azbil Specification

BC-R25 Series
Burner Controllers

Summary

BC-R25 Series burner controllers are combustion safety controllers specifically designed for batch operation (systems which start and stop at least once within 24 hours). They ensure safety by automatically controlling the ignition, combustion monitoring, and fuel shutoff of oil and gas burners with on-off control. They are also equipped with a 7-segment display that can be used in maintenance, a trial operation mode that is convenient for trial operation and adjustment, and other features.
Additionally, the BC-R25 is equipped with host communications (RS-485) and Smart Loader Package functions, allowing troubleshooting and more detailed observation of status.

Features

Compliant with JIS standards

- Safe construction of combustion systems and equipment
  - Uses pre-purge and ignition timing in compliance with JIS B 8407:2012 (forced-air burners) and JIS B 8415:2008 (combustion equipment in compliance with the safety principles for industrial incinerators).
  - Uses POC (proof of closure) based on shutoff valve closure confirmation switch input
- JIS-compliant burner controller safety design
  - Safety design in compliance with JIS C 9730 (automatic electrical controls for household and similar use)
  - EN 298 compliance (certification pending)

Easy mounting and replacement

- DIN rail mounting
  - Easily mountable in the same way as other control devices and control relays
- Uses a sub-base structure
  - Structure separates the sub-base from the main unit It is possible to change only the main unit, leaving the wired-in sub-base in place

Extensive communications with external devices

- Equipped with a 7-segment display
  - 7-segment display for sequence codes and warning codes
  - Press the DISP switch to display the flame voltage.
- External status output
  - States such as ignition failure, flame failure, and combustion detected are output digitally (and used as panel displays)
- Warning reset by contact input
- Equipped with a trial operation mode
  - Combustion signal, ignition failure, and other states output can be forced to a monitor
  - Wiring checks can be made
- Equipped with host communications (RS-485), allowing remote observation of status
- Status checking by Smart Loader Package

Precautions on equipment instrumentation

(1) The equipment used in the combustion safety system was designed with careful consideration of laws, standards, safety guidelines, and the like. If the system is designed to a foreign specification, refer to laws and standards in the relevant country.
Main Safety Policies in Japan
- Technical Policy on Safety Standards for Combustion Equipment in Industrial Furnaces: Ministry of Health, Labour and Welfare
- Combustion equipment in compliance with the safety principles for industrial incinerators - JIS B 8415
- Forced Draught Burners - Part 1: Gas Burners - JIS B 8407-1
- Forced Draught Burners - Part 2: Oil Burners - JIS B 8407-2
- The index of safety technology of industrial gas combustion equipment: Japan Gas Association
- Index of safety technology of gas boiler combustion facilities: Japan Gas Association

(2) This device monitors for failures in the relay contacts used for combustion load (IG, PV, MV) output. An E09 error is output if a voltage occurs at a load terminal, due to a ground fault or wiring error, when this device is not outputting a load. If an E09 error occurs when this device is installed, recheck the wiring and eliminate the factors causing the error.

(3) If the wiring from this device exceeds the recommended length, prevent malfunction due to the effects of external noise by running wires from the control panel to the casing through a conduit, keeping a distance between power lines and input lines, and other measures. Check the operation of the system on installation.

(4) A reset signal must always be input near the equipment (burner, etc.), not remotely.
If a reset is input while it is not possible to confirm safety, there is the risk of explosion.

Specifications

Item		Description				
Application		Batch-operated combustion systems burning gas, oil, or gas/oil mixture				
Compatible flame detector		AUD100/110/120 series UV sensor, flame rod				
Sequence	**Sequence timing**	Pre-purge	Pilot ignition (Main ignition) *1	Pilot only (Hi solenoid valve ignition standby) *1	Main ignition (Hi solenoid valve ignition) *1	Postpurge
		35 s, 45 s, 3 min (select by model number)	4.5±0.5 s	8.5±1 s	4.5±0.5 s	20±2 s
	Flame response	AUD100/110/120 series UV sensor		Flame rod		
		2 s max (nominal 1.5 s) (when flame voltage is 3 V)		2 s max (nominal 1.5 s) (when flame voltage is 2 V)		
	Reset timing	1 s or longer (main unit reset switch or contact reset input) *2				
	Warning detection timing	False flame	Airflow switch error 1	Airflow switch error 2	Interlock error	POC (shutoff valve closure check) error
		5 s	1 s	180 s	1 s max.	3 s
	Airflow switch monitoring	Yes (checks for switch error #1, error #2)				
	Ignition failure	Lockout				
	Flameout	Lockout				
Electrical specifications	**Rated power supply**	100 Vac, 200 Vac, or 220 Vac (depending on the model), 50 Hz or 60 Hz				
	Allowable power supply voltage	85 to 110 % of rated power supply				
	Power consumption	10 W or less				
	Voltage resistance	1500 Vac for 1 min, or 1800 Vac for 1 s Between each terminal and ground (the DIN rail clamp), except for combustion sensor connection terminals (terminals 14, 15)				
	Insulation resistance	At least 50 MΩ, 500 Vdc megger Between each terminal and ground (the DIN rail clamp), except for combustion sensor connection terminals (terminals 14, 15)				
	Contact rating	Blower motor (electromagnetic breaker)	Ignition transformer	Pilot valve (main valve Lo solenoid valve) *1	Main valve (main valve Hi solenoid valve) *1	Warning
		100 VA	300 VA	200 VA	200 VA	75 VA
	Monitor outputs	4, maximum 30 mA each				
	Combustion detection level	AUD100/110/120 series UV sensor		Flame rod		
		When ignition is detected: 1.5 to 4.5 Vdc When detected as extinguished: 0.2 to 0.6 Vdc		When ignition is detected: 1.5 to 4.5 Vdc When detected as extinguished: 0.0 to 0.2 Vdc		
	Flame voltage output	Recommended flame voltage: Must be stable at 2 Vdc or above Flame voltage output range: 0.2 to 4.5 Vdc		Recommended flame voltage: Must be stable at 2 Vdc or above Flame voltage output range: 0.0 to 4.5 Vdc		
	Input	Startup, lockout interlock, contact reset, airflow switch, POC (shutoff valve proof of closure) * Each input is a non-voltage contact input, with allowable contact resistance up to 500 Ω				
	Lifespan	10 years when used for eight hours per day, or 100,000 start/stop cycles (at 25 °C, constant temperature, rated voltage)				
Transportation and storage conditions	**Ambient temperature**	-20 to +70 °C				
	Ambient humidity	5 to 95 % RH (no condensation)				
	Vibration	0 to 9.8 m/s^2 (10 to 150 Hz, 1 octave/minute, 10 cycles, in each of XYZ directions)				
	Shock	0 to 300 m/s^2				
	Packaged drop test	60 cm drop height (free drop onto 1 corner, 3 edges, 6 sides)				
Operating conditions	**Ambient temperature**	-20 to +60 °C				
	Ambient humidity	10 to 90 % RH (no condensation)				
	Vibration	0 to 3.2 m/s^2 (10 to 150 Hz, 1 octave/minute, 10 cycles, in each of XYZ directions)				
	Shock	0 to 9.8 m/s^2				
	Mounting angle	Reference plane +/-10°				
	Dust	0.3 mg/m^3 or less				

