



5W Ultraminiature Encapsulated Switching Power Supplies

**ECA-5 series**



- Universal 85-265VAC Input
- High Efficiency
- Improved EMI Performance
- 3000V Isolation
- Single and Dual Outputs
- UL60950-1, EN60950-1 & IEC60950-1



| Model Number | Output Voltage | Output Amps(max) | (pk) |
|--------------|----------------|------------------|------|
|--------------|----------------|------------------|------|

#### SINGLE OUTPUT - PCB Mount

|           |         |       |       |
|-----------|---------|-------|-------|
| ESCA-5000 | 3.3 VDC | 1.25A | 1.56A |
| ESCA-5001 | 5 VDC   | 1A    | 1.5A  |
| ESCA-5002 | 12 VDC  | 0.42A | 0.63A |
| ESCA-5003 | 15VDC   | 0.33A | 0.5A  |
| ESCA-5005 | 24VDC   | 0.23A | 0.35A |

#### SINGLE OUTPUT - Chassis Mount

|           |         |       |       |
|-----------|---------|-------|-------|
| ESCC-5000 | 3.3 VDC | 1.25A | 1.56A |
| ESCC-5001 | 5 VDC   | 1A    | 1.5A  |
| ESCC-5002 | 12 VDC  | 0.42A | 0.63A |
| ESCC-5003 | 15VDC   | 0.33A | 0.5A  |
| ESCC-5005 | 24VDC   | 0.23A | 0.35A |

#### SINGLE OUTPUT - DIN Rail Mount

|               |         |       |       |
|---------------|---------|-------|-------|
| ESCC-5000/DRL | 3.3 VDC | 1.25A | 1.56A |
| ESCC-5001/DRL | 5 VDC   | 1A    | 1.5A  |
| ESCC-5002/DRL | 12 VDC  | 0.42A | 0.63A |
| ESCC-5003/DRL | 15VDC   | 0.33A | 0.5A  |
| ESCC-5005/DRL | 24VDC   | 0.23A | 0.35A |

#### DUAL OUTPUT - PCB Mount

|           |          |          |          |
|-----------|----------|----------|----------|
| EDCA-5006 | +/-12VDC | +/-0.21A | +/-0.26A |
| EDCA-5007 | +/-15VDC | +/-0.17A | +/-0.21A |

#### DUAL OUTPUT - Chassis Mount

|           |          |          |          |
|-----------|----------|----------|----------|
| EDCC-5006 | +/-12VDC | +/-0.21A | +/-0.26A |
| EDCC-5007 | +/-15VDC | +/-0.17A | +/-0.21A |

#### DUAL OUTPUT - DIN Rail Mount

|               |          |          |          |
|---------------|----------|----------|----------|
| EDCC-5006/DRL | +/-12VDC | +/-0.21A | +/-0.26A |
| EDCC-5007/DRL | +/-15VDC | +/-0.17A | +/-0.21A |

**WWW.ASTRODYNE.COM**

ASTRODYNE USA: 1-800-823-8082  
 ASTRODYNE PACIFIC: 886-2-26983458  
 ASTRODYNE EUROPE: 353 51 561060



- Universal 85-265VAC Input
- High Efficiency
- Improved EMI Performance
- 4000V Isolation
- Single and Dual Outputs
- UL60601, EN60601-1 & IEC60601-1



