

4-2-5 Setup Menu (setup)

func

Operating Mode



FUNCTION

Use this menu to select the operating mode of the K3NR. All parameters will be set to default values if any change is made in this parameter except to those for the communications and protect settings.

- f1: Displays the number of circumferential or rotational speed of input A.
- f2 through f5: Displays the result of the arithmetic operation of two different revolutions.
- f6: Displays the value of passing time calculated from the frequency or processing length of input A.
- f7: Displays the pulse counting of input A.



SETTING

	Setting	Default
f1:	Rotational/circumferential speed	f1
f2:	Absolute ratio	
f3:	Error ratio	
f4:	Rotational difference	
f5:	Flow rate ratio	
f6:	Passing time	
f7:	Pulse counting	



REFERENCE

Refer to *Section 3 Operating Modes*.

SETTING
EXAMPLE

Follow the steps described below to select the f4 rotational difference setting.

Set Value LED Display Model

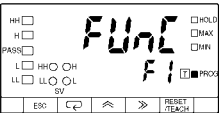


Basic Model

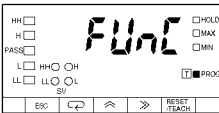


- 1, 2, 3... 1. Press the Mode Key for more than one second while the setup setup menu is displayed. The func operating mode setting will appear.

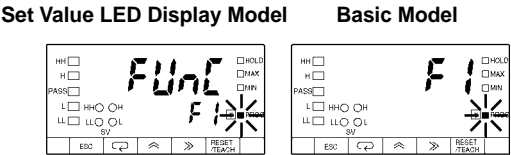
Set Value LED Display Model



Basic Model

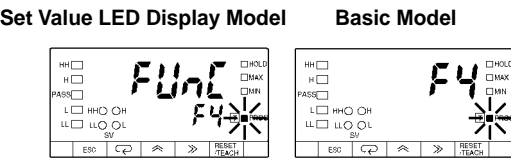


2. Press the Shift Key to display f1 for changing. The PROG indicator will flash.

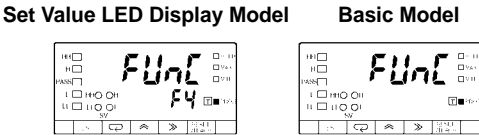


3. Repeatedly press the Up Key until f4 is displayed. The displayed setting will be validated automatically if no change is made for five seconds. The func operating mode setting will be displayed again.

Note Press the Mode Key to enter the displayed setting immediately. The next parameter will be displayed for setting.



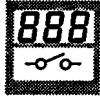
4. Repeatedly press the Escape Key until the setup setup menu is displayed.



ina

inb

Sensor Type



FUNCTION



SETTING

- Specifies the type of sensors for input A and input B.
- The sensor type of input B cannot be selected if the operating mode of the K3NR is set to f1 (rotational/circumferential speed) or f6 (passing time).

- Open Collector Input

Sensor type	Normally open	Normally closed	Default
Transistor input	00	01	00
Relay input	10	11	

Normally Open Model: The sensor output is OFF (open) when the sensor is not sensing an object.

Normally Closed Model: The sensor output is ON (closed) when the sensor is not sensing an object.

- Voltage Pulse Input

Sensor type	Active high (H)	Active low (L)	Default
Voltage pulse input	10	11	00

SETTING EXAMPLE

Follow the steps described below to set input A to 11 in operating mode f1 (rotational/circumferential speed).

Set Value LED Display Model

Basic Model



1, 2, 3...

1. Press the Mode Key for more than one second while the setup menu is displayed. The func operating mode setting will appear.

Set Value LED Display Model

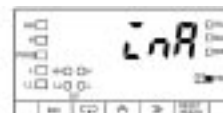
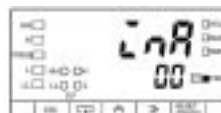
Basic Model



2. Press the Mode Key to display ina input A sensor type setting.

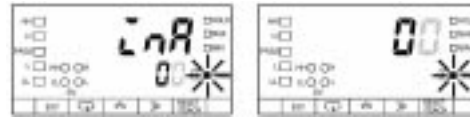
Set Value LED Display Model

Basic Model



- Press the Shift Key to display 00 for changing. The PROG indicator will flash.