Host communication specifications	**Communications standard**	RS-485
	Transmission route	3-wire system
	Transmission speed	4800, 9600, 19200 bps
	Transmission distance	Max. 500 m
	Communication method	Semi-duplex
	Synchronization method	Asynchronous
	Data format	8 data bits, 1 stop bit, even parity, odd parity 8 data bits, 2 stop bits, even parity, odd parity
	Device address	1 to 32
	Connection method	1: N (max. 15 units)
	Miscellaneous	Based on RS-485
General specifications	**Protective structure**	IP40 (with a sideboard (81447515-001) attached to the sub-base (BC-R05)) IP10 (sub-base (BC-R05) only)
	Excess voltage category	II
	Pollution degree	PD2
	Case color	Black
	Case material	Denatured PPE resin (UL94-V0 PTI materials group IIIa)
	Structure	Sub-base and a main unit
	Mounted orientation	Vertical or horizontal However, in horizontal mounting the 7-segment display must face directly upward (DIN rail mounting or direct mounting through base screw holes)
	Standards	JIS C 9730-2-5: 2010 (Automatic Electrical Controls For Household And Similar Use - Part 2-5: Particular Requirements For Automatic Electrical Burner Control Systems) Compliant with JIS C 9730-1: 2010 (Automatic Electrical Controls For Household And Similar Use - Part 1: General Requirements)
	Dimensions	W95 × H105 × D110 mm
	Weight	Approximately 600 g (incl. sub-base)
Wiring types and max. wiring length		- Start, airflow switch, lockout interlock, POC (shutoff valve proof of closure) Copper IV wire with 600 V vinyl insulation, 1.25 mm^2, recommended condition: 20 m or less, maximum wiring length: 100 m - Contact reset Copper IV wire with 600 V vinyl insulation, 1.25 mm^2, maximum wiring length: 10 m - AUD100 Series (F, G) Copper IV wire with 600 V vinyl insulation, 1.25 mm^2, maximum wiring length: 100 m - Flame rod (F, G) RG-11U (JAN standard: US DoD compliant specification) or equivalent, 5C2V, 7C2V (JIS standard) Recommended condition: 20 m or less, maximum wiring length: 30 m - RS-485 communications (3-wire system) 0.2 to 1.5 mm^2 shielded, twisted pair cable (recommended), maximum wiring length: 500 m - Signal line for flame voltage output IV wire, 0.75 mm^2 or larger, max. wiring length 10 m

*1 Item in ( ) is for the case of direct ignition.
*2 In the case of postpurge when there is a warning, no reset input is accepted until postpurge is complete.
Also, reset input is not accepted if no warning has occurred.

Model number composition

(Note: The dedicated sub-base and sideboard are not provided with the BC-R25 series controller. Order them separately.)

● BC-R25 series Interrupted pilot type

I II III IV V VI VII **Example: BC-R25B1G0500**

I	II	III	IV	V	VI	VII	Description
Base model number	Communications functions	Combustion sensor	Power supply	Function code	Timing code	Additional functions	
BC-R							Burner Controller
	25						RS-485, with Smart Loader Package function
		B					Flame rod (Ionization)
		C					UV sensor (AUD100/110/120)
			1				100 Vac
			2				200 Vac
			6				220 Vac
				G			Interrupted pilot type
					050		Pre-purge time 35 s
					086		Pre-purge time 45 s
					122		Pre-purge time 60 s
					158		Pre-purge time 3 min
						0	None
						D	With inspection record (with data)

● BC-R25 series Direct ignition type

I II III IV V VI VII **Example: BC-R25B1J0500**

I	II	III	IV	V	VI	VII	Description
Base model number	Communications functions	Combustion sensor	Power supply	Function code	Timing code	Additional functions	
BC-R							Burner Controller
	25						RS-485, with Smart Loader Package function
		B					Flame rod (Ionization)
		C					UV sensor (AUD100/110/120)
			1				100 Vac
			2				200 Vac
			6				220 Vac
				J			Direct ignition type
					050		Pre-purge time 35 s
					086		Pre-purge time 45 s
					122		Pre-purge time 60 s
					158		Pre-purge time 3 min
						0	None
						D	With inspection record (with data)

● BC-R25 Recycling model Interrupted pilot type

I II III IV V VI VII **Example: BC-R25B1H0500**

I	II	III	IV	V	VI	VII	Description
Base model number	Communications functions	Combustion sensor	Power supply	Function code	Timing code	Additional functions	
BC-R							Burner Controller
	25						RS-485, with Smart Loader Package function
		B					Flame rod (Ionization)
		C					UV sensor (AUD100/110/120)
			1				100 Vac
			2				200 Vac
			6				220 Vac
				H			Interrupted pilot type
					050		Pre-purge time 35 s
					086		Pre-purge time 45 s
					122		Pre-purge time 60 s
					158		Pre-purge time 3 min
						0	None
						D	With inspection record (with data)

● BC-R25 Recycling model Direct ignition type

I II III IV V VI VII **Example: BC-R25B1K0500**

I	II	III	IV	V	VI	VII	Description
Base model number	Communications functions	Combustion sensor	Power supply	Function code	Timing code	Additional functions	
BC-R							Burner Controller
	25						RS-485, with Smart Loader Package function
		B					Flame rod (Ionization)
		C					UV sensor (AUD100/110/120)
			1				100 Vac
			2				200 Vac
			6				220 Vac
				K			Direct ignition type
					050		Pre-purge time 35 s
					086		Pre-purge time 45 s
					122		Pre-purge time 60 s
					158		Pre-purge time 3 min
						0	None
						D	With inspection record (with data)

Compatible flame detector (sold separately)

● UV sensor

Model number	Name	Notes
AUD15C1000	Advanced UV sensor tube unit	Use a dedicated socket for the AUD100C/110C/120C
AUD100C100_	Dedicated socket for the AUD15 Lead wire type	AUD15C1000, sold separately
AUD100C1000-A15		AUD15C1000 in package
AUD110C100_	Dedicated socket for the AUD15 Terminal board type	AUD15C1000, sold separately
AUD110C1000-A15		AUD15C1000 in package
AUD120C120_	Dedicated socket for the AUD15 1/2-inch mounting type	Without G1/2 adapter, AUD15C1000, sold separately
AUD120C121_		With G1/2 adapter, AUD15C1000, sold separately

