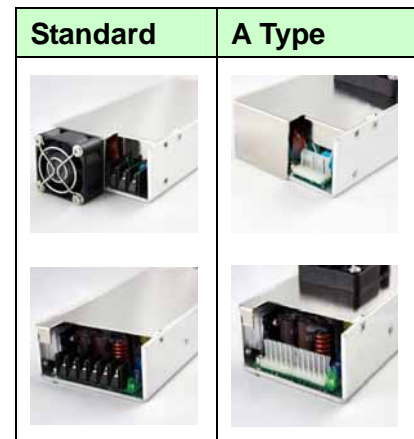


**KEY FEATURES**

- U Bracket Switching Power Supply
- Universal Input: 90-264 VAC
- With P.F.C. Function, PF>0.95
- Cooling by Built-in 12 VDC FAN
- 240W Convection without FAN
- Protections: Over Load / Over Voltage /  
Over Temperature / Short Circuit  
All by Auto-recovery
- Leakage Current <300uA
- High Power Density
- High Efficiency up to 93%
- RoHS Compliant Design
- Ultra Compact Size: 6.8 x 3.2 x 1.5 Inches
- 3-Years Product Warranty


**ELECTRICAL SPECIFICATIONS**

| Model No.  | AQF360U-12S                                     | AQF360U-24S        | AQF360U-36S  | AQF360U-48S  | AQF360U-54S |              |
|--|---|--------------------|--------------|--------------|-------------|--------------|
| Max Output Wattage (Convection) (W)                | 240W  | 240W               | 240W         | 240W         | 240W        |              |
| Max Output Wattage (18CFM FAN) (W)                 | 360W  | 360W               | 360W         | 360W         | 360W        |              |
| Input  | Voltage   |                    |              |              |             |              |
|  | 90-264 VAC or 120-370 VDC                       |                    |              |              |             |              |
|  | Frequency (Hz)                                  |                    |              |              |             |              |
|  | 47-63 Hz  |                    |              |              |             |              |
|  | Current (Full load)                             |                    |              |              |             |              |
|  | < 4.0 A max. (115 VAC) / < 2.0 A max. (230 VAC) |                    |              |              |             |              |
| Inrush Current (<2ms)                              |   |                    |              |              |             |              |
| < 30 A max. (115 VAC) / < 60 A max. (230 VAC)      |   |                    |              |              |             |              |
| Leakage Current                                    |   |                    |              |              |             |              |
| < 0.3 mA max.(240VAC 63Hz)                         |   |                    |              |              |             |              |
| Power Factor                                       |   |                    |              |              |             |              |
| PF>0.98 (115 VAC) / PF>0.93 (230 VAC) at Full Load |   |                    |              |              |             |              |
| Output   | Voltage (V.DC.)                                 | 12V                | 24V          | 36V          | 48V         | 54V          |
|  | Trim  | 10.8 ~ 13.2V       | 21.6 ~ 26.4V | 32.7 ~ 39.6V | 44 ~ 51V    | 51.3 ~ 56.7V |
|  | Voltage Accuracy                                | ±2%                |              |              |             |              |
|  | Current (Convection) (A) max                    | 20                 | 10           | 6.66         | 5           | 4.44         |
|  | Current (18CFM FAN) (A) max                     | 30                 | 15           | 10           | 7.5         | 6.66         |
|  | Line Regulation (LL-HL) (typ.)                  | ±1%                |              |              |             |              |
|  | Load Regulation (5-100%) (typ.)                 | ±1%                |              |              |             |              |
|  | Minimum Load                                    | 1%                 |              |              |             |              |
|  | Maximum Capacitive Load                         | 85000 uF           | 48000 uF     | 21000 uF     | 13000 uF    | 7000 uF      |
|  | Ripple & Noise (max.)                           | 120mVp-p           |              | 200mVp-p     |             |              |
|  | Efficiency (typ.)                               | 90%                | 92%          | 93%          | 93%         | 93%          |
|  | Hold-up Time                                    | 12 ms min.         |              |              |             |              |
|  | Switching Frequency                             | 75 kHz             |              |              |             |              |
|  | FAN Supply                                      | 12 VDC / 0.5A max. |              |              |             |              |
| Protection   | Over Power Protection                           | Auto recovery      |              |              |             |              |
|  | Over Voltage Protection                         | Auto recovery      |              |              |             |              |
|  | Over Temperature                                | Auto recovery      |              |              |             |              |
|  | Short Circuit Protection                        | Auto-recovery      |              |              |             |              |
| Isolation  | Input-Output (V.AC)                             | 3000V              |              |              |             |              |
|  | Input-FG (V.AC)                                 | 1500V              |              |              |             |              |
|  | Output-FG (V.AC)                                | 500V               |              |              |             |              |

