

Names and functions of display/operation section

Output display (Red)



- "F" is displayed when confirming the function setting.



- "E" lights up when switch output is ON. (Only when using switch output specifications)
- "E" lights up when error output is ON. * Blinks when overcurrent is detected.



- "E" lights up when error output is ON. * Blinks when overcurrent is detected.

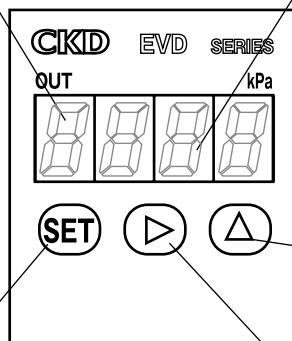
* If +/- should be specified or upper/lower limits have been set,



is displayed.

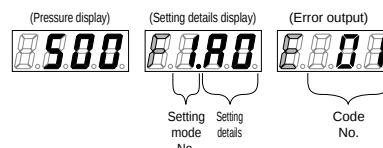
SET Key

- Use to enter each setting mode.
- When setting each data, this key is used to confirm the values, etc.



3-digit number LED display (green)

- Displays the pressure display and function setting details during RUN mode (pressure display). * The setting mode No. and setting details are displayed when displaying details of function settings.
- When setting each data, the values, etc., are displayed.
- Error code No. is displayed at error output.



△ Key

- Setting details are sequentially displayed during RUN mode (pressure display).
- Use to select the setting when setting data.
- When setting each data, it is used to increase the values, etc.

▶ Key

- When setting each data, this key is used to select the numbers to each value, etc.

Function list

Screen display	Name	Display content (RUN mode)	Settings (Setting mode)	Setting Method
	Pressure Display	Secondary pressure is confirmed with the 3-digit numerical display LED. Unit: kPa		
 Screen F1	Input Signal Selection	The selected input signal and current target value (pressure conversion value) are confirmed. * When preset input (8-point) is selected, the currently selected preset No. and setting value are displayed.	For analog input: Analog input, preset memory input, or direct memory input is selected. For preset input/direct memory input, input the setting or this mode. For parallel input: Parallel input or direct memory input is selected. For direct memory input, input the setting for this mode.	603
 Screen F2	Zero /Span adjustment	The validity of the zero/span adjustment and the setting value are confirmed. When "valid," the F2.0 - zero point adjustment value (L) and span point adjustment value (H) are alternately displayed. * The default setting is set with the full scale (--).	Select whether to use with full scale or zero/span adjustment. When zero/span adjustment is selected, the adjustment value for this mode can be set randomly.	604
 Screen F3	Auto-power OFF	Auto-power OFF enabled/disabled can be confirmed. * The default setting is invalid (--).	Auto-power OFF enabled/disabled can be selected. Note) The auto-power OFF time is set to approx. one minute. The time cannot be changed.	604
 Screen F4	Switch Output * Switch Output Specifications only	The switch output enabled/disabled and setting value can be confirmed. When "Mode 1 enabled" is selected, the F4.0-- tolerance range setting value (L) and - + tolerance range setting value (H) are alternately displayed. When "Mode 2 enabled" is selected, the F4.1 - min. setting value (L) and - max. setting value (H) are alternately displayed. * The default setting is invalid (--).	Switch output enabled/disabled can be selected. When enabled, mode 1 or 2 can be selected. +/- tolerance values and max./min. values can be set as desired. Note) The hysteresis width cannot be set.	604
 Screen F5	Proportional value Change	Changes in the proportional value and its set level can be confirmed. When "Proportional Value Up" is selected, F5.H is displayed. When "Proportional Value Down" is selected, the F5.L - setting value is alternately displayed. * The default setting is standard (--).	Select whether to use the standard value or whether to change the proportional value. The proportional value level is set in this mode only when "Proportional Value Down" is selected. (10 stages)	605

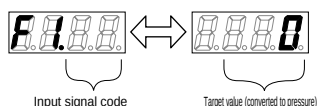
* EVD-□100 only

Operating method

RUN mode List of displayed contents

■ F1 (input signal selection) screen F1 display descriptions

The input signal and target value are alternately displayed.



