

Interface panel function MOTOMAN-NX100



Upon receipt of this product and prior to initial operation, read these instructions thoroughly, and retain for future reference.

© 2006 MOTOMAN Robotics Europe AB · Reg No.: MRS6036EN.0.U

 **MOTOMAN**
A YASKAWA COMPANY

Reference list

***This manual is a revised version of the YEC document:
HW0482596.4***

Revision

***2007-04-24
First release of this manual.***

1. Outline of interface panel function	5
2. Display and operations of panel screen	7
Interface panel display	7
3. Data setting and touch panel I/F instructions	13
Setting procedure	14
Details on interface panel setting items	23
4. Save and load of set data	29
5. Editing saved data	31
6. Parameters	35
Clearing the status of signals	35
Allocation of general input signals to interface panel screens	37

1. Outline of interface panel function

This function makes the system construction simple and enables the reduction of operation panel and Interlock panel (hereinafter called "I/L panel") by holding the roles of operation panel and I/L board in the programming pendant (hereinafter called "PP").

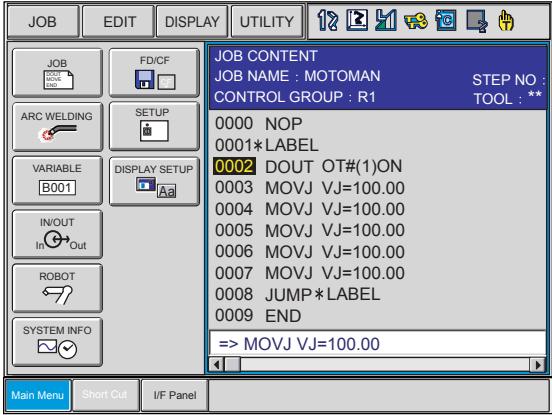
Users can construct the arbitrary operation panel for PP by setting data in Interface panel setting screen.

2. Display and operations of panel screen

2.1 Interface panel display

■ **Panel screen display**

Follow the operations as below to display the Interface panel.

	Operation	Explanation
1	Press {I/F panel} to display the interface panel screen.	
2	Press {I/F panel} while the interface panel appears on the screen.	The screen goes back to the previous display.

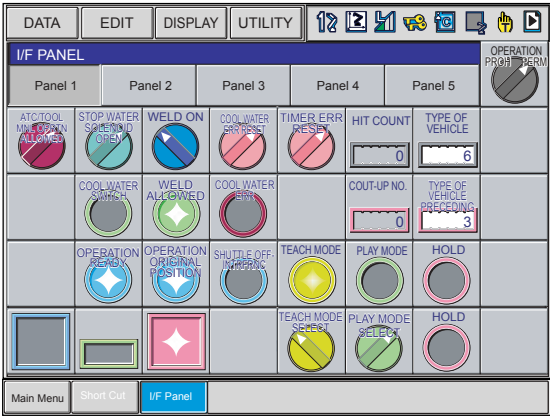


Information!

Due to some conditions during an operation, Interface panel may not appear on the screen. In that case, the message “Cannot display at current operation mode” appears when {I/F Panel} is pressed.

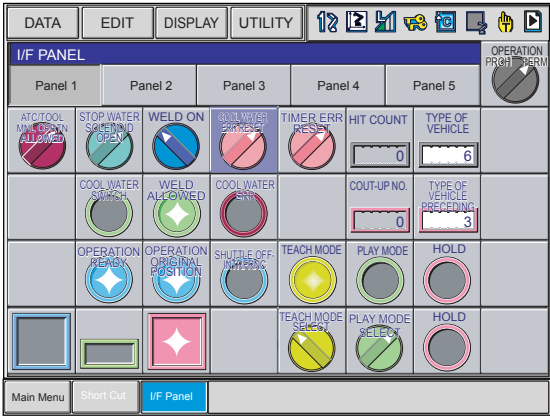
■ **Panel screen operation by touch panel**

Follow the operations as below to perform ON/OFF operation on the panel screen by touch panel.

Operation	Explanation
1	<p>Hold down [INTERLOCK] and select an appropriate button on the touch panel.</p> 

■ **Panel screen operation by PP keys**

Follow the operations as below to perform ON/OFF operation on the panel screen by PP keys.

Operation	Explanation
1	<p>Use the arrow key to move to the place where ON/OFF operation is to be performed.</p> 
2	<p>Hold down [INTERLOCK] and press [SELECT].</p>



Information!

Set the item "INTERLOCK ENABLE" in the I/F PANEL SETUP screen to "PERMIT", and operations are allowed without pressing the [INTERLOCK] key.
See the item "Interlock enable" in the table "Data of each setting items" of "Details on interface panel setting items" on page 23.



Information!

Set the following parameter to "1" to allow operations only by the touch panel (prohibiting the operations by cursor key).

Parameter: S2C301 (IF panel operation by cursor key)

0: Enable, 1: Disable

■ Numeric display

Follow the operations as below to display numeric values on the panel screen.

	Operation	Explanation
1	Set the item "PANEL TYPE" in the I/F PANEL SETUP screen to either "Counter" or "Preset counter".	Numeric value will be displayed in either three-digit number or six-digit number according to the setting of indicated value. If the indicated value exceeds the specified number of digits (three-digit or six-digit), an asterisk "*" appears instead of numeric value. Three-digit display: Six-digit display:

■ Input of numeric value

Follow the operations below to input numeric values.

	Operation	Explanation
1	Set the item "PANEL TYPE" in the I/F PANEL SETUP screen to "Preset counter".	
2	Hold down [INTERLOCK] and touch the icon of "Preset counter" or move the cursor to the icon of "Preset counter", then press [SELECT].	Numeric values can now be entered in the Preset counter. Three-digit display: → Six-digit display: →
3	Enter numeric values with the numeric keypad.	Numeric values in the range from -99 to 999 can be entered in the three-digit preset counter. Numeric values in the range from -99999 to 999999 can be entered in the six-digit preset counter. No other numeric value is unable to be set except for the possible range of settings shown below: <Possible range of settings> B-variable: 0 to 255 I-variable: -32768 to 32767 Register: 0 to 65535





Information!

Numeric values cannot be entered in the preset counter during playback.

■ **Change of panel screen**



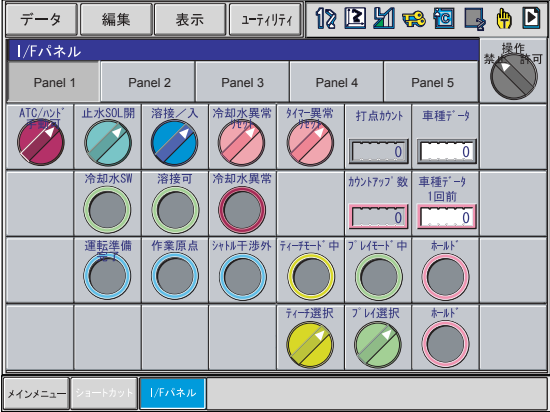
Follow the operations as below to change the file number of interface panel.

