



Operating Instructions

Three Phase Identification System TM

▲ CAUTION

The equipment covered in these operating instructions should be used by qualified employees trained in and familiar with the safety related work practices, safety rules and other safety requirements associated with this type of equipment. These instructions are not intended as a substitute for adequate training, nor do they cover all details or situations which could be encountered in relation to the operation of this type of equipment.

▲ WARNING

Use appropriate length live line tools for the voltage being worked and maintain minimum approach distances as outlined in OSHA 1910.269, Table E-6. Do not let live line tool fittings become grounded in any way. This may result in equipment damage, personal injury and/or death. Do not hold meter probe with bare or insulated hand, minimum live line tool length is 2 ft 1in.

Meter housing and any attachments shall be considered **non-insulating**. Meter should **NOT** be used as an insulating tool. The high voltage probe(s) shall be wiped clean prior to each use with a silicone impregnated cloth and kept clean and free of contaminants to prevent tracking on the outside of the probe, which could affect accuracy of the meter and/or failure, resulting in equipment damage, personal injury and/or death.

NOTICE

Before operating this equipment, read, understand and follow all instructions contained in this manual. Keep instructions with equipment.

DESIGN and FUNCTION

The 3 phase ID machine is designed to identify up to 3 shielded conductors before and after the center conductor is exposed while maintaining single or multiple ground connections. This unique tool features a transmitter module that produces 3 different signals and a passive receiver consisting of a current transformer with an audible/visual handheld display to indicate the correct phase conductors. This device will significantly reduce previously needed coordination resulting in time savings and eliminates safety concerns by maintaining ground connections during the entire process. The transmitter module is powered by two Milwaukee lithium ion M18 batteries and incorporates cam lock connectors to quickly interface different attachments such as C style, ball socket, and alligator clamps.

Operation for identifying shielded conductors before cut is made

- 1.1 Isolate conductor(s) to be tested at all possible connections, test for absence of voltage and apply grounds at all location(s).
- 1.2 Install charged and tested batteries into sender.
- 1.3 Remove grounds at location of sender.
- 1.4 Install and attach respective leads to all phase conductors.
- 1.5 Red on Phase 1A.
- 1.6 Yellow on Phase 2B.
- 1.7 Blue on Phase 3C.
- 1.8 Turn machine on.
- 1.9 Two sets of LED's should indicate continuity (solid) and applied signal (blinking).
- 1.10 Attach receiver clamp on to horn box, clamp around each phase cable to be identified. The clamp must be oriented with the arrow towards GROUND or away from the sender.
- 1.11 Listen for beeping that will indicate phase. If no audible signal is detected rotate sensitivity knob forward until you can hear the signal. The following repeating patterns will indicate phase.
- 1.12 Phase 1A: Beep – Off – Beep
- 1.13 Phase 2B: Beep, Beep – Off – Beep, Beep
- 1.14 Phase 3C: Beep, Beep, Beep – Off – Beep, Beep, Beep

Operation for identifying shielded conductors after cut is made

- 1.1 Attach receiver clamp on to horn box, clamp around each phase cable to be identified. The clamp must be oriented with the arrow towards GROUND or away from the sender.
- 1.2 Listen for beeping that will indicate phase. If no audible signal is detected rotate sensitivity knob forward until you can hear the signal. The following repeating patterns will indicate phase.
- 1.3 Phase 1A: Beep – Off – Beep
- 1.4 Phase 2B: Beep, Beep – Off – Beep, Beep
- 1.5 Phase 3C: Beep, Beep, Beep – Off – Beep, Beep, Beep
- 1.6 Mark identified phases.