[Analog input]

EVD-□-0□□-□-□, EVD-□-1□□-□-□, EVD-□-2□□-□-□

Input signal code	Description
	Analog 0 to 10 VDC input *
	Analog 0 to 5 VDC input *
	Analog 4 to 20 mADC input *
	Preset memory input The selected preset No. is displayed.
	Direct memory input

* One of [F1.A0], [F1.A1] and [F1.A2] is displayed based on the model.

[Digital input]

EVD-□-P□□-□-□

Input signal code	Description
	Parallel 10 bit input
	Direct memory input

■ F2 (zero/span adjustment) screen F2 display descriptions

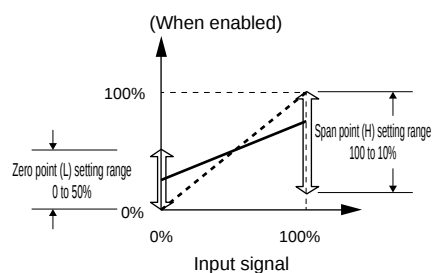
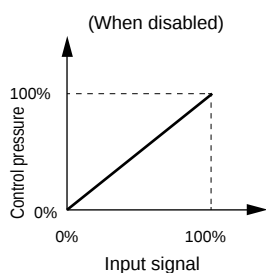
The validity of the zero/span adjustment and the setting value are confirmed.

Note: This function is invalid if preset memory input or direct memory input is selected for F1 mode.

When disabled

When enabled

The diagram shows three 4-digit displays connected by double-headed arrows. The first display shows 'F2.01' with a bracket underneath labeled 'Zero point Adjustment'. The second display shows '0.000' with a bracket underneath labeled 'Set value (%)'. The third display shows 'H.090' with a bracket underneath labeled 'Span point Adjustment'.



■ F3 (auto-power OFF) screen F3 display descriptions

Auto-power OFF enabled/disabled can be confirmed.

When disabled

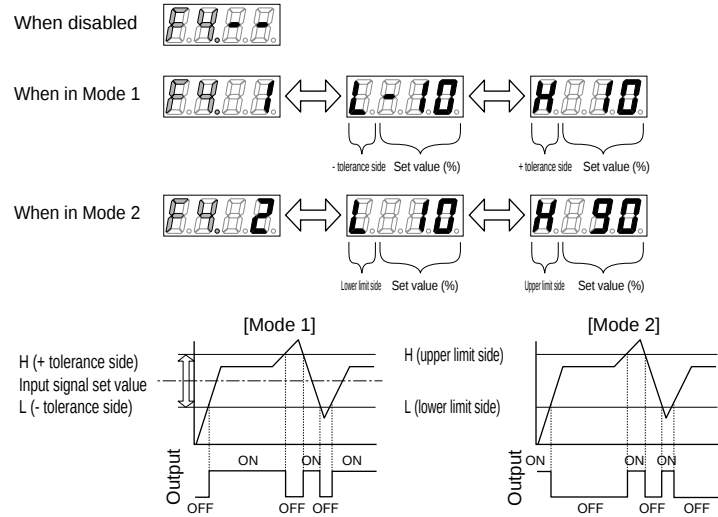
When enabled

F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac- remove Filt
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner
Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRtSens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

RUN mode List of displayed contents

F4 (switch output function) screen F4 display description (compatible model: EVD-□□-□□SN, EVD-□□-□□SP)

The switch output enabled/disabled and setting value can be confirmed.
Note) This is invalid with analog output specifications. (--) is displayed on the screen but cannot be used.



F5 (proportional value change) screen F5 display descriptions

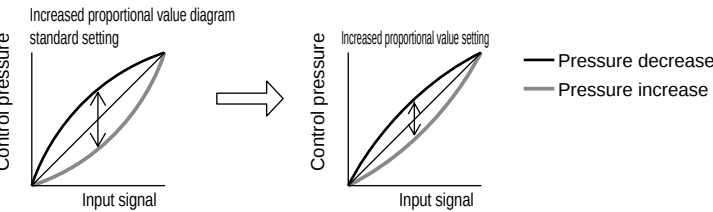
Compatible models: EVD-1100-□□□-□-□, EVD-3100-□□□-□-□
Note) The screen is not displayed in EVD-□500/EVD-□900.

