

**SILICON RECTIFIER POWER  
CONVERSION UNITS  
FOR  
LIFTING MAGNET SERVICE**

FILNOR CLASS 4010 TYPE FSR FULL-WAVE SILICON RECTIFIER POWER CONVERSION UNITS PROVIDE A SOURCE OF 230 VDC POWER FOR LIFTING MAGNETS ON AC CRANES AND OTHER INSTALLATIONS WHERE A DC BUS IS NOT AVAILABLE.

- **460/3/60 STANDARD INPUT.**
- **3KW TO 100KW CAPACITY, 230 VDC OUTPUT VOLTAGE.**
- **NEMA I VENTILATED ENCLOSURE.**
- **DESIGNED FOR CONTINUOUS OPERATION AT 100% RATED LOAD, 150% RATED LOAD FOR ONE (1) MINUTE OR 200% RATED LOAD FOR TEN (10) SECONDS BOTH PRECEDING AND FOLLOWING CONTINUOUS OPERATION AT RATED LOAD.**

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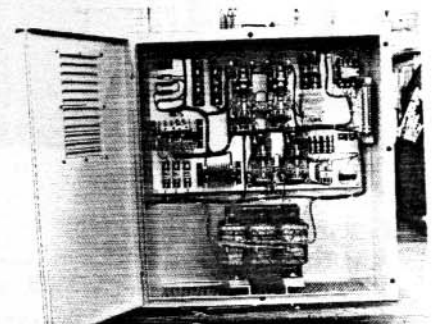
**STANDARD UNIT CONSISTS OF:**

- 3 - SEMICONDUCTOR TYPE FUSES FOR RECTIFIER PROTECTION.
- 1 - THREE PHASE, DRY TYPE ISOLATING TRANSFORMER WITH TWO (2) 2½% FULL CAPACITY TAP ABOVE AND TWO (2) 2½% FULL CAPACITY TAP BELOW NORMAL FOR LINE VOLTAGE ADJUSTMENT.
- 1 - THREE (3) PHASE, FULL WAVE BRIDGE, SILICON RECTIFIER ASSEMBLY.
- 1 - SELENIUM SURGE SUPPRESSOR.
- 2 - D.C. OUTPUT LINE FUSES.

**OPTIONAL FEATURES:**

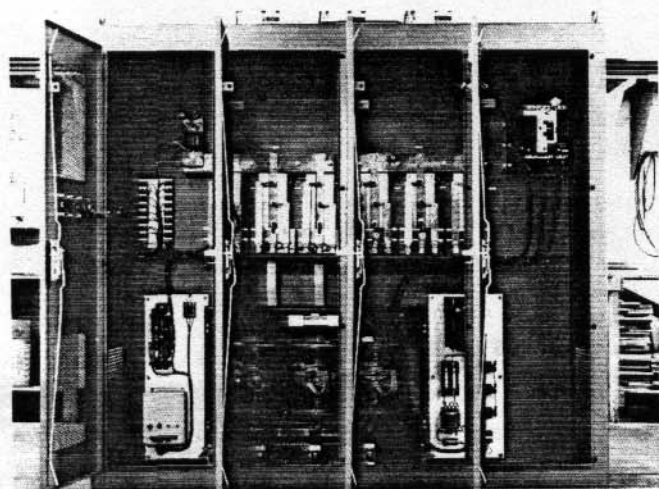
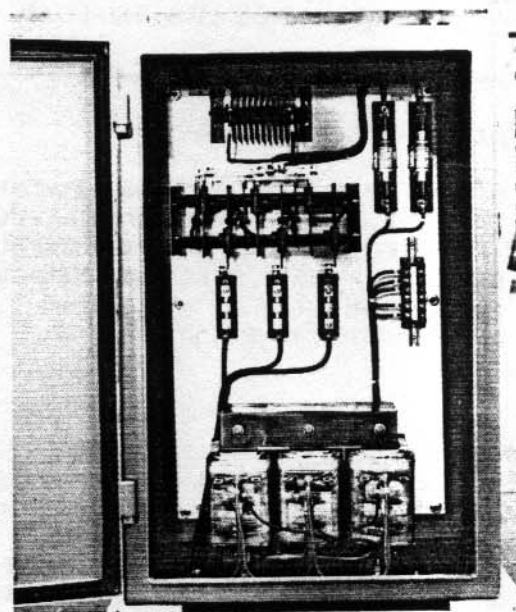
- A. NEMA 3R ENCLOSURES OR CUSTOM ENCLOSURES.
- B. 230/3/60 INPUT, 250 VDC OUTPUT AVAILABLE.
- C. FUSED 3-POLE LINE KNIFE SWITCH.
- D. 3-POLE LINE CIRCUIT BREAKER WITH EXTERNAL ROTARY OPERATING HANDLE.
- E. 3-POLE MAIN LINE AC CONTACTOR WITH TRANSFORMER AND FUSES.
- F. 3½" 0-300 VDC VOLTMETER, WIRED AND MOUNTED ON DOOR.
- G. 3½" 50MV AMMETER, WIRED AND MOUNTED ON DOOR, AND AMMETER SHUNT.
- H. THERMAL OVERLOAD RELAY WITH 3-HEATERS.
- I. START-STOP PUSHBUTTONS, WIRED AND MOUNTED ON DOOR.
- J. THERMAL SWITCHES IN TRANSFORMER WINDING.
- K. 460/3/60 INPUT, 115 VDC OUTPUT AVAILABLE.
- L. ADJUSTABLE DC OUTPUT AVAILABLE.

NOTE: RECTIFIERS USED ON LIFTING MAGNET SERVICE MUST BE SIZED TO SUPPLY CURRENT DRAWN BY A COLD MAGNET (25° C). COLD CURRENT IS GENERALLY RATED 30-50% HIGHER THAN OPERATING CURRENT.



**ORDERING INFORMATION REQUIRED:**

1. FILNOR CLASS 4010, KILOWATTS REQUIRED.
2. SYSTEM INPUT VOLTAGE, FREQUENCY, AND OUTPUT VOLTAGE.
3. ENCLOSURE TYPE.
4. MAGNET COLD CURRENT.
5. OPTIONS REQUIRED.



**ACCESSORIES:**

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|-------------------------------|------------------|
| MAGNET CONTROLLER .....       | CLASS 4130       |
| BATTERY BACK-UP SYSTEMS ..... | CLASS 4150       |
| UNITIZED ASSEMBLY .....       | REFER TO FACTORY |