There are two ways of changing file number.

	Operation	Explanation
1	Press the page key  .	The panel page changes one by one in the forward direction. Hold down [SHIFT] and press  to change the panel in the backward direction
2	Instruct the page to be shown by the Touch panel directly.	Press [Shift] to show panel pages 6 to 10.

■ **Change of language on screen**

The language can be changed only when bilingual function is enabled.

	Operation	Explanation
1	Hold down [SHIFT] and press  .	
2	The language on the screen changes.	



Information!

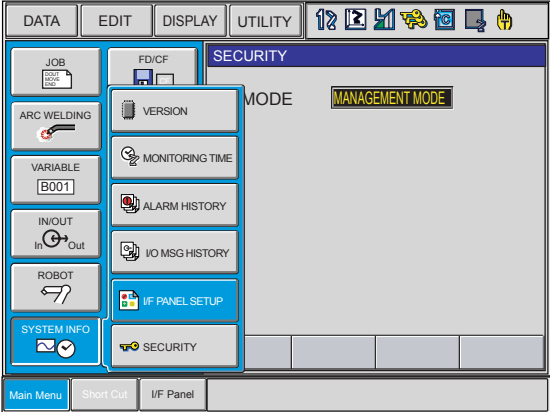
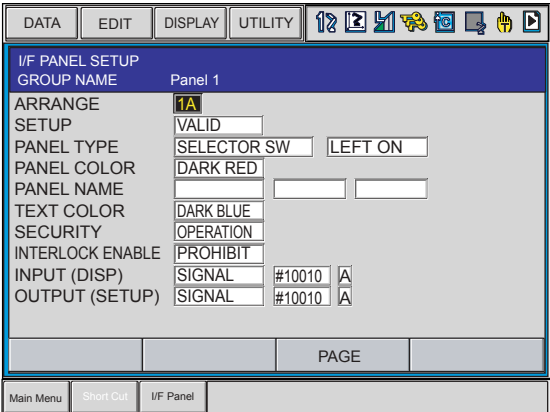
Unless panel names are set in each language mode, the panel names will not be displayed when the screen is changed to the subject language mode.

In such a case, set the panel names in the subject language mode.

3. Data setting and touch panel I/F instructions

Set the security level to "Management" mode.

Follow the operations as below to open I/F panel setting screen.

	Operation	Explanation
1	Select {SYSTEM INFO} under the main menu.	 <p>The screenshot shows the main menu with a top bar containing 'DATA', 'EDIT', 'DISPLAY', and 'UTILITY'. A vertical list of icons is on the left, with 'SYSTEM INFO' highlighted in blue. A secondary menu is open over 'SYSTEM INFO', listing options like 'VERSION', 'MONITORING TIME', 'ALARM HISTORY', 'I/O MSG HISTORY', 'I/F PANEL SETUP', and 'SECURITY'. The 'I/F PANEL SETUP' option is highlighted. The background shows 'SECURITY' mode set to 'MANAGEMENT MODE'. At the bottom, there are buttons for 'Main Menu', 'Short Cut', and 'I/F Panel'.</p>
2	Select {I/F PANEL SETUP}.	<p>The I/F panel setting screen appears.</p>  <p>The screenshot shows the 'I/F PANEL SETUP' screen. The top bar is the same as the previous screen. The main area contains the following settings: 'GROUP NAME' is 'Panel 1'; 'ARRANGE' is '1A'; 'SETUP' is 'VALID'; 'PANEL TYPE' is 'SELECTOR SW' with 'LEFT ON' selected; 'PANEL COLOR' is 'DARK RED'; 'PANEL NAME' has two empty input fields; 'TEXT COLOR' is 'DARK BLUE'; 'SECURITY' is 'OPERATION'; 'INTERLOCK ENABLE' is 'PROHIBIT'; 'INPUT (DISP)' is 'SIGNAL' with '#10010' and 'A'; 'OUTPUT (SETUP)' is 'SIGNAL' with '#10010' and 'A'. At the bottom right, there is a 'PAGE' button. At the bottom, there are buttons for 'Main Menu', 'Short Cut', and 'I/F Panel'.</p>

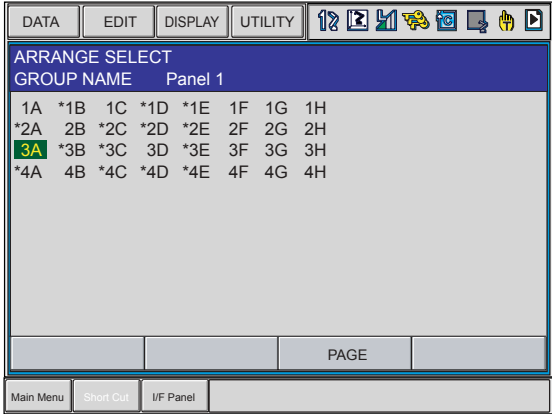
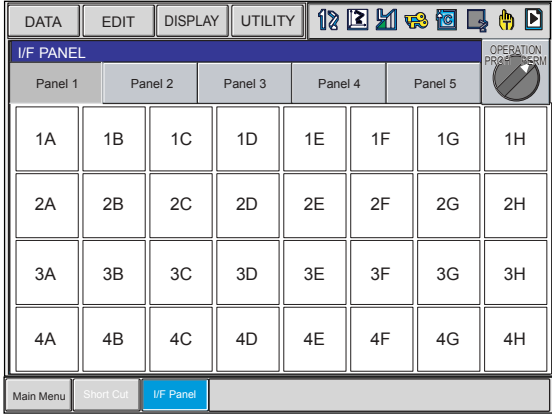

3.1 Setting procedure

The following describe the process on how to set up based on the table “Example of I/F panel setting” on page 14.

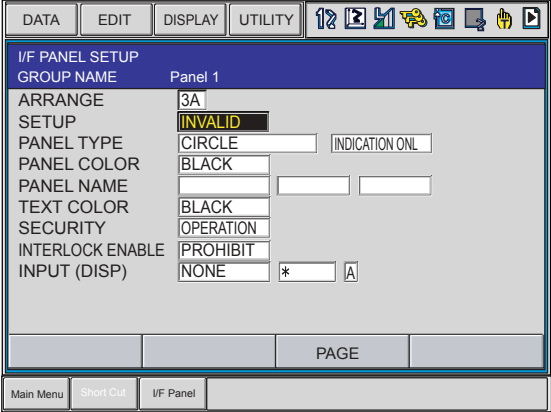
Example of I/F panel setting

Items	Set data
Arrangement	1A
Setup	Valid
Panel type	Counter Three-digit display
Panel color	Black
Panel name	Top of the counter (1st line) Middle of the counter (2nd line) Bottom of the counter (3rd line)
Text color	Black
Security	Operation mode
Interlock enable	Prohibited
Input	Variable: B B000

