

Diagnostic Codes & Countermeasures PowerBank EV193



Version History

Version	Change Time	Revise Content	Editor
A/0	2023/10/17	First edition	Chang Zhang
A/1	2023/10/19	Modify file format	Chang Zhang
A/2	2023/10/26	Change DTC codes	Chang Zhang



FUTURENed

No	ECU	DTC Code	Failure Cause Description	Troubleshooting	Treatment Measures
1	EMS	0101F1	12V high-voltage failure	Check the 200W ACDC output	Restart/replace 200W ACDC
2	EMS	0102F1	12V low-voltage failure	Check the 200W ACDC output Check the status of the 12V battery	Restart/replace 200W ACDC Check the status of 12V battery external 12V power supply
3	EMS	010300	24V over-voltage failure	Check the 1.5kwDCDC output	Restart/replace 1.5kw DCDC
4	EMS	010400	24V under-voltage failure	Check the 1.5kwDCDC output	Restart/replace 1.5kw DCDC
5	EMS	010600	Accessory load relay open failure	Check KA9	Restart the system Replace KA9
7	EMS	010900	FVC1 failure	Check FVC1	Restart the system
8	EMS	011100	Three-phase switch contactor open failure	Check KM1	Restart the AC-grid
9	EMS	011400	Recharge positive relay open failure	Check the K15 feedback contact	Exchange Relay, and then reset
10	EMS	011500	Recharge positive relay adhesion failure	Check the K15 feedback contact	Exchange Relay, and then reset
11	EMS	C10287	BMS CAN communication timeout failure	Check the BMS communication cable	Restart the system
12	EMS	C10487	The POS terminal communication times out	Check POS terminal communication	Restart the POS terminal Replace the POS terminal
13	EMS	C10587	A gun dc electric meter communication timeout failure	Check DC1 meter communication	Change the meter Automatic recovery when failure doesn't meet the failure criteria
14	EMS	C10687	B gun dc electric meter communication timeout failure	Check DC2 meter communication	Change the meter Automatic recovery when failure doesn't meet the failure criteria
15	EMS	C10787	CCU1 CAN communication timeout failure	Check the CCU1 communication cable	Restart the system
16	EMS	C10887	CCU1 CAN communication timeout failure	Check the CCU2 communication cable	Restart the system



FutureNed

17	EMS	C11087	ACDC_1 communication timeout failure	Check the ACDC1 communication cable	Restart the system Replace the ACDC1 machine
18	EMS	0118F1	ACDC_1 internal Level 2 failure (Snapshot record detail information)	Automatic recovery when failure doesn't meet the failure criteria	Automatic recovery when failure doesn't meet the failure criteria
19	EMS	0118F2	ACDC_1 internal Level 3 failure (Snapshot record detail information)	Reset and the fault flag is erased	Reset and the fault flag is erased
20	EMS	C11187	ACDC_2 communication timeout failure	Check the ACDC2 communication cable	Restart the system Replace the ACDC2 machine
21	EMS	0119F1	ACDC_2 internal Level 2 failure (Snapshot record detail information)	Automatic recovery when failure doesn't meet the failure criteria	Automatic recovery when failure doesn't meet the failure criteria
22	EMS	0119F2	ACDC_2 internal Level 3 failure (Snapshot record detail information)	Reset and the fault flag is erased	Reset and the fault flag is erased
23	EMS	C11287	DCDC_1 communication timeout failure	Check the DCDC1 communication cable	Restart the system Replace the DCDC1 machine
24	EMS	0120F1	DCDC_1 internal Level 2 failure (Snapshot record detail information)	Automatic recovery when failure doesn't meet the failure criteria	Automatic recovery when failure doesn't meet the failure criteria
25	EMS	0120F2	DCDC_1 internal Level 3 failure (Snapshot record detail information)	Reset and the fault flag is erased	Reset and the fault flag is erased
26	EMS	C11387	DCDC_2 communication timeout failure	Check the DCDC2 communication cable	Restart the system Replace the DCDC2 machine
27	EMS	0121F1	DCDC_2 internal Level 2 failure (Snapshot record detail information)	Automatic recovery when failure doesn't meet the failure criteria	Automatic recovery when failure doesn't meet the failure criteria
28	EMS	0121F2	DCDC_2 internal Level 3 failure (Snapshot record detail information)	Reset and the fault flag is erased	Reset and the fault flag is erased
29	EMS	C11487	DCDC_3 communication timeout failure	Check the DCDC3 communication cable	Restart the system Replace the DCDC3 machine
30	EMS	0122F1	DCDC_3 internal Level 2 failure (Snapshot record detail information)	Automatic recovery when failure doesn't meet the failure criteria	Automatic recovery when failure doesn't meet the failure criteria



