



JN SERIES SINGLE AND DUAL OUTPUT 23~40 WATTS ISOLATED DC/DC CONVERTERS

- ◆ 9V ~ 75V , 2:1 & 4:1 INPUT RANGE
- ◆ REGULATED OUTPUT
- ◆ 1500Vdc (3000Vdc ^{*note1}) INPUT / OUTPUT ISOLATION
- ◆ HIGH EFFICIENCY (UP TO 85%)
- ◆ REMOTE ON / OFF CONTROL (optional)
- ◆ SOFT START
- ◆ UVLO SHUTDOWN
- ◆ SHORT CIRCUIT PROTECTION (Hiccup)
- ◆ OVER VOLTAGE PROTECTION (clamp)
- ◆ INDUSTRY STANDARD



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

MODEL SELECTION CHART :

Model Number	Model (Input Voltage)	Output Voltage	Output Current	Efficiency
	Vdc	Vdc	mA	@Max.Load %(Typ.)
JN28-12S3V3	12 (9~18)	3.3	8000	85
JN40-12S05V		5	8000	85
JN40-12S12V		12	3300	85
JN40-12S15V		15	2600	85
JN40-12S24V		24	1600	85
JN40-12D05V		±5	±4000	83
JN40-12D12V		±12	±1600	83
JN40-12D15V		±15	±1300	83
JN26-24S3V3		24 (18~36)	3.3	8000
JN40-24S05V	5		8000	86
JN40-24S12V	12		3300	86
JN40-24S15V	15		2600	86
JN40-24S24V	24		1600	86
JN40-24D05V	±5		±4000	83
JN40-24D12V	±12		±1600	83
JN40-24D15V	±15		±1300	83
JN28-48S3V3	48 (36~75)		3.3	8000
JN40-48S05V		5	8000	86
JN40-48S12V		12	3300	87
JN40-48S15V		15	2600	87
JN40-48S24V		24	1600	87
JN40-48D05V		±5	±4000	84
JN40-48D12V		±12	±1600	84
JN40-48D15V		±15	±1300	84
JN26-412S3V3		412 (9~36)	3.3	7000
JN35-412S05V	5		7000	82
JN36-412S12V	12		3000	82
JN35-412S15V	15		2300	82
JN36-412S24V	24		1500	82
JN35-412D05V	±5		±3500	80
JN36-412D12V	±12		±1500	80
JN35-412D15V	±15		±1150	80

ABSOLUTE MAXIMUM INPUT VOLTAGE :

- 12 Models : 25V
- 24 Models : 50V
- 48 Models : 100V
- 412 Models : 50V
- 424 Models : 100V

GENERAL SPECIFICATIONS :

- Switching Frequency : 250KHz Typical
- Efficiency : See Table
- Isolation Voltage :
Input-to-Output : 1500Vdc(3000Vdc ^{*note1})
Input/Output to Case : 1500Vdc(3000Vdc ^{*note1})
- Isolation Resistance : ≥ 1000Mohm(500VDC)

ENVIRONMENTAL SPECIFICATIONS :

- Operating Temperature Range(Ambient):
-40°C to +75°C (with derating)
- Maximum Case Temperature : +100°C
- 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 : 2.0*2.0*0.4 inches (50.8*50.8*10.2 mm)
- Weigh : 65g

INPUT SPECIFICATIONS :

- Input Voltage Range : See Table
- Input Filter : Pi Type
- Remote On/Off Control :
On : TTL High or Open
Off : TTL Low or Short

OUTPUT SPECIFICATIONS :

- Output Voltage & Current : See Table
- Output Voltage Accuracy : ±2 %
- Ripple & Noise(20MHz BW) :
5V,3.3V : 80mVp-p max.
Others : 1% P-P max.
- Line Regulation : ±0.5 % max.
- Load Regulation F.L→1/4F.L :
Single Output : ±0.5 % max.
Dual Outputs : ±2.0 % max.
- Short Circuit Protection :
Continuous(auto-recovery)
- Over Load Protection : ≥ 110% of full Load
- Transient Response Recovery Time (50% Load Step Change) : 300µs max.

