

AQR-5 Series, 5Watt
FEATURES:

- ✓ Universal AC input range
- ✓ Short circuit, and over current protections
- ✓ Board in-line type installation
- ✓ High voltage isolation
- ✓ Compact size
- ✓ Plastic case



| Model | Input voltage (Vac) | Output voltage (Vdc) | Output current (mA) | Output power (W) |
|----------|---------------------|----------------------|---------------------|------------------|
| AQR5-5 | 85-264 | 5 | 1000 | 5 |
| AQR5-9 | | 9 | 550 | 5 |
| AQR5-12 | | 12 | 416 | 5 |
| AQR5-24 | | 24 | 208 | 5 |
| AQR5-D5 | | ±5 | ±500 | 5 |
| AQR5-D9 | | ±9 | ±275 | 5 |
| AQR5-D12 | | ±12 | ±210 | 5 |
| AQR5-D24 | | ±24 | ±100 | 5 |

Note : Above models are default to plastic case.

ELECTRICAL
Input

| Parameters | Symbols | Test Conditions / Comment | Min. | Typ. | Max. | Units |
|-----------------|------------|---------------------------|------|------|------|-------|
| Input voltage | V_{in} | -- | 85 | -- | 264 | Vac |
| Input frequency | F_{line} | -- | 47 | -- | 63 | Hz |
| Efficiency | η | Full voltage, full load | -- | 78 | -- | % |

Output

| | | | | | | |
|-------------------------|-----------------|--------------------------------|----|-----|----|---|
| Output voltage accuracy | -- | $V_{in}=100-240Vac$ | -- | 1 | -- | % |
| Line regulation | $V_{out-line}$ | V_{in} from 100Vac to 240Vac | -- | 0.2 | -- | % |
| Load regulation | $V_{out-load}$ | 20%-100% load | -- | 0.5 | -- | % |
| Turn-on delay time | T_{on_delay} | -- | -- | 1 | -- | S |

AQR-5 Series, 5Watt
ELECTRICAL
Output

| Parameters | Symbols | Test Conditions / Comment | Min. | Typ. | Max. | Units |
|------------|--------------|---------------------------|------|------|------|-------|
| Ripple | V_{ripple} | -- | -- | 120 | -- | mV |

Protection

| | | | | | | |
|---------------|--------------------------|--|--|--|--|--|
| Over current | Continuous auto-recovery | | | | | |
| Short circuit | Continuous auto-recovery | | | | | |

Environment

| | | | | | | |
|-------------------------------|---------------|---------------------------|-----|----|------|------|
| Storage | $T_{storage}$ | Humidity: 5% RH to 95% RH | -40 | -- | +105 | °C |
| Ambient operating temperature | T_a | -- | -25 | -- | +65 | °C |
| Case temperature | T_c | -- | -- | -- | +90 | °C |
| Operating relative humidity | H_a | Non condensing | 10 | -- | 90 | % |
| MTBF | T_{MTBF} | -- | -- | -- | 200 | kHrs |

Dimension(LxWxH) 39x25x22mm

Weight 32g

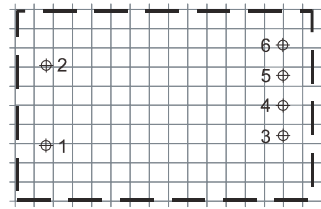
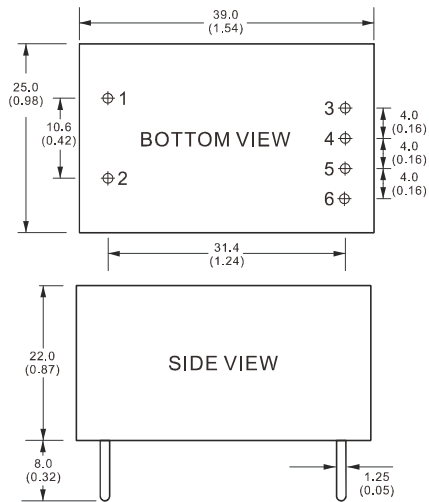
Safety

| | |
|-------------------|--|
| Isolation Voltage | Input-Output: 2500Vac \leq 1.5mA//1min |
| | Input-Case: 1500Vac \leq 1.5mA//1min |

Notes: Unless otherwise specified, all the above parameters are measured at ambient temperature of 25°C and Vin = 100Vac to 240Vac.

