



1. Scope




This specification applies to capacitor unit BS13A-EC400/422F(PS2829) for backup use.

2. Summary

This backup unit holds up output voltages for approx one second with the power supply, eNSP4-500P series connected at AC failure.

3. General Specification

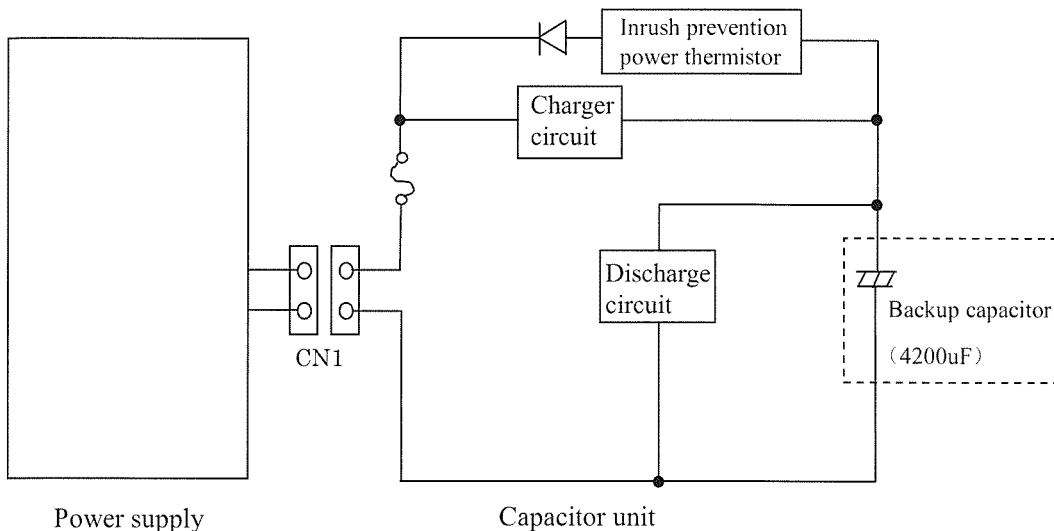
	Items	Specification	Measurement conditions, etc.
Electrical specification	Capacitors	400V 150uF (28 pcs. connected in parallel).	
	Nominal capacitor capacity	4200uF	
	Capacitor charging current	20mA typical	Constant charging current
	Capacitor charging time	120s or less	The time that the capacitor voltage rises to 360V since AC input is turned on.
	Backup time 1	Approximately 1 second	With 150W load of the power supply.
	Backup time 2	Approximately 45 seconds	At standby mode with 5VS output with no load.
	Self-discharge time 1	200 seconds or less	The time that the capacitor voltage decreases to 30V with full-charge in case the connector should be disconnected from the power supply.
	Charge lamp	30V or more	LED turns on when the capacitor voltage is 30V or higher
Environment	Operating temp. /humidity	0 to 60°C/20 to 90%RH	There shall be no condensation.
	Storage temp. /humidity	-20 to 70°C/10 to 95%RH	There shall be no condensation.
	Vibration	Displacement amplitude of 0.075mm with a vibration frequency of 10 to 55Hz for 10 sweep cycles in three directions for 45 minutes.	To follow JIS-C-60068-2-6. At no operation.
	Mechanical shock (surface dropping)	Lift one bottom edge of the unit up to 50mm high with the opposite edge placed on the test bench, and let it fall. Repeat 3 times for each of four bottom edges, and no malfunction shall be observed.	To follow JIS-C-60068-2-31. At no operation
Others	Insulation resistance	100M Ω between input and FG.	With DC 500V MEGGER.
	Dielectric strength	1.5kV for one minute between input and FG	Shortened test condition, 1.8kV/s, is acceptable. Cut-off current: 10mA or less.
	Weight	2kg or less	
	Product quality grade	FA	
	Safety standard	UL60950, CSAC22.2 NO.60950, and EN60950.	These standards are acquire in combination with the power supply.
	Lifetime expectancy	120,000 hours or more	Average ambient temperature: 40°C. Calculation is based on real lifetime of electrolytic capacitors.
	Warranty	Three years after delivery. If any faults belong to us, the defective unit shall be repaired or replaced at our cost.	Except when the unit is operated  of specification. 

Drawn by		Checked by		Approved by		Model	Drawing No.
						BS13A-EC400/422F	2829-01-4-520

4. Connector Specification

CN1	Pin	Signal name	Cable color	Wire gauge	Wire protection
Connector: ELR-03V (JST) Pin contact: SLM-41T-P1.3E (JST)	1	+V	White	UL1015 AWG20	UL tube
	2	NC			
	3	-V	Black	UL1015 AWG20	UL tube

5. Circuit Block Diagram



6. Precaution before use

1) Electric shock

This power supply is designed and manufactured as embedded type (Class I equipment) and contains a high-voltage part. Make sure to securely install the power supply into equipment to prevent electric shock. In addition, make sure to ground the grounding in a proper way specified by safety standard.

