

- ◆ 9V ~ 75V , 2:1 & 4:1 INPUT RANGE
- ◆ REGULATED OUTPUT
- ◆ 1500Vdc INPUT / OUTPUT ISOLATION
- ◆ HIGH EFFICIENCY
- ◆ REMOTE ON /OFF CONTROL
- ◆ THERMAL SHUTDOWN
- ◆ SOFT START
- ◆ UVLO/OVLO SHUTDOWN
- ◆ SHORT CIRCUIT PROTECTION (continuous)
- ◆ OVER VOLTAGE PROTECTION (clamp)
- ◆ INDUSTRY STANDARD
- ◆ MTBF> 301,000 hrs



ELECTRICAL SPECIFICATIONS :
At Nominal Input , Full Load and 25°C

Model Selection Chart :

Model Number	Input Voltage	Output Voltage	Output Current	Efficiency	
	Vdc	Vdc	mA	@Max.Load %(Typ.)	
JR33-12S3V3	12 (9~18)	3.3	10000	78	
JR40-12S05V		5	8000	80	
JR60-12S12V		12	5000	83	
JR60-12S15V		15	4000	84	
JR60-12S24V		24	2500	86	
JR40-12D05V		±5	±4000	79	
JR60-12D12V		±12	±2500	83	
JR60-12D15V		±15	±2000	84	
JR32-12THEV		3.3V±12V	6000±500	72	
JR35-12THDV		3.3V±15V	6000±500	72	
JR42-12TGEV		5V±12V	6000±500	75	
JR45-12TGDV		5V±15V	6000±500	75	
JR33-24S3V3		24 (18~36)	3.3	10000	79
JR40-24S05V			5	8000	81
JR60-24S12V			12	5000	85
JR60-24S15V	15		4000	85	
JR60-24S24V	24		2500	88	
JR40-24D05V	±5		±4000	79	
JR60-24D12V	±12		±2500	84	
JR60-24D15V	±15		±2000	84	
JR32-24THEV	3.3V±12V		6000±500	74	
JR35-24THDV	3.3V±15V		6000±500	74	
JR42-24TGEV	5V±12V		6000±500	76	
JR45-24TGDV	5V±15V		6000±500	76	
JR33-48S3V3	48 (36~75)		3.3	10000	79
JR40-48S05V			5	8000	80
JR60-48S12V			12	5000	83
JR60-48S15V		15	4000	84	
JR60-48S24V		24	2500	84	
JR40-48D05V		±5	±4000	79	
JR60-48D12V		±12	±2500	83	
JR60-48D15V		±15	±2000	86	
JR32-48THEV		3.3V±12V	6000±500	75	
JR35-48THDV		3.3V±15V	6000±500	75	
JR42-48TGEV		5V±12V	6000±500	77	
JR45-48TGDV		5V±15V	6000±500	77	
JR40-412S05V		412 (9~36)	5	8000	79
JR40-412S12V			12	3300	84
JR40-424S05V		424 (18~75)	5	8000	78
JR40-424S12V	12		3300	85	

Absolute Maximum Input Voltage :

- 12Vdc Input Models : 25V
- 24Vdc Input Models : 50V
- 48Vdc Input Models : 100V
- Remote On/Off Control :
On : TTL High or Open
Off : TTL Low or Short

GENERAL SPECIFICATIONS :

- Switching Frequency : 60KHz Typical
- Efficiency : See Table
- Isolation Voltage :
Input-to-Output : 1500Vdc
Input/Output to Case : 1500Vdc
- Isolation Resistance : ≥
1000Mohm(500VDC)

ENVIRONMENTAL SPECIFICATIONS :

- Operating Temperature Range(Ambient):
-40°C to +71°C (with derating)
- Maximum Case Temperature : +100°C
- Thermal Shutdown : +105°C ~ +115°C Case
- Storage Temperature Range : -55°C to +115°C
- Cooling : Free-air Convection
- Temperature Coefficient : ±0.05% /°C max
- Humidity : 95%

PHYSICAL SPECIFICATIONS :