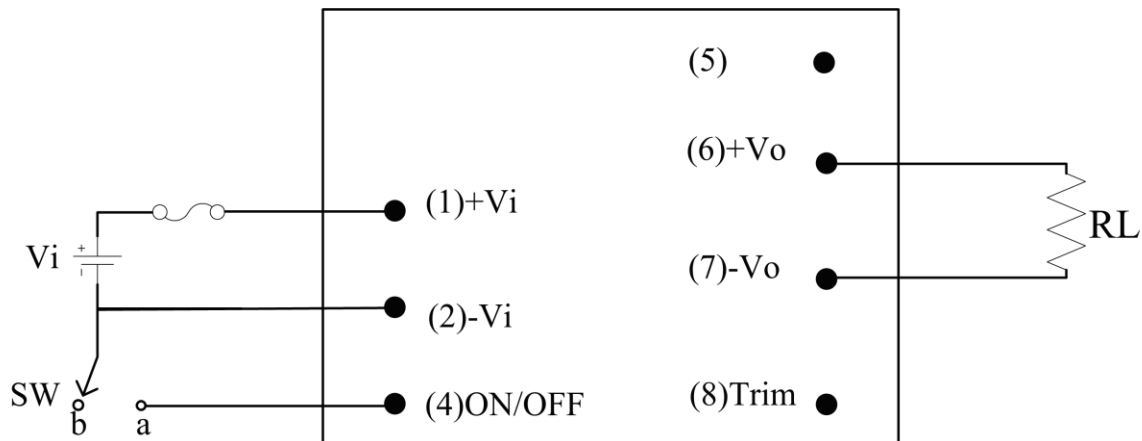
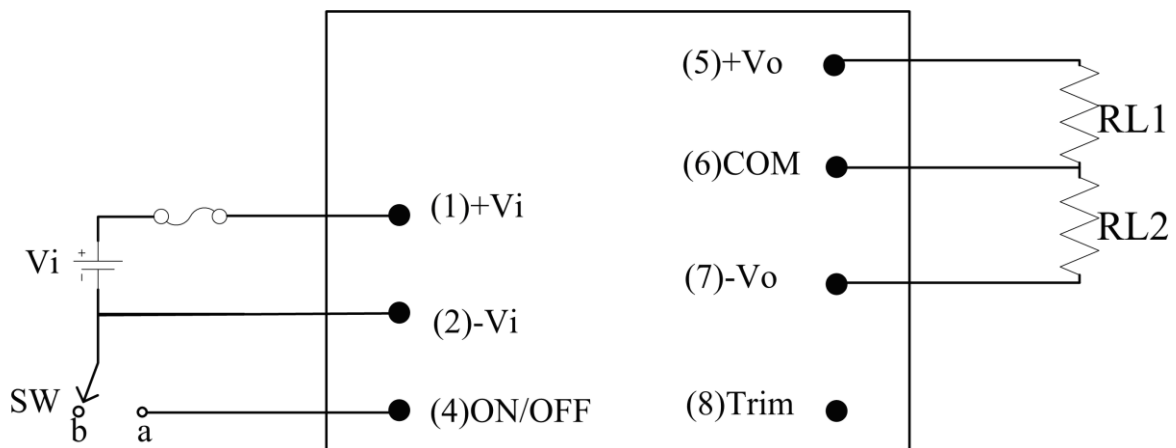
RECOMMENDED INPUT FUSE(SLOW BLOW) :

- 12 Models : 8A/250V
- 24 Models : 4A/250V
- 48 Models : 2A/250V
- 412 Models : 4A/250V
- 424 Models : 2A/250V

