HOW TO CHANGE ROBOT DESCENT TORQUE FOR EPIK, UNIK ROBOT

Warning : Only qualified personal change setting. changing factory setting might damage of robot, all is responsible by user.

1. **Open control box of top of robot.**
2. **Single arm robot has 3 Servo Motor Driver**
3. **3rd driver (all the way Right side) is UP/down servo motor Driver.**

Open cover of menu, There are 4 button

1st : Mode : Change setting : PN (1time) , UN (2 time), FN (3time)

2nd : Up arrow : Change number to go up

3rd : Down arrow : Change number to Down

4th : Left arrow (or Enter) : Save data (1 time) and go back to menu (2 times)

How to change Torque setting

1. **Press Mode (menu) Button : It wll blink PN000**
2. **Press up arrow and go to PN 401**
3. **Press Left arrow key**
4. **It will display 300 (1~300%) : Factory setting is 300%**
5. **Press down arrow key to change setting (100~150) : Do not save under 100. Robot arm will get alarm during high speed.**
6. **Press Left arrow key to save**
7. **Turn off robot main power and turn on robot main power .**

How to check current over load

1. **Press Mode (menu) Button : It wll blink PN000**
2. **Press Mode again (menu) Button : It wll blink UN000**
3. **Press up button go to UN003**
4. **Press Left arrow button : It will show -30**
5. **When you press up/down button number will increase or decrease.**

Chapter 5

Panel Operator

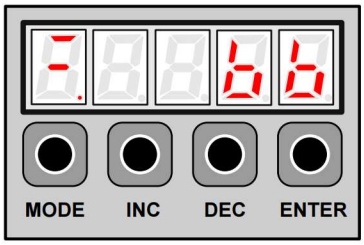
5.1 Basic Operation

5.1.1 Functions on Panel Operator

The panel operator is a built-in operator that consists of display section and keys located on the front panel of the servo drive.

Parameter setting, status display ,and execution of utility function are enabled using the panel operator.

The names and functions of the keys on the panel operator are shown as follows:



Panel Symbol	Corresponding Key Name	Function
▲	INC key	• To display the parameter settings and setting values. • To increase the setting value. • To decrease the setting value.
▼	DEC key	
M	MODE key	• To select a basic mode, such as the display mode, parameter setting mode, monitor mode, or utility function mode. • To save the setting during parameter setting and exit.
◄	ENTER key	To display the parameter settings and setting values, and release ararm.

Note: In this manual, the Panel Symbol is represented by Corresponding Key Name for easy understanding.

5.1.2 Resetting Servo Alarms

Servo alarms can be reset by pressing the ENTER key when the panel operator in display mode. Servo alarms can also be reset using the CN1-39(/ALM-RST) input signal.

There is no need to clear the servo alarms if it turns the main circuit power supply OFF.

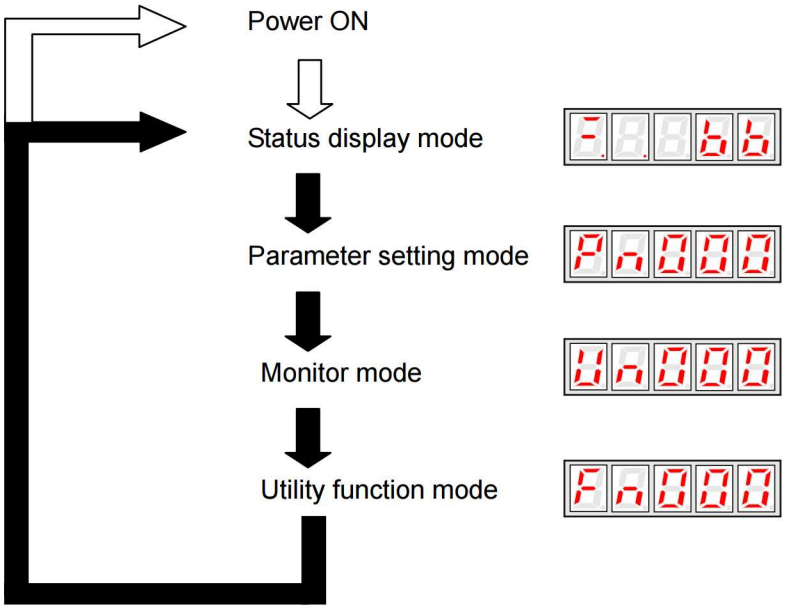
Note: After an alarm occurs, remove the cause of the alarm before resetting it.

