

Smart Rotary Actuator: Designed for Harsh Environment Series 647

Features

- Brushless DC Reliability
- Fast response, high torque output
- Built for high temperature, high vibration applications
- Front-End-Protection (FEP) against input voltage spike
- Diagnostic capability
- Intermediate position operation with closed loop
- Non-contacting position feedback
- CAN control and feedback
- Onboard software provided
- Options:
 - Development kit support – Please contact CTS



Applications

- The 647 is used in vehicle applications that require a precise control of mechanical devices in challenging environments including control valves (EGR, exhaust throttle) and turbochargers.
 - Automotive
 - Industrial
 - Off Road
 - Agriculture

Description

The 647 Rotary actuator has a Brushless DC motor that delivers continuous output torque of 2Nm and a fast step response of 200 msec. The actuator has a built-in absolute position sensor for closed loop feedback. This product was designed and developed to meet demanding heavy-duty diesel powertrain durability and performance requirements

Electrical Specification:

Parameter	Specification
Supply Voltage	12 to 28 VDC nominal
Max. Current at 25°C	6.0 Amps
Step Response	200 msec, 90°
Rotational Travel	340° Maximum with stops, 360° without stops

Mechanical Specification:

Parameter	Specification
Max Continuous Torque	2 Nm (286 oz. in.)
Mass	1.2 Kg typ. (2.6 lbs.)
Envelope	75 x 80 x 110 mm (2.95 x 3.15 x 4.33 inch)
Mounting features	As shown in Dimensions Section

Durability and Environmental: Meets Automotive and Commerical engine requirements

Parameter	Specification
Strokes	>5 Million @ full load power
Vibration	Random – 15 G's, 20 hrs / plane
Mechanical Shock	30 G's, 10ms half-sine pulse
Operational Temperature	-40°C to 140°C (200°C with water cooling)
Thermal Shock	-40°C to 150°C
Humidity	95% RH @ 30°C - 80°C, 9 days
Solvent Resistance	All normal under-hood fluids
Salt Fog	ASTM-B117 340 hrs. (240 hrs. no red rust)



Dimensional Details:



