

**Model K3GN**  
**Digital Panel Meter**

**EN Instruction manual**

Thank you for purchasing this OMRON product. Read this instruction manual and thoroughly familiarize yourself with the functions and characteristics of the product before using it. This product is designed for use by qualified personnel with knowledge of electrical systems. Keep this instruction manual for future reference.

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5364386-2B (Side-A)

Refer to the Cat. No. N102 K3GN User's Manual for details.

**Safety Precautions**

● Definition of Precautionary Information

**CAUTION** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or in property damage.

**CAUTION**

Do not touch the terminals while power is being supplied. Doing so may possibly result in electric shock.	
Do not allow pieces of metal, wire clippings, or fine metallic shavings or filings to enter the product. Doing so may occasionally result in minor or moderate injury or in property damage due to electric shock, fire, or malfunction caused by internal short circulation.	
Do not use the product in locations where flammable or explosive gases are present. Doing so may occasionally result in minor or moderate explosion, causing minor or moderate injury, or property damage.	
Do not use the equipment for measurements within Measurement Categories II, III or IV (according to IEC61010-1). Doing so may occasionally cause unexpected operation, resulting in minor or moderate injury, or damage to the equipment. Use the equipment for measurements only within the Measurement Category for which the product is designed.	
Failure to perform correct setting of the product according to the application may occasionally cause unexpected operation, resulting in minor or moderate injury, or damage to the equipment. Ensure safety in the event of product failure by taking safety measures, such as installing a separate monitoring system.	
Ensure safety in the event of product failure by taking safety measures, such as installing a separate monitoring system. Product failure may occasionally prevent operation of comparative outputs, resulting in damage to the connected facilities and equipment.	
Tighten the screws on the terminal block and the connector locking screws securely using a tightening torque within the following ranges. Loose screws may occasionally cause fire, resulting in minor or moderate injury, or damage to the equipment. Terminal block screws: 0.43 to 0.58 N · m Connector locking screws:	
Do not attempt to disassemble, repair, or modify the product. Doing so may occasionally result in minor or moderate injury due to electric shock.	

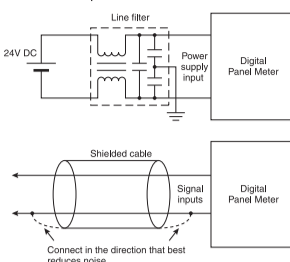
**Precautions for Safe Use**

- Precautions for the environment
  - Do not use the product in the following locations.
    - Locations subject to direct radiant heat from heating equipment
    - Locations where the product may come into contact with water or oil
    - Locations subject to direct sunlight
    - Locations where dust or corrosive gases (in particular, sulfuric or ammonia gas) are present
    - Locations subject to extreme temperature changes
    - Locations where icing or condensation may occur
    - Locations subject to excessive shocks or vibration
  - Do not use the product in locations subject to temperatures or humidity levels outside the specified ranges or in locations prone to condensation. If the product is installed in a panel, ensure that the temperature around the product (not the temperature around the panel) does not go outside the specified range. Parts life is dependent on temperatures. A part life shortens when the temperature rises, and it lengthens when the temperature falls. Parts life can be lengthened by lowering the temperature inside the product.
  - In order to prevent inductive noise, wire the lines connected to the product separately from power lines carrying high voltages or currents. Do not wire in parallel with or in the same cable as power lines. Other measures for reducing noise include running lines along separate ducts and using shield lines.
  - Do not install the product near devices generating strong high-frequency waves or surges. When using a noise filter, check the voltage and current and install it as close to the product as possible. If several products are mounted side-by-side or arranged in a vertical line, the heat dissipation will cause the internal temperature of the product to rise, shortening the service life. If necessary, cool the products using a fan or other cooling method.
  - Take care when cleaning the product, because the exterior of the product contains organic solvent (thinner, benzene, etc.), strong alkaline material and strong acid material.
  - Avoid storing in high humidity or in a corrosive gas environment (including during transportation)

- Precautions for Safe Use
  - Use and store within the proper temperature and humidity described in the specifications.
  - Provide sufficient space around the product for heat dissipation.
  - When using the product stored unused over a year after purchasing, the product features may not be utilized sufficiently.
  - Avoid storing outdoors and in a place that receives direct sunlight (including during transportation).
  - The service life of the output relays depends on the switching capacity and switching conditions. Consider the actual application conditions and use the product within the rated load and electrical service life. Using the product beyond its service life may result in contact welding or burning.
  - Be sure to confirm the name and polarity for each terminal before wiring the terminal block and connectors. Faulty wiring causes destruction or burnout of internal parts.
  - Use the product within the noted supply voltage and rated load.
  - Do not connect anything to unused terminals.
  - Output turns OFF when the mode is changed or settings are initialized. Take this into consideration when setting up the control system.
  - Install an external switch or circuit breaker and label them clearly so that the operator can quickly turn OFF the power.
  - Ensure that the rated voltage is achieved no longer than 2 s after turning the power ON. When applying a voltage gradually, power supply may not be reset or output functions indeterminately.
  - Mount to a panel between 1 and 5 mm thick.
  - Use the specified size of crimp terminals (M3, width: 5.8 mm max.) for wiring. To connect bare wires, use AWG 24 to AWG 16 to wire the power supply terminals and AWG 22 to AWG 16 for other terminals. (Length of exposed wire: 6 to 8 mm)
  - Allow the product to operate without load for at least 15 minutes after the power is turned ON.

