

Series KR DC to DC Converters Single and Dual Output

**Wide Input Range up to 3.33:1
Isolated Regulated up to 20 Watt DC to DC Converters
Full Regulated All Units Shielded**

This series of high efficiency, wide input range, encapsulated regulators come in 51 different models. These units feature a 500 VOLT DC input to output isolation in both single and dual output models. The KR Series will operate over a temperature range of -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.

FEATURES

- Single and dual isolated outputs
- Voltage regulation over input range of

Unit	Low	High
KRA	18V	36V
KRB	36V	60V
KRC	18V	60V

- Encapsulated semiconductors, conservatively rated for maximum reliability.
- Load regulation (see table for typical variation at different loads)
- Line regulation = Typical values

TYPICAL CHARACTERISTICS:

Test conditions: 25° C ambient

Operating temperature: -25° C to +70° C ambient

Output voltage tolerance: $\pm 2.5\%$ at typical input voltage

Output voltage temperature coefficient: 0.02% / ° C

Storage temperature: -55° C to +125° C

Short circuit protection: Temporary

Operating frequency: 40Khtz, typical

OPTIONS AVAILABLE

- Selected Mil-Std 883
- Expanded operating temp.
(-55° C to +85° C)

18-36V DC = $\pm 1.5\%$

36-60V DC = $\pm 1.5\%$

18-60V DC = $\pm 3.0\%$

- Stabilization Bake (125° C ambient)
- Temperature Cycle (-55° C to +125° C)
- High Temp, full power burn in (100% power, 125° C case temp)

- High efficiency - up to 83%
- 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%
- 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 KR - SINGLE OUTPUT											
Pico Part Number	Input Voltage Range	Output Voltage DC	Max. Load Current mA	Max. Output Power (watts)	EFF. @ Full Load Typical (%)*	Input Current Full Load Typical (mA)*	Out Volt Ripple @ Full LD. 1-1MHz BW mv p-p	Out Volt Tolerance ($\pm$ %)*	** VLD. Reg. 25%-100% Load ($\pm$ %)*	Line Regulation* ($\pm$ %)	Price
KRA3.3S	18-36	3.3	6061	20	78	950	60	1.00	3.00	2.50	198.07
KRA5S	18-36	5	4000	20	78	950	60	0.75	2.50	1.50	198.07
KRA5.2S	18-36	5.2	3846	20	78	950	60	0.75	2.50	1.50	198.07
KRA9S	18-36	9	2222	20	80	925	60	0.50	1.25	0.75	198.07
KRA12S	18-36	12	1667	20	78	950	60	0.50	1.00	0.50	198.07
KRA15S	18-36	15	1333	20	78	950	60	0.50	1.00	0.50	198.07
KRA24S	18-36	24	833	20	81	915	60	0.50	0.50	0.25	198.07
KRA28S	18-36	28	714	20	82	905	60	0.50	0.50	0.25	198.07
KRA48S	18-36	48	417	20	83	890	80	0.50	0.50	0.25	198.07

KRA100S	18-36	100	200	20	83	890	100	0.50	0.50	0.25	247.59
KRB3.3S	36-60	3.3	6061	20	78	534	60	1.00	3.00	2.50	231.27
KRB5S	36-60	5	4000	20	78	535	60	0.75	2.50	1.00	231.27
KRB5.2AS	36-60	5.2	3846	20	78	535	60	0.75	2.50	1.00	231.27
KRB9S	36-60	9	2222	20	80	520	60	0.50	1.25	0.50	231.27
KRB12S	36-60	12	1667	20	78	535	60	0.50	1.00	0.50	231.27
KRB15S	36-60	15	1333	20	78	535	60	0.50	1.00	0.50	231.27
KRB24S	36-60	24	833	20	81	515	60	0.50	0.50	0.25	231.27
KRB28S	36-60	28	714	20	82	510	60	0.50	0.50	0.25	231.27
KRB48S	36-60	48	417	20	83	500	80	0.50	0.50	0.25	231.27
KRB100S	36-60	100	200	20	83	500	100	0.50	0.50	0.25	289.09
KRC3.3S	18-60	3.3	6061	20	78	657	60	1.00	3.0	2.50	247.30
KRC5S	18-60	5	4000	20	78	660	60	0.75	2.50	2.00	247.30
KRC5.2S	18-60	5.2	3846	20	78	660	60	0.75	2.50	2.00	247.30
KRC9S	18-60	9	2222	20	80	640	60	0.50	1.25	1.00	247.30
KRC12S	18-60	12	1667	20	78	660	60	0.50	1.00	0.75	247.30
KRC15S	18-60	15	1333	20	78	660	60	0.50	1.00	0.75	247.30
KRC24S	18-60	24	833	20	81	635	60	0.50	0.50	0.50	247.30
KRC28S	18-60	28	714	20	82	625	60	0.50	0.50	0.50	247.30
KRC48S	18-60	48	417	20	83	615	80	0.50	0.50	0.50	247.30
KRC100S	18-60	100	200	20	83	615	100	0.50	0.50	0.50	308.70