AQR-5 Series, 5Watt

MECHANICAL



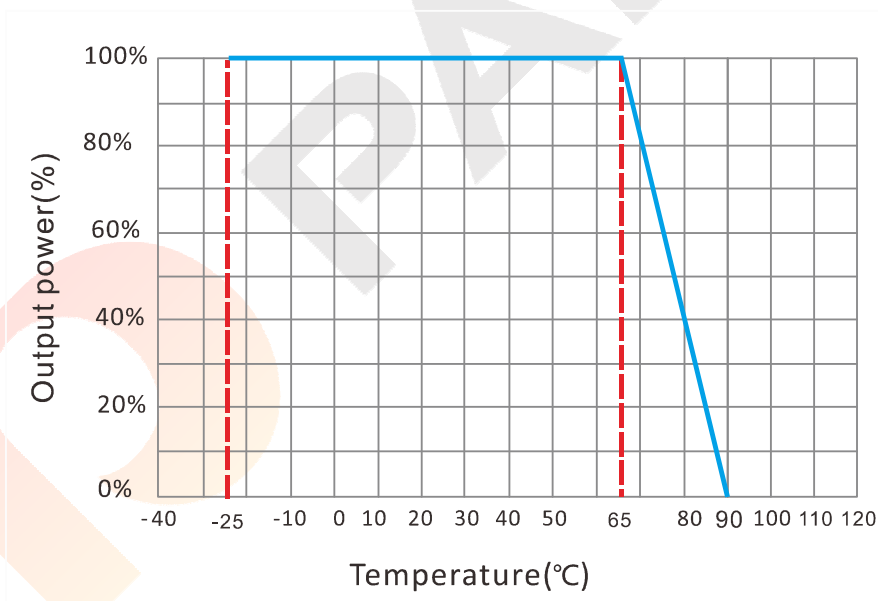
Unit : mm(inch)
PCB vertical view
Grid spacing: 2.54mm(0.1inch)

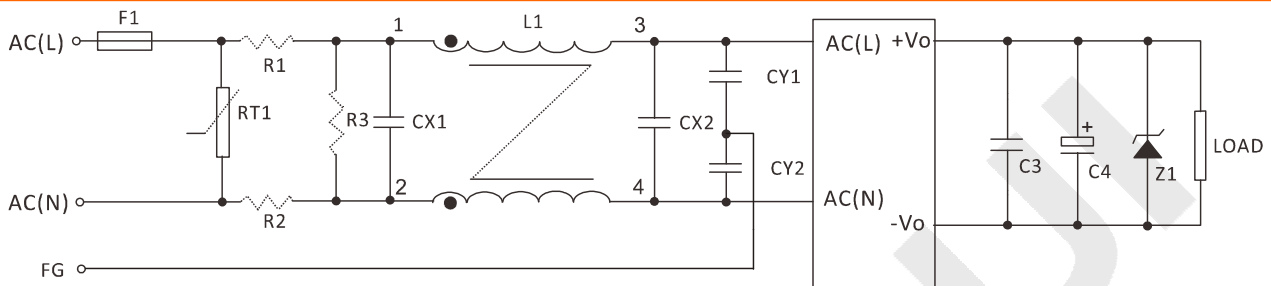
CONNECTION

| PIN # | SINGLE | DUAL |
|-------|--------|--------|
| 1 | AC(N) | AC(N) |
| 2 | AC(L) | AC(L) |
| 3 | +Vo | +Vo1 |
| 4 | No Pin | COM |
| 5 | GND | -Vo2 |
| 6 | No Pin | No Pin |

Note: Unit is mm(inch).

ELECTRICAL CURVE



AQR-5 Series, 5Watt
NOTE
RECOMMENDED TEST AND APPLICATION CIRCUIT

EMC RECOMMENDED APPLICATION CIRCUIT

| | 5VDC | 9VDC | 12VDC | 24VDC |
|----------|-----------|----------------------|-----------|----------|
| F1 | | T1A/250V | | |
| RT1 | | 7D471K | | |
| R1, R2 | | 2Ω/3W | | |
| R3 | | 1MΩ/2W | | |
| L1 | | L=3-10mH, I=0.2-0.5A | | |
| CX1, CX2 | | 0.15-1μF/300Vac | | |
| CY1, CY2 | | 102K/400Vac | | |
| C3 | | 1μF/50V | | |
| C4 | 220uF/16V | 100uF/25V | 100uF/25V | 47uF/35V |
| Z1 | P6KE6.8A | P6KE16A | P6KE16A | P6KE33A |