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PCS SFT-4001 USER GUIDE v2.0

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PCS SFT-4001 User Guide
(Gauge Driver Controlled Reverse Lights Neutral Safety Relay Module)

Section 1: Introduction & Theory of Operation
The PCS SFT-4001 Gauge Driver Controlled Reverse Light and Neutral Safety Kit is only setup for the GMLAN CAN bus. The SFT-4001 gauge module reads the transmissions range position for Park Neutral and Reverse via CAN messaging to activate the relays. There are two relays, one for reverse lights and one park/neutral. 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 relays to activate the corresponding circuits.

Section 2: Installation
The SFT-4001 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 connectors with unterminated wires. Both relays have two unterminated wires. There is one common and one Normally Open Wire (NO).

Module Power Connection:
The SFT-4001 is rated for use on 8-36VDC. The SFT-4001 and relays are operated on 12 volt switched power.

Wire Color	Function
Yellow	12V Switch Power
Black	Ground

CAN Connection:
The SFT-4001 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
Orange	Reverse Light Common
Green	Reverse Light Normally Open Circuit
White	Neutral Safety Common
Gray	Neutral Safety Normally Open Circuit

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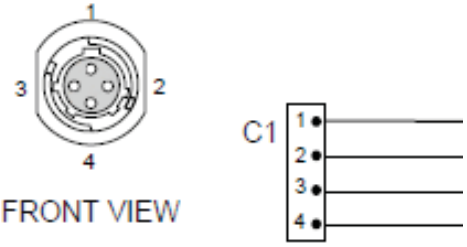
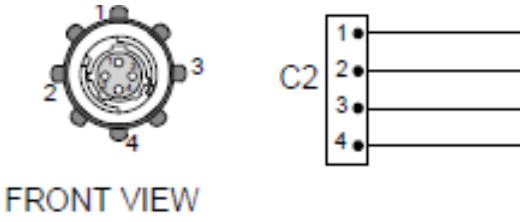
Option Connectors Wiring:

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





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-4001 does not activate either relays"

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-4001 power and ground wires are making good connection.
5. Check harness 12V power to the relays.
6. Check battery voltage.
7. Verify the Transmission Range Switch is functional with a scanner

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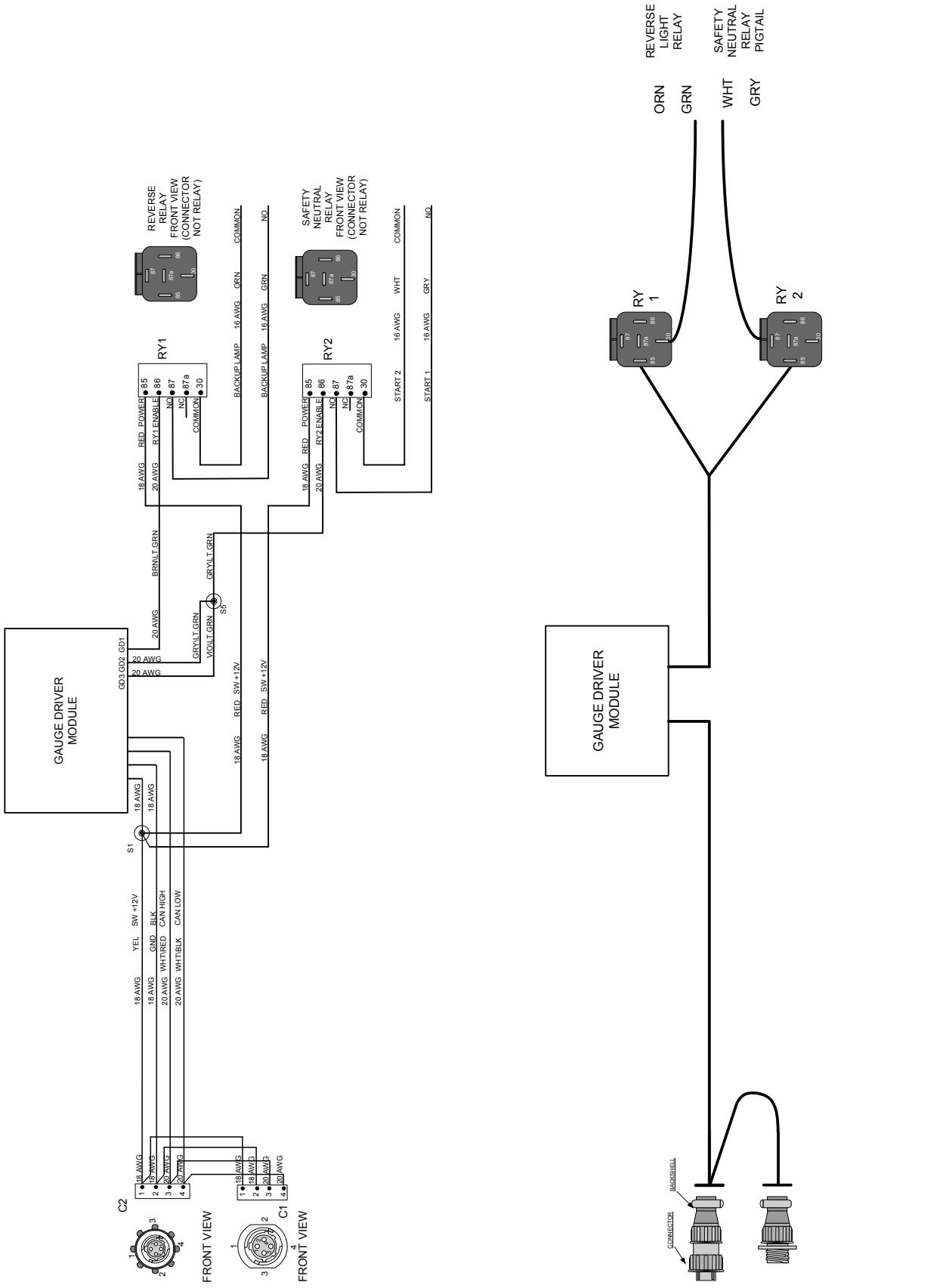
GAUGE DRIVER MODULE
GD1
GD2
GD3
20 AWG
BRN/LT GRN
GRY/LT GRN
VIO/LT GRN
S8
S1
18 AWG
RED SW +12V
YEL SW +12V
BLK GND
WHT/RED CAN HIGH
WHT/BLK CAN LOW
C2
C1
FRONT VIEW
REVERSE RELAY FRONT VIEW (CONNECTOR NOT RELAY)
SAFETY NEUTRAL RELAY FRONT VIEW (CONNECTOR NOT RELAY)
RY1
RY2
RED POWER
RY1 ENABLE
RY2 ENABLE
NO
NC
COMMON
BACKUP LAMP
16 AWG
ORN
GRN
START 2
START 1
WHT
GRY
REVERSE LIGHT RELAY
SAFETY NEUTRAL RELAY PIGTAIL
BACKSHELL
CONNECTOR