The validity of the proportional value and the set level are confirmed.

- When disabled: Control is applied with standard values (default value).
- When enabled: "Proportional value up" or "proportional value down" is selected.
The set level is selected from ten stages only when "proportional value down" is selected.

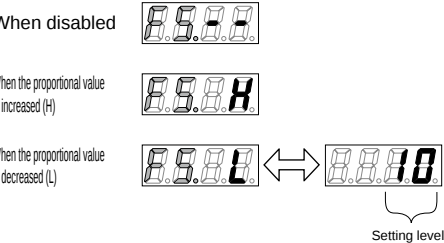
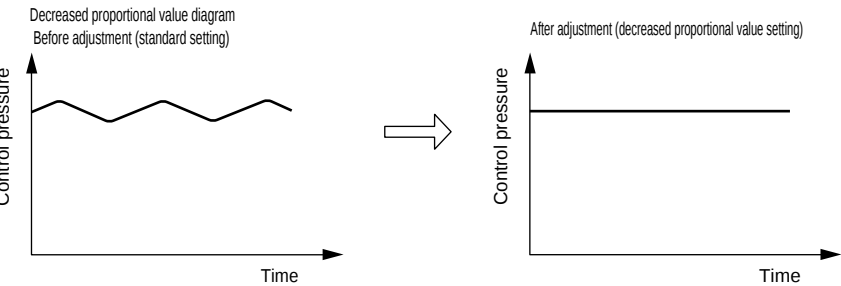
[Effect of increasing proportional value]

While the effect varies with piping and load capacity conditions, a higher accuracy in control is achieved. Hunting occurs easily, requiring care during use.



[Effect of decreasing proportional value]

If vibration occurs during blow applications or during a leakage test, stable control is ensured by decreasing the proportional value as shown below.



How to set setting mode

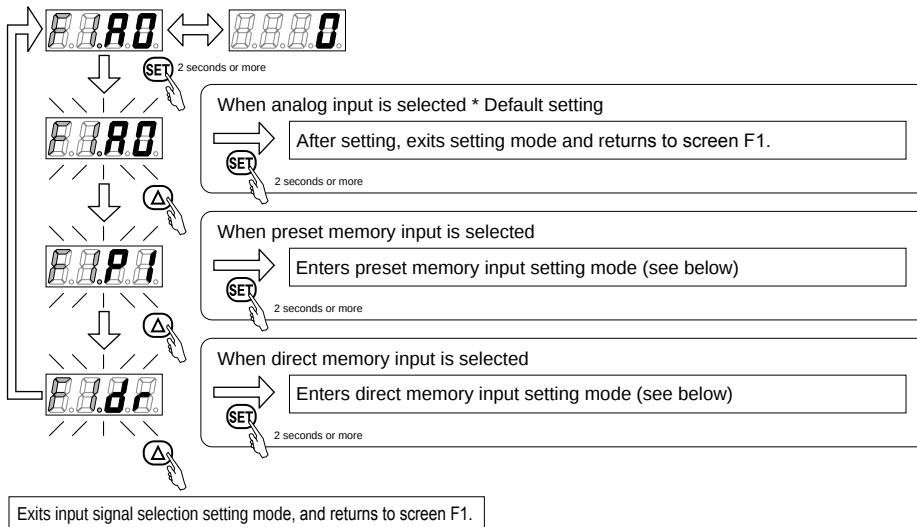


CAUTION Release the key lock before changing setting details. (Refer to page 606)

