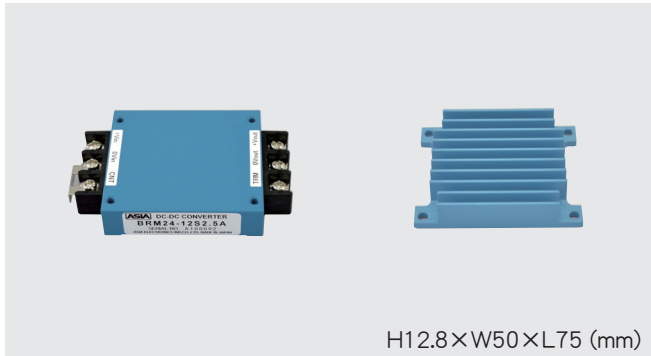


# BRM SERIES

## 23~30W DC/DC CONVERTERS Single Output



H12.8×W50×L75 (mm)

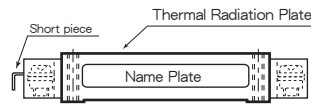
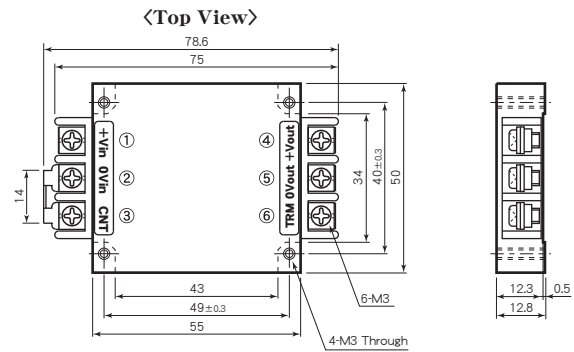
### Features

- Low Profile 12.8mm
  - Built-in Input Filter
  - Input-Output Isolation (AC2000V)
  - High Efficiency 87~90%
  - Wide Input Voltage Range
  - High Reliability
  - 6 Sided Metal Shielding
  - Remote ON/OFF Control
  - Adjustable Output Volt. ±5%
  - Input Low Voltage Protection
  - Input Over Voltage Protection
  - Output Over Voltage Protection 115~140% Operation
  - Thermal Protection +110°C~+120°C
  - Operating Ambient Temperature -40°C~+85°C
  - Max. Case Temperature +105°C
  - Conformity to RoHS Directive
  - Not built-in aluminum and tantalum electrolytic capacitor
- 薄型 12.8mm
  - 入力フィルタ内蔵
  - 入出力間絶縁 (AC2000V)
  - 高効率 87~90%
  - 広範囲な入力電圧
  - 高信頼性
  - 6面メタルシールド
  - リモートON/OFFコントロール
  - 可変出力電圧 ±5%
  - 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 115~140% 動作
  - 過熱保護回路内蔵 +110°C~+120°C
  - 動作周囲温度 -40°C~+85°C
  - 最大ケース温度 +105°C
  - 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

- Input Voltage, Range DC12, 24, 48, 100V (See Table 1)
- Output Voltage, Current See Table 1
- Output Voltage Accuracy ±2% ±3% (3.3, 5, 6V Vout only) ±5% (Used trimmer) See Table 1
- Output Voltage Range ±0.3% max. (at Vin Range)
- Efficiency ±0.5% max. (0~100% Load)
- Line Regulation (3% Vin) Vp-p max.
- Load Regulation 40mVp-p max. 100mVp-p max. (48V Vout only) 100mVp-p max.
- Reflected Input Ripple, Noise 200mVp-p max. (48V Vout only)
- Output Ripple Built-in, Auto-restart (See Fig. 2)
- Output Noise 115~140% Output Voltage
- Short Circuit Protection ON : Short or 0~0.8V
- Over Voltage Protection OFF : Open or 2~10V (Between terminal ② ~ ③)
- Remote ON/OFF Control 0.02%/°C max. -40°C~+85°C (See Fig. 1)
- Temperature Coefficient +105°C
- Operating Ambient Temp. -50°C~+115°C
- Max. Case Temperature AC2000V one minute (Input-Output-Case)
- Storage Temperature 100MΩ min. (at DC1000V) (Input-Output-Case)
- Isolation Voltage Main Body : 100g max. Heat Sink : 40g max.
- Weight 20~95% RH
- Humidity 490m/s<sup>2</sup> (11msec 3directions)
- Shock 10~55Hz 98m/s<sup>2</sup> (30minutes 3directions)
- Vibration 6 Sided Aluminum Case
- Surface Structure 500,000H
- MTBF (Ta : 25°C, 80% Load, Nominal Vin)
- Warranty 5 years