| Model Number                          | Output Voltage | Output Amps(max) | (pk)     |
|---------------------------------------|----------------|------------------|----------|
| <b>SINGLE OUTPUT - PCB Mount</b>      |                |                  |          |
| ESMA-5000                             | 3.3 VDC        | 1.25A            | 1.56A    |
| ESMA-5001                             | 5 VDC          | 1A               | 1.5A     |
| ESMA-5002                             | 12 VDC         | 0.42A            | 0.63A    |
| ESMA-5003                             | 15VDC          | 0.33A            | 0.5A     |
| ESMA-5005                             | 24VDC          | 0.23A            | 0.35A    |
| <b>SINGLE OUTPUT - Chassis Mount</b>  |                |                  |          |
| ESMC-5000                             | 3.3 VDC        | 1.25A            | 1.56A    |
| ESMC-5001                             | 5 VDC          | 1A               | 1.5A     |
| ESMC-5002                             | 12 VDC         | 0.42A            | 0.63A    |
| ESMC-5003                             | 15VDC          | 0.33A            | 0.5A     |
| ESMC-5005                             | 24VDC          | 0.23A            | 0.35A    |
| <b>SINGLE OUTPUT - DIN Rail Mount</b> |                |                  |          |
| ESMC-5000/DRL                         | 3.3 VDC        | 1.25A            | 1.56A    |
| ESMC-5001/DRL                         | 5 VDC          | 1A               | 1.5A     |
| ESMC-5002/DRL                         | 12 VDC         | 0.42A            | 0.63A    |
| ESMC-5003/DRL                         | 15VDC          | 0.33A            | 0.5A     |
| ESMC-5005/DRL                         | 24VDC          | 0.23A            | 0.35A    |
| <b>DUAL OUTPUT - PCB Mount</b>        |                |                  |          |
| EDMA-5006                             | +/-12VDC       | +/-0.21A         | +/-0.26A |
| EDMA-5007                             | +/-15VDC       | +/-0.17A         | +/-0.21A |
| <b>DUAL OUTPUT - Chassis Mount</b>    |                |                  |          |
| EDMC-5006                             | +/-12VDC       | +/-0.21A         | +/-0.26A |
| EDMC-5007                             | +/-15VDC       | +/-0.17A         | +/-0.21A |
| <b>DUAL OUTPUT - DIN Rail Mount</b>   |                |                  |          |
| EDMC-5006/DRL                         | +/-12VDC       | +/-0.21A         | +/-0.26A |
| EDMC-5007/DRL                         | +/-15VDC       | +/-0.17A         | +/-0.21A |



5W Ultraminiature Encapsulated Switching Power Supplies

**ECA-5** series

#### INPUT SPECIFICATIONS

|                      |                            |
|----------------------|----------------------------|
| Input Voltage Range  | 90-264 VAC                 |
| Frequency Range      | 47-63 Hz                   |
| Inrush Current, typ: | 20A@100V, 40A@200V Input * |

#### OUTPUT SPECIFICATIONS

|                          |                                                  |
|--------------------------|--------------------------------------------------|
| Voltage and Current      | See Selection Chart                              |
| Load Regulation (20%-FL) | Singles: +/- 3%, Duals: +/- 3%                   |
| Line Regulation          | Singles +/- 0.1~1%, typ<br>Duals +/- 0.3~1%, typ |
| Cross Regulation (Duals) | 2%                                               |
| Preset Accuracy          | 1%                                               |
| DC Voltage Adjust (typ)  | +/- 10% of FS (Primary)                          |
| Temperature Coefficient  | +/-0.03%/°C                                      |
| Ripple/Noise             | 100mV Pk-Pk, typ                                 |
| Over Voltage Protection  | Clamp, 130-150% *                                |
| Over Temp. Protection    | Latching, Cool and Repower                       |
| Short Circuit Protection | Continuous, self-recovering                      |
| Hold Up Time             | 20 mS, typ                                       |

#### GENERAL SPECIFICATIONS

|                     |                          |
|---------------------|--------------------------|
| Input-Out Isolation | 3KVAC, (4KVAC Medical)   |
| I/P-Ground          | 2500VAC                  |
| O/P-Ground          | 1000VAC                  |
| Efficiency          | 75%~78%, typ             |
| Switching Frequency | 100Khz, (fixed, typical) |

#### PHYSICAL SPECIFICATIONS

|               |                        |                             |
|---------------|------------------------|-----------------------------|
| Size          | PCB Mount              | 2.28L" x 1.77W" x 0.83H"    |
|               | Chassis Mount          | 3.77L" x 2.16W" x 1.0H"     |
| Case Material | Rynite, 94V-0 Rated    |                             |
| Construction  | Encapsulated. Soft Pot |                             |
| Weight        | PCB / CHA              | 4 oz (112g) / 8.5 oz (238g) |

