

350 W, AC and DC Multiple Output Hot Swap Power Supplies

- Features
- ▶ Diode Isolated Outputs for Hot Swap
  - ▶ "Zero Wire" Slope Program Current Sharing for Redundancy
  - ▶ Self-Aligning Connector with Solid Metal Machined Contacts
  - ▶ Universal AC Input or 48 VDC Input
  - ▶ Dual Converter Design Eliminates Interaction Between Logic and Auxiliary Outputs

**Specifications**  
Overall Dimensions: 10.75" × 4.8" × 2.5".

**Adjustability:** Outputs 1 and 2, and 4 factory adjusted to nominal ±0.2%, output 3 tracks #2, initial accuracy ±3%.

**Line and Load Reg:** Outputs 1, 2 and 4 hold ±2% over AC input range and 0 to 100% load change (preprogrammed slope). Output #3 requires 20% minimum load on Outputs 2 and 3 to hold ±5%.

**Ripple and Noise:** 1% p-p or 100 mV, whichever is greater.

**Remote Sense (Output #1):** Compensates for 250 mV total line drop. Preprogrammed slope remains under ±3% worst case. Open sense lead protection.

**Temperature Coefficient (Outputs 1, 2 and 4):** 0.03% per degree C.

**Stability:** 0.1% over 8 hours after 30 minutes warm-up.

**Transient Response (Outputs 1, 2 and 4):** Output voltage returns to within 1% in less than 500 µs for a 50% load change (measured with rise time and fall time of 200µs). Peak transient does not exceed 5%.

**Overload Protection:** All outputs are protected against overload and short circuit. Automatic recovery upon removal of fault.

**Overvoltage Protection (Outputs 1 and 2):** Protects load against power supply induced over voltage. Trip point is factory set so that output voltage cannot exceed 136% of nominal.

TMX and RMX series power supplies can be operated in redundant configurations to achieve AC operation with battery backup capability.

RMX Series — 350 W, AC Multiple Output Power Supplies

- ▶ 350 W
- ▶ Power Factor Corrected
- ▶ Multiple Output, Hot Swappable

RMX series 350 W power supplies provide new and increased flexibility for configuring connector interface. Redundant "hot swappable" power systems using a standard product. The RMX-350 series eliminates the need for external sheet metal sleds, OR-ing diodes, and a high current interface. These switching power supplies are power factor corrected, multiple-output units which contain built-in Schottky OR-ing diodes and a high current. **Weight:** 3.5 lbs. **AC Input:** 90-264 VAC continuous range, 47 to 63 Hz. Internally fused for 7 A. **Power Factor:** 0.99 typical at full load, meets EN61000-3-2. **Inrush:** Cold start AC current is less than 30 A at 115 VAC and 60 A at 230 VAC, limited by thermistor. **Brownout Protection:** Holds regulation to 85 VAC. **Holdup Time:** 20 ms minimum after removal of power at full load. **Efficiency:** 70% typical. **AC Power Fail:** Provides TTL "0" 5 ms before output voltage goes out of regulation band upon loss of AC power.

| Stock No. | Mfr.'s Type  | Power (Watts) | Output 1    | Output 2          | Output 3    | Output 4     | EACH   |
|-----------|--------------|---------------|-------------|-------------------|-------------|--------------|--------|
|           |              |               |             |                   |             |              | 1-4    |
| 744-8451  | RMX-353-0512 | 350           | +5 V @ 50 A | +12 V @ 8/12 A pk | -12 V @ 4 A | —            | 571.20 |
| 744-8453  | RMX-354-1205 | 350           | +5 V @ 50 A | +12 V @ 8/12 A pk | -12 V @ 4 A | 5.2 V @ 5 A  | 571.20 |
| 744-8455  | RMX-354-1212 | 350           | +5 V @ 50 A | +12 V @ 8/12 A pk | -12 V @ 4 A | 12.0 V @ 5 A | 571.20 |
| 744-8457  | RMX-354-1224 | 350           | +5 V @ 50 A | +12 V @ 8/12 A pk | -12 V @ 4 A | 24.0 V @ 3 A | 571.20 |
| 744-8459  | RMX-354-1512 | 350           | +5 V @ 50 A | +15 V @ 4 A       | -15 V @ 4 A | 12.0 V @ 5 A | 571.20 |
| 744-8461  | RMX-354-1524 | 350           | +5 V @ 50 A | +15 V @ 4 A       | -15 V @ 4 A | 24.0 V @ 3 A | 571.20 |

