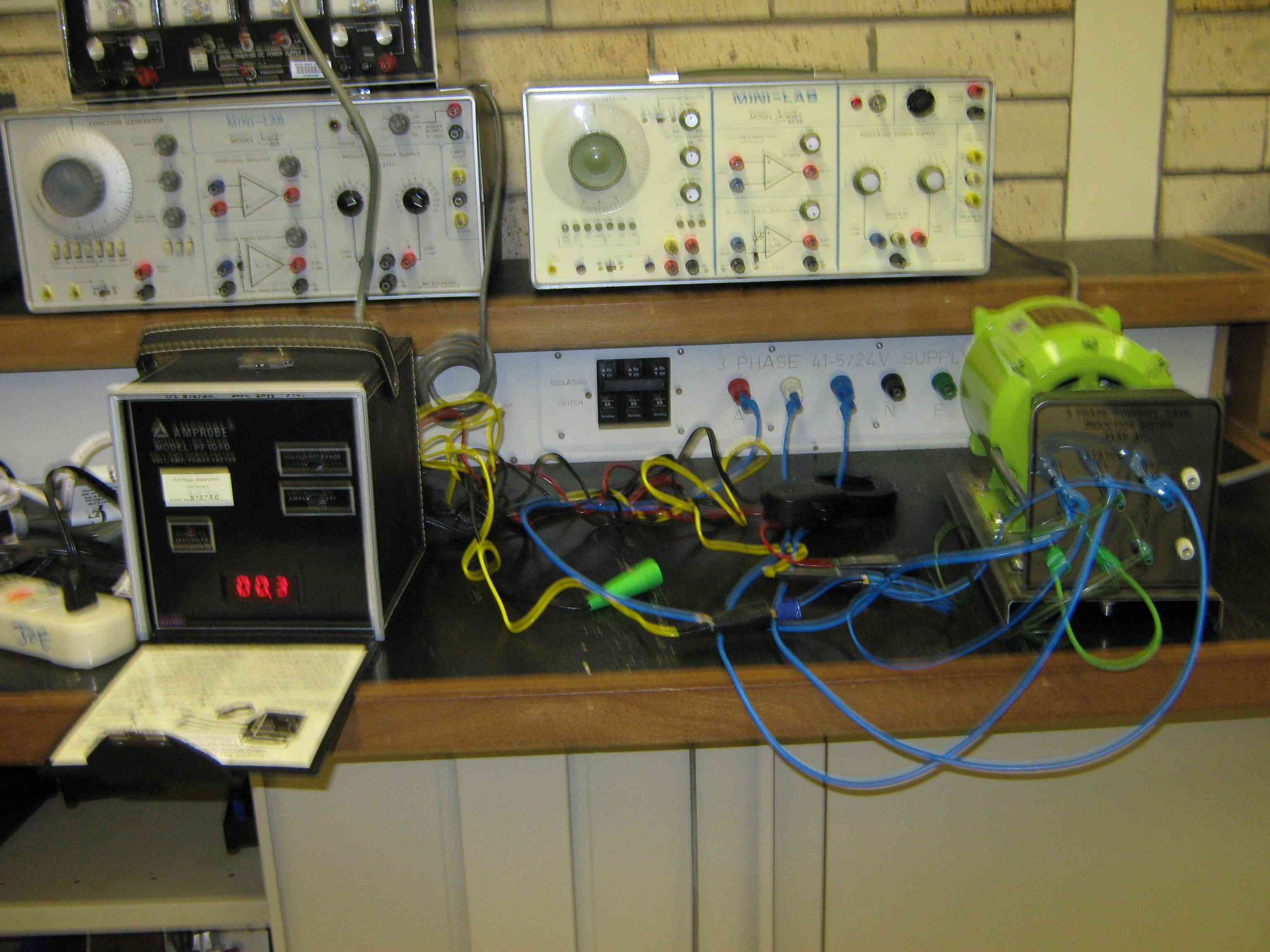

REGULATED POWER SUPPLY
3 PHASE 41-5/24V SUPP
ISOLATING
SWITCH
3 PHASE SQUIRREL CAGE
INDUCTION MOTOR
415V AC
STATOR
U1
V1
W1


FUNCTION GENERATOR
MINI-LAB
MODEL
REGULATED POWER SUPPLY
MINI-LAB
MODEL
REGULATED POWER SUPPLY
3 PHASE 41-5/24V SUPPLY
ISOLATING
SWITCH
AMPROBE
MODEL: PF1050
VOLT AMP POWER FACTOR

MINI-LAB

MODEL 603

MINI-LAB

MODEL 603B

3 PHASE 41-5/24V SUPPLY

ISOLATING SWITCH

A B C N E

AMPROBE®

MODEL: PF1050

VOLT/AMP/POWER FACTOR

ELECTRICAL ENGINEERING CERTIFICATE

PLANT NO B72720.