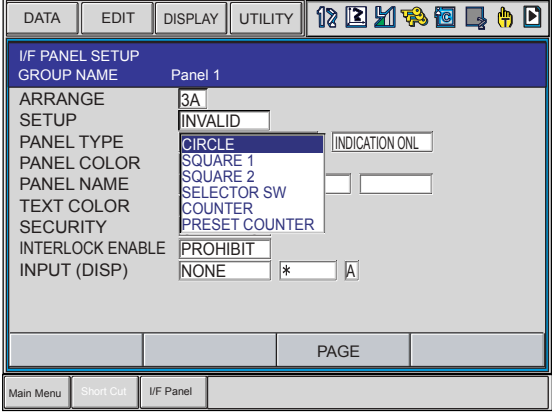
■ **I/F panel setting data and display position**

	Operation	Explanation
1	Move the cursor to the item "ARRANGE" in the I/F panel setting screen, then press [SELECT].	<p>The arrangement setting screen appears. An item with an asterisk "*" indicates that the item has already been set (the setting is enabled).</p>  <p>The display position of set data is as follows:</p> 
2	Move the cursor to the position where the item is to be arranged and press [SELECT].	<p>Using the page key  or the [PAGE] button changes the control group of the arrangement setting screen and a user can select the position where the item is to be arranged.</p>

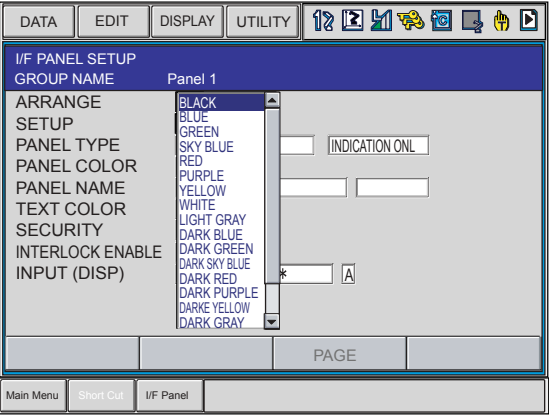
■ **Editing of setup**

	Operation	Explanation
1	Move the cursor to the item "SETUP" in the I/F panel setting screen and press [SELECT].	<p>The status of "SETUP" switches between "VALID" and "INVALID" with each pressing of [SELECT]. If the items "INPUT (DISP)" and "OUTPUT (SETUP)" in the I/F panel setting screen are not set, the status of "SETUP" cannot be set to "VALID". (See the no.2 "SETUP" in the table "Data of each setting items" of " " .)</p>  <p>The screenshot shows the 'I/F PANEL SETUP' screen for 'Panel 1'. The 'SETUP' status is currently 'INVALID'. Other settings include: ARRANGE: 3A, PANEL TYPE: CIRCLE, PANEL COLOR: BLACK, TEXT COLOR: BLACK, SECURITY: OPERATION, INTERLOCK ENABLE: PROHIBIT, and INPUT (DISP): NONE. A 'PAGE' button is visible at the bottom of the screen.</p>

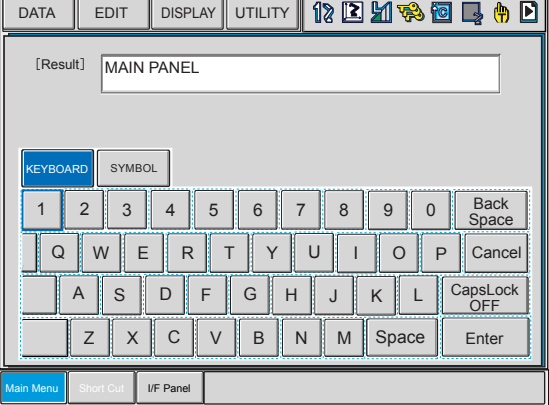
■ **Editing of panel type**

	Operation	Explanation
1	Move the cursor to the item "PANEL TYPE" in the I/F panel setting screen and press [SELECT].	<p>The list of panel types is displayed.</p>  <p>The screenshot shows the 'I/F PANEL SETUP' screen for 'Panel 1'. A list of panel types is displayed over the 'PANEL TYPE' field: CIRCLE, SQUARE 1, SQUARE 2, SELECTOR SW, COUNTER, and PRESET COUNTER. The 'CIRCLE' option is currently selected. Other settings are the same as in the previous screenshot.</p>
2	Move the cursor to the panel type to be selected and press [SELECT].	

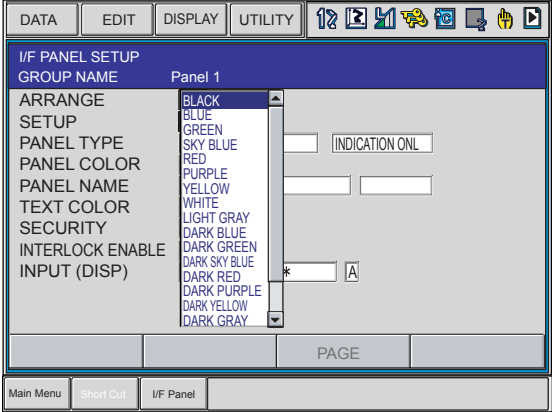
■ **Editing of panel color**

	Operation	Explanation
1	Move the cursor to the item "PANEL COLOR" in the I/F panel setting screen and press [SELECT].	<p>The list of panel colors is displayed.</p>  <p>The screenshot shows the 'I/F PANEL SETUP' window with 'Panel 1' selected. A list of colors is displayed in a scrollable area, including BLACK, BLUE, GREEN, SKY BLUE, RED, PURPLE, YELLOW, WHITE, LIGHT GRAY, DARK BLUE, DARK GREEN, DARK SKY BLUE, DARK RED, DARK PURPLE, DARK YELLOW, and DARK GRAY. The 'PANEL COLOR' item is highlighted. Other settings like 'ARRANGE SETUP', 'PANEL TYPE', 'PANEL NAME', 'TEXT COLOR', 'SECURITY', and 'INTERLOCK ENABLE INPUT (DISP)' are visible on the left. A 'PAGE' button is at the bottom right, and a status bar at the very bottom shows 'Main Menu', 'Short Cut', and 'I/F Panel'.</p>
2	Move the cursor to the panel color to be selected and press [SELECT].	

