

DC-DC Converters



Series PA Single and Series PA Dual

**Isolated Regulated 100 Watts, Wide Input Range/18-36 VDC
Fully Regulated, Short Circuit Protected
Parallel Operation Available**

Features:

- Dual isolated outputs
- Short circuit protection
- Input voltage protection
- Thermal, over temp. shutdown
- Line regulation
- Load regulation
- No external components required
- Hi density, hi efficiency design
- Remote shutdown
- Trim capabilities
- Fixed frequency-100 Khtz

Typical Characteristics:

Frequency: 100 Khtz

Base plate: Max. +85° C

Operating temperature: See thermal chart, Min. 0° C ambient, Max. +85° C base plate temp.

Test conditions: 25° C ambient

Isolation Base Input: 2121 VDC

Isolation Input Output: 4242 VDC

Isolation Output to Base: 1000 VDC

Storage temperature: -55° C to +105° C

23 Standard Models

100 VDC Output Models

Hi Density 100 Watts

Fixed Frequency

For all variations, call factory.

For Parallel Operation: Add suffix "P" (i.e. PA5SP).

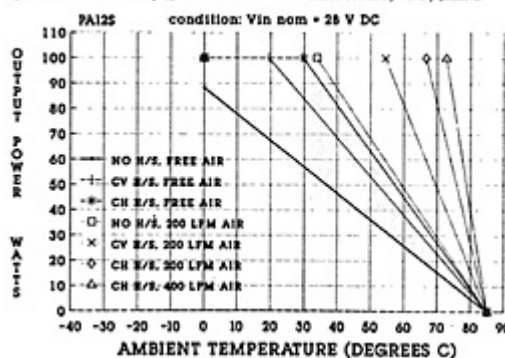
Consult factory to optimize for your application.

The PICO PA Series of high power DC-DC Converters, allow a wide input voltage of 18-36 VDC, while maintaining a regulated output. They are fully safeguarded for over voltage, over temperature and continuous short circuit protection.

The availability of Dual Isolated Outputs, small size, and the capability of parallel operations as standard features should reduce your design and component costs, while the fixed frequency operation helps parallel connections for higher power requirements.

This high density unit is assembled in the USA with PICO quality and component selection, allowing it to meet the most stringent commercial requirements.

Full thermal analysis can be determined using application notes on page 124. By using the efficiency and thermal resistance of your desired unit to the formula you can complete your evaluation. The curves below were generated for Part #PA12S using Application Notes. Please consult factory with any questions.



[Larger Version of Graph](#)

Series PA Single 100 Watts Input 18-36 VDC

Pico Part No.	Input Voltage Range (V DC)	Output Voltage (V DC)	Max. Output Power* (W)	EFF. Full Load Typical** (%)	Max. Load Regulation (%)		Max. Line Regulation At Full Load (%)		Output Voltage Ripple (Full Load) 1-1MHz BW (MV P-P)	Output Voltage Tolerance** (± %)	Price (US \$)
					10-50%	50-100%	18-28V	28-36V			
PA3.3S	18-36	3.3	50	74	2.00	2.00	1.50	1.50	50	2.0	156.03
PA5S	18-36	5	75	76	2.00	2.00	1.50	1.50	50	2.0	156.03
PA5.2S	18-36	5.2	75	76	2.00	2.00	1.50	1.50	50	2.0	156.03
PA9S	18-36	9	100	81	1.50	1.50	1.25	1.25	50	1.5	156.03

PA12S	18-36	12	100	83	1.25	1.25	1.00	1.00	50	1.0	156.03
PA15S	18-36	15	100	84	1.00	1.00	0.75	0.75	50	1.0	156.03
PA24S	18-36	24	100	86	0.75	0.75	0.50	0.50	50	1.0	156.03
PA28S	18-36	28	100	86	0.50	0.50	0.50	0.50	50	0.5	156.03
PA48S	18-36	48	100	86	0.50	0.50	0.50	0.50	50	0.5	156.03
PA100S	18-36	100	100	85	0.50	0.50	0.50	0.50	50	0.5	214.99

10% Minimum load required at all times.

* Using proper thermal management, maximum temp. of +85° C (case)

** Reading taken at nominal 28 VDC input

Series PA Dual 100 Watts Input 18-36 VDC

Pico Part Number	Input Voltage Range (V DC)	Output Voltage (V DC)	Max. Output Power Per Output* (W)	EFF. Full Load Typical** (%)	Max. Load Regulation (%)***		Max. Line Regulation At Full Load (%)		Output Voltage Ripple (Full Load) 1-1MHz BW (MV P-P)	Output Voltage Tolerance** (± %)	Price (US \$)
					10-50%	50-100%	18-28V	28-36V			
PA5D	18-36	5	37.5	76	2.00	2.00	1.50	1.50	50	2.0	223.54
PA9D	18-36	9	50	81	1.50	1.50	1.25	1.25	50	1.5	223.54
PA12D	18-36	12	50	83	1.25	1.25	1.00	1.00	50	1.0	223.54
PA15D	18-36	15	50	84	1.00	1.00	0.75	0.75	50	1.0	223.54
PA24D	18-36	24	50	85	0.75	0.75	0.50	0.50	50	1.0	223.54
PA28D	18-36	28	50	86	0.50	0.50	0.50	0.50	50	0.5	223.54
PA48D	18-36	48	50	86	0.50	0.50	0.50	0.50	50	0.5	240.25

10% Minimum load required at all times.

* Using proper thermal management, maximum temp. of +85° C (case)

** Reading taken at nominal 28 VDC input

*** Balance Load

****HIGH VOLTAGE SERIES PA TO 250 VDC - 100 WATTS - INPUT 18 - 36 VDC

PICO PART NUMBER	INPUT VOLTAGE RANGE (V DC)	OUTPUT VOLTAGE (V DC)	MAX. OUTPUT POWER (W)*	EFF. @ FULL LOAD TYPICAL (%)**	MAX. LOAD REGULATION (%)**		MAX. LINE REGULATION AT FULL LOAD (%)		OUTPUT VOLTAGE RIPPLE FULL LOAD 1-1 MHz BW (%)	OUTPUT VOLTAGE Tolerance (±%)**	PRICE (US \$)
					20-50%	50-100%	18-28 V	28-36 V			
PA125S	18-36	125	100	82	0.5	0.5	0.3	0.3	1	0.5	214.99
PA150S	18-36	150	100	82	0.5	0.5	0.3	0.3	1	0.5	214.99
PA175S	18-36	175	100	82	0.5	0.5	0.3	0.3	1	0.5	214.99
PA200S	18-36	200	100	82	0.5	0.5	0.3	0.3	1	0.5	286.66
PA225S	18-36	225	100	82	0.5	0.5	0.3	0.3	1	0.5	286.66
PA250S	18-36	250	100	82	0.5	0.5	0.3	0.3	1	0.5	286.66

10% Minimum load required at all times

*Using proper thermal management maximum temp of +85°C (case)

**Reading taken at nominal 28 VDC input

**** UL approval pending

[GO TO APPLICATION NOTES](#)

[GO TO HEAT SINK INFORMATION](#)

[GO TO MECHANICAL CONFIGURATION](#)

For immediate engineering assistance or to place an order: **Call Toll Free: 800-431-1064**

PICO Electronics, Inc.

143 Sparks Ave. Pelham, NY 10803-1810
Tel: 914-738-1400 Fax: 914-738-8225