Parts and Accessories

TPIDT	3 PHASE ID TRANSMITTER BOX
CT110	BIERER CLAMP ON CT
TPIDAVR	TPID AUDIO/VISUAL RECEIVER
M18B-2	MILWAKEE BATTERY, SET OF 2
M18B	MILWAKEE BATTERY, SINGLE
M18C	CHARGER, M18B
BLW	LARGE CASE W/O FOAM
TPIDBLW	LARGE CASE WITH FOAM
TPIDBSCK	CABLE KIT, BALL SOCKET CLAMP
TPIDTP75K	CABLE KIT, 3/4" C-CLAMP
TPIDACK	CABLE KIT, ALLIGATOR CLAMP
TPID115YKK	CABLE KIT, 15KV ELBOW, YELLOW, W/O GREEN
R1015M48BSC	CABLE, 8' #4, RED CAM TO BALL SOCKET CLAMP
Y1015M48BSC	CABLE, 8' #4, YELLOW CAM TO BALL SOCKET CLAMP
B1015M48BSC	CABLE, 8' #4, BLUE CAM TO BALL SOCKET CLAMP
G1015M48BSC	CABLE, 8' #4, GREEN CAM TO BALL SOCKET CLAMP
R1015M48115YK	CABLE, 8' #4, RED CAM TO 15KV ELBOW
Y1015M48115YK	CABLE, 8' #4, YELLOW CAM TO 15KV ELBOW
B1015M48115YK	CABLE, 8' #4, BLUE CAM TO 15KV ELBOW
R1015M48AC	CABLE, 8' #4, RED CAM TO ALLIGATOR CLAMP
Y1015M48AC	CABLE, 8' #4, YELLOW CAM TO ALLIGATOR CLAMP
B1015M48AC	CABLE, 8' #4, BLUE CAM TO ALLIGATOR CLAMP
G1015M48AC	CABLE, 8' #4, GREEN CAM TO ALLIGATOR CLAMP
R1015M48TP75	CABLE, 8' #4, RED CAM TO 3/4" C-CLAMP
Y1015M48TP75	CABLE, 8' #4, YELLOW CAM TO 3/4" C-CLAMP
B1015M48TP75	CABLE, 8' #4, BLUE CAM TO 3/4" C-CLAMP
G1015M48TP75	CABLE, 8' #4, GREEN CAM TO 3/4" C-CLAMP



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Operating Instructions
ACDM
Cable Identifier
Receiver



CAUTION

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NOTICE

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▲ DANGER ▲

DO NOT ATTACH TO ENERGIZED SOURCE.

▲ WARNING ▲

**Always install and remove the CT with the unit off.
Never clamp CT around a conductor until connected to unit.**

Limitation of Warranty and Liability

Bierer & Associates Inc. warrants this product to be free from defects in workmanship and material, under normal use and service conditions for a period of one year from date of shipment.

Due to continuous product improvement and development, Bierer & Associates Inc. reserves the right to modify product designs and specifications without notice.

It is impossible to eliminate all risks associated with the use of high voltage electrical devices including this device. Risks of serious injury or death are inherent in working around energized electrical systems. Such risks include but are not limited to variations of electrical systems and equipment, manner of use or applications, weather and environmental conditions, operator mentality, and other unknown factors that are beyond the control of Bierer & Associates Inc.

Bierer & Associates Inc. does not express or imply to be an insurer of these risks, and by purchasing or using this product you **AGREE TO ACCEPT THESE RISKS. IN NO EVENT SHALL Bierer & Associates Inc. BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.**

Design and Function

The ACDM Cable Identifier Receiver is an analog passive receiver for the DCI-50-CT, the DCI-100-CT, and the TPID transmitter. The kit includes a ACDM receiver and a B110 current clamp. The unit is designed to show a needle deflection in response to a dc pulse on the line in the direction the pulse is moving. The display is a centered needle display with a red and green area on either side, a green deflection indicates pulse moving in the same direction as the red arrow on the CT and a red deflection means the pulse is moving in the opposite direction.

ACDM SET-UP AND TEST

1. Using the instructions provided with the device being used to test with, set-up and install transmitter device.
2. Plug the CT into the unit.

▲WARNING▲

**Always install and remove the CT before use.
Never clamp CT around a conductor until connected to unit.**

3. Place CT around conductor being tested with the red arrow pointing to the grounded side.
4. The needle will deflect if the transmit signal is present.
5. A green deflection indicates it is the correct line in the correct direction.
6. A red deflection is either the return or the correct conductor with the ct installed backwards.

Note: typically, the return signal on a single conductor will be weaker than the primary signal as the signal is split amongst all the grounds

7. Once the correct cable has been identified. You can remove the CT from the unit.
8. Once the ct is not around the conductor any longer, you can remove the ct from the unit and return to its carry case.

