

Model 958 Single Turn 58mm Absolute



Principle Engineering



Features

- 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 24 VCC)

The Model 958 Single Turn Absolute is ideal for a wide variety of industrial applications requiring an encoder with Size 58 mm mounting and absolute positioning output. A rugged, industrial grade housing allows the Model 958 to be used in a wide variety of applications calling for a reliable, heavy-duty encoder. In addition, its innovative Opto-ASIC circuitry, coupled with its digital output, make it an excellent choice in those applications plagued by unusually high levels of electrical noise. Available with a choice of either type 20 or type 26 servo mounting, and a variety of connector and cabling options, the Model 958 is easily designed into a variety of applications. The Model 958 can also be ordered with stainless steel housing, heavy duty bearings, and an IP66 seal.

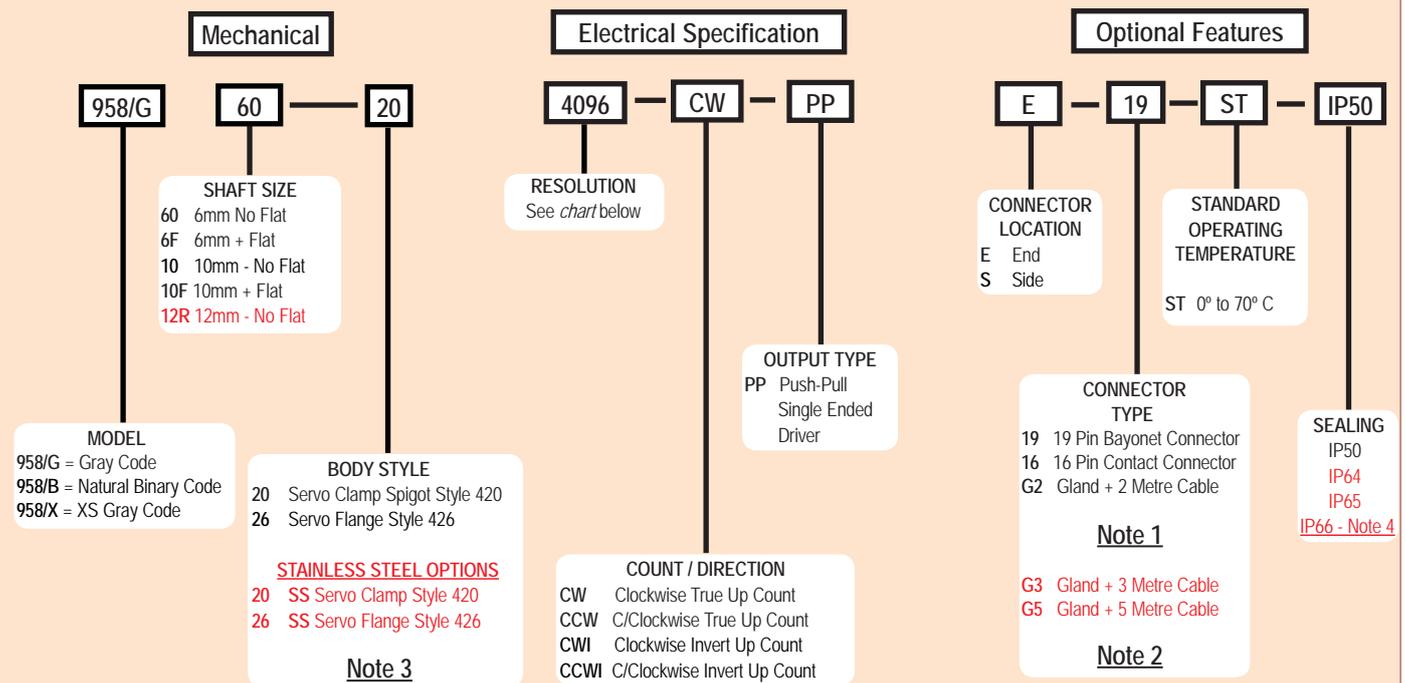
With so many options that make the Model 958 ultra-durable, this absolute encoder can tolerate the worst environments!

Common Applications

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

Model 958 Ordering Guide

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



**For specification
assistance call
Customer Service**

Model 958 Resolution Table

Output Code	Pulses Per Resolution					
958/G Gray Code	0256	0512	1024	2048	4096	
958/B Natural Binary	0250	0256	0360	0500	0512	0720
	1000	1024	1440	2000	2048	2880
	4000	4096				
958/X Excess Gray	0180	0250	0360	0500	0720	1000
	1440	2000	2880	4000		

NOTES:

- 1 For additional connector styles - contact sales office for availability.
- 2 For non-standard cable lengths - contact the sales office.
- 3 For Stainless Steel options - contact the sales office.
- 4 Significantly increased torque.