FutureNed

31	EMS	0122F2	DCDC_3 internal Level 3 failure (Snapshot record detail information)	Reset and the fault flag is erased	Reset and the fault flag is erased
32	EMS	C11587	DCDC_4 communication timeout failure	Check the DCDC4 communication cable	Restart the system Replace the DCDC4 machine
33	EMS	0123F1	DCDC_4 internal Level 2 failure (Snapshot record detail information)	Automatic recovery when failure doesn't meet the failure criteria	Automatic recovery when failure doesn't meet the failure criteria
34	EMS	0123F2	DCDC_4 internal Level 3 failure (Snapshot record detail information)	Reset and the fault flag is erased	Reset and the fault flag is erased
35	EMS	C11687	Thermal management unit communication failure	Check the working status of the thermal management unit	Restart the system
36	EMS	012700	ACDC output fuse Open failure	Check the fuse status	Restart the system Replace fuse
37	EMS	C11788	CAN1 Busoff failure	Automatic recovery when failure doesn't meet the failure criteria	Automatic recovery when failure doesn't meet the failure criteria
38	EMS	C11888	CAN4 Busoff failure	Automatic recovery when failure doesn't meet the failure criteria	Automatic recovery when failure doesn't meet the failure criteria
39	EMS	C11988	CAN3 Busoff failure	Automatic recovery when failure doesn't meet the failure criteria	Automatic recovery when failure doesn't meet the failure criteria
40	EMS	0130F1	Water Immersion level 1 failure	Check the pile for water	Reset and the fault flag is erased
41	EMS	0130F2	Water Immersion level 2 failure	Check the pile for water	Reset and the fault flag is erased
42	EMS	013100	Door Open failure	Check if the door is clocked	Reset and the fault flag is erased
43	EMS	0137F2	HCU level 3 failure	Check the working status of the HCU thermal management unit	Reset and the fault flag is erased Replace the thermal management unit
44	EMS	016600	Recharge negative relay open failure	Check the K16 feedback contact	Exchange Relay,and then reset
45	EMS	016700	Recharge negative relay adhesion failure	Check the K16 feedback contact	Exchange Relay,and then reset
46	EMS	017300	Recharge negative relay open failure	Check the K9/K10 feedback contact	Exchange Relay,and then reset



FutureNed

47	EMS	017400	Recharge negative relay adhesion failure	Check the K9/K10 feedback contact	1.Exchange Relay,and then reset
48	EMS	017500	A-gun distribute negative relay open failure	Check the K5/K6 feedback contact	1.Exchange Relay,and then reset
49	EMS	017600	A-gun distribute negative relay adhesion failure	Check the K5/K6 feedback contact	1.Exchange Relay,and then reset
50	EMS	017700	B-gun distribute negative relay open failure	Check the K7/K8 feedback contact	1.Exchange Relay,and then reset
51	EMS	017800	B-gun distribute negative relay adhesion failure	Check the K7/K8 feedback contact	Exchange Relay,and then reset
52	EMS	017900	Thermal management unit power fuse Open failure	Check the FU4 status	Exchange thermal management unit power fuse , and the reset
53	EMS	086800	Fuse5 Open failure	Check the FU5 status	Exchange fuse5 , and the reset
54	EMS	088800	POS machine fault	Check the POS machine status	Restart the POS machine Replace the POS machine
55	EMS	088900	RCD open fault	Check system grounding Check whether the power lines on the power grid side are damaged	Check the system and restart
56	EMS	096600	The system battery soc is low.	Check whether the AC is online	Automatic recovery when failure doesn't meet the failure criteria
57	EMS	0249F3	level 3 Collision Event	Check whether the pile has been collided	Reset and the fault flag is erased
58	EMS	025000	Falling Event	Check whether the pile is turned over	Reset and the fault flag is erased
59	BMS	002100	system initialize failure	Checking Pack status	automatically recovers after system re-initialize succeed
60	BMS	C701F2	PT CAN HALL timeout	Checking Pack status	Restart the system



