

KEY FEATURES

- Power Module for PCB Mountable
- Smaller Size (2"x1") with High Efficiency
- 4:1 Wide Input Range
- Regulated Output
- Low Ripple and Noise
- Screw Terminal For Optional
- Operating Temperature: -40°C...+85°C (with derating)
- Remote ON/OFF Control (Optional)
- Standard 2" x 1" Package and Pinout
- 3-Years Product Warranty

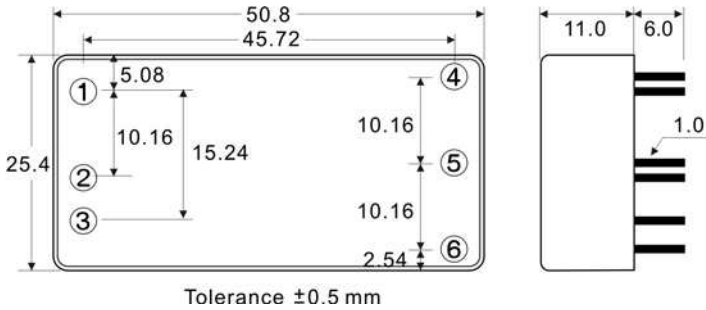

ELECTRICAL SPECIFICATIONS

| Model No. (Single Output) | ST60-24-5S | ST60-24-12S | ST60-24-15S | ST60-24-24S |
|-----------------------------|--------------|--------------|--------------|--------------|
| Max. Output Wattage (W) | 60W | 60W | 60W | 60W |
| Input Voltage (V.DC.) | 24V (9-36V) | 24V (9-36V) | 24V (9-36V) | 24V (9-36V) |
| Output Voltage (V.DC.) | 5V / 12000mA | 12V / 5000mA | 15V / 4000mA | 24V / 2500mA |
| Efficiency | 91% | 92% | 92% | 91% |
| Capacitor Load (max) | 4700uF | 680uF | 680uF | 120uF |

| Model No. (Single Output) | ST60-48-5S | ST60-48-12S | ST60-48-15S | ST60-48-24S |
|-----------------------------|--------------|--------------|--------------|--------------|
| Max. Output Wattage (W) | 60W | 60W | 60W | 60W |
| Input Voltage (V.DC.) | 48V (18-75V) | 48V (18-75V) | 48V (18-75V) | 48V (18-75V) |
| Output Voltage (V.DC.) | 5V / 10000mA | 12V / 5000mA | 15V / 4000mA | 24V / 2500mA |
| Efficiency | 90% | 92% | 92% | 91% |
| Capacitor Load (max) | 4700uF | 680uF | 680uF | 120uF |

| Model No. (Single Output) | ST60-24-5S | ST60-24-12S | ST60-24-15S | ST60-24-24S | |
|-----------------------------|-------------------------------------|---------------------------------------------------------------------------|-----------------------------|-------------|------|
| Max Output Wattage (W) | 60W | | | | |
| Input | Input Filter π type | | | | |
| Output | Voltage (V.DC.) | 5 | 12 | 15 | 24 |
| | Trim Voltage Range | $\pm 10\%$ | | | |
| | Voltage Accuracy | $\pm 2\%$ | | | |
| | Current (mA) max | 12000 | 5000 | 4000 | 2500 |
| | Line Regulation (LL-HL) (typ.) | $\pm 0.5\%$ | | | |
| | Load Regulation (10-100%) (typ.) | $\pm 1\%$ | | | |
| | Ripple | 50 mV max. | <0.2% Vout +40mV max (Vp-p) | | |
| | Noise | 100 mV max. | <0.5% Vout +50mV max (Vp-p) | | |
| Protection | Switching Frequency | 250KHz | | | |
| | Over Power Protection | Works over 120% of rating and recovers automatically. | | | |
| | Over Voltage Protection | Zener diode clamp | | | |
| Isolation | Short Circuit Protection | Current limit, auto-recovery | | | |
| | Voltage | 1600 VDC. | | | |
| | Resistance | 10^8 ohms | | | |
| Environment | Capacitance | 1000 pF | | | |
| | Operating Temperature | -40°C...+85°C (with derating) | | | |
| | Storage Temperature | -55°C...+105°C | | | |
| | Case Temperature | +105°C max. | | | |
| | Temperature Coefficient | $\pm 0.02\%$ Per°C | | | |
| | Humidity | 95% RH | | | |
| Physical | MTBF | >550,000 h @ 25°C (MIL-HDBK-217F) | | | |
| | Dimension (L x W x H) | 2.0 x 1.0 x 0.433 Inches (50.8 x 25.4 x 11.0 mm) Tolerance ± 0.5 mm | | | |
| | Case Material | Five-side shielded Aluminum with Non-Conductive base, Black Anodize | | | |
| | Weight | 33 g | | | |
| Safety | Cooling Method | Free-air convection | | | |
| | Agency Approvals | CE, UL, cUL (Pending) | | | |
| EMC | EMI (Conducted & Radiated Emission) | EN 55022 class A (Pending) | | | |
| | EMS (Noise Immunity) | EN 55024 (Pending) | | | |

