

Easy UPS 3L and Galaxy 3L

Modbus Address Table

Read Function	Address	Parameter	Description	Format	Size	Gain	Unit
0x04	30001	Input voltage phase A	Input voltage phase A	unsigned int	2	0.1	V
0x04	30002	Input voltage phase B	Input voltage phase B	unsigned int	2	0.1	V
0x04	30003	Input voltage phase C	Input voltage phase C	unsigned int	2	0.1	V
0x04	30004	Input freq.	Input frequency	unsigned int	2	0.1	Hz
0x04	30005	Input current phase A	Input current phase A	unsigned int	2	0.1	A
0x04	30006	Input current phase B	Input current phase B	unsigned int	2	0.1	A
0x04	30007	Input current phase C	Input current phase C	unsigned int	2	0.1	A
0x04	30008	Input PF_A	Input Power factor phase A	unsigned int	2	0.001	/
0x04	30009	Input PF_B	Input Power factor phase B	unsigned int	2	0.001	/
0x04	30010	Input PF_C	Input Power factor phase C	unsigned int	2	0.001	/
0x04	30011	Output voltage phase A	Output voltage phase A	unsigned int	2	0.1	V
0x04	30012	Output voltage phase B	Output voltage phase B	unsigned int	2	0.1	V
0x04	30013	Output voltage phase C	Output voltage phase C	unsigned int	2	0.1	V
0x04	30014	Output frequency	Output frequency	unsigned int	2	0.1	Hz
0x04	30015	Output current phase A	Output current phase A	unsigned int	2	0.1	A
0x04	30016	Output current phase B	Output current phase B	unsigned int	2	0.1	A
0x04	30017	Output current phase C	Output current phase C	unsigned int	2	0.1	A
0x04	30018	Output kW phase A	Output kW phase A	unsigned int	2	0.1	kW
0x04	30019	Output kW phase B	Output kW phase B	unsigned int	2	0.1	kW
0x04	30020	Output kW phase C	Output kW phase C	unsigned int	2	0.1	kW
0x04	30021	Load rating phase A	Load percent phase A	unsigned int	2	1	%
0x04	30022	Load rating phase B	Load percent phase B	unsigned int	2	1	%
0x04	30023	Load rating phase C	Load percent phase C	unsigned int	2	1	%
0x04	30024	Output A phase load peak ratio	Output A phase load peak ratio	unsigned int	2	0.01	/
0x04	30025	Output B phase load peak ratio	Output B phase load peak ratio	unsigned int	2	0.01	/
0x04	30026	Output C phase load peak ratio	Output C phase load peak ratio	unsigned int	2	0.01	/
0x04	30027	Bypass voltage phase A	Bypass voltage phase A	unsigned int	2	0.1	V

