BATTERY CHARGER & AC UPS

- HIGH RELIABILITY
- COMPLETELY AUTOMATIC FULL CHARGE TERMINATION

BATTERY CHARGER & AC UPS

ACM-1, BCC-24E/24F, UPC-1/3

GENERAL INFORMATION

The Battery charger controllers are high quality products combined with related functions and especially developed to be easily applied to marine system, power plant, steel, chemical plant and other places where the battery should be needed. They comply with various international standards, and standardized circuit is adopted. In addition to a basic functions, the controller has applicable functions, and control circuit consist of high quality components up to various standards.

The charger adopts a constant voltage and a constant current as a basic charging method.
And the termination of charging is defined by calculating a voltage differential coefficient(dV/dt) and a current differential coefficient(dI/dt) and adding a supplementary charging time.

[ACM-1Ⓡ2] controller has float and trickle charging.
It is possible to adjust Floating and Trickle voltage by using a VR.
It is possible to select the mode by using a trickle and floating mode botton.

[BCC-24EⓇ2] controller has float and equalize charging.
It is possible to adjust Floating and Equalizing voltage by using a VR.
Equalize charging time should be adjusted different according to the ambient temperature.
It is possible to select the mode by suing a equalize and float charging button.

[BCC-24FⓇ2] controller is only a float charging.

ORDERING INFORMATION

Control circuits are different from one another in their operation according to their systems.
The following are applicable models. Please select the applicable model according to the plan of the system and the specification on this operation manual.

▪ BCC - 24 E (Ⓡ2): 3Phase, Half Bridge Type

E	EQUALIZING TYPE
F	FLOATING TYPE
24	NOMINAL OUTPUT VOLTAGE : DC24V

BATTERY CHARGER CONTROLLER

▪ ACM-1 (Ⓡ2): 3Phase, Full Bridge Type

1	NOMINAL OUTPUT VOLTAGE DC110V

AUTOMATIC CHARGER MONITOR

CONSTRUCTION AND ENVIRONMENT SPECIFICATIONS

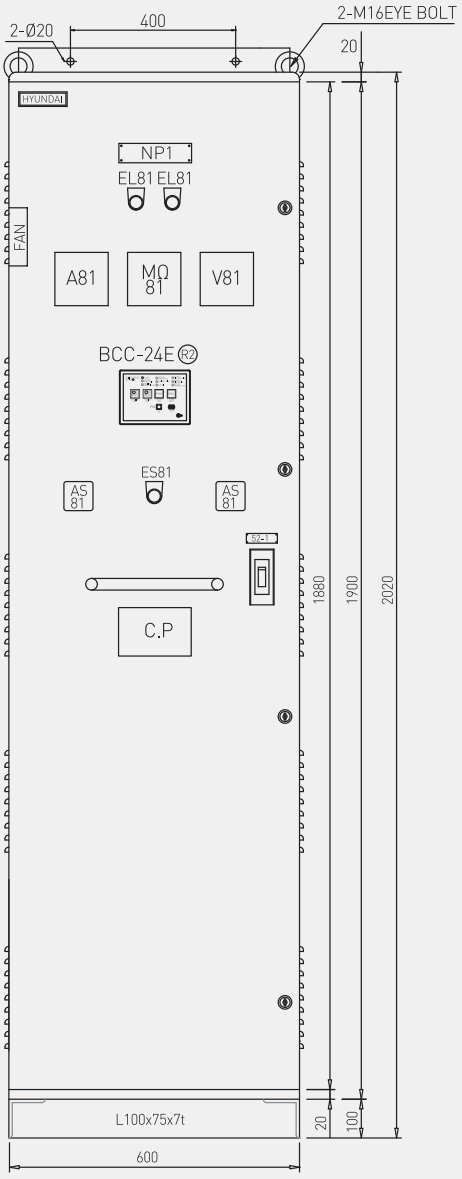
ENCLOSURE	MATERIAL		PC(Flame retardant) UL94 V-O / TRIREX3025G10 / G / G (Reinforced)
	DIELECTRIC STRENGTH		31KV/mm
	COLOR		Black (maker standard)
TEMPERATURE /HUMIDITY	AMBIENT TEMPERATURE		-20°C ~ +55°C
	STORAGE TEMPERATURE		-20°C ~ +85°C
	HUMIDITY		45% ~ 85% R.H
IP GRADE : FRONT SIDE PROTECTION	PUSH BUTTON WITH LAMP		IP 44
	LED LAMP		IP 44
EXTERNAL CONNECTION T.B	MATERIAL	INSUSATING MATERIAL	PBT
		FLAMMABISITY CLASS	UL-94 V-O
		CONTACT PIN	Cu
	WIRE SIZE(max.)		2.5mm²
	SPACING BETWEEN TERMINALS		5.0mm
	TEMPERATURE RANGE		-40°C ~ +115°C

