



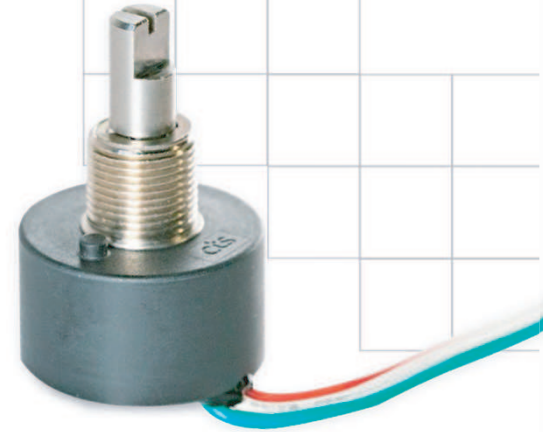
Series 285

Non-Contacting Position Sensor

- Compact 22 mm size
- Extended rotational life (10 Million cycles)
- Wide temperature range (-40°C to +125°C)
- Precision linearity ($\pm 0.5\%$ and $\pm 0.25\%$ options)
- Dust & water protection (IP50, 54 and 67 options)

Applications

- Patient platform position feedback
- Pneumatic control valve position feedback
- Draw wire position sensors
- Actuator motor position feedback
- Foot pedal, twist throttle, steering, and lift & shuttle