VOLTS/AMPS RANGE

LEADING P.F. INDICATOR

124.7

MINI-LAB

MODEL 603

MINI-LAB

MODEL 603B

FUNCTION GENERATOR

REGULATED POWER SUPPLY

ISOLATING SWITCH

3 PHASE 41-5/24V SUPPLY

A B C N E

AMPROBE®

MODEL: PF1050

VOLT/AMP/POWER FACTOR

VOLTS/AMPS RANGE

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DUAL TRACKING DC POWER SUPPLY

FUNCTION GENERATOR

MINI-LAB
MODEL 603

OPERATIONAL AMPLIFIER

BI-POLAR POWER SUPPLY

REGULATED POWER SUPPLY

MINI-LAB
MODEL 603B

3 PHASE 41-5/24V SUPPLY

ISOLATING SWITCH

AMPROBE®
MODEL: PF1050
VOLT/AMP/POWER FACTOR

ELECTRICAL ENGINEERING CERTIFICATE
PLANT NO 872720.

VOLTS/AMPS RANGE

LEADING P.F. INDICATOR

35.9

JOE

MINI-LAB
MODEL 603
OPERATIONAL AMPLIFIER
BI-POLAR POWER SUPPLY
POWER SUPPLY 0-200V
FUNCTION GENERATOR
MINI-LAB
MODEL 603B
VOLTAGE/OPERATIONAL AMPLIFIER
BI-POLAR POWER SUPPLY
REGULATED POWER SUPPLY
ISOLATING SWITCH
3 PHASE 41-5/24V SUPPLY
A B C N E
AMPROBE®
MODEL: PF1050
VOLT/AMP/POWER FACTOR
VOLTS/AMPS RANGE
ELECTRICAL ENGINEERING CERTIFICATE
PLANT NO 872720.
AMPS PF VOLTS
LEADING P.F. INDICATOR
24.7

FUNCTION GENERATOR

MINI-LAB
MODEL 603

OPERATIONAL AMPLIFIER

BI-POLAR POWER SUPPLY

REGULATED POWER SUPPLY

POWER SUPPLY 0-200V

FUNCTION GENERATOR

MINI-LAB
MODEL 603B

VOLTAGE/OPERATIONAL AMPLIFIER

BI-POLAR POWER SUPPLY

REGULATED POWER SUPPLY

ISOLATING SWITCH

3 PHASE 41-5/24V SUPPLY

A B C N E

AMPROBE®
MODEL: PF1050
VOLT/AMP/POWER FACTOR

VOLTS/AMPS RANGE

ELECTRICAL ENGINEERING CERTIFICATE
PLANT NO 272720.

AMPS PF VOLTS

LEADING P.F. INDICATOR

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AMPROBE®
MODEL: PF1050
VOLT/AMP/ POWER FACTOR
VOLTS/AMPS RANGE
ELECTRICAL ENGINEERING
CERTIFICATE
PLANT NO 272720.
AMPS
PF
VOLTS
00.3
BI-POLAR POWER SUPPLY
POWER AMPLIFIER
BWD ELECTRONICS
MELBOURNE AUSTRALIA
FREQUENCY
AMPLITUDE
ISOLATING
SWITCH
3 PHASE 41-5/24V SUPPLY
A B C N E

AMPROBE®
MODEL: PF1050
VOLT/AMP/POWER FACTOR
ELECTRICAL ENGINEERING CERTIFICATE
PLANT NO 272720.
VOLTS/AMPS RANGE
0-999 0-999
AMPS PF VOLTS
LEADING P F INDICATOR
24.7
ISOLATING SWITCH
3 PHASE 41-5/24V SUPPLY
A B C N E

OPERATIONAL AMPLIFIER

BI-POLAR POWER SUPPLY

REGULATED POWER SUPPLY

VOLTAGE/OPERATIONAL AMPLIFIER

3 PHASE 41-5/24V SUPPLY

ISOLATING SWITCH

AMPROBE®

MODEL: PF1050

VOLT/AMP/POWER FACTOR

VOLTS/AMPS RANGE

ELECTRICAL ENGINEERING CERTIFICATE

PLANT NO. 872720.