Read Function	Address	Parameter	Description	Format	Size	Gain	Unit
0x04	30028	Bypass voltage phase B	Bypass voltage phase B	unsigned int	2	0.1	V
0x04	30029	Bypass voltage phase C	Bypass voltage phase C	unsigned int	2	0.1	V
0x04	30030	Bypass frequency	Bypass frequency phase A	unsigned int	2	0.1	Hz
0x04	30031	Battery voltage positive	Battery voltage positive	unsigned int	2	0.1	V
0x04	30032	Battery voltage negative	Battery voltage negative	unsigned int	2	0.1	V
0x04	30033	Positive battery discharge current	Positive battery discharge current	unsigned int	2	0.1	A
0x04	30034	Negative battery discharge current	Negative battery discharge current	unsigned int	2	0.1	A
0x04	30035	Positive battery charging current	Positive battery charging current	unsigned int	2	0.1	A
0x04	30036	Negative battery charging current	Negative battery charging current	unsigned int	2	0.1	A
0x04	30037	Battery capacity rate	Battery capacity	unsigned int	2	1	%
0x04	30038	Battery remain time	Battery backup time	unsigned int	2	1	Min
0x04	30039	Battery temp.	Battery temperature	unsigned int	2	0.1	°C
0x04	30040	Ambient temperature	Ambient temperature	unsigned int	2	0.1	°C
0x04	30047	Output kVA phase A	Output kVA phase A	unsigned int	2	0.1	kVA
0x04	30048	Output kVA phase B	Output kVA phase B	unsigned int	2	0.1	kVA
0x04	30049	Output kVA phase C	Output kVA phase C	unsigned int	2	0.1	kVA
0x04	30050	Input AB line voltage	Input AB line voltage	unsigned int	2	0.1	V
0x04	30051	Input BC line voltage	Input BC line voltage	unsigned int	2	0.1	V
0x04	30052	Input CA line voltage	Input CA line voltage	unsigned int	2	0.1	V
0x04	30053	Bypass AB line voltage	Bypass AB line voltage	unsigned int	2	0.1	V
0x04	30054	Bypass BC line voltage	Bypass BC line voltage	unsigned int	2	0.1	V
0x04	30055	Bypass CA line voltage	Bypass CA line voltage	unsigned int	2	0.1	V
0x04	30056	Output AB line voltage	Output AB line voltage	unsigned int	2	0.1	V
0x04	30057	Output BC line voltage	Output BC line voltage	unsigned int	2	0.1	V
0x04	30058	Output CA line voltage	Output CA line voltage	unsigned int	2	0.1	V
0x04	30071	UPS system status	UPS current running status	unsigned int	2	1	/
0x03	40002	Parallel ID	Set ID for UPS cabinet in the parallel	int	2	1	/
0x03	40007	Number of parallel UPSs	The total number of UPS in the system.	int	2	1	/
0x03	40008	Number of par. redundant UPSs	Parallel redundant number	int	2	1	/
0x03	40014	Output voltage compensation	Inverter output voltage trimming	int	2	1	%
0x03	40015	Battery blocks per string	Number of battery blocks in string.	int	2	1	/
0x03	40017	All number of battery strings	Number of battery parallel groups	int	2	1	/
0x03	40021	Battery block capacity (Ah):	The rated capacity (AH) of a single battery	int	2	1	AH