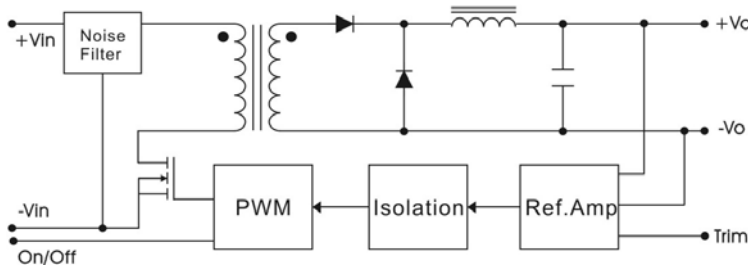
MECHANICAL DIMENSION (Top View)



| PIN# | Single |
|------|---------|
| 1 | CTRL |
| 2 | -DC IN |
| 3 | +DC IN |
| 4 | TRIM |
| 5 | -DC OUT |
| 6 | +DC OUT |

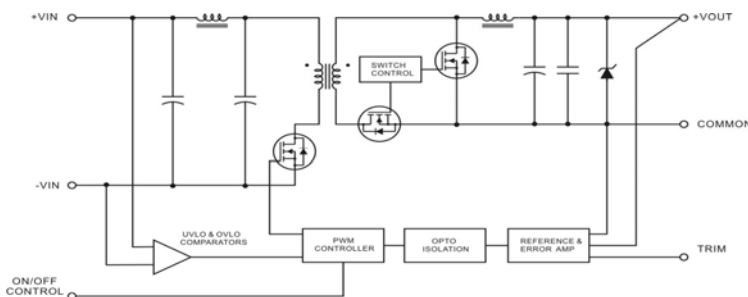
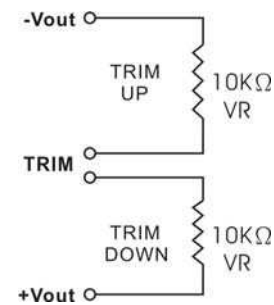
BLOCK DIAGRAM

Single Output



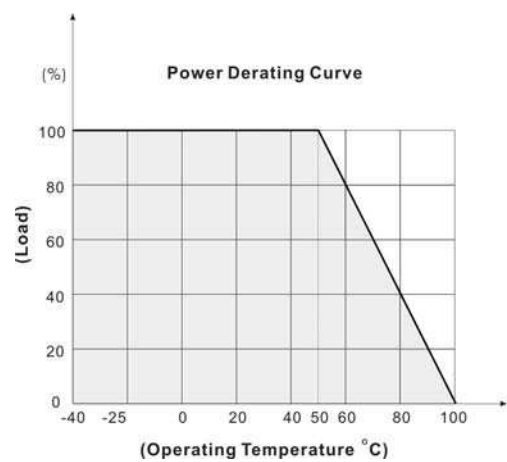
Output Voltage (V.DC) : 24V

TRIM



Output Voltage (V.DC) : 5V, 12V, 15V

DERATING



ST60 SERIES

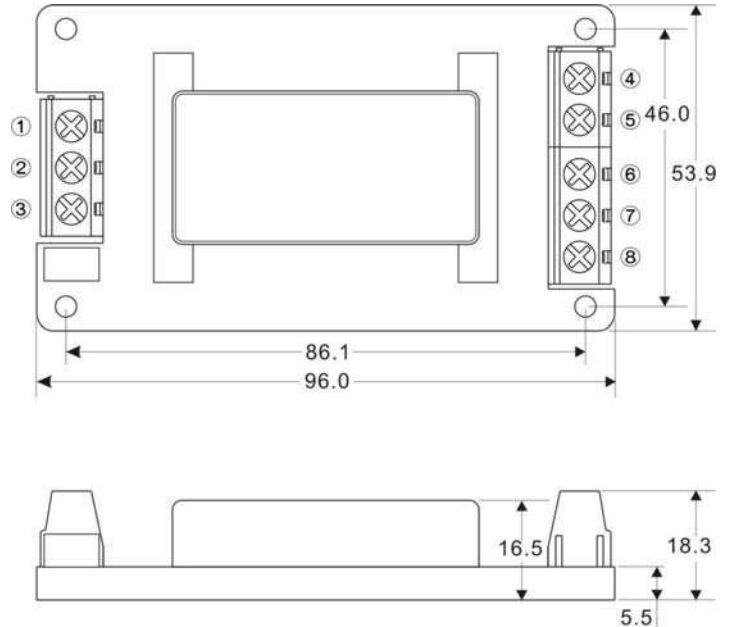
60 Watts

SCREW TERMINAL

ST60-A2



| PIN# | Single | Dual | 24Vout |
|------|---------------|---------------|---------------|
| 1 | CTRL | CTRL | CTRL |
| 2 | -DC IN | -DC IN | -DC IN |
| 3 | +DC IN | +DC IN | +DC IN |
| 4. | TRIM | -DC OUT | NO CONNECT |
| 5 | -DC OUT | COM | -DC OUT |
| 6 | NO CONNECT | NO CONNECT | NO CONNECT |
| 7 | +DC OUT | +DC OUT | +DC OUT |
| 8 | NO CONNECT | NO CONNECT | NO CONNECT |



ST60-A5



| PIN# | Single | Dual | 24Vout |
|------|---------------|---------------|---------------|
| 1 | CTRL | CTRL | CTRL |
| 2 | -DC IN | -DC IN | -DC IN |
| 3 | +DC IN | +DC IN | +DC IN |
| 4. | TRIM | -DC OUT | NO CONNECT |
| 5 | -DC OUT | COM | -DC OUT |
| 6 | NO CONNECT | NO CONNECT | NO CONNECT |
| 7 | +DC OUT | +DC OUT | +DC OUT |
| 8 | NO CONNECT | NO CONNECT | NO CONNECT |

