



EACH PHASE OF THE REGULATOR COMPRISES A MOTOR-DRIVEN VARIABLE AUTOTRANSFORMER, A BUCK-BOOST FIXED RATIO TRANSFORMER, AND A MANUAL RAISE/LOWER SWITCH. THE MICROPROCESSOR CONTROLLER AUTOMATICALLY POSITIONS EACH OF THE AUTOTRANSFORMERS TO HOLD THE OUTPUT VOLTAGE OF EACH PHASE CONSTANT. A RS-232 INTERFACE IS PROVIDED FOR REMOTE OPERATION AND MONITORING.

**SPECIFICATIONS:**

|                                |                              |
|--------------------------------|------------------------------|
| WAVEFORM DISTORTION            | ZERO                         |
| FREQUENCY RANGE                | 57Hz TO 63Hz                 |
| OUTPUT REGULATION              | ±1V                          |
| CONTROL BAND (USER SELECTABLE) | * ±0.5V, ±1.0V, ±2.0V, ±4.0V |
| CORRECTION RATE                | 19 VOLTS/SECOND              |
| INTERNAL IMPEDANCE             | LESS THAN 1%                 |
| PHASE SHIFT                    | NEGLIGIBLE                   |
| EFFICIENCY                     | 99% TYPICAL                  |
| TEMPERATURE RANGE              | 0°C (32°F) TO +40°C (104°F)  |

\* FACTORY SET AT ±0.5V

**WIRE RANGES FOR CUSTOMER WIRING:**  
INPUT/OUTPUT/NEUTRAL TERMINALS: (2) (500MCM-#4 AWG) COMPRESSION PER PHASE  
GROUND TERMINAL: (1) (2/0-#14 AWG) COMPRESSION

**CONTROLS:**  
MICROTERMINAL: THE TERMINAL IS PROVIDED FOR LOCAL CONTROL OF THE UNIT WITH AN LCD DISPLAY FOR OUTPUT VOLTAGE READINGS. SEE THE MP USER'S HANDBOOK (FORM #003-1622) FOR DETAILED INFORMATION.

CONTROLLER ON/OFF SWITCH: THIS SWITCH TURNS OFF POWER TO THE MICROPROCESSOR CONTROLLER ONLY.

MOTOR ON/OFF SWITCH: THIS SWITCH TURNS OFF POWER FROM THE MICROPROCESSOR TO EACH OF THE AUTOTRANSFORMER MOTORS.

RAISE/LOWER SWITCHES: THESE SWITCHES ARE LOCATED INTERNALLY AND ARE ACCESSIBLE FROM THE FRONT VIA THE REMOVABLE ACCESS PANEL. THE SWITCHES ALLOW FOR EACH PHASE OF THE REGULATOR TO BE MANUALLY CONTROLLED INDIVIDUALLY.

\*\* AT NOMINAL OUTPUT VOLTAGE INPUT VOLTAGE RANGE SHIFTS PROPORTIONALLY WITH OUTPUT VOLTAGE SETTINGS.

|   |                        |  |                    |
|---|------------------------|--|--------------------|
| THREE PHASE (INDIVIDUAL LINE CONTROL) 60 HZ   |                        |  |                    |
| OUTPUT VOLTAGE (ADJUSTMENT)   | INPUT VOLTAGE RANGE ** | MAXIMUM OUTPUT AMPERES   | RATED OUTPUT (KVA) |
| 480Y/277  | 432-528                | 400  | 333                |
| UNLESS OTHERWISE SPECIFIED, TOLERANCE IS *<br>DECIMALS .12 .002<br>XX .0005<br>XXX .005   |                        | UNITS IN (mm)  |                    |
| Holes .12<br>Angles 1°<br>Draft 1-1/2°  |                        | TITLE: SPEC. CONTROL DRAWING<br>AUTO. VOLTAGE REGULATOR<br>TYPE: CVR-48QCIY333 |                    |
| MATERIAL:   |                        | DRAWN BY: TIM RAU DATE: 3/12/97  |                    |
| ALL DIMENSIONS APPLY AFTER PLATING  |                        | FIRST USED ON: DO NOT SCALE DWG.   |                    |
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|   |                        | ENGINEER: DATE: SCALE: .2=1 SHEET 1 OF 2                                       |                    |



REMOVABLE ACCESS PANELS FRONT & REAR  
RECOMMENDED AREAS FOR CONDUIT ENTRY.