# KC SERIES
# KCW SERIES

## 50W AC/DC CONVERTERS
## 36W(Wide Input Voltage Range)


H30×W60×L132 (mm)

## ■ Features

- ●Wide Input Voltage Range (KCW) AC85～264V
- ●Improved Power Factor
- ●Output Over Voltage Protection
- ●High Efficinecy 83～88%
- ●Input-Output Isolation (AC1500V)
- ●Operating Ambient Temperature −25℃～+71℃
- ●Adjustable Output Volt. ±5%
- ●Conformity to VCCI Class B
- ●Conformity to RoHS Directive

- ●ワイド入力電圧 (KCW) AC85～264V
- ●力率改善回路内蔵
- ●出力過電圧保護回路内蔵
- ●高効率 83～88%
- ●入出力間絶縁 (AC1500V)
- ●動作周囲温度 −25℃～+71℃
- ●出力電圧調整可能 ±5%
- ●VCCI クラスB 準拠
- ●RoHS指令対応

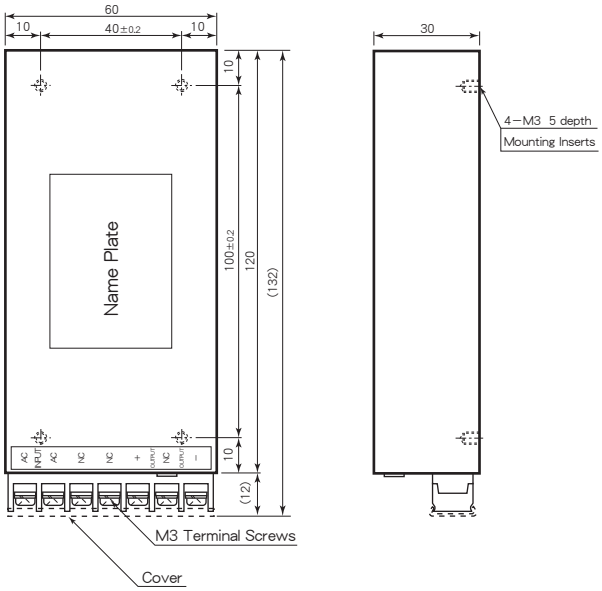
## ■ General Characteristics

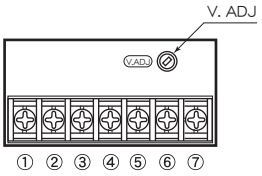
(at Ta:25℃, Full Load, Nominal Vin)

| | |
|---|---|
| ●Input Voltage,Range | KC : AC100V (85～132V)<br>AC200V (175～264V)<br>KCW : AC160V (85～264V) |
| ●Input Frequency | 47～440Hz |
| ●Power Factor | 0.80 typ. (Vin : 50,60Hz)<br>0.65 typ. (Vin : 400Hz) |
| ●Output Voltage,Current | See Table 1 |
| ●Output Voltage Adjustment | ±5% |
| ●Efficiency | See Table 1 |
| ●Line Regulation | 0.1% max. (at Vin Range) |
| ●Load Regulation | 0.5% max.<br>1.5% max. (5V Vout only)<br>(0～100% Load) |
| ●Output Ripple | (0.1%Vout+40mV)p-p max. (Vin : 50, 60Hz)<br>(1%Vout+40mV)p-p max. (Vin : 400Hz) |
| ●Output Noise | (0.5%Vout+50mV)p-p max. (Vin : 50, 60Hz)<br>(1.5%Vout+50mV)p-p max. (Vin : 400Hz) |
| ●Short Circuit Protection | Built-in, Auto-restart (See Fig 2) |
| ●Over Voltage Protection | 115～140% Output Voltage |
| ●Temperature Coefficient | 0.02%／℃ max. |
| ●Operating Ambient Temp. | −25℃～+71℃ (See Fig 1) |
| ●Max. Case Temperature | +85℃ |
| ●Storage Temperature | −40℃～+85℃ |
| ●Isolation Voltage | AC1500V one minute<br>(Input−Output−Case) |
| ●Isolation Impedance | 100MΩ min. (at DC1000V)<br>(Input−Output−Case) |
| ●Weight | 550g max. |
| ●Humidity | 20～95% RH |
| ●Shock | 490m/s² (11msec 3directions) |
| ●Vibration | 10～55Hz 98m/s²<br>(30minutes 3directions) |
| ●Surface Structure | Aluminum Case |
| ●MTBF | 110,000H<br>(Ta:25℃, 80%Load, Nominal Vin) |
| ●Warranty | 5 years |