- Case Material : Nickel-Coated Copper with
Non-Conductive Base
- Pin Material : Brass, Solder Coated
- Potting Material: Epoxy
(Flammability to UL94V-0)
- Dimension : 3.0*2.6*0.83 inches
(76.2*66.0*21.1mm)
- Weight : 212g

INPUT SPECIFICATIONS :

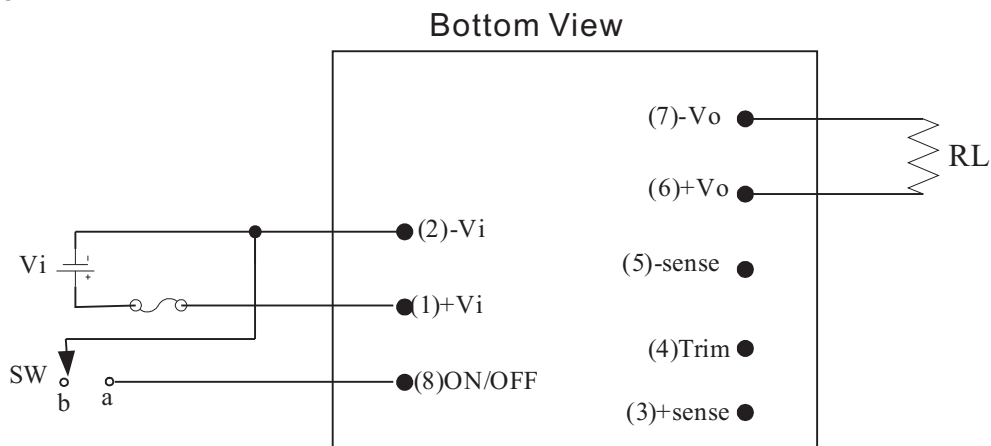
- Input Voltage Range : See Table
- Input Filter : Pi Type

OUTPUT SPECIFICATIONS :
· Output Voltage & Current : See Table
· Output Voltage Accuracy :
Single/Dual= $\pm 2\%$
Triple = Main , $\pm 2\%$
Auxiliary , $\pm 5\%$
· Ripple & Noise(20MHz BW) :
5V,3.3V: $\leq 80\text{mVp-pmax.}$
Others: 1% P-P max.
· Line Regulation : $\pm 1\%$ max.
· Load Regulation F.L \rightarrow 1/4F.L :
Single Output : $\pm 1.0\%$ max.
Other Outputs : $\pm 2.5\%$ max.
· Short Circuit Protection :
Continuous(auto-recovery)
· Over Load Protection : $\geq 110\%$ of full Load
· Transient Response Recovery Time (50% Load Step Change) : 280 μs max.

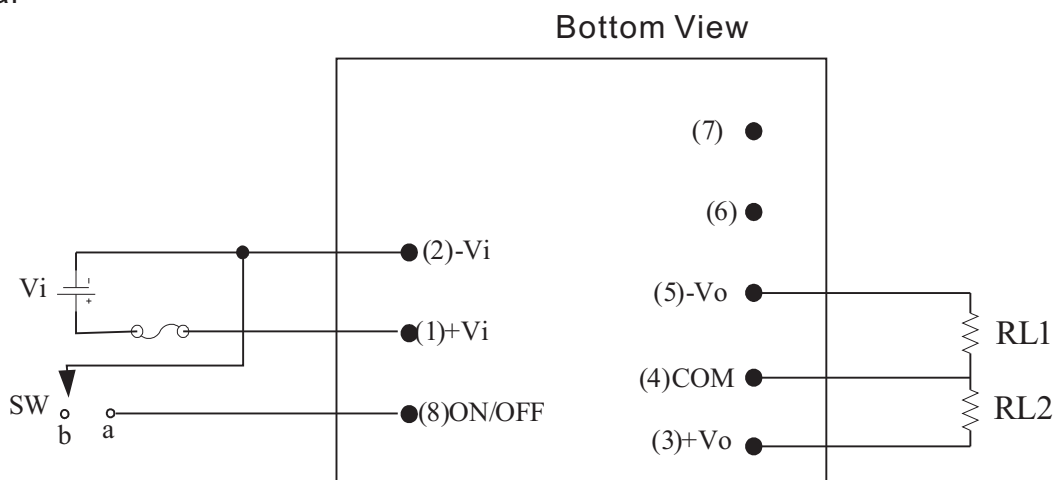
RECOMMENDED INPUT FUSE (Slow Blow) :
· 12Vdc Input Models : 15A/250V
· 24Vdc Input Models : 8A/250V
· 48Vdc Input Models : 4A/250V