1. All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.
2. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.

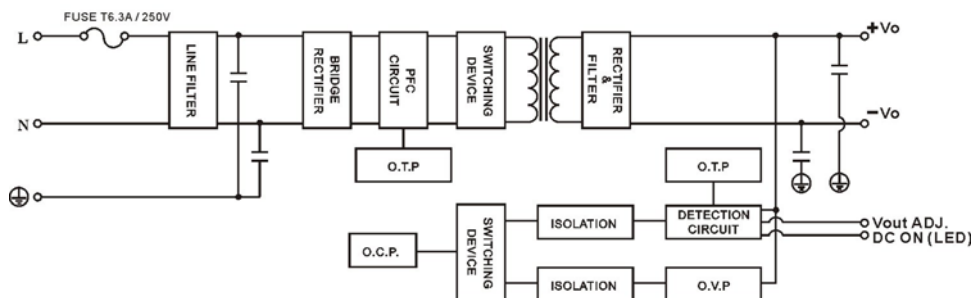
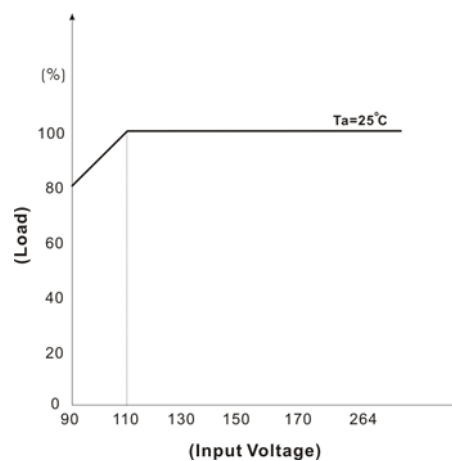
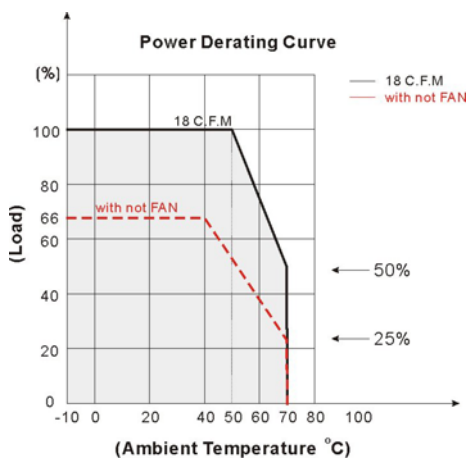
**ELECTRICAL SPECIFICATIONS**

