

Constructional Data Form (CDF) for Electrical Appliances

Page 1 of 5

License holder	: RENON POWER TECHNOLOGY INC
License holder Address	: 1489 W WARM Rd Ste110, Nevada 89014, USA
Factory	: Rui Zhi Xin Neng Yuan (Huizhou) Co., Ltd.
Factory Address	: Kangyi Industrial Park, Yuhe Road, Sanhe Street, Huiyang District, Huizhou, 516213 Guangdong, P.R. China
Type of Appliance	: Battery system (Energy Storage Module)
Type Designation	: 1) R-EB005161, R-EB005161-H 2) R-EB005151, R-EB005151-H
Rating	: 1) 51.2V d.c., 100Ah, 5120Wh 2) 48.0V d.c., 100Ah, 4800Wh
Protection Class	: Class I
Supply connection	: ☐ fixed power cord ☒ permanent connection ☐ appliance inlet ☐ direct plug in ☐ Special Connector

Table 1 The main features of the battery system:

Product name	Energy Storage Module	
Model	R-EB005161, R-EB005161-H	R-EB005151, R-EB005151-H
Capacity [Ah]	100	
Nominal voltage [Vd.c.]	51.2	48
Standard continuous charge current [A]	20	
Maximum continuous charge current [A]	95	
Standard continuous discharge current [A]	50	
Maximum continuous discharge current [A]	95	
Standard Full Charging Voltage [Vd.c.]	56.8	53.25
Maximum Charge Voltage [Vd.c.]	58.4	54.75
End of discharge voltage [Vd.c.]	43.2	40.5
Charging Temperature Range [°C]	0 to 50	
Discharging Temperature Range [°C]	-20 to 50	
Storage temperature range, recommended [°C]	0 to 30	
Recommend charging method declared by the manufacturer	Charged with constant current 20 A until voltage reaches 56.8 V d.c., then switch to constant voltage 56.8 V d.c. till charge current less than 2 A.	Charged with constant current 20 A until voltage reaches 53.25 V d.c., then switch to constant voltage 53.25 V d.c. till charge current less than 2 A.
Nominal mass [kg]	45±1	43±1
External dimensions [mm](Width, Depth, Height)	440 × 420 × 132	
Battery designation	IFpP29/176/208[16S]M/-30+60/95	IFpP29/176/208[15S]M/-30+60/95

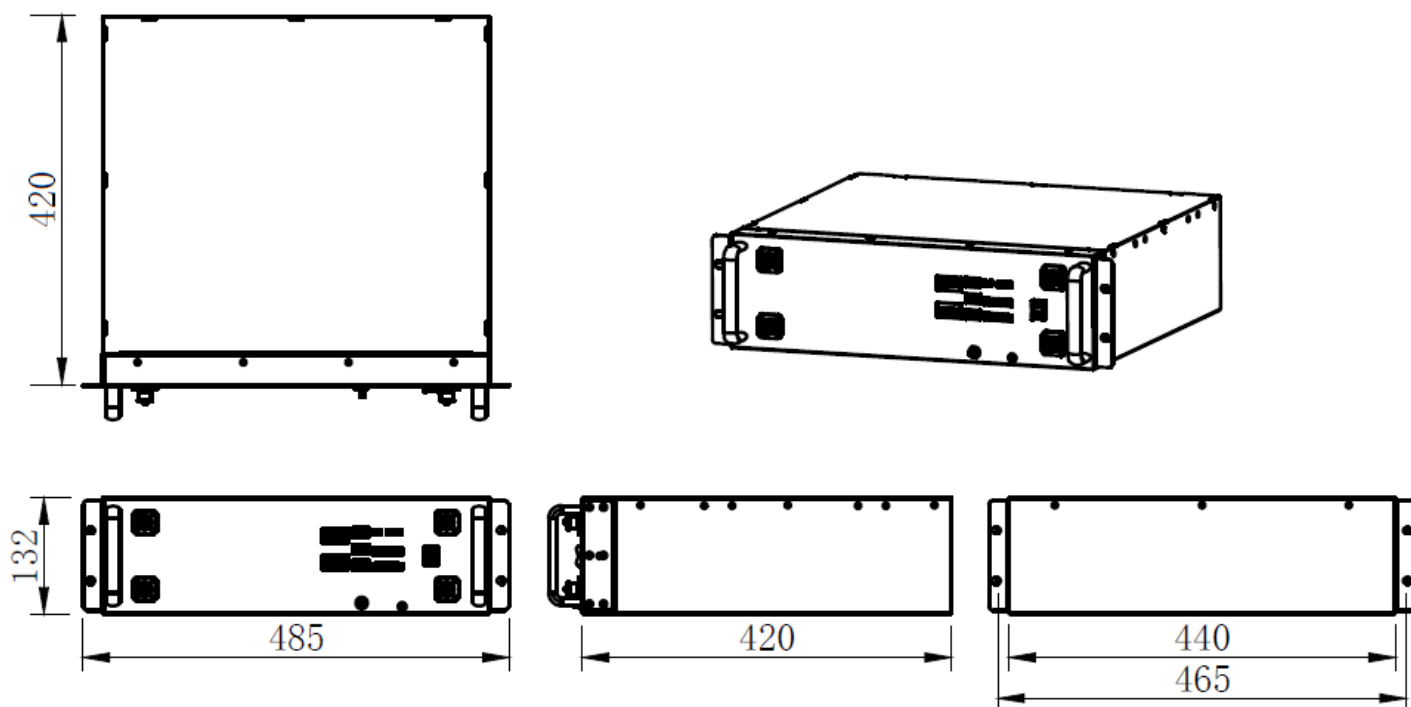
Constructional Data Form (CDF) for Electrical Appliances