Remote Control

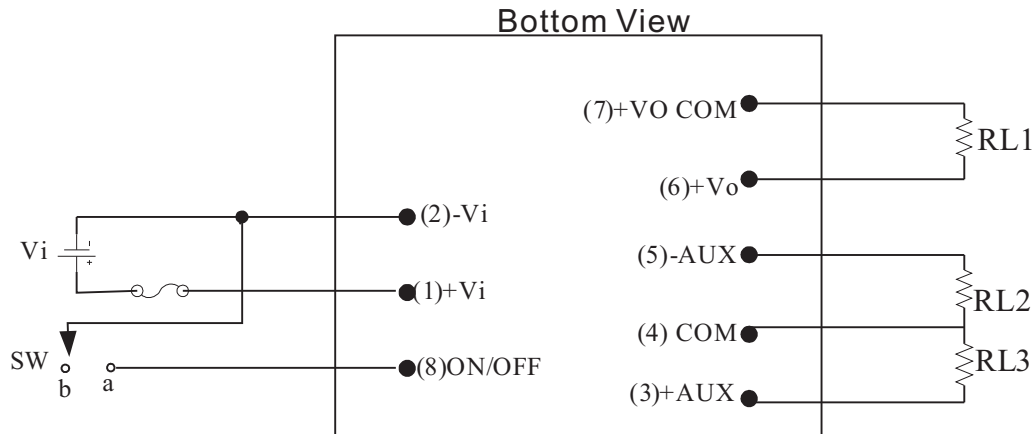
JR Single :



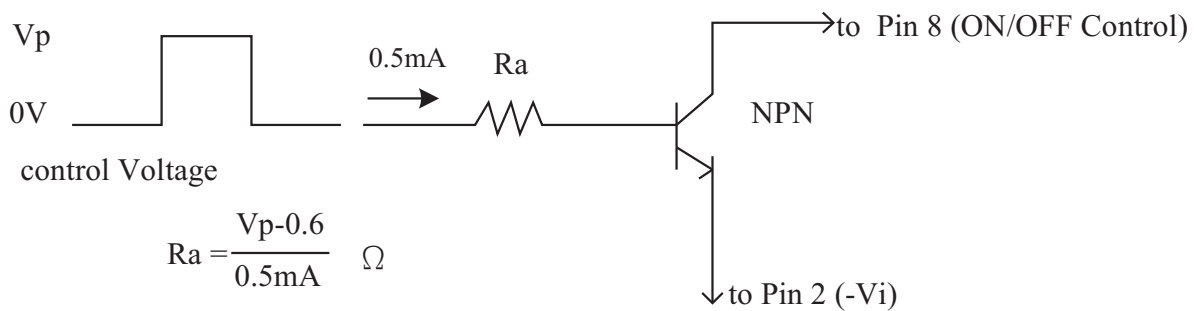
JR Dual :



JR Triple :



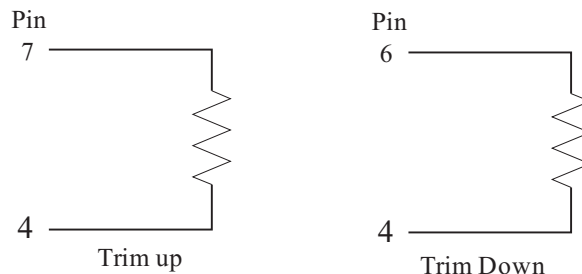
The converter can be disabled by connecting SW to position "a". Connecting SW to position "b", the converter can normally operate. The SW can be replaced by a NPN transistor with connecting as follows:



Note : The control voltage is referenced to negative input (-Vi)