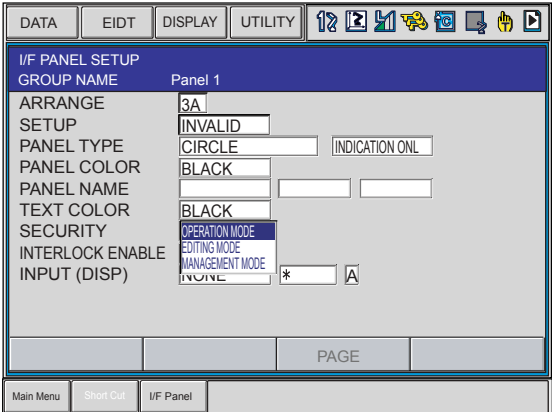
■ **Editing of panel name**

	Operation	Explanation
1	Move the cursor to the item "PANEL NAME" in the I/F panel setting screen and press [SELECT].	<p>The soft key pad screen appears.</p>  <p>The screenshot shows the 'I/F PANEL SETUP' window with a text input field containing '[Result] MAIN PANEL'. Below the input field is a virtual keyboard with 'KEYBOARD' and 'SYMBOL' tabs. The keyboard includes numeric keys (1-0), letters (QWERTYUIOP, ASDFGHJKL, ZXCVBNM), and function keys like 'Back Space', 'Cancel', 'CapsLock OFF', 'Space', and 'Enter'. A status bar at the bottom shows 'Main Menu', 'Short Cut', and 'I/F Panel'.</p>
2	Enter the desired panel name up to 10 one-byte characters.	

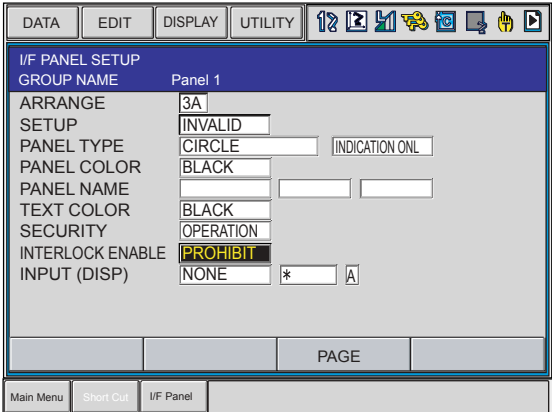
■ **Editing of text color**

	Operation	Explanation
1	Move the cursor to the item "TEXT COLOR" in the I/F panel setting screen and press [SELECT].	<p>The list of text colors is displayed.</p> 
2	Move the cursor to the text color to be selected and press [SELECT].	

■ **Editing of security**

	Operation	Explanation
1	Move the cursor to the item "SECURITY" in the I/F panel setting screen and press [SELECT].	<p>The list of security modes is displayed.</p> 
2	Move the cursor to the security mode to be selected and press [SELECT].	

■ **Editing of interlock enable**

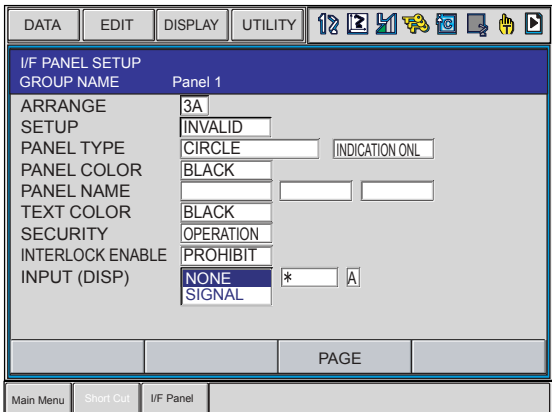
Operation	Explanation
1 Move the cursor to the item "INTERLOCK ENABLE" in the I/F panel setting screen and press [SELECT].	<p>The status of INTERLOCK ENABLE switches between "PROHIBIT" and "PERMIT" with each pressing of [SELECT].</p>  <p>The screenshot shows the 'I/F PANEL SETUP' screen for 'Panel 1'. The 'INTERLOCK ENABLE' option is highlighted in yellow, and its value is 'PROHIBIT'. Other options include ARRANGE (3A), SETUP (INVALID), PANEL TYPE (CIRCLE), PANEL COLOR (BLACK), PANEL NAME, TEXT COLOR (BLACK), SECURITY (OPERATION), and INPUT (DISP) (NONE).</p>



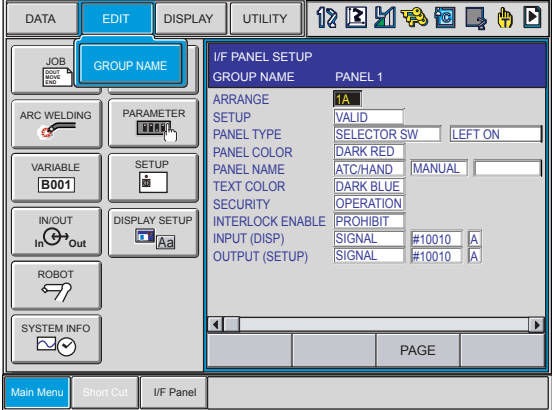
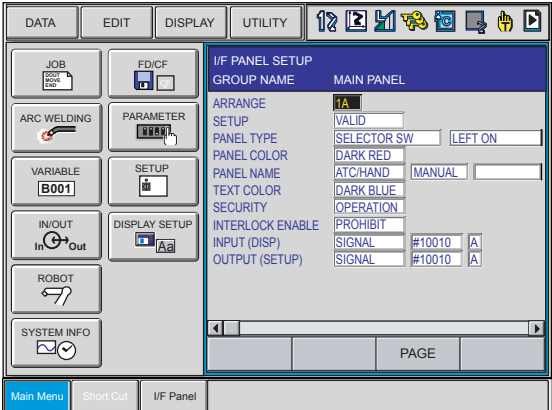
Information!

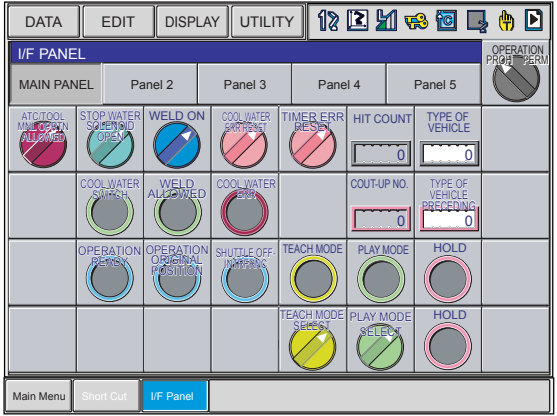
Be aware that operations are allowed without pressing the [INTERLOCK] key simultaneously if the item "INTERLOCK ENABLE" is set to "PERMIT".

