General Description and Basic Functions

TRW Automotive Body Control Systems (TRW BCS) offers Steering Column Control Modules (SCCM) integrating complex control functions in small packages and in accordance to customer requirements. The modular construction facilitates flexibility in adding and removing functions. Thanks to flexible stalk lever configurations, it can be used for various steering wheel designs.

The TRW BCS SCCMs are based on 70+ years of design and manufacturing experience. They are remarkable for their low-cost modular design and are able to accommodate various functions, including traditional Turn Signal, Wiper/Wash, Headlamp, Beam Selector and Flash to Pass and integrated Steering Column Locks, Ignition Switches, Cruise Control, etc.

The TRW BCS patented fold-back clockspring design reduces tape length. Other technologies include gold plated multi-point contact systems, a reduction in the number of solder interconnects by using TRW BCS compliant pins and the ultrasonic welding of clockspring tape to circuit frame. These features ensure a highly robust design while not increasing manufacturing costs. In addition, TRW is continuing to focus on Best in Class Feel and Sound requirements within the steering wheel. This includes eliminating free play within the stalk levers and optimizing the Clockspring design to eliminate plastic components contributing to increase levels of torque and sound.

Product Features

- Dual and single stalk capability
- Left hand and right hand drive flexibility
- Electronic and Mechanical Turn Signal Cancel Systems
- Pedal and Steering Column Adjust Control
- Hazard Warning Control
- Lane Departure and Lane Keep Control
- Front and Rear Wiper/Wash Controls
- Independently serviceable components
- Column shroud positioning and mounting features
- Fully integrated designs
  - Magnetic and Optical Steering angle sensor
  - Wheel Mounted Switches
- Globally-acclaimed tactile and driver feedback development
- Interface electronic steering lock

Specifications

Steering Column Switch
- Automotive temperature and environmental ranges
- Custom force / travel characteristics
- High- and low-current column switches, modular and integrated
- High- and low-current ignition switches and ignition locks
- CAN and LIN Bus communication
- High current, RMUX and digital circuit capability

Steering Angle Sensor
- Initialization or absolute position
- Better than 0.1° resolution
- Compact design

Air Bag Rotary Connector
- Rotation angle ± 2.5 turns
- 18 wires connector (4 air bag, 14 auxiliary tracks)

Fold-back clockspring
- TRW-patented technology
- Twenty Circuit Clockspring with and without High Current Heated Steering Wheel
- Up to Three Air Bag squib Configuration