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

〈Top View〉




**Terminal Outs**

| | |
|---|---|
| ① | AC in |
| ② | AC in |
| ③ | No Connection |
| ④ | No Connection |
| ⑤ | +Vdc out |
| ⑥ | No Connection |
| ⑦ | −Vdc out |

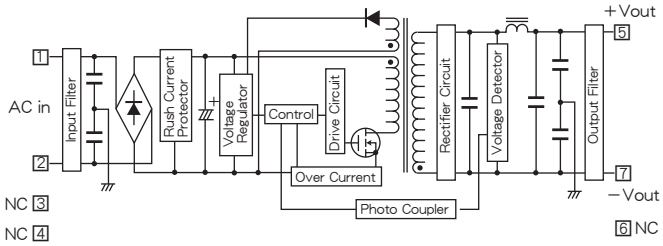
## ■ Selection Guide

Table 1

| Model Number | Input Volt. (Range) (V. AC) | Output Voltage (V. DC) | Output Current (A) | Efficiency 80%Load (%)(typ.) |
|---|---|---|---|---|
| KC100− 5S 10A | 100 (85～132) | 5 | 10 | 85 |
| KC100−12S 4.2A | | 12 | 4.2 | 87 |
| KC100−15S 3.3A | | 15 | 3.3 | 88 |
| KC100−24S 2.1A | | 24 | 2.1 | 88 |
| KC200− 5S10A | 200 (175～264) | 5 | 10 | 85 |
| KC200−12S 4.2A | | 12 | 4.2 | 87 |
| KC200−15S 3.3A | | 15 | 3.3 | 88 |
| KC200−24S 2.1A | | 24 | 2.1 | 88 |
| KCW160− 5S 7A | 160 (85～264) | 5 | 7 | 83 |
| KCW160−12S 3A | | 12 | 3 | 85 |
| KCW160−15S 2.4A | | 15 | 2.4 | 86 |
| KCW160−24S 1.5A | | 24 | 1.5 | 86 |

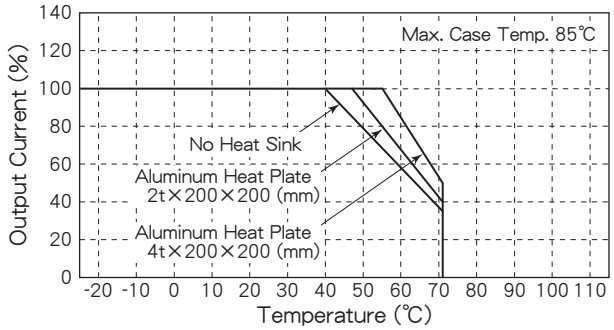
※ 上記仕様以外にも対応可能ですので お問い合わせ下さい。
Please consult with us about other specification.

## ■ Block Diagram

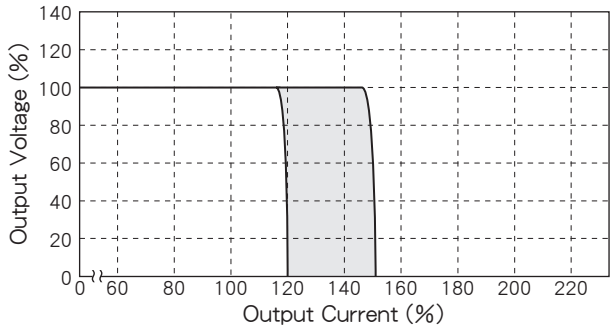



## ■ Characteristic Curves

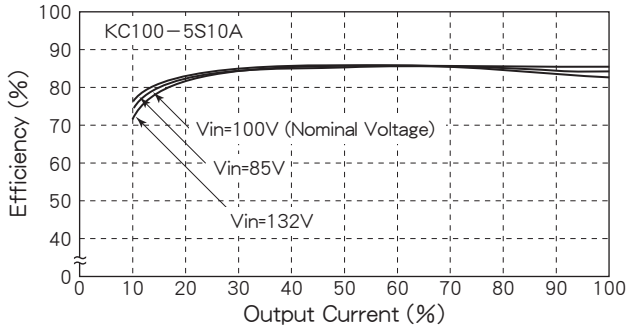
### Fig 1 Derating Curve



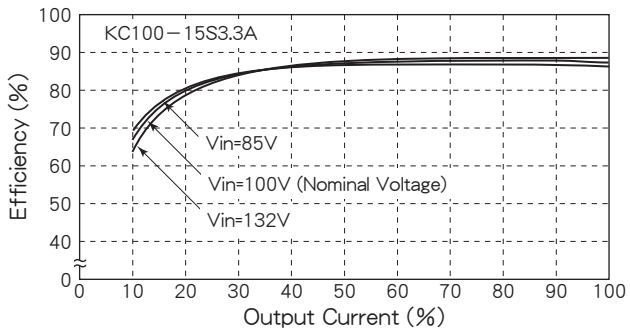

### Fig 2 Short Circuit Operating Area



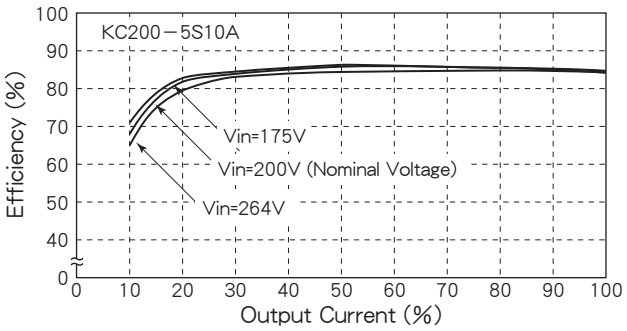

### Fig 3 Efficiency vs. Output Current



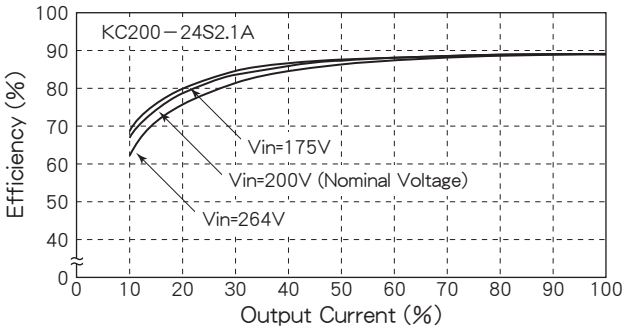

### Fig 4 Efficiency vs. Output Current



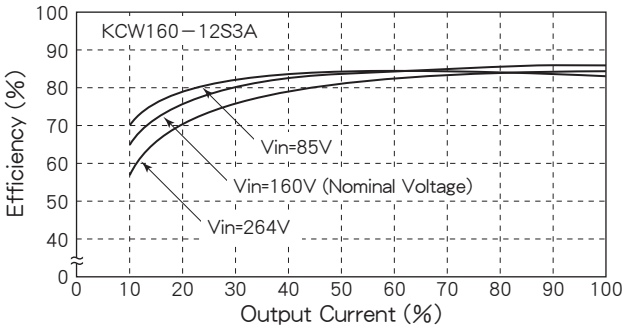

### Fig 5 Efficiency vs. Output Current




### Fig 6 Efficiency vs. Output Current




### Fig 7 Efficiency vs. Output Current




### Fig 8 Efficiency vs. Output Current