Page 2 of 5

Table 2 The operating region of the internal component cell:

Product Name	Rechargeable Prismatic Lithium-ion Cell
Model	CB27173204EA
Nominal voltage [V d.c.]	3.2
Rated capacity [Ah]	100
Standard fully charge voltage [V d.c.]	3.65
Maximum charge voltage [V d.c.]	3.75
Maximum charging current [A]	100
Maximum discharging current [A]	100
End of discharge voltage [V d.c.]	2.5
Charging temperature range [°C]	-10 to 60
Discharging temperature range [°C]	-30 to 60
Cell designation	IFpP29/176/208/M/-30+60/95

Unit (mm):



Constructional Data Form (CDF) for Electrical Appliances

Critical Components

Material: e.g. external enclosure, PCB, closed-end connector, sleeves, cord anchorage etc

Components with winding: e.g. motor, transformer, magnetic coil etc.

Other components: e.g. switch, thermostat, heater, plug, internal wire, capacitor, relay, varistor etc.

object/part No.	manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity1)
Cell	Ruipu Energy Co., Ltd.	CB27173204EA	3.2 V d.c. 100Ah See Table 2 for more details	IEC/EN IEC 62619:2022	TUV Rh Teste report CN22DOAR 001
Enclosure	Guangxi Iron and Steel Group Co., Ltd	--	SPCC, Minimum thickness 1.2mm	IEC/EN IEC 62619:2022	Tested with appliance
Connector	General Connectivity System Co., Ltd	PSRP6XC25A PSRP6XA25A	1000V 120A Operating Temperature: -40 to 125°C, IP67B(MATED)	EN 61984:2009	TUV Rh R 50535454 001
Insulation sheet over the cells	SHENZHEN TEESUN TECHNOLOGY CO LTD	TS-FR370F	V-0, at min 0.25mm thickness. RTI rated 80°C	ANSI/UL 94, UL746, IEC 60695- 11-10 (Yellow card)	UL E329660
Electric wire	Shenzhen shunjia electrical technology Co Ltd	1332	300V, 200°C, 22AWG	UL 758	UL E490463
Heating shrink tube, wrapped on the power lead (inside part) of module	CHANGYUAN ELECTRONICS GROUP CO LTD	CB-1000	Black, 600 V, 125°C	UL 224	UL E180908
Heating shrink tube	SHENZHEN WOLIDA TRADING CO LTD	RSFR-H	Black, 600 V, 125°C	UL 224	UL E329530
Electric wire, Communication for BMU	GUANGZHOU FENGTAI MEIHUA CABLE CO LTD	1332	300V, 200°C, 22AWG	UL 758	UL E204798
Cell connection busbar	Shenzhen Fudixin Technology Co., Ltd.	Aluminum 1060	Width: 24mm, Minimum thickness:1.5 mm	IEC / EN IEC 62619:2022	Tested with appliance
Heating shrink tube, wrapped on the power bus bar of module	SHENZHEN WOER HEAT- SHRINKABLE MATERIAL CO LTD	RSFR-H	Orange, 600V 125°C	UL 224	UL E203950

