



AMERICAN ELECTRIC EQUIPMENT, INC.

P.O. BOX 710 BECKLEY, WV 25801

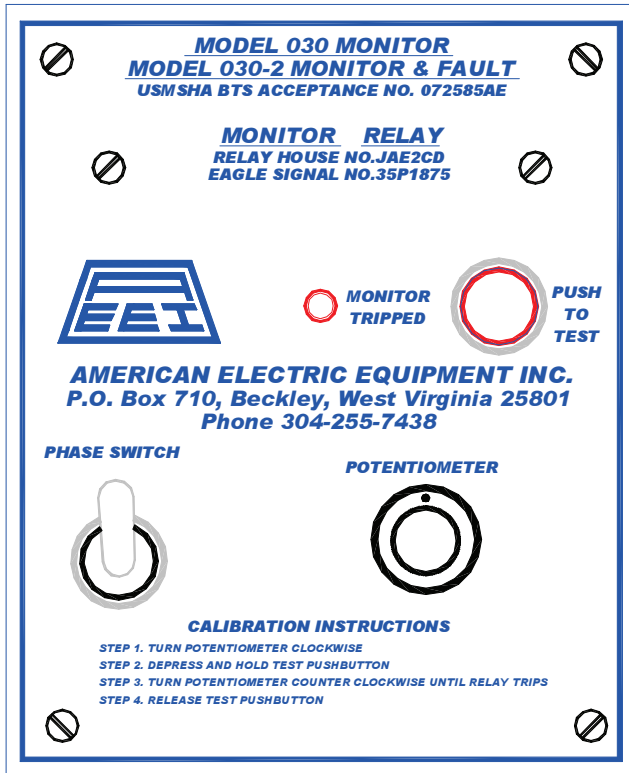
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030-2 LOW VOLTAGE GROUND MONITOR

Document A-8799

JULY 12, 2006



Features

- ✓ MSHA accepted for trailing cable use
- ✓ Harsh environment operation; no sensitive electronic components to fail
- ✓ Easy adjustment from front of unit
- ✓ Failsafe operation
- ✓ No terminating device required
- ✓ Phase reversal switch to prevent nuisance tripping
- ✓ Integral ground fault relay
- ✓ Test pushbutton for ground monitor functions
- ✓ Monitor trip indicating light

Description

The AEEI 030-2 ground monitor is a pilot wire impedance type ground monitor. The MSHA BTS acceptance number allows its use in mining applications where trailing cables feed mobile equipment. It features an integral ground fault relay optimized for use on 15 A or 25 A resistance grounded systems.

Operation

Connect monitor and ground fault CT as shown on drawing.

When power is applied to monitor initially, adjustment is required. Follow instructions on monitor faceplate to calibrate monitor.

If the pilot-ground loop is intact the TRIPPED light will be off.

Faults

There are two types of faults, monitor trip is provided with a test pushbutton:

1. MONITOR TRIPPED

If the pilot-ground loop's impedance is greater than the trip value, the MONITOR TRIPPED light is lit. It will go off when a good pilot-ground loop is established.

2. GROUND FAULT TRIPPED

The GROUND FAULT solid state relay will short the 120 volt UVR output when a ground fault occurs (VIA a current limiting resistor). This circuit is not provided with an indicator and does not require any adjustments.

Output Signal

The monitor is designed for use on circuit breakers with a 120 VAC UVR relay. The monitor output on terminals 7 and 8 is 120 VAC for normal operation and 0 VAC for a trip condition.

Undervoltage Protection

Contacts change state on loss of power, so the monitor can be used to provide undervoltage protection to a circuit.

Phase Reversal Switch

The PHASE SWITCH has the effect of reversing polarity on the monitor loop output. Polarity does not matter except in an environment of high induced pilot wire currents. If such currents exist, flipping the PHASE SWITCH and going to the opposite polarity may be of benefit in preventing accidental tripping of the monitor.

Testing

The MONITOR TEST pushbutton can be used to test the monitor without disconnecting wires.