### Terminal Outs & Dimensions (±0.5mm)



Application ON/OFF Control and Vout Adjustment

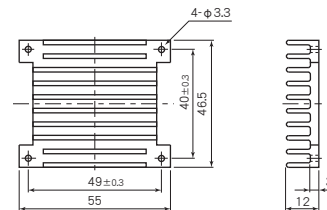


Vout (V)	3.3V	5V	6V	12V	15V	24V	28V	48V
VR (Ω)	50k	50k	50k	50k	50k	50k	50k	50k
Rf (Ω)	10k	33k	47k	47k	62k	110k	130k	220k

### Terminal Outs

①	+Vdc in
②	0 Vdc in
③	ON/OFF Control
④	+Vdc out
⑤	0 Vdc out
⑥	TRM

### Option Heat Sink



\* Option Heat Sink Model : A3-13988

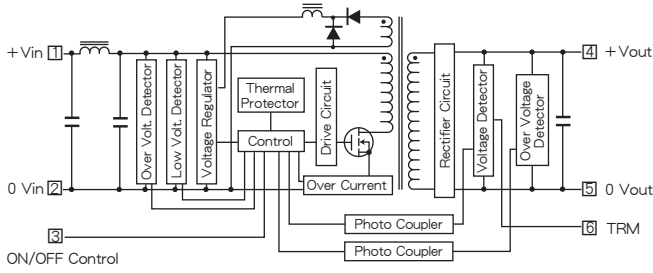
### Selection Guide

Model Number	Input Volt. (Range) (V. DC)	Output Voltage (V. DC)	Output Current (A)	Efficiency (Typical)(%)		
				20% Load	80% Load	
BRM12-3.3S 7A	12 (8~18)	3.3	7	84	87	
BRM12-5S 6A		5	6	84	90	
BRM12-6S 5A		6	5	84	90	
BRM12-12S 2.5A		12	2.5	84	90	
BRM12-15S 2A		15	2	84	90	
BRM12-24S 1.25A		24	1.25	84	90	
BRM12-28S 1.07A		28	1.07	84	90	
BRM12-48S 0.6A		48	0.6	84	90	
BRM24-3.3S 7A		24 (16~36)	3.3	7	84	87
BRM24-5S 6A			5	6	84	90
BRM24-6S 5A	6		5	84	90	
BRM24-12S 2.5A	12		2.5	84	90	
BRM24-15S 2A	15		2	84	90	
BRM24-24S 1.25A	24		1.25	84	90	
BRM24-28S 1.07A	28		1.07	84	90	
BRM24-48S 0.6A	48		0.6	84	90	
BRM48-3.3S 7A	48 (32~76)		3.3	7	84	87
BRM48-5S 6A			5	6	84	90
BRM48-6S 5A		6	5	84	90	
BRM48-12S 2.5A		12	2.5	84	90	
BRM48-15S 2A		15	2	84	90	
BRM48-24S 1.25A		24	1.25	84	90	
BRM48-28S 1.07A		28	1.07	84	90	
BRM100-3.3S 7A		100 (64~144)	3.3	7	84	87
BRM100-5S 6A			5	6	84	90
BRM100-6S 5A			6	5	84	90
BRM100-12S 2.5A	12		2.5	84	90	
BRM100-15S 2A	15		2	84	90	
BRM100-24S 1.25A	24		1.25	84	90	
BRM100-28S 1.07A	28		1.07	84	90	