Read Function	Address	Parameter	Description	Format	Size	Gain	Unit
0x03	40023	Maximum charge current	The maximum charge current rate for charger	int	2	0.01	/
0x03	40028	Float charge temp. compensation:	Float charge temp. compensation:	int	2	1	mV/Cell/°C
0x03	40031	System time setting (Year-Mon)	System time setting (Year-Mon)	bitwise	2	1	/
0x03	40032	System time setting (Day-Hour)	System time setting (Day-Hour)	bitwise	2	1	/
0x03	40033	System time setting (Min-Sec)	System time setting (Min-Sec)	bitwise	2	1	/
0x03	40035	Device ID (Modbus ID)	Device communication ID	int	2	1	/
0x03	40115	Number of battery 1 strings	Number of battery 1 parallel groups	int	2	1	/
0x03	40116	Number of battery 2 strings	Number of battery 2 parallel groups	int	2	1	/
0x03	40117	Number of battery 3 strings	Number of battery 3 parallel groups	int	2	1	/
0x03	40201	Output dry contact 1 set	D15:I/O Func 0:Open 1:Close D14~D8: Delay 0~127s D7~D0: Func 0~255: Details are as follow: 0:OFF 1:Common Alarm 2:Normal Operation 3:Battery Operation 4:Static Bypass 5:Output Overloaded 6:Fan Inoperable 7:Battery Fault 8:Battery Disconnected 9:Battery Voltage Low 10:Input Out Of Tolerance 11:Bypass Out Of Tolerance 12:EPO Activated 13:Maintenance Mode	bitwise	2	1	/
0x03	40202	Output dry contact 2 set		bitwise	2	1	/
0x03	40203	Output dry contact 3 set		bitwise	2	1	/
0x03	40204	Output dry contact 4 set		bitwise	2	1	/
0x03	40205	Output dry contact 5 set		bitwise	2	1	/
0x03	40206	Output dry contact 6 set		bitwise	2	1	/
0x03	40221	Input dry contact 1 set	D15:I/O Func: 0: Open 1:Close D14~D8: Delay 0~127s D7~D0: Func 0~255: Details are as follow: 0:OFF 1:UPS ON 2:UPS OFF 3:Battery Fault 4:Genset enable 5:Custom Alarm 3 6:Custom Alarm 4 7:Disable ECO 8:Force INV off	bitwise	2	1	/
0x03	40222	Input dry contact 2 set		bitwise	2	1	/
0x03	40223	Input dry contact 3 set		bitwise	2	1	/
0x03	40224	Input dry contact 4 set		bitwise	2	1	/
0x03	40225	Input dry contact 5 set		bitwise	2	1	/
0x03	40226	Input dry contact 6 set		bitwise	2	1	/
0x03	53020~53-034	UPS Type Setting 1~15 (Unicode coding)	A register just describe one character, Unicode coding	string	2	1	/
0x03	53040~53-046	Serial Number Setting 1~7(ASCII)	This register is set to 2 characters. A total of 8 bytes is used for 16 characters.	string	2	1	/
0x03	53050~53-053	Firmware version 1~4(ASCII)	This register is set to 2 characters. A total of 4 bytes is used for 8 characters.	string	2	1	/
0x03	51185	Air filter maintenance cycle	Dust filter maintenance cycle	unsigned int	2	1	Month
0x03	51195	Air filter maintenance time	Dust filter running time	unsigned int	2	1	Day

Read Function	Address	Parameter	Description	Format	Size	Gain	Unit
0x03	51196	Battery maintenance time	Battery maintenance time	unsigned int	2	1	Day
0x02	10002	UOB	Output Switch	bitwise	1	1	/
0x02	10003	MBB	Manu-Bypass Switch	bitwise	1	1	/
0x02	10008	ECO	ECO	bitwise	1	1	/
0x02	10010	Battery self-test	Battery Test	bitwise	1	1	/
0x02	10011	Battery charge	Battery charge	bitwise	1	1	/
0x02	10012	Positive boost charge	P-Battery Boost Charging	bitwise	1	1	/
0x02	10013	Negative boost charge	N-Battery Boost Charging	bitwise	1	1	/
0x02	10014	Rectifier Staus	Rectifier Staus	bitwise	1	1	/
0x02	10020	Inverter output	UPS Supply Power Status1	bitwise	1	1	/
0x02	10021	Bypass operation	UPS Supply Power Status2	bitwise	1	1	/
0x02	10022	Transfer to bypass with break	Transfer to bypass with break	bitwise	1	1	/
0x02	10023	Shutdown Inverter will cause load drop	INV. Off coming to PowerOff	bitwise	1	1	/
0x02	10026	Load over INV capacity	Load over INV capacity	bitwise	1	1	/
0x02	10027	INV overload shutdown	INV overload shutdown	bitwise	1	1	/
0x02	10031	Max transfers to bypass	Transfer Times-out	bitwise	1	1	/
0x02	10032	REC EPO	Rectifier EPO	bitwise	1	1	/
0x02	10033	INV EPO	Inverter EPO	bitwise	1	1	/
0x02	10034	ECU EPO	ECU EPO	bitwise	1	1	/
0x02	10035	Bypass EPO	Bypass EPO	bitwise	1	1	/
0x02	10036	Bypass takeover	Bypass takeover	bitwise	1	1	/
0x02	10037	BB Status	BB Status	bitwise	1	1	/
0x02	10065	Rectifier inoperable	Rectifier fault	bitwise	1	1	/
0x02	10066	Inverter inoperable	Inverter fault	bitwise	1	1	/
0x02	10067	REC power supply lost	Auxiliary power fault	bitwise	1	1	/
0x02	10068	Fan inoperable	Fan fault	bitwise	1	1	/
0x02	10069	Input SCR inoperable	Input SCR inoperable	bitwise	1	1	/
0x02	10070	INV relay short circuit	INV relay short circuit	bitwise	1	1	/
0x02	10071	Bypass SCR shorted	Bypass SCR shorted	bitwise	1	1	/
0x02	10072	INV fuse blown	INV fuse blown	bitwise	1	1	/
0x02	10073	DC voltage incorrect	DC voltage incorrect	bitwise	1	1	/
0x02	10074	REC cannot initialize	REC cannot initialize	bitwise	1	1	/
0x02	10075	Charger SCR broken	Charger SCR broken	bitwise	1	1	/
0x02	10076	Charger inoperable	Charger fault	bitwise	1	1	/
0x02	10077	Parallel alarm	Parallel alarm, include module parallel and cabinet parallel alarm	bitwise	1	1	/
0x02	10080	Input phases reversed	Mains Site Wiring Fault	bitwise	1	1	/