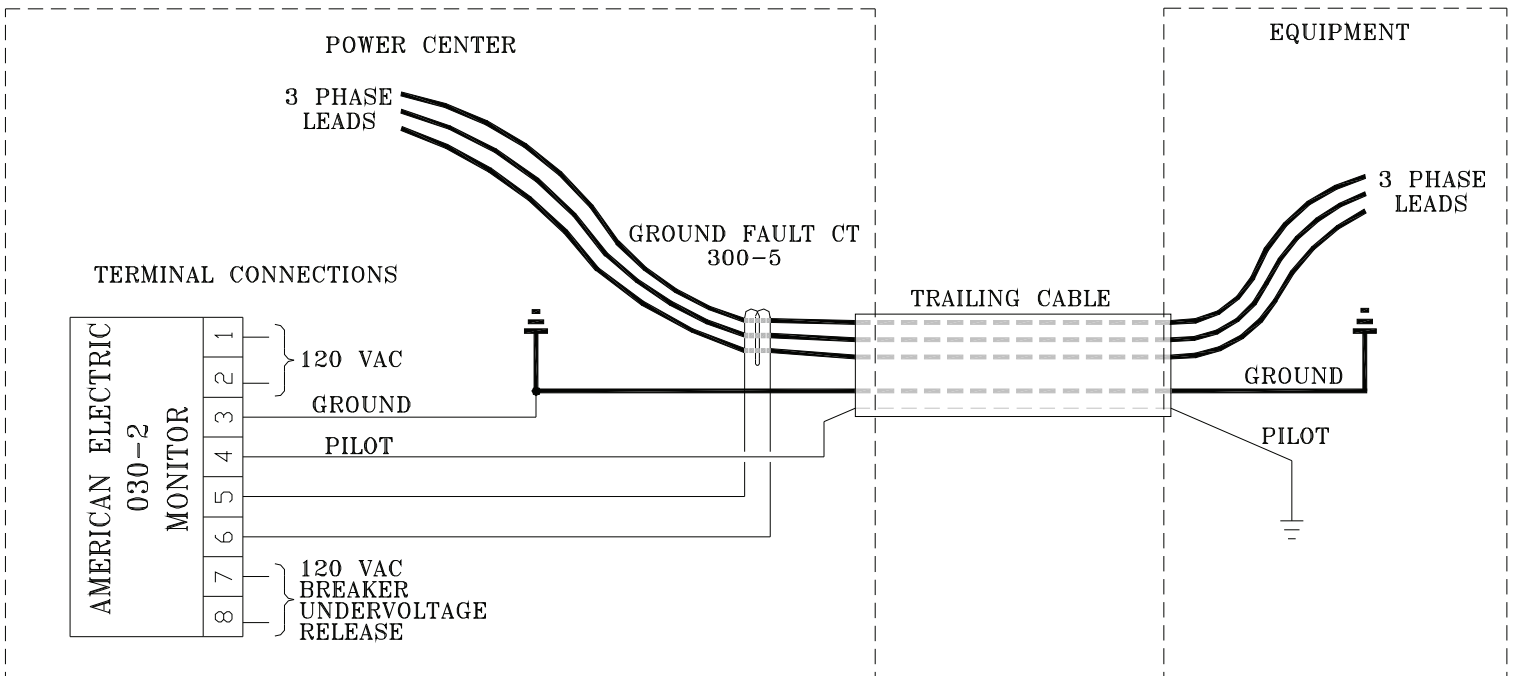
MONITOR TEST simulates a rise in pilot to ground loop resistance by inserting a test resistance in the pilot to ground loop.

