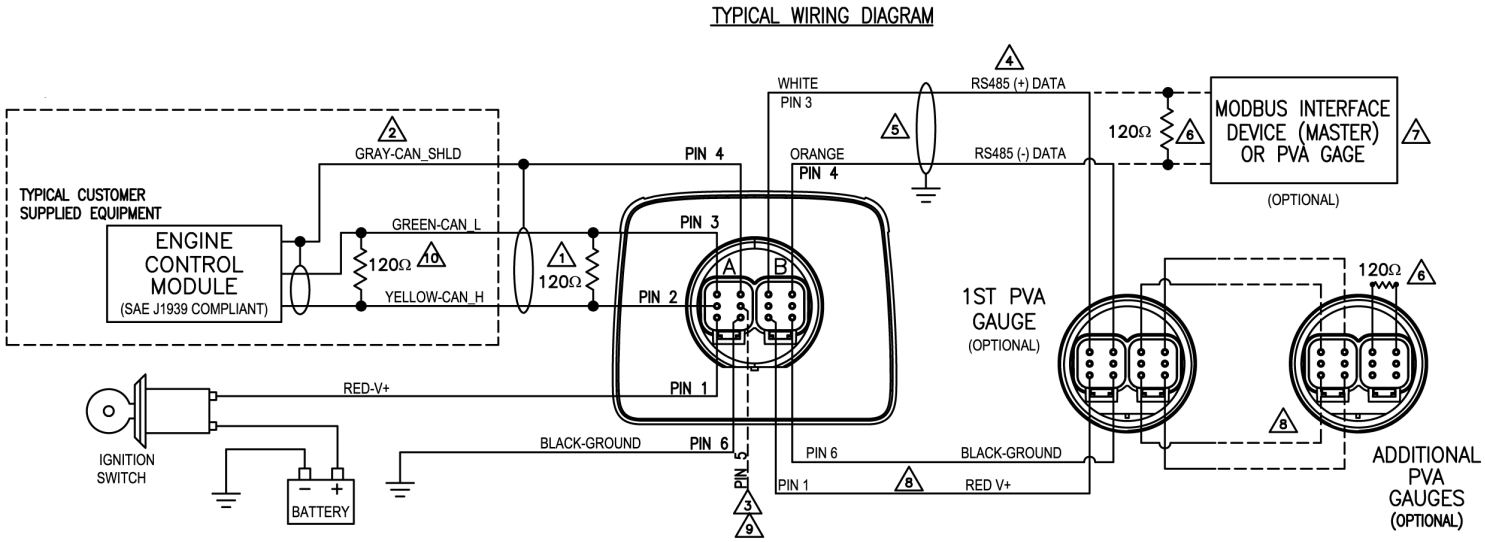
PowerView™ – Wiring Diagrams

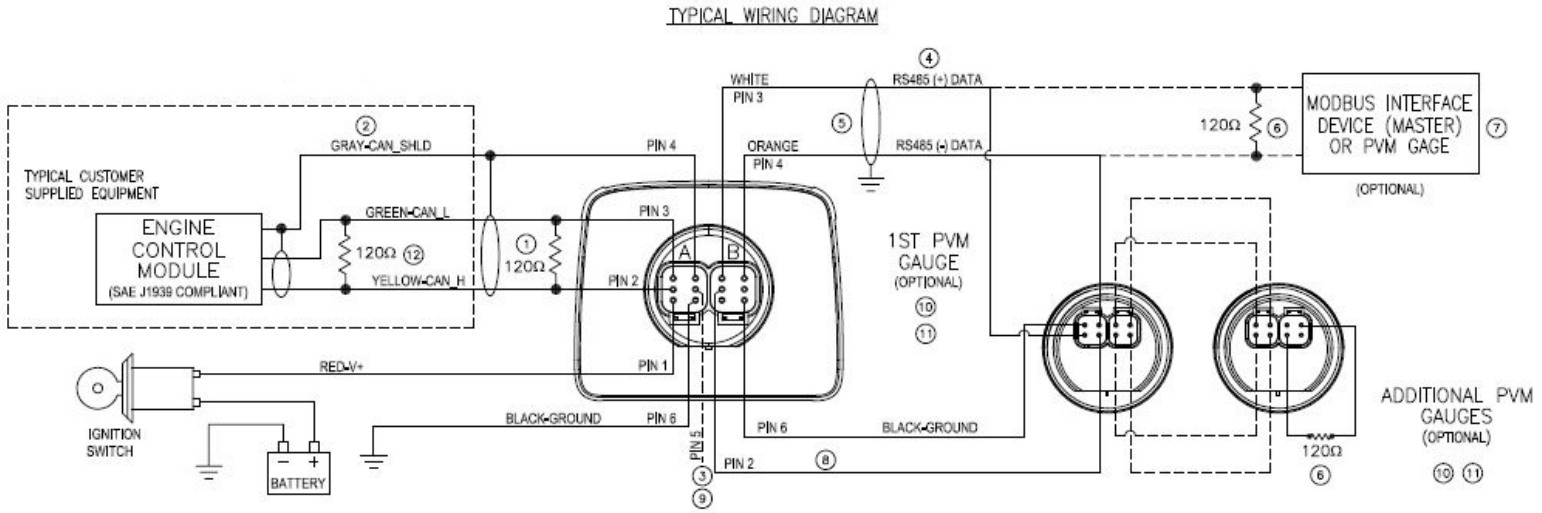
PowerView with Optional PVA Gages



NOTE	
1	Place resistor between CAN Hi and CAN Lo near the PowerView (resistor included in PVW-P or factory purchased panels).
2	Use SAE J1939 compliant wiring.
3	Optional: Potentiometer, 1000-ohm, 1/4W. To use input as a fuel sender, see note 9.
4	Only use 120-ohm characteristic impedance cable, such as Belden 9841.
5	RS485 shield connected to PowerView end only.
6	Place resistor and end of line on last PVA gage or MODBUS interface device (included in PVJR or factory purchased panels).
7	PVA gages cannot be used in a system utilizing an optional MODBUS master device.
8	PVA gages power connection can be to Port B Pin 1 or to the positive battery connection. Do not connect to Port B Pin 2.
