

# MODEL 958 – SINGLE TURN ABSOLUTE ENCODER



Ø58 mm

## FEATURES

- European Size 58 (58 mm) Package
- Resolutions up to 12 Bit (4096 PPR equivalent)
- Incorporates Opto-ASIC Technology
- Industrial Grade, Heavy Duty Housing
- Wide Range of Operating Voltages (4.75 to 26 VDC)

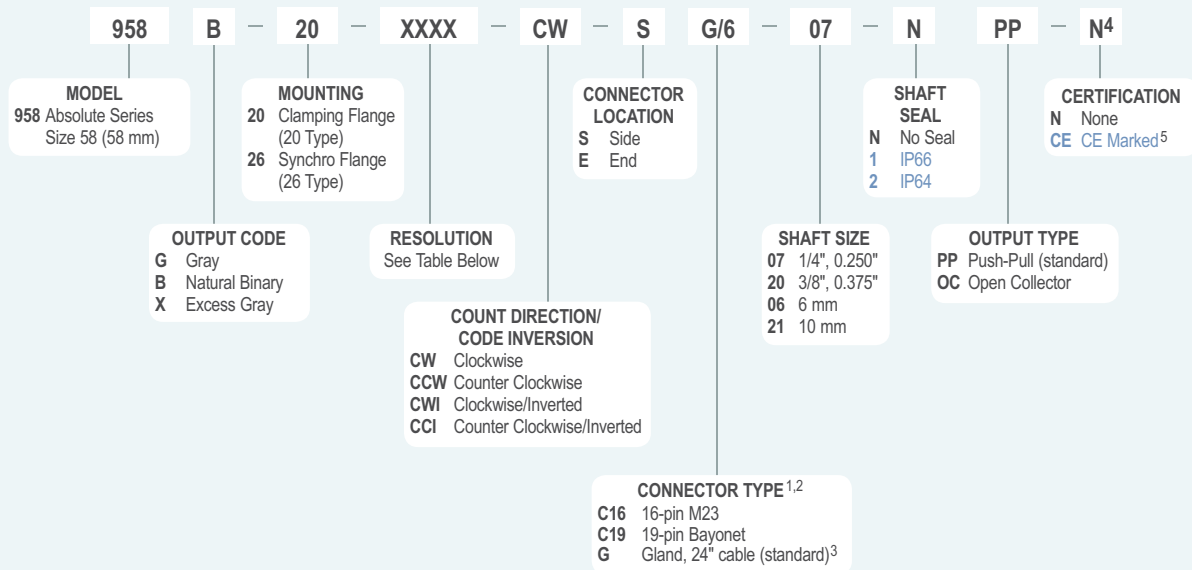
The Model 958 Single Turn Absolute Accu-Coder™ is ideal for a wide variety of industrial applications requiring an encoder with European Size 58 (58 mm) mounting and absolute positioning output. With an industrial grade housing and innovative Opto-ASIC circuitry, the Model 958 is both rugged and reliable, performing especially well in situations with high levels of electrical noise. Available with a choice of either Clamping Flange (Type 20) or Synchro Flange (Type 26) servo mounting, sealing up to IP66, and a variety of connector and cabling options. The Model 958 is easily designed into a variety of applications. With so many options that make the Model 958 ultra-durable, this absolute encoder can handle the toughest environments.

## COMMON APPLICATIONS

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

## MODEL 958 ORDERING GUIDE

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



## MODEL 958 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:

- For additional connector styles please contact Customer Service.
- 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).
- For non-standard cable lengths, add a forward slash (/) plus cable length expressed in feet. Example: G/6 = 6 feet of cable.
- Also available in stainless steel housing. Contact Customer Service for details.
- 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 958 SPECIFICATIONS

### Electrical

Input Voltage..... 4.75 to 26 VDC max  
 Regulation ..... 100 mV peak-to-peak, max ripple at 0 to 100 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)

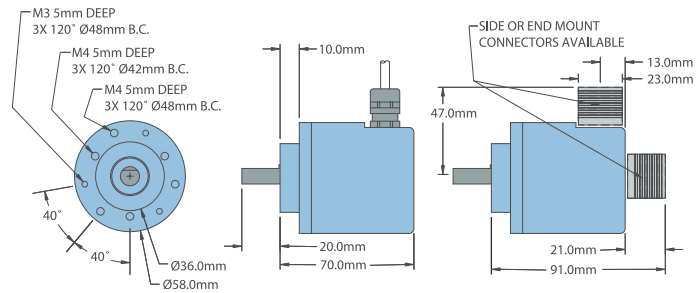
### Mechanical

Max Shaft Speed..... 6000 RPM continuous  
 Radial Shaft Load ..... 27 lb max  
 Axial Shaft Load ..... 27 lb max  
 Starting Torque ..... 1.0 oz-in typical for no seal  
                               2.0 oz-in with IP64 shaft seal  
                               3.0 oz-in typical with IP66 shaft seal  
 Max Acceleration .....  $1 \times 10^5$  rad/sec<sup>2</sup>  
 Housing ..... Aluminum  
 Weight..... 22 oz typical

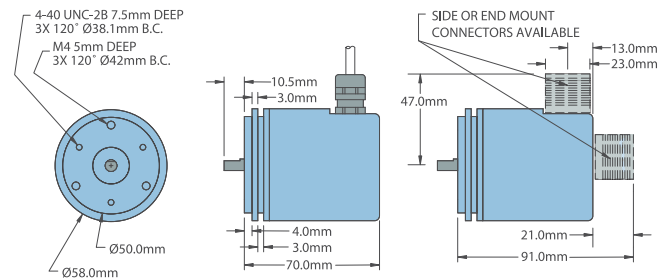
### Environmental

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..... IP54 (standard), IP64, or IP66 (NEMA 13 and 4) optional

## MODEL 958 CLAMPING FLANGE 20 TYPE (20)



## MODEL 958 SYNCHRO FLANGE 26 TYPE (26)



All dimensions are in millimeters with a tolerance of  $\pm 0.17$  mm unless otherwise specified.

## WIRING TABLE

Function	Cable† Wire Color	19-pin Bayonet KPT02E14-19P	16-pin M23
S1 MSB	Brown	A	3
S2	White	B	5
S3	Green	C	6
S4	Orange	D	7
S5	Blue	E	8
S6	Violet	F	9
S7	Gray	G	10
S8 LSB 8-bit	Pink	H	11
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
Special*	White/Red	U	--
+VDC	Red	V	2

\*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.