Read Function	Address	Parameter	Description	Format	Size	Gain	Unit
0x02	10081	Input N detect abnormal	Input N detect abnormal	bitwise	1	1	/
0x02	10082	Bypass phases reversed	Bypass Site Wiring Fault	bitwise	1	1	/
0x02	10083	Batt. polarity reversed	Batt. polarity reversed	bitwise	1	1	/
0x02	10084	No battery connected	No battery connected	bitwise	1	1	/
0x02	10085	Backfeed on bypass	Feedback protection	bitwise	1	1	/
0x02	10088	Inverter overload	Inverter overload	bitwise	1	1	/
0x02	10089	Loss of redundancy	Loss of redundancy	bitwise	1	1	/
0x02	10090	Batt. end of discharge	Batt. end of discharge	bitwise	1	1	/
0x02	10091	Battery overvoltage	Battery over voltage	bitwise	1	1	/
0x02	10092	Low battery warning	Battery low pre-warning	bitwise	1	1	/
Read Function	Address	Parameter	Description	Format	Size	Gain	Unit
0x02	10095	Bypass out of sync	Bypass unable to trace	bitwise	1	1	/
0x02	10096	Bypass out of tol.	Bypass Not Available	bitwise	1	1	/
0x02	10098	LBS communication lost	LBS Not Synchronized	bitwise	1	1	/
0x02	10099	Inverter out of sync	System Not Synchronized	bitwise	1	1	/
0x02	10121	Parallel cable damaged	Parallel cable damaged	bitwise	1	1	/
0x02	10126	Bypass SCR broken	ECU bypass thyristor disconnect	bitwise	1	1	/
0x02	10127	Bypass overtemperature	ECU bypass overtemperature	bitwise	1	1	/
0x02	10138	Bypass unavailable	Bypass unavailable	bitwise	1	1	/
0x02	10147	Bypass overload	Bypass overload	bitwise	1	1	/
0x02	10148	Incorrect use of MBB	Maintenance switch wrong operation	bitwise	1	1	/
0x02	10150	Par. cable abnormal	Par. cable abnormal	bitwise	1	1	/
0x02	10154	Parallel cable missing	Parallel cable missing	bitwise	1	1	/
0x02	10155	Par. bypass incorrect	Parallel bypass incorrect	bitwise	1	1	/
0x02	10156	Bypass comm. lost	Bypass comm. lost	bitwise	1	1	/
0x02	10157	On bypass:no output	On bypass:no output	bitwise	1	1	/
0x02	10158	Bypass setting wrong	Bypass setting wrong	bitwise	1	1	/
0x02	10159	Service recommended.	Service recommended.	bitwise	1	1	/
0x02	10163	Batt temp. >45°C or <-20°C	Batt. NTC temperature sensor abnormal	bitwise	1	1	/
0x02	10164	Room temp. >40°C or <-20°C	Ambient NTC temperature sensor abnormal	bitwise	1	1	/
0x02	10167	Backfeed on input	Feedback protection	bitwise	1	1	/
0x02	10201	Mains out of tol.	Input Voltage or frequency out of range	bitwise	1	1	/
0x02	10202	Battery voltage low	Battery voltage low	bitwise	1	1	/
0x02	10203	Bypass operation	Bypass Supply Power	bitwise	1	1	/