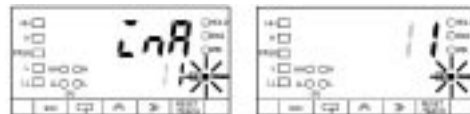
Set Value LED Display Model Basic Model



- Press the Up and Shift Keys to display 11. The displayed value will be validated automatically if no change is made for five seconds. The ina input A sensor type setting will be displayed again.

Note Press the Mode Key to enter the displayed setting immediately. The next parameter will be displayed.

Set Value LED Display Model Basic Model



- Press the Escape Key to display the setup menu.

Set Value LED Display Model Basic Model



=ro.ax

=ro.ay

=ro.bx

=ro.by

Auto Zero Time of Input A X (Mantissa)

Auto Zero Time of Input A Y (Exponent)

Auto Zero Time of Input B X (Mantissa)

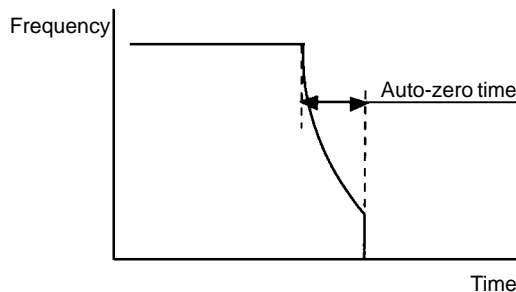
Auto Zero Time of Input B Y (Exponent)



FUNCTION

Calibrates the process value to zero forcibly if no input pulse is received for a certain period. This period is called auto-zero time.

Refer to the following graph.



Logically, the input pulse frequency does not drop to zero perfectly due to the estimated frequency calculation of the K3NR. Therefore, the K3NR has a function to calibrate the frequency to zero forcibly if no input pulse is received for a certain period.

Automatic zero time is determined by the following formula.

Auto-zero time = $X \times 10^Y$ (s) (X: mantissa, Y: exponent)

Note Auto-zero time must be longer than the value obtained by dividing one by the minimum frequency input of the K3NR. Auto-zero time must not be less than 0.1 s.

If the operating mode of the K3NR is set to F7 (pulse counting), this parameter will not be available.



SETTING

Input type		Setting	Default
=ro.ax:	Auto zero time of input A X (mantissa)	0.0001 to 9.9999	9.9999 09
=ro.ay:	Auto zero time of input A Y (exponent)	-9 to 09	9.9999 09
=ro.bx:	Auto zero time of input B X (mantissa)	0.0001 to 9.9999	
=ro.by:	Auto zero time of input B Y (exponent)	-9 to 09	



REFERENCE

Note For details, refer to page 153 for the estimated frequency calculation of the K3NR.

SETTING EXAMPLE

Follow the steps described below to set the value of auto-zero time to one second.

Set Value LED Display Model

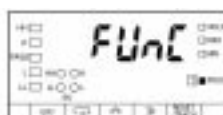
Basic Model



- 1, 2, 3... 1. Press the Mode Key for more than one second while the setup menu is displayed. The func operating mode setting will appear.

Set Value LED Display Model

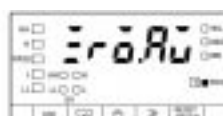
Basic Model



2. Repeatedly press the Mode Key until the =ro.ax auto zero time of input A X (mantissa) setting is displayed.

Set Value LED Display Model

Basic Model



3. Press the Shift Key to display the set value 9.9999 for changing. The PROG indicator will flash.

Set Value LED Display Model

Basic Model

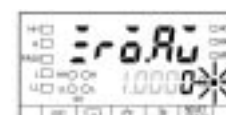


4. Press the Up and Shift Keys to set the value to 1.0000. The input will be validated automatically if no change is made for five seconds. The =ro.ax auto zero time of input A X (mantissa) setting will be displayed again.