FUNCTION

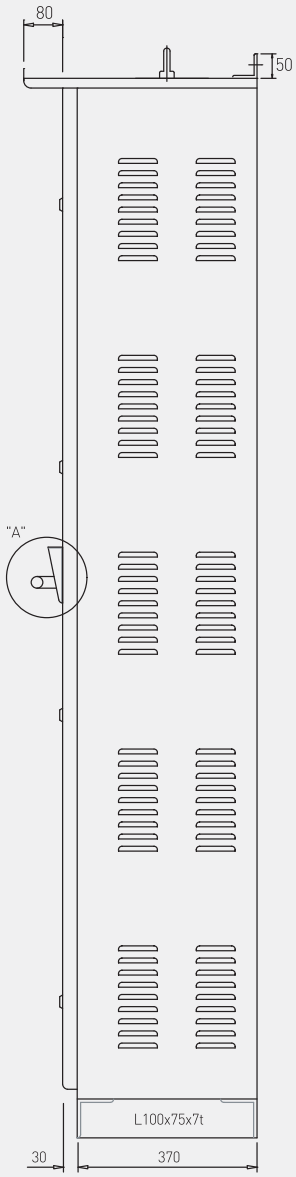
CONTROLLER MODEL	CONTROL SYSTEM	INDICATION & SIGNAL
ACM-1 Ⓡ2	- LAMP TEST - FLOATING / TRICKLE MODE - DC VOLTAGE ADJUST - BUZZER STOP - ALARM RESET - DC OUTPUT CURRENT ADJUST	- SOURCE LAMP -- ALARM -- - CONTROL SOURCE FAIL - RECTIFIER POWER FAILURE - CHARGER OVER VOLTAGE - LOW INSULATION - FAN FAIL - BATTERY DISCONNECTING - BATTERY DISCHARGING - BATTERY UNDER VOLTAGE
BCC-24EⓇ2 / 24FⓇ2	- LAMP TEST - FLOATING / EQUALIZING MODE (BCC-24E(Ⓡ2)) - DC VOLTAGE ADJUST - BUZZER STOP - ALARM RESET - DC OUTPUT CURRENT ADJUST	-SOURCE LAMP -- ALARM -- - CONTROL SOURCE FAIL - RECTIFIER POWER FAILURE - CHARGER OVER VOLTAGE - LOW INSULATION - FAN FAIL - BATTERY DISCONNECTING - BATTERY DISCHARGING - BATTERY UNDER VOLTAGE

1) LAMP TEST : WHEN THIS BUTTON IS PRESSED, ALL LAMP WILL LIGHT UP. 2) ALARM RESET : WHEN THIS BUTTON IS PRESSED, ALARM WILL RESET.

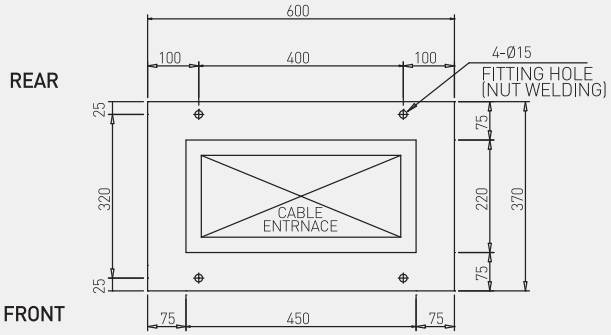
DINENSION (DC 24V CHARGER PANEL)



