

SERIES PLR

DC-DC CONVERTERS

**Wide Input Range/up to 3.33:1
Isolated Regulated up to 5 Watt
DC-DC Converters
Fully Regulated
All Units Shielded**

This series of Low Profile 0.300", high efficiency, wide input range, encapsulated regulators come in 85 different models. These units feature a 500 VOLT DC input to output isolation in both single and dual output models. The PLR Series will operate from -25° C to +70° C with no heat sink or electrical derating. These units are excellent for applications where input voltage varies dramatically, yet a high efficiency and output voltage regulation must be maintained.

TYPICAL CHARACTERISTICS:

- **Test conditions:** 25° C ambient.
- **Operating temperature:** -25° C to +70° C ambient.
- **Output voltage tolerance:** $\pm 1\%$ at typical input voltage
- **Output voltage temperature coefficient:** 0.02%/°C
- **Storage temperature:** -55° C to +125° C
- **Short circuit protection:** Temporary
- **Operating frequency:** 40 KHz, typical

OPTIONS AVAILABLE

FEATURES

- Voltage regulation over input range of

Unit	Low	High
PLRE	5V	15V
PLRF	8V	24V
PLRA	18V	36V
PLRB	36V	60V
PLRC	18V	60V

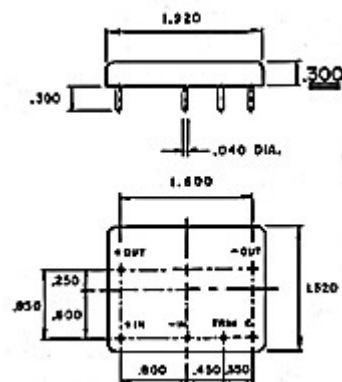
- 0.300" Height
- Encapsulated semiconductors, conservatively rated for maximum reliability.
- Load regulation (see table for typical variation at different loads)
- Line regulation = Typical values
- 5-15V DC = $\pm 1.5\%$
- 8-24V DC = $\pm 1.5\%$
- 18-36V DC = $\pm 1.0\%$

- Per Mil. Std. 883
- Expanded operating temp. (-55° C to +85° C)
- Stabilization Bake (125° C ambient)
- Temperature Cycle (-55° C to +125° C)
- Hi Temp, full power burn in (100% power, 125° C case temp)
- 36-60V DC = $\pm 1.0\%$
- 18-60V DC = $\pm 1.5\%$
- High efficiency - up to 80%
- Will operate over a temperature range of -25° C to +70° C with no heat sink or electrical derating
- 6 sided shielding
- Isolation - 100 megohms at 500 Volts DC
- External output trimming pin standard, +5%
- Single and dual isolated outputs
- Each unit is supplied with an external control pin. This "C" pin, when connected to the negative (-) input, will disable the unit, allowing for remote shutdown.

SERIES PLR - SINGLE OUTPUT											
PICO Part Number	Input Volt. Range	Output Volt. DC	Max. Load Current (mA)	Max. Output Power (watts)	Eff. @ Full Load Typical (%)*	Input Current Full Load Typical (mA)*	Output Volt. Ripple @ Full LD. 1-1 MHz BW mv p-p	Output Volt. Tolerance ($\pm$ %)*	** V LD. Reg. 25%-100% Load ($\pm$ %)*	Line Regulation ($\pm$ %)*	Price
PLRE3.3S	5-15	3.3	909	3	75	400	200	1.00	3.00	2.75	188.91
PLRE5S	5-15	5	600	3	78	385	175	0.75	1.75	2.00	188.91
PLR5.2S	5-15	5.2	577	3	78	385	175	0.75	1.75	2.00	188.91
PLRE9S	5-15	9	444	4	78	515	125	0.50	1.50	1.50	188.91
PLRE12S	5-15	12	333	4	79	505	125	0.50	1.25	1.25	188.91
PLRE15S	5-15	15	267	4	79	505	125	0.50	1.25	1.25	188.91
PLRE24S	5-15	24	167	4	80	500	125	0.50	1.00	1.25	188.91
PLRE28S	5-15	28	143	4	80	500	125	0.50	1.00	1.00	188.91
PLRE48S	5-15	48	83	4	80	500	300	0.50	1.00	1.00	188.91
PLRE100S	5-15	100	40	4	80	500	300	0.50	1.00	1.00	236.14
PLRF3.3S	8-24	3.3	1212	4	75	333	200	1.00	3.00	2.75	188.91
PLRF5S	8-24	5	1000	5	78	400	150	0.75	1.75	2.00	188.91
PLRF5.2S	8-24	5.2	961	5	78	400	150	0.75	1.75	2.00	188.91
PLRF9S	8-24	9	556	5	78	400	125	0.50	1.50	1.50	188.91
PLRF12S	8-24	12	417	5	79	395	125	0.50	1.25	1.25	188.91
PLRF15S	8-24	15	333	5	79	395	125	0.50	1.25	1.25	188.91
PLRF24S	8-24	24	208	5	80	390	125	0.50	1.00	1.25	188.91
PLRF28S	8-24	28	179	5	80	390	125	0.50	1.00	1.00	188.91
PLRF48S	8-24	48	104	5	80	390	250	0.50	1.00	1.00	188.91

