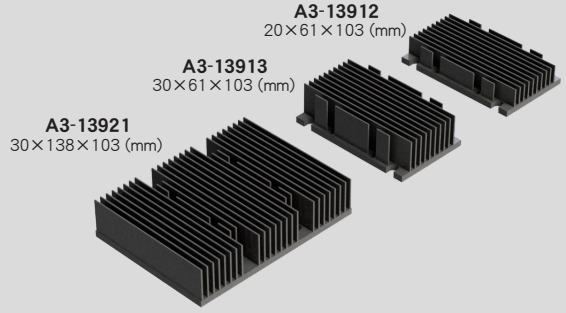
KMP SERIES

160～200W DC/DC CONVERTERS
Single Output

H20×W60×L105 (mm)

■ Option Heat Sink



■ Features

- ●Built-in Input Filter
- ●Input-Output Isolation
- ●High Efficiency 87～91%
- ●Wide Input Voltage Range
- ●High Reliability
- ●6 Sided Metal Shielding
- ●Adjustable Output Volt. ±8%
- ●Input Low Voltage Protection
- ●Input Over Voltage Protection
- ●Output Over Voltage Protection
- ●Thermal Protection
  +110℃～+120℃
- ●Remote ON/OFF Control
- ●Operating Ambient Temperature
  −40℃～+85℃
- ●Conformity to RoHS Directive
- ●Not built-in aluminum and tantalum electrolytic capacitor

- ●入力フィルタ内蔵
- ●入出力間絶縁
- ●高効率 87～91%
- ●広範囲な入力電圧
- ●高信頼性
- ●6面メタルシールド
- ●可変出力電圧 ±8%
- ●入力低電圧保護回路内蔵
- ●入力過電圧保護回路内蔵
- ●出力過電圧保護回路内蔵
- ●過熱保護回路内蔵
  +110℃～+120℃
- ●リモートON/OFFコントロール
- ●動作周囲温度
  −40℃～+85℃
- ●RoHS指令対応
- ●アルミ電解コンデンサ及びタンタルコンデンサ不使用

■ General Characteristics

(at Ta:25℃, Full Load, Nominal Vin)

●Input Voltage,Range	DC12, 24, 48, 100, 140V (See Table 1)
●Output Voltage,Current	See Table 1
●Output Voltage Accuracy	±2% (12V,13.8,15V,24V,28V,48V Vout) ±3% (3.3V,5V,6V Vout)
●Output Voltage Range	±8% Adjustable
●Efficiency	See Table 1
●Line Regulation	±0.3% max. (at Vin Range)
●Load Regulation	±1% max. (3.3V,5V,6V Vout : ±1.5% max.) (0～100% Load)
●Reflected Input Ripple,Noise	(5% Vin)Vp-p max.
●Output Ripple	80mVp-p max.
●Output Noise	(0.5% Vout+100mV)p-p max.
●Short Circuit Protection	Built-in, Auto-restart (See Fig 5)
●Over Voltage Protection	115～140% Output Voltage
●Remote ON/OFF Control	ON :Short or 0～0.8V OFF:Open or 2～10V (Between pin ② ～ ③)
●Temperature Coefficient	0.02%／℃ max.
●Operating Ambient Temp.	−40℃～+85℃ (See Fig 1)
●Max. Case Temperature	+105℃
●Storage Temperature	−55℃～+125℃
●Isolation Voltage	AC2000V one minute (Input−Output−Case)
●Isolation Impedance	100MΩ min. (at DC1000V) (Input−Output−Case)
●Weight	Main Body : 300g max. Heat Sink A3-13912 : 145g max. A3-13913 : 185g max. A3-13921 : 430g max.
●Humidity	20～95% RH
●Shock	490m/s^2 (11msec 3directions)
●Vibration	10～55Hz 98m/s^2 (30minutes 3directions)
●Surface Structure	Aluminum Case
●Soldering Conditions	
Soldering DIP	260℃, for 15 seconds max.
Soldering iron	360℃, for 5 seconds max.
●MTBF	400,000H (Ta:25℃, 80%Load, Nominal Vin)
●Warranty	5 years