■ **Editing of input**

Operation	Explanation
1 Move the cursor to the item "INPUT (DISP)" in the I/F panel setting screen and press [SELECT].	<p>The list of input items is displayed.</p>  <p>The screenshot shows the 'I/F PANEL SETUP' screen for 'Panel 1'. The 'INPUT (DISP)' option is highlighted in blue, and its value is 'NONE'. Other options are the same as in the previous screenshot.</p>
2 Move the cursor to the input no. setting area on the right of {INPUT (DISP)} and press [SELECT].	<p>Enter the input no. with the numeric keypad and press [ENTER].</p>

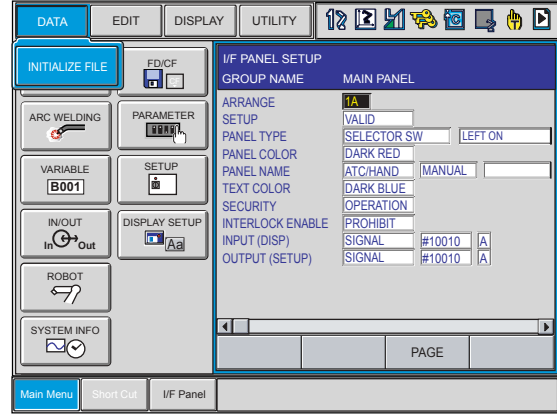
■ **Editing of group name**

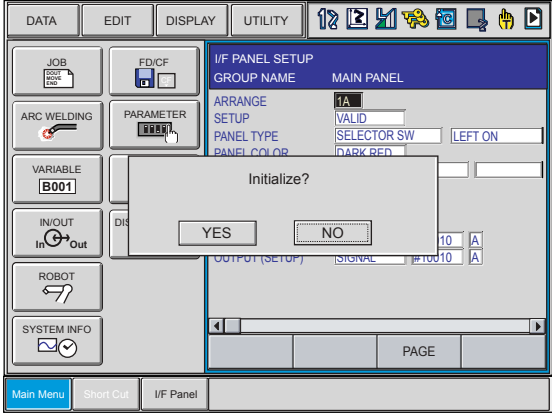
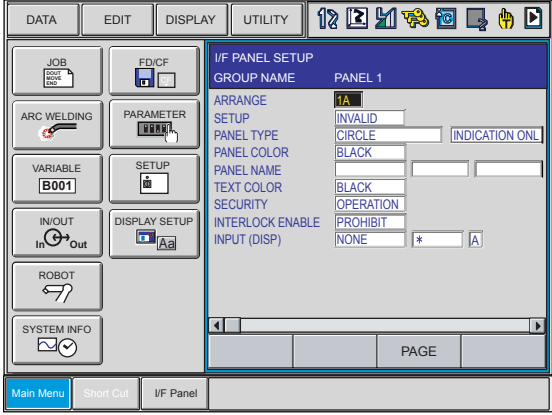
	Operation	Explanation
1	Select {EDIT} from the menu on the I/F panel setting screen.	
2	Select {Group name}.	
3	Type in a new group name.	<p>Enter a new group name (up to 12 one-byte characters). The current group name indicated in the input area can be rewritten to a new group name by partially changing it.</p> <p>i Information! For character entry operation, refer to "Character Input" in NX100 OPERATOR'S MANUAL.</p> <p>The new group name is displayed in the I/F panel setting screen.</p> 

Operation	Explanation
4 Press {I/F PANEL} to display the I/F PANEL screen.	<p>The new group name is displayed in the I/F panel setting screen.</p>  <p>The screenshot shows the I/F PANEL screen with a top menu bar containing DATA, EDIT, DISPLAY, and UTILITY. Below the menu bar, there are five panels (MAIN PANEL, Panel 2, Panel 3, Panel 4, Panel 5) each with several status indicators and controls. At the bottom, there is a navigation bar with Main Menu, Short Cut, and I/F Panel buttons.</p>

■ **Initialization of set data**

Perform the following procedures to completely initialize the data which have been set.

Operation	Explanation
1 Select {DATA} from the menu on the I/F panel setting screen.	 <p>The screenshot shows the I/F PANEL SETUP screen. On the left side, there is a menu with options: INITIALIZE FILE, ARC WELDING, VARIABLE (B001), IN/OUT, ROBOT, and SYSTEM INFO. The INITIALIZE FILE option is selected. On the right side, there is a table of settings for the I/F PANEL SETUP, including GROUP NAME, ARRANGE, SETUP, PANEL TYPE, PANEL COLOR, PANEL NAME, TEXT COLOR, SECURITY, INTERLOCK ENABLE, INPUT (DISP), and OUTPUT (SETUP). At the bottom, there is a navigation bar with Main Menu, Short Cut, and I/F Panel buttons.</p>

	Operation	Explanation
2	<p>Select {Initialize file}. Select {YES} in the confirmation dialog box to proceed with initialization.</p>	
3	<p>The file has been initialized.</p>	

3.2 Details on interface panel setting items

The following describe details on the setting items of the Interface panel screen.
Refer to them as required when setting the Interface panel data.

Data of each setting items

No.	Items	Explanations
1	Arrangement	32 positions in total: 1A to 4H
2	Setup	0: INVALID, 1: VALID VALID ⇒ INVALID: the setup status can be changed from Valid to Invalid without conditions. INVALID ⇒ VALID: When the set parameter is OK after checking, the status can be changed from Invalid to Valid. The following setting is required for VALID status: <When Icon type is circle, square or selector switch> Input: I/O Output: none or within the range of general output signals <When Icon type is counter> Input: B-variable, I-variable, or register <When Icon type is preset counter> Input: B-variable, I-variable, or register Output: B-variable, I-variable, or register * If the setting item is edited in the Valid status, the status becomes Invalid.
3	Panel type	0: Circle indication light (display only) 1: Circle indication light (push button) 2: Circle indication light (push-lock/ 3: Square indication light1 (display only) push-release button) 4: Square indication light1 (push button) 5: Square indication light1 (push-lock/ push-release button) 6: Square indication light2 (display only) 7: Square indication light2 (push button) 8: Square indication light2 (push-lock/ 9: Selector switch (left: ON) push-release button) 10: Selector switch (right: ON) 11: Selector switch (2-point output) 12: Selector switch (panel operation) 16: Counter (3-digit display) 17: Counter (6-digit display) 18: Preset counter (3-digit display) 19: Preset counter (6-digit display)
4	Panel color	0: Black, 1: Blue, 2: Green, 3: Sky blue, 4: Red, 5: Purple, 6: Yellow, 7: White, 8: Light gray, 9: Dark blue, 10: Dark green, 11: Dark sky blue, 12: Dark red, 13: Dark purple, 14: Dark yellow, 15: Dark gray, 16: Orange
5	Panel name	10 one-byte characters for one line Three lines can be indicated at maximum.
6	Text color	0: Black, 1: Blue, 2: Green, 3: Sky blue, 4: Red, 5: Purple, 6: Yellow, 7: White, 8: Light gray, 9: Dark blue, 10: Dark green, 11: Dark sky blue, 12: Dark red, 13: Dark purple, 14: Dark yellow, 15: Dark gray, 16: Orange
7	Security	0: Operation mode, 1: Editing mode, 2: Management mode
8	Interlock enable	0: Prohibited, 1: Permitted

Data of each setting items

No.	Items	Explanations	
9	Input	ID	0: Invalid, 1: I/O, 2: B-variable, 3: I-variable, 4: Register
		No.	Numbers differ according to the ID. (See the table "Input/output allocation status" on page 25)
		Contact	OFF: A-contact, ON: B-contact The setting is invalid when the ID is not set to general input/output.
10	Output	ID	0: Invalid, 1: I/O, 2: B-variable, 3: I-variable, 4: Register
		No.	Numbers differ according to the ID. (See the table "Input/output allocation status" on page 25.)
		Contact	OFF: A-contact, ON: B-contact The setting is invalid when the ID is not set to general input/output.
11	Group name	Requires 12 one-byte characters per 1 line: 1-line display.	