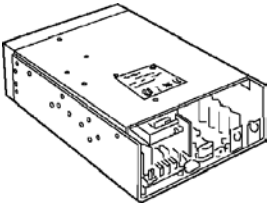
TMX Series — 350 W, DC Multiple Output Power Supplies

- ▶ 350 W
- ▶ Multiple Output
- ▶ 48 VDC Input, Hot Swappable

TMX series power supplies are designed to meet applicable Bellcore and NEBS standards, so they are readily operated from central office power (48 VDC). They are DC clones of Condor's RMX series power supplies. The RMX and TMX power supplies are directly interchangeable. They allow you to operate existing systems from AC or DC power without compromising performance or making any mechanical changes for mounting and cooling. **Weight:** 3.8 lbs. **DC Input:** 40-60 VDC, internally fused for 15 A. **Efficiency:** 75% typical. **Low Input:** Provides TTL "0" when input is below 40 VDC.

|          |              |     |             |                   |             |              |        |
|----------|--------------|-----|-------------|-------------------|-------------|--------------|--------|
| 744-8405 | TMX-353-0512 | 350 | +5 V @ 50 A | +12 V @ 8/12 A pk | -12 V @ 4 A | —            | 571.20 |
| 744-8407 | TMX-354-1205 | 350 | +5 V @ 50 A | +12 V @ 8/12 A pk | -12 V @ 4 A | 5.2 V @ 5 A  | 571.20 |
| 744-8409 | TMX-354-1212 | 350 | +5 V @ 50 A | +12 V @ 8/12 A pk | -12 V @ 4 A | 12.0 V @ 5 A | 571.20 |
| 744-8411 | TMX-354-1224 | 350 | +5 V @ 50 A | +12 V @ 8/12 A pk | -12 V @ 4 A | 24.0 V @ 3 A | 571.20 |
| 744-8413 | TMX-354-1512 | 350 | +5 V @ 50 A | +15 V @ 4 A       | -15 V @ 4 A | 12.0 V @ 5 A | 571.20 |
| 744-8415 | TMX-354-1524 | 350 | +5 V @ 50 A | +15 V @ 4 A       | -15 V @ 4 A | 24.0 V @ 3 A | 571.20 |

Power Factor Corrected, Single Output, Forced Current Sharing Power Supplies



- ▶ Forced Current Sharing for N +1 Redundancy
- ▶ Universal AC Input
- ▶ 0.99 Typical Power Factor
- ▶ Low Ripple and Noise
- ▶ DC Power Wood and AC Power Fail Signals
- ▶ True Remote Inhibit
- ▶ Monotonic Turn-On and Turn-Off

- ▶ 0.99 Typical Power Factor
- ▶ Low Ripple and Noise on All Outputs
- ▶ DC Power Good and AC Power Fail Signals
- ▶ True Remote Inhibit
- ▶ Monotonic Turn-On and Turn-Off

**Specifications (continued)**  
**Peak Output Current:** Dual current ratings define continuous and peak currents. The peak current shown can be delivered for a maximum period of 30 seconds.

**Remote Enable:** Contact closure to common turns on DC outputs (recessed pin for make last, break first" connection).

**Remote Inhibit:** Contact closure to the negative sense line or a TTL level "0" turns off DC outputs.

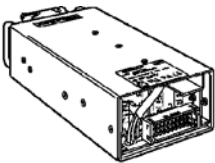
**DC Power Good:** Provides a TTL "1" open collector when output 1 is above 4.6 nominal.

**Redundancy:** Built-in OR-ing diodes, slope program current sharing on all outputs, and self aligning connector provide "hot swap" and "N+1" capabilities. Current sharing remains within 10% of the unit's full output rating while units are in thermal equilibrium.

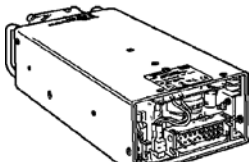
**Reverse Voltage:** Protected against reverse voltage up to supply current rating.

**Thermal Protection:** Shuts down power supply if overheated. Automatic recovery.

**Temperature Range:** 0-50°C to full ratings. Most models are approved to UL1950, CSA 22.2 #234; IEC 950 and TUV, EN60950, Class 1 SELV. CE 72/23/EEC/93/68EEC.



