

Data in these instructions is for use on the controller and provides brief operation guidelines, for greater details please refer to the standard operation Manual

I、 Controller size:

Module Dimensions	Panel Cutout
W156mm×H120mm×D39.5mm	W123mm×H96mm

II、 Parameter setting method:

1、 Primary key:



Mode Button / LED / Change manual or automatic mode



"-" Value Decrease / Parameter setting down



"+" Value Increase/ Parameter setting up



Generator Start Button /LED















Shutdown /Reset Button /LED



Scroll Button /Parameter settings enter and exit Button

2、 Setting method:

FOR EXAMPLE: (SETTING CONTROLLER CRANK ATTEMPT AT 2)

Operation	Description
Press and hold  2sec, enter into parameters settings menu, then LCD displays:	[SETTING] 0. QUIT 1. SYSTEM 2. GENERATOR 3. ENGINE
Press  2 times and then press  , then LCD displays:	[ENGINE] 0. QUIT 1. ENGINE TYPE 2. ECU TYPE 3. ENGINE RUN SPEED
Press  9 times and then press  LCD displays:	[Crank attempt] 3
Press  or  prompted enter password: 1111, press  to enter.	[Crank attempt] Password:0000
Press  or  to change parameters, change at 2	[Crank attempt] 2
Press  to confirm, press and hold  2sec will quit parameter settings menu, LCD displays:	Ready

III、 Parameters Setting:**1、 SYSTEM**

NO.	Items	Preset	NO.	Items	Preset
1.1	Language		1.11	Rated active power	500KW
1.2	Password		1.12	Voltage type	1
1.3	Pressure unit	0	1.13	Display contrast	5
1.4	Temperature unit	0	1.14	Auto scroll time	0
1.5	Comm. address	1	1.15	Starting alarm	0
1.6	Startup mode	0	1.16	CB close pulse	Continuous
1.7	CT ratio	1000:5	1.17	Reset to MAN	0
1.8	PT ratio	1.0:1	1.18	Default settings	
1.9	Rated voltage	220V	1.19	Firmware Update	
1.10	Rated current	1000A			

2、 GENERATOR

NO.	Items	Preset	NO.	Items	Preset
2.1	GEN-V under 1	90%	2.8	GEN-KW over 2	110%
2.2	GEN-V under 2	85%	2.9	GCB close	5S
2.3	GEN-V over 1	115%	2.10	GCB open	5S
2.4	GEN-V over 2	120%	2.11	GEN. loading Volt	90%
2.5	GEN-I over 1	110%	2.12	GEN. on delay	5S
2.6	GEN-I over 2	115%	2.13	Load mode	BTS
2.7	GEN-KW over 1	110%	2.14	Soft unload time	1S

3、 ENGINE

NO.	Items	Preset	NO.	Items	Preset
3.1	Engine type	1	3.25	Pre-heat time	3S
3.2	ECU type	4	3.26	Safety-on delay	10S
3.3	Engine rated speed	1500	3.27	Cool down mode	1
3.4	MPU input	0	3.28	Cool down time	300S
3.5	Fly wheel teeth	120	3.29	Stop time	20S
3.6	Set pickup now		3.30	EX. Crank permit	0
3.7	Pair of poles	2	3.31	Charge failure	8.0V
3.8	Fuel mode	0	3.32	Pickup signal	1
3.9	Start delay	10S	3.33	Overspeed level1	1600 RPM
3.10	Crank attempts	3 times	3.34	Overspeed level2	1710 RPM
3.11	Critical C-attempt	6 times	3.35	Underspeed level1	1440RPM
3.12	Crank time	5S	3.36	Underspeed level2	1350 RPM
3.13	Crank time add	Not used	3.37	Start failure	6
3.14	Crank pause time	15S	3.38	Stop failure	3
3.15	Ignition speed	200RPM	3.39	Batt. Overvolt	35.0 V
3.16	Ignition start DLY	5S	3.40	Batt. Undervolt	8.0 V
3.17	Gas valve on DLY	5S	3.41	Maintenance	1000
3.18	Crank cutout RPM	300RPM	3.42	ECU Data fail	2
3.19	Crank cutout volt	85%	3.43	ECU Warning	2
3.20	Crank cutout ALT-V	Not used	3.44	ECU Shutdown	6
3.21	Crank cutout Oil-P	2.2 Bar	3.45	Water in fuel	2
3.22	Crank cutout P-DLY	Not used	3.46	BTS Batt. V low	48
3.23	Idle time	Not used	3.47	BTS Batt. V high	52
3.24	Pre-heat mode	1			

4、 Analog INPUT

NO.	Items	Preset	NO.	Items	Preset
4.1	P-sensor type	4	4.14	Low fuel level 2	10%
4.2	Oil-P low level1	1.4Bar	4.15	High fuel level1	90%
4.3	Oil-P low level2	1.1Bar	4.16	Hiigh fuel level 2	100%
4.4	T-sensor type	3	4.17	Fuel pump ON	20%
4.5	High temp. level1	92℃	4.18	Fuel pump OFF	70%
4.6	High temp. level2	100℃	4.19	AUX low T level1	60℃
4.7	Heater on level	50℃	4.20	AUX low T level2	50℃
4.8	Heater off level	60℃	4.21	AUX high T level1	90℃
4.9	Cooler on level	80℃	4.22	AUX high T level2	100℃
4.10	Cooler off level	70℃	4.23	Heater1 on level	50℃
4.11	AUX sensor use	1	4.24	Heater1 off level	60℃
4.12	AUX sensor type	3	4.25	Cooler1 on level	80℃
4.13	Low fuel level1	20%	4.26	Cooler1 off level	70℃

