EcoPowerFit-CCS
instruction manual

Platetia Co., Ltd.

Safety precautions

①Please do not use this product for any purpose other than its intended purpose.

This product is designed to control the compressors of air conditioners, refrigerators, etc., and achieve demand peak cuts and power savings. Please do not use it for any other purpose.

②Do not disassemble or modify this product.

Never disassemble or modify this product before using it, as this may cause electric shock, fire, or malfunction.

③Be careful of electric shock.

When installing or removing this product, be sure to turn off the power. When setting up, etc., when the power is on, open the lid of the main unit, and connect or disconnect the connector, be careful not to touch the terminals or metal parts of the parts. There is a risk of electric shock.

④Do not apply shock to this product.

This product uses many precision parts. Therefore, applying a shock may cause damage to this product and the air conditioner.

Product Summary

90% of the power consumption of an air conditioner is accounted for by the compressor inside the unit. EcoPowerFit-CCS constantly monitors the operating status of air conditioner/freezer compressors using current sensors, and controls the compressor once or twice every 30 minutes at a safe timing to reliably save energy while maintaining comfort. This is an energy-saving control device that reduces power consumption and demand values. In addition, measurement data can be saved and output so that the reduction results can be verified.

Main functions

Forced cut-off by reduction of demand value and command from demand master unit Protection function for compressor that reduces power consumption. Normal operation priority function Setting control rate by time zone (4 categories) and season (4 categories) according to usage using calendar function Power measurement function saves data such as power consumption, reduced power, and operating time in 360 Japanese data

Product Specifications

project	specification
Model name	EcoPowerFit-CCS (B) * (B) is equipped with a lithium battery
Controlled object	Air conditioners, freezers, and refrigerators that use compressors
Body material	Made of ABS resin
External dimensions	W120×H220×D75 (excluding protrusions)
Waterproofing standard	IP33D
Weight	550 g
Color	silver
Power supply	AC200V 50/60Hz
Clock	Frequency synchronization method
Backup battery	Lithium battery (approx. 10 years) *1
Input for current	CT current sensor (compressor operation check and simple power measurement)
measurement	Data transmission with EC-DC (base unit) via RS485 communication
Communication method	No-voltage ABC contact output AC250V/8A Output time variable according to settings (1 second or more)
Output for control	CPU operating status display Normally once every 2 seconds During control 2 times per second
Red LED	Compressor status display Lights up when operating Lights off when stopped
Green LED	10% to 50%, 0% and 100% can be set using the calendar function
Control rate	1 time, 2 times (Number of control in 30 minutes)
Number of controls	To protect the compressor, when restarting the compressor after it has been stopped, set a time period during which no control will occur after the compressor restarts. (3-5 minutes)
Compressor protection function	If the machine has been stopped for a long time, set the time period during which it will not be controlled until the room temperature stabilizes. However, if a demand signal is received, priority will be given to that signal.
Normal operation priority function	You can set the time in 4 divisions per day, and set the control rate and number of times for each.
Calendar function Control time control	When controlling multiple units, do not control them all at once, but at staggered timings according to the built-in clock.
Alternate operation function	Control and non-control can be performed alternately every 30 minutes.
Power measurement function	The main unit has a memory function that records power consumption, power reduction, operating time, etc. for 360 days, and can output the following data using optional dedicated software and a computer connected with a signal converter cable. ① Power consumption list ② Operating time list ③ Control power list ④ Control power graph
Setting method	Connect the dedicated communication cable to the 4P connector on the main unit and use the PC software.

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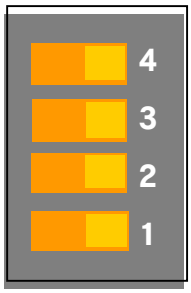
1.Function description

DIP switch



4 Control ON OFF switch
left uncontrolled
Right Normal tense

3 Control test switch
left control
Right Normal tense

2 Special data setting switch
Left setting
right normal tense

1 I do not use it

When performing maintenance on the air conditioner, in the event of an abnormality, or canceling demand control or intermittent control, turn switch No. 4 to the left.

When using without communication line connected, always leave switch 2 to the left. However, when outputting data directly to a computer, set switch 2 to the right.

4P connector for setting machine connection

Used when changing data and outputting internal data.

● Red LED

Displays the CPU operating status.
Normal (slow flashing)
Flashing once every 2 seconds
Gotoki (quick flashing)
Flashes twice per second

● Green LED

Check the operating status of the air conditioner compressor.
Display.
When stopped Lights up
When running when
Off On driving

● Red LED

For RS485 communication confirmation

Off during communication operation
Blinks when communication is established

RS485 communication cable connection terminal This is the line for communicating with the demand controller base unit.

Data backup battery

Data is retained during a power outage. (Battery life is 10 years.)

