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PILOT WIRE MONITOR RELAY

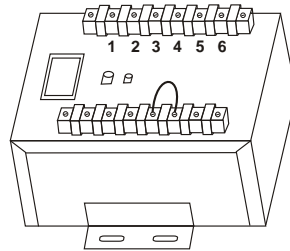
The 2A31 is a special relay for checking ground wire continuity in trailing cables. The relay can detect any of the following fault conditions:

- an open circuit in the ground wire
- an open circuit in the pilot wire
- a short circuit between the pilot wire and ground

If the 2A31 relay detects any of the above fault conditions the output relay will trip. The N.O. - N.C. Contacts may be wired to a shunt trip, under voltage trip or contactor coil.

- Features:
- | | |
|--|--|
| 1. Indicating light shows relay has tripped. | 3. Fused protection of internal circuitry. |
| 2. One output relay with 2 N.O. - 2 N.C. Form "C" contacts. Rated 10 Amp, 120 Volt 50/60 Hz. | 4. Terminal blocks for remote reset. Factory installed jumper gives auto reset after fault is cleared. |

Control Voltage	Patton & Cooke Catalog Number
120 V 60 Hz	2A31-1C-A-60Hz
120 V 50 Hz	2A31-1C-A-50Hz



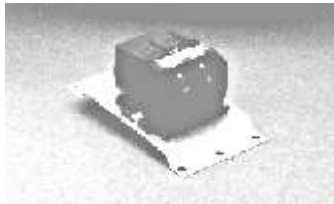
PILOT WIRE MONITOR RELAY

TERMINATING DEVICES

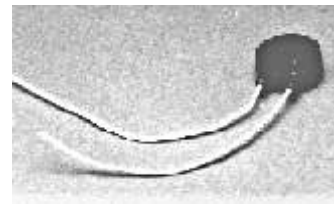
A diode is used as a terminating module. This is connected between the pilot wire and the grounded machine frame on mobile equipment which is powered by a trailing cable.

Description	Patton & Cooke Catalog Number
End-of-line diode with varistor on metal mounting plate, c/w 2 point terminal block	2A31-2A-1HDS
End-of-line doide with varistor molded in polyurethane with 6" color coded wire leads. See Note 1.	2A31-3PE

Note: 1. Designed to mount in Patton & Cooke covers and hoods to provide end of line completion in "live end covers".



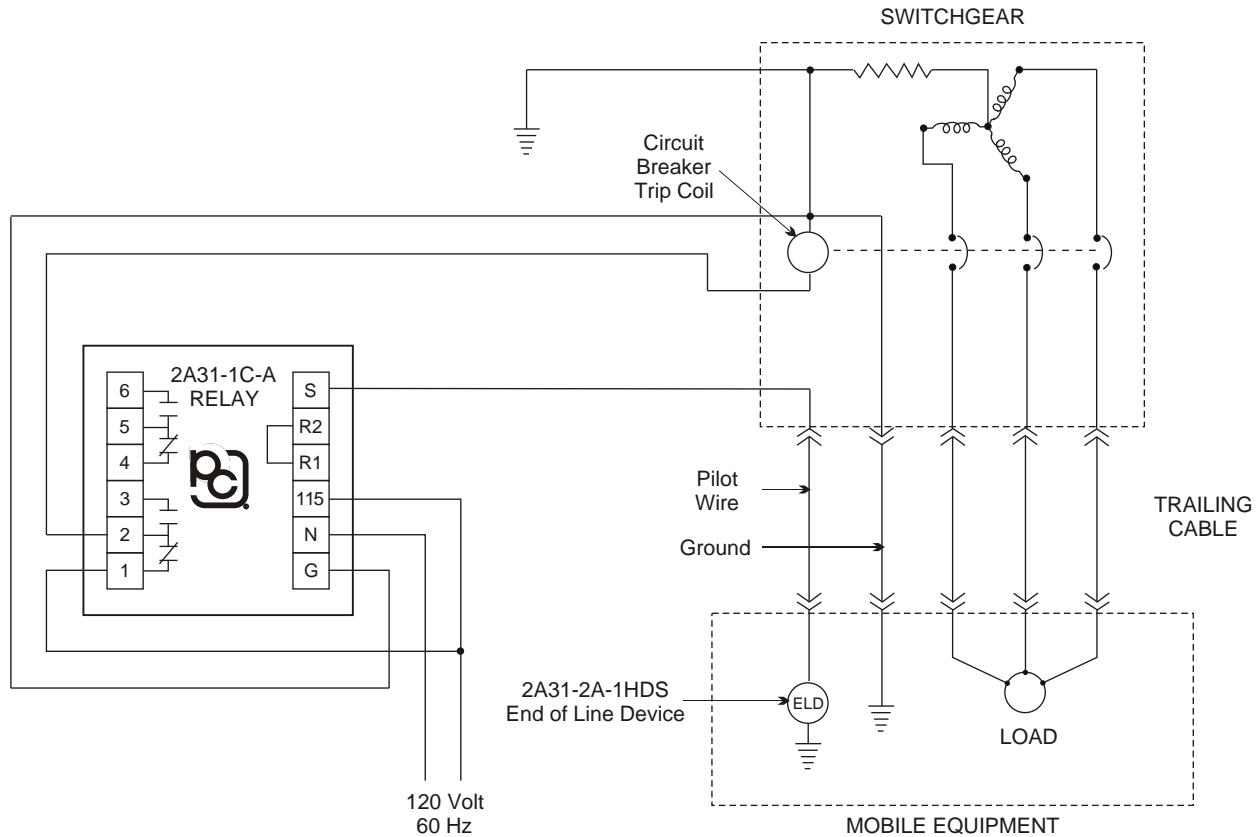
END-OF-LINE DIODE with Varistor on Mounting Plate



END-OF-LINE DIODE with Varistor Molded in Polyurethane



SCHEMATIC DIAGRAM SHOWING 2A31 RELAY SETUP ARRANGEMENT



ACCESSORIES

SURGE SUPPRESSOR

A surge suppressor is available for those applications where line disturbances may cause premature failure of the end-of-line diode. This is mounted in a dust tight plug-in housing with a screw mounted base. The preferred mounting location is close to the diode.

Description	Patton & Cooke Catalog Number
Surge Suppressor	11K-012

APPLICATION NOTES:

The 2A31 relays can be used in a 3-way and 4-way splitter box applications. The "master" relay is installed in the switchhouse. This monitors the circuit from the switchhouse to the splitter, the relay or relays which monitor the branch circuit or circuits, and the circuit going to the shovel or machine. The relay(s) mounted in the splitter are powered from the ground check conductor using a factory or field installed 4.7 uF capacitor (2 - 2.2 uF in parallel). No control voltage is required in the splitter box.

For factory installed capacitor specify catalog number OS-A382 (two required).

For special applications or for more details on the 2A31 relays contact Patton & Cooke.