9	Optional: Use FW Murphy approved fuel sender only. Use a two-wire sender and terminate ground wire to Port A Pin 6. Do not connect a potentiometer and fuel sender at the same time as erratic operation will result.
10	Terminating resistor at ECU end of harness. **WARNING:** Two 120-OHM resistors should be located at opposite ends of the J1939 CAN Bus. Failure to comply will cause Bus failures. Only two 120-ohm resistors are allowed on the J1939 CAN Bus. ECU terminating resistor is typically located in the harness, but can be located inside the ECU. For ECU resistor location, check with OEM, equipment supplier, or ECU specification.

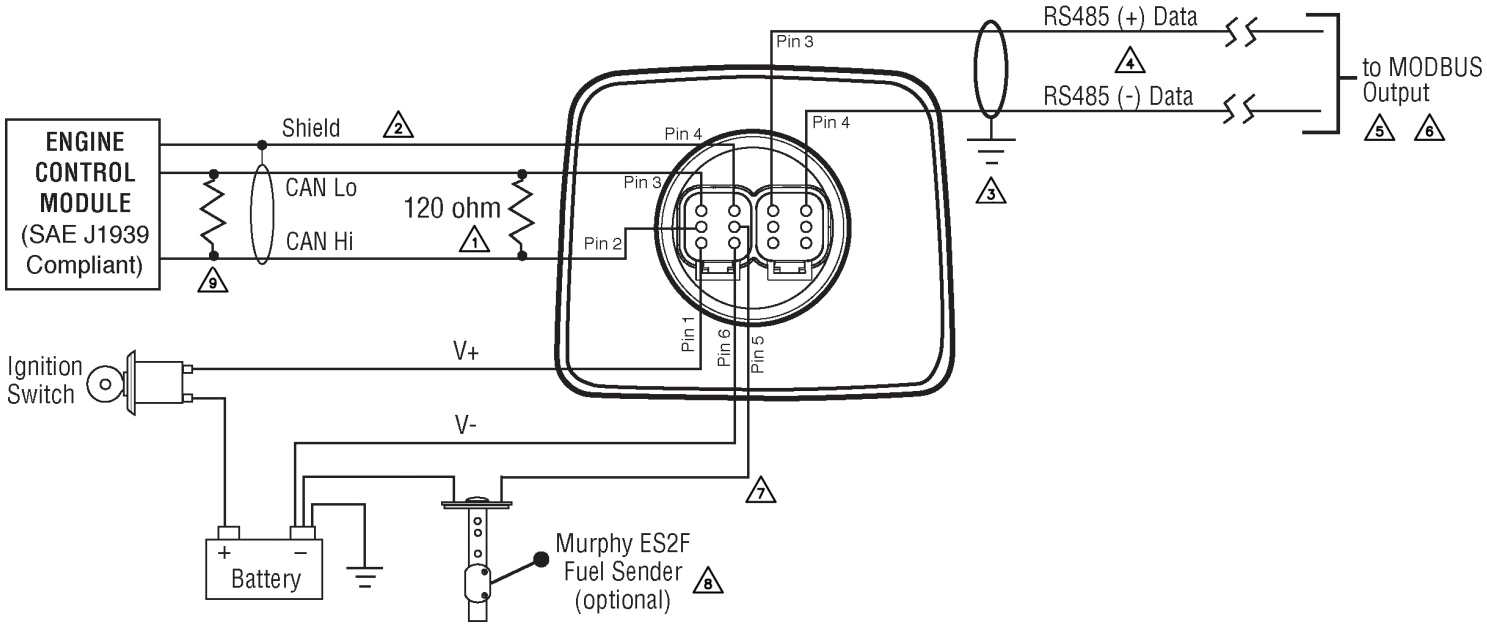
IMPORTANT: To eliminate external interference, RS485 (+) and RS485 (-) should be twisted pair cable such as Belden 9841 or 3105A, or twist wires together one twist per inch minimum. CAN wiring should be controlled impedance, SAE J1939-11 compliant data bus cable, such as Radox plug and play cable, from Champlain cable.