Main unit power connector

This connector is used to supply power to the main unit from the air conditioner.

200V

This line carries 200V and is dangerous. Also, if you disconnect it, EcoPowerFit-CCS will become completely inoperable.

Control relay output connector

This line turns the air conditioner compressor ON and OFF.

Green A contact
White COM
Black B contact

this wire, the air
- 1 -
conditioner may

Connector for current value measurement input

CT

Monitors the operating status of the air conditioner through operating current.

If you disconnect this line, EcoPowerFit-CCS will not be able to detect the operation of the air conditioner and will no longer perform intermittent control.

2.Setting input items

Either connect a dedicated setting device to this unit and configure the settings, or connect a PC to the EcoPowerFit-CCS main unit (demand controller main unit) and input using the dedicated software.

This is usually set by the installer during the installation process according to the customer's request.

- If multiple units are installed, set the channel number for each unit. This allows you to individually set whether or not to control based on commands from the demand base unit. It is possible.

- Set the control start time for each channel number from the start of the 30 minute time limit.You can. (Can be set up to twice every 30 minutes.)

- When the compressor starts operating from a stopped state, you can set a time period during which no control will occur from the start of operation to protect the compressor. The contact used is A

- You can set the time to control the compressor. (Once or twice every 30 minutes)
  If the compressor has been stopped for longer than set time A, it will be controlled for set time B.You can eliminate it. (This means that if it has been stopped for a longtime,it will immediately return to control.)

- This is a function to operate normally for a while without letting the unit run, maintain the room temperature, and then enter control. However, when using a demandcommand, priority is given to the demand command.

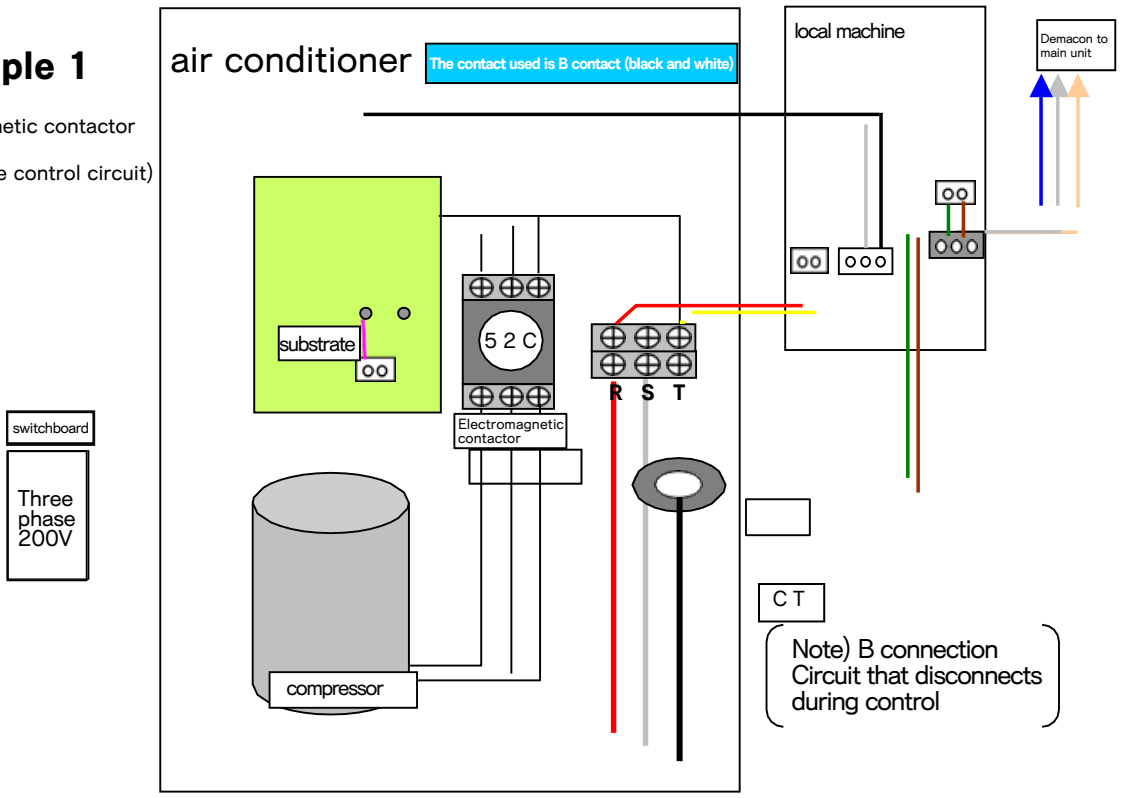
- You can select a mode that alternates control and non-control every 30 minutes. Normally it is set to OFF.

- You can select whether or not to accept demand signals.
- You can enter the date, time, day of the week, and current time.