#### ENVIRONMENTAL SPECIFICATIONS

|                     |                           |             |
|---------------------|---------------------------|-------------|
| Oper. Temperature   | 0 to +70°C (See Derate)   |             |
| Storage Temperature | -25 to +71°C *            |             |
| Relative Humidity   | 0 to + 95%, non-cond *    |             |
| EMC / EMI           | FCC/A, VDE 0871/A, CISPRB |             |
| MTBF                | (Mil Std 217, 25°C)       | 180,000 Hrs |

All specifications are typical at nominal input, full load, and 25°C unless otherwise noted

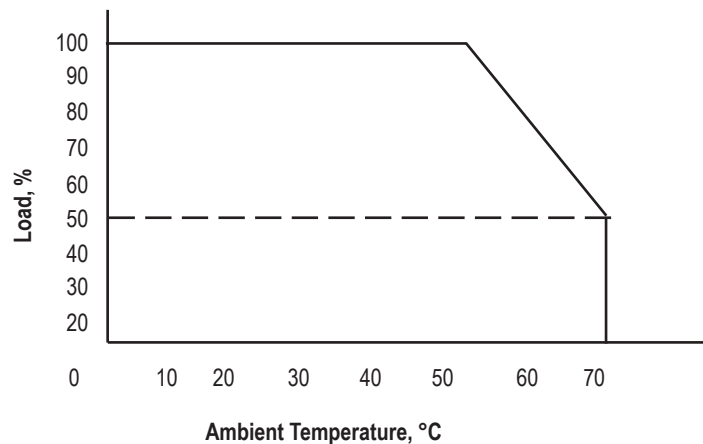
\* These are stress ratings. Exposure of the devices to any of these conditions may adversely affect long term reliability. Proper operation under conditions other than the standard operating conditions is neither warranted nor implied.

**Astrodyne products are not authorized or warranted for use as critical components in life support systems, equipment used in hazardous environments, nuclear controls systems, or other mission-critical applications.**

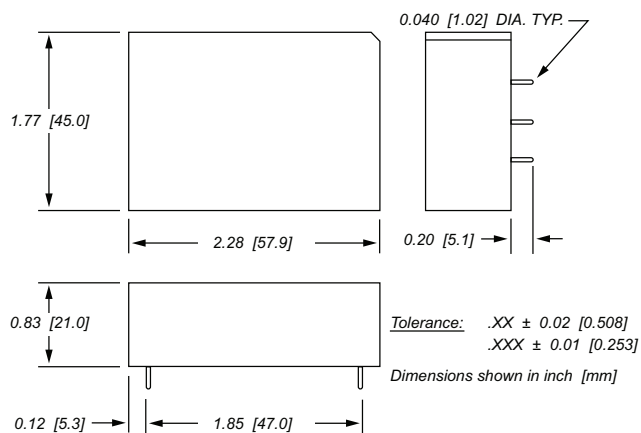
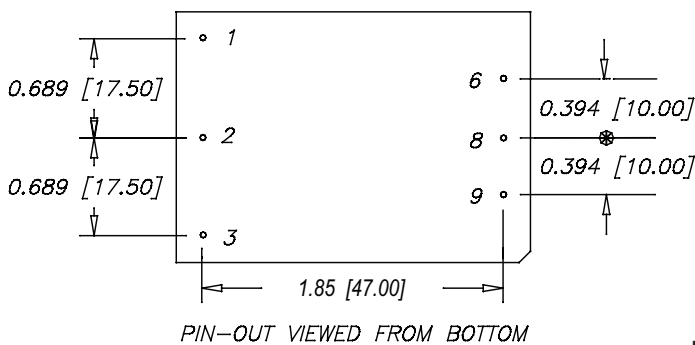
**WWW.ASTRODYNE.COM**