PowerView with Optional PVM Gages



NOTE	
1	Place resistor between CAN Hi and CAN Lo near the PowerView (resistor included in PVW-P or factory purchased panels).
2	Use SAE J1939 compliant wiring.
3	Optional: Potentiometer, 1000-ohm, 1/4W. To use input as a fuel sender, see note 9.
4	Only use 120-ohm characteristic impedance cable, such as Belden 9841.
5	RS485 shield connected to PowerView end only.
6	Place resistor and end of line on last PVM gage or MODBUS interface device. (included in PVJR or factory purchased panels).
7	PVM gages cannot be used in a system utilizing an optional MODBUS master device.
8	PVM gages only power connection is Port B Pin 2. Do not connect to battery voltages port A Pin 1 or Port B Pin 1. Do not connect external PVM power supply to this Pin.
9	Optional: Use FW Murphy approved fuel sender only. Use a two-wire sender and terminate ground wire to Port A Pin 6. Do not connect a potentiometer and fuel sender at the same time as erratic operation will result.
10	Total of 5 PVM gages may be used.
11	Total distance from first gage to PV101 not to exceed 20 feet (6 meters). Distance between gages not to exceed 20 inches (.5 meters). Total length of all harnesses not to exceed 28 feet (8.5 meters).
12	Terminating resistor at ECU end of harness. **WARNING:** Two 120-OHM resistors should be located at opposite ends of the J1939 CAN Bus. Failure to comply will cause Bus failures. Only two 120-ohm resistors are allowed on the J1939 CAN Bus. ECU terminating resistor is typically located in the harness, but can be located inside the ECU. For ECU resistor location, check with OEM, equipment supplier, or ECU specification.

PowerView as a MODBUS Slave



NOTE	
1	Place resistor between CAN Hi and CAN Lo near the PowerView (resistor included in PVW-P-12, PVW-PW-30, and in factory purchased PowerView panels).
2	Use SAE J1939 compliant cable and equipment.
3	RS485 shield connected to PowerView end only.
4	Use 120-ohm characteristic impedance cable, such as Belden 9841 or 3105A.
5	Place 120 ohm resistor between RS485 (+) and RS485 (-) at end of line near Modbus master device.
6	The PowerView will not drive optional PVA gages while in MODBUS SLAVE ACTIVE mode.
7	If optional PVW-PW-30 is used, and a Murphy Fuel Sender is not used, connect the blue wire in the PVW-PW-30 harness to V- or ground.
8	Fuel Level input for PV101 only. Use Murphy 2-wire Fuel Level Sender, Model ES2F. Analog input function must be set to FUEL LEVEL.
9	Terminating resistor at the ECU end of the harness. **WARNING:** *Two 120 ohm terminating resistors should be installed at opposite ends of the J1939 CAN bus. Failure to comply will cause bus failures. Only two 120-ohm terminating resistors are allowed on the J1939 CAN bus. They are typically located in the harness, but on some ECU's they are mounted internally, or as a part of the ECU wire harness.*