



# ETA-USA

## HIGH QUALITY SWITCHING POWER SUPPLIES

AC/DC SWITCHING POWER SUPPLY  
TRIPLE CHANNEL OUTPUT  
15 WATTS  
UNIVERSAL INPUT

### OBH15T SERIES



| General Description |
|---------------------|
|                     |



| Application                   |   |
|-------------------------------|---|
| Broad needs                   |   |
| Input                         |   |
| <b>Input Voltage Range:</b>   | AC90~264V                                   |
| <b>Input current:</b>         | 310mA max (115VAC), 170mA max (230VAC)      |
| <b>Frequency Range:</b>       | 47~440 Hz                                   |
| <b>Fuse:</b>                  | 1.5A slow blow type                         |
| <b>Inrush Current:</b> *1, *4 | 10A (max.) at AC115VAC<br>20A (max.) 230VAC |

| Features  |
|---|
| 1. Regulated Output                                   |
| 2. Fully Encapsulated                                 |
| 3. Low ripple and noise                               |
| 4. PCB Mountable                                      |
| 5. Over power, short circuit, over voltage protection |
| Options   |
| Screw Terminal (add suffix "-S")                      |





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| Output Characteristic      | Unit     | Models            |      |             |      |
|----------------------------|----------|-------------------|------|-------------|------|
|                            |          | OBH15T-0512       |      | OBH15T-0515 |      |
| Output Voltage             | Vdc      | +5                | ±12  | +5          | ±15  |
| Output Current             | mA       | 2000              | ±200 | 2000        | ±150 |
| Ripple (max)               | mVpp     | <0.2% Vo + 40 max |      |             |      |
| Noise(max)                 | mVpp     | <0.5% Vo + 50 max |      |             |      |
| Voltage Accuracy           |          | ±2%               |      |             |      |
| Capacitive Load (max)      | uF       | 14000             | ±900 | 14000       | ±680 |
| Hold up time               | mS       | 15 mS min.        |      |             |      |
| Switching Frequency        | kHz      | 100               |      |             |      |
| Minimum Load               | %        | 5V 10% (200mA)    |      |             |      |
| <b>Regulation</b>          |          |                   |      |             |      |
| a. Line Regulation [max]   |          | ±1% / ±0.5%       |      |             |      |
| b. Load Regulation         | mV       | ±2% / ±0.5%       |      |             |      |
| c. Temperature Coefficient | /°C      | ±0.02% /°C        |      |             |      |
| <b>Efficiency *1</b>       | <b>%</b> | <b>73</b>         |      | <b>73</b>   |      |

Conditions:

- \*1 Rated input and Rated output
- \*2 at Output current quick change 25% to 75%
- \*3 At 100% load (convection cooling)
- \*4 Cold start at 25 °C Ambient temp.