■ Selection Guide

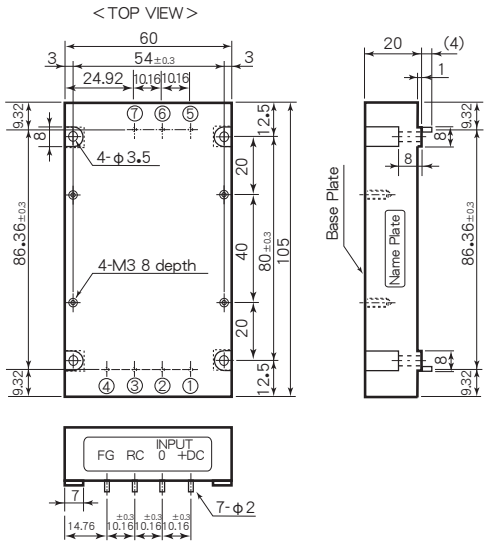
Table 1

Model Number	Input Volt. (Range) (V. DC)	Output Voltage (V. DC)	Output Current (A)	Efficiency (Typical)(%) 20% Load	50% Load	80% Load
KMP12 − 3.3S 32A	12 (8～18) at 50% Load (9～18) at 100% Load	3.3	32	85	88	87
KMP12 − 5S 32A		5	32	86	90	89
KMP12 − 6S26.6A		6	26.6	86	90	89
KMP12 − 12S13.4A		12	13.4	87	90	89
KMP12 −13.8S11.6A		13.8	11.6	87	90	89
KMP12 − 15S10.7A		15	10.7	87	90	89
KMP12 − 24S 6.7A		24	6.7	87	90	89
KMP12 − 28S 5.8A		28	5.8	87	90	89
KMP12 − 48S 3.4A		48	3.4	87	90	89
KMP24 − 3.3S 40A	24 (16～36)	3.3	40	88	91	90
KMP24 − 5S 32A		5	32	90	92	91
KMP24 − 6S26.6A		6	26.6	90	92	91
KMP24 − 12S16.7A		12	16.7	90	92	91
KMP24 −13.8S14.5A		13.8	14.5	90	92	91
KMP24 − 15S13.4A		15	13.4	90	92	91
KMP24 − 24S 8.4A		24	8.4	90	92	91
KMP24 − 28S 7.2A		28	7.2	90	92	91
KMP24 − 48S 4.2A		48	4.2	90	92	91
KMP48 − 3.3S 40A	48 (36～76)	3.3	40	88	91	90
KMP48 − 5S 32A		5	32	91	92	91
KMP48 − 6S26.6A		6	26.6	91	92	91
KMP48 − 12S16.7A		12	16.7	91	92	91
KMP48 −13.8S14.5A		13.8	14.5	91	92	91
KMP48 − 15S13.4A		15	13.4	91	92	91
KMP48 − 24S 8.4A		24	8.4	91	92	91
KMP48 − 28S 7.2A		28	7.2	91	92	91
KMP48 − 48S 4.2A		48	4.2	91	92	91
KMP100− 3.3S 40A	100 (64～144)	3.3	40	85	91	90
KMP100− 5S 32A		5	32	87	92	91
KMP100− 6S26.6A		6	26.6	87	92	91
KMP100− 12S16.7A		12	16.7	87	92	91
KMP100−13.8S14.5A		13.8	14.5	87	92	91
KMP100− 15S13.4A		15	13.4	87	92	91
KMP100− 24S 8.4A		24	8.4	87	92	91
KMP100− 28S 7.2A		28	7.2	87	92	91
KMP100− 48S 4.2A		48	4.2	87	92	91
KMP140− 3.3S 40A	140 (90～200)	3.3	40	85	91	90
KMP140− 5S 32A		5	32	87	92	91
KMP140− 6S26.6A		6	26.6	87	92	91
KMP140− 12S16.7A		12	16.7	87	92	91
KMP140−13.8S14.5A		13.8	14.5	87	92	91
KMP140− 15S13.4A		15	13.4	87	92	91
KMP140− 24S 8.4A		24	8.4	87	92	91
KMP140− 28S 7.2A		28	7.2	87	92	91
KMP140− 48S 4.2A		48	4.2	87	92	91