Information!

Shown below is the status of output signals. The status varies depending on which of "push button" and "push-lock/push-release button" is selected by pressing "circle indication light", "square indication light 1" or "square indication light 2".

When selecting "push button":

An input signal (indicated value) of when pressing "push button" is reversed to an output signal (set value).

The output signal (set value) of when releasing the button returns to the previous input status of when pressing the button (indicated value).

- ① When pressing the button: Input = ON ⇒ Output = OFF
 Input = OFF ⇒ Output = ON
- ② When releasing the button: Input = ON at the time of ① ⇒ Output = ON
 Input = OFF at the time of ① ⇒ Output = OFF

When selecting "push-lock/push-release button":

An input signal (indicated value) of when pressing "push-lock/push-release button" is reversed to an output signal (set value).

The status of signal does not change even when the button is released. (The status is held.)

- ① When pressing the button: Input = ON ⇒ Output = OFF
 Input = OFF ⇒ Output = ON
- ② When releasing the button: Hold the status (= ①) of output

When selecting "2-point output" by selector switch, the status of output signal of when pressing a selector switch is as follows:

When pressing a selector switch while the switch is pointing left:

Output 1 = OFF, Output 2 = ON

When pressing a selector switch while the switch is pointing right:

Output 1 = ON, Output 2 = OFF

See the following table "Input/output allocation status " when allocating input/output signals.

Input/output allocation status

ID	Items	Range	Input allocation	Output allocation	Icon type
1	General input	#00010 to #01287 (1024 signals)	enable	disable	Circle/Square indication light Selector switch
	General output	#10010 to #11287 (1024 signals)	enable	enable	Circle/Square indication light Selector switch
	External input	#20010 to #21287 (1024 signals)	enable	disable	Circle/Square indication light Selector switch
	External output	#30010 to #31287 (1024 signals)	enable	disable	Circle/Square indication light Selector switch
	Special input	#40010 to #40807 (640 signals)	enable	disable	Circle/Square indication light Selector switch
	Special output	#50010 to #51007 (800 signals)	enable	disable	Circle/Square indication light Selector switch
	I/F panel	#60010 to #60647 (512 signals)	enable	enable	Circle/Square indication light Selector switch
	Auxiliary relay	#70010 to #79997 (7992 signals)	enable	disable	Circle/Square indication light Selector switch
	Control input	#80010 to #80647 (512 signals)	enable	disable	Circle/Square indication light Selector switch
	Pseudo input	#82010 to #82127 (96 signals)	enable	disable	Circle/Square indication light Selector switch
	DL input	#22010 to #23287 (1024 signals)	enable	disable	Circle/Square indication light Selector switch
DL output	#32010 to #33287 (1024 signals)	enable	disable	Circle/Square indication light Selector switch	
2	B-variable	B000 to B099 (100 signals)	enable	-	Counter
			enable	enable	Preset counter
3	I-variable	I000 to I099 (100 signals)	enable	-	Counter
			enable	enable	Preset counter
4	Register	M000 to M499 (500 signals)	enable	-	Counter
			enable	enable	Preset counter











Information!


The table above describes the status of input/output allocation on I/F panel.
Don't refer to this allocation table when allocating input/output signals for concurrent I/O program.

The following table "Touch panel I/F" describes the the buttons corresponding to icon types. See the table when setting icon types.

Touch panel I/F

No.	Items	Icon	Icon type
0, 1, 2	Circle indication light	 ON  OFF	<p>Indicates the status of allocated signals.</p> <p>The light turns on when the status of input signal (indicated value) is ON, whereas it turns off when OFF.</p>
3, 4, 5	Square indication light1	 ON  OFF	<p>Indicates the status of allocated signals.</p> <p>The light turns on when the status of input signal (indicated value) is ON, whereas it turns off when OFF.</p>
6, 7, 8	Square indication light2	 ON  OFF	<p>Indicates the status of allocated signals.</p> <p>The light turns on when the status of input signal (indicated value) is ON, whereas it turns off when OFF.</p>
9, 10, 11, 12	Selector switch	 	<p>Indicates the status of allocated signals.</p> <p>When a selector switch is set to "left: ON" or "2-point output): The switch points left when the status of input signal (indicated value) is ON, whereas it points right when OFF.</p> <p>When a selector switch is set to "right: ON": The switch points right when the status of input signal (indicated value) is ON, whereas it points left when OFF.</p>

Touch panel I/F

No.	Items	Icon	Icon type
16, 17, 18, 19	Counter (3 digits) Counter (6 digits)		Indicates the allocated variables or registers. * The BG color of the preset counter is white.

4. Save and load of set data

Set the security level to "Management" mode. (See "Editing of security" on page 18)

	Operation	Explanation
1	Select {FD/PC CARD} under the main menu.	
2	Select {SAVE} or {LOAD}.	
3	Move the cursor to "SYSTEM DATA" and press [SELECT].	
4	Move the cursor to "I/F PANEL DATA" and press [SELECT].	
5	Press [ENTER].	
6	Move the cursor to "YES" and press [SELECT].	

5. Editing saved data

The following explain how to modify the data which is saved in FD/PC CARD on PC.

<Data example>

```
//IFPANEL 1
//NAME Panel 1, Panel 1
1A,0,0,0,1,NAME1,NAME2,NAME3,1,1,0,11111,0,0,0,0,0,0,0,NAME1,NAME2,NAME3,0
1B,1,0,0,1,NAME1,NAME2,NAME3,1,1,0,11111,0,0,22222,1,0,0,0,NAME1,NAME2,NAME3,0
1C,1,0,0,1,,NAME2,,1,1,0,11111,0,0,22222,1,0,0,0,NAME1,NAME2,NAME3,0
.
.
//IFPANEL 10
///NAME Panel 10, Panel 10
.
.
4G,0,0,0,1,NAME1,NAME2,NAME3,1,1,0,11111,0,0,0,0,0,0,0,NAME1,NAME2,NAME3,0
4H,1,0,0,1,NAME1,NAME2,NAME3,1,1,0,11111,0,0,22222,1,0,0,0,NAME1,NAME2,NAME3,0
```

<Details on each data items>

Interface panel data: //IFPANEL <N1>

<N1>: File number of interface panel data

Interface panel group name: ///NAME <N2>,<N3>

<N2>: First language group name (12 one-byte characters)

<N3>: Second language group name (12 one-byte characters)

<Item data>

<D1>,<D2>,<D3>,<D4>,<D5>,<D6>,<D7>,<D8>,<D9>,<D10>,<D11>,<D12>,<D13>,<D14>,<D15>,<D16>,<D17>,<D18>,<D19>,<D20>,<D21>,<D22>,<D23>

<D1>: Panel arrangement

1A,1B,1C,1D,1E,1F,1G,1H,2A,...,4F,4G,4H Total: 32 positions (2 one-byte characters); the lower-case letters cannot be used.