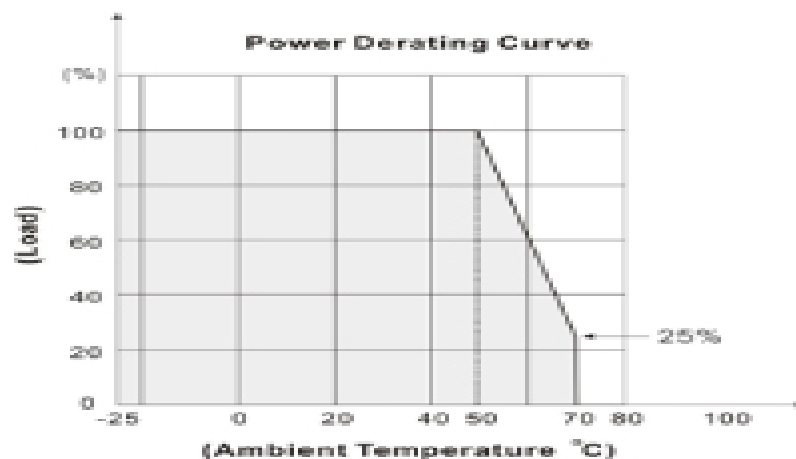


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| Environmental Specification |   |
|-----------------------------|---|
| Operating Temperature*3     | -25 to +70 °C with derating                                   |
| Storage Temperature         | -40 to +85 °C   |
| Humidity                    | 95% RH max  |
| Isolation Voltage           | 3000V Input-Output<br>1500V Input-FG<br>500V Output-FG        |
| Cooling                     | Convection  |
| MTBF                        | >200,000 hours  |
| Leakage Current             | 750µA max   |
| Enclosure Material          | Plastic Resin with Fiberglass (flammability meeting UL 94V-0) |
| Environmental Agencies      |   |
| Line Conducted Noise [EMI]  | Built to meet EN55022-B                                       |
| Noise immunity              | EN 55024  |
| Safety                      | CE, cUL, UL   |
| Function/Protection         |   |
| Over Power Protection       | Hiccup mode, automatic recovery                               |
| Over voltage Protection     | Zener diode clamp   |
| Short circuit Protection    | Hiccup mode, indefinite (automatic recovery)                  |
| Mechanical                  |   |
| Dimension [mm]              | 54.0W × 74.0L × 22.0H ±0.5                                    |
| Weight [g] (typical)        | 140   |

## Derating Curves

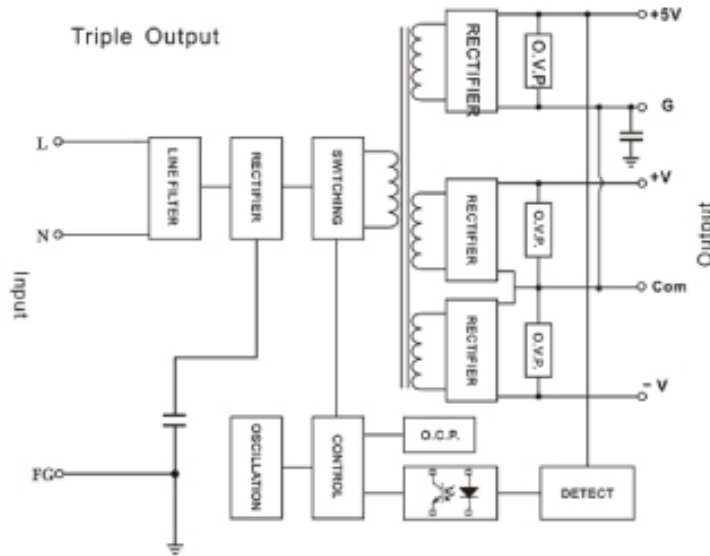




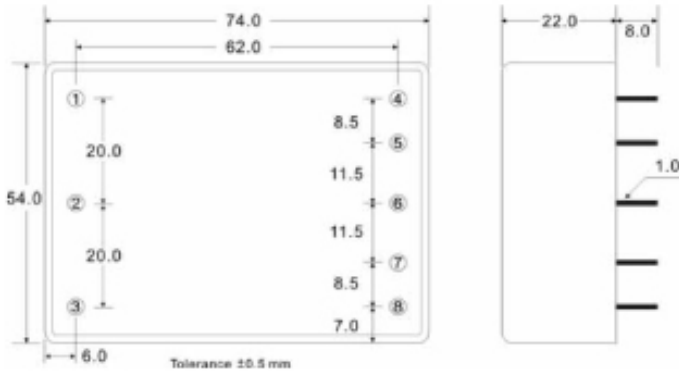
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### Block Diagram



### Mechanical Dimensions



| PIN# | SINGLE    | Dual      | Triple    |
|------|-----------|-----------|-----------|
| 1    | FG        | FG        | FG        |
| 2    | AC IN (N) | AC IN (N) | AC IN (N) |
| 3    | AC IN (L) | AC IN (L) | AC IN (L) |
| 4    | NO PIN    | NO PIN    | -DC OUT   |
| 5    | -DC OUT   | -DC OUT   | COMMON    |
| 6    | NO PIN    | COMMON    | +DC OUT   |
| 7    | +DC OUT   | +DC OUT   | +5V RTN   |
| 8    | NO PIN    | NO PIN    | +5V OUT   |