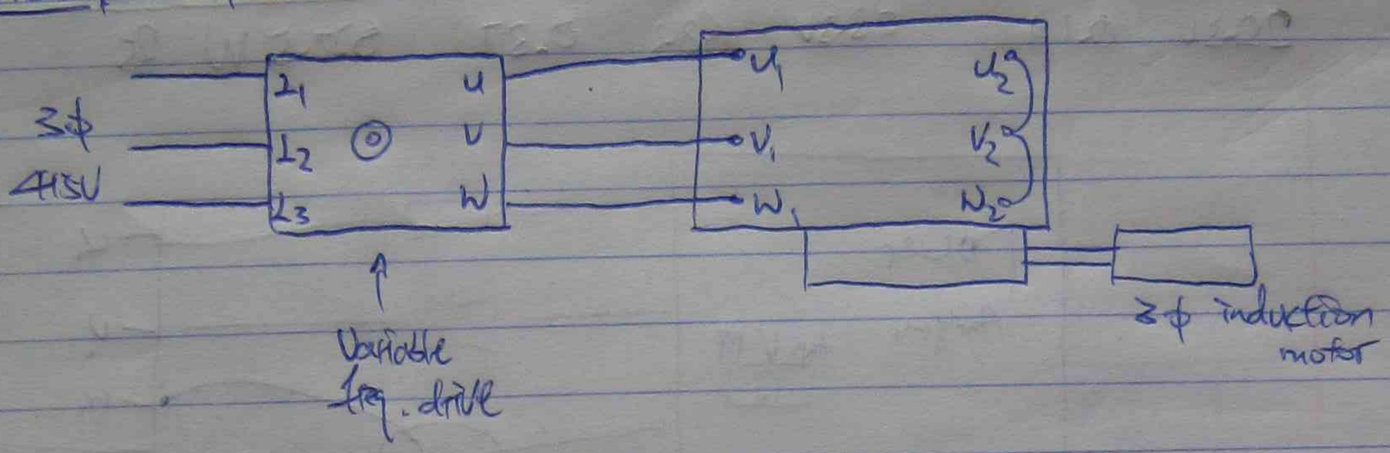
AMPS PF VOLTS

LEADING P.F. INDICATOR

99.1

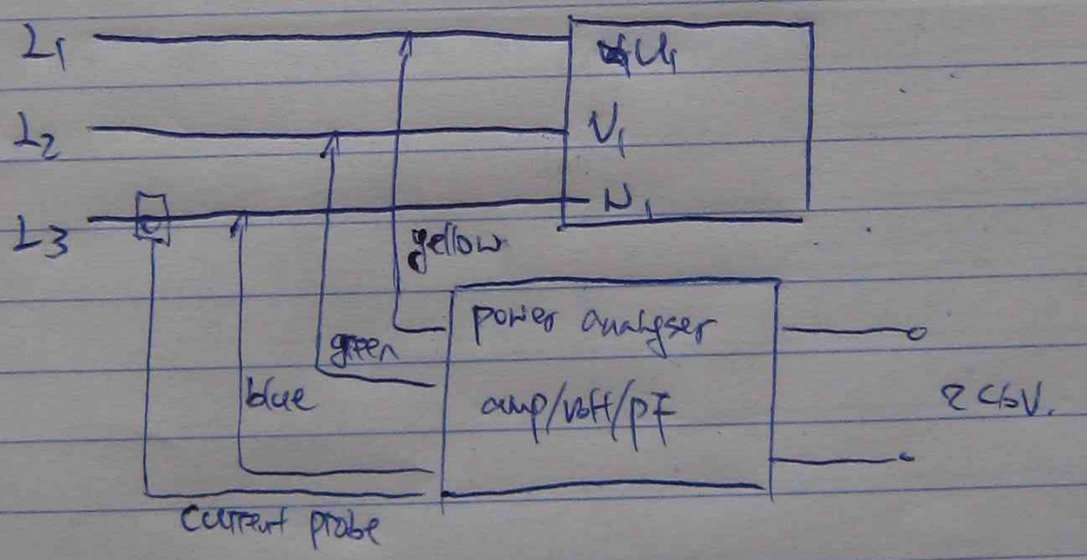
Kekun Chen ~~Kekun Chen~~

LAB #4 3ϕ Induction motor variable speed drive.



Frequency increase, speed of dc motor increase.

