

USING A CLAMP ON AMP/MULTIMETER PART I MEASUREMENT SELECTION

This is the range of settings for measuring current in AMPERES.

This is the range testing diodes or for the continuity of a circuit. The choice is made by pushing the select button.

This is the range of settings for measuring resistance in ohms. The symbol for OHMS is Ω .

There can be NO VOLTAGE at the points you are measuring or you'll blow a fuse inside the meter. Before taking a measurement **Always test the meter leads by touching them together** and making sure the reading is either 0 or very low.

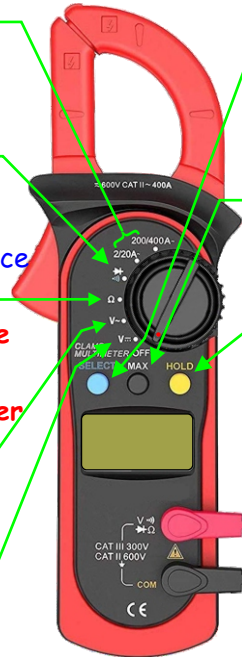
This is the range of settings for measuring **VOLTS AC**. The symbol for VOLTS AC is $V\sim$.

This is the range of settings for measuring **VOLTS DC**. The symbol for VOLTS DC is $V\text{---}$.

This button is used only to select diode or continuity tests.

This button will hold the maximum reading for all voltage and current tests and is very useful for motor testing.

This button will hold the reading when it is pressed and can be used on any test.



SYMBOLS USED

- $V\text{---}$ DC VOLTAGE
- $V\sim$ AC VOLTAGE
- Ω RESISTANCE (OHMS)
- \rightarrow DIODE TEST
- \rightarrow CONTINUITY
- 2/20A~2-20 AMP AC
- 200/400A~200-400 AMP AC

USING THE AC VOLTAGE SCALES

BE SURE POWER IS ON BEFORE TESTING FOR VOLTAGE!

TEST #1 fuse condition

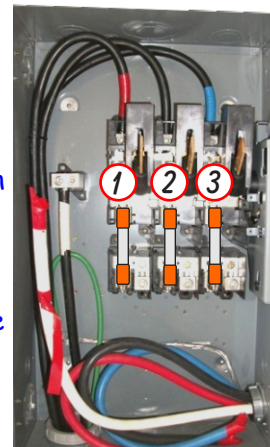
reading should be close to 0 Volts when the fuse is good.

AC VOLTS



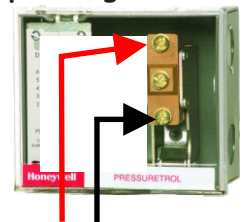
TEST #2 voltage present at the main panel

Place the meter lead on 1 and touch the other lead to 2 and 3. Do the same on 2, and 3. Between each terminal, there should be voltage readings of the line voltage (208-240 on 3 phase or, 110-130 single phase)



TEST #4

steam pressure switch operating condition



The AC voltage reading should be close to 0 V until the pressure reaches the set point of the switch. Then it will read the system operating voltage.

TEST #3 voltage present at contactor coil

Determine whether the contactor is AC and be sure that it should be energized while taking the voltage test. The voltage reading should be close to the rated voltage for the contactor coil.



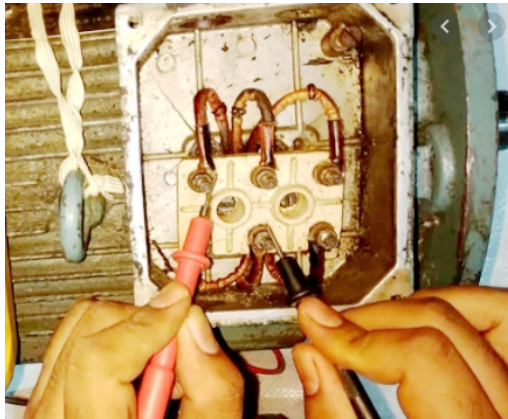
NOTES

1. VOLTAGE TESTING REQUIRES THE POWER TO BE ON.
2. CHECK THE METER LEADS BY FIRST TESTING AN ELECTRICAL OUTLET YOU KNOW IS GOOD.
3. WHEN RUNNING THE TESTS SHOWN HERE THE COLORED ARROWS INDICATE WHERE THE TIPS OF METER LEADS SHOULD BE PLACED. THE POSITION OF THE RED AND BLACK LEADS ARE INTERCHANGEABLE.

USING THE OHMS-RESISTANCE SCALE

BE SURE POWER IS OFF BEFORE TESTING FOR OHMS-RESISTANCE!

RESISTANCE
IN OHMS



TEST #1-motor winding condition

1. Set the meter on the resistance-ohm scale.
2. Measure from each motor winding to the motor frame. The reading should be O.L on the Meg Ohm scale ($M\Omega$). If it's not that indicates a shorted motor winding.
3. Read between any two winding, the reading should be very low ($2-10\Omega$), the important thing is they should be fairly close in resistance. If the readings are different by more than about 5 ohms, it likely indicates trouble.

