

## SFT-4003 Gauge Driver Controlled Neutral Safety

### Section 1: Introduction & Theory of Operation

The PCS SFT-4003 Gauge Driver Controlled Neutral Safety Kit is only setup for the GMLAN CAN bus. The SFT-4003 gauge module reads the transmissions range position for Park Neutral via CAN messaging to activate the relay. The module will enter Scanning Mode every time the vehicle is keyed on. It will continually monitor the CAN bus for the transmission range state as long it is powered up. The gauge module uses low side drivers to ground the relay to activate the Neutral Safety Relay. When the relay is activated the normally open wire closes and completes the circuit to the common wire.

### Section 2: Installation

The SFT-4003 requires 12V Switched Power, Ground, CANH and CANL for operation. The harness utilizes the PCS 4 pin options connector. This enables the customers that have a PCS harness the ability to quickly install the module. For applications that do not have an option connector, customers will need to order the mating connector with unterminated wires. The relay has two unterminated wires. There is one common and one Normally Open Wire (NO) that are used to control the starter.

#### Module Power Connection:

The SFT-4003 is rated for use on **8-36VDC**. The SFT-4003 and relays are operated on 12 volt switched power.

Wire Color	Function
Yellow	12V Switch Power
Black	Ground

#### CAN Connection:

The SFT-4003 can be connected directly to the CAN bus using white/red and white/black twisted pair wires.

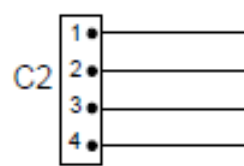
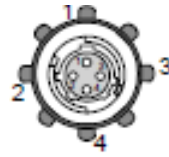
Wire Color	Function
White\Red	CANH
White\Black	CANL

#### Relay Wiring:

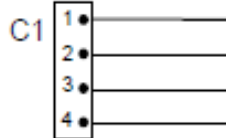
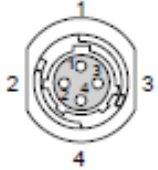
Wire Color	Function
Yellow	12V Power Supply
White	Neutral Safety Common
Gray	Neutral Safety Normally Open Circuit

**Option Connectors Wiring:**

OPTION		
PIN	CIRCUIT FUNCTION	COLOR
1	POWER	YEL
2	GND.	BLK
3	CAN HIGH	WHT/RED
4	CAN LOW	WHT/BLK



FRONT VIEW



FRONT VIEW

OPTION		
PIN	CIRCUIT FUNCTION	COLOR
1	POWER	YEL
2	GND.	BLK
3	CAN HIGH	WHT/RED
4	CAN LOW	WHT/BLK

**Section 3: Troubleshooting**

Here are some of the common problem scenarios. If you encounter trouble beyond what is covered here, please call 1(804)-227-3023 for further assistance.

**“My SFT-4003 does not activate the relay”**

1. Check that the CANH and CANL wires are properly connected.
2. Verify the transmission has a calibration in the TCM.
3. Check that the supported messages are actually being transmitted.
4. Check that the SFT-4003 power and ground wires are making good connection.
5. Check harness 12V power to the relay.
6. Check battery voltage.
7. Verify the Transmission Range Switch is functional with a scanner