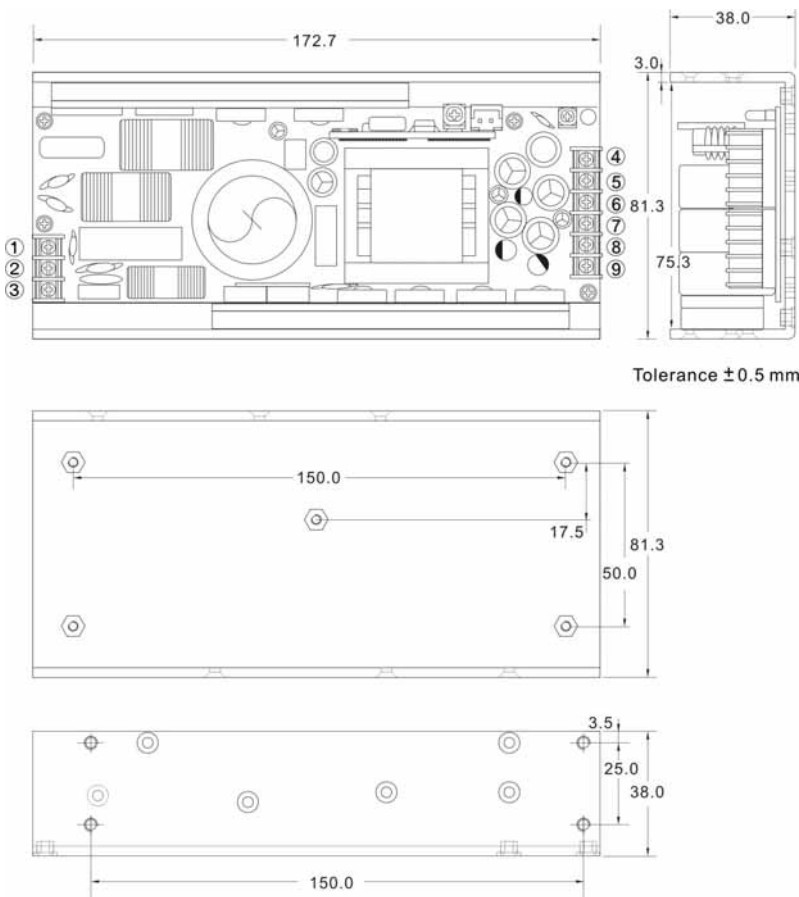
| Model No.   | AQF360U-12S   | AQF360U-24S | AQF360U-36S | AQF360U-48S | AQF360U-54S |
|---|---|-------------|-------------|-------------|-------------|
| Environment   | Operating Temperature   |             |             |             |             |
|   | -10°C...+70°C (with derating)                                     |             |             |             |             |
|   | Storage Temperature   |             |             |             |             |
|   | -25°C...+85°C   |             |             |             |             |
|   | Temperature Coefficient   |             |             |             |             |
|   | ±0.03%/°C ( 0~50°C )  |             |             |             |             |
| Physical  | Humidity  |             |             |             |             |
|   | 95% RH  |             |             |             |             |
|   | MTBF  |             |             |             |             |
|   | >120,000 h @ 25°C (MIL-HDBK-217F)                                 |             |             |             |             |
|   | Vibration   |             |             |             |             |
| 10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes. |   |             |             |             |             |
| Physical  | Dimension (L x W x H)   |             |             |             |             |
|   | 6.8 x 3.2 x 1.5 Inches (172.7 x 81.3 x 38.0 mm) Tolerance ±0.5 mm |             |             |             |             |
|   | Weight  |             |             |             |             |
| 668 g   |   |             |             |             |             |
| Physical  | Cooling Method  |             |             |             |             |
|   | 240W Convection without FAN                                       |             |             |             |             |
| Safety  | Agency Approvals  |             |             |             |             |
| CE, UL60950   |   |             |             |             |             |
| EMC   | EMI (Conducted & Radiated Emission)                               |             |             |             |             |
|   | EN 55022 class B  |             |             |             |             |
| EMS (Noise Immunity)  |   |             |             |             |             |
| EN 55024  |   |             |             |             |             |

1. All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.
2. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.

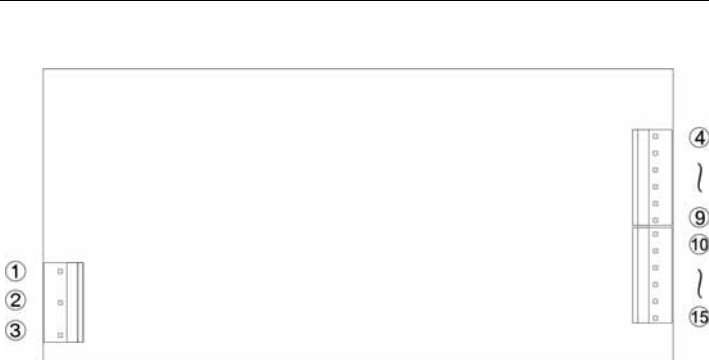
**BLOCK DIAGRAM**

Single Output


**DERATING**


**MECHANICAL DIMENSION ( Top View )**
**Standard**


| PIN# | SINGLE     |
|------|------------|
| 1    | FG         |
| 2    | AC IN (N)  |
| 3    | AC IN (L)  |
| 4-6  | +DC OUT    |
| 7-9  | -DC OUT    |
| FAN  | WAFER(2.5) |


**A Type**


| PIN#  | SINGLE     |
|-------|------------|
| 1     | FG         |
| 2     | AC IN (N)  |
| 3     | AC IN (L)  |
| 4-9   | +DC OUT    |
| 10-15 | -DC OUT    |
| FAN   | WAFER(2.5) |