Read Function	Address	Parameter	Description	Format	Size	Gain	Unit
0x02	10204	UPS Important alarm	UPS generate alarm, include important alarm	bitwise	1	1	/
0x02	10205	INV output	INV supply power	bitwise	1	1	/
0x02	10206	UPS warning	include important alarm and general alarm	bitwise	1	1	/
0x02	10207	UPS over temperature	UPS over temperature, include: REC over temperature; INV over temperature; Bypass over temperature;	bitwise	1	1	/
0x02	10251	External MBB status	External MBB status	bitwise	1	1	/
0x02	10252	External BB1 status	External BB1	bitwise	1	1	/
0x02	10254	External UOB status	External UOB	bitwise	1	1	/
0x02	10256	Batt breaker trip status	Battery breaker trip status	bitwise	1	1	/
0x02	10257	SPD status	SPD status	bitwise	1	1	/
0x02	10259	External BB2 status	External BB2	bitwise	1	1	/
0x02	10260	External BB3 status	External BB3	bitwise	1	1	/

UPS System Status

Code (Hex)	Status Label (English)
0x0000	Initialize
0x0001	Standby operation
0x0002	Output is off
0x0003	Bypass operation
0x0004	Normal operation
0x0005	Battery operation
0x0006	Battery self-test
0x0008	ECO Mode
0x0009	EPO activated
0x000A	Maintenance bypass op.
0x000D	Hybrid operation
0x000E	Self-aging mode
0x0014	REC is OFF
0x0015	Input
0x0016	On battery
0x001E	Inverter standby
0x001F	Inverter Output
0x0020	Inverter self-aging
0x0028	ECU is Off
0x0029	ECU Standby
0x002A	ECU active
0x0032	ECU Takeover Mode
0x0033	Bypass Takeover Mode

Moudule Data Address

Read Function	Address	Content	Size	Remark
0x04	31203+100*(N-1)	Module N REC alarm info1	2Byte	D16-D31, see Table 1.1.1 for details
0x04	31204+100*(N-1)	Module N REC alarm info2	2Byte	D0-D15, see Table 1.1.1 for details
0x04	31205+100*(N-1)	Module N REC failure info1	2Byte	D48-D63, see Table 1.1.2 for details
0x04	31206+100*(N-1)	Module N REC failure info2	2Byte	D32-D47, see Table 1.1.2 for details
0x04	31207+100*(N-1)	Module N REC failure info3	2Byte	D16-D31, see Table 1.1.2 for details
0x04	31208+100*(N-1)	Module N REC failure info4	2Byte	D0-D15, see Table 1.1.2 for details
0x04	31253+100*(N-1)	Module N INV alarm info1	2Byte	D16-D31, see Table 1.2.1 for details
0x04	31254+100*(N-1)	Module N INV alarm info2	2Byte	D0-D15, see Table 1.2.1 for details
0x04	31255+100*(N-1)	Module N INV failure info1	2Byte	D48-D63, see Table 1.2.2 for details
0x04	31256+100*(N-1)	Module N INV failure info2	2Byte	D32-D47, see Table 1.2.2 for details
0x04	31257+100*(N-1)	Module N INV failure info3	2Byte	D16-D31, see Table 1.2.2 for details
0x04	31258+100*(N-1)	Module N INV failure info4	2Byte	D0-D15, see Table 1.2.2 for details

