

Portable Oxygen Analyzer TB-SI(DCP) series



Feature

- New control unit C-58 installed
- Possible to set Unit “%”, “ppm”, “mV”, “atm” freely in 3 ranges
- Display Concentrations to Two Decimal Places in ppm
- Built-in multi filter protects detector from corrosive gas
- RS-485 and MODBUS communication

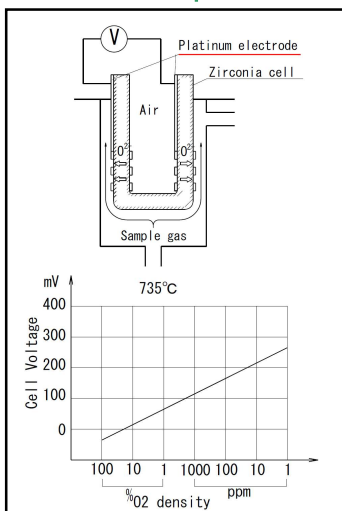
Application

- Portable application
- Semiconductor application
- Reflow furnace
- Exhaust gas etc.

TB-SI(DCP) Series

This model is a portable analyzer which uses Detective element made of Zirconia electrolyte. TB sensor and C-58 control unit are installed altogether in a box for portable uses.

Principle



Sensing cell is a closed end, 90mm length and 7mm diameter. Tube made of Zirconium oxide. When it is red hot, it becomes a oxygen measuring cell because of movement of oxygen ions in its crystal structure.

If there are two different oxygen gases on both side of the cell, a voltage is produced.

For the oxygen in combustible gases, the oxygen value is calculated from following formula:

$$E = 0.0496 \cdot T \log \frac{\text{Air (20.6\% = 206,000ppm = 0.206atm)}}{\text{Sample = O}_2\%, \text{ O}_2\text{ppm, O}_2\text{atm}} + C$$