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Model 958 Specifications

Electrical

Input Voltage.....4.75 to 24 VCC max
 Regulation.....100 mV peak-to-peak, max ripple at 0 to 100 kHz
 Input Current.....100 mA max with no external load
 Output FormatAbsolute- Parallel Outputs
 Output Type.....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
 ResolutionUp to 12 bit
 Accuracy.....+1/6th LSB

Control

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

Mechanical

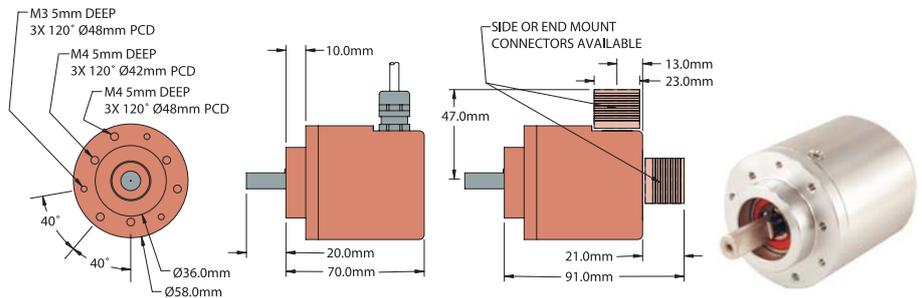
Max Shaft Speed.....6000 RPM continuous
 Shaft Size6mm, 10mm, 12mm
 Radial Shaft Load.....15Kg max
 Axial Shaft Load20Kg max
 Starting Torque7.061 x 10⁻³ Nm typical for no seal or IP64
 2.118 x 10⁻² Nm typical with IP65 shaft seal
 Max Acceleration.....1 x 10⁵ rad/sec²
 Electrical ConnGland with 2M cable (braid shield, 30 AWG conductors), 16 Pin, or 19-pin connector
 Housing.....Aluminum / Stainless Steel on request
 Mounting.....European Standard Clamping Flange (20 Type) and Synchro Flange (26 Type)
 Weight.....750gms typical

Environmental

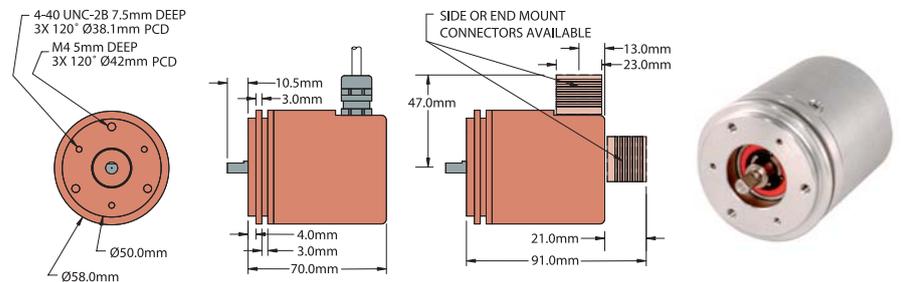
Operating Temp.....0° to 70° C
 Storage Temp.....-20° to +85° C
 Humidity.....98% RH non-condensing
 Vibration.....10 g @ 58 to 500 Hz
 Shock.....20 g @ 11 ms duration
 Sealing.....IP50 (standard)
 IP64, IP65 or IP66**

** IP66 Significantly increased torque.

Model 958 Clamping Flange 20 Type (20)



Model 958 Synchro Flange 26 Type (26)



Wiring Table

Function	19-PIN	16-PIN	Gland Cable or Mating Conn.	NOTES:
	KPT02E14-19P			
S1 MSB	A	3	Brown	* Where Fitted ** Direction Control- Standard is CW increasing when viewed from the shaft end. Direction pin is pulled high normally to 5V internally. Direction pin must be pulled low (GND, Common) to reverse count direction. 0V only, should be applied to the direction pin.
S2	B	5	White	
S3	C	6	Green	
S4	D	7	Orange	
S5	E	8	Blue	
S6	F	9	Violet	
S7	G	10	Grey	
S8 LSB 8-bit	H	11	Pink	
S9 LSB 9-bit	J	12	Red/Green	
S10 LSB 10-bit	K	13	Red/Yellow	
S11 LSB 11-bit	L	14	Turquoise	
S12 LSB 12-bit	M	15	Yellow	
Direction **	R	4	Red/Blue	
Case Ground	S	16	Drain/Screen	
0V Common	T	1	Black	
Special *	U	--	White/Red	
+VCC	V	2	Red	