FRONT VIEW



SIDE VIEW

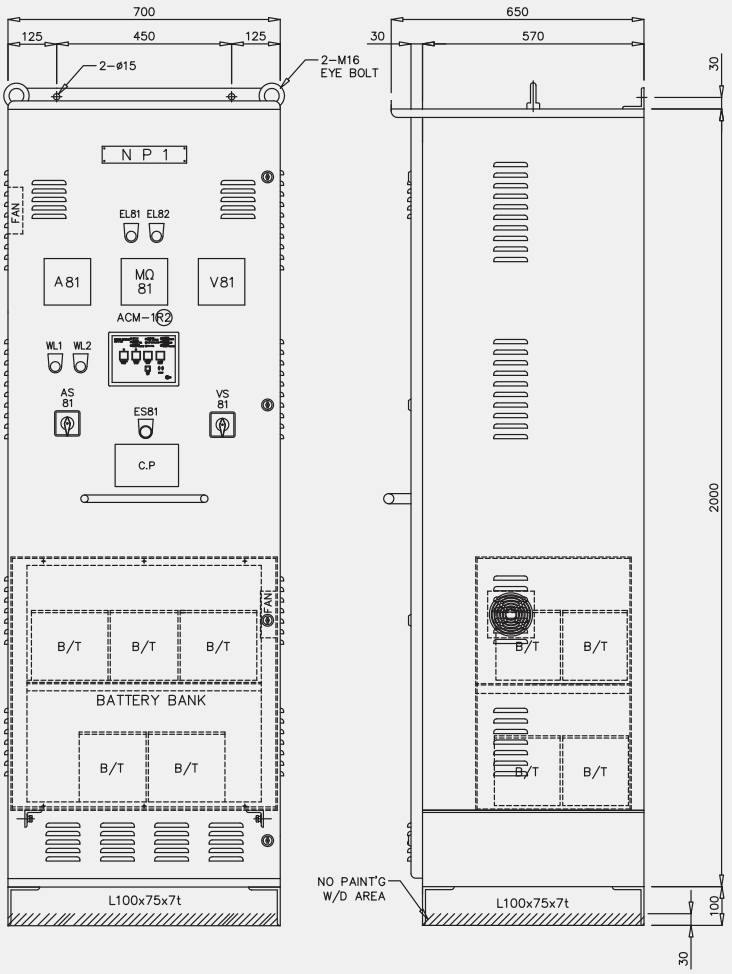


BOTTOM VIEW

NOTE

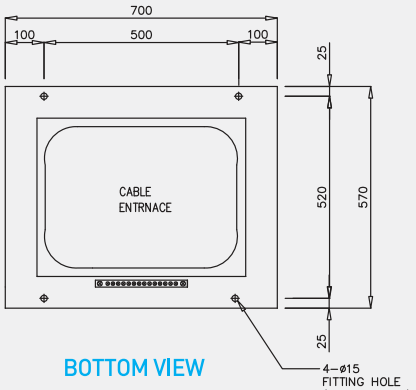
1. PAINT'G : MUNSELL CODE. 7.5 BG 7/2
2. PANEL SIZE : 600(W) x 400(D) x 2000(H)
3. SIDE & REAR & TOP : STEEL 1.6t
4. DOOR : STEEL 2.3t
5. FRAME : STEEL 3.2t
6. Q'TY : 1SET
7. WEIGHT : ab. 350kg
8. "A" : BRACKET HANDLE
   (ACRLONITRILE BUTADIENE STYRENNE)

DIMENSION (DC 110V CHARGER PANEL)



FRONT VIEW

SIDE VIEW



BOTTOM VIEW

NOTE

1. PAINT'G : RAL7032(HAMMERTON)
2. BATTERY TYPE : 12V-40Ah(ESH40-12) x 9BLOCK MAINTENANCE FREE TYPE(LEAD-ACID)
3. FANEL TYPE : 700(W) x 600(D) x 2100(H)
4. SIDE & REAR & TOP : STEEL 1.6t
5. DOOR : STEEL 2.3t
6. FRAME : STEEL 3.2t
7. WEIGHT : ab. 400kg

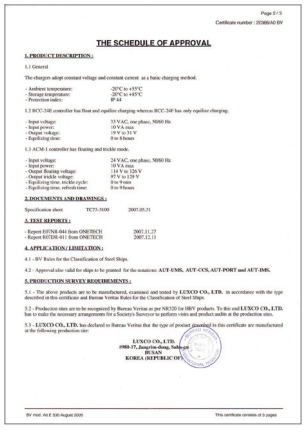
BCC-24E_F,ACM-1_BV

MARINE DIVISION

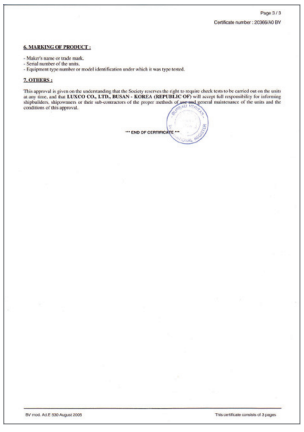
TYPE APPROVAL CERTIFICATE

LUXCO CO., LTD.

BATTERY CHARGER ASSEMBLIES



THE SCHEDULE OF APPROVAL



GENERAL INFORMATION

UPS is an electrical apparatus that provides emergency power to a load when the input power source, typically mains power, fails.
AC UPS differs from an auxiliary or emergency power system or standby generator in that it will provide near. instantaneous protection from input power interruptions, by supplying energy stored in batteries or a flywheel.
UPS is typically used to protect computers, data centers, telecommunication equipment or other electrical equipment where an unexpected power disruption could cause injuries, fatalities, serious business disruption or data loss. UPS units range in size from units designed to protect a single computer without a video monitor (around 200 VA rating) to large units powering entire data centers or buildings.

