



# Stoneridge, Inc.,

## Transmission Range Control Module

### Shift-by-Wire Actuator

## Preliminary Data Sheet

### Features / Benefits

- Replaces the function normally controlled by the shift lever in the vehicle cabin. It can be bolted onto existing transmissions freeing up space in the cabin.
- Redundant non-contact position sensing
- High force (300N)
- Fail safe return-to-park function
- CAN/LIN Interface
- >300K Cycles



### Performance Characteristics

#### Electrical

**Supply Voltage:** 9 - 16 VDC

**Max. Operating Current:** 20.0 Amps (Shift Event)

#### Mechanical

**Peak Force (12.6VDC, 25°C):** 89.0N

**Positional Accuracy:**  $\pm 0.75$  mm  
cable travel

**Actuation time:** 250 ms

**Mass (without bracket):** <2.5 kg

**Working Linear Travel:** 43 mm

**Mounting Features:** Customer Specified  
Bracket

**Total Linear Travel:** 50 mm

**Connector:** Customer Specified

**Full Travel Time** 300 ms max,  
Park to Drive

**Envelope:** Customer Specified

#### Durability

**Strokes (Full)** >300,000

#### Environmental

**Vibration:** Random - 15 g's, 50 hrs/plane

**Mechanical Shock:** 30 g's, 10 ms half-sine pulse

**Operational Temp. Range:** -40°C to 105°C (125°C in development)

**Solvent Resistance:** All normal under hood fluids

**Salt Fog:** ASTM-B117 840 hrs.



# Transmission Range Control Module Shift-by-Wire Actuator

"Energy into Action"

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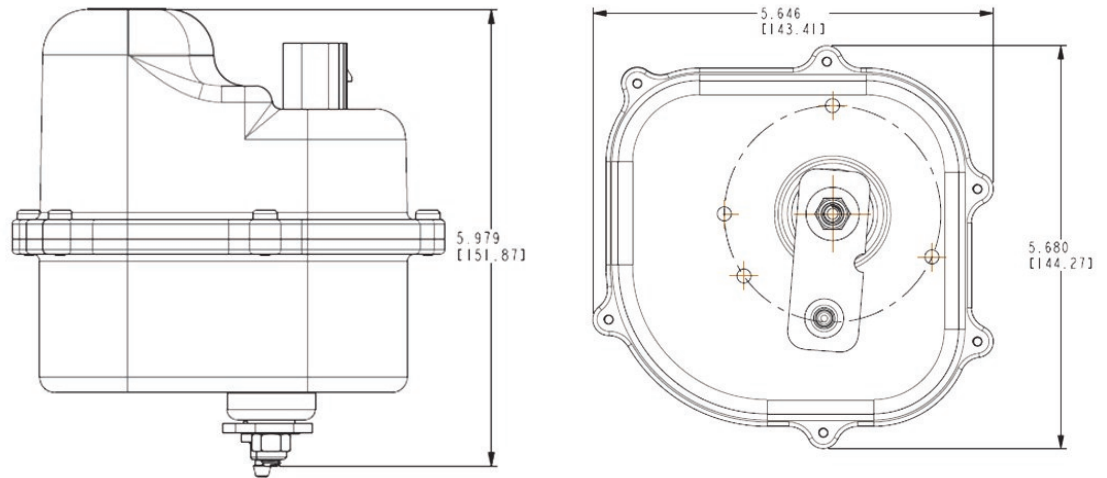
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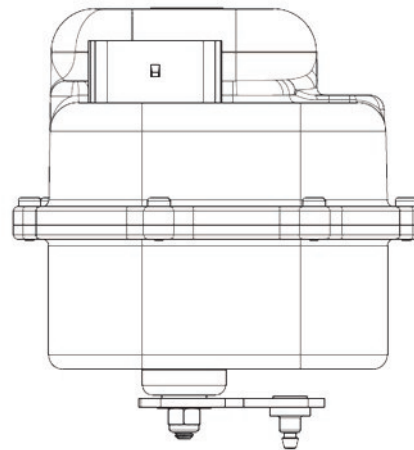
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**Stoneridge** is an independent designer and manufacturer of highly engineered electrical and electronic components, modules and systems principally for the automotive, light/medium/heavy-duty truck, agricultural and off-highway vehicle markets. Our products provide engineered solutions that improve the efficiency and performance of electric and electronic systems.

The **Control Devices Group** focuses on products that sense, switch and control a specific function. Our key technologies include:

- Electromechanical Actuators
- Customer Actuated Switches
- Emissions Sensors
- Solenoid Coil Valves
- Powertrain Switches and Sensors
- Pressure Switches and Sensors
- Speed Sensors
- Temperature Sensors
- Position Sensors
- Torque Sensors