Ordering Information

Series	Termination	Bushing Length	Shaft Length	Shaft Trim	Bearing Style	Output Type	Linearity	Operating Voltage	IP Rating	Rotation Angle	Locating Lug																																																																																												
285	C	3	2	P	S	A	A	B	4	C	1																																																																																												
<table border="1"> <thead> <tr> <th>Code</th> <th>Spec.</th> </tr> </thead> <tbody> <tr> <td>C</td> <td>250 mm wires</td> </tr> </tbody> </table>		Code	Spec.	C	250 mm wires	<table border="1"> <thead> <tr> <th>Code</th> <th>Spec.</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>3/8" L x 3/8" D, 32 UNEF</td> </tr> <tr> <td>C</td> <td>9 mm L, M10 x 0,75</td> </tr> </tbody> </table>		Code	Spec.	3	3/8" L x 3/8" D, 32 UNEF	C	9 mm L, M10 x 0,75	<table border="1"> <thead> <tr> <th>Code</th> <th>Spec.</th> </tr> </thead> <tbody> <tr> <td>C</td> <td>20 mm</td> </tr> <tr> <td>D</td> <td>25 mm</td> </tr> <tr> <td>2</td> <td>3/4"</td> </tr> <tr> <td>3</td> <td>7/8"</td> </tr> </tbody> </table>		Code	Spec.	C	20 mm	D	25 mm	2	3/4"	3	7/8"	<table border="1"> <thead> <tr> <th>Code</th> <th>Spec.</th> </tr> </thead> <tbody> <tr> <td>S</td> <td>Sleeve bearing</td> </tr> </tbody> </table>		Code	Spec.	S	Sleeve bearing	<table border="1"> <thead> <tr> <th>Code</th> <th>Spec.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>$\pm 0.5\%$</td> </tr> <tr> <td>B</td> <td>$\pm 0.25\%*$</td> </tr> </tbody> </table> <p><i>*Consult factory</i></p>		Code	Spec.	A	$\pm 0.5\%$	B	$\pm 0.25\%*$	<table border="1"> <thead> <tr> <th>Code</th> <th>Spec.</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>IP50</td> </tr> <tr> <td>5</td> <td>IP54</td> </tr> <tr> <td>6</td> <td>IP67</td> </tr> </tbody> </table>		Code	Spec.	4	IP50	5	IP54	6	IP67	<table border="1"> <thead> <tr> <th>Code</th> <th>Total</th> <th>EEA</th> <th>Stops</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>270°</td> <td>260°</td> <td>270°</td> </tr> <tr> <td>B</td> <td>320°</td> <td>310°</td> <td>320°</td> </tr> <tr> <td>C</td> <td>360°</td> <td>360°</td> <td>N/A</td> </tr> </tbody> </table>		Code	Total	EEA	Stops	A	270°	260°	270°	B	320°	310°	320°	C	360°	360°	N/A	<table border="1"> <thead> <tr> <th>Code</th> <th>Spec.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Analog output, CW</td> </tr> <tr> <td>B</td> <td>Analog output, CCW</td> </tr> </tbody> </table>		Code	Spec.	A	Analog output, CW	B	Analog output, CCW	<table border="1"> <thead> <tr> <th>Code</th> <th>Spec.</th> </tr> </thead> <tbody> <tr> <td>F</td> <td>Flatted (6 mm dia.)</td> </tr> <tr> <td>L</td> <td>Flatted (1/4" dia.)</td> </tr> <tr> <td>R</td> <td>Round (6 mm dia.)</td> </tr> <tr> <td>P</td> <td>Round (1/4" dia.)</td> </tr> </tbody> </table>		Code	Spec.	F	Flatted (6 mm dia.)	L	Flatted (1/4" dia.)	R	Round (6 mm dia.)	P	Round (1/4" dia.)	<table border="1"> <thead> <tr> <th>Code</th> <th>Spec.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>3.3V</td> </tr> <tr> <td>B</td> <td>5.0V</td> </tr> </tbody> </table>		Code	Spec.	A	3.3V	B	5.0V	<table border="1"> <thead> <tr> <th>Code</th> <th>Spec.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>No lug</td> </tr> <tr> <td>1</td> <td>Left 7,4 mm</td> </tr> </tbody> </table>		Code	Spec.	0	No lug	1	Left 7,4 mm
Code	Spec.																																																																																																						
C	250 mm wires																																																																																																						
Code	Spec.																																																																																																						
3	3/8" L x 3/8" D, 32 UNEF																																																																																																						
C	9 mm L, M10 x 0,75																																																																																																						
Code	Spec.																																																																																																						
C	20 mm																																																																																																						
D	25 mm																																																																																																						
2	3/4"																																																																																																						
3	7/8"																																																																																																						
Code	Spec.																																																																																																						
S	Sleeve bearing																																																																																																						
Code	Spec.																																																																																																						
A	$\pm 0.5\%$																																																																																																						
B	$\pm 0.25\%*$																																																																																																						
Code	Spec.																																																																																																						
4	IP50																																																																																																						
5	IP54																																																																																																						
6	IP67																																																																																																						
Code	Total	EEA	Stops																																																																																																				
A	270°	260°	270°																																																																																																				
B	320°	310°	320°																																																																																																				
C	360°	360°	N/A																																																																																																				
Code	Spec.																																																																																																						
A	Analog output, CW																																																																																																						
B	Analog output, CCW																																																																																																						
Code	Spec.																																																																																																						
F	Flatted (6 mm dia.)																																																																																																						
L	Flatted (1/4" dia.)																																																																																																						
R	Round (6 mm dia.)																																																																																																						
P	Round (1/4" dia.)																																																																																																						
Code	Spec.																																																																																																						
A	3.3V																																																																																																						
B	5.0V																																																																																																						
Code	Spec.																																																																																																						
0	No lug																																																																																																						
1	Left 7,4 mm																																																																																																						