<D2>: Setup 0: Invalid 1: Valid

<D3>: Panel type

- 0: Circle indication light (display only)
- 1: Circle indication light (push button)
- 2: Circle indication light (push-lock/push-release button)
- 3: Square indication light1 (display only)
- 4: Square indication light1 (push button)
- 5: Square indication light1 (push-lock/push-release button)
- 6: Square indication light2 (display only)
- 7: Square indication light2 (push button)
- 8: Square indication light2 (push-lock/push-release button)
- 9: Selector switch (left: ON)
- 10: Selector switch (right: ON)
- 11: Selector switch (2-point output)
- 12: Selector switch (panel operation)

- 13: Square indication light3 (display only)
- 14: Square indication light3 (push button)
- 15: Square indication light3 (push-lock/push-release button)
- 16: Counter (3-digit display)
- 17: Counter (6-digit display)
- 18: Preset counter (3-digit display)
- 19: Preset counter (6-digit display)
- <D4>: Panel color
 - 0: Black 1: Blue 2: Green 3: Sky blue 4: Red 5: Purple 6: Yellow 7: White
 - 8: Light gray 9: Dark blue 10: Dark green 11: Dark sky blue 12: Dark red
 - 13: Dark purple 14: Dark yellow 15: Dark gray 16: Orange
- <D5>: Text color
 - Same as the panel color
- <D6>: First language panel name on the 1st line (10 one-byte characters)
- <D7>: First language panel name on the 2nd line (10 one-byte characters)
- <D8>: First language panel name on the 3rd line (10 one-byte characters)
- <D9>: Security 0: Operation mode 1: Editing mode 2: Management mode
- <D10>: Interlock enable 0: Prohibited 1: Permitted
- <D11>: Input type
 - 0: None
 - 1: Signal (numbers are 5-digit)
 - 2: B-variable (B000 to B099: numbers are 3-digit)
 - 3: I-variable (I000 to I099: numbers are 3-digit)
 - 4: Register (M000 to M499: numbers are 3-digit)
- <D12>: Number
- <D13>: Input contact 0: A-contact 1: B-contact
- <D14>: Output type 1
 - 0: None
 - 1: Signal (numbers are 5-digit)
 - 2: B-variable (B000 to B099: numbers are 3-digit)
 - 3: I-variable (I000 to I099: numbers are 3-digit)
 - 4: Register (M000 to M499: numbers are 3-digit)
- <D15>: Number
- <D16>: Output contact 1 0: A-contact 1: B-contact
- <D17>: Output type 2
 - 0: None
 - 1: Signal (numbers are 5-digit)
 - 2: B-variable (B000 to B099: numbers are 3-digit)
 - 3: I-variable (I000 to I099: numbers are 3-digit)
 - 4: Register (M000 to M499: numbers are 3-digit)
- <D18>: Number
- <D19>: Output contact 2 0: A-contact 1: B-contact
- <D20>: Second language panel name on the 1st line (10 one-byte characters)
- <D21>: Second language panel name on the 2nd line (10 one-byte characters)
- <D22>: Second language panel name on the 3rd line (10 one-byte characters)
- <D23>: Optional 0: Standard



Warning!

- ◆ Syntax error will occur when inserting line feeds into the data "Data example".
- ◆ Syntax error will occur when the number of commas differs from the saved data in FD/PC card.
- ◆ Define capital letters for variables.
- ◆ Wrong signal range or type instruction will make the attribute invalid when loading.
- ◆ Loading for one item is possible as follow;
//IFPANEL 4
//NAME Panel 4, Panel 4
1A,0,0,0,1,NAME1,NAME2,NAME3,1,1,0,11111,0,0,0,0,0,0,NAME1,NAME2,NAME3,0

6. Parameters

6.1 Clearing the status of signals

By setting parameters, input/output signals at the time of power supply ON or mode change can be set to "hold" or "clear".

The possible settings and the timing of status signal settings are as follows:

Signals	Timing of setting the status of signals	Parameters	Set values
General output signals	Mode change	S4C032 to S4C039	0: Hold / 1: Clear
General output signals	Power supply ON	S2C187	0: Hold / 1: Clear
Auxiliary relay signals	Power supply ON	S4C040 to S4C055	0: Clear / 1: Hold
I/F panel signals	Power supply ON	S4C330 to S4C333	0: Hold / 1: Clear

*Notice that auxiliary relay signals have different set values of parameters from general output signals or I/F panel signals.

"Hold" and "Clear" of the status of signals are defined as follows:

"Hold" means to keep the status of the previous one at the time of when the power supply is turned OFF or the mode is changed.

"Clear" means to turn the status of signals into OFF regardless of the previous status at the time of when the power supply is turned OFF or the mode is changed.

■ Status of general output signals at mode change

By setting parameters from S4C032 to S4C039, it allows to set the status of general output signals (#10010 to #11287) at the time of when changing mode. For the parameter settings, refer to the table below.

Parameters	General output signals	Set values	Explanation
S4C032	#10010 to #10167	(Bit specification) 0: Hold, 1: Clear	When a bit specification is set to "1", the status of general output signals will be cleared at the time of changing mode. (Bit specification is to be set by a series of 8 signals.)
S4C033	#10170 to #10327		
S4C034	#10330 to #10487		
S4C035	#10490 to #10647		
S4C036	#10650 to #10807		
S4C037	#10810 to #10967		
S4C038	#10970 to #11127		
S4C039	#11130 to #11287		

■ Status of general output signals at power supply ON

By setting parameter S2C187, it allows to set the status of general output signals (#10010 to #11287) at the time of when turning the power supply ON. For the parameter setting, refer to the table below.

Parameters	General output signals	Set values	Explanation
S2C187	#10010 to #11287	0: Hold, 1: Clear	When S2C187 is set to "1", the status of general output signals will be cleared at the time of power supply ON. (All signals are to be set together.)

■ Status of auxiliary relay signals at power supply ON

By setting parameters from S4C040 to S4C055, it allows to set the status of auxiliary relay signals (#70010 to #79997) at the time of when turning the power supply ON. For the parameter settings, refer to the table below.