＊上記仕様以外にも対応可能ですのでお問い合わせください。
Please consult with us about other specification.

KMP SERIES DATA SHEET

■ Pin Outs & Dimensions (±0.5mm)

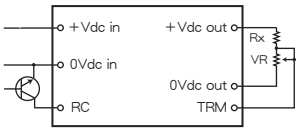


Terminal Outs

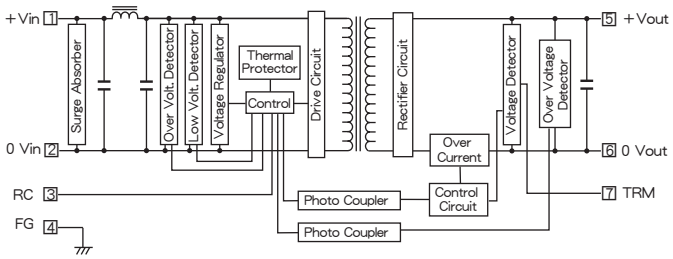
①	+Vdc in
②	0 Vdc in
③	RC
④	FG
⑤	+Vdc out
⑥	0 Vdc out
⑦	TRM

Application

ON/OFF Control and Vout Adjustment

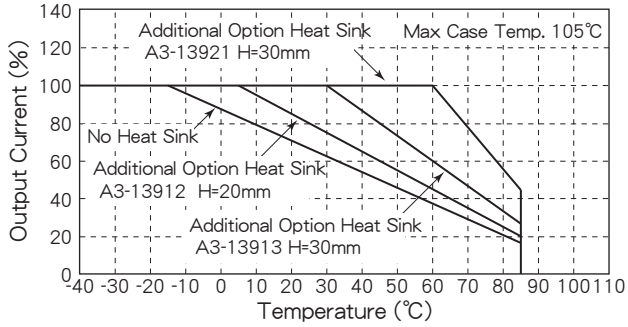


■ Block Diagram



■ Characteristic Curves

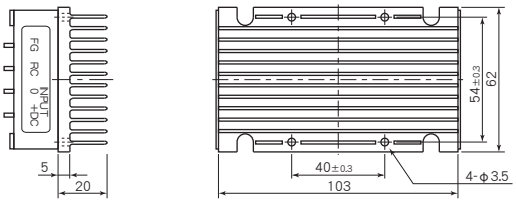
Fig 1 Derating Curve



■ Option Heat Sink

Fig 2 Temperature Characteristic on Case Surface

＊Option Heat Sink Model : A3-13912



KMP24-12S16.7A Additonal Heat Sink A3-13912
Ta=25℃, 80% Load, Vin=Nominal

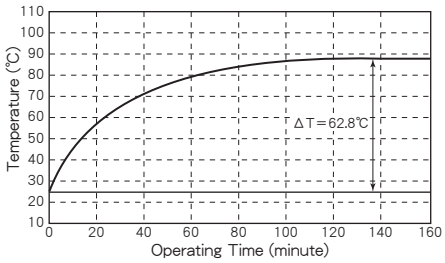
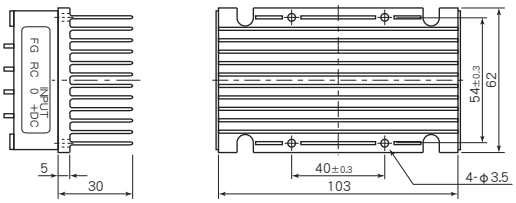