Electrical Specifications

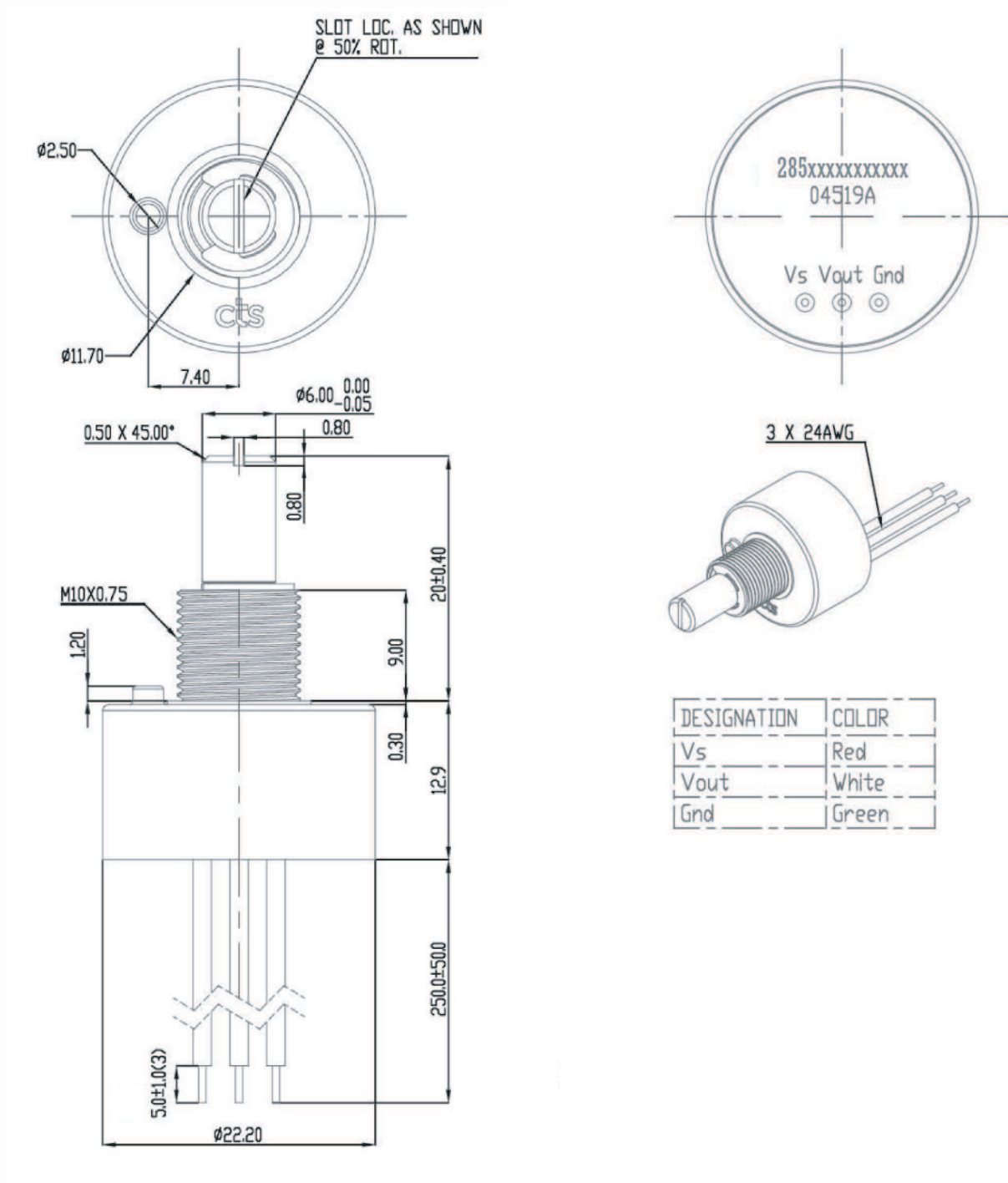
Sensor Function		Min	Typical	Max	Unit
Output	Analog				
Independent Linearity		-0.5%		+0.5%	
Hysteresis				0.2%	V _{sup}
Output Voltage		5%		95%	V _{sup}
Output Overvoltage Limits		-6		+18	VDC
Output Current		-8	1	+8	mA
Output Load		5	10		kΩ
Input Voltage		-10%	5	+10%	VDC
Supply Voltage Absolute Limits		-18		+18	VDC
Supply Current			10	15	mA
Resolution	12 BIT at 360°				
Dielectric Strength	1 minute			750	VDC
Insulation Resistance	at 500 VDC	1000			MegΩ
Electrostatic Discharge (ESD)	HBM	-4		+4	kV