_: 0: standard product, D: with inspection record (with data), T: tropicalization treatment (AUD110C only),
B: with inspection record (with data) + tropicalization treatment (AUD110C only)

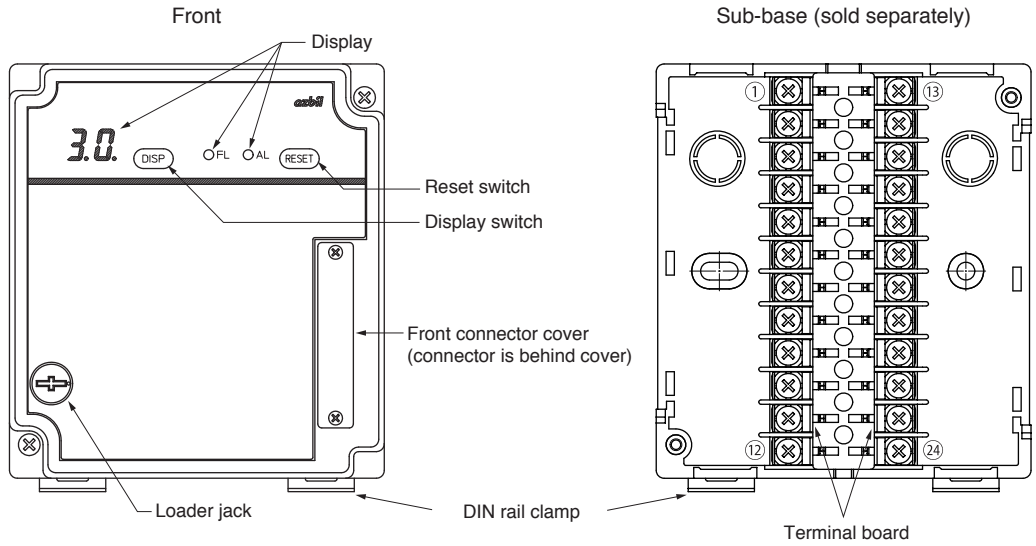
● Flame rod

Model number	Name	Notes
C7007A	Flame rod holder	
C7008A	Flame rod assembly	

Options (sold separately)

Model number	Product name	Notes
BC-R05A100	Dedicated sub-base for BC-R	Required for all products in the BC-R25 series
81447514-001	Connector for front wiring	Weidmueller model number : BL3.5/11F, compatible wire: 0.2-1.5mm^2(AWG28-14)
81447514-002	Connector for front wiring (For right-side wiring)	Weidmueller model number : BL3.5/11/270F, compatible wire: 0.2-1.5mm^2(AWG28-14)
81447515-001	Sideboards	Contains two. Not included in the sub-base.
SLP-BCRJ71	Smart Loader Package (no cable)	
81441177-001	USB loader cable	
FSP136A100	Analog flame meter	
81447519-001	Jack and jack cover	(Included with the controller.)
81447531-001	Front connector cover	Packaged with mounting screws (Included with the controller.)

Terminal numbers, front panel item names



Terminal numbers

Front connector terminals

No.	Function	No.	Function
25	Flame voltage output (+)	31	Power supply for monitor output
26	Flame voltage output (-)	32	Monitor output, combustion
27	Host communications (RS-485) DA	33	Monitor output, ignition failure
28	Host communications (RS-485) DB	34	Monitor output, flame failure
29	Host communications (RS-485) SG	35	Monitor output, lockout interlock input
30	NC	-	-

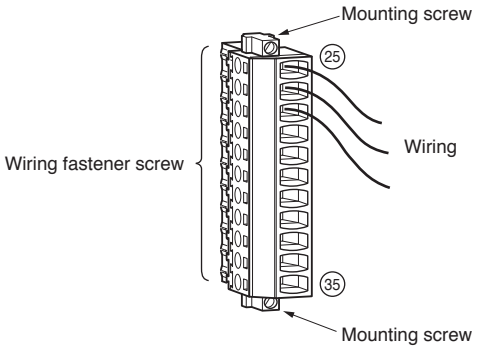
*1 After lockout is released, even if the start input is ON, the unit will not start for 5 seconds to ensure operation stability.

*2 During postpurge, reset is disabled for 20 seconds.

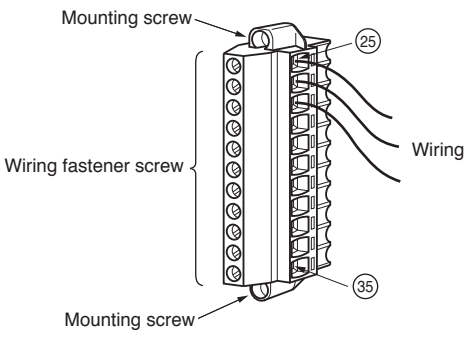
Sub-base terminals

No.	Function	No.	Function
1	Blower motor output (electromagnetic breaker)	13	Warning output
2	AC power supply (L1)	14	Flame detector (F)
3	AC power supply (L2 (N))	15	Flame detector (G)
4	Output common 1	16	Input common 1
5	Output common 2	17	Input common 2
6	Ignition transformer output	18	NC
7	Pilot valve output	19	NC
8	Main valve output	20	Start input *1
9	NC	21	Airflow switch input
10	NC	22	Lockout interlock input
11	NC	23	POC (shutoff valve closure check) input
12	NC	24	Contact reset input *2

● Connector for front wiring (81447514-001) terminal layout



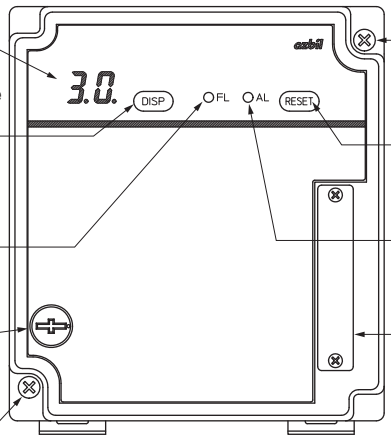
● Connector for front wiring (for right side wiring) (81447514-002) terminal layout



7-segment display, LED display, switches

If this device detects a flame failure etc., it isolates the load and applies a lockout. During lockout, the relevant diagnostic function code is displayed on the 7-segment display.