5.1.3 Basic Mode Selection

The basic modes include status display mode, parameter setting mode, monitor mode, and utility function mode. Each time the MODE key is pressed, the next mode in the sequence is selected.

Select a basic mode to display the operation status, set parameters and operation references.

The basic mode is selected in the following order.



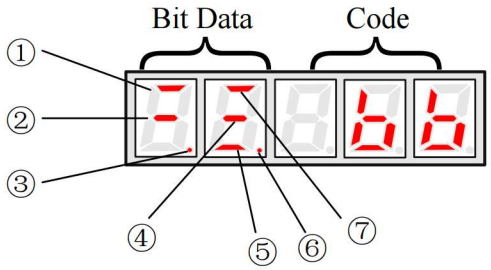
5.1.4 Status Display Mode

The status display mode displays the servo drive status as bit data and codes.

Selecting Status Display Mode

The status display mode is selected when the power supply is turned ON. If it is not displayed, select this mode by pressing MODE key.

Note that the display differs between the speed/torque control and position control types.



4.9.1 Internal Torque Limit

Maximum torque is always limited to the values set in the following parameters.

Pn401	Forward Torque Limit		Speed Position Torque	
	Setting Range	**Setting Unit**	**Factory Seeting**	**Setting Validation**
	0～300	1%	300	Immediately

5.1.5 Operation in Parameter Setting Mode

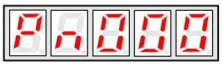
The servo drive offers a large number of functions, which can be selected or adjusted by the parameter settings. Refer to **A.1 Parameter List** for details.

■Parameter Setting Procedures

The parameter settings can be used for changing parameter data. Before changing the data, check the permitted range of the parameter.

The example below shows how to change parameter Pn102 from “100” to “85”.

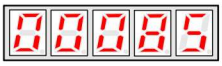
1. Press MODE key to select the parameter setting mode.



2. Press INC key or DEC key to select parameter number.

3. Press ENTER key to display the current data of Pn102.

4. Press the INC or DEC key to change the data to the desired number 00085. Hold the key to accelerate the changing of value. When the maximum value or minimum value is reached, pressing INC or DEC key respectively, will have no effect.



5. Press the ENTER or MODE key once to return to the display of Pn102.

5.1.6 Operation in Monitor Mode

The monitor mode allows the reference values input into the servo drive, I/O signal status, and servo drive internal status to be monitored.

■Using the Monitor Mode

The example below shows how to display the value (1500) stored in Un001.

1. Press MODE key to select the monitor mode.

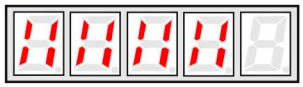
2. Press the INC or DEC key to select the monitor number to display.

3. Press the ENTER key to display the data for the monitor number selected at step 2.

4. Press the ENTER key once more to return to the monitor number display.

■List of Monitor Modes

Contents of Monitor Mode Display

Monitor Number	Monitor Display	
Un000	Actual servomotor speed Unit: rpm	
Un001	Input speed reference Unit:rpm	
Un002	Input torque reference Unit:% (with respect to rated torque)	
Un003	Internal torque reference Unit:% (with respect to rated torque)	
Un004	Number of encoder rotation angle pulses	
Un005	Input signal monitor →	Internal status bit display 7 6 5 4 3 2 1 0 
Un006	Encoder signal monitor →	
Un007	Output signal monitor →	
Un008	Frequency given by pulse Unit:1kHZ	
Un009	Number of servomotor rotation pulses	
Un010	Pulse rate of servomotor rotated（x10^4）	
Un011	Error pulse counter lower 16 digit	
Un012	Error pulse counter higher 16 digit	
Un013	Number of pulses given	
Un014	Number of pulses given（×10000）	
Un015	Load inertia percentage	
Un016	Servomotor overload ratio	
Un017	Servomotor winding temperature	Only used in ProNet-7.5kW～22kW when equipped with resolver.
Un018	Encoder EEPROM saves motor and encoder types and correlation information	
Un019	Reserve	
Un020	Reserve	
Un021	Nikon Encode internal Temperature（unit：℃）	