Fig 3 Temperature Characteristic on Case Surface

＊Option Heat Sink Model : A3-13913



KMP24-12S16.7A Additonal Heat Sink A3-13913
Ta=25℃, 100% Load, Vin=Nominal

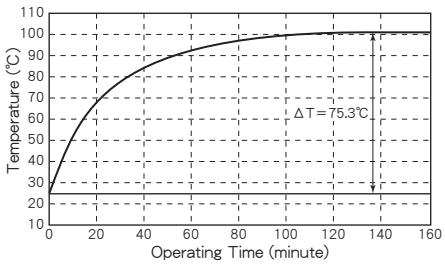
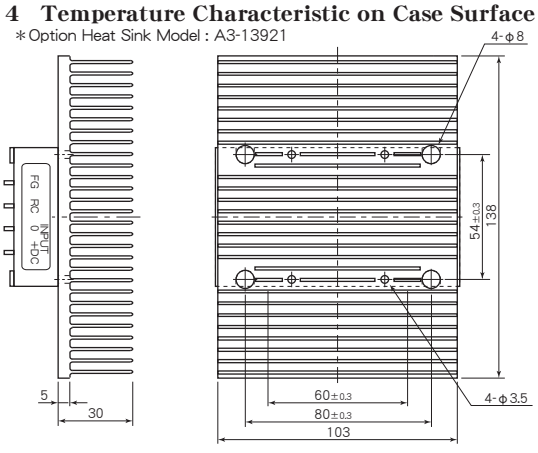