FutureNed

61	BMS	0DE7F2	Cell overvoltage level 3 failure	Check the ACDC working status	After the fault is reported, the machine will be powered on manually after 3h of rest; If condition 1 does not succeed ,looking for professionals to repair damage.
62	BMS	0DFEF3	Cell overcharging failure	Check the ACDC working status	After the fault is reported, the machine will be powered on manually after 3h of rest; 2,If condition 2 does not succeed ,looking for professionals to repair damage.
63	BMS	0DE6F2	Cell undervoltage level 3 failure	Check the ACDC working status and grid status	After the fault is reported, manually power on, If condition 1 does not succeed ,looking for professionals to repair damage.
64	BMS	0DFFF3	Cell undercharging failure	Check the DCDC working status and grid status	After the fault is reported, manually power on, If condition 1 does not succeed ,looking for professionals to repair damage.
65	BMS	072429	Cell voltage rationality failure	Check the cell voltage sampling point	Restart the system
66	BMS	0E00F2	Cell voltage diff is too big level 3 failure	Checking Pack status	After the fault is reported, the machine will be powered on manually after 3h of rest; If condition 1 does not succeed



FutureNed

					,looking for professionals to repair damage.
67	BMS	0E01F2	Cell overtemperature level 3 failure	Check the working status of the thermal management unit	Automatic recovery when failure doesn't meet the failure criteria
68	BMS	0E01F3	Cell overtemperature failure	Check the working status of the thermal management unit	1. Restart the system
69	BMS	072529	Cell temperature rationality failure	Check the cell temperature sampling point	2. Restart the system
70	BMS	0AFBF2	Pack overvoltage level 2 failure	Check the ACDC working status	Automatic recovery when failure doesn't meet the failure criteria
71	BMS	0AFAF2	Pack overvoltage level 2 failure	Check the DCDC working status and grid status	After the fault is reported, manually power on, If condition 1 does not succeed ,looking for professionals to repair damage.
72	BMS	0DF7F3	Pack overcurrent failure	Check the DCDC working status	2. Restart the system
73	BMS	0AA2F3	Open failure for positive relay	Check the K17 relay status	1.Exchange Relay, and then reset
74	BMS	0AA1F1	Adhesion failure for positive relay	Check the K17 relay status	1.Exchange Relay, and then reset
75	BMS	0AA400	Adhesion failure for negative relay	Check the K18 relay status	1.Exchange Relay, and then reset
76	BMS	0AE3F3	Open failure for precharge relay	Check the K20 relay status	1.Exchange Relay, and then reset
77	BMS	0718F3	Open failure of fuse or pack relay	Check FUSE	1.Exchange FUSE, and then reset
78	BMS	0B09F3	Precharging failure		1. Restart the system
79	BMS	0B0AF3	Short circuit of pre-charge load		1. Restart the system
80	BMS	0AA6F2	Insulation detection Level 3 fault	Check the grounding circuit	1. Restart the system
81	BMS	0A0A00	Open failure of HVIL		1. Restart the system
82	BMS	C00987	Internal failure of CMU1		Automatic recovery when failure doesn't meet the failure criteria



FutureNed

83	BMS	C00A87	Internal failure of CMU2		Automatic recovery when failure doesn't meet the failure criteria
84	BMS	C00B00	Internal failure of CMU3		Automatic recovery when failure doesn't meet the failure criteria
85	BMS	C00C00	Internal failure of CMU4		Automatic recovery when failure doesn't meet the failure criteria
86	CCU1	030100	CCU_Over-current protection failure		Recover after pulling the gun
87	CCU1	030200	DCDC output over-voltage Alarm		Recover after pulling the gun
88	CCU1	C30487	CCU and EMS CAN communication timeout		Automatic recovery when failure doesn't meet the failure criteria
89	CCU1	C30588	EMS CAN Busoff		Automatic recovery when failure doesn't meet the failure criteria
90	CCU1	0315F2	Gun over-temperature level 3 failure		Automatic recovery when failure doesn't meet the failure criteria
91	CCU1	032500	DC positive relay open failure	Check K1 relay status	1.Exchange Relay, and then reset
92	CCU1	032600	DC positive relay adhesion failure	Check K1 relay status	1.Exchange Relay, and then reset
93	CCU1	032700	DC negative relay open failure	Check K2 relay status	1.Exchange Relay, and then reset
94	CCU1	032800	DC negative relay adhesion failure	Check K2 relay status	1.Exchange Relay, and then reset
95	CCU1	032900	Fuse failure	Check Fuse1 status	1.Exchange Fuse1, and then reset
96	CCU1	0332F3	Insulation level 3 failure detection		Recover after pulling the gun
97	CCU1	033300	Isolation detect timeout		Recover after pulling the gun
98	CCU1	035900	DC output voltage exceeds BCL requirement voltage		Recover after pulling the gun
99	CCU1	036000	DC output current exceeds BCL requirement current		Recover after pulling the gun
100	CCU1	038300	Battery maximum allowable voltage less than AFC minimum output voltage		Recover after pulling the gun
101	CCU1	060700	DB_SLAC_ERROR_TIMER_INIT		Restart SECC



