



單相電力調整器

BRL、BRD、BRA TYPE



Features (some of features are depends on the model)

- Output mode: Phase trigger control & Zero cross trigger control
- 6 input signal of option 0~5V, 1~5V, 0~10V, 2~10V, 0~20mA, 4~20mA
- Built-in FUSE protect for saving the space and repair a new easier
- Built-in overheat protect and temperature indicator of heat sink
- Built-in RS-485 communication function
- Can be displayed input commands, output current, output percentage, the temperature of heat sick and error message
- Can set the cushion start time, overload and under load level
- Have the function of test running
- Built-in the function of error output contact and plan
- If the user connect CT, which will have the functions of Thyristor puncture, Fuse melting, Heater low current and Heater overload protection.

Model Explanation

BRL 4 030					
Model	BRL	Simple Type			
	BRD	Display Type (including display)			
	BRA	Full Function (including display, comm., detect error)			
Main Power	4	AC110V~440V (※ BRL: AC200V~440V)			
Rated Current	030	30A	FUSE	FWC-32A10F	
	060	60A		80FE	

Modes option

Control Mode	Input Signal	S4	S3	S2	S1	Marked
Phase Control	0~5V	☐	☐	☒	☒	■ : ON □ : OFF → Default
	1~5V	☐	☐	☐	☒	
	0~10V	☐	☒	☒	☒	
	2~10V	☐	☒	☐	☒	
	0~20mA	☒	☐	☒	☒	
	4~20mA	☒	☐	☐	☒	
Zero Crossing Control	0~5V	☐	☐	☒	☐	▬ 4 ▬ 3 ▬ 2 ▬ 1 → ON
	1~5V	☐	☐	☐	☐	
	0~10V	☐	☒	☒	☐	
	2~10V	☐	☒	☐	☐	
	0~20mA	☒	☐	☒	☐	
	4~20mA	☒	☐	☐	☐	

Specification

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Aux. Power	90V~240VAC±15%, 50/60Hz, Power sumpition: 5W
Main Power	Single phase (110V/220V/380V/440V)±15%, 50/60Hz
Rated Current	30A, 60A
Control Mode	Phase Control/Zero crossing control (switchable)
Input Signal	0~5V, 1~5V, 0~10V, 2~10V, 0~20mA, 4~20mA
Output Control Range	0~100.0%
Resolution/Linear	0.1% / 1%
Cooling Way	Nature cooling (if the inside temp. is overheat, please built-in the fan)
Ambient Temperature Humidity	-10~+50°C / under 90% RH
Hi-Pot Test	AC2000V/1 min. (between the power/signal terminal and heat sink)
Noise Susceptibility	2KV 5KHz
Isolution Resistor	Over 20MΩ/50V (between the power/signal terminal and heat sink)
Housing Material	ABS (UL94V)

Output mode & Application

Output wave	10% 50% 90%
Advantage: • Available to apply to constant resistance, variable resistor and lighting regulation • When continuity output, none interrupted phenomenon Disadvantage: • When trigger, will have noise of harmonics	
Output wave	10% 50% 90%
Advantage: • None interrupted phenomenon • If none half wave, can reach to the highest power factor Disadvantage: • Only available to constant resistor heater • Current meter will vibration during output • Easily heating aging	

Precautions:

- Reboot after changing setting
- If input mode is VR adjustment, please set input signal to 0~5V
- Changing the setting mode or replace the fuse, please turn off the power to prevent the damage of electric shock

Operation & Display Function (BRD & BRA)

面板說明 Panel explanation

Display Modes Selection
Press [MODE] to start

d.00	
PEr	Output percentage 0~99%
Cmd	Input command 0~20.0mA, 0~10.0V
Hot	Heat sink temp. 0~100°C
CUr	Output current 0.0~99.9A

Test Mode
Press [SEL] for 2 secs. to start

T.00	
Manual output test 0~100%	

Parameter Setting:
start parameter setting, select the changing item, press [SEL] to load the value. Using [UP][DOWN] key to increase/decrease the value, then re-press [SEL] for 1 sec. to complete the changing

Level 2 Parameter press [MODE] for 2 secs. to start, re-press [MODE] to jump to the next parameter. Press [MODE] for 2 secs. to exit to end of setting