Bypass Data Address

Read Function	Address	Content	Size	Remark
0x04	31103	Bypass 1 alarm info1	2Byte	D16-D31, see Table 2.1.1 for details
0x04	31104	Bypass 1 alarm info2	2Byte	D0-D15, see Table 2.1.1 for details
0x04	31105	Bypass 1 failure info1	2Byte	D48-D63, see Table 2.1.2 for details
0x04	31106	Bypass 1 failure info2	2Byte	D32-D47, see Table 2.1.2 for details
0x04	31107	Bypass 1 failure info3	2Byte	D16-D31, see Table 2.1.2 for details
0x04	31108	Bypass 1 failure info4	2Byte	D0-D15, see Table 2.1.2 for details

ECU Data Address

Read Function	Address	Content	Size	Remark
0x04	31003+50*(N-1)	ECU N alarm info1	2Byte	D16-D31, see Table 3.1.1 for details
0x04	31004+50*(N-1)	ECU N alarm info2	2Byte	D0-D15, see Table 3.1.1 for details
0x04	31005+50*(N-1)	ECU N failure info1	2Byte	D48-D63, see Table 3.1.2 for details
0x04	31006+50*(N-1)	ECU N failure info2	2Byte	D32-D47, see Table 3.1.2 for details
0x04	31007+50*(N-1)	ECU N failure info3	2Byte	D16-D31, see Table 3.1.2 for details
0x04	31008+50*(N-1)	ECU N failure info4	2Byte	D0-D15, see Table 3.1.2 for details

Monitor Alarm1

Read Function	Address	Content	Size	Remark
0x04	30073	Monitor Alarm1	2Byte	D0-D15, see Table 4.1.1 for details

Table 1.1.1 Rec Alarm Information

	Content	Remark
D29	Battery overvoltage	1:Active
D28	Low battery warning	1:Active
D27	Batt. polarity reversed	1:Active
D26	Batt. end of discharge	1:Active
D25	Battery voltage low	1:Active
D24	No battery connected	1:Active
D23	Input phases reversed	1:Active
D22	Input N detect abnormal	1:Active
D21	Input freq. out of tol.	1:Active
D20	Input volt. out of tol.	1:Active
D19	EPPROM communication lost	1:Active
D18	Input unavailable	1:Active
D17	REC setting incorrect	1:Active

Table 1.1.2 Rec failure information

	Content	Remark
D63	Backfeed on input	1:Active
D62	Rectifier overtemp.	1:Active
D61	REC par. cable abnormal:PWM carrier	1:Active
D60	Rectifier overcurrent	1:Active
D59	REC power supply lost:REC	1:Active
D58	REC power supply lost:15V	1:Active
D57	Input SCR inoperable:A	1:Active
D56	Input SCR inoperable:B	1:Active
D55	Input SCR inoperable:C	1:Active
D54	Discharger SCR broken:P(Reserve)	1:Active
D53	Discharger SCR broken:N(Reserve)	1:Active
D52	Charger SCR broken:P(Reserve)	1:Active
D51	Charger SCR broken:N(Reserve)	1:Active
D50	Fan inoperable:3	1:Active
D49	Fan inoperable:2	1:Active
D48	Fan inoperable:1	1:Active
D47	Fan supply inoperable	1:Active
D46	Charger overtemp.	1:Active
D45	Soft-start inoperable	1:Active
D44	Charger inoperable:Positive	1:Active
D43	Charger inoperable:Negative	1:Active
D42	PFC communication lost:REC and INV SPI	1:Active
D41	PFC communication lost:EPPROM IIC	1:Active
D40	PFC communication lost:CPLD SPI	1:Active
D39	REC cannot initialize:RAM	1:Active
D38	REC cannot initialize:mismatching	1:Active
D35	Power block not connected	1:Active
D34	Rectifier inoperable:over voltage	1:Active
D33	Rectifier inoperable:under voltage	1:Active
D32	Rectifier inoperable:P and N bus difference	1:Active