3. Electrical wiring diagram

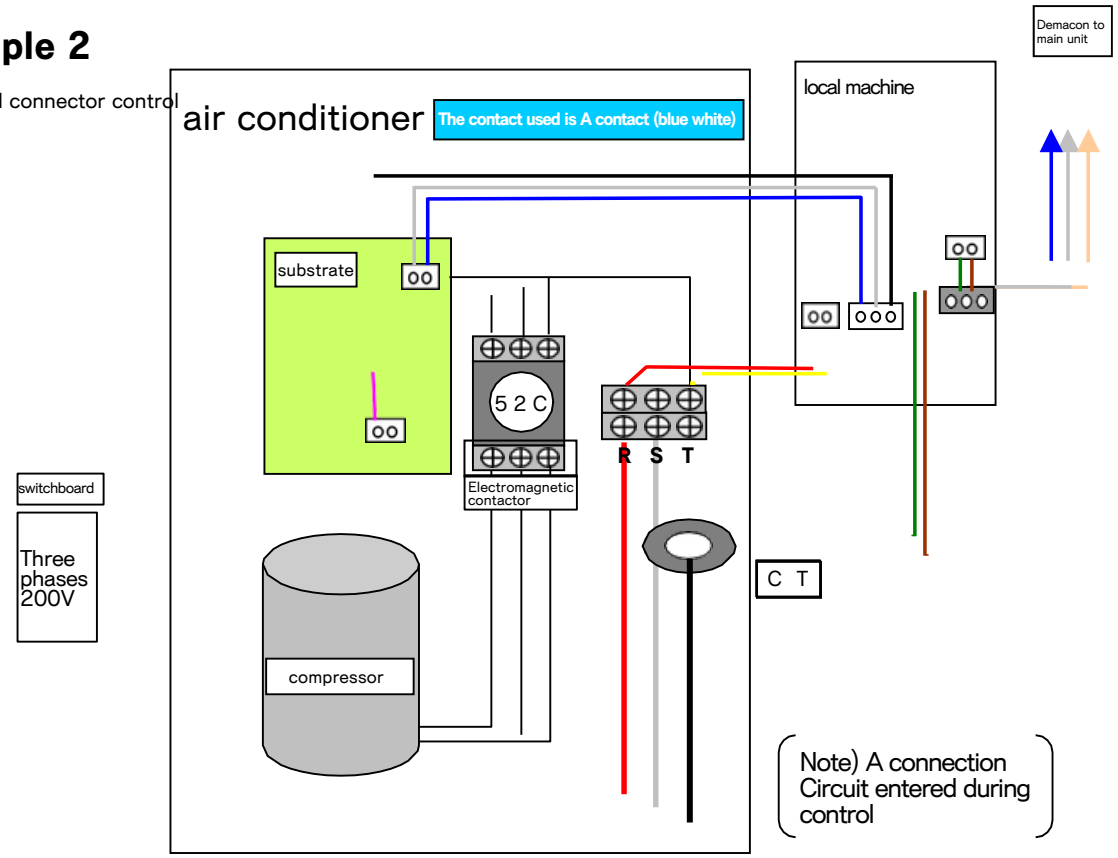
Example 1

Electromagnetic contactor
(52C)
(temperature control circuit)
For control



Example 2

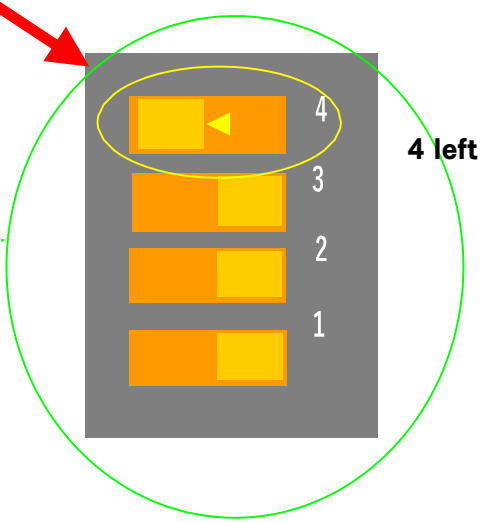
Fordemand connector control

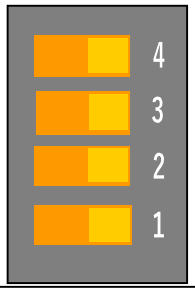


4. An abnormality has occurred in the air conditioner in which this unit is installed.

When temporarily canceling control

Slide the top dip switch (4) to the left.





Confirmation procedure when an abnormality occurs in the air conditioner in which this unit is installed

Slide dip switch 4 to the left

→ **Symptoms improved**

↓

This machine is malfunctioning.
Please contact your retailer.

Symptoms did not improve →

The air conditioner may be malfunctioning.

air conditioner
Please contact the installation company or maintenance company.