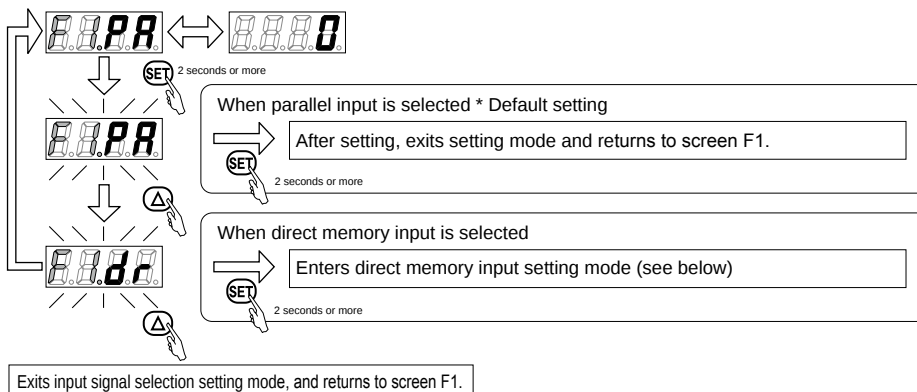
■ **F1 (input signal selection function)** Hold down the SET key for two seconds or more with the screen F1 displayed. F1 setting mode is entered.

● **Changing the analog input signal selection**

Note: Analog input specifications cannot be changed.

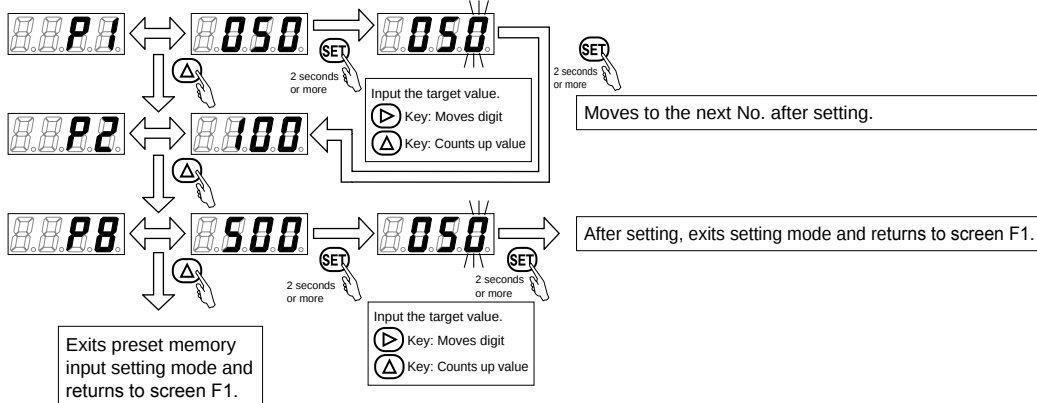


● **Changing parallel input signal selection**



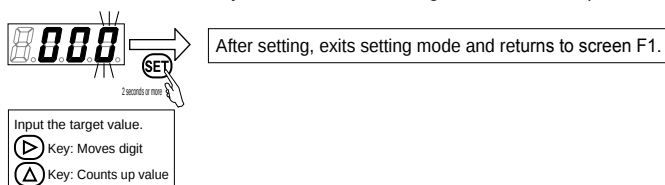
● **Using preset memory input setting mode**

* Hold down the SET key for two seconds or longer with screen F1 preset memory input set.



● **Using direct memory input setting mode**

* Hold down the SET key for two seconds or longer with screen F1 preset memory input set.



F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filt
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRISens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain
Separ
Mech
Press SW
Res press
exh valve
SlowStart
Anti-bac/Bac-
remove Filtr
Film
Resist FR
Oil-Prohr
Med
Press FR
No Cu/
PTFE FRL
Outdrs FRL
Adapter
Joiner
Press
Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneur
AirBoost
Speed Ctrl
Silncr
CheckV/
other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
Electro
Press SW
ContactSW
AirSens
PresSW
Cool
Air Flo
Sens/Ctrl
WaterRtSens
TotAirSys
(Total Air)
TotAirSys
(Gamma)
Gas
generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg
etc
Ending