Part Name



7-segment LED (green)
When normal: sequence code/ flame voltage
When an error occurs: Warning code/ flame voltage

Switch
Flame voltage/ sequence code
Flame voltage/ warning code display switch

Flame LED (green)
Lit when flame signal is detected.
Off when flame signal is off.

Loader jack
POC function selection
Smart Loader Package jack

BC-R main unit fastening screw

BC-R main unit fastening screw

Reset switch
Switch to cancel lockout
(Press and hold for approximately 1s)

ALARM LED (red)
Lit during lockout.
Off when there is no lockout.

Front connector
Flame voltage output (0-5V)
Monitor output (semiconductor relay output)
Host communications (RS-485)

Warning codes

Display	Name	Content
E0	Interlock error	Lockout interlock
E1	False flame	Combustion signal was detected for 5s during start check and pre-purge
E2	Airflow switch error 1	The airflow switch turned Off during combustion
E3	Airflow switch error 2	The airflow switch stayed On for 3 minutes during start check
		The airflow switch did not turn On for 3 minutes after the start of pre-purge
E6	Ignition failure	Ignition could not be detected with pilot ignition (interrupted pilot type)
		Ignition could not be detected with main trial (direct ignition type)
E7	Flame failure	The flame signal disappeared in the sequence after pilot ignition (interrupted pilot type)
		The flame signal disappeared in the sequence after main trial (direct ignition type)
E8	POC (shutoff valve closure check) error*	The shutoff valve closure check switch was detected to be Off (open) when the main valve was closed
		The shutoff valve closure check switch was detected to be On (closed) when the main valve was open
E9 + Sub-code (2 digits)	Device error	Voltage error detected in output from the ignition transformer, pilot valve, or main valve, etc.

* Replace the burner controller, and if there is a warning code E8, POC may have been set by the equipment manufacturer as disabled.

Sequence codes

- Interrupted pilot type

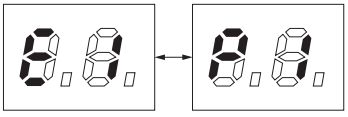
Display	Status content
P1	Start check
P2	Pre-purge
P4	Pilot ignition
P5	Pilot only
P6	Main ignition
P8	Steady combustion
P9	Postpurge
--	Stop

- Direct ignition type

Display	Status content
P1	Start check
P2	Pre-purge
P4	Main ignition
P5	Hi solenoid valve ignition standby
P6	Hi solenoid valve ignition
P8	Steady combustion
P9	Postpurge
--	Stop

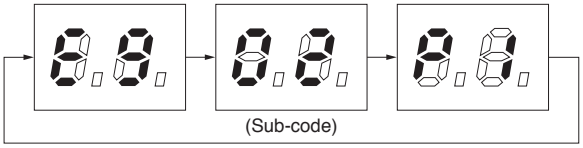
Examples of sequence codes and warning codes

- Warning code: E0 to E8



Switches every 0.8s

- Warning code: E9 + sub-code (2 digits)

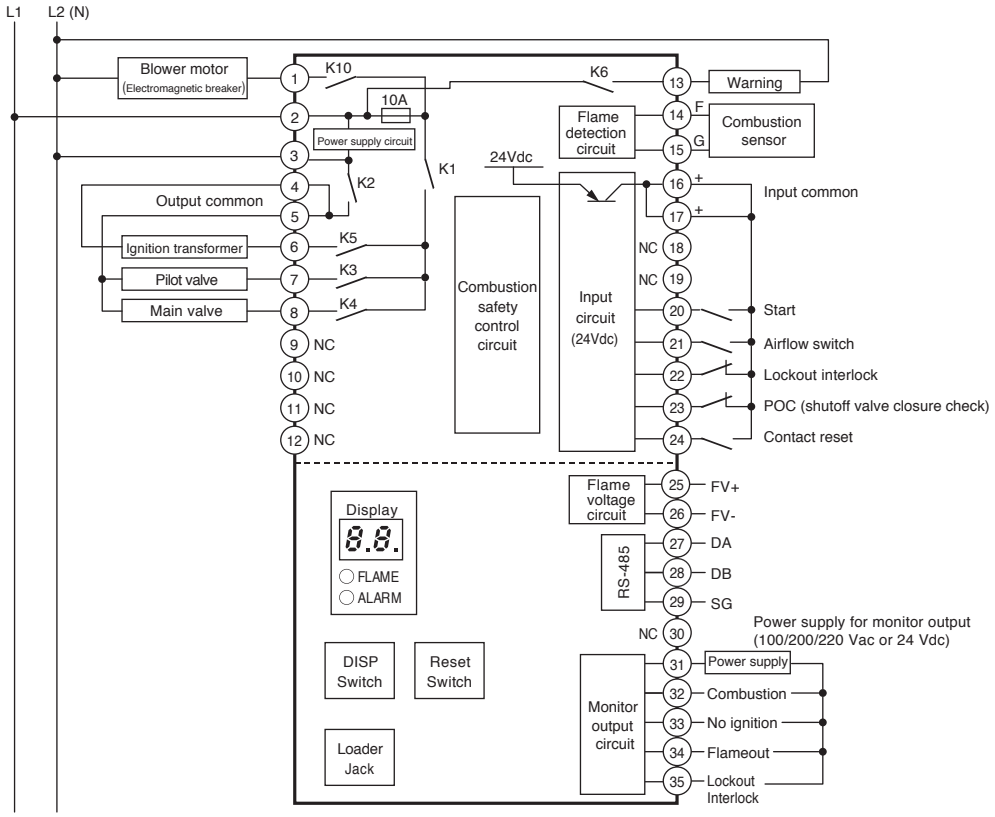


(Sub-code)