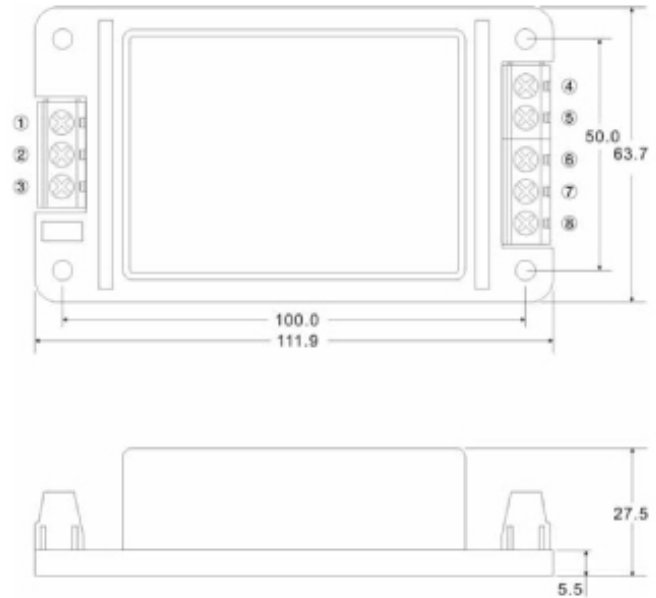


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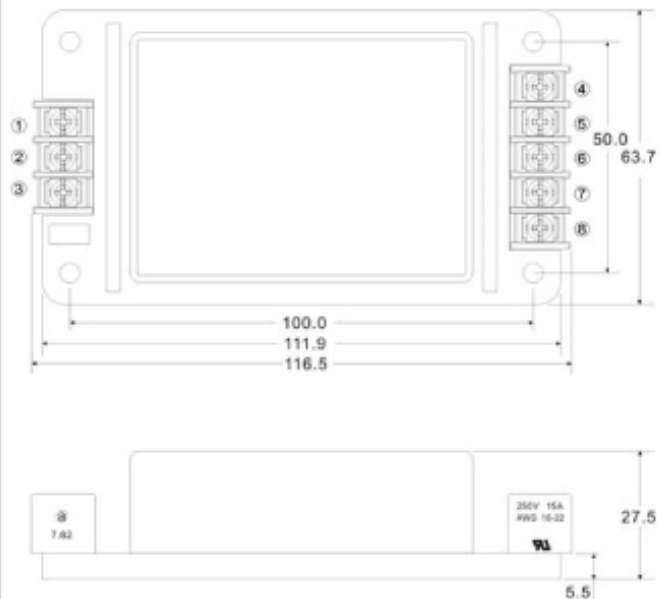
"S1"

| PIN# | Single     | Dual       | Triple    |
|------|------------|------------|-----------|
| 1    | FG         | FG         | FG        |
| 2    | AC IN (N)  | AC IN (N)  | AC IN (N) |
| 3    | AC IN (L)  | AC IN (L)  | AC IN (L) |
| 4    | NO CONNECT | NO CONNECT | -DC OUT   |
| 5    | -DC OUT    | -DC OUT    | COMMON    |
| 6    | NO CONNECT | COMMON     | +DC OUT   |
| 7    | +DC OUT    | +DC OUT    | +5V RTN   |
| 8    | NO CONNECT | NO CONNECT | +5V OUT   |



"S2"

| PIN# | Single     | Dual       | Triple    |
|------|------------|------------|-----------|
| 1    | FG         | FG         | FG        |
| 2    | AC IN (N)  | AC IN (N)  | AC IN (N) |
| 3    | AC IN (L)  | AC IN (L)  | AC IN (L) |
| 4    | NO CONNECT | NO CONNECT | -DC OUT   |
| 5    | -DC OUT    | -DC OUT    | COMMON    |
| 6    | NO CONNECT | COMMON     | +DC OUT   |
| 7    | +DC OUT    | +DC OUT    | +5V RTN   |
| 8    | NO CONNECT | NO CONNECT | +5V OUT   |



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