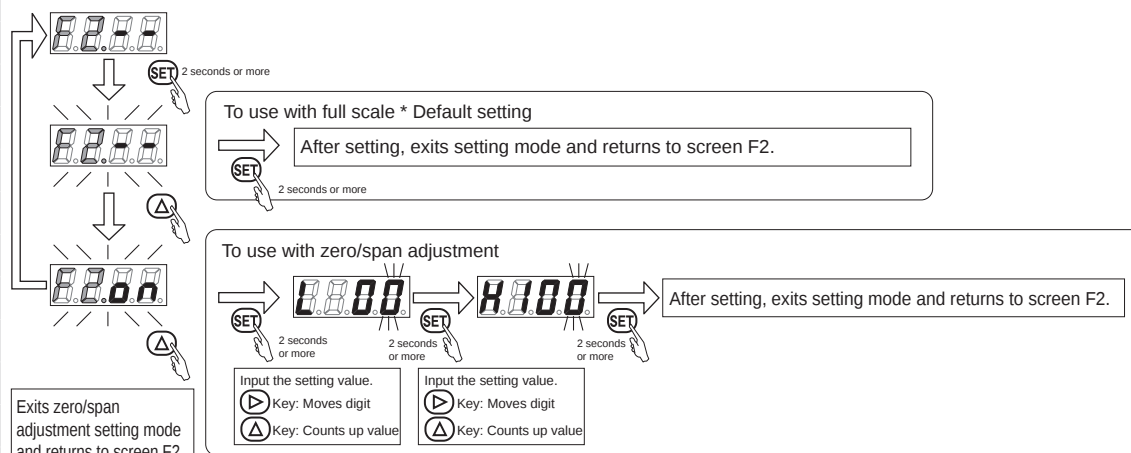
How to set setting mode



CAUTION

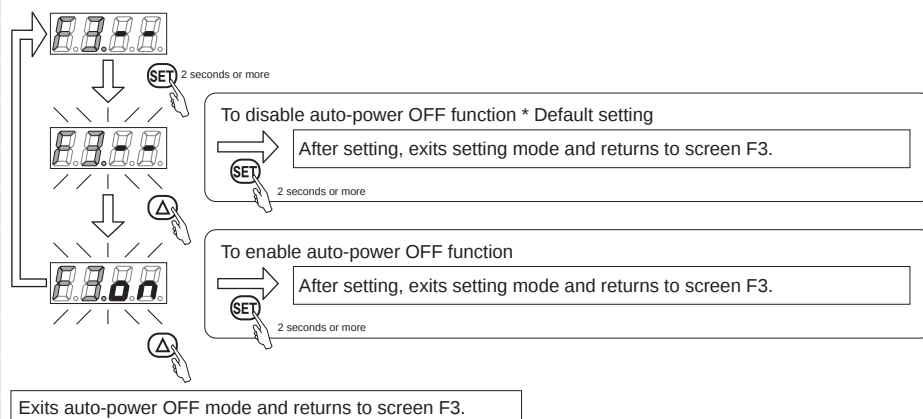
Release the key lock before changing setting details. (Refer to page 606)

■ F2 (zero/span adjustment function) Hold down the SET key for two seconds or more with the screen F2 displayed. F2 setting mode is entered.



* This function cannot be used when preset memory input or direct memory input is selected with F1 (input signal selection function). Only full scale can be used.

■ F3 (auto-power OFF function) Hold down the SET key for two seconds or more with the screen F3 displayed. F3 setting mode is entered.