Trim Function

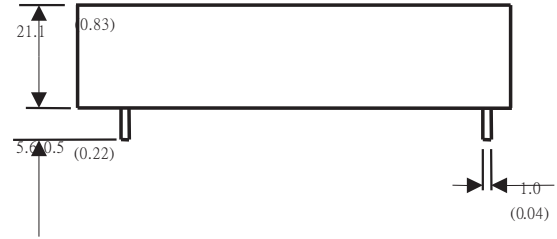
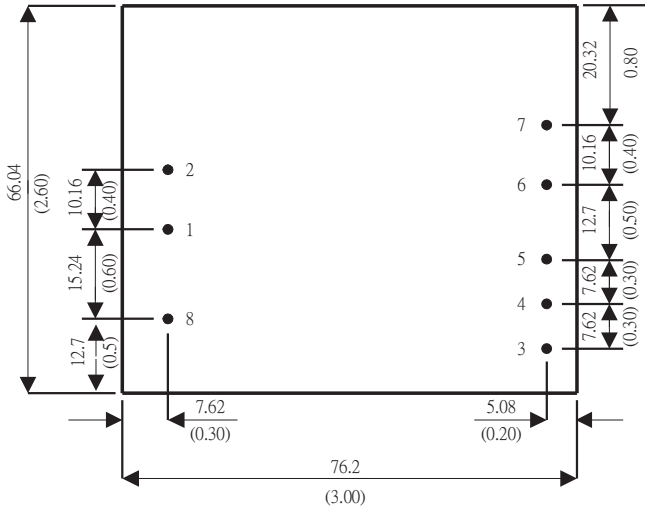
The converter's output voltage can be trimmed up (+10% max) by connecting a resistor between Pin4 and pin7, and be trimmed down⁽¹⁾ between pin 4 and pin 6, as shown below:



Note: Trim down range may depend on different output voltages.

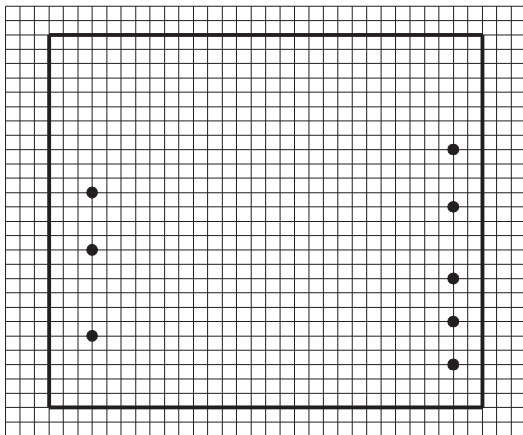
Mechanical Specifications

Bottom View



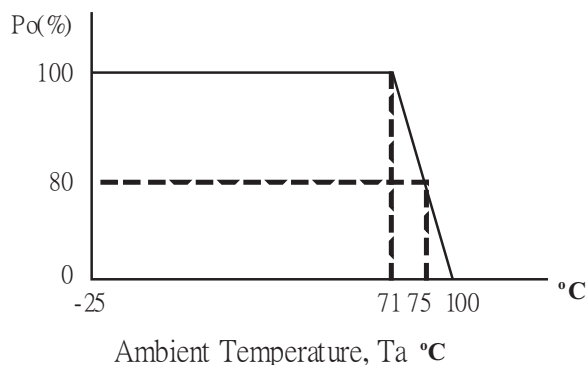
Tolerance	Millimeters	Inches
	X ±0.5	.XX ±0.02
	XX ±0.5	.XXX ±0.02
Pin	±0.05	±0.002

Recommended Pin Patterns
 Bottom View (2.54mm / 0.1inch grids)



Pin	Single	Dual	Triple
1	+Vin	+Vin	+Vin
2	-Vin	-Vin	-Vin
3	+Sense	+Vout	+Aux
4	Output Trim	Com	Com
5	-Sense	-Vout	-Aux
6	+Vout	No Pin	+Vo
7	-Vout	No Pin	+Vo Com
8	Remote ON/OFF Control		

Power Derating Curve



Note

- (1) All specifications are typical at Ta=25°C, nominal input voltage, resistive load and rated output current unless otherwise noted.
- (2) The unit will shut down when the case temperature reaches between 105°C~115°C. The unit will automatically restart as long as the case temperature reduced to the normal operating range.
- (3) Specifications subject to change without notice.