E: cell voltage(mV) T: absolute cell temperature

C: cell constant(mV) O₂atm: vol% of oxygen of

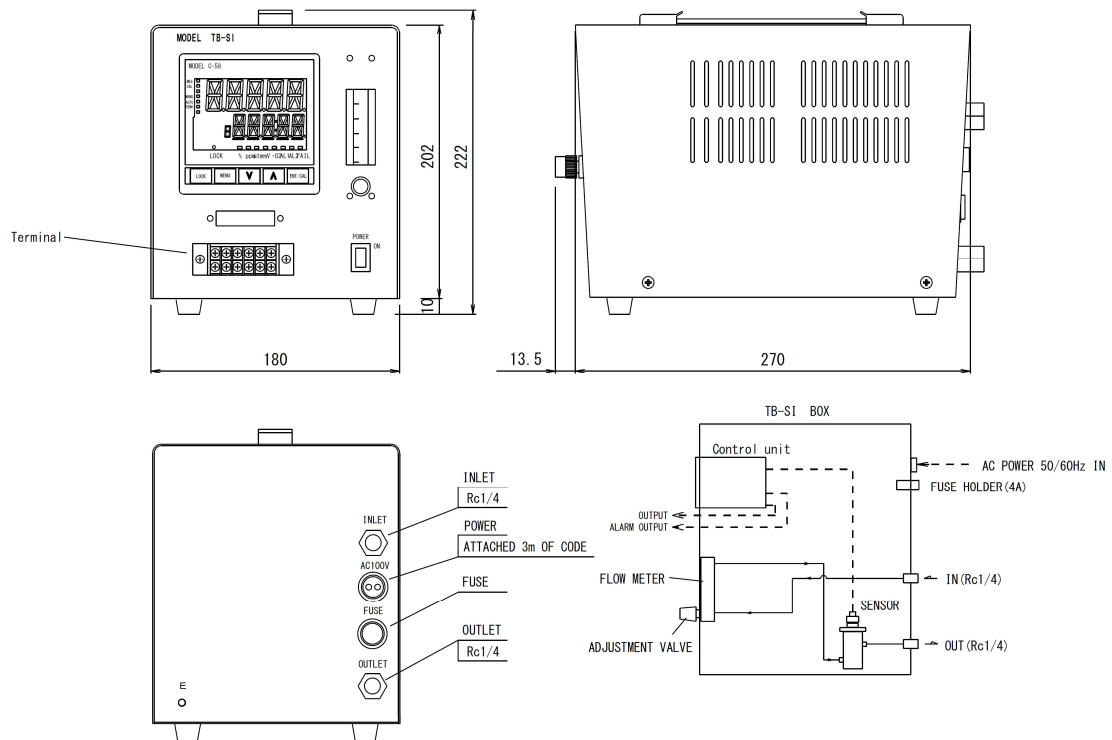
※About 2 years warranty

•It is limited our original instrument only.

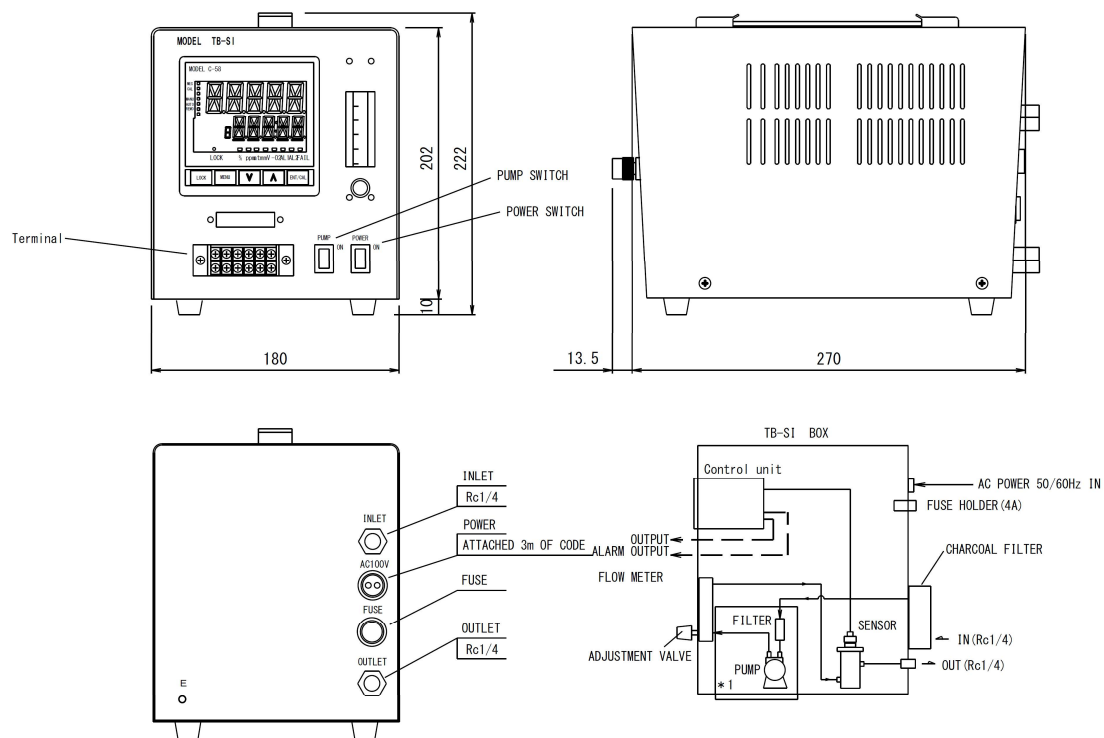
•Consumption parts such as filter, O-ring are except

•In case of the sampling gas contains strong acidity, strong alkaline, or corrosiveness, it may be out of warranty.