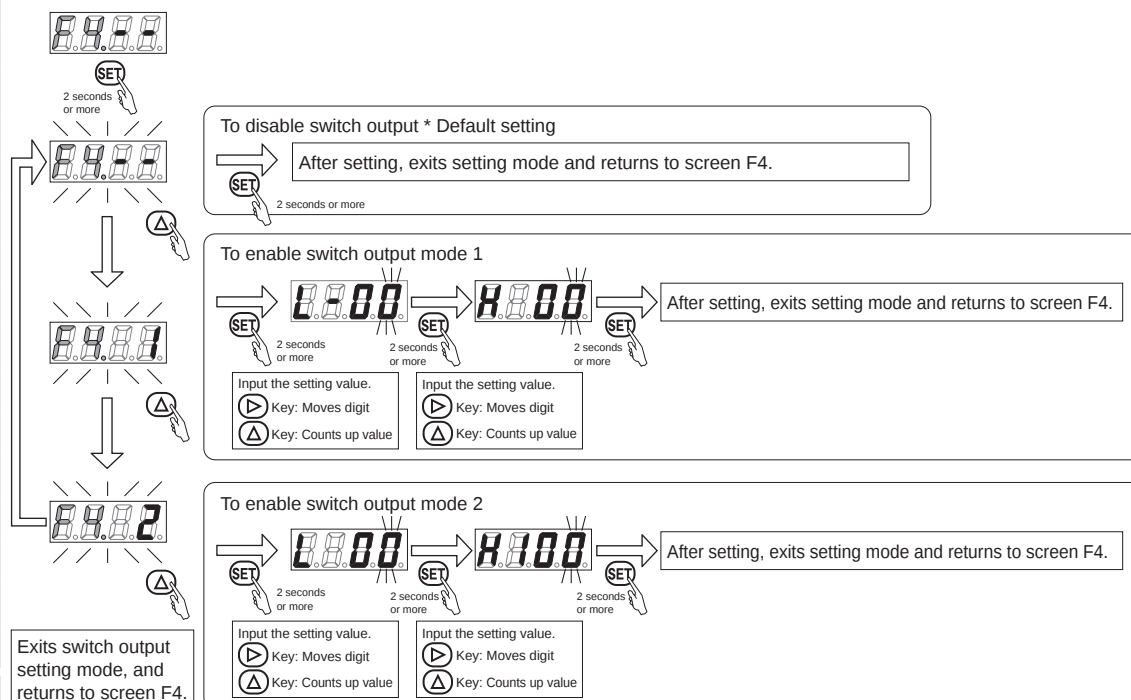
* If any key is pressed during auto-power OFF, the display illuminates.

* The auto-power OFF time is set to approx. one minute. The time cannot be changed.

■ F4 (switch output function) Hold down the SET key for two seconds or more with the screen F4 displayed. F4 setting mode is entered.

(Compatible models: EVD-□□□□SN, EVD-□□□□SP)