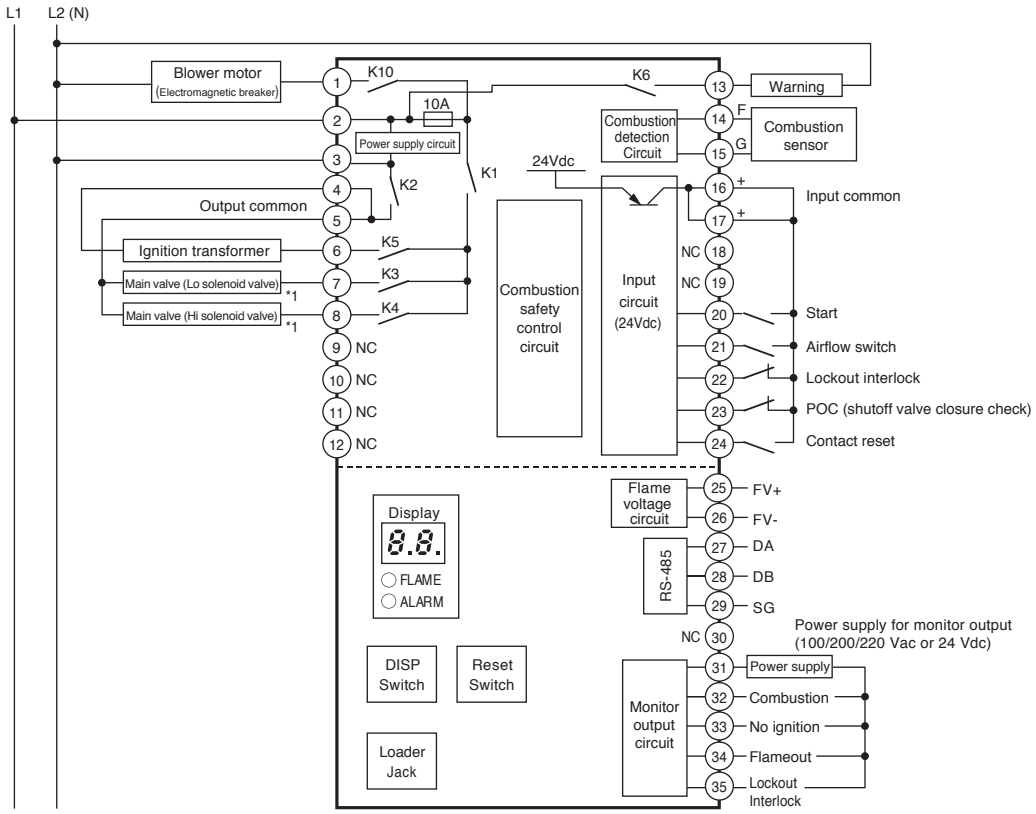
Switches every 0.8s

Internal block circuit, external connection terminals (1-24 on sub-base, 25-35 on front connector)

● Interrupted pilot type



● Direct ignition type



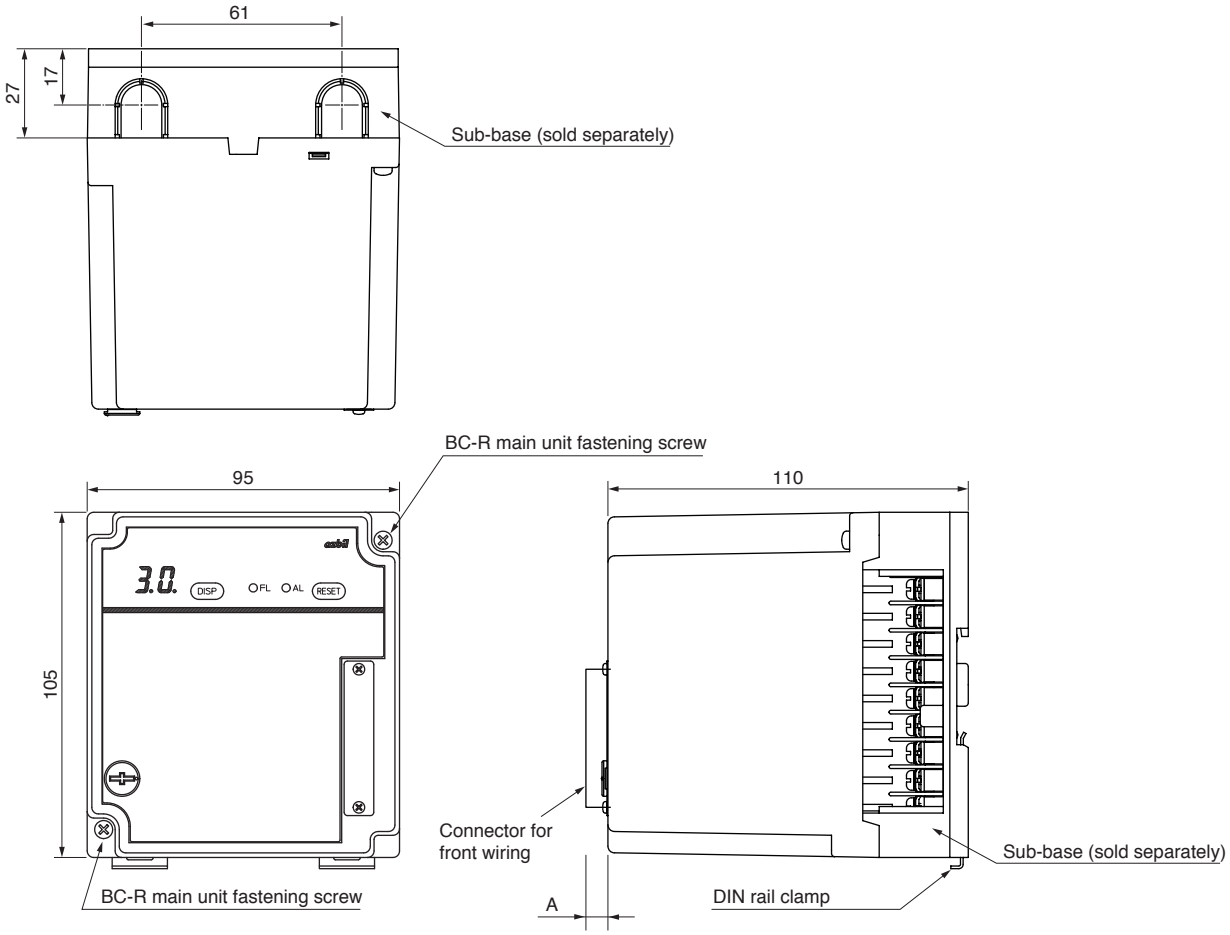
Note - Use contact reset (terminal 24) input in isolation. It cannot be used in conjunction with other BC-R contact reset inputs.
- Output common (terminals 4, 5) and input common (terminal 16, 17) cannot be used in conjunction with other BC-R contact reset inputs.

*1 Content in ( ) describes the situation when three-position (Off-Lo-Hi) control is used. If other than three-position control is used, connect main valve to terminal 7.