Note Press the Mode Key to enter the set value immediately. The auto zero time of input A Y (exponent) setting will be displayed for setting the next parameter.

Set Value LED Display Model

Basic Model



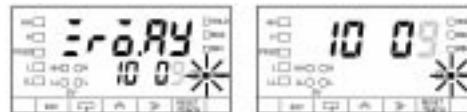
- Press the Mode Key to display the $\pm 0.0Y$ auto zero time of input A Y (exponent) setting.

Set Value LED Display Model Basic Model



- Press the Shift Key to display the set value 10 09 for changing.

Set Value LED Display Model Basic Model



- Press the Up and Shift Keys to set the value to 10 00. The input will be validated automatically if no change is made for five seconds. The $\pm 0.0Y$ auto zero time of input A Y (exponent) setting will be displayed again.

Note Press the Mode Key to enter the set value immediately. The auto zero time of input B X (mantissa) setting will be displayed for setting the next parameter.

Set Value LED Display Model Basic Model



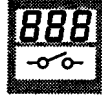
- Press the Escape Key to display the setup setup menu.

Set Value LED Display Model Basic Model



time

Time Unit



FUNCTION



SETTING

The time unit can be selected to display the calculation results of F6 (passing time).

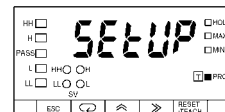
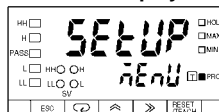
Unit	Display range	Default
scal	–19999 to 99,999	scal
sec	Displayed in seconds within a range between 0 and 99,999 s.	
min	Displayed minutes within a range between 0 and 99,999 min.	
h.mm.ss	Displayed in hours, minutes, and seconds within a range between 0 h, 00 min, 00 s and 9 hrs, 59 min, 59 s.	
mm.ss.d	Displayed in minutes and seconds (1/100 s) within a range between 00 min, 00 s 0 and 59 min, 59 s, 9.	

SETTING EXAMPLE

Follow the steps described below to set sec second unit setting.

Set Value LED Display Model

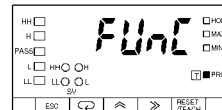
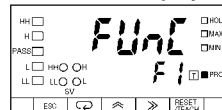
Basic Model



- 1, 2, 3... 1. Press the Mode Key for more than one second while the setup setup menu is displayed. The func operating mode setting will appear.

Set Value LED Display Model

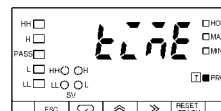
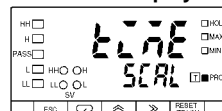
Basic Model



2. Repeatedly press the Mode Key until time time unit setting is displayed.

Set Value LED Display Model

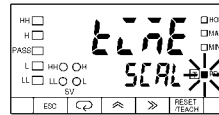
Basic Model



- Press the Shift Key to display scal for changing. The PROG indicator will flash.

Set Value LED Display Model

Basic Model

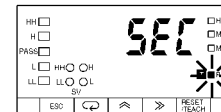
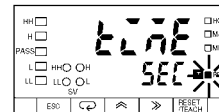


- Press the Up Key to display sec. The input will be validated automatically if no change is made for five seconds. The time time unit setting will be displayed again.

Note Press the Mode Key to enter the set value immediately. The next parameter will be displayed for setting.

Set Value LED Display Model

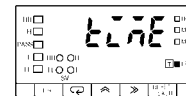
Basic Model



- Press the Escape Key to display the setup setup menu.

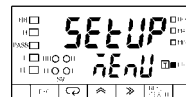
Set Value LED Display Model

Basic Model



Set Value LED Display Model

Basic Model



u-no

bps

Communications Unit Number

Baud Rate



FUNCTION



SETTING



MODELS

- Set a communications unit number as an identification number by which the host computer is connected to the K3NR.
- If more than one K3NR is connected in parallel, make sure that each communications unit number is unique.
- The baud rate should be set to the baud rate of the host computer.

