

Series 286

Multi-turn Hall-Effect Position Sensor

- Multi-turn: All electrical angles available up to 3600°
- Non-contact Hall Effect technology
- Compact 25mm diameter size
- Wide temperature range (-40~125°C)
- Life cycle: 10M rotations
- Dust & water resistant (IP 67)

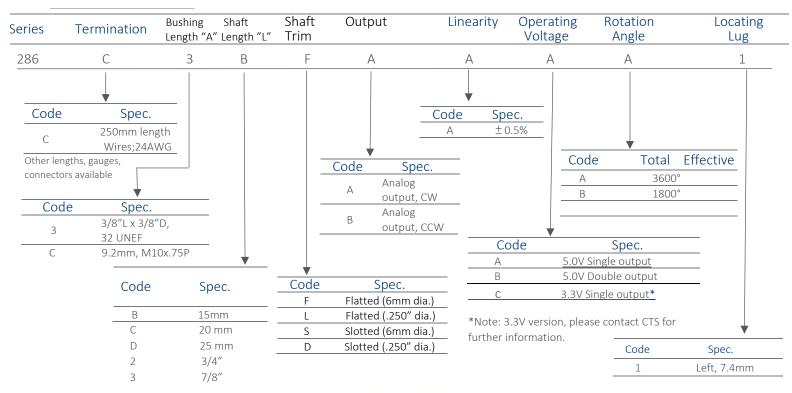
Applications

- Control valve position feedback
- Actuator motor position feedback
- Foot pedal, twist throttle
- Steering, and lift-and-shuttle

Description

Building on decades of experience in controls, the Series 286 Multi-Turn Hall-Effect Position Sensor provides solid, reliable CTS performance, with added multi-turn capability. The 286 is designed for demanding uses in industrial, transportation, medical and other areas and is ideal for custom applications.

Ordering Information



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Electrical Specifications

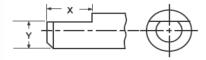
Sensor Function		Min	Typical	Max	Unit
Output	 Single output Dual output PWM 1KHz, 10% to 90% duty cycles on 5V(Optional) 				
Independent Linearity	at room temperature	-0.5%		+0.5%	
Hysteresis				0.5%	Vsup
Output Voltage		5%		95%	Vsup
Overvoltage Limits	@5V	-18		18	VDC
Output Current		-8		+8	mA
Output Load		5	10		K ohms
Input Voltage		4.5	5	5.5	VDC
Supply Current			8	13	mA
Resolution	12 BIT at 360°				
Dielectric Strength	1 minute	750			VDC
Insulation Resistance	at 500 VDC	1000			Megohms
Electrostatic Discharge (ESD)	Contact discharges@5V	-8		+8	KV

^{*}Note: For 3.3V and PWM version, please contact CTS for further information.

Mechanical and Environmental

Soldering	Maximum manual temperature, 350°C for 5 seconds
Bearing	10 Million cycles
RoHS	Lead-Free. Fully compliant to RoHS Directive 2011/65/EU
Total Mechanical Travel	10 turns 3600°, 5 turns 1800° continuous
Push and Pull Shaft Strength	13.6 Kgf min.
Rotational Life	10 Million cycles
Panel Nut tightening Torque	25 in-lb
IP Rating	67
Marking	CTS logo, part number, date code
Packaging	Standard anti-static tray packaging
Operating Temperature	-40°C to +125°C
Range	
Storage Temperature	-40°C to +125°C
Range:	10 0 10 1120 0

Shaft Style and Diameter Option



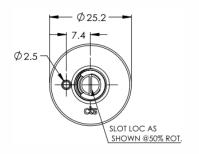
Shaft Trim	Diameter	X	Y
F	.236" (6.00 mm)	.375"(9.5 mm)	.157"(4.00 mm)
L	.250" (6.35 mm)	.375"(9.5 mm)	.157"(4.00 mm)

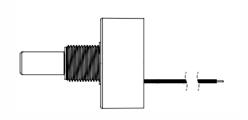


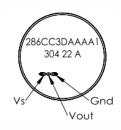
Shaft Trim	Diameter	Х	Υ
s	.236" (6.00 mm)	.031"(0.80 mm)	.031"(0.80 mm)
D	.250" (6.35 mm)	.031"(0.80 mm)	.031"(0.80 mm)

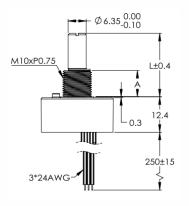


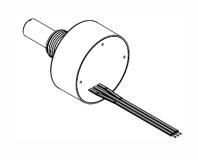
Dimensions in millimeters Single Output



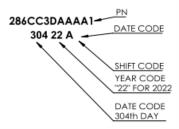




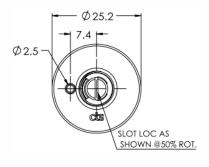


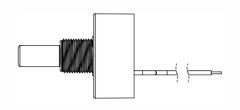


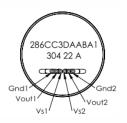
DESIGNATION	COLOR
Vs	red
Vout	white
Gnd	green



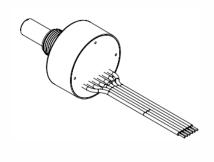
Redundant (Dual) Output



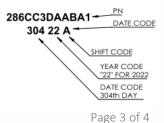




Ø 6.3	35 _{-0.10}
M10xP0.75	L±0.4
	0.3 12.4
6*24AWG-	250±15



COLOR
red
blue
black
yellow
white
brown

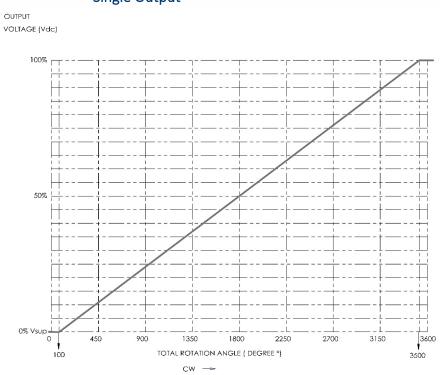


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Vout Analog





Redundant Output: with inverted slope