External Dimensions

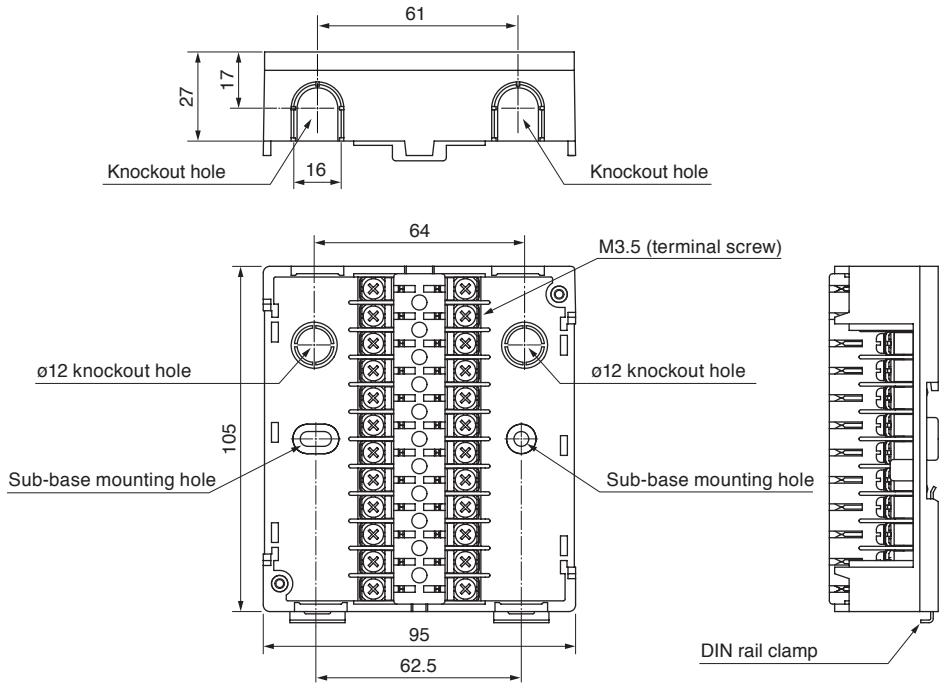
(Unit: mm)

• BC-R25 Burner Controller



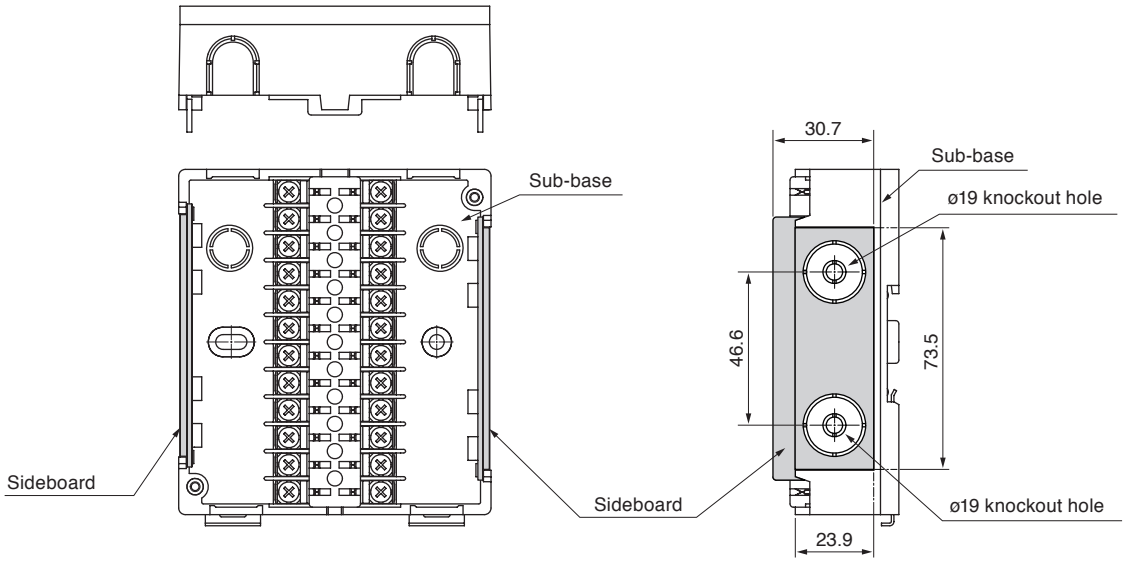
Model number	A
81447514-001	10.6
81447514-002	14.6

• Sub-base BC-R05A100 (sold separately)



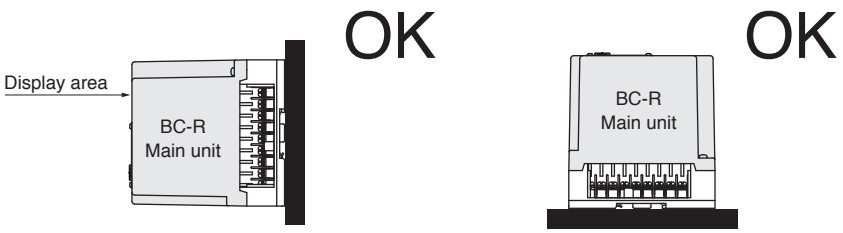
• Sideboard 81447515-001 (sold separately)

(Unit: mm)

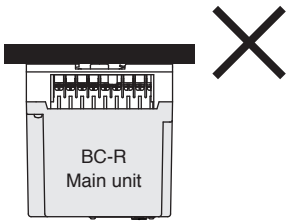


Installation orientation

Install the device in the orientation shown below.



Do not install it in the orientations illustrated below.

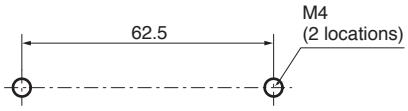


Mounting in a Panel

(Unit: mm)

[1] Drill two M4 screw holes into the panel.