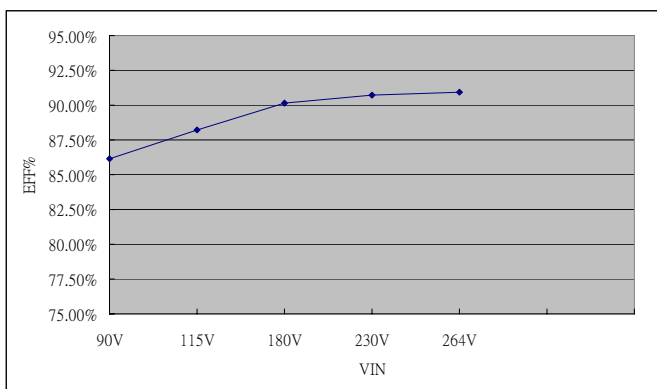

**ASSEMBLY INSTRUCTIONS**

\*U Case T=3.0mm

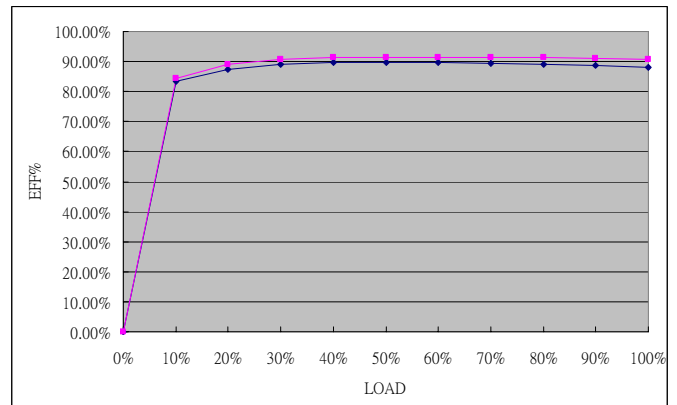
Customer screws into the length of the case no higher than 0.5mm  
(Namely screw length for load plate thickness plus 3.5mm)

**EFFICIENCY VERSUS LOAD**
**AQF360U-12S**
**VIN VS Efficiency**

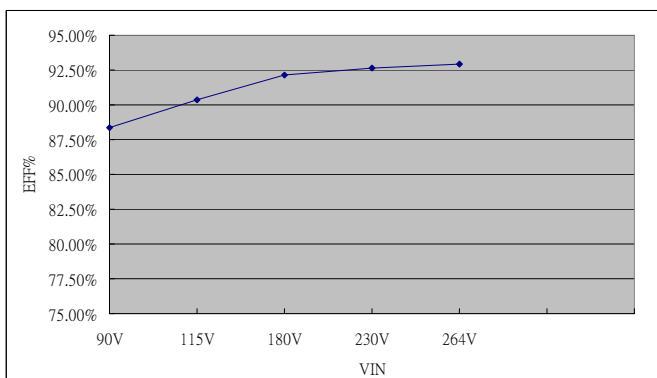
| Input Voltage (V) | 90    | 115   | 180   | 230   | 264   |
|-------------------|-------|-------|-------|-------|-------|
| Efficiency (%)    | 86.12 | 88.20 | 90.15 | 90.69 | 90.95 |


**LOAD VS Efficiency**

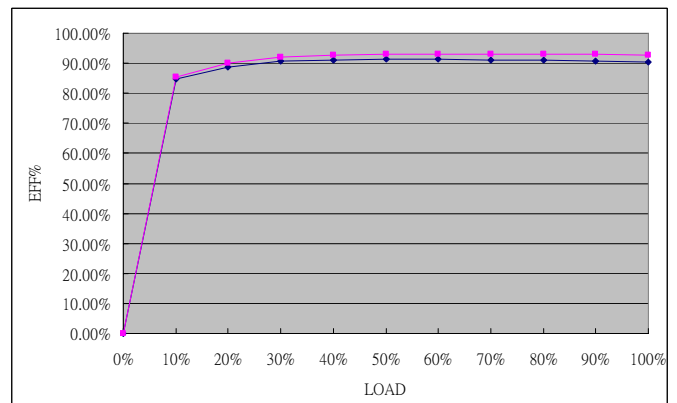
| Load (%) | 0     | 10    | 20    | 30    | 40    | 50    |
|----------|-------|-------|-------|-------|-------|-------|
| 115V (%) | 0     | 83.25 | 87.43 | 89.02 | 89.67 | 89.80 |
| 230V (%) | 0     | 84.38 | 88.94 | 90.75 | 91.24 | 91.49 |
| Load (%) | 60    | 70    | 80    | 90    | 100   |       |
| 115V (%) | 89.64 | 89.39 | 89.00 | 88.65 | 88.20 |       |
| 230V (%) | 91.46 | 91.38 | 91.22 | 91.02 | 90.09 |       |


