft	<b>0</b> Single Ended, no Index, Format C <b>1</b> Single Ended, with Index, Format C <b>2</b> Differential, no Index, Format C <b>3</b> Differential, with Index, Format C <b>4</b> Single Ended, with Index, Format A <b>5</b> Differential, with Index, Format A	<b>0</b> 5-26V in; 5-26V Open Collector with 2.2k $\Omega$ Pullup out <b>1</b> 5-26V in; 5-26V Open Collector out <b>2</b> 5-26V in; 5V Totem Pole out <b>3</b> 5-26V in; 5V Line Driver out <b>4</b> 5-26V in; 5-26V Line Driver out

### DIMENSIONS

Approximate Dimensions (in inches)



### Terminal Board Connections



Screw terminals with pressure plates that accept #14 AWG to #22 AWG.