ORDERING INFORMATION

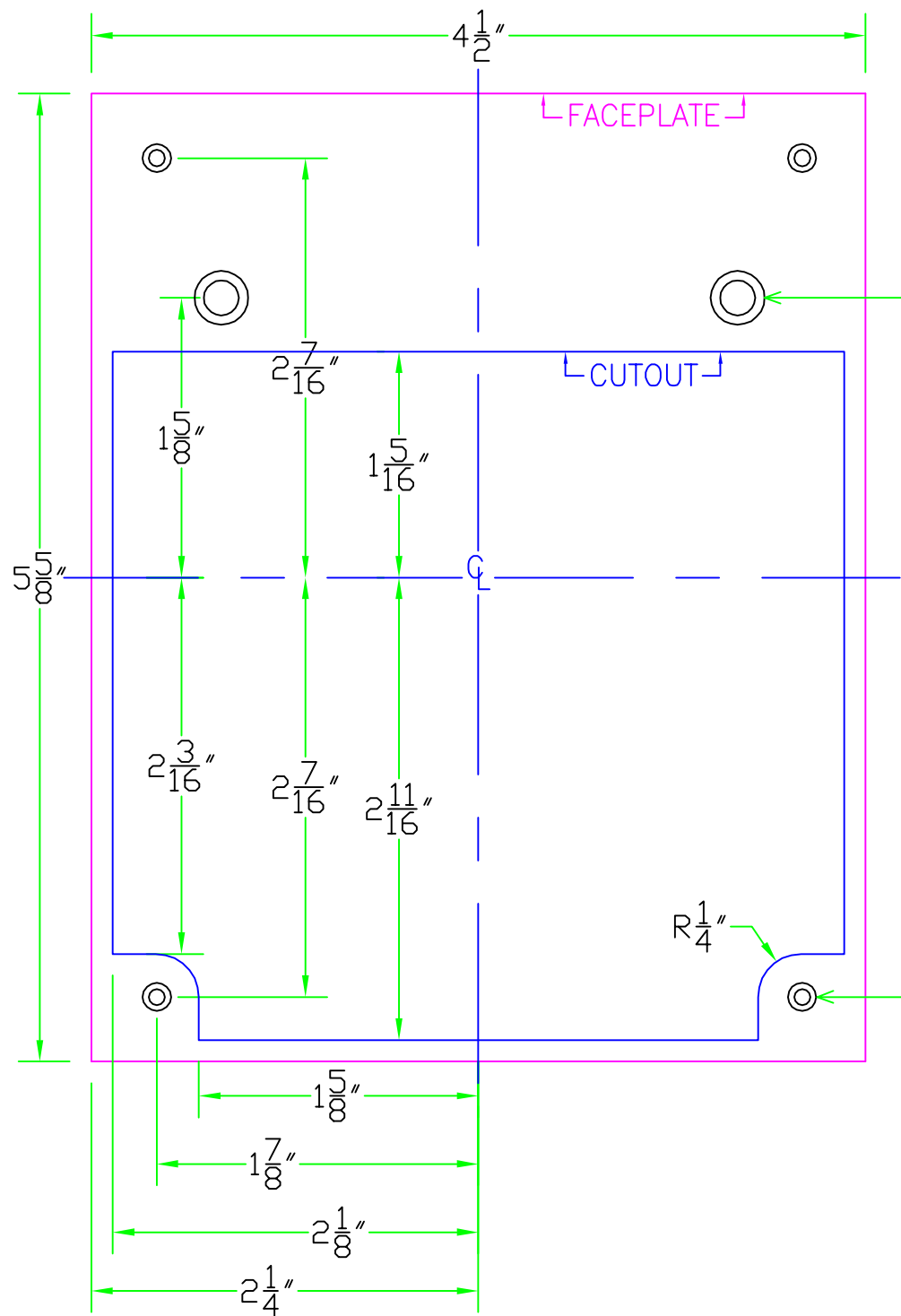
MONITOR PART NUMBER: 030-2

300-5 CT PART NUMBER: A-1247

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|--------------------------------|--------------|
| SCALE: FULL | APPROVED BY: |
| DATE: 1-24-12 | DANNY FARLEY |
| MOUNTING DETAILS FOR | |
| 030-2 AND 030-3 GROUND MONITOR | |
| DRAWING NUMBER | |
| A-12812 | |



DRILL 3/16" &
COUNTER SINK
5/16" x 1/16" DEEP
2 PLACES

DRILL / TAP 8/32
4 PLACES