- Communications Unit Number

Setting range	Unit	Default
00 to 99	---	00

- Baud Rate

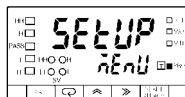
Setting range	Default
1200: 1,200 bps / 2400: 2,400 bps / 4800: 4,800 bps / 9600: 9,600 bps / 19200: 19.2 Kbps / 38400: 38.4 Kbps	9600

This setting is available for the K3NR with the Communications Output Board.

SETTING EXAMPLE

Follow the steps described below to set the communications unit number to 15 and the baud rate to 19,200 bps.

Set Value LED Display Model



Basic Model



1, 2, 3...

1. Press the Mode Key for more than one second while the setup setup menu is displayed. The func operating mode setting will appear.

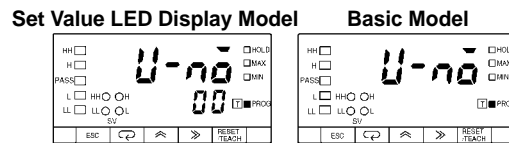
Set Value LED Display Model



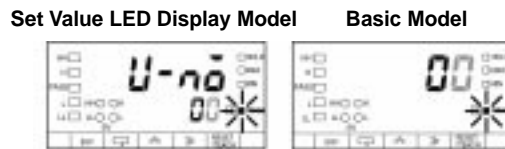
Basic Model



- Repeatedly press the Mode Key until the u-no communications unit number setting is displayed.

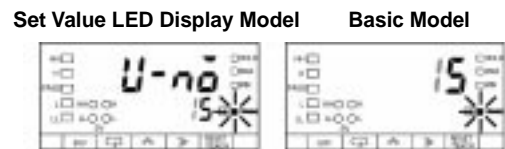


- Press the Shift Key to display the prior set value 00 for changing. The PROG indicator will flash.

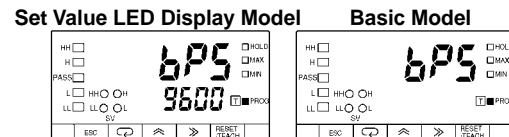


- Press the Up and Shift Keys to set the value to 15. The input value will be validated automatically if no change is made for five seconds. The u-no communications unit number setting will be displayed again.

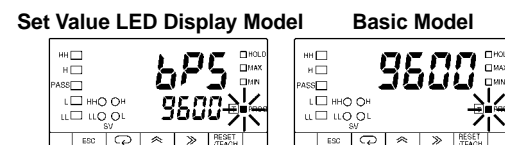
Note Press the Mode Key to enter the set value immediately. The next parameter will be displayed for setting.



- Press the Mode Key to display the bps baud rate setting.



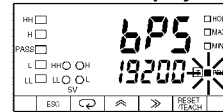
- Press the Shift Key to display the prior set value 9600 for changing. The PROG indicator will flash.



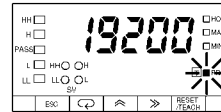
- Press the Up Key to set the value to 19200. The input will be validated automatically if no change is made for five seconds. The bps baud rate setting will be displayed again.

Note Press the Mode Key to enter the set value immediately. The next parameter will be displayed again for setting.

Set Value LED Display Model

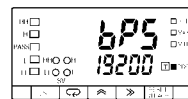


Basic Model

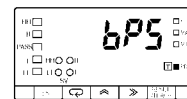


- Press the Up Key to enter the set value for setting the next parameter. The input value will be validated automatically if no change is made for five seconds. The bps baud rate setting will be displayed again.

Set Value LED Display Model



Basic Model



len

sbit

prty

Word Length

Stop Bits

Parity Bits



FUNCTION



SETTING

- The communications format used for communicating with the host computer is set in the setup menu.
- Refer to the *Communications Manual* for the communications format in detail.