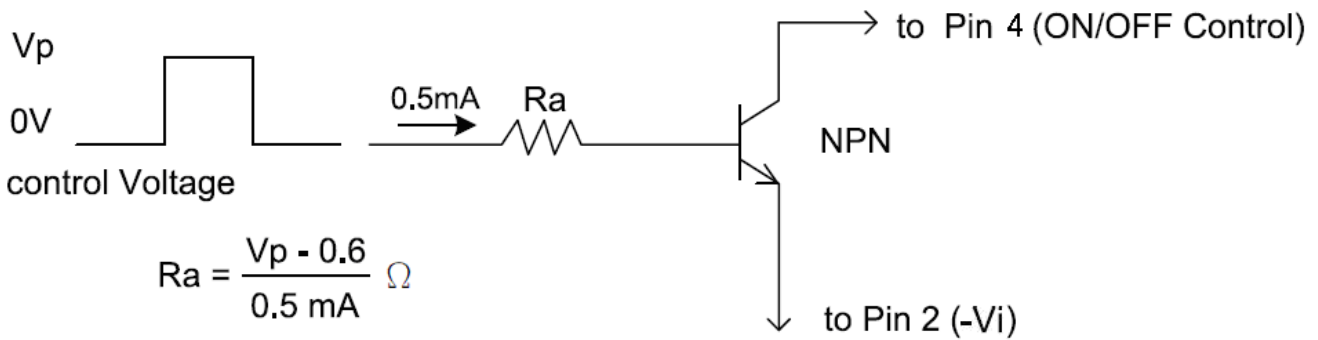
MODEL SELECTION CHART :

Model Number	Model (Input Voltage)	Output Voltage	Output Current	Efficiency
	Vdc	Vdc	mA	@Max.Load
				%(Typ.)
JN26-424S3V3	424 (18~75)	3.3	7000	83
JN35-424S05V		5	7000	83
JN36-424S12V		12	3000	83
JN35-424S15V		15	2300	83
JN36-424S24V		24	1500	83
JN35-424D05V		±5	±3500	81
JN36-424D12V		±12	±1500	81
JN35-424D15V		±15	±1150	81

*note1 : For optional 3KV I/O Isolation , please “V” replacement as “W”
 For example : “JN23-424S3W3” for optional 3KV I/O Isolation

REMOTE CONTROL
JN Single :
Bottom View

JN Dual :
Bottom View


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 :

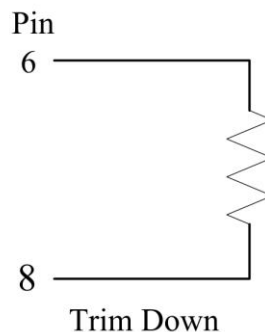
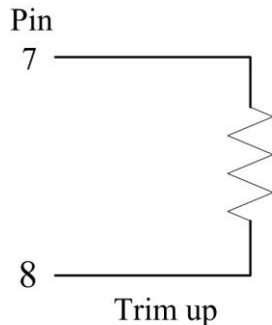


Note : The control voltage is referenced to negative input (-Vi).

TRIM FUNCTION

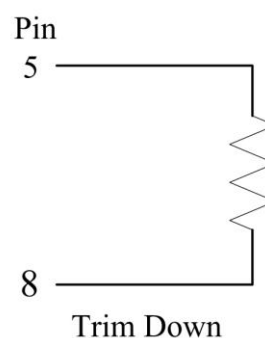
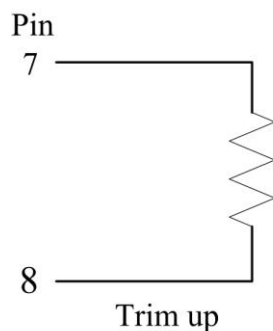
Single Output:

The converter's output voltage can be trimmed up (+10% max) by connecting a resistor between Pin 8 and Pin7, and be trimmed down⁽¹⁾ between Pin 8 and Pin 6, as shown below :



Dual Output:

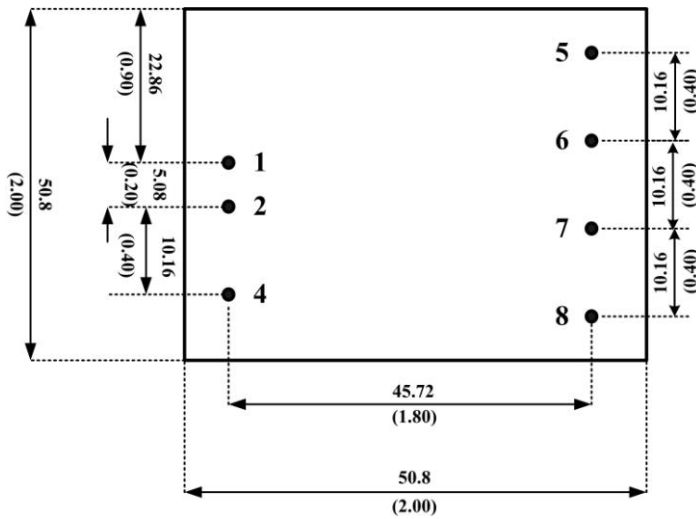
The converter's output voltage can be trimmed up (+10% max) by connecting a resistor between Pin 8 and Pin7, and be trimmed down⁽¹⁾ between Pin 8 and Pin 5, as shown below :



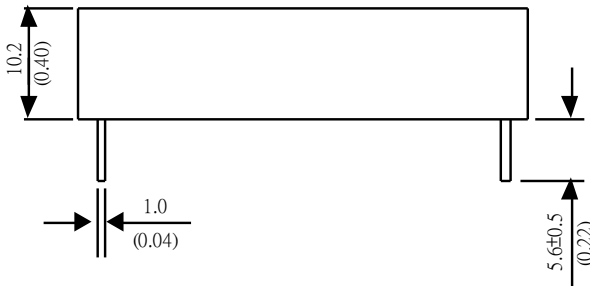
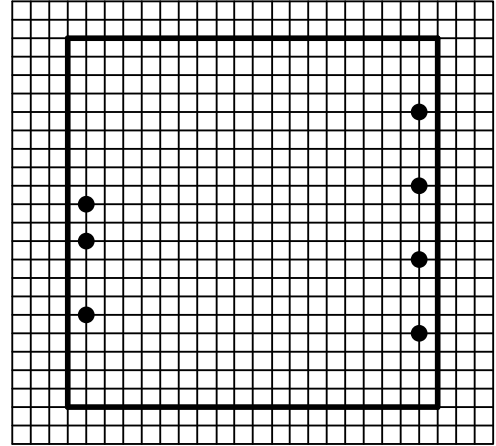
MECHANICAL SPECIFICATIONS

Mechanical Specifications

Bottom View

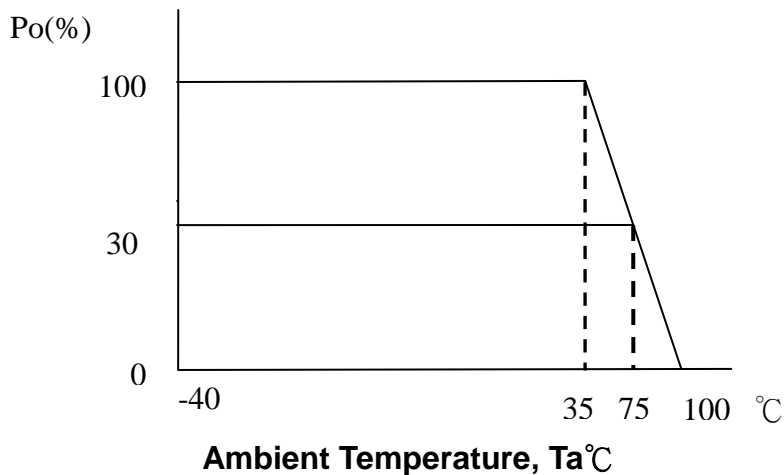


Recommended Pin Patterns
 Bottom View (2.54mm / 0.1inch grids)



Tolerance	Millimeters	Inches
	X ±0.25	.XX ±0.01
	XX ±0.25	.XXX ±0.01
Pin	±0.05	±0.002

Power Derating Curve



Pin Connections

Pin	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
4	Remote On/Off Control	
5	No Pin	+Vout
6	+Vout	Common
7	-Vout	-Vout
8	Trim	Trim

NOTE:

- (1) All specifications are typical at $T_a=25^\circ\text{C}$, nominal input voltage, resistive load and rated output current unless otherwise noted.
- (2) Specifications subject to change without notice.