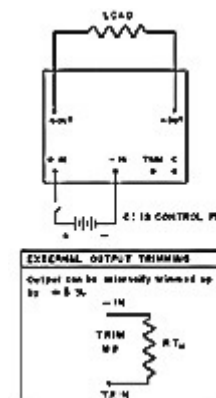
PLRF100S	8-24	100	50	5	80	390	300	0.50	1.00	1.00	236.14
PLRA3.3S	18-36	3.3	1212	4	76	195	150	1.00	3.00	1.50	188.91
PLRA5S	18-36	5	1000	5	76	245	100	0.75	2.00	1.00	188.91
PLRA5.2S	18-36	5.2	961	5	76	245	100	0.75	2.00	1.00	188.91
PLRA9S	18-36	9	556	5	76	245	100	0.50	2.00	0.50	188.91
PLRA12S	18-36	12	417	5	77	240	100	0.50	2.00	0.50	188.91
PLRA15S	18-36	15	333	5	79	235	100	0.50	1.50	0.50	188.91
PLRA24S	18-36	24	208	5	80	230	100	0.50	1.50	0.50	188.91
PLRA28S	18-36	28	179	5	80	230	100	0.50	1.50	0.50	188.91
PLRA48S	18-36	48	104	5	80	230	250	0.50	1.00	0.50	188.91
PLRA100S	18-36	100	50	5	80	230	300	0.50	1.00	1.00	236.14
PLRB3.3S	36-60	3.3	1212	4	74	113	150	1.00	3.00	1.50	223.26
PLRB5S	36-60	5	1000	5	74	140	100	0.75	1.75	0.50	223.26
PLRB5.2S	36-60	5.2	961	5	74	140	100	0.75	1.75	0.50	223.26
PLRB9S	36-60	9	556	5	74	140	100	0.50	1.50	0.50	223.26
PLRB12S	36-60	12	417	5	74	140	100	0.50	1.00	0.25	223.26
PLRB15S	36-60	15	333	5	76	135	100	0.50	1.00	0.25	223.26
PLRB24S	36-60	24	208	5	76	135	100	0.50	0.75	0.25	223.26
PLRB28S	36-60	28	179	5	76	135	100	0.50	0.75	0.25	223.26
PLRB48S	36-60	48	104	5	76	135	200	0.50	0.75	0.25	223.26
PLRB100S	36-60	100	50	5	76	135	300	0.50	1.00	1.00	279.07
PLRC3.3S	18-60	3.3	1212	4	74	139	150	1.00	3.00	1.75	240.43
PLRC5S	18-60	5	1000	5	75	170	100	0.75	2.00	1.50	240.43
PLRC5.2S	18-60	5.2	961	5	75	170	100	0.75	2.00	1.50	240.43
PLRC9S	18-60	9	556	5	75	170	100	0.50	1.50	1.00	240.43
PLRC12S	18-60	12	417	5	75	170	100	0.50	1.00	0.75	240.43
PLRC15S	18-60	15	333	5	77	165	100	0.50	1.00	0.75	240.43
PLRC24S	18-60	24	208	5	78	165	100	0.50	0.75	0.75	240.43
PLRC28S	18-60	28	179	5	78	165	100	0.50	0.75	0.75	240.43
PLRC48S	18-60	48	104	5	78	165	225	0.50	0.75	0.75	240.43
PLRC100S	18-60	100	50	5	78	165	300	0.50	1.00	1.00	300.54
* Measurements taken with input voltage set at mid value.											
**10% minimum load required.											

Series PLR - Single Output



Typical Weight: 40 grams

[Larger Size Drawing](#)



[Larger Size Schematic](#)