Lab5. 3ϕ Induction motor power/torque measurement & no load test



Phase Resistance

$W_1-W_2 = 4.3\Omega$

$U_1-U_2 = 4.3\Omega$

$V_1-V_2 = 4.3\Omega$

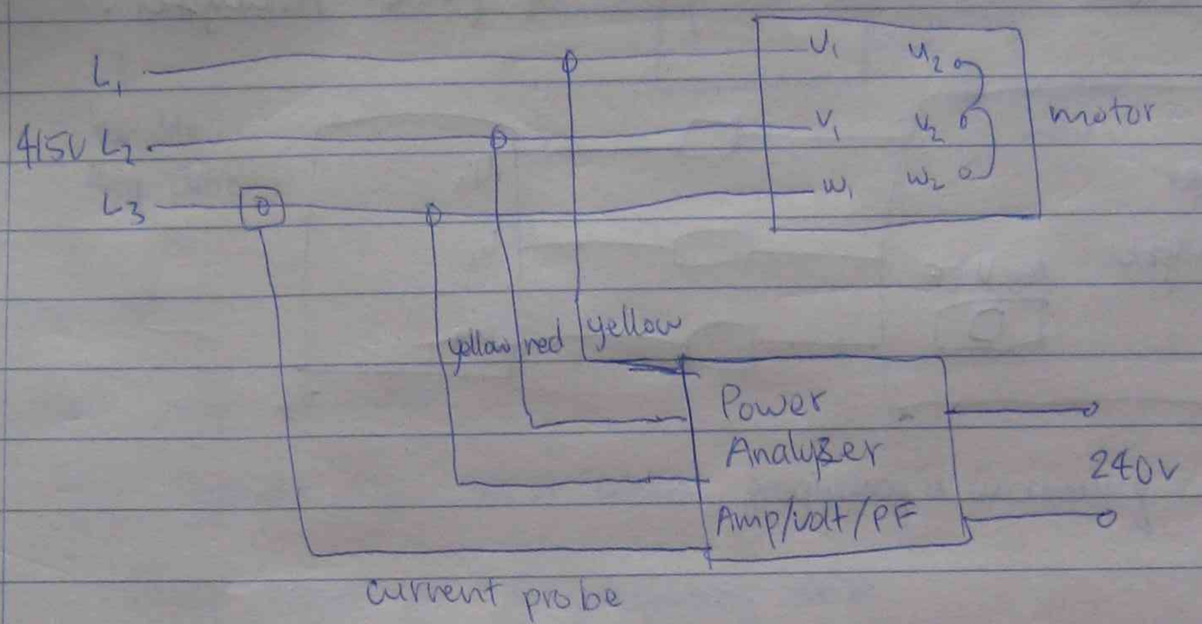
Amp = 0.1 A

Voltage = 25.5V

PF = 68.3

Lab 5 3ϕ induction motor power / torque measurement and no load test

1. Merge the phase ~~module~~ resistance of 3ϕ motor winding
2. connect the given circuit.



3. Run the motor and measure amp/volt/PF.

$V_{(ENL)}$	I	SNL $= V_1$	Q	PF- cos θ	$P_{NL} = 3VI \times PF$ power	$Q_{NL} = \sqrt{S_{NL}^2 - P_{NL}^2}$	$T = \frac{Power \times 9.5}{ns}$
25.5V	0.1A	25.5V	68.3	0.37	522.5W	25	

read n_s from Name Plate

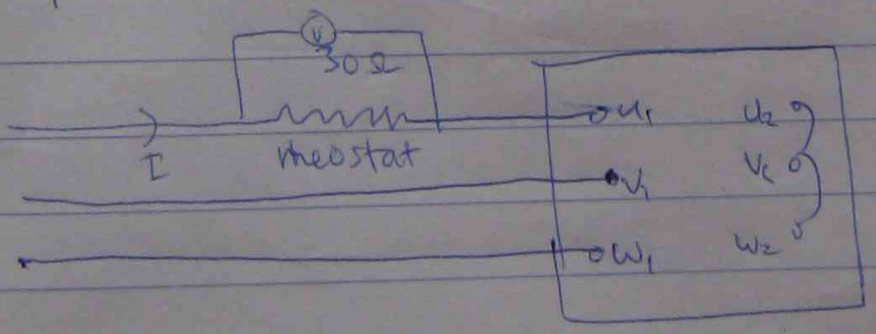
Phase Resistance

$U_1 - U_2 = 4.3\ \Omega$

$V_1 - V_2 = 4.3\ \Omega$

$W_1 - W_2 = 4.3\ \Omega$

If supply current is too low



$I = \frac{V}{30\Omega}$

To measure P.F, by pass rheostat