**ASTRODYNE USA: 1-800-823-8082**  
**ASTRODYNE PACIFIC: 886-2-26983458**  
**ASTRODYNE EUROPE: 353 51 561060**

### OUTPUT DERATING CURVE



### MECHANICAL DIMENSIONS



#### Model

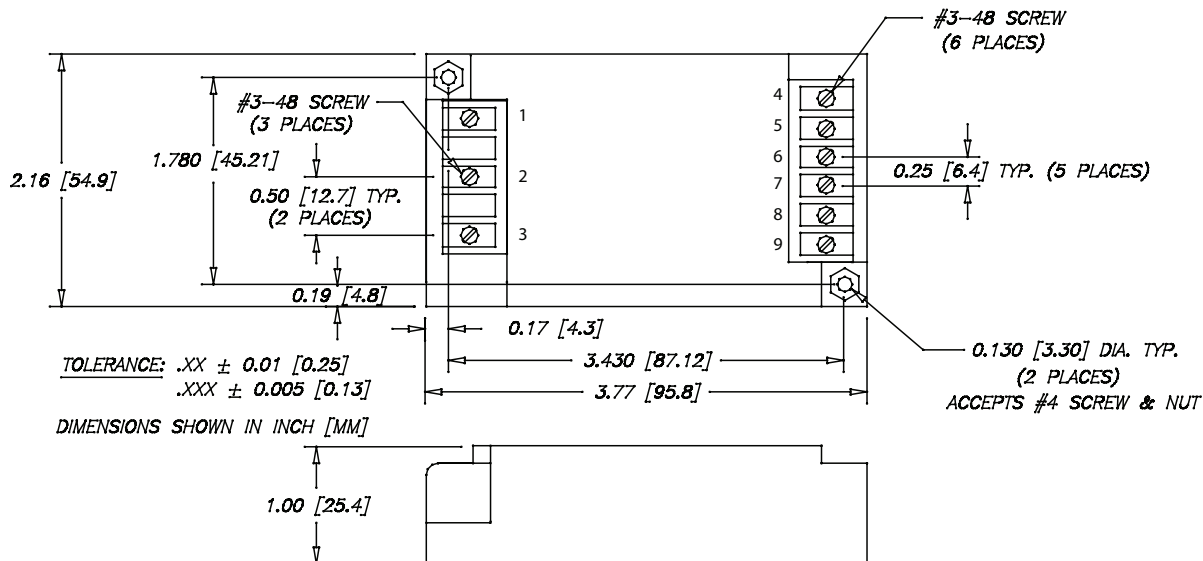
#### Type / Pin#

#### Single

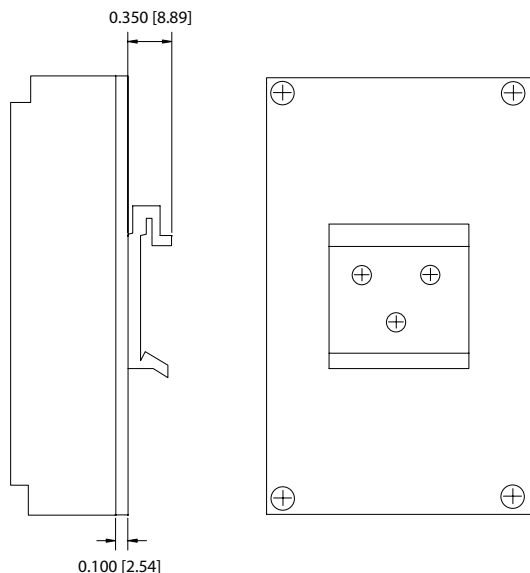
#### Dual

|   |        |         |
|---|--------|---------|
| 1 | AC HI  | AC HI   |
| 2 | AC LO  | AC LO   |
| 3 | GND    | GND     |
| 6 | +Vout  | +Vout   |
| 8 | No Pin | Out Com |
| 9 | -Vout  | -Vout   |

### MECHANICAL DIMENSIONS - CHASSIS MOUNT



### MECHANICAL DIMENSIONS - DIN RAIL



#### Model

#### Type / Pin#

#### Single

#### Dual

|   |       |       |
|---|-------|-------|
| 1 | AC LO | AC LO |
| 2 | GND   | GND   |
| 3 | AC HI | AC HI |
| 4 | N/C   | N/C   |
| 5 | -Vout | -Vout |
| 6 | -Vout | Com   |
| 7 | +Vout | Com   |
| 8 | +Vout | +Vout |
| 9 | N/C   | N/C   |

DIN Rail mounting kit available for Chassis-mount modules, specify part # M-DRL-01. Kit includes mounting plate, DIN Rail clip and assembly hardware.