Fig 4 Temperature Characteristic on Case Surface

＊Option Heat Sink Model : A3-13921



KMP24-12S16.7A Additonal Heat Sink A3-13921
Ta=25℃, 100% Load, Vin=Nominal

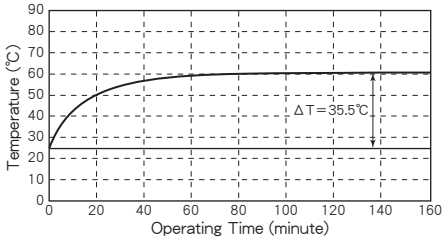


Fig 5 Short Circuit Operating Area

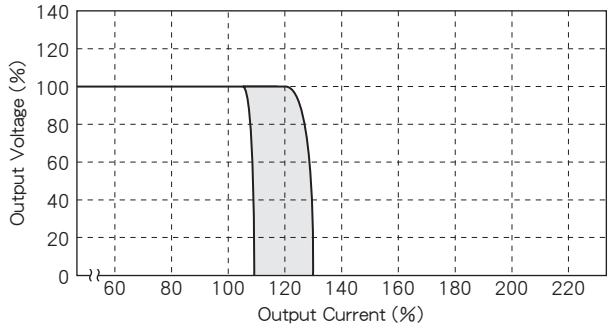


Fig 6 Efficiency vs. Output Current

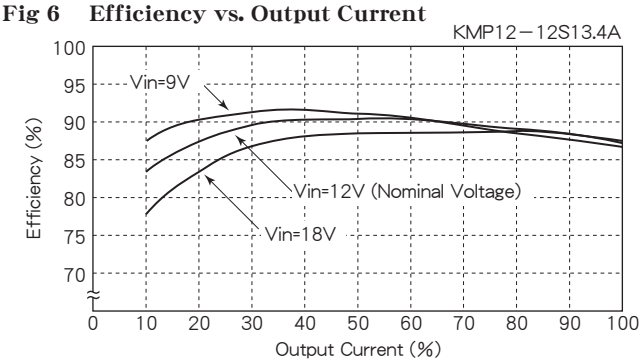


Fig 7 Efficiency vs. Output Current

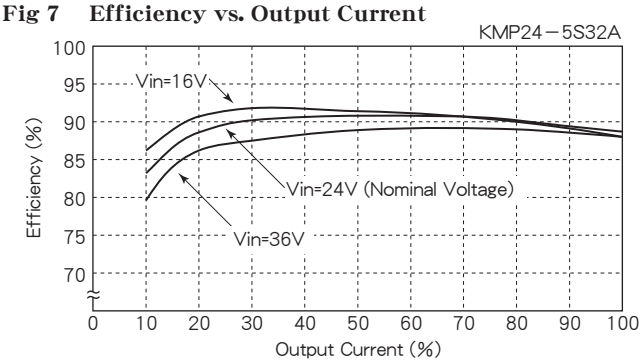


Fig 8 Efficiency vs. Output Current

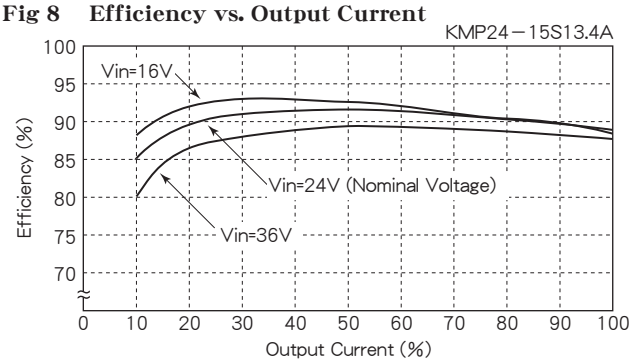


Fig 9 Efficiency vs. Output Current

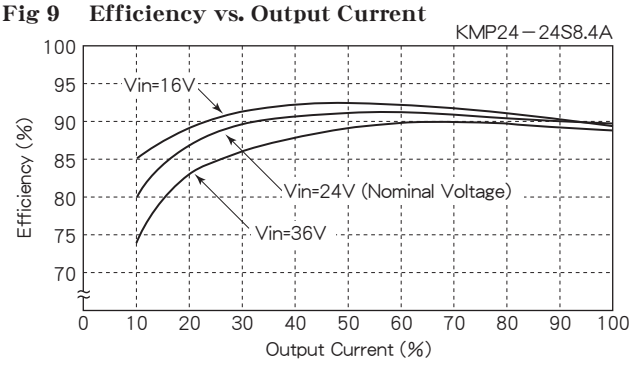


Fig 10 Efficiency vs. Output Current

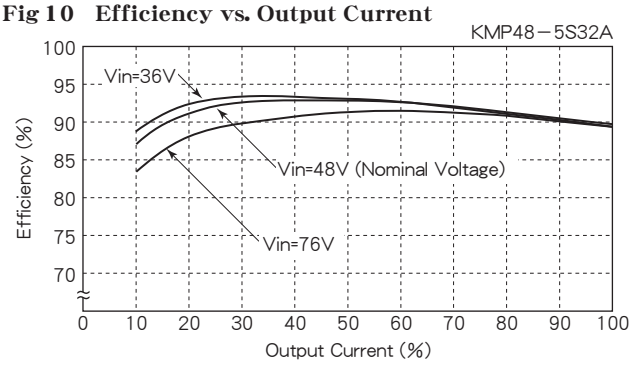


Fig 11 Efficiency vs. Output Current

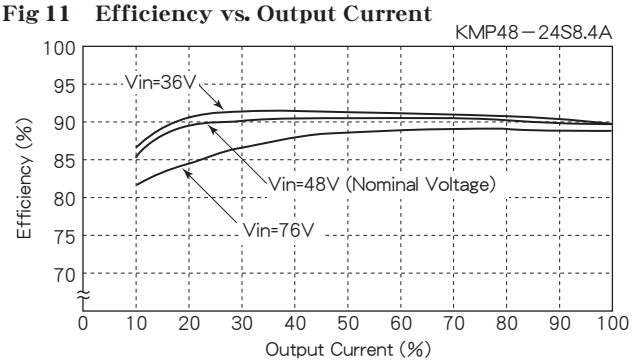


Fig 12 Efficiency vs. Output Current