Constructional Data Form (CDF) for Electrical Appliances

Page 4 of 5

NTC	Shenzhen Kemin Sensor Co., Ltd	CWF1 10KF3435	25°C, 10kΩ,	ANSI/UL 60730-1	UL E356449
Heat sheet (R-EB005161-H, R-EB005151-H)	DONGGUAN GUIXIANG INSULATION MATERIAL CO., LTD.	B, C	B: 11.55V 35.3W 3.78±5%Ω, C: 6.21V 19W 2.03±5%Ω, Body UL94 V-0, Operating Temperature: -40 to 120°C,	IEC / EN IEC 62619:2022	Tested with appliance
PCB	Shengyi Technology Co Ltd	S1000H	130°C, V-0	ANSI/UL 746	UL E109769
- BMS main board (RN-BMS-48120-001A_V01.002)					
IC for AFE (U1)	SINO WEALTH	SH367309	8.5 to 65V, Operating Temperature: -40 to 85°C	IEC 62619:2022	Tested with appliance
Optical Isolators (U4)	AVAGO Technology	HCNR201-500E	Operating Temperature: -55 to 125°C	DIN EN 60747-5-5 (VDE 0884-5):2011-11; EN 60747-5-5:2011	VDE 40009376
MCU (U5)	Nation	N32G457VE	1.8V to 3.6V, Operating Temperature: -40 to 105°C	IEC / EN IEC 62619:2022	Tested with appliance
IC (U7)	3PEAK	TP5532-SR	Supply voltage: 6V, Temperature Range: -40°C to 125°C	IEC / EN IEC 62619:2022	Tested with appliance
IC (U10)	SG Micro Corp	SGM823-R	Supply-Voltage Monitor: 2.63V, V _{CC} =-0.3V to 6.0V, Temperature Range: -40°C to 125°C	IEC / EN IEC 62619:2022	Tested with appliance
ISO (ISO1 ~ 9)	LITE-ON Technology Corp.	LTV-217-C	V _R : 6V, V _{CEO} =80V, V _{ECO} : ±20V, Operating Temperature Range: -55°C to 110°C	IEC / EN IEC 62619:2022	Tested with appliance
MOSFET (QP1 ~ QP12, QD1 ~ QD12)	China Resources Microelectronics (Chongqing) Limited	CRSS028N10N	V _{DS} :100V V _{GS} : ±20V, Operating Temperature Range: -55°C to 150°C	IEC / EN IEC 62619:2022	Tested with appliance
MOSFET (U31, U32)	JieJie Microelectronics Co., Ltd.	JMTP330N06D	V _{DSS} = 60V, I _D =5A, V _{GSS} =±20V, R _{DS(ON)} < 38mΩ @ V _{GS} = 10V, R _{DS(ON)} < 47mΩ @ V _{GS} = 4.5V, Operating Temperature Range: -	IEC / EN IEC 62619:2022	Tested with appliance

Constructional Data Form (CDF) for Electrical Appliances

			55°C to 150°C		
Current sensor resistor (RS1 ~ RS20)	TA-I TECHNOLOGY CO., LTD	RLP25FEGR005	5mΩ, Tolerance ±1%, Operating Temperature Range: - 55°C to 170°C, Temperature Coefficient of Resistance: ±50ppm/°C	IEC / EN IEC 62619:2022	Tested with appliance
Gate driver (U30)	JoulWatt	JWH7924SOPB	4.5V to 18V, Temperature Range: - 40°C to 140°C	IEC / EN IEC 62619:2022	Tested with appliance
- Current limit PCB sub board (RN-CLB-10A-001-V01.003)					
IC (U1)	Silergy Corp	SY8501FCC	Supply voltage 7~110V DC, Operating Temperature Range: - 40°C to 85°C	IEC 62619:2022	Tested with appliance
IC (U2)	Texas Instruments	TL494IDR	Supply voltage 7 ~ 40V DC, Operating Temperature Range: - 40°C to 85°C	IEC 62619:2022	Tested with appliance
IC (U3)	JWJOULWATT	JWH7924	Supply voltage $V_{dd} = - 0.3$ to 20V DC, Operating Temperature Range: - 40°C to 140°C	IEC 62619:2022	Tested with appliance
1) Provided evidence ensures the agreed level of compliance. See OD-2039. License available upon request.					