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

# BRM SERIES DATA SHEET

## Block Diagram



## Characteristic Curves

Fig. 1 Derating Curve

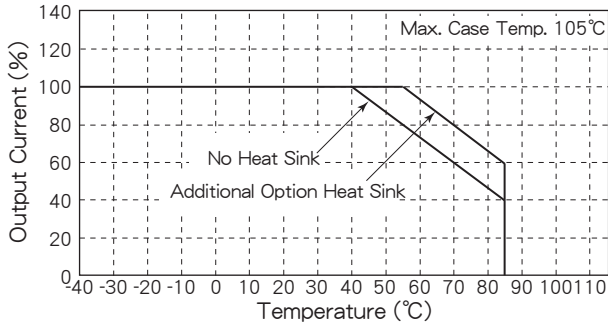


Fig. 2 Short Circuit Operating Area

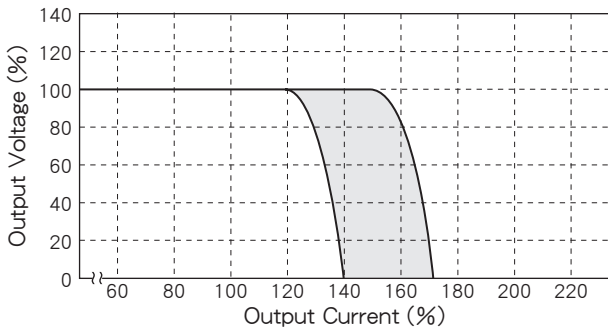


Fig. 3 Temperature Characteristic on Case Surface

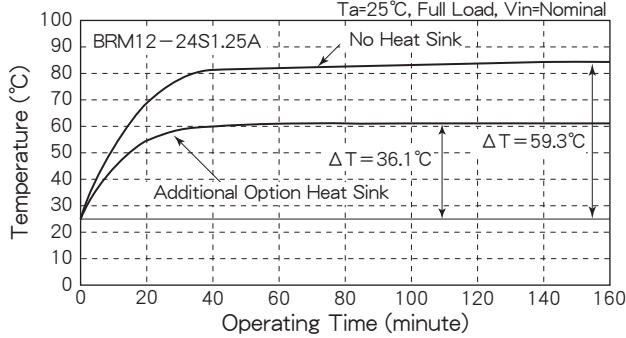


Fig. 4 Efficiency vs. Output Current (Vin=12V)

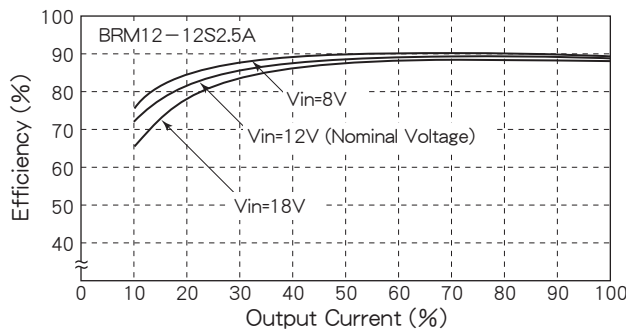


Fig. 5 Efficiency vs. Output Current (Vin=12V)

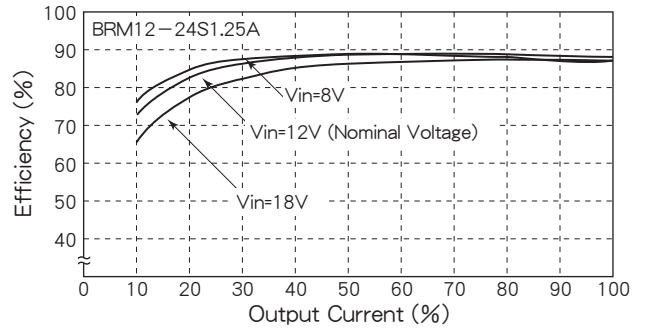


Fig. 6 Efficiency vs. Output Current (Vin=24V)

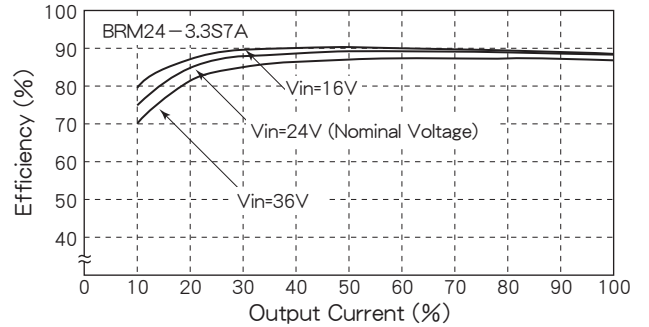


Fig. 7 Efficiency vs. Output Current (Vin=24V)

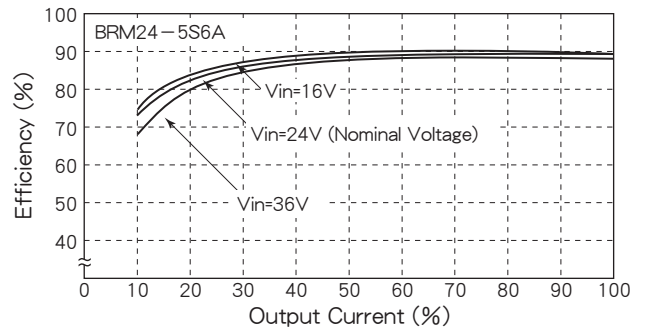


Fig. 8 Efficiency vs. Output Current (Vin=48V)

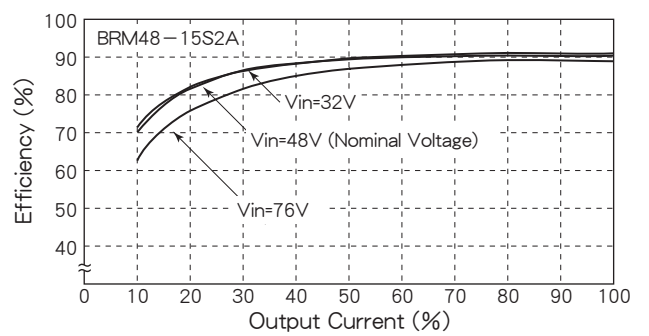


Fig. 9 Efficiency vs. Output Current (Vin=100V)

