EXAMPLE

You wish to determine the phase sequence of a 220 volt, three phase, 60 cycle AC line.

Step 1. Using an AMPROBE Model RS-3 with a high voltage scale of 0-600 volts, no change of range is required, as this model normally reads up to 600 volts.

Step 2. Now measure the line voltage. In this example, the reading is 215 volts.

Step 3. Next, connect the black alligator clip of the AMPROBE Phase Sequence Adaptor to the voltage test leads of the AMPROBE RS-3 meter (See Fig. 1).

Caution: SEE THE CAUTION NOTE UNDER STEP 3 IN OPERATION SECTION.

Step 4. Connect the Red, Yellow and Black leads of the PSA-1 adaptor to the three phase lines in any order.

Step 5. Check meter for voltage reading.
There is a possibility that the indicating needle will read above the 600 volt limit of the AMPROBE voltage meter. Thjis will not damage your AMPROBE meter, however, this practice is not recommended for multimeters of different manufacture unless you are sure of their capabilities.

Step 5a. If the AMPROBE meter now indicates a reading of over 215 volts (higher than your initial line voltage reading), then you have established that the phase sequence of your circuit is:

BLACK-YELLOW-RED

or...

Step 5b. Should the AMPROBE meter now read lower than the initial reading of 215 volts, you have a phase sequence of:

RED-YELLOW-BLACK

or...

Step 5c. Of course, once the open phase situation is rectified, recheck for Phase Sequence by following steps 3, 4 and 5.

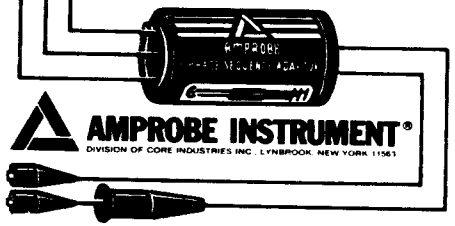
AMPROBE INSTRUMENT®
DIVISION OF CORE INDUSTRIES INC. LYNBROOK, NEW YORK 11563

PTD. IN U.S.A.

operating instructions

Manual AAO-15 2/81 PT. NO. 921750

PHASE SEQUENCE ADAPTOR MODEL PSA-1



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PRECAUTIONS FOR PERSONAL SAFETY

IMPORTANT:

1. Before using any electrical instrument or accessory for actual testing, the unit should be checked on known live line to make certain it is operating properly.
2. In many instances, you will be working with dangerous levels of voltage and/or current; therefore, it is important that you avoid direct contact with any uninsulated, current-carrying surfaces. Appropriate insulating gloves and clothing should be worn.

The AMPROBE® Phase Sequence Adaptor, Model PSA-1, when used in conjunction with **any AMPROBE** volt-ammeter or any multimeter that can measure AC voltage, will determine the phase sequence of a circuit.

Note: The Phase Sequence Adaptor can be used on circuits with line voltage up to 550 volts AC providing the AMPROBE instrument or multimeter used has a voltage range that goes above 550 volts. It will indicate between 25 and 60 cycles.

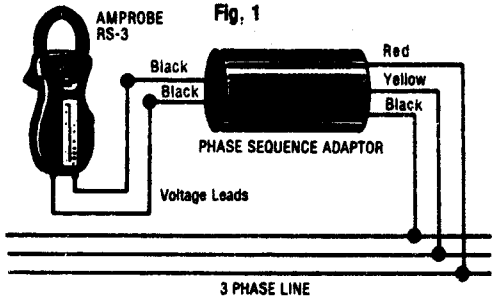

Fig. 1

OPERATION

Step 1. Set AMPROBE instrument or multimeter to proper voltage range.

Step 2. Measure line voltage before hooking up Phase Sequence Adaptor to instrument.

Step 3. Connect two black leads of Phase Sequence Adaptor to the voltage test leads of the meter. See Fig. 1.

Caution: Make certain that the insulating jackets of the AMPROBE instrument voltage test leads and the Phase Sequence Adaptor leads completely cover their alligator clips (Fig. 2a).

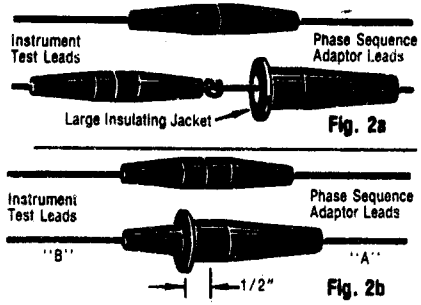

Fig. 2a

Fig. 2b

The large insulating jacket on one of the Phase Sequence Adaptor leads (lead "A" in fig. 2b) must be pushed up over the insulating jacket on the measuring instrument test lead (lead "B" in fig. 2b) so it covers at least 1/2 inch of the instrument lead insulating jacket (Fig. 2b). **This connection between the instrument test lead and the Phase Sequence Adaptor lead must not touch ground.**

When using AMPROBE EXTENDO LEADS, use with the insulated alligator clip adaptors. When using instruments with exposed test lead probe tips, make certain that one probe is inserted into the large insulating jacket far enough to cover 1/2 inch of the insulated section of the test probe.

Step 4. Connect Red, Yellow and Black adaptor leads to circuit in any color sequence or order.

Step 5. Check meter for voltage reading.

a. If meter reading is higher than the original circuit voltage measured in step #2, then the phase sequence is Black-Yellow-Red.

b. If meter reading is lower than the original circuit voltage measured in step #2, then the phase sequence is Red-Yellow-Black.

c. If meter reading is the same as the first reading then 1 phase is open.