- Word Length

Setting	Unit	Default
7/8	bit	7

- Stop Bits

Setting	Unit	Default
1/2	bit	2

- Parity Bit

Setting	Default
none: None eUen: Even odd: Odd	eUen



MODELS

This setting is available for the K3NR with the Communications Output Board.

SETTING EXAMPLE

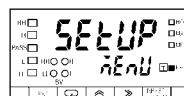
Follow the steps described below to set the following.

Word length: 8 bits

Number of stop bits: 1

Parity bits: none

Set Value LED Display Model



Basic Model



1, 2, 3...

1. Press the Mode Key for more than one second while the setup menu is displayed. The func operating mode setting will appear.

Set Value LED Display Model

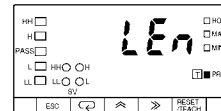
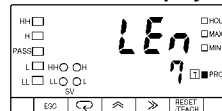
Basic Model



2. Repeatedly press the Mode Key until the len word length setting is displayed.

Set Value LED Display Model

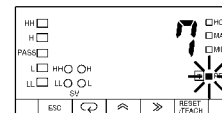
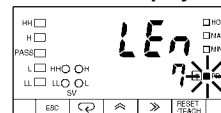
Basic Model



3. Press the Shift Key to display the prior set value 7 for changing. The PROG indicator will flash.

Set Value LED Display Model

Basic Model

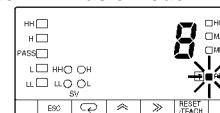
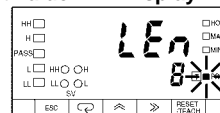


4. Press the Up Key to set the value to 8. The input value will be validated automatically if no change is made for five seconds. The len word length setting will be displayed again.

Note Press the Mode Key to enter the set value immediately. The next parameter will be displayed for setting.

Set Value LED Display Model

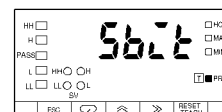
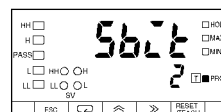
Basic Model



5. Press the Mode Key to display the sbt stop bit setting.

Set Value LED Display Model

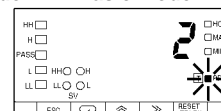
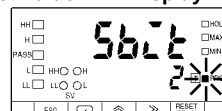
Basic Model



6. Press the Shift Key to display the set value 2 for changing.

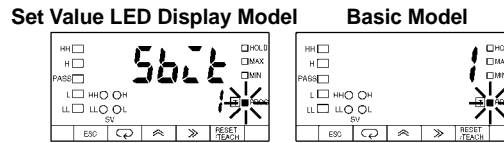
Set Value LED Display Model

Basic Model

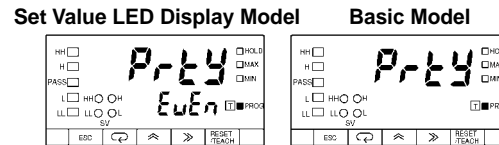


7. Press the Up Key to set the value to 1. The input will be validated automatically if no change is made for five seconds. The sbit stop bit setting will be displayed again.

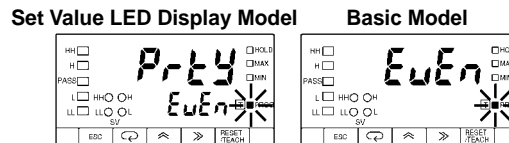
Note Press the Mode Key to enter the set value immediately. The next parameter will be displayed for setting.



8. Press the Mode Key to display the prty parity bit setting.

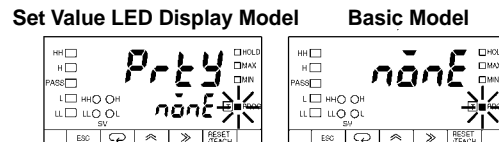


9. Press the Shift Key to display eUen for changing.



10. Press the Up Key to display none. The setting will be validated automatically if no change is made for five seconds. The prty parity bit setting will be displayed again.

Note Press the Mode Key to enter the setting immediately. The next parameter will be displayed for setting.



When no operation is executed for five seconds

