

### 15W Desk Top Switching Power Supplies For Industrial Equipment

#### Description:

The IPU16A series of AC/DC switching mode power supplies provide 15 Watts of continuous output power and is well-suited for a variety of applications. All supplies are UL 94V-1 min compliant. All model meet FCC Part-15 class B and CISPR-22 class B emission Limits and are designed to comply with UL/c-UL(UL 60950-1), TUV/GS(EN 60950-1) and new CE requirements. All units are 100% burned-in and tested.

#### Features:

- Wide Input Voltage 90 to 264VAC, 47 to 63 Hz
- IEC-320-C14 Input Inlet
- Optional Output Connector (See appendix)
- Single Output
- Energy Star 2.0, Efficiency level V
- Class I
- Operating temperature -20~70°C
- 3 year warranty



#### Safety Approvals:



#### Electrical Characteristics:

| Sym.  | Parameter                     | Test Conditions                                      | Min.             | Typ. | Max. | Unit |   |
|-------|-------------------------------|------------------------------------------------------|------------------|------|------|------|---|
| Vin   | Input Voltage                 | Operating Voltage                                    | 90               |      | 264  | VAC  |   |
| fin   | Input Frequency               |                                                      | 47               |      | 63   | Hz   |   |
| Po    | Output Power Range            | Vin=90 to 264VAC                                     |                  |      | 15   | W    |   |
| Vo    | Output Voltage Range          |                                                      | See rating chart |      |      | V    |   |
| Io    | Output Current Range          |                                                      | See rating chart |      |      | A    |   |
| Iil   | Input Current (Low Line)      | Io=Full load, Vin=115VAC                             |                  |      | 0.4  | A    |   |
| Iih   | Input Current (High Line)     | Io=Full load, Vin=230VAC                             |                  |      | 0.26 | A    |   |
| Irl   | Low Line Inrush Current       | Io=Full load, 25 c, Cool start, Vin=115VAC           |                  | 12   | 15   | A    |   |
| Irh   | High Line Inrush Current      | Io=Full load, 25 c, Cool start, Vin=230VAC           |                  | 26   | 30   | A    |   |
| Eff   | Efficiency                    | Io=Full Load, Vin=230VAC                             | 72               |      | 85   | %    |   |
| REG-i | Line Regulation               | Io=Full Load                                         |                  | 0.5  | 1    | %    |   |
| REG-o | Load Regulation               | Vin=230VAC                                           |                  | 3    | 10   | %    |   |
| OVP   | Over Voltage Protection       |                                                      | Nil              |      |      | %    |   |
| OCP   | Over Current Protection       | Nil.But,Output protected to short circuit conditions |                  |      |      |      | % |
| Ttr   | Time of Transient Response    | Io=Full Load to Half Load, Vin=100VAC                |                  |      | 4    | mS   |   |
| Thold | Hold-Up Time                  | Io=Full Load, Vin=110VAC                             | 5                |      |      | mS   |   |
| Ts    | Start Up Time                 | Io=Full Load, Vin=100VAC                             | 0.3              | 1    | 2    | S    |   |
| Vrn   | Ripple & Noise (Peak to Peak) | Full Load, Vin=90VAC                                 |                  | 0.5  | 1    | %    |   |
| Ilk   | Safety Ground Leakage Current | Io=Full Load, Vin=240VAC                             |                  | 0.5  | 0.75 | mA   |   |
| TC    | Temperature Coefficient       | All output                                           | -0.04            |      | 0.04 | %/ c |   |
| Pno   | No-Load Power Consumption     | No load, Vin=240VAC                                  | 0                | 0.4  | 0.5  | W    |   |

\* Note: The Ripple & Noise which is under 3.3VCD at 2% max

#### Environmental :

| Sym.  | Parameter                                                   | Test Conditions | Min. | Typ. | Max. | Unit |
|-------|-------------------------------------------------------------|-----------------|------|------|------|------|
| Toper | Operating Temperature                                       |                 | -20  |      | 70   | °C   |
| Tstg  | Storage Temperature                                         |                 | -40  |      | 85   | °C   |
| Hr    | Relative Humidity                                           |                 | 5    |      | 95   | %    |
| MTBF  | Operating Temperature at 25°C, Calculated per MIL-HDBK-217F |                 | 0.1M |      |      | Hrs  |
| Pd    | Derate linearly from 100% load at 40°C to 50% load at 70°C  |                 |      |      |      |      |

# IPU 16A SERIES

## 15W Desk Top Switching Power Supplies For Industrial Equipment

### Safety Specifications:

| Sym.  | Parameter                                                | Test Conditions      | Min. | Typ. | Max. | Unit  |
|-------|----------------------------------------------------------|----------------------|------|------|------|-------|
| Vps   | Dielectric Withstanding Voltage for Primary to secondary | Primary to secondary | 4242 |      |      | VDC   |
| Vpg   | Dielectric Withstanding Voltage for Primary to Ground    | Primary to ground    | 2121 |      |      | VDC   |
| Ris   | Isolation Resistance                                     | Test Voltage=500VDC  | 50   |      |      | M Ω   |
| CISPR | EMI requirements for CISPR-22                            | Vin=220VAC           | B    |      |      | CLASS |
| FCC   | EMI requirements for FCC PART-15                         | Vin=110VAC           | B    |      |      | CLASS |

### Output Voltage And Current Rating Chart ( Single Output ) :

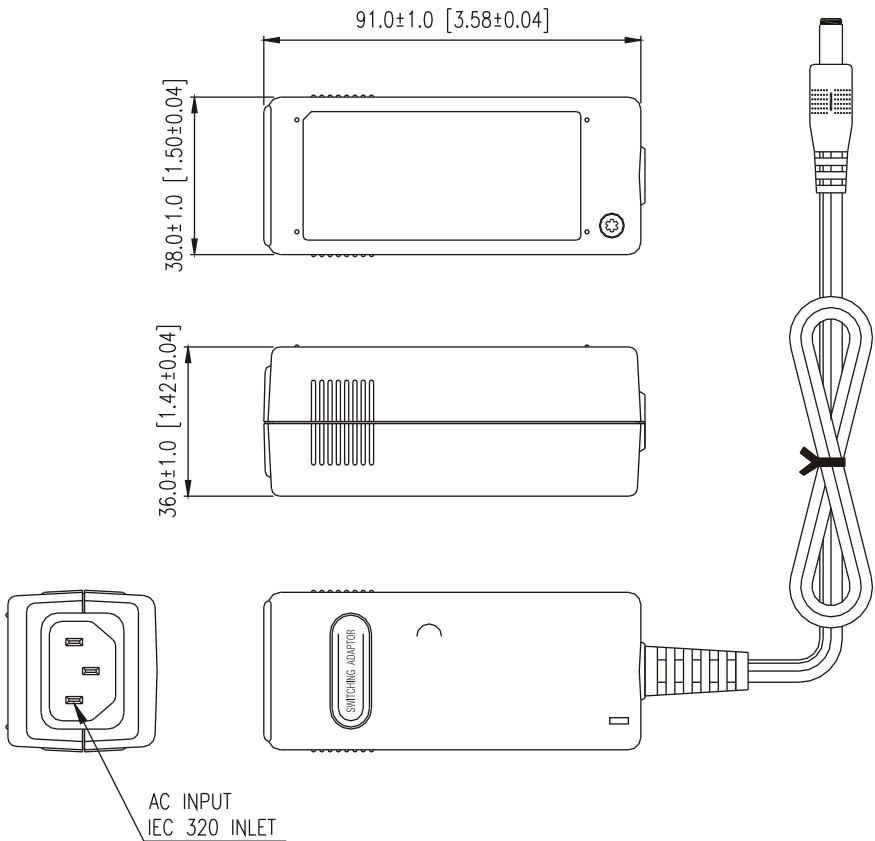
| Model Number | Output Voltage | Output Current | Total Regulation | Maximum Output Power |
|--------------|----------------|----------------|------------------|----------------------|
| IPU16A-101   | 3 ~ 5 VDC      | 2.50 A max     | 7%               | 12W                  |
| IPU16A-102   | 5 ~ 6 VDC      | 2.50 ~ 2.00 A  | 5%               | 12W                  |
| IPU16A-103   | 6 ~ 8 VDC      | 2.00 ~ 1.50 A  | 5%               | 12W                  |
| IPU16A-104   | 8 ~ 11 VDC     | 1.87 ~ 1.36 A  | 5%               | 15W                  |
| IPU16A-105   | 11 ~ 13 VDC    | 1.36 ~ 1.15 A  | 5%               | 15W                  |
| IPU16A-106   | 13 ~ 16 VDC    | 1.15 ~ 0.94 A  | 5%               | 15W                  |
| IPU16A-107   | 16 ~ 21 VDC    | 0.94 ~ 0.72 A  | 5%               | 15W                  |
| IPU16A-108   | 21 ~ 27 VDC    | 0.72 ~ 0.55 A  | 5%               | 15W                  |
| IPU16A-109   | 27 ~ 33 VDC    | 0.55 ~ 0.45 A  | 5%               | 15W                  |
| IPU16A-110   | 33 ~ 40 VDC    | 0.45 ~ 0.37 A  | 3%               | 15W                  |
| IPU16A-111   | 40 ~ 48 VDC    | 0.37 ~ 0.31 A  | 3%               | 15W                  |

Mark " \* " means approved by TUV/PSE.

The model number of 101 had been approved by CEC level IV.

The model number of 102~111 had been approved by CEC level V.

### Mechanical Specifications :



Note:  
1. Dimensions are shown in mm.  
2. Weight: 165gs approx.  
3. Optional output connector:  
See page Appendix.