**AQF360U-24S**
**VIN VS Efficiency**

| Input Voltage (V) | 90    | 115   | 180   | 230   | 264   |
|-------------------|-------|-------|-------|-------|-------|
| Efficiency (%)    | 88.36 | 90.35 | 92.13 | 92.67 | 92.96 |

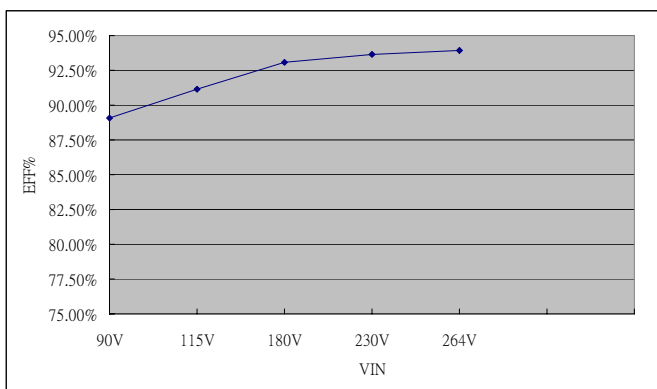

**LOAD VS Efficiency**

| Load (%) | 0     | 10    | 20    | 30    | 40    | 50    |
|----------|-------|-------|-------|-------|-------|-------|
| 115V (%) | 0     | 84.77 | 88.62 | 90.54 | 91.14 | 91.33 |
| 230V (%) | 0     | 85.54 | 90.08 | 92.06 | 92.62 | 92.99 |
| Load (%) | 60    | 70    | 80    | 90    | 100   |       |
| 115V (%) | 91.32 | 91.18 | 90.98 | 90.70 | 90.35 |       |
| 230V (%) | 93.08 | 93.08 | 93.02 | 92.91 | 92.67 |       |

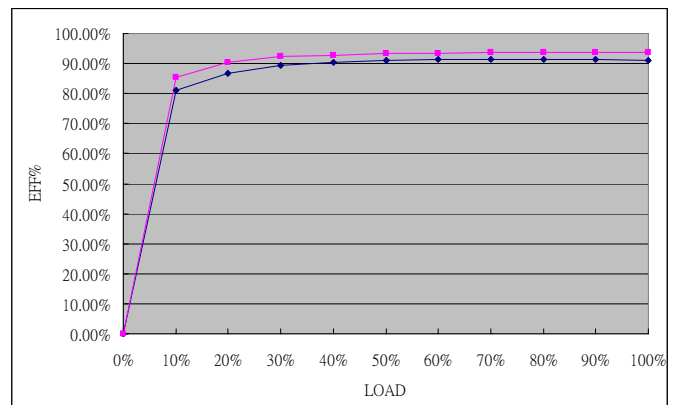


**EFFICIENCY VERSUS LOAD**
**AQF360U-36S**
**VIN VS Efficiency**

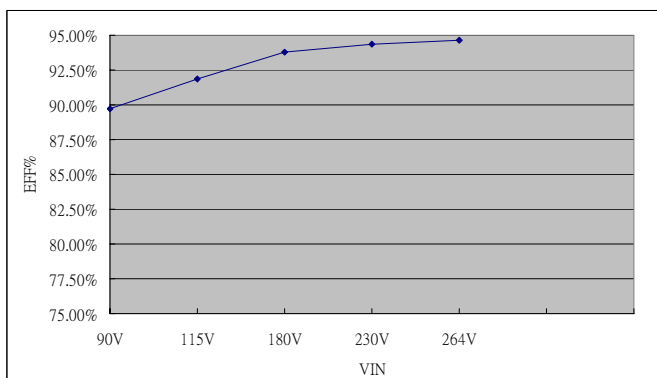
| Input Voltage (V) | 90    | 115   | 180   | 230   | 264   |
|-------------------|-------|-------|-------|-------|-------|
| Efficiency (%)    | 89.04 | 91.17 | 93.06 | 93.64 | 93.93 |