Mechanical and Environmental

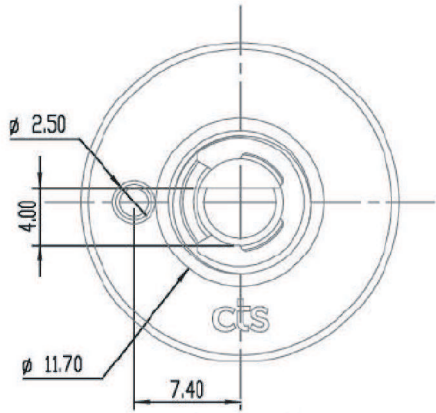
Soldering	Maximum manual temperature, 350°C for 5 seconds
Total Mechanical Travel	
Without Stops	360° continuous
With End Stops	270° or 320°
Static Stop Strength	40 in-oz. min.
Push and Pull Shaft Strength	13.6 kgf min.
Rotational Life	
Sleeve Bearing	10 Million cycles
Operating Speed	120 RPM max.
Vibration	30 Gs, 50 to 500 Hz
Rotational Torque	72 gf-cm
Panel Nut tightening Torque	25 in-lb
IP Rating	50, 54 or 67
Marking	CTS logo, part number, date code
Packaging	Standard anti-static bulk packaging
Operating Temperature Range	-40°C to +125°C
Storage Temperature Range	-40°C to +140°C
Weight	21 gm

All testing is performed at room ambient conditions except as noted. Users should verify device actual performance in their specific applications. This product is compliant to RoHS3 Directive 2011/65/EU & 2015/863 Amendments of Annex II on 31 March 2015. Custom and value-added options available on request. Please contact your sales representative for additional information.

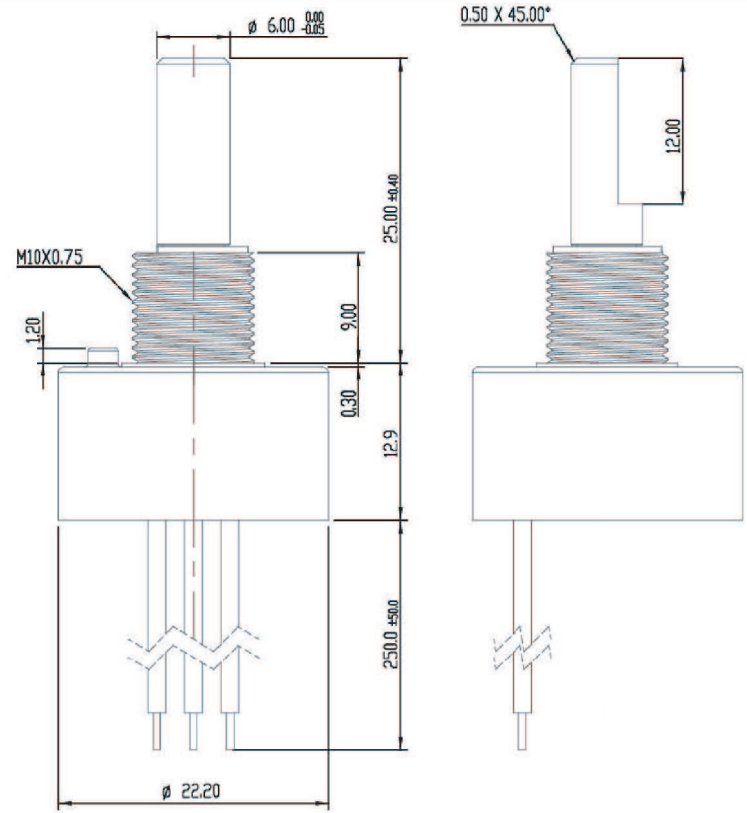
Mechanical Specifications
Series 285 w/Slotted Shaft



Mechanical Specification
Series 285 w/Flatted Shaft



Dimension: mm
Standard Tolerance:
.X (1 Place): ± 0.3
.XX (2 Place): ± 0.13
Angle: $\pm 3^\circ$



Electrical Specification
Series 285 Output Graph

