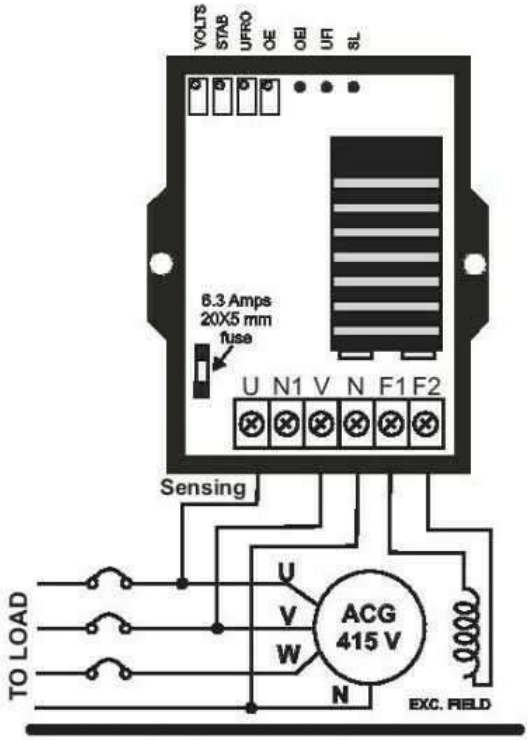
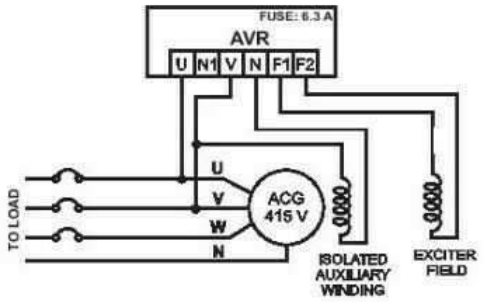
SPECIFICATIONS & TECHNICAL DETAILS OF AVR MODEL AG-120

NOTE: All potentiometers are 25 turns type. Its minimum to maximum value can be achieved by rotating 25 turns in either direction

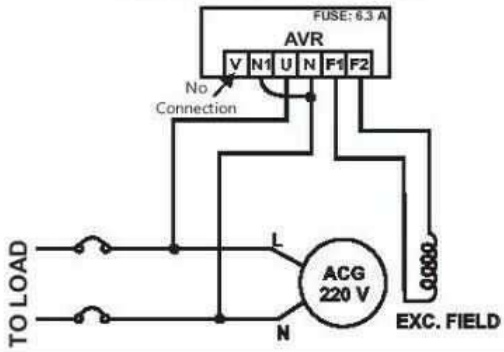
3 PHASE 415 V ALTERNATOR CONNECTIONS



CONNECTING ISOLATED AUXILIARY INPUT TO AVR FOR 3 PHASE 415 V ALTERNATOR



CONNECTING AVR TO 220 V SINGLE PHASE ALTERNATOR



WARNING: To prevent personal injury or equipment damage only qualified technician / operator should install, operate or service this device

CAUTION: While using meager & high potential equipment, disconnect all connections of AVR. Incorrect use of such equipments could damage components of AVR

VOLT:
Rotate these pot clockwise to increase AC terminal voltage and anticlockwise to decrease AC terminal voltage.

STAB:
Stability potentiometer is factory set such that optimum response of voltage recovery is achieved during sudden load changes. In some cases in order to release burden on engine it is required to sluggish the recovery time of voltage, therefore to increase the response time STAB potentiometer is carefully rotated anti clock wise direction such that response time will increase resulting larger dip in terminal voltage during sudden load. Kindly note that by excessively rotating STAB potentiometer to clock wise direction at one stage voltage will become unstable and cause hunting. Again by gradually rotating the STAB pot to anti clock wise direction will stabilize the generator voltage. **(It is advisable that only technically qualified person should adjust these pot.)**

UFRO:
The under frequency roll off (UFRO) is factory set at 47 Hz for 50 Hz generator. In case if it is required to set UFRO level for 60 Hz generator than remove 50/60 Hz link to set at 57 Hz. Under frequency activation is indicated by UFI LED. Additionally a UFRO potentiometer is provided on AVR if UFRO level is requred to set between frequency range from 45 Hz to 59 Hz.. Rotating UFRO potentiometer clock wise direction will set UFRO level in increasing frequency direction and rotating in anti clock wise direction will set to decreasing frequency.

OE:
Excitation field voltage exceeding its specified limit indirectly indicates alternator over load. AVR has in built accurate excitation voltage sensing circuitry to protect alternator windings from over load. DC field voltage monitored by AVR circuitry will cut off field supply after 20-25 seconds when field voltage exceeds preset value. The over excitation trip level is factory set to maximum 95 V DC. It will be required to set trip level by user as specified by excitation voltage on alternator name plate. The OE potentiometer is factory set to fully clock wise direction. By rotating the potentiometer to anti clock wise direction will set DC voltage trip level from maximum to downwards to 0 V DC. Vice versa rotating OE potentiometer to clock wise direction will set trip level from 0 V upwards to maximum. In order to set to set trip level apply full load on generator and then rotate OE potentiometer anti clock wise direction till OE LED turns ON. Once OE LED turns ON the timer will be activated and after 20-25 seconds field supply will be cut off. Tripping will be indicated OEI indicator LED.

SENSE LOSS (SL):
Input terminal marked as U is sensing Phase. In case if this input is disconnected than excitation reaches to maximum causing high output voltage to dangarous level, which may damage the running loads. In order to prevent high voltage issue AVR has built in sens loss proteciton. When ever sensing is lost the AVR will cut off the excitation power within 0.5 to 1 aseconds preventing high voltage. Sense Loss (SL) LED will indicate fault condition.

SPECIFICATIONS:

INPUT VOLTAGE	2 Phase(415 V) + N for 3 Ph. Alternator 1 Phase(230 VAC)+ N for 1 Ph. Alternator.
SENSING VOLTAGE	415 or 230 V AC (Refer Diagram)
OUTPUT EXCI. VOLTAGE	100 V DC
OUTPUT EXCI. CURRENT	6 A DC.
FIELD OHMS	MINIMUM 12 OHMS
INPUT FREQUENCY	50 / 60 Hz
RESIDUAL BUILD UP	5 V AC AT 50 Hz.
VOLTAGE REGULATION	+/- 1 %. Thermal drift 0.04 %per deg C
UNDER FREQUENCY (UFRO / UFI)	FACTORY SETTING 47 Hz, FOR 60 Hz REMOVE 50/60 Hz LINK. INDICATION BY UFI - LED
OVER EXCITATION VOLTAGE TRIP (OE SET / OEI LED)	10- 25 SECONDS DELAY TIMER. ADJUSTABLE POT RANGE 0 - 95V DC. INDICATION BY OEI - LED (Factory setting to max)
VIBRATION	20-100Hz 50 mm/sec 100Hz - 2 Khz 3.3g
OPERATING TEMPERATURE	-20 TO +70 ^{o}C
STORAGE TEMPERATURE	-20 TO +80 ^{o}C
RELATIVE HUMIDITY	0 TO +70 ^{o}C : 95 %
FUSE (FAST ACTING)	6.3 AMPS (SIZE: 20 X 5 mm)
DIMENSIONS (L X B X H)	106 X 70 X 35 mm
WEIGHT	240 gms