**LOAD VS Efficiency**

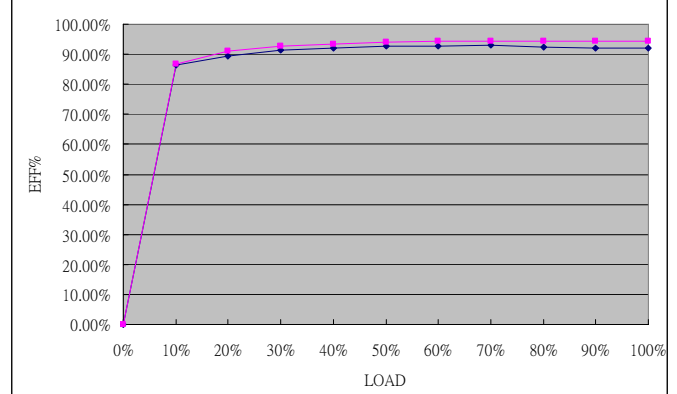
| Load (%) | 0     | 10    | 20    | 30    | 40    | 50    |
|----------|-------|-------|-------|-------|-------|-------|
| 115V (%) | 0     | 80.96 | 86.76 | 89.39 | 90.51 | 91.01 |
| 230V (%) | 0     | 85.51 | 90.25 | 92.24 | 92.82 | 93.39 |
| Load (%) | 60    | 70    | 80    | 90    | 100   |       |
| 115V (%) | 91.21 | 91.36 | 91.37 | 91.31 | 91.17 |       |
| 230V (%) | 93.46 | 93.68 | 93.76 | 93.68 | 93.64 |       |


**AQF360U-48S**
**VIN VS Efficiency**

| Input Voltage (V) | 90    | 115   | 180   | 230   | 264   |
|-------------------|-------|-------|-------|-------|-------|
| Efficiency (%)    | 89.75 | 91.89 | 93.79 | 94.36 | 94.67 |

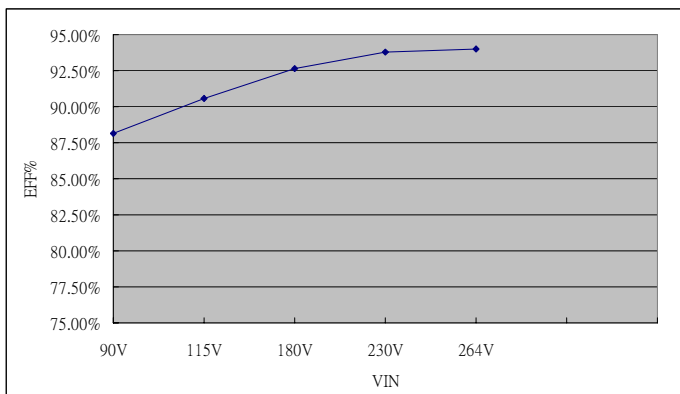

**LOAD VS Efficiency**

| Load (%) | 0     | 10    | 20    | 30    | 40    | 50    |
|----------|-------|-------|-------|-------|-------|-------|
| 115V (%) | 0     | 86.43 | 89.33 | 91.43 | 92.17 | 92.58 |
| 230V (%) | 0     | 86.80 | 90.87 | 92.74 | 93.47 | 94.02 |
| Load (%) | 60    | 70    | 80    | 90    | 100   |       |
| 115V (%) | 92.58 | 93.00 | 92.38 | 92.18 | 91.89 |       |
| 230V (%) | 94.02 | 94.23 | 94.24 | 94.40 | 94.36 |       |



**EFFICIENCY VERSUS LOAD**
**AQF360U-54S**
**VIN VS Efficiency**

| Input Voltage (V) | 90    | 115   | 180   | 230   | 264   |
|-------------------|-------|-------|-------|-------|-------|
| Efficiency (%)    | 88.12 | 90.58 | 92.65 | 93.79 | 93.99 |


**LOAD VS Efficiency**

| Load (%) | 0     | 10    | 20    | 30    | 40    | 50    |
|----------|-------|-------|-------|-------|-------|-------|
| 115V (%) | 0.00  | 86.37 | 88.87 | 89.82 | 90.28 | 90.91 |
| 230V (%) | 0.00  | 88.59 | 91.67 | 92.80 | 93.35 | 93.66 |
| Load (%) | 60    | 70    | 80    | 90    | 100   |       |
| 115V (%) | 90.98 | 90.96 | 90.95 | 90.87 | 90.58 |       |
| 230V (%) | 93.79 | 93.83 | 93.86 | 93.80 | 93.79 |       |