Table 1.2.1 Inv Alarm Information

	Content	Remark
D31	INV par. cable abnormal:Control CAN	1:Active
D30	INV par. cable abnormal:Inverter status(reserve)	1:Active
D29	INV par. cable abnormal:Three phase zero	1:Active
D28	INV par. cable abnormal:PWM carrier	1:Active
D27	Inverter overload	1:Active
D26	Inverter out of sync	1:Active
D23	INV communication lost	1:Active
D22	INV settings incorrect	1:Active

Table 1.2.2 Inv failure Information

	Content	Remark
D63	Inverter inoperable:C	1:Active
D62	Inverter inoperable:B	1:Active
D61	Inverter inoperable:A	1:Active
D60	NV IGBT short circuit:C	1:Active
D59	NV IGBT short circuit:B	1:Active
D58	NV IGBT short circuit:A	1:Active
D57	INV relay short circuit:C	1:Active
D56	INV relay short circuit:B	1:Active
D55	INV relay short circuit:A	1:Active
D54	INV relay damaged:C	1:Active
D53	INV relay damaged:B	1:Active
D52	INV relay damaged:A	1:Active
D51	INV par. cable damaged:Control CAN	1:Active
D50	INV par. cable damaged:Inverter status(reserve)	1:Active
D49	INV par. cable damaged:Three phase zero	1:Active
D48	INV par. cable damaged:PWM carrier	1:Active
D47	Short circuit on output:C	1:Active
D46	Short circuit on output:B	1:Active
D45	Short circuit on output:A	1:Active
D44	INV comm not initialize:INV and REC SPI	1:Active
D43	INV comm not initialize:EPPROM IIC	1:Active
D42	INV comm not initialize:CPLD SPI	1:Active
D41	INV cannot initialize:RAM	1:Active
D40	INV cannot initialize:mismatching	1:Active
D38	INV self-test wrong:INV relay can not close	1:Active
D37	INV self-test wrong:INV voltage abnormal	1:Active
D34	DC component inoperable:C	1:Active
D33	DC component inoperable:B	1:Active
D32	DC component inoperable:A	1:Active
D31	DC voltage incorrect	1:Active
D29	Power block disconnected	1:Active
D28	INV supply inoperable:APS	1:Active
D27	INV supply inoperable:15V	1:Active
D26	INV supply inoperable:1.5V	1:Active
D25	INV overtemperature	1:Active
D24	Load sharing incorrect	1:Active
D22	UPS mode incorrect	1:Active
D21	INV fuse blown	1:Active

Table 2.1.1 Bypass alarm information

	Content	Remark
D31	Par. bypass incorrect	1:Active
D30	Bypass phases reversed	1:Active
D29	Bypass out of sync	1:Active
D28	Bypass out of tol.	1:Active
D27	Bypass comm. lost	1:Active
D26	On bypass: No output	1:Active
D25	Bypass setting wrong	1:Active

Table 2.1.2 Bypass failure information

	Content	Remark
D63	By. comm cable damaged	1:Active
D62	Bypass SCR inoperable:C	1:Active
D61	Bypass SCR inoperable:B	1:Active
D60	Bypass SCR inoperable:A	1:Active
D59	Bypass SCR shorted:C	1:Active
D58	Bypass SCR shorted:B	1:Active
D57	Bypass SCR shorted:A	1:Active
D56	Bypass comm. lost:IIC	1:Active
D55	Bypass comm. lost:SPI	1:Active
D54	Bypass cannot start:RAM	1:Active
D53	Bypass cannot start:Hardware version	1:Active
D52	Bypass cannot start:reserve	1:Active
D51	Bypass connection wrong:Knob	1:Active
D50	Bypass connection wrong:dc	1:Active
D49	Bypass overtemperature 3	1:Active
D48	Bypass overtemperature 2	1:Active
D47	Bypass overtemperature 1	1:Active
D46	Bypass fan inoperable:4	1:Active
D45	Bypass fan inoperable:3	1:Active
D44	Bypass fan inoperable:2	1:Active
D43	Bypass fan inoperable:1	1:Active
D42	Bypass unavailable:15V	1:Active
D41	Bypass unavailable:AUX power	1:Active
D40	Bypass fan inoperable:8	1:Active
D39	Bypass fan inoperable:7	1:Active
D38	Bypass fan inoperable:6	1:Active
D37	Bypass fan inoperable:5	1:Active

