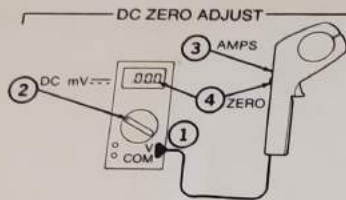# 80i-kW
CURRENT/POWER PROBE
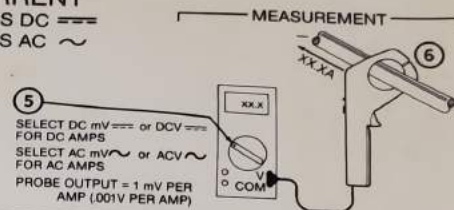
QUICK REFERENCE GUIDE

FLUKE

WARNING: TO AVOID ELECTRIC SHOCK OR EQUIPMENT DAMAGE, DO NOT USE ON BARE CONDUCTORS OR ON CIRCUITS WITH VOLTAGE EXCEEDING 660V
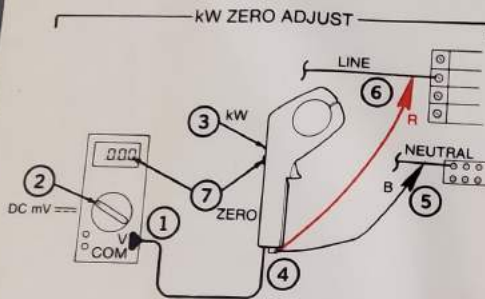⚠ **READ INSTRUCTION MANUAL BEFORE MAKING MEASUREMENTS**

CURRENT
AMPS DC ⎓
AMPS AC ∼

DC ZERO ADJUST

MEASUREMENT

SELECT DC mV ⎓ or DCV ⎓ FOR DC AMPS
SELECT AC mV ∼ or ACV ∼ FOR AC AMPS
PROBE OUTPUT = 1 mV PER AMP (.001V PER AMP)
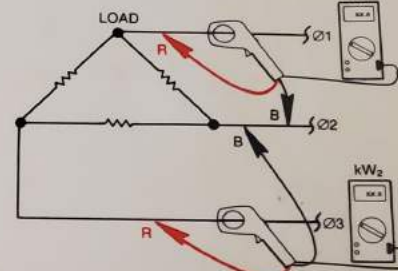
AC POWER
kW AC ∼

CONNECT VOLTAGE TEST LEADS BEFORE ZEROING
ADJUST ZERO BEFORE MEASURING

R = RED TEST LEAD
B = BLACK TEST LEAD
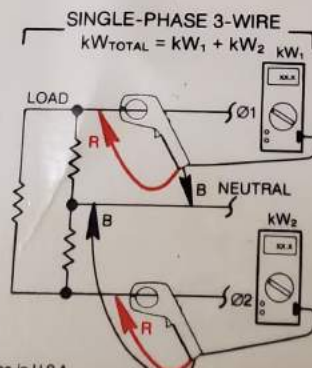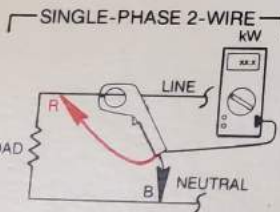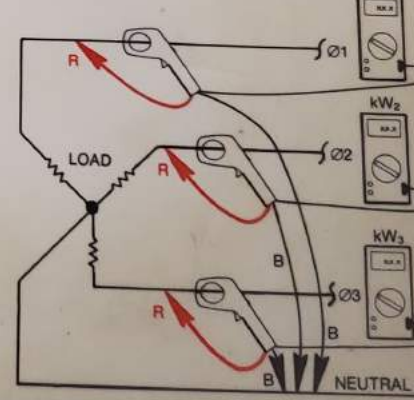PROBE OUTPUT = 1 mV DC PER kW AC (.001 VDC PER kW AC)

kW ZERO ADJUST

LINE

NEUTRAL

THREE-PHASE 3-WIRE DELTA or Y
$kW_{TOTAL} = kW_1 + kW_2$

LOAD
Ø1
Ø2
Ø3
kW_1
kW_2

THREE-PHASE 4-WIRE
$kW_{TOTAL} = kW_1 + kW_2 + kW_3$

LOAD
Ø1
Ø2
Ø3
kW_1
kW_2
kW_3
NEUTRAL

SINGLE-PHASE 3-WIRE
$kW_{TOTAL} = kW_1 + kW_2$

LOAD
Ø1
B NEUTRAL
Ø2
kW_1
kW_2

SINGLE-PHASE 2-WIRE

LINE
LOAD
NEUTRAL
kW

REV 1
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BATTERY REPLACEMENT
9V

$$POWER\ FACTOR = \frac{kW}{kVA}$$

kW = TOTAL POWER (SUM) IN ALL PHASES

$$kVA_{SINGLE\ PHASE} = \frac{V \times I}{1000}$$

$$kVA_{3-PHASE} = \frac{1.732 \times V \times I}{1000}$$

V = PHASE TO PHASE VOLTAGE (3-PHASE)
V = PHASE TO NEUTRAL VOLTAGE (SINGLE PHASE)
I = INDIVIDUAL PHASE CURRENT (BALANCED LOAD)