RMX



TMX

RMX-350 AC Input (90-264 VAC Continuous Range)

| Function                | 115 VAC                          | 230 VAC                           | Connector     |
|-------------------------|----------------------------------|-----------------------------------|---------------|
| J1-21<br>J1-23<br>J1-25 | Line<br>Neutral<br>Safety Ground | Line 1<br>Line 2<br>Safety Ground | See DC Output |

TMX-350 DC Input (40-60 VAC)

| Function                | 48 VDC                              | Connector     |
|-------------------------|-------------------------------------|---------------|
| J1-22<br>J1-24<br>J1-11 | +48 VDC<br>-48 VDC<br>Safety Ground | See DC Output |

DC Output

| Function | Location                      | Notes                                         | Connector                                   |
|----------|-------------------------------|-----------------------------------------------|---------------------------------------------|
| Output 1 | J1-10, 20, 30<br>J1-9, 19, 29 | Main Output<br>Rtn (Common)                   | Positronics#<br>PLC30M400A1-168.3           |
| Output 2 | J1-2<br>J1-3                  | Rtn (Common)                                  | Mates with panel<br>Mounted                 |
| Output 3 | J1-4<br>J1-3                  | Rtn (Common)                                  | PLC30F1000<br>Connector using               |
| Output 4 | J1-5<br>J1-6                  | (+) Floating<br>Output<br>(-) Floating Output | Crimp contacts<br>FC114N2<br>(14 to 16 AWG) |

Status and Control

| Function      | Location | Notes                                                           | Connector     |
|---------------|----------|-----------------------------------------------------------------|---------------|
| Remote Sense  | J1-18    | Output 1 Sense                                                  | See DC Output |
| Remote Sense  | J1-8     | Output 1 Sense Rtn                                              |               |
| DC Power Good | J1-7     | Reference to Common<br>when Output 1 Sense<br>Rtn is terminated |               |
| Enable        | J1-16    | Reference to Common                                             |               |
| Inhibit       | J1-27    | Reference to Common                                             |               |
| AC Power Fail | J1-17    | Reference to Common                                             |               |

500 Watts

| Stock No. | Mfr.'s Type | Volts  | Watts | Output Rating | Power Out | Dimensions Inches | EACH   |        |
|-----------|-------------|--------|-------|---------------|-----------|-------------------|--------|--------|
|           |             |        |       |               |           |                   | 1-4    | 5-24   |
| 744-0795  | SPF-500-12  | 90-264 | 500   | 12 V @ 42.0 A | 500       | 11.00 × 5 × 2.50  | 531.31 | 495.00 |
| 744-0835  | SPF-500-15  | 90-264 | 500   | 15 V @ 34.0 A | 500       | 11.00 × 5 × 2.50  | 531.31 | 495.00 |
| 744-0875  | SPF-500-24  | 90-264 | 500   | 24 V @ 21.0 A | 500       | 11.00 × 5 × 2.50  | 531.31 | 495.00 |
| 744-0910  | SPF-500-28  | 90-264 | 500   | 28 V @ 18.0 A | 500       | 11.00 × 5 × 2.50  | 531.31 | 495.00 |
| 744-0955  | SPF-500-48  | 90-264 | 500   | 48 V @ 10.4 A | 500       | 11.00 × 5 × 2.50  | 531.31 | 495.00 |

750 Watts

|          |            |        |     |               |     |                  |        |        |
|----------|------------|--------|-----|---------------|-----|------------------|--------|--------|
| 744-0800 | SPF-750-12 | 90-264 | 750 | 12 V @ 62.0 A | 750 | 12.92 × 5 × 2.50 | 855.58 | 796.17 |
| 744-0840 | SPF-750-15 | 90-264 | 750 | 15 V @ 50.0 A | 750 | 12.92 × 5 × 2.50 | 855.58 | 796.17 |
| 744-0880 | SPF-750-24 | 90-264 | 750 | 24 V @ 31.0 A | 750 | 12.92 × 5 × 2.50 | 855.58 | 796.17 |
| 744-0915 | SPF-750-28 | 90-264 | 750 | 28 V @ 27.0 A | 750 | 12.92 × 5 × 2.50 | 855.58 | 796.17 |
| 744-0960 | SPF-750-48 | 90-264 | 750 | 48 V @ 16.0 A | 750 | 12.92 × 5 × 2.50 | 855.58 | 796.17 |

1000 Watts

|          |             |        |      |               |      |                  |         |         |
|----------|-------------|--------|------|---------------|------|------------------|---------|---------|
| 744-0885 | SPF-1000-24 | 90-264 | 1000 | 24 V @ 42.0 A | 1000 | 12.00 × 8 × 3.38 | 1208.78 | 1134.92 |
| 744-0920 | SPF-1000-28 | 90-264 | 1000 | 28 V @ 36.0 A | 1000 | 12.00 × 8 × 3.38 | 1208.78 | 1135.00 |
| 744-0965 | SPF-1000-48 | 90-264 | 1000 | 48 V @ 21.0 A | 1000 | 12.00 × 8 × 3.38 | 1208.78 | 1135.00 |