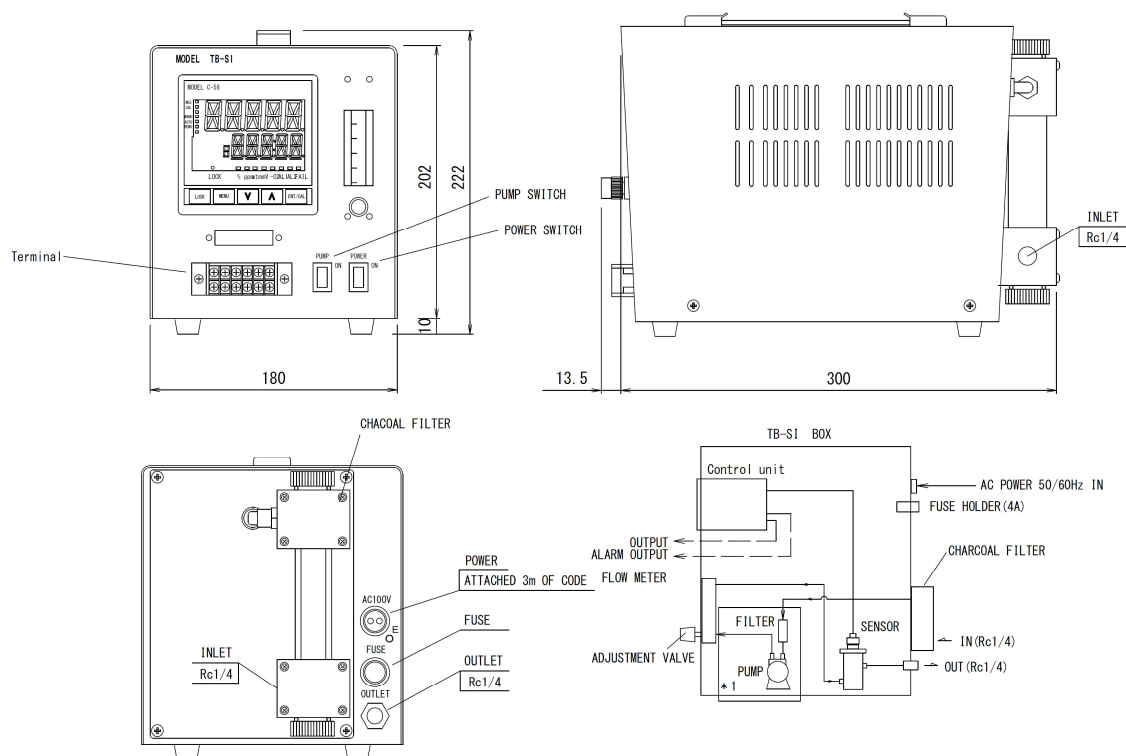
TB-SI(DCP) Dimensions



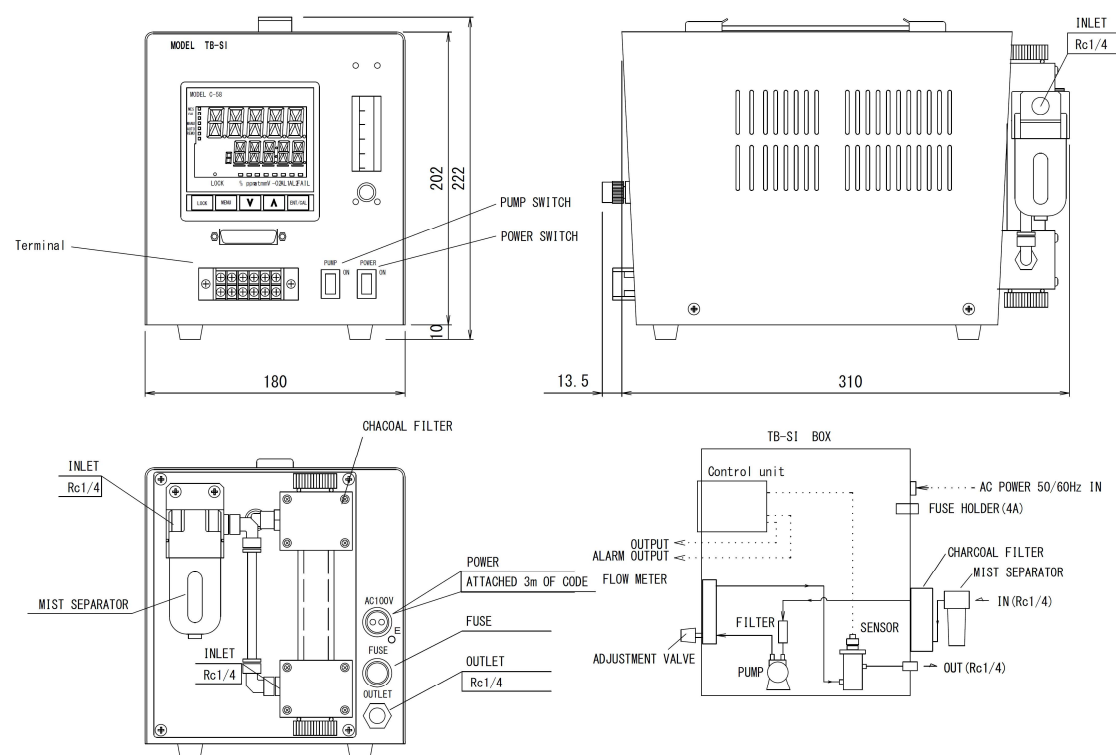
TB-SI-P(DCP) Dimensions



TB-SI-PC(DCP) Dimensions



TB-SI-PC(DCP) Dimensions



TB-SI(DCP) Series

Specification

P r i n c i p l e	Zirconia electrolyte	
S t r u c t u r e	SPCC box、TB-II P sensor、C-58 Control unit、Flow meter with needle	
M O D E L	TB-SI(DCP)	No pump (Supply with pressure)
	TB-SI-P(DCP)	Sampling pump
	TB-SI-PC(DCP)	Sampling pump, Charcoal filter
	TB-SI-PR(DCP)	Sampling pump, Charcoal filter, Mist separator
Measuring range	1ppm~100%O ₂	
C o n t r o l u n i t	C-58	
D i s p l a y	Segment type LCD, Upper 5 digits・Lower 5 digits・Status lamp 14pcs	
R a n g e	3	
Display ranges	%	0.00~100.00 or 0.0~100.0 (0.00~200.00 or 0.0~200.0)
	ppm	0.0~9999.9 or 0.00~999.99 (0.0~9999.9)
	atm	-35.00~0.00 (-37.00~0.30)
	mV	-100.0~1500.0 (-150.0~1550.0)
R a n g e c h a n g e	Auto/Manual/Remote	
O u t p u t	4~20mADC (Isolated) 0~1VDC、0~5VDC、0~10VDC (Isolated、select one of them) RS-485 (Optional) , MODBUS (Optional)	
Contact output	points	Relay contact 3 pcs (A contact)・Open collector 2 pcs
	Function	① Concentration alarm (Selectable Hi/Lo, Hi/H・Hi, Lo/L・Lo)
		② Failure alarm (Sensor temp. failure))
		③ Range answer
		④ Measurement status
D r i f t	Large one either of less than ±1%FS or±1ppm	
L i n e a r i t y	Large one either of less than ±1%FS or±1ppm	
R e p e a t a b i l i t y	90% reading 10sec. (Swinging to a high density side)	
R e s p o n s e	Less than ±2%FS/week	
P i p i n g	Rc1/4	
F l o w r a t e	0.2~2L/min.	
S a m p l e t e m p.	60°C MAX.	
W a r m - u p	About 20 min.	
P o w e r	100~240VAC	
A c c e s s o r y	3 meters of Power supply code	

※For the improvement, the specification and design may be changed without prior notice.

Inquiry



Daiichi Nekken Co.,Ltd.

13-22 Nishikura-Cyo, Ashiya-City,
Hyogo-Prefecture, Japan ZIP:659-0026
TEL 0797-31-2410 / FAX 0797-31-8951
URL <http://www.daiichinekken.co.jp>
E-mail info@daiichinekken.co.jp