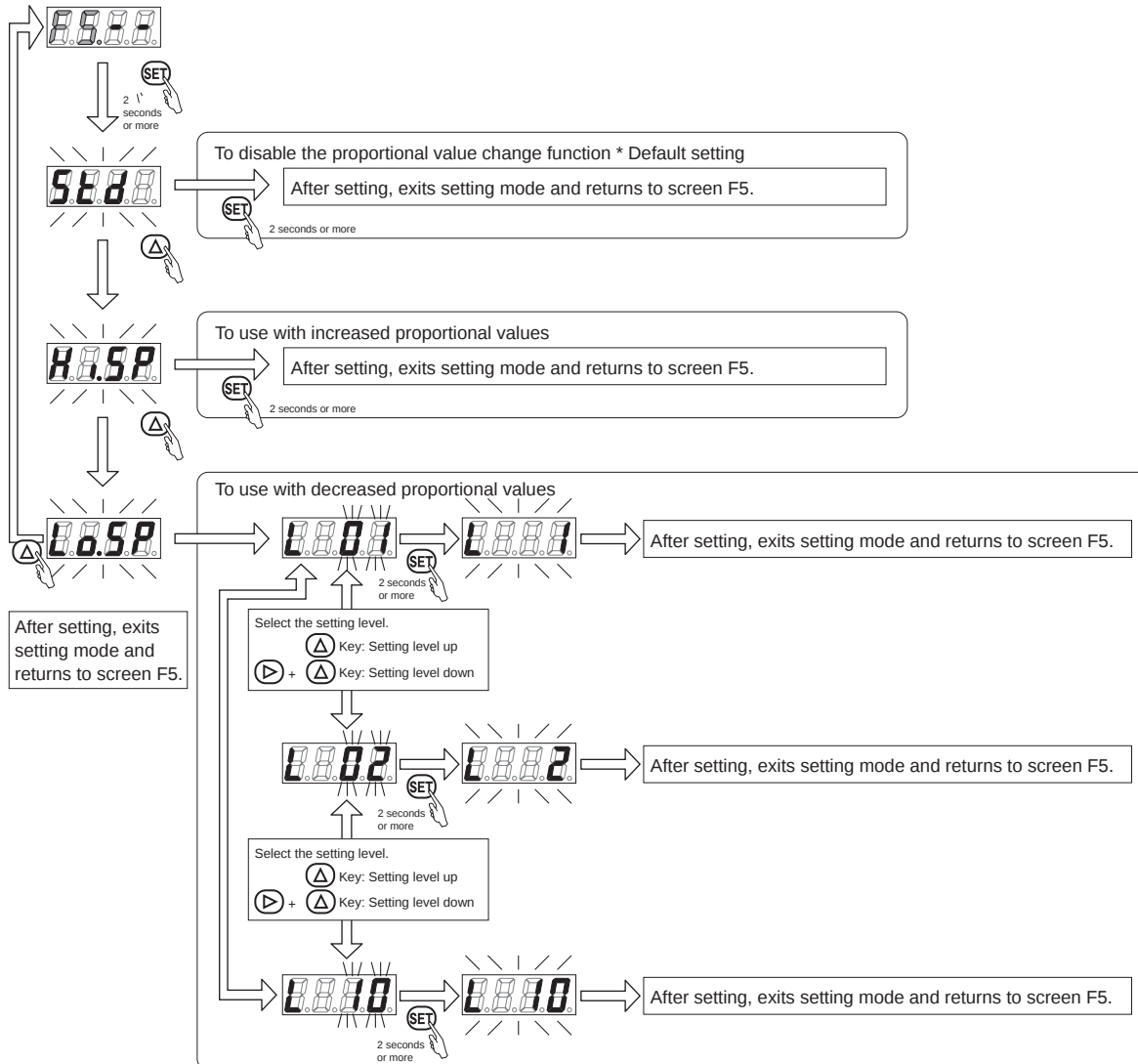
Note: This is invalid with analog output. (--) is displayed on the screen but cannot be used.



How to set setting mode CAUTION Release the key lock before changing setting details. (Refer to page 606)

■ F5 (Proportional value change function) Hold down the SET key for two seconds or more with the screen F5 displayed. F5 setting mode is entered.

 Compatible models: EVD-1100-□□□□□□, EVD-3100-□□□□□□
 (Note) The screen is not displayed in EVD-□500/EVD-□900.



* When used with a decreased proportional value, operation takes place with the set level displayed on the screen when the set level is selected. When the set level is decided, press the "SET key" for two seconds or longer to enter the value.

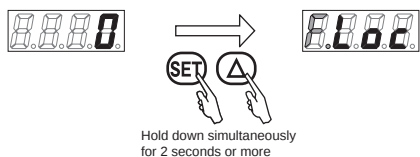
F.R.L.
F.R.
F (Filtr
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filt
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRISens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-
remove Filtr
Film Resist FR
Oil-ProhrR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner
Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneur
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRtSens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

Key lock

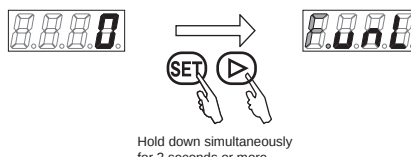
This function prevents incorrect operation. Release the key lock before changing settings.

● Operating the key lock



Hold down simultaneously
for 2 seconds or more

● Releasing the key lock



Hold down simultaneously
for 2 seconds or more

* The key is locked every time the power is turned ON.

