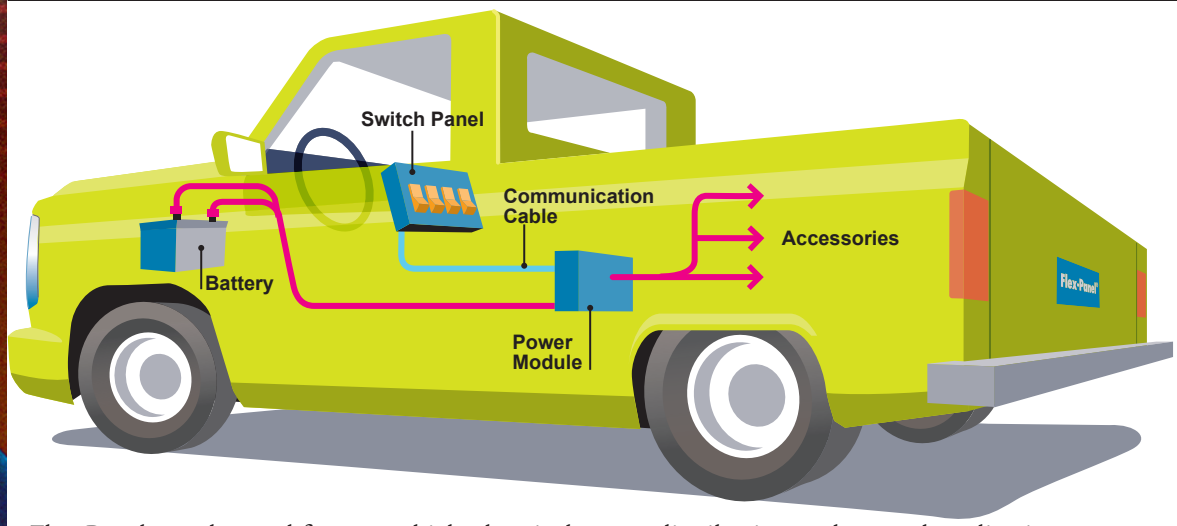
WiredRite
SIMPLER IS BETTER

Flex–Panel®
System Overview

The Flex-Panel® system from Wired Rite is a complete solution for custom vehicle wiring, and is installed as an overlay to the vehicle's pre-existing OEM wiring system. Flex-Panel facilitates the addition of electrical accessories including lights, electronics, and other equipment, and provides smart control of all accessories for safe and reliable operation.



Flex-Panel may be used for any vehicle electrical power distribution and control application, including work trucks, utility vehicles, emergency, fire and police vehicles. A generic simplified system installation is shown above. The Flex-Panel Control System can be customized for each specific vehicle application.

Easier installation and shorter wiring runs

Flex-Panel has a modular architecture with building blocks that go where you need them. Switch Panels and Power Modules can each be located in the vehicle location most convenient for installation and maintenance. Installation is easier, and wiring runs are shortened.

Each Flex-Panel Module within the system is installed in the location that is most convenient for the application. For example, the Switch Panel may be located within reach of the driver seat in the vehicle dashboard or overhead location, while a Power Module may be located closer to the appliances that are being controlled. The thin, flexible Communication Link cable is easy to handle and easy to install.

Simplified control connections

The Switch Panel can be installed without a direct connection from the battery. Power is supplied via the Powered Communication (Comm) Link for all the microprocessor functions as well as the switches, sensors, and legends. One thin flexible control cable supplies both the communication link and the power for the system. Appliance loads are powered from the output studs of the modules.

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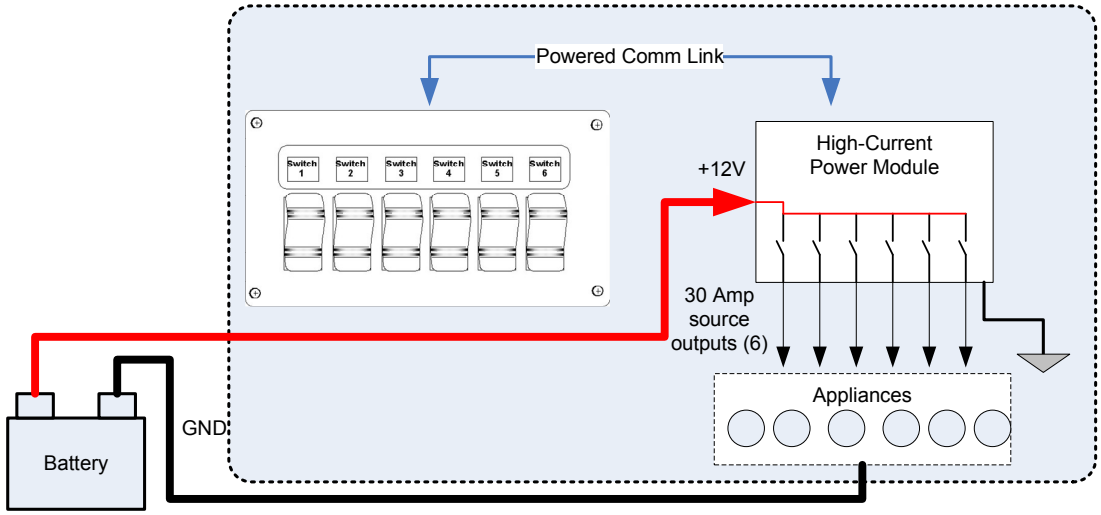
Combine up to Eight Modules to Extend system

Flex-Panel systems can include up to eight modules with up to 64 switch/sensor inputs and up to 64 outputs. System communication, accomplished via the Powered Comm Link, is coordinated automatically by the system and is transparent to the installer and the operator. Communication Link cables between modules are available up to 100 ft in length and connect to each Switch Panel and Power Module in the system in a daisy chain configuration. For even more expansion, multiple systems can be combined in parallel within the same vehicle.

Example Block Diagrams

A block diagram for a simple example stand-alone system is shown below. This system uses a single 6-switch Switch Panel connected to a High-Current Power Module via the communication link. This configuration is typically recommended for up to six outputs with straightforward functionality. Two sensor inputs are available into the Switch Panel. The 30 Amp outputs are source outputs, that is, they supply power to the load.



System Characteristics

Distance between modules. Modules must be interconnected to the Flex-Panel communications port via daisy chain. Total cable length can be up to 1,000 feet. Standard cables are available up to 40 feet, with longer versions available upon request.

Number of Inputs and Outputs. From one to eight modules can be integrated in a single system, allowing up to 64 Switch/Sensor inputs and 64 accessory outputs.

Communication and control. Each module has two 4-pin connectors for the communications, allowing daisy chain connection of all system modules, via a compact communication wire harness. Modules are interconnected through the Powered Comm Link (PCL), which uses a four-pin RS-485 interface. Modules in the system are connected in a daisy chain via the PCL cables, which are supplied in various lengths. Power for module operation can be supplied over the power and ground connections in the PCL cables, provided +12V and GND connections are supplied to the PCL connector in any one of the system modules.