



# POWER SOURCE

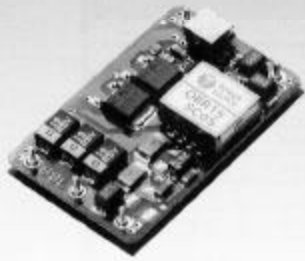


# DC/DC CONVERTER

Single, 2ch

# 6W

DC4.5~6V/DC9~18V/  
DC18~72V



*Super-small, high efficiency*

## SINGLE-OUTPUT OBR-S C SERIES DUAL-OUTPUT OBR-WC SERIES

warranty 3 years

### ★OBR-SC05 (DC5V) 29×46×10 mm

Model	Input	Input current on no-load	Output	Efficiency
OBR05SC05	DC 5V	15mA	5V 1.0A	74%
OBR12SC05		35mA	12V 0.5A	74%
OBR15SC05		36mA	15V 0.4A	75%
OBR24SC05		51mA	24V 0.26A	76%

### ★OBR-SC12 (DC12V) 29×46×10 mm

Model	Input	Input current on no-load	Output	Efficiency
OBR05SC12	DC 12V	15mA	5V 1.0A	75%
OBR12SC12		20mA	12V 0.5A	78%
OBR15SC12		25mA	15V 0.4A	79%
OBR24SC12		30mA	24V 0.26A	81%

### ★OBR-SC2448 (DC24/48V) 29×46×10 mm

Model	Input	Input current on no-load	Output	Efficiency
OBR05SC2448	DC 24/48V	24V:11mA 48V:13mA	5V 1A	24V:78% 48V:76%
OBR12SC2448		24V:12mA 48V:14mA	12V 0.5A	24V:82% 48V:81%
OBR15SC2448		24V:12mA 48V:14mA	15V 0.4A	24V:84% 48V:82%
OBR24SC2448		24V:14mA 48V:16mA	24V 0.26A	24V:85% 48V:84%

### ★OBR-WC05 (DC5V) 29×46×10 mm

Model	Input	Input current on no-load	Output	Efficiency
OBR22WC05	DC 5V	34mA	±12V 0.25A	74%
OBR23WC05	4.5~6V	45mA	±15V 0.2A	75%

### ★OBR-WC12 (DC12V) 29×46×10 mm

Model	Input	Input current on no-load	Output	Efficiency
OBR22WC12	DC 12V	25mA	±12V 0.25A	78%
OBR23WC12	9V~18V	25mA	±15V 0.2A	79%

### ★OBR-WC2448 (DC24/48V) 29×46×10 mm

Model	Input	Input current on no-load	Output	Efficiency
OBR22WC2448	DC 24/48V	24V:18mA 48V:18mA	±12V 0.25A	24V:81% 48V:80%
OBR23WC2448	18V~72V	24V:18mA 48V:18mA	±15V 0.2A	24V:82% 48V:81%

Following strong market demands for "distributed power" we have developed a new DC/DC converter, suitable for PCB mounting. The non-encapsulated DC/DC converter is very small, light and very competitive. The Input range varies from 4.5VDC to 6VDC, 9VDC to 18VDC, and 18VDC-72VDC.

The pin layout is compatible to the OBS (10W) series.

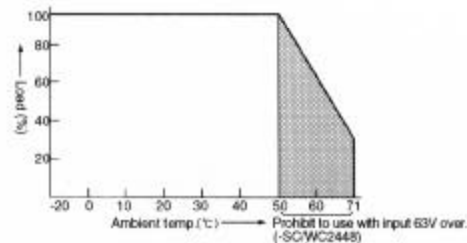
### ■ Special Features

1. Open board type
2. Super small size, light weight
3. Wide range input (DC4.5V~6V, 9V~18V & DC18V~72V)
4. Output trimming. High efficiency (Single output only)
5. Isolation voltage : 500V min.
6. Wide operating temperature range
7. Low input current at no-load

### ■ Applications

Telecommunication, office equipment, industrial machines and electronics, automation, robotics, household equipment.