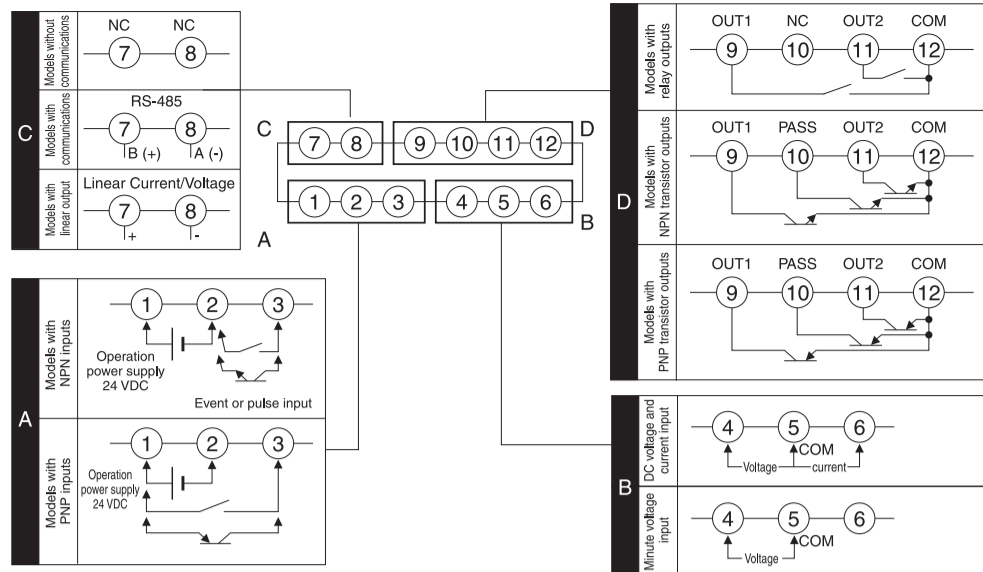
**Precautions for Correct Use**

- Install the product horizontally. Display error has the risk of becoming larger than the standard because heat cannot be radiated.
- When using a noise filter on the power supply, check that the filter is suitable for the supply voltage and current ratings, and then attach the noise filter as close as possible to the K3GN.



- If placed near the product, radios, TVs, or other wireless devices may suffer reception interference.

● Terminal Arrangement



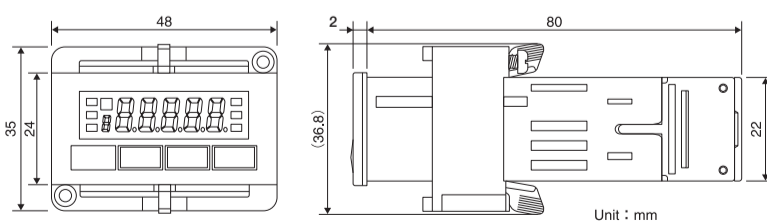
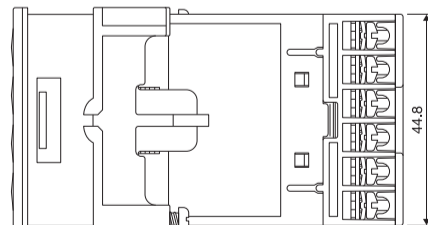
Terminal No.	Name	Description	Applicable models
1 - 2	Operation power supply	Connect the operation power supply	All models
3 - 2	Event input or pulse input	Operates as follows depending on parameter setting: • Holds process value. • Calibrate the process value to zero and clear the forced-zero function. • Pulse input.	K3GN-ND□-□24VDC K3GN-NL□-□24VDC
3 - 1			K3GN-PD□-□24VDC
4,6-5	DC voltage and current input	Connect the DC voltage and current.	K3GN-□D□-□24VDC
	Minute voltage input	Connect the minute voltage.	K3GN-NL□-□24VDC
7 - 8	Communications	RS-485 communications terminals	K3GN-□□□-FLK 24VDC
	Linear Current output	DC current output	K3GN-ND□-L1 24VDC
	Linear Voltage output	DC voltage output	K3GN-ND□-L2 24VDC
9,11-12	Comparative outputs	Outputs Relay or Transistor outputs. There is also a PASS output for models with transistor outputs.	K3GN-□DC-□24VDC K3GN-NLC-□24VDC
9,10,11-12			K3GN-NDT1-□24VDC K3GN-PDT2-□24VDC K3GN-NLT1-□24VDC

● Specifications

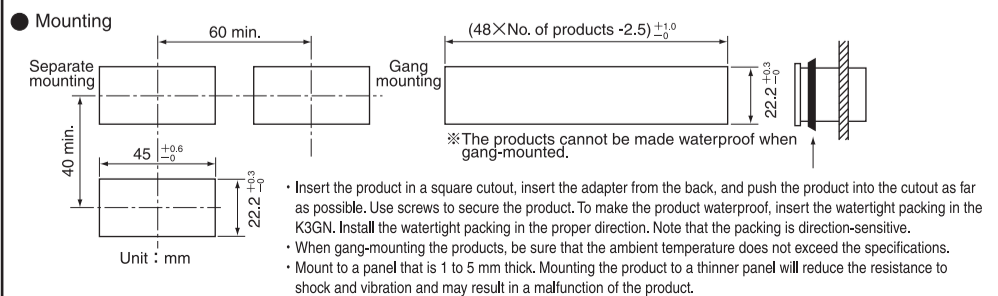
Supply voltage	24VDC	
Operating voltage range	85% to 110% of the rated voltage	
Power consