



Medical



Industrial

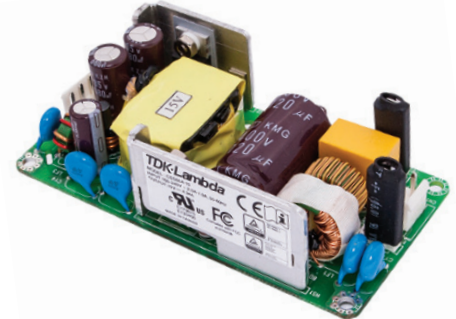


Comm



Broadcast

## 2 x 4" 40-65W AC-DC Medical & ITE Power Supplies

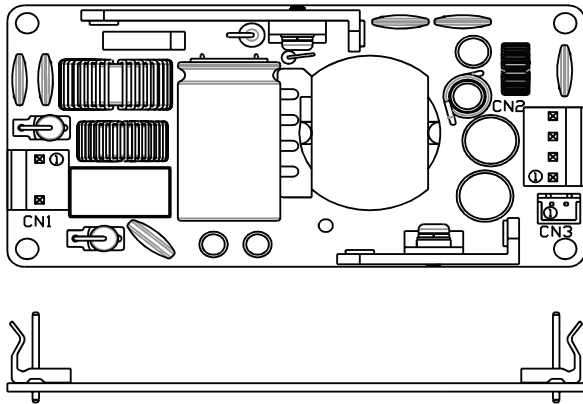


| Features                      | Benefits                        |
|-------------------------------|---------------------------------|
| • Industry Standard Footprint | • Availability to Second Source |
| • Wide Range AC Input         | • Global Operation              |
| • Dual Input Fuses            | • Easier System Compliance      |

| Specification               |      |                                                                                                                 |
|-----------------------------|------|-----------------------------------------------------------------------------------------------------------------|
| Model                       |      | CSS65A                                                                                                          |
| Input Voltage Range         | -    | 90 - 264VAC (47 - 63Hz)                                                                                         |
| Inrush Current (115/230VAC) | A    | Less than 45A / 90A, 25°C ambient cold start                                                                    |
| Input Current (115/230VAC)  | A    | 2 / 1                                                                                                           |
| Leakage Current             | uA   | <250uA 264VAC 63Hz                                                                                              |
| Touch Current               | uA   | <100uA 264VAC 63Hz                                                                                              |
| Hold Up Time (Typ)          | ms   | >10ms at 115VAC input                                                                                           |
| Off-Load Power Consumption  | W    | <75mW                                                                                                           |
| Average Efficiency          | %    | 5V: 86%, 12-54V: 89%                                                                                            |
| Temperature Coefficient     | %/°C | ±0.05%/°C                                                                                                       |
| Output Voltage Accuracy     | %    | ±1%                                                                                                             |
| Output Adjustment Range     | -    | None                                                                                                            |
| Remote Sense                | -    | Yes                                                                                                             |
| Minimum Load                | A    | None                                                                                                            |
| Output Regulation           | %    | 5V: ±5%, 12-28V: ±3%, 48-54V: ±2%                                                                               |
| Ripple & Noise              | %    | See Model Selector                                                                                              |
| Overcurrent Protection      | -    | 110 - 180%, Auto-Recovery                                                                                       |
| Overvoltage Protection      | V    | 110 - 130% of nominal (Cycle input power to reset)                                                              |
| Operating Temperature       | °C   | 0°C to +70°C derate linearly to 50% load from 50°C to 70°C                                                      |
| Storage Temperature         | °C   | -40°C to +85°C                                                                                                  |
| Humidity (non condensing)   | %RH  | 10 - 90%RH                                                                                                      |
| Cooling                     | -    | Convection                                                                                                      |
| Withstand Voltage           | VAC  | Input to Ground 1.5kVAC, Input to Output 4kVAC (Reinforced)<br>(2 x MOPPS), Output to Ground 1.5kVAC (1xMOPPS). |
| Isolation Resistance        | MΩ   | >20MΩ at 25°C & 70%RH, Output to Ground 500VDC                                                                  |
| Vibration (non operating)   | -    | 23.52m/s <sup>2</sup> (10 - 55Hz: constant sweep 1 min X, Y, Z for 1 hour)                                      |
| Shock                       | -    | < 196.1 m/s <sup>2</sup> (20G)                                                                                  |
| Safety Agency Approvals     | -    | UL/CSA/IEC/EN60601-1, ANSI/AAMI ES60601-1, UL/CSA/IEC/EN60950-1,<br>UL/CSA/IEC/EN62368-1, CE Mark               |
| Conducted & Radiated EMI    | -    | EN55011-B, FCC Class B                                                                                          |
| Immunity                    | -    | EN60601-1-2, IEC61000-4                                                                                         |
| Altitude                    | m    | Medical: 3,000m, ITE: 5,000m                                                                                    |
| Weight (Typ)                | g    | 136g                                                                                                            |
| Size (WxLxH)                | mm   | 50.8 x 101.6 x 30.5 (including underside components)                                                            |
| Warranty                    | yrs  | 3                                                                                                               |

## Outline Drawing CSS65A Series

### Input/Output Connectors (Molex)



#### CN1: Input Connector

JST B3P-VH-B pitch: 3.96mm or equivalent,  
mates with JST VHR-3N or equivalent

| Pin # | Signal     |
|-------|------------|
| 1     | AC Neutral |
| 2     | AC Line    |

TKP P8800I P8800I-03 or Molex equivalent  
mates with MOLEX 5239 09-65-4034 or equivalent

| Pin # | Signal     |
|-------|------------|
| 1     | AC Line    |
| 2     | AC Neutral |

#### CN2: Main Output Connector

JST B4P-VH-B pitch: 3.96mm or equivalent,  
mates with JST VHR-4N or equivalent

| Pin # | Signal |
|-------|--------|
| 1     | GND    |
| 2     | GND    |
| 3     | +Vo    |
| 4     | +Vo    |

TKP P8800I P8800I-04 or Molex equivalent  
mates with MOLEX 5239 09-52-4044 or equivalent

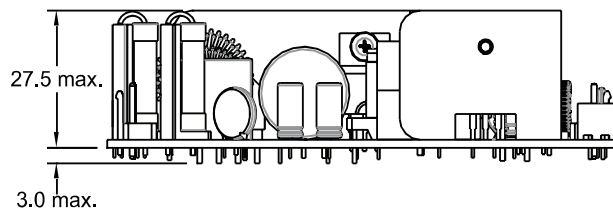
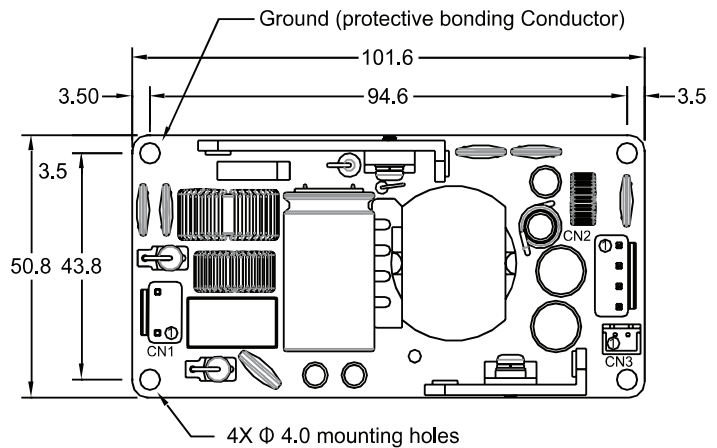
| Pin # | Signal |
|-------|--------|
| 1     | +Vo    |
| 2     | +Vo    |
| 3     | GND    |
| 4     | GND    |

#### CN3: Remote Sense Connector

JST B2B-XH-A pitch: 2.5mm or equivalent,  
mates with JST XHP-2 or equivalent

| Pin # | Signal      |
|-------|-------------|
| 1     | +Vo Sense + |
| 2     | +Vo Sense - |

### JST Input/Output Connectors shown (/J option)



## Model Selector

| Model     | Output (V) | Maximum Output (A) | Maximum Power (W) | Ripple and Noise Full Load (mV) | Ripple and Noise <30% Load (mV) (1) |
|-----------|------------|--------------------|-------------------|---------------------------------|-------------------------------------|
| CSS65A-5  | 5          | 8.0                | 40                | 100                             | 200                                 |
| CSS65A-12 | 12         | 5.42               | 65                | 120                             | 200                                 |
| CSS65A-15 | 15         | 4.34               | 65                | 120                             | 300                                 |
| CSS65A-19 | 19         | 3.43               | 65                | 120                             | 300                                 |
| CSS65A-24 | 24         | 2.71               | 65                | 200                             | 300                                 |
| CSS65A-28 | 28         | 2.33               | 65                | 200                             | 350                                 |
| CSS65A-48 | 48         | 1.36               | 65                | 200                             | 480                                 |
| CSS65A-54 | 54         | 1.21               | 65                | 200                             | 480                                 |

Notes: (1) Ripple level increases at light loading to meet new efficiency standards

## Options

| Suffix | Description                       |
|--------|-----------------------------------|
| Blank  | Molex Input and Output Connectors |
| /J     | JST Input and Output Connectors   |



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