ORDERING INFORMATION FOR CONTROLLER

Control circuits are different from one another in their operation according to their systems.
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■ **UPC-1**

1	1 Phase
3	3 Phase

UNINTERRUPTIBLE POWER SUPPLY CONTROLLER

ONSTRUCTION AND ENVIRONMENT

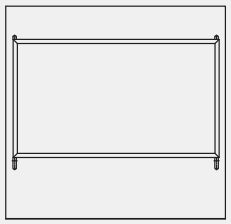
(20KV STANDARD)

ENCLOSURE	FRONT : DOOR (HINGE) SIDE : TIGHTEN UP SCREW		REAR : TIGHTEN UP SCREW BOTTOM : OPEN	
PAINT COLOR	MAKER STANDARD		**AMBIENT TEMP**	45°C
DRAWING & DOCUMENT	ENGLISH		**MATERIAL OF NAME PLATE**	PHENOLIC
CHARGER METHOD	**AUTO (O)**	MANU ( )		
SOURCE CAPACITY	**CHARGER**	AC 440 V 1Ø / 3Ø 60 Hz AC 220 V 1Ø / 3Ø 20 kVA		1 SET
	BATTERY	DC 240V 100AH		1 SET
	CONT. CIRC.	AC 440V 60Hz AC 220V		
NOTE	PLEASE BE CAREFUL AS THIS PRODUCT CAN VARY VOLTAGE OR CAPACITY ACCORDING TO USE'R REQUEST.			

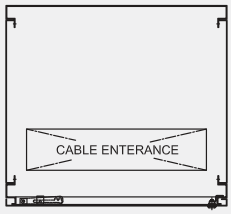
PRODUCT SPECIFICATIONS

GENERAL	Phase	1Ø		3Ø
	Capacity	20KVA	30KVA	40KVA
	Operation mode	100% continuous		
	Rectifier & charger	Control	Thyristor phase control	
		Semicon	I.G.B.T PWM	
INPUT	Input voltage	AC 220V	AC 380V	AC 440V
	Voltage range	+10%, -10%		
	Input frequence range	50Hz / 60Hz ± 5%		
OUTPUT	Output voltage	220VAC		
	Output Over-load duration	120% 10Min		
	Output Wave Distortion(THD)	under 3%		
Audible Noise		Within 60 dBA		
Frequency Range		±1 Hz		
Frequency change speed		1Hz/Sec		
crest factor of load current on non-linear load		2.8 : 1		
Installation altitude		Working : under 2,000m above the sea level Keeping : under 12,000m above the sea level		
Installation temperature		Working : 0 ~ 45°C Keeping : -20 ~ 60°C		
Installation humidity		relative humidity 10~95% (NON-CONDENSING)		
DC	Max. voltage	DC 140V		DC 260V
	Nominal voltage	DC 120V		DC 240V
	End voltage	DC 100V		DC 210V
BATTERY	type	LEAD ACID TYPE		
	capacity	12V		
	Installation	CABINET TYPE		

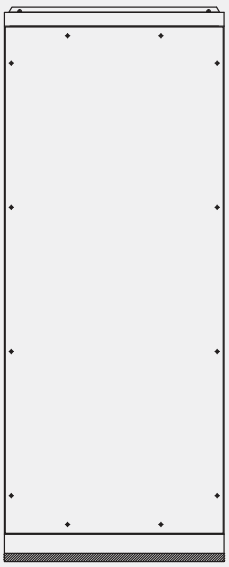
OUTLINE



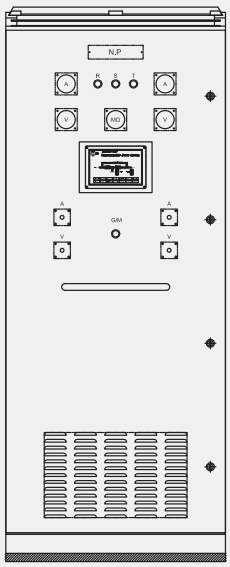
TOP



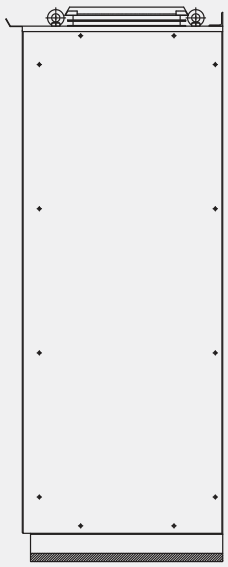
BOTTOM



REAR



FRONT



SIDE(R)