TEST #2
solenoid coil condition



reading should be
 $40-400\Omega$ when
the coil is OK

NOTES

1. BE SURE POWER IS OFF BEFORE TESTING FOR OHMS-RESISTANCE.

2. Check the meter leads and battery before running tests by touching the ends of the meter leads together. readings should be 000, when not touching should be O.L .

3. When running the tests shown here the colored arrows show where the tips of the meter leads should be placed. The positions of the red and black leads are interchangeable.

USING THE CONTINUITY SCALE

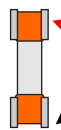
CONTINUITY

BE SURE POWER IS OFF BEFORE TESTING FOR CONTINUITY!



Use the select button to toggle between diode or continuity testing.

TEST #1
fuse condition



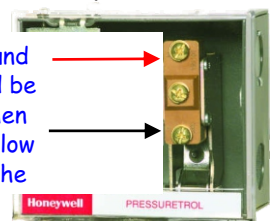
Buzzer should sound and reading should be close to 00Ω when the fuse is good.

TEST #3
wire identification using continuity



When you have a multi-wire cable and you need to identify an individual wire, place a meter lead on the wire and touch the other lead to each wire on the opposite end of the cable. The buzzer will sound and the reading should be close to 00Ω when the leads are on the same wire.

TEST #2
steam pressure switch



Buzzer should sound and reading should be close to 00Ω when the pressure is below the set point of the switch.

NOTES

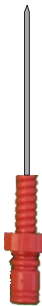
1. BE SURE POWER IS OFF BEFORE TESTING FOR CONTINUITY.

2. Check the meter leads and meter before running tests by touching the ends of the meter leads together. Readings should be 00Ω when touching and O.L. when not touching.

3. When running the tests shown here the colored arrows show where the tips of the meter leads should be placed. The positions of the red and black leads are interchangeable.

ON TARGET

CLAMP ON AMP/MULTIMETER KIT



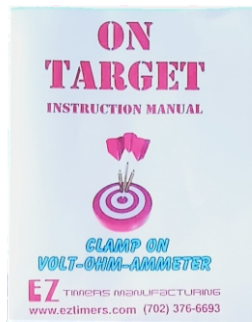
LONG
INSULATION
PIERCING PROBE



ALLIGATOR CLIP



WIRE GRABBER



INSTRUCTION
MANUAL



AUXILIARY
LEADS



GENERAL USAGE
METER LEADS

ROBUST CHEMICAL
RESISTANT
CARRY CASE



\$130

ON TARGET
CLAMP ON
AMP/MULTIMETER

**STOP PAYING TO HAUL
SEPARATOR WATER**

**REPLACE THAT ZEROWASTE
OR GALAXY**

SAHARA II
SEPARATOR WATER MISTER
SO RELIABLE, YOU'LL FORGET IT'S EVEN THERE

\$2,295

*MODELS FOR PERC SLIGHTLY HIGHER



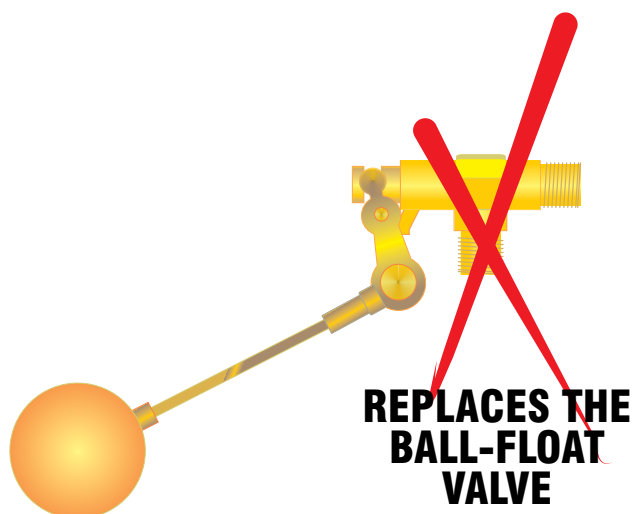
2 YEAR TOTAL WARRANTY

**Easy installation all parts
included**

**Complies with
environmental regulations**

**No costly filter cartridges
uses inexpensive
granulated carbon**

EZ - LEVEL
ELECTRONIC LEVEL CONTROL



**REPLACES THE
BALL-FLOAT
VALVE**

**END THOSE
TROUBLESOME
BALL FLOAT VALVE
HASSLES**



\$695

*REQUIRES 24 VAC SOLENOID

**Reduce boiler down time
Reduce water costs
Reduce sewage costs
Reduce boiler scaling
Reduce piping damage
Reduce service calls**