SERIES KR - DUAL OUTPUT											
Pico Part Number	Input Voltage Range	Output Voltage 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)*	Out Volt Ripple @ Full LD. 1-1MHz BW mv p-p	Out Volt Tolerance (± %)*	** VLD. Reg. 25%-100% Load (± %)*	Line Regulation (± %)	Price
KRA5D	18-36	5	2000	10	78	950	60	0.75	2.50	1.50	226.69
KRA9D	18-36	9	1111	10	80	925	60	0.50	1.25	0.75	226.69
KRA12D	18-36	12	833	10	78	950	60	0.50	1.00	0.50	226.69
KRA15D	18-36	15	667	10	78	950	60	0.50	1.00	0.50	226.69
KRA24D	18-36	24	417	10	81	915	60	0.50	0.50	0.25	226.69
KRA28D	18-36	28	357	10	82	905	60	0.50	0.50	0.25	226.69
KRA48D	18-36	48	208	10	83	890	80	0.50	0.50	0.25	226.69
KRB5D	36-60	5	2000	10	78	535	60	0.75	2.50	1.00	259.89
KRB9D	36-60	9	1111	10	80	520	60	0.50	1.25	0.50	259.89
KRB12D	36-60	12	833	10	78	535	60	0.50	1.00	0.50	259.89
KRB15D	36-60	15	667	10	78	535	60	0.50	1.00	0.50	259.89

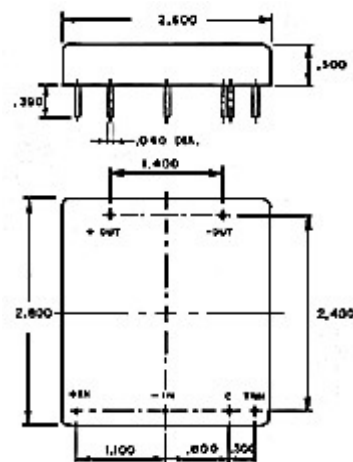
KRB24D	36-60	24	417	10	81	515	60	0.50	0.50	0.25	259.89
KRB28D	36-60	28	357	10	82	510	60	0.50	0.50	0.25	259.89
KRB48D	36-60	48	208	10	83	500	80	0.50	0.50	0.25	259.89
KRC5D	18-60	5	2000	10	78	660	60	0.75	2.50	2.00	275.92
KRC9D	18-60	9	1111	10	80	640	60	0.50	1.25	1.00	275.92
KRC12D	18-60	12	833	10	78	660	60	0.50	1.00	0.75	275.92
KRC15D	18-60	15	667	10	78	660	60	0.50	1.00	0.75	275.92
KRC24D	18-60	24	417	10	81	635	60	0.50	0.50	0.50	275.92
KRC28D	18-60	28	357	10	82	625	60	0.50	0.50	0.50	275.92
KRC48D	18-60	48	208	10	83	615	80	0.50	0.50	0.50	275.92

Series KR Single Output

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C: is control pin

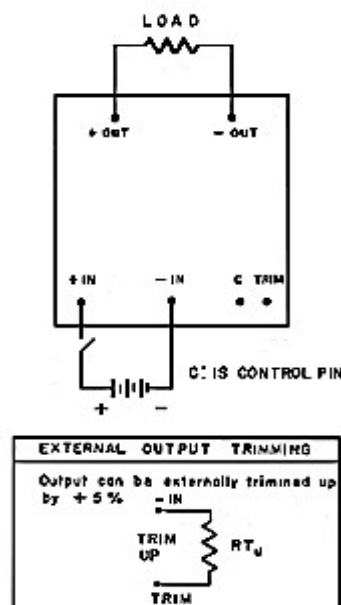
NOTE: all radii typ. 7/64"



bottom view

[Larger Size Drawing](#)

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.



[Larger Size Schematic](#)

Typical Weight: 165 Grams

Series KR Dual Output

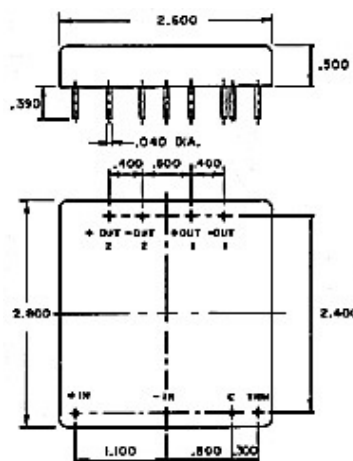
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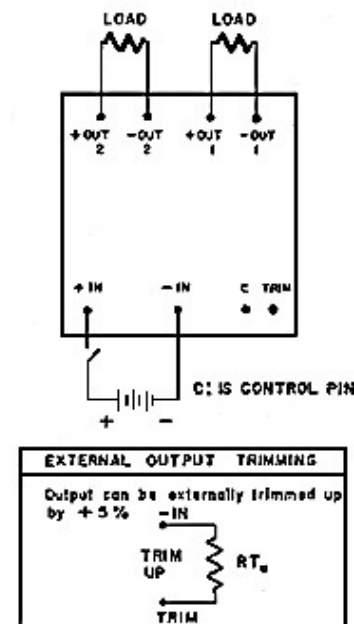
NOTE: all radii typ. 7/64"



bottom view

[Larger Size Drawing](#)

allowing for remote shutdown.



[Larger Size Schematic](#)

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

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