MODEL 925 – SINGLE TURN ABSOLUTE ENCODER

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 Encoder 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 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.

925 – B – F – XXXX – CW – S – G/6 – 07 – N – PP – N

MODEL
925 Absolute Series Size 25 (2.5")

OUTPUT CODE
G Gray
B Natural Binary
X Excess Gray

MOUNTING
F Flange
S 2.5" Servo

RESOLUTION
See Table Below

COUNT DIRECTION/ CODE INVERSION
CW Clockwise
CCW Counter Clockwise
CWI Clockwise/Inverted
CCI Counter Clockwise/Inverted

CONNECTOR LOCATION
S Side
E End

CONNECTOR TYPE [1,2]
C10 10-pin MS[3]
C16 16-pin M23
C19 19-pin Bayonet
G Gland, 24" cable (standard)[4]

SHAFT SIZE
07 1/4", 0.250"
19 5/16", 0.3125"
20 3/8", 0.375"
06 6 mm
18 8 mm
21 10 mm

SHAFT SEAL
N No Seal
1 IP66
2 IP64
5 IP67

OUTPUT TYPE
PP Push-Pull (standard)
OC Open Collector

CERTIFICATION
N None
CE CE Marked[5]

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. For Pin Configuration Diagrams, see page 107 or visit 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. 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..... ±1/2 LSB

Control

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

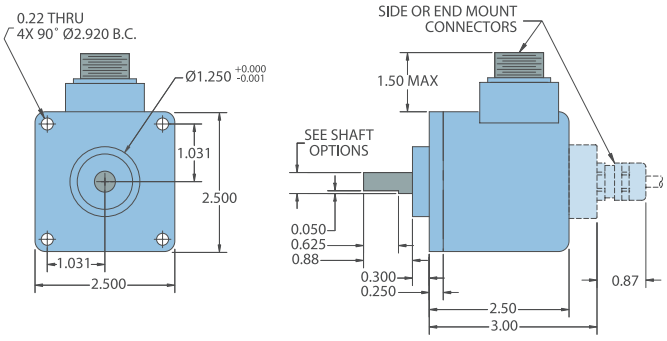
Mechanical

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 typcial with IP67 shaft seal
Max Acceleration..... 1×10^5 rad/sec^2
Housing..... Aluminum
Weight..... 22 oz typical

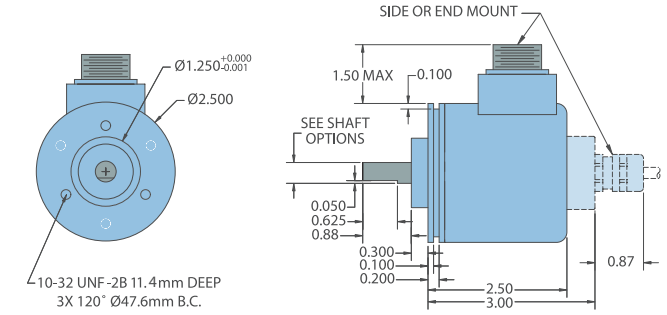
Environmental

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 ±0.005" or ±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+	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.
+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.
†Standard cable is 24 AWG conductors with foil and braid shield.