FutureNed

102	CCU1	066600	DB_CP_STATE_E	Check CP connection	Recover after pulling the gun
103	CCU1	037600	DCDC output out of range	Check the DCDC output status	Recover after pulling the gun
104	CCU1	C31587	CCU and SECC communication timeout		1. Automatic recovery when failure doesn't meet the failure criteria
105	CCU1	037000	Precharge timeout		1. Automatic recovery when failure doesn't meet the failure criteria
106	CCU1	034100	Vehicle Voltage out of CML		1. Automatic recovery when failure doesn't meet the failure criteria
107	CCU1	036300	CP off line		Recover after pulling the gun
108	CCU1	036600	Outside of Posrelay voltage exceeds Maximum allowable voltage of EV		Recover after pulling the gun
109	CCU1	035800	Before insulation detection, outside of relay voltage exceeds 60V.		Recover after pulling the gun
110	CCU1	039600	Cross positive relay is open fault	Check the status of the K27 relay	1. Exchange Relay, and then reset
111	CCU1	039700	Cross positive relay is adhesion fault	Check the status of the K27 relay	1. Exchange Relay, and then reset
112	CCU1	039800	Cross negative relay is open fault	Check the status of the K28 relay	1. Exchange Relay, and then reset
113	CCU1	039900	Cross negative relay is adhesion fault	Check the status of the K28 relay	1. Exchange Relay, and then reset
114	CCU2	130100	CCU_Over-current protection failure		Recover after pulling the gun
115	CCU2	130200	DCDC output over-voltage Alarm		Recover after pulling the gun
116	CCU2	D30487	CCU and EMS CAN communication timeout		Automatic recovery when failure doesn't meet the failure criteria
117	CCU2	D30588	EMS CAN Busoff		Automatic recovery when failure doesn't meet the failure criteria



FutureNed

118	CCU2	1315F2	Gun over-temperature level 3 failure		Automatic recovery when failure doesn't meet the failure criteria
119	CCU2	132500	DC positive relay open failure	Check K3 relay status	1.Exchange Relay, and then reset
120	CCU2	132600	DC positive relay adhesion failure	Check K3 relay status	1.Exchange Relay, and then reset
121	CCU2	132700	DC negative relay open failure	Check K4 relay status	1.Exchange Relay, and then reset
122	CCU2	132800	DC negative relay adhesion failure	Check K4 relay status	1.Exchange Relay, and then reset
123	CCU2	132900	Fuse failure	Check Fuse2 status	1.Exchange Fuse2, and then reset
124	CCU2	1332F3	Insulation level 3 failure detection		Recover after pulling the gun
125	CCU2	133300	Isolation detect timeout		Recover after pulling the gun
126	CCU2	135900	DC output voltage exceeds BCL requirement voltage		Recover after pulling the gun
127	CCU2	136000	DC output current exceeds BCL requirement current		Recover after pulling the gun
128	CCU2	138300	Battery maximum allowable voltage less than AFC minimum output voltage		Recover after pulling the gun
129	CCU2	160700	DB_SLAC_ERROR_TIMER_INIT		Restart SECC
130	CCU2	166600	DB_CP_STATE_E	Check CP connection	Recover after pulling the gun
131	CCU2	137600	DCDC output out of range	Check the DCDC output status	Recover after pulling the gun
132	CCU2	D31587	CCU and SECC communication timeout		1.Automatic recovery when failure doesn't meet the failure criteria
133	CCU2	137000	Precharge timeout		1.Automatic recovery when failure doesn't meet the failure criteria
134	CCU2	134100	Vehicle Voltage out of CML		1.Automatic recovery when failure doesn't meet the failure criteria
135	CCU2	136300	CP off line		Recover after pulling the gun
136	CCU2	136600	Outside of Posrelay voltage exceeds Maximum allowable voltage of EV		Recover after pulling the gun



FUTURENeo

137	CCU2	135800	Before insulation detection, outside of relay voltage exceeds 60V.		Recover after pulling the gun
138	CCU2	139600	Cross positive relay is open fault	Check the status of the K25 relay	1.Exchange Relay, and then reset
139	CCU2	139700	Cross positive relay is adhesion fault	Check the status of the K25 relay	1.Exchange Relay, and then reset
140	CCU2	139800	Cross negative relay is open fault	Check the status of the K26 relay	1.Exchange Relay , and then reset
141	CCU2	139900	Cross negative relay is adhesion fault	Check the status of the K26 relay	1.Exchange Relay , and then reset