SERIES PLR - DUAL OUTPUT

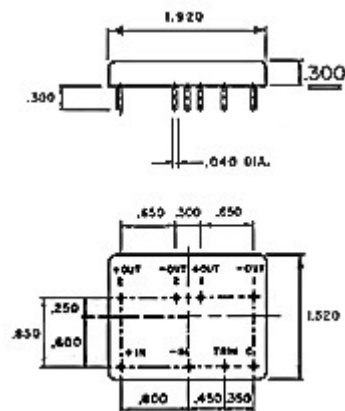
PICO Part Number	Input Volt. Range	Output Volt. DC Per Output	Max. Load Current (mA) Per Output	Max. Output Power (watts) Per Output	Eff. @ Full Load Typical (%)*	Input Current Full Load Typical (mA)*	Output Volt. Ripple@ Full LD. 1-1 MHz BW mv p-p	Output Volt. Tolerance (± %)*	** V LD. Reg. 25%-100% Load (± %)*	Line Regulation (± %)*	Price
PLRE5D	5-15	5	300	1.5	78	385	175	0.75	1.75	2.00	231.85
PLRE9D	5-15	9	222	2.0	78	515	125	0.50	1.50	1.50	231.85
PLRE12D	5-15	12	167	2.0	79	505	125	0.50	1.25	1.25	231.85
PLRE15D	5-15	15	134	2.0	79	505	125	0.50	1.25	1.25	231.85
PLRE24D	5-15	24	84	2.0	80	500	125	0.50	1.00	1.25	231.85
PLRE28D	5-15	28	72	2.0	80	500	125	0.50	1.00	1.00	231.85
PLRE48D	5-15	48	42	2.0	80	500	300	0.50	1.00	1.00	231.85
PLRF5D	8-24	5	500	2.5	78	400	100	0.75	1.75	2.00	231.85
PLRF9D	8-24	9	278	2.5	78	400	125	0.50	1.50	1.50	231.85
PLRF12D	8-24	12	208	2.5	79	395	125	0.50	1.25	1.25	231.85
PLRF15D	8-24	15	167	2.5	79	395	125	0.50	1.25	1.25	231.85

PLRF24D	8-24	24	104	2.5	80	390	125	0.50	1.00	1.25	231.85
PLRF28D	8-24	28	89	2.5	80	390	125	0.50	1.00	1.00	231.85
PLRF48D	8-24	48	52	2.5	80	390	250	0.50	1.00	1.00	231.85
PLRA5D	18-36	5	500	2.5	76	245	100	0.75	2.00	1.00	231.85
PLRA9D	18-36	9	278	2.5	76	245	100	0.50	2.00	0.50	231.85
PLRA12D	18-36	12	208	2.5	77	240	100	0.50	2.00	0.50	231.85
PLRA15D	18-36	15	167	2.5	79	235	100	0.50	1.50	0.50	231.85
PLRA24D	18-36	24	104	2.5	80	230	100	0.50	1.50	0.50	231.85
PLRA28D	18-36	28	89	2.5	80	230	100	0.50	1.50	0.50	231.85
PLRA48D	18-36	48	52	2.5	80	230	250	0.50	1.00	0.50	231.85
PLRB5D	36-60	5	500	2.5	74	140	100	0.75	1.75	0.50	266.19
PLRB9D	36-60	9	278	2.5	74	140	100	0.50	1.50	0.50	266.19
PLRB12D	36-60	12	208	2.5	74	140	100	0.50	1.00	0.25	266.19
PLRB15D	36-60	15	167	2.5	76	135	100	0.50	1.00	0.25	266.19
PLRB24D	36-60	24	104	2.5	76	135	100	0.50	0.75	0.25	266.19
PLRB28D	36-60	28	89	2.5	76	135	100	0.50	0.75	0.25	266.19
PLRB48D	36-60	48	52	2.5	76	135	200	0.50	0.75	0.25	266.19
PLRC5D	18-60	5	500	2.5	75	170	100	0.75	2.00	1.50	283.37
PLRC9D	18-60	9	278	2.5	75	170	100	0.50	1.50	1.00	283.37
PLRC12D	18-60	12	208	2.5	75	170	100	0.50	1.00	0.75	283.37
PLRC15D	18-60	15	167	2.5	77	165	100	0.50	1.00	0.75	283.37
PLRC24D	18-60	24	104	2.5	78	165	100	0.50	0.75	0.75	283.37
PLRC28D	18-60	28	89	2.5	78	165	100	0.50	0.75	0.75	283.37
PLRC48D	18-60	48	52	2.5	78	165	225	0.50	0.75	0.75	283.37

* Measurements taken with input voltage set at mid value.

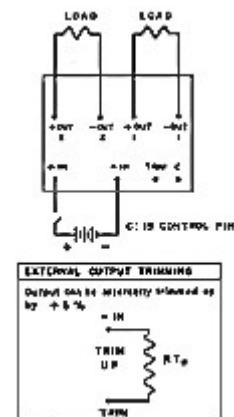
** 10% minimum load required.

Series PLR - Dual Output



Typical Weight: 40 grams

[Larger Size Drawing](#)



[Larger Size Schematic](#)

Ordering Instructions:

No minimum.

Net 30 days F.O.B. Pelham, NY

Delivery--stock to one week for sample orders.

For immediate engineering assistance or to place an order:

Call Toll Free: 800-431-1064

PICO Electronics, Inc.

143 Sparks Ave. Pelham, NY 10803-1837

Tel: 914-738-1400 or Fax: 914-738-8225

[Go back to DC-DC Converters menu](#)

