

# MODEL 925 – SINGLE TURN ABSOLUTE ENCODER



Ø2.5"

## FEATURES

- Standard Size 25 Package (2.5")
- Resolutions up to 12-Bit (4096 Counts)
- Incorporates Opto-ASIC Technology
- Industrial Grade, Heavy Duty Housing
- Optional IP67 Seal

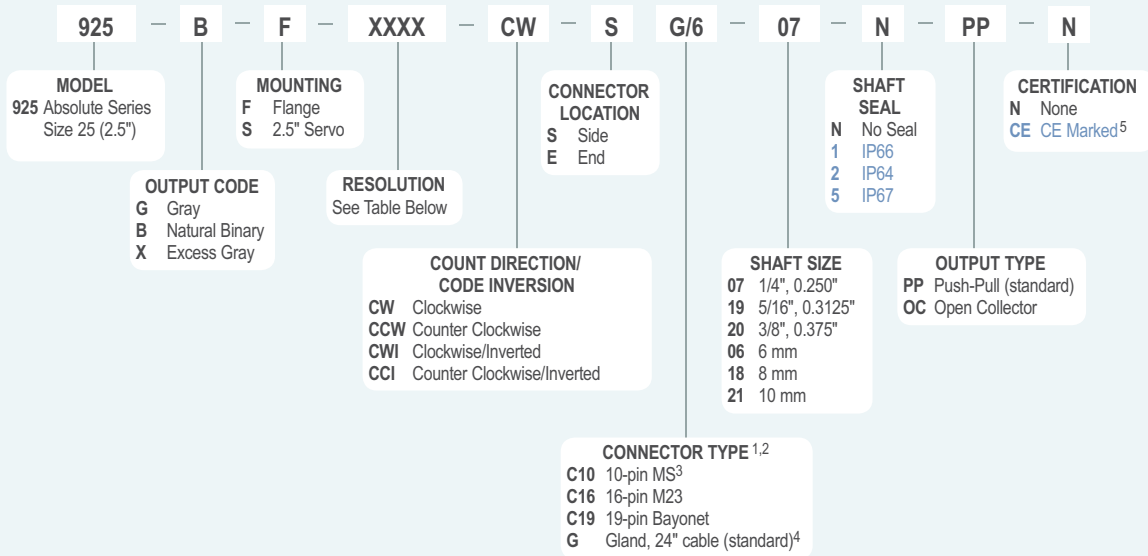
The Model 925 Single Turn Absolute Accu-Coder™ is ideal for a wide variety of industrial applications that require an encoder with the capability of absolute positioning output. Its fully digital output and innovative use of Opto-ASIC technology make the Model 925 an excellent choice for all applications, especially ones with a high presence of noise. Available with either round servo or square flange mounting, and a variety of connector and cabling options, the Model 925 is easily designed into a variety of application requirements. The Model 925, with its wide selection of shaft sizes supported by industrial grade, heavy duty bearings and its optional IP67 seal is ideal for rough environments.

## COMMON APPLICATIONS

Machine Tools, Robotics, Telescopes, Antennas, Rotary & X-Y Positioning Tables, Medical Scanners

## MODEL 925 ORDERING GUIDE

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



## MODEL 925 RESOLUTION TABLE

Output Code	Counts Per Resolution						
Gray Code	0256	0512	1024	2048	4096		
Natural Binary	0250	0256	0360	0500	0512	0720	1000
	1024	1440	2000	2048	2880	4000	4096
Excess Gray	0180	0250	0360	0500	0720	1000	1440
	2000	2880	4000				

## NOTES:

- 1 For additional connector styles please contact Customer Service.
- 2 For mating connectors, cables, and cordsets see Encoder Accessories on page 102 or visit [www.encoder.com](http://www.encoder.com). For Pin Configuration Diagrams, see page 107 or visit [www.encoder.com](http://www.encoder.com).
- 3 Only available with 8-bit resolution encoder. Not available with CE.
- 4 For non-standard cable lengths, add a forward slash (/) plus cable length expressed in feet. Example: G/6 = 6 feet of cable.
- 5 Please refer to **Technical Bulletin TB100: When to Choose the CE Option** at [www.encoder.com](http://www.encoder.com). Contact Customer Service for availability.