Table 3.1.1 ECU alarm information

	Content	Remark
D31	Max transfers to bypass	1:Active
D30	Power block qty. wrong	1:Active
D29	Loss of redundancy	1:Active
D28	Bypass overload	1:Active
D27	Incorrect use of MBB	1:Active
D26	EPPROM communication lost	1:Active
D25	Par. cable abnormal:Control CAN	1:Active
D24	Par. cable abnormal:Inverter status (reserved)	1:Active
D23	Par. cable abnormal:Three phase Zero-crossing	1:Active
D22	Par. cable abnormal:PWM carrier	1:Active
D21	ECU par. cable abnormal	1:Active
D20	ECU2 abnormal	1:Active
D19	ECU1 abnormal	1:Active
D18	Bypass reversed	1:Active
D17	Bypass out of sync	1:Active
D16	Bypass out of tol.	1:Active
D15	ECU setting incorrect	1:Active
D14	LBS communication lost	1:Active
D13	Parallel cable missing	1:Active

Table 3.1.2 ECU failure information

	Content	Remark
D63	Parallel cable damaged:Connection	1:Active
D62	Parallel cable damaged:Control CAN	1:Active
D61	Parallel cable damaged:Inverter status(reserve)	1:Active
D60	Parallel cable damaged:Three phase zero-crossing	1:Active
D59	Parallel cable damaged:PWM carrier	1:Active
D58	ECU unavailable:Short needle	1:Active
D57	ECU unavailable:contact	1:Active
D56	ECU supply inoperable:15V	1:Active
D55	ECU supply inoperable:5V	1:Active
D53	ECU communication not initializing:EPPROM	1:Active
D52	ECU communication not initializing:CPLD SPI	1:Active
D50	ECU cannot initialize:RAM	1:Active
D49	ECU cannot initialize:Hardware mismatching	1:Active
D48	ECU cannot initialize:MCP2515	1:Active
D47	Bypass SCR broken:C	1:Active
D46	Bypass SCR broken:B	1:Active
D45	Bypass SCR broken:A	1:Active
D44	C phase bypass SCR short circuit	1:Active
D43	B phase bypass SCR short circuit	1:Active
D42	A phase bypass SCR short circuit	1:Active
D41	Bypass overtemperature 3	1:Active
D40	Bypass overtemperature 2	1:Active
D39	Bypass overtemperature 1	1:Active
D38	CT on output reversed	1:Active
D37	Dry supply inoperable(reserve)	1:Active
D36	Dry comm not initialize(reserve)	1:Active
D35	Backfeed on bypass	1:Active

Table 4.1.1 Monitor Alarm

D15~D0bit	Content	Remark
D15	BattFault	1:Active
D13	Firmware version is incompatible.	1:Active
D9	Check air filter pop	1:Active
D8	Warranty pop	1:Active
D7	Service recommended pop	1:Active
D6	EEPROM inoperable	1:Active
D5	RS485 sensor not connected	1:Active
D4	Custom alert 03.	1:Active
D3	Custom alert 04.	1:Active
D2	Monitor CAN abnormal	1:Active
D1	Batt temp. >45°C or <-20°C	1:Active
D0	Room temp. >40°C or <-20°C	1:Active