Parameters	Auxiliary relay signals	Set values	Explanation
S4C040	#70010 to #70647	(Bit specification) 0: Clear, 1: Hold	When a bit specification is set to "1", the status of auxiliary relay signals will be held at the time of power supply ON. (Bit specification is to be set by a series of 32 signals.)
S4C041	#70650 to #71287		
S4C042	#71290 to #71927		
S4C043	#71930 to #72567		
S4C044	#72570 to #73207		
S4C045	#73210 to #73847		
S4C046	#73850 to #74487		
S4C047	#74490 to #75127		
S4C048	#75130 to #75767		
S4C049	#75770 to #76407		
S4C050	#76410 to #77047		
S4C051	#77050 to #77687		
S4C052	#77690 to #78327		
S4C053	#78330 to #78967		
S4C054	#78970 to #79607		
S4C055	#79610 to #79997		

■ **Status of I/F panel signals at power supply ON**

By setting parameters from S4C330 to S4C333, it allows to set the status of I/F panel signals (#60010 to #60647) at the time of when turning the power supply ON. For the parameter settings, refer to the table below.

Parameters	I/F panel signals	Set values	Explanation
S4C330	#60010 to #60167	(Bit specification) 0: Hold, 1: Clear	When a bit specification is set to "1", the status of I/F panel signals will be cleared at the time of power supply ON. (Bit specification is to be set by a series of 8 signals.)
S4C331	#60170 to #60327		
S4C332	#60330 to #60487		
S4C333	#60490 to #60647		

6.2 Allocation of general input signals to interface panel screens

By setting general input signal numbers to parameters from S4C350 to S4C360, general input signals can be allocated to interface panel screens. For the parameter settings, refer to the table below.

Parameters	Corresponding panel screens	Set values	Explanation
S4C350	NONE	0: No function 1 to 1024 (Integral number): General input signal numbers	Allocates the general input signals set for parameters to the panel screens corresponded to the parameters.
S4C351	Panel 1		
S4C352	Panel 2		
S4C353	Panel 3		
S4C354	Panel 4		
S4C355	Panel 5		
S4C356	Panel 6		
S4C357	Panel 7		
S4C358	Panel 8		
S4C359	Panel 9		
S4C360	Panel 10		

■ **Notification of the status of general input signals**

	Operation	Explanation
1	Set general input signal numbers to the parameters from S4C350 to S4C360. (Set values are available from 1 to 1024)	<p>When the general input signal set to the parameter turns ON, the Interface panel gets activated automatically and the corresponding panel screen appears.</p> <p>If there are several corresponding screens, the panel of smaller number appears on the display.</p> <p>However, when the signal set to S4C350 (which has no corresponding panel) turns ON, the panel screen of the previous one appears on the display.</p> <p>When the signals set from S4C351 to S4C360 turn ON, the page button (on which the group name is indicated) changes its color in the corresponding panel.</p>



Information!

In the cases below, the [I/F Panel] button flashes in the lower left of the display notifying the "ON" status of the general input signals set for the parameters.

- ◆ The case when the Interface panels are unable to get activated (during inputting characters or numeric values) when the general input signals set for the parameters turn ON.
- ◆ The case when a page button of the corresponding panel is not shown when the general input signals set for the parameters turn ON.

Notes

MOTOMAN Group companies:

- AT MOTOMAN robotec GmbH**
Am concorde Park 1, B6/108-110,
AT-2320 Schwechat-Wien, Austria
Phone +43-1-707-9324-15
- CZ MOTOMAN robotec Czech s.r.o.**
Jeremiasova 1422/7b, CZ-155 00 Prague, Czech Republic
Phone +420-251-618-430
- DE MOTOMAN robotec GmbH**
Im Katzenforst 2, DE-61476 Kronberg/Taunus, Germany
Phone: +49-6173-60-77-30
- DK MOTOMAN Robotics Europe AB**
Anelystparken 47A, DK-8381 Tilst, Denmark
Phone: +45-7022-2477
- ES MOTOMAN Robotics Iberica S.L.**
Avenida Marina 56, Parcela 90, ES-08830
St. Boi de Llobregat (Barcelona), Spain
Phone: +34-93-6303478
- FI MOTOMAN Robotics Finland OY**
Messinkikatu 2, FI-20380 Turku, Finland
Phone: +358-403000600
- FR MOTOMAN Robotics SARL**
Rue Nungesser et Coli, D2A Nantes-Atlantique,
FR-44860 Saint-Aignan-de-Grand-Lieu, France
Phone: +33-2-40131919
- IT MOTOMAN Robotics Italia SRL**
Via Emilia 1420/16, IT-41100 Modena, Italy
Phone: +39-059-280496
- NL MOTOMAN benelux B.V**
Zinkstraat 70, NL-4823 AC Breda, Netherlands
Phone: +31-76-5302305
- PT MOTOMAN Robotics Iberica S.L.**
Z. Ind. Aveiro Sul, Lote 21, N. S. Fátima, PT-3810 Aveiro,
Portugal
Phone: +351-234 943 900
- SE MOTOMAN Robotics Europe AB**
Box 504, SE-385 25 Torsås, Sweden
Phone: +46-480-417800
- SI MOTOMAN robotec d.o.o.**
Lepovce 23, SI-1310 Ribnica, Slovenia
Phone: +386-1-8372410

- SI RISTRO d.o.o.**
Lepovce 23, SI-1310 Ribnica, Slovenia
Phone: +386-61-8372410
- UK MOTOMAN Robotics UK Ltd**
Johnson Park, Wildmere Road, Banbury,
Oxon OX16 3JU, Great Britain
Phone: +44-1295-272755

Distributors:

- CZ Hadyna International spol. s.r.o.**
Ostrava-Marianske Hory +420 596 622 636
- CZ SP-Tech s.r.o.**
Nymburk +420 325 515 105
- CH Messer Schweisstechnik AG**
Dällikon +41-1-8471717
- GR Kouvalias Robotics**
Avlona Attica +30-22950 42902
- HU Rehm Hegesztéstechnika Kft**
Budapest +36-30-9510065
- IL KNT Engineering Ltd**
Beit Shemesh +972-2-9905882
- IL Uniweld Ltd**
Yavne +972-8-9328080
- NO Optimove as**
Lierstranda +47-32240600
- PL Rywal-RHC Sp.z.o.o**
Torun +48 56 66 93 800
- RU Weber Comechanics**
Moscow +7 495 105 88 87
- TR Teknodrom Robotics & Automation INC**
Gebze/Kocaeli +90 262 678 8820
- ZA Robotic Systems SA PTY Ltd**
Johannesburg +27-11-6083182

MOTOMAN Headquarters

MOTOMAN Robotics Europe AB
Box 4004, SE-390 04 Kalmar, Sweden
Phone: +46-480-417800, Fax: +46-480-417999
info@motoman.se
www.motoman.se

MOTOMAN robotec GmbH
Kammerfeldstraße 1, DE-85391 Allershausen, Germany
Phone: +49-8166-90-0, Fax: +49-8166-90-103
info@motoman.de
www.motoman.de

Specifications may be subject to change without notice