5、 Discrete IN/OUT

NO.	Items	Preset	NO.	Items	Preset
5.1	D-Input 1 Config	6	5.6	Relay 2 Config	1
5.2	D-Input 2 Config	2	5.7	Relay 3 Config	0
5.3	D-Input 3 Config	3	5.8	Relay 4 Config	0
5.4	D-Input 4 Config	4	5.9	Relay 5 Config	0
5.5	Relay 1 Config	2	5.10	Relay 6 Config	0

7、 ATS CONTROL

NO.	Items	Preset	NO.	Items	Preset
7.1	M V-monitor type	1	7.6	M Hz low alarm	45.0Hz
7.2	M V low alarm	90%	7.7	M Hz low Return	48.5Hz
7.3	M V low Return	95%	7.8	M Hz High ALM	57.0Hz
7.4	M V High alarm	115%	7.9	M Hz High Return	52.0Hz
7.5	M V High Return	110%	7.10	M alarm delay	5S

8、 MAINTENANCE

NO.	Items	Preset	NO.	Items	Preset
8.1	DATE/ TIME		8.7	TUE active	0
8.2	Scheduler period	1	8.8	WED active	0
8.3	Scheduler mode	01	8.9	THU active	0
8.4	Start time	HH:MM	8.10	FRI active	0
8.5	Run duration	60 min	8.11	SAT active	0
8.6	MON active	0	8.12	SUN active	0

Menu descriptions:**I Voltage input type**

Code	Define Voltage type	Code	Define Voltage type	Code	Define Voltage type
1	"Y" 3P4W	2	△" 3P4W	3	3P3W
4	2P3W	5	1P2W		

I Sensor type definition

Code	Temperature sensor Type	Oil sensor type
1	Close for HET switch (low level is active)	Close for LOP (low level is active)
2	Open for HET switch (high level is active)	Open for LOP (high level is active)
3	VDO120°C	VDO 5 bar
4	VDO150°C	VDO 10 bar
5	Datcon	Datcon 7 bar
6	Murphy	Murphy 7 bar
7	Pt100	Note: 7-13 is defined and a custom project, details please refer to the instruction for use.
8	Note: 8-14 is defined and a custom project, details please refer to the instruction for use.	

I D-input definition

Code	Config output	Code	Config output type	Code	Config output type	Code	Config output type
0	Not used	8	Generator closed auxiliary	16	Alarm mute	24	Stop button
1	User configured	9	Low fuel switch	17	Alarm reset	25	Start button
2	Oil pressure switch	10	Lamp test	18	Prohibit return	26	Low water level
3	Temp. high switch	11	Reserve	19	Reserve	27	Gas leakage1
4	Emergency stop	12	Reserve	20	Panel lock	28	Gas leakage2
5	Remote start off load	13	Air-flap Closed	21	Activate AUTO mode	29	Fire alarm
6	Remote start with load	14	Pre-heat temp. switch	22	Activate MAN mode	30	Reserve
7	Mains closed auxiliary	15	Critical mode	23	Activate TEST mode		

I Configure relay definition

Code	Config output	Code	Config output type	Code	Config output type	Code	Config output type
0	Not used	31	Underspeed level1	62	Loss of pickup	93	Reserve
1	Crank	32	Underspeed level 2	63	Scheduled run	94	Reserve
2	Fuel	33	Overspeed level1	64	Blinds control	95	Reserve
3	Gas valve	34	Overspeed level2	65	Cooler control	96	Reserve
4	Ignition	35	Oil-P low level1	66	Cooler1 control	97	ECU water in fuel
5	Shutdown alarm	36	Oil-P low level2	67	Reserve	98	D-Input 1 alarm
6	Warning	37	High temp. level1	68	Heater control	99	D-Input 2 alarm
7	Idle	38	High temp. level 2	69	Heater1 control	100	D-Input 3 alarm
8	Preheat output	39	Fuel low level1	70	Reserve	101	D-Input 4 alarm
9	Reserve	40	Fuel low level2	71	GCB open	102	Reserve
10	Reserve	41	GEN-V under1	72	MCB open	103	Reserve
11	Fuel pump control	42	GEN-V under2	73	Mains V low alarm	104	Reserve
12	Genset running	43	GEN-V over1	74	Mains V high alarm	105	Reserve
13	Auto mode	44	GEN-V over2	75	Mains Hz low alarm	106	Reserve
14	Test mode	45	GEN-Hz under1	76	Mains Hz high alarm	107	Reserve
15	Man mode	46	GEN-Hz under2	77	Mains alarm	108	Reserve
16	Maintenance due	47	GEN-Hz over1	78	Reserve	109	Reserve
17	MCB fail to close	48	GEN-Hz over2	79	Mains overcurrent	110	Reserve
18	GCB fail to close	49	GEN-I over1	80	Soft unload	111	Reserve
19	Fail to start	50	GEN-I over2	81	Off load	112	Reserve
20	Fail to stop	51	GEN-KW over1	82	Reserve	113	Reserve
21	Mains	52	GEN-KW over2	83	Reserve	114	Mains power supply
22	GEN.	53	D-input 1	84	Emergency stop	115	Reserve
23	Audible alarm	54	D-input 2	85	Reserve	116	Reserve
24	Cooling down	55	D-input 3	86	Reserve	117	Reserve
25	CAN data fail	56	D-input 4	87	Reserve	118	Reserve
26	ECU warming	57	Reserve	88	Reserve	119	Fuel high level1
27	ECU alarm	58	Reserve	89	AUX low level1	120	Fuel high level2
28	Charge failure	59	Reserve	90	AUX low level2		
29	Batt. over volt	60	Reserve	91	AUX high level1		
30	Batt. under volt	61	Oil-P sensor open	92	AUX high level2		

IV、 Typical Wiring Diagram:

