

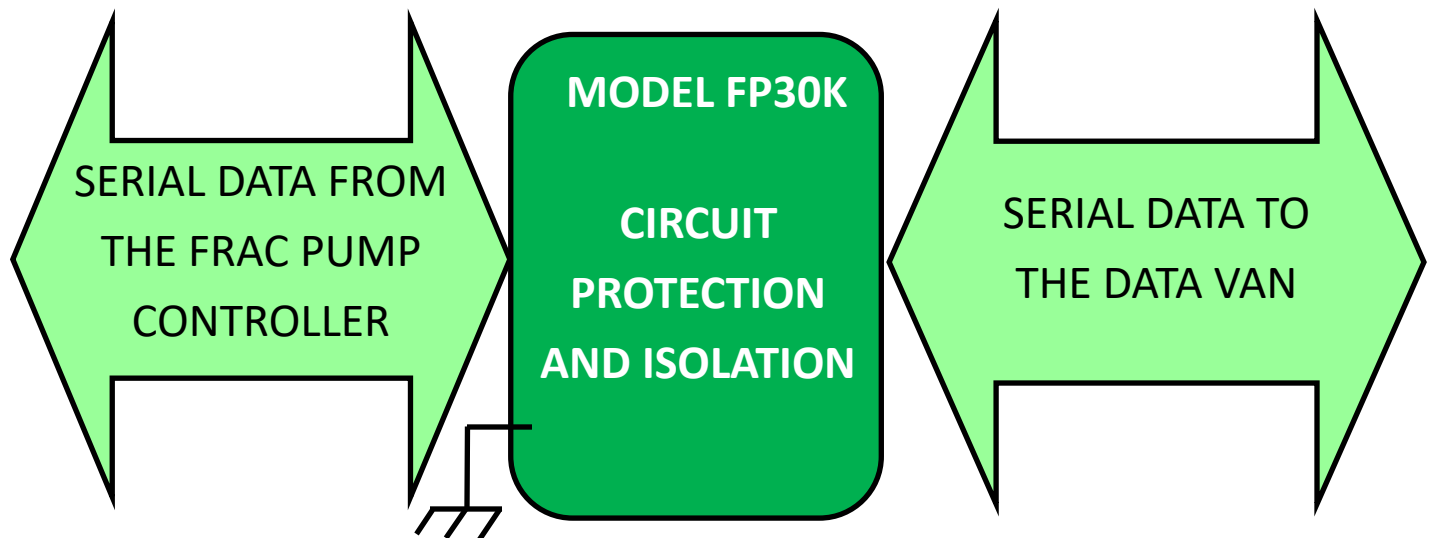


## MODEL FP30K FRAC PUMP LIGHTNING PROTECTION UNIT

Frac pumps are used to pump fluid into the producing zone of an oil/gas well at relative high pressures and rates in order to fracture the formation and allow more oil & gas to run into the well head. Because of the pressures and rates involved, considerable data is monitored and control for multiple frac pumps is centralized in the Data Van. Communications is typically via serial communications cables. The length of these communication cables is typically 300 feet or more. Therefore, when lightning strikes in the area, the current in the lightning produces a very strong magnetic field. This magnetic field causes a high voltage spike to occur in each cable. With no protection, these spikes are transferred directly into the connected electronics causing extensive damage.

The Model FP30K, mounted on the frac pump, protects the frac pump by using overvoltage sensing circuitry with typical turn on time of one pico second to provide a path for these high voltage spikes to ground. Both power and signals then have 30,000 volts isolation so that spikes are not transferred into the frac pump controls. All the equipment then continues to operate as expected with no interruptions. While this is perhaps the best possible protection you can get for this application, keep in mind that it is for close lightning strikes. If you are so unfortunate to receive a direct hit with lightning, there is nothing that will provide complete protection.

### TYPICAL APPLICATION



A similar unit, DV30K, containing multiple channels, is available for the Data Van.

Both the DV30K and the FP30K units are custom designed to customers specific equipment and provide the correct connectors and signals for proper operation.