P.00	Input command option (0~5V, 1~5V, 0~10V, 2~10V, 0~20mA, 4~20mA)	4~20
P.01	Soft start time 1~60S	10
P.02	Respond speed time 1~10S	2
P.03	Max. value setting 0~100%	100
P.04	Min. value setting 0~50%	0
P.05	Error option; ATO: ALM work, MNU: Stop	ATO
P.06	Relay output; ALM: Error, FAN: Over heating	Alm
P.07	Overload setting 0~99A (0=OFF)	OA
P.08	Under load setting 0~99A (0=OFF)	OA
P.09	Comm. delay 3~99 sec.	5 sec.
P.10	Comm. address 1~99	1
P.11	Comm. rate 2.4, 4.8, 9.6, 19.2KBPS	9.6
P.12	Comm. format 8n1, 8n2, 8o1, 8e1	8n1
P.13	Current abnormal detect function (ON-OFF)	ON
P.14	Rated current ratio (0=close) Range: 0~rated value (start rated current function, system is phase control)	OA

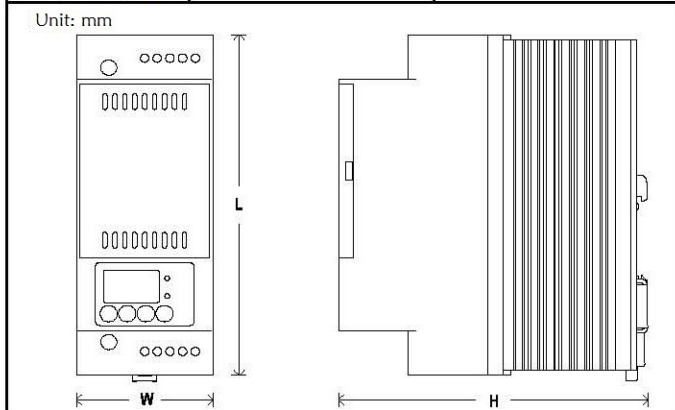
Error Code

E.01	Overload current (rated current 1.3X). Start judging at output 50% above
E.02	Power/Fuse break
E.03	Overload exceed P05 set value Start judging at output 50% above
E.04	Heat Sink > 80°C
E.05	Load disconnection. Start judging at output 50% above
E.06	SCR thyristor pounceure, judging at none output
E.07	Under load, lower P08 set value Start judging at output 50% above
E.08	Temperature sensor malfunction output 10% above, after 10 min. temperature value is still at 0°C

FULL function model

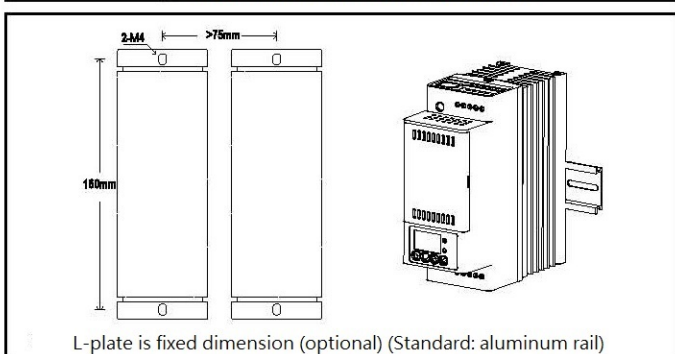
Appearance Dimension & Installation

Current	30A	60A
Length(L)	145	145
Width(W)	55	55
Height(H)	105	125
Weight(Kg)	0.8	1.0

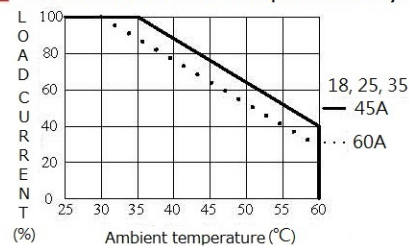


Installation

Fixed Method	Can select aluminum rail or double-screw to fixed
Precautions	- Vertical installing, to achieve the best radiating effect - Notice the interval distance to ensure the best radiating effect (>20mm) - Sufficient ventilation distance at top and lower (>150mm) - Must opening a vent hole in the controller box, and mount a fan to have better air convection - Should be lower than rated current 70% if the temperature of the controller box is higher



Load & Ambient temperature graph



Wiring Diagram