### ■ Output Derating



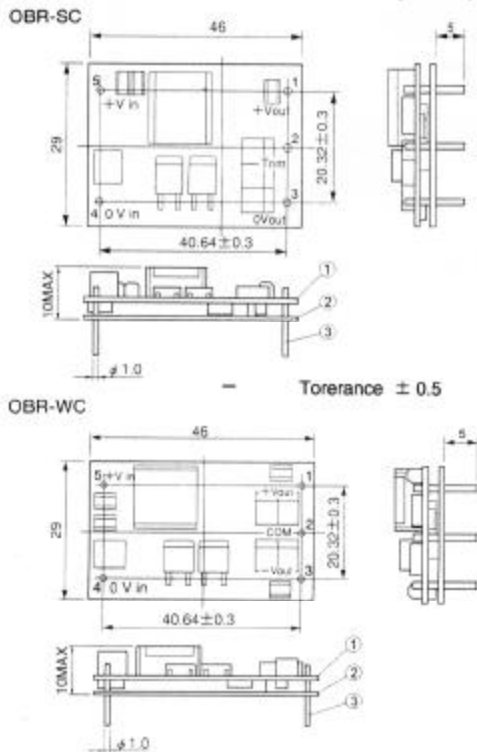
# OBR-SC/WC

# Specification

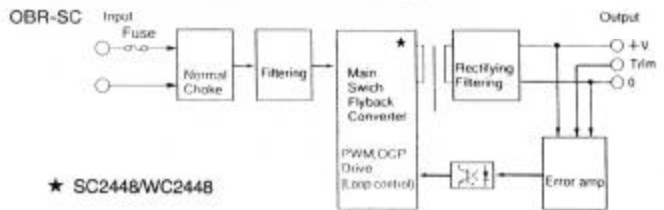
Model ( Input voltage)	OBR05SC			OBR12SC			OBR15SC			OBR24SC			OBR22WC			OBR23WC		
	05	12	2448	05	12	2448	05	12	2448	05	12	2448	05	12	2448	05	12	2448
Output																		
Voltage	5V			12V			15V			24V			±12V			±15V		
Voltage tolerance	±0.1V MAX			±0.24V MAX			±0.3V MAX			±0.48V MAX			±0.24V MAX			±0.3V MAX		
Ripple&noise	100mVp-p MAX																	
Line regulation	25mV MAX			60mV MAX			75mV MAX			120mV MAX			60mV MAX			75mV MAX		
Load regulation	25mV MAX			60mV MAX			75mV MAX			120mV MAX			±480mV MAX <sup>1)</sup>			±600mV MAX <sup>1)</sup>		
Temperature coefficient	0.03% / °C (-20~+71°C)																	
Drift / Time effect (8h/25°C)	40mV MAX			75mV MAX			90mV MAX			135mV MAX			75mV MAX			90mV MAX		
Rize-up time	5mS Typical (SC2448/WC2448 [±15mS Typical])																	
Isolation																		
withstand voltage	Input-output 500V AC 1 Minute									(At room temperature and humidity)								
Isolation resistance	Input-output 500V DC 50MΩ MIN									(At room temperature and humidity)								
Environment																		
Operating temperature	-20~+71°C (50°C 3.5% / °C )																	
Storage temperature	-20~+85°C																	
Humidity	20~90%RH																	
Vibration shock	(5~10Hz) 10mm, (10~55Hz) 2G X,Y,Z Each 30 Minutes																	
Additional functions	Drop type (Automatic recover) (SC05 / 12)																	
Output voltage trimming range	+250mV			+250mV			+350mV			+650mV			—			—		
	-250mV			-900mV			-1.6V			-4V			—			—		
Over current protection	Fold back protection (Automatic recover) SC2448 / WC2448																	
Weight	12g																	

- 1 Load condition 10~100%
- 2 Output varies to lower with resistor by connected 1 pin to 2 pin (∞ / rating → 0Ω / max variation)  
Output varies to upper with resistor by connected 2 pin to 3 pin (∞ / rating → 0Ω / max variation)

## Dimension (mm)



## Block Diagram

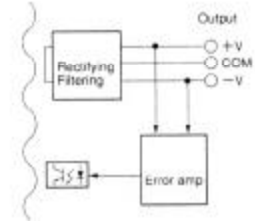


★ SC2448/WC2448

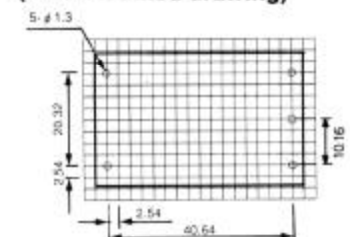
## Terminal connection

No.	(Function)	
	OBR-SC	OBR-WC
1	+V out	+V out
2	trimming	COM
3	0 V out	-V out
4	0 V in	0 V in
5	+V in	+V in

## OBR-WC



## (PCB mounted drawing)



- ① Double-sided printed through hole wiring board.
- ② Bakelite Vo t=0.5
- ③ 1.0φ Material : BsB 2700 1/2H  
Processing : Copper-plated 1~3 μm  
Solder-plated 3~6 μm

SC2448/WC2448

Parts location : subject to change without noyice. (-SC2448/WC2448)

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