

### 1.1 Input Characteristics

|                          |                 |
|--------------------------|-----------------|
| AC input voltage rating  | 220Vac          |
| AC input voltage range   | 100Vac – 240Vac |
| AC input frequency range | 47Hz ~ 63Hz     |
| Input current            | 0.84A Max.      |
| Input Power              | 100W Max.       |
| Power factor             | 0.5 Min         |
| Efficiency               | 83% Min         |

### 1.2 Output Characteristics

|                    |           |
|--------------------|-----------|
| Output Voltage     | 24.0V     |
| Rated load current | 3.5A      |
| Peak load current  | 4.0A      |
| Rated Output Power | 84W       |
| Min. load current  | 100mA     |
| Output Tolerance   | ±5%       |
| Ripple and Noise   | 1000mVp-p |

### 1.3 Performance Specifications

|                 |     |
|-----------------|-----|
| Line Regulation | ±5% |
| Load Regulation | ±5% |

### 1.4 Protection Features

|                                 |                                     |
|---------------------------------|-------------------------------------|
| Over Current Protection         | Output shut down with auto-recovery |
| Short Circuit Protection        | Output shut down with auto-recovery |
| Over Voltage or Load Protection | Output shut down with auto-recovery |
| Over Temperature Protection     | Output shut down with auto-recovery |

### 1.5 Environments

|                       |                 |
|-----------------------|-----------------|
| Operating Temperature | -20°C to +50°C  |
| Storage Temperature   | -30°C to +70°C  |
| Operating Humidity    | 20% to 90% R.H. |
| Storage Humidity      | 0% to 95% R.H.  |

### 1.6 Dielectric Withstand Voltage (Hi-Pot)

|                                   |                     |
|-----------------------------------|---------------------|
| condition : non operating         |                     |
| Test Point : primary to secondary | 3.0KVac, 10mA, 3Sec |

### 1.7 Insulation Resistance

|                                   |                               |
|-----------------------------------|-------------------------------|
| condition : non operating         |                               |
| Test Point : primary to secondary | Greater than 100MΩ at 500 VDC |

## 2 Performance Evaluation

This session presents the test results of SMPS module up to data. Results on inrush current and safety test are not included and will be added when they become available. Overall, the module meets design specifications.

### 2.1 Input Characteristics

#### 2.1.1 Input current and Standby power

The module was tested at different input voltages (from 200Vac to 240Vac)

##### Standby power at min. load

|               |        |        |        |
|---------------|--------|--------|--------|
| Input Voltage | 200Vac | 220Vac | 240Vac |
| Pin (mW)      | 1.52W  | 1.62W  | 1.67W  |

##### Input current at full load

|                   |        |        |        |
|-------------------|--------|--------|--------|
| Input Voltage     | 200Vac | 220Vac | 240Vac |
| Input Current (A) | 0.90A  | 0.84A  | 0.78A  |

##### Efficiency

|                  |        |        |        |
|------------------|--------|--------|--------|
| Input Voltage    | 200Vac | 220Vac | 240Vac |
| Input Power (W)  | 96.5W  | 96.3W  | 96.2W  |
| Output Power (W) | 84W    | 84W    | 84W    |
| Power factor     | 0.53   | 0.51   | 0.50   |
| Efficiency (%)   | 87%    | 87%    | 87%    |

### 2.2 Output Characteristics

#### 2.2.1 Line Regulation & Load Regulation

| Input Voltage | Output Voltage (V) |           |          |
|---------------|--------------------|-----------|----------|
|               | Min Load           | Nor. Load | Max Load |
| 200Vac        | 24.07V             | –         | 23.90V   |
| 220Vac        | 24.07V             | –         | 23.90V   |
| 240Vac        | 24.07V             | –         | 23.90V   |

#### 2.2.2 Ripple & Noise

Ripple & Noise measure results

| Input Voltage | Ripple & Noise (mV) |          | Remark |
|---------------|---------------------|----------|--------|
|               | Min Load            | Max Load |        |
| 200Vac        | –                   | 300mV    |        |
| 240Vac        | –                   | 300mV    |        |

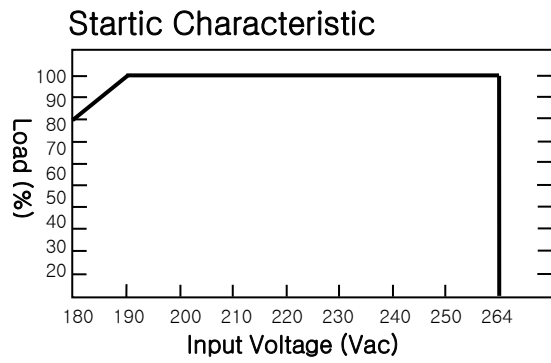
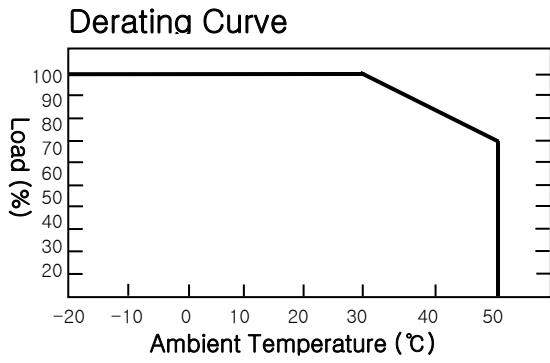
Note: Ripple & noise were measured at DC Cable end with a 0.1uF/50V ceramic cap connected in parallel with a 47uF/50V Electrolytic cap. Bandwidth was limited to 20MHz.

### 2.3 Protections

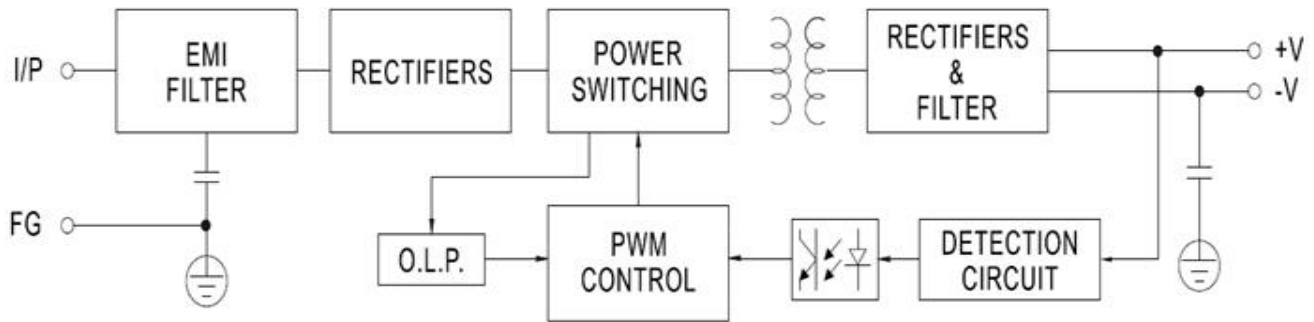
#### 2.3.1 Over Current Protection (OCP)

The power supply will shut down auto-recovery when output current exceeds up load 100%, and it should recover when the over current condition is removed.

### 3 load Characteristic Curve



### 4 Block Diagram



### 5 Case size