2) Plugging and unplugging of the connector

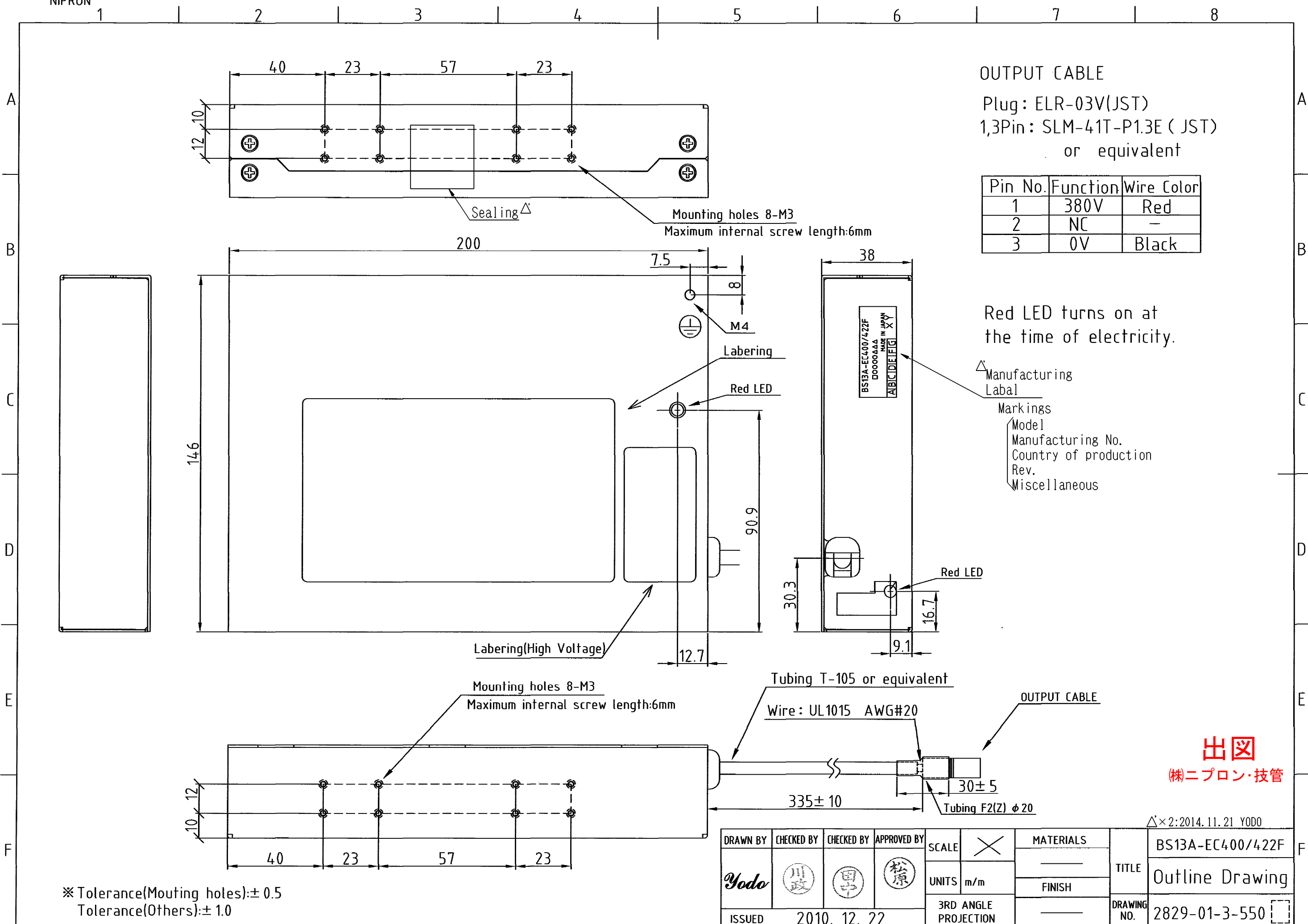
· This unit charges internal capacitors with high voltage, and turns on the charge lamp (LED). After turning off the AC power, do not plug or unplug the connector (CN1) before the charge lamp turns off. It possibly causes electric shock if the connector is disconnected while the charge lamp is on.

· Avoid unplugging then plugging the connector while the charge lamp is turned on. Or inrush current from the capacitors unit into the smoothing capacitors of the power supply may melt the contacts of the connector. In addition, avoid shorting both ends of the connector while the electric charge still remains in the capacitor unit. It may cause melting of the fuse inside the capacitor unit and the contact of the connector.

**出図**

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Drawn by <i>Yodo</i>	Checked by 	Approved by 	Model BS13A-EC400/422F	Drawing No. 2829-01-4-520
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OUTPUT CABLE  
Plug: ELR-03V(JST)  
1,3Pin: SLM-41T-P1.3E (JST)  
or equivalent

Pin No.	Function	Wire Color
1	380V	Red
2	NC	-
3	0V	Black

出図  
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$\Delta \times 2$ : 2014. 11. 21 YODO

DRAWN BY	CHECKED BY	CHECKED BY	APPROVED BY	SCALE	MATERIALS	TITLE
Yodo	川	田	松原	$\times$		
ISSUED	2010. 12. 22			UNITS	FINISH	DRAWING NO.
				m/m		2829-01-3-550
				3RD ANGLE PROJECTION		

\*Tolerance(Mouting holes):  $\pm 0.5$   
Tolerance(Others):  $\pm 1.0$