### MODEL 925 SPECIFICATIONS

#### Electrical

Input Voltage..... 4.75 to 26 VDC max  
 Regulation ..... 100 mV peak-to-peak, max ripple at 0 to 10 kHz  
 Input Current ..... 100 mA max with no external load  
 Output Format ..... Absolute- Parallel Outputs  
 Output Type ..... Open Collector- 20 mA max per channel  
 Push-Pull- 20 mA max per channel  
 Code ..... Gray Code, Natural Binary Code, Excess Gray Code  
 Max Frequency ..... 50 kHz (LSB)  
 Rise Time..... Less than 1 microsecond  
 Resolution ..... Up to 12 bit  
 Accuracy .....  $\pm 1/2$  LSB

#### Control

Directional Control... Field selectable for increasing counts (CW or CCW)

#### Mechanical

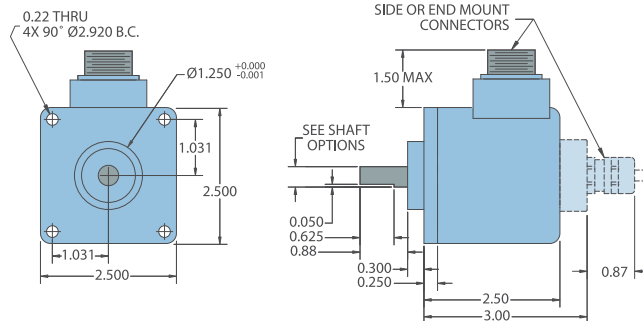
Max Shaft Speed..... 6000 RPM continuous  
 Radial Shaft Load ..... 35 lb max  
 Axial Shaft Load ..... 40 lb max  
 Starting Torque ..... 1.0 oz-in typical for no seal  
 2.0 oz-in typical with IP64 seal  
 3.0 oz-in typical with IP66 shaft seal  
 7.0 oz-in typical with IP67 shaft seal

Max Acceleration .....  $1 \times 10^5$  rad/sec<sup>2</sup>  
 Housing ..... Aluminum  
 Weight ..... 22 oz typical

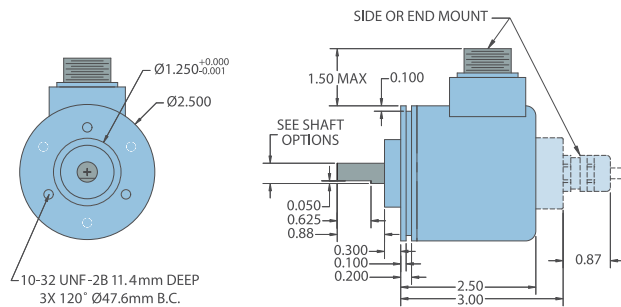
#### Environmental

Storage Temp ..... -20° to +85° C  
 Humidity..... 98% RH non-condensing  
 Vibration..... 10 g @ 58 to 500 Hz  
 Shock..... 20 g @ 11 ms duration  
 Sealing..... IP50 standard; IP64, IP66 or IP67 optional

### MODEL 925 2.5" FLANGE MOUNT (F)



### MODEL 925 2.5" SERVO MOUNT (S)



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

### WIRING TABLE

Function	Cable† Wire Color	19-pin Bayonet KPT02E14-19P	16-pin M23	10-pin MS*
S1 MSB	Brown	A	3	A
S2	White	B	5	B
S3	Green	C	6	C
S4	Orange	D	7	D
S5	Blue	E	8	E
S6	Violet	F	9	F
S7	Gray	G	10	G
S8 LSB 8-bit	Pink	H	11	H
S9 LSB 9-bit	Red/Green	J	12	--
S10 LSB 10-bit	Red/Yellow	K	13	--
S11 LSB 11-bit	Turquoise	L	14	--
S12 LSB 12-bit	Yellow	M	15	--
Direction <sup>+</sup>	Red/Blue	R	4	--
Case Ground	Drain/Screen	S	16	--
0V Common	Black	T	1	J
Special**	White/Red	U	--	--
+VDC	Red	V	2	I

\*Only available with 8-bit resolution encoder. Not available with CE.

\*\*Where fitted.

<sup>+</sup>Direction control Standard is CW increasing when viewed from the shaft end. Direction pin is pulled high to 5V internally. Direction pin must be pulled low (GND, Common) to reverse count direction. Applied voltage to direction pin should not exceed 5V.

<sup>†</sup>Standard cable is 24 AWG conductors with foil and braid shield.