Setting range of functions

Function	Settings display screen	Setting details	Setting specifications
F1: Input signal selection function Preset memory input 		Set the target value (pressure).	Range: *1 □100 / 000 to 100 □500 / 000 to 500 □900 / 000 to 900 Min. set unit: 1 kPa
F1: Input signal selection function Direct memory input 		Set the target value (pressure).	Range: *1 □100 / 000 to 100 □500 / 000 to 500 □900 / 000 to 900 Min. set unit: 1 kPa
F2: Zero/span adjustment function 		Set the zero point adjustment value.	Range: 00 to 50 *2 Min. set unit: 1%
		Set the span point adjustment value.	Range: 100 to 010 *2 Min. set unit: 1%
⚠ F4: Switch output function When in Mode 1 		Set the "-" tolerance value.	Range: -00 to -50 Min. set unit: -1%
		Set the "+" tolerable value.	Range: 00 to 50 Min. set unit: 1%
⚠ F4: Switch output function When in Mode 2 		Sets the min. value.	Range: 00 to 90 *2 Min. set unit: 1%
		Sets the max. value.	Range: 100 to 010 *2 Min. set unit: 1%
⚠ F5: Proportional value change function Increased proportional value 	The level cannot be set.		
⚠ F5: Proportional value change function Decreased proportional value 		Set the level.	Range: 01 to 10 Min. set unit: 1

*1: If set to a pressure of 1% F.S. or less, it may not be possible to control pressure due to the effect of residual pressure.

*2: The setting range may be limited depending on the setting value.

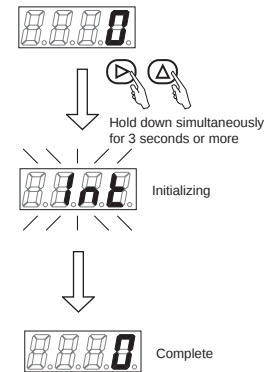
⚠ F4: The switch output function is for the switch output only. Cannot be used with the analog output.
Compatible models: EVD-□□□□SN, EVD-□□□□SP

⚠ F5: The proportional value change function is limited to the pressure range 100 kPa.
Compatible model: EVD-□100-□□□

Default mode settings (Initialization)

Screen display	Name	Settings display	Setting details
Screen F1 	Input signal selection	Analog Parallel A0.A1.A2	Analog/ parallel input
Screen F2 	Zero/span adjustment		Full scale (zero/span adjustment disabled)
Screen F3 	Auto-power OFF		Auto-power off disabled
Screen F4 	Switch output * Switch output specifications only		Switch output disabled
Screen F5 	Proportional value change * EVD-□100 only		Standard setting (Proportional value change disabled)

[Initializing]



Error code

Error display	Cause	Countermeasures
	The power voltage is not within the rating. Detected at 19.5 VDC or less detection accuracy $\pm 10\%$	Check the product's specifications, set the power voltage within the rated range, then turn the power ON again.
	The input signal exceeded the rating range. Detected at input 110% and over detection accuracy $\pm 1\%$	Check the product's input signal, set the input signal within the rated range, then turn the power ON again.
	An error occurred during EEPROM reading or writing.	Contact your nearest CKD branch or dealer.
	An error occurred during memory reading or writing.	Contact your nearest CKD branch or dealer.
	Secondary pressure did not reach the set value for five seconds or more consecutively. (20% F.S. or less of the set value was not attained) (Detection accuracy $\pm 6\%$ F.S.)	Check primary pressure provide pressure within the rating range, then turn the power ON again. Check that there are no leaks from pipes, fitting, or other devices. Correctly connect, then turn power ON again. If the error is not resolved, contact your nearest CKD branch or dealer.
	The switch output's overcurrent protection circuit has operated.	Check whether load current exceeds the rating. Correctly connect, then turn the power ON again.

When the above errors occur, the error displays and error output turns ON.

F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain
Separ
Mech
Press SW
Res press
exh valve
SlowStart
Anti-bac/Bac-
remove Filt
Film
Resist FR
Oil-ProhR
Med
Press FR
No Cu/
PTFE FRL
Outdrs FRL
Adapter
Joiner
Press
Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/
other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
Electro
Press SW
ContactSW
AirSens
PresSW
Cool
Air Flo
Sens/Ctrl
WaterRISens
TotAirSys
(Total Air)
TotAirSys
(Gamma)
Gas
generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg
etc
Ending