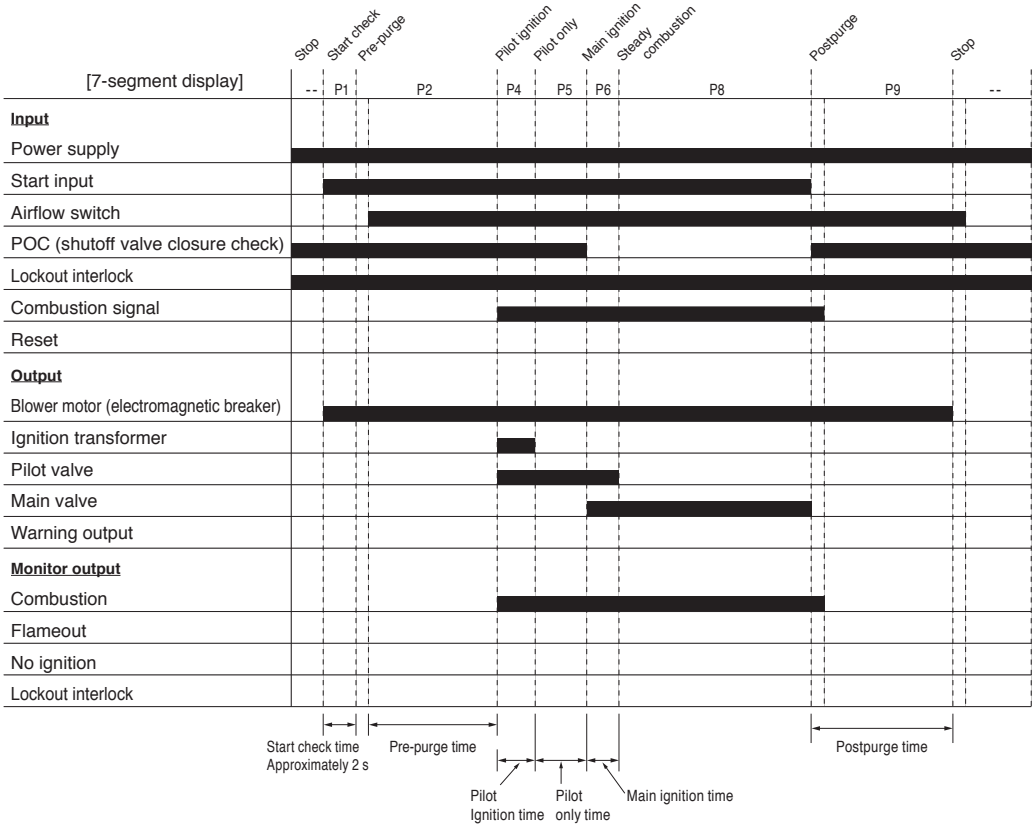
[2] Use screws to mount the sub-base on the panel.
(Maximum tightening torque: 1.2 N·m)



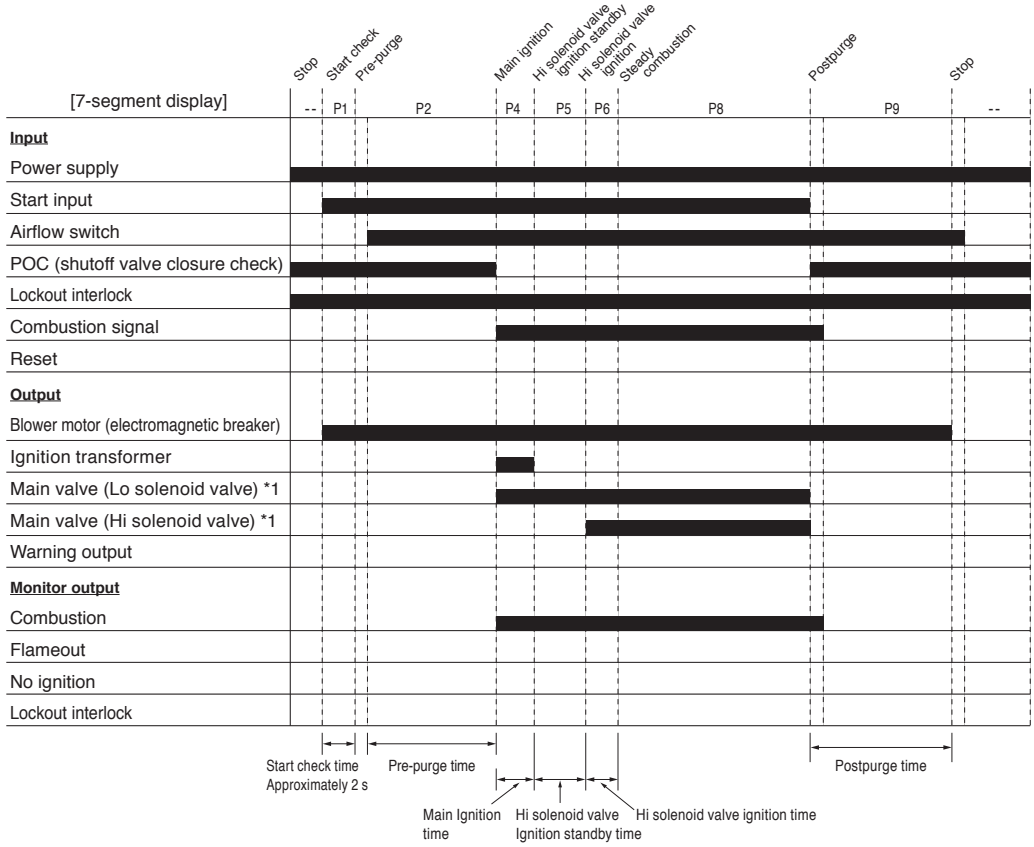
Operation Sequence

About the sequence except Normal Operation, please watch "BC-R25 User's manual No. CP-SP-1388E".

1-1. Normal Operation (interrupted pilot type)



1-2 . Normal Operation (Direct ignition type)

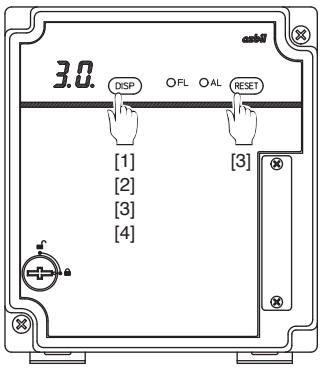


*1 Content in ( ) describes the situation when three-position (Off-Lo-Hi) control is used.
If other than three-position control is used, only look at the main valve (Lo solenoid valve)

Trial-run operation mode

Warning

In trial operation mode, loads (blower, ignition transformer, control motor, etc.) operate.
They should be operated by a person with expert knowledge and an understanding of the functions. There is a risk of a major accident.



Transition to trial operation mode

Trial operation setup

Exit

[1] Press and hold the DISP switch for approximately 5 s or more during the stop sequence (when the start switch is Off).

The 7-segment display changes to [C1] and the system goes into trial operation mode.
The central dot of the 7-segment display starts blinking (a 1 s cycle).

[2] Each time the DISP switch is pressed, the display changes through the cycle [┌→C1→C2→C3→C4→C5→C6┐].

Display	Content
C1	Continuous pilot burn mode (only output from the main valve 1 with direct ignition)
C2	Monitor output, flame
C3	Monitor output, ignition failure
C4	Monitor output, flame failure
C5	Monitor output, lockout interlock
C6	Blower motor (electromagnetic breaker) output

■ Trial-run operation mode selection

[3] Select trial operation type using the DISP switch.

When C1 is selected

1 Press the Reset button when C1 is displayed.
The 7-segment display displays [--] blinking.
2 The combustion sequence starts when start input is received.
At that stage, the sequence code is blinks. (It is steadily lit in normal mode)

When C2~C6 is selected

1 Press the Reset button to enter selection mode.
The 7-segment display displays [Cx/oF].
2 When the DISP switch is pressed in this situation, the display toggles between [Cx/oF] and [Cx/on], and trial operation runs according to the On/Off selection.
* C6 only becomes [C6/on]. To turn the blower off, press the Reset switch when in this state.
3 When the Reset switch is pressed to stop trial operation, the display for selecting types of trial operation ([2] above) is displayed.

[4] Press and hold the DISP switch for 5 s or more to end trial operation mode.
Trial operation mode also ends in the following situations.
- The power supply is turned Off.
- A warning is issued during trial operation mode (in continuous pilot burn mode).

1.1 Continuous pilot burn mode (C1)
In the combustion sequence, only the pilot burns and main ignition is not performed.
A lockout occurs if there is an error.

1.2 Forced output of the Flame monitor output (C2)
Allows checking of indicators etc. connected to the monitor output terminal.
Turns the flame monitor output ON or OFF.

1.3 Forced ignition failure monitor output (C3)
Allows checking of indicators etc. connected to the monitor output terminal.
Turns the ignition failure monitor output ON or OFF.

1.4 Forced flame failure monitor output (C4)
Allows checking of indicators etc. connected to the monitor output terminal.
Turns the flame failure monitor output ON or OFF.

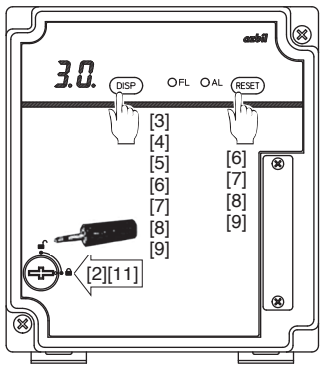
1.5 Forced lockout interlock monitor output (C5)
Allows checking of indicators etc. connected to the monitor output terminal.
Turns the lockout interlock monitor output ON or OFF.

1.6 Blower motor (electromagnetic breaker) output On (C6)
This is a function to force blower motor (electromagnetic breaker) output and check the air volume.

Function setting mode (for POC and communications address)

! Caution

- If POC is selected, the lower right dot of the 7-segment display is lit, regardless of the operation mode.
- If devices installed in the system are set without selecting POC (shutoff valve closure check), an E8 error is issued when this device is replaced, unless the new device is set without POC (shutoff valve closure check) selection.
- In modes other than function setting mode, remove the dedicated pin plug.



Transition to function setting mode

[1] Turn the power supply Off.
[2] Insert the dedicated pin plug into the loader jack connector.
[3] Turn on the power while holding the DISP switch down. (approximately 10 s)
The 7-segment display shows a blinking [H-] (at a 0.4 s blink cycle) and the ALARM LED blinks (once per second).
[4] Release the DISP switch, then press and hold it again for at least 5 s.
The 7-segment display shows [H1] and changes to function selection mode. (The ALARM LED continues to blink.)
(The ALARM LED continues to blink.)

! If the 7-segment display flashes [o-/-o] for 2.4 s, the transition to function selection mode has not succeeded. The pin plug may not be inserted correctly.

[5] Each time the DISP switch is pressed, the display cycles through the sequence [H1 → H2 → H3 → H4].

Display	Content
H1	POC (proof of closure for shutoff valve) setting
H2	Communications address setting
H3	Baud rate setting
H4	Communications format setting

Various settings

■ POC (shutoff valve closure check) action selection setting

- Factory settings

Setting
ON: POC function enabled

[6] Use the DISP switch to select [H1] on the 7-segment display.
1 Press the Reset button.
The 7-segment display shows [H1/oF] or [H1/on].
2 When the DISP switch is pressed in this situation, the display toggles between [H1/oF] and [H1/on], changing the POC action selection between On and Off.

ON	POC function enabled
OFF	POC function disabled

3 The setting is conformed when the Reset switch is pressed.
If ON (if POC function is active), [H1.] is displayed.
While the POC function is active, a dot appears in the lower right of the 7-segment display.
While the POC function is inactive, [H1.] is displayed, and no dot appears in the lower right of the 7-segment display.

■ Communications address setting

- Factory settings

Setting
1

[7] Use the DISP switch to select [H2] on the 7-segment display.
1 Press the Reset button.
The 7-segment display shows [H2/xx], where xx is the address value.
2 When the DISP switch is pressed in this situation, the display cycles through [H2/1 → H2/2 → H2/3 · · · · H2/32].
Make the address selection.
3 After making the selection, press the Reset switch to confirm.
At this stage, the display is [H2].

■ Baud rate setting

- Factory settings

Settings
3: 19600bps

[8] Use the DISP switch to select [H3] on the 7-segment display.
1 Press the Reset button.
The 7-segment display shows [H3/xx], where xx is 1~3
1: 4800 bps
2: 9600 bps
3: 19200 bps.
2 When the DISP switch is pressed in this situation, the display cycles through [H3/1 → H3/2 → H3/3].
Make the baud rate selection.
3 After making the selection, press the Reset switch to confirm.
At this stage, the display is [H3].

■ Communications format setting

- Factory settings

Settings
1: Even parity, Stop bit 1

[9] Use the DISP switch to select [H4] on the 7-segment display.
1 Press the Reset button.
The 7-segment display shows [H4/xx], where xx is 1~4
1: Even parity, Stop bit 1
2: Even parity, Stop bit 2
3: Odd parity, Stop bit 1
4: Odd parity, Stop bit 2.
2 When the DISP switch is pressed in this situation, the display cycles through [H4/1 → H4/2 → H4/3].
Select the communications format.
3 After making the selection, press the Reset switch to confirm.
At this stage, the display is [H4].

Exit

[10] Turn the power Off.
[11] Remove the pin plug.

Customer Specification Check Sheet, BC-R25 Series

This sheet is for selecting the optimum BC-R25 Series product to suit the customer's specification.
Use it to facilitate communications with our sales staff.

Equipment name		
Equipment summary		
Flame detector used (draw a circle around the applicable product)		Flame rod/ UV sensor (AUD100 Series)
(For a UV sensor: Write the model No.)		
Ignition method (circle the applicable product)		Direct ignition type/ interrupted pilot type
Power supply voltage (circle the applicable voltage)		100Vac / 200Vac / 220Vac
Sequence	Pre-purge	Seconds or minutes
	Main ignition	s
	Postpurge	s
	Flame response	s
RS-485 host communications (circle as appropriate)		Required / Not required
Input (Write whether or not there is input, the specification, etc.)	Lockout interlock input	
	Start input	
	Contact reset input	
	Airflow switch input	
	POC (shutoff valve closure check) input	
MEMO		

Please read the "Terms and Conditions" from the following URL before ordering or use:

http://www.azbil.com/products/bi/order.html

Specifications are subject to change without notice.

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