# QA Series


DC/DC

## 5 Watts

Single/Dual Outputs

- **Industry standard form factor 2 x 1 x 0.40**
- **Wide input voltage range**
  - **4.5-5.25 Vdc**
  - **9-36 Vdc**
  - **20-72 Vdc**
- **200kHz switching frequency**
- **Continuous short circuit protection**
- **Six-sided shielding**
- **UL1950 Recognized**

## Specifications

### INPUT

| | |
|---|---|
| Voltage Range | 4.5-5.25 Vdc<br>9-36 Vdc<br>20-72 Vdc |
| Reverse Polarity Protected | To Nominal Input Current<br>External Fuse Required |

### OUTPUT

| | |
|---|---|
| Voltage Tolerance | ± 2% |
| Ripple and Noise | 1% of Rated Output (typ) |
| Short Circuit Protection | Continuous Power Cycle |
| Temperature Coefficient | 0.02% / °C |

### GENERAL

| | |
|---|---|
| Regulation: | |
| Line | 0.5% |
| Load | 1.0% |
| Switching Frequency | 200 kHz |
| Efficiency | 75% (typ) |
| I/O Isolation | 500 Vdc |

### ENVIRONMENTAL

| | |
|---|---|
| Operating Temperature | -25°C to +71°C |
| Max Baseplate Temp | 105°C |
| Storage Temperature | -40°C to +105°C |
| Cooling | Free-air Convection |

All specifications are typical at nominal line and full load at 25°C unless otherwise noted and are subject to change without notice.

The QA series of cost sensitive single and dual output 5 watt DC/DC converters are specifically designed for critical applications requiring a compact, low profile case.

These high performance 5 watt converters offer a high switching frequency topology, 500 Vdc I/O isolation, and efficiencies to 75%.

Fifteen models available; Three input voltage ranges of 4.5-5.25 Vdc, 9-36 Vdc, and 20-72 Vdc provide regulated outputs of 5, 12, 15 and ±12 and ±15 Vdc.

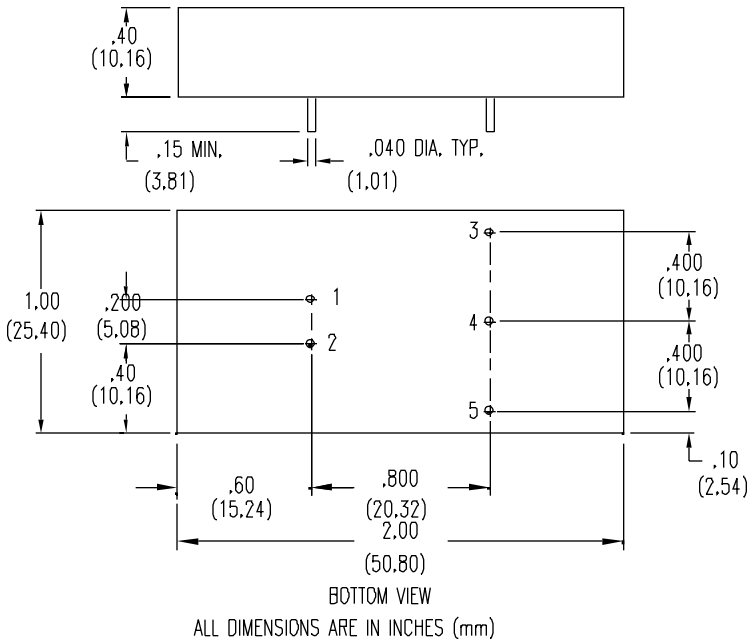
## Applications

These units are ideally suited for telecommunications, distributed power systems, automatic test equipment, medical and process control.

# QA Series Ordering Information

| Input Voltage Range | Output Voltage | Output Current | Model Number |
|---|---|---|---|
| 4.5-5.25 Vdc | 5 Vdc | 1000 mA | QA11-075-05 |
| 4.5-5.25 Vdc | 12 Vdc | 420mA | QA12-037-05 |
| 4.5-5.25 Vdc | 15 Vdc | 330mA | QA13-030-05 |
| 4.5-5.25 Vdc | ±12 Vdc | ±210mA | QA22-037-05 |
| 4.5-5.25 Vdc | ±15 Vdc | ±160mA | QA23-030-05 |
| 9-36 Vdc | 5 Vdc | 1000mA | QA11-075-18 |
| 9-36 Vdc | 12 Vdc | 420mA | QA12-037-18 |
| 9-36 Vdc | 15 Vdc | 330mA | QA13-030-18 |
| 9-36 Vdc | ±12 Vdc | ±210mA | QA22-037-18 |
| 9-36 Vdc | ±15 Vdc | ±160mA | QA23-030-18 |
| 20-72 Vdc | 5 Vdc | 1000mA | QA11-075-48 |
| 20-72 Vdc | 12 Vdc | 420mA | QA12-037-48 |
| 20-72 Vdc | 15 Vdc | 330mA | QA13-030-48 |
| 20-72 Vdc | ±12 Vdc | ±210mA | QA22-037-48 |
| 20-72 Vdc | ±15Vdc | ±160mA | QA23-030-48 |

# Dimensions and Connections




**PIN CONNECTIONS**
**Single Output**
1. +Input
2. -Input
3. + Output
4. No Pin
5. - Output

**PIN CONNECTIONS**
**Dual Outputs**
1. +Input
2. -Input
3. + Output
4. Common
5. - Output

NOTES:
1. Ripple measured with a 3.3 mf tantalum capacitor across each output.
2. Case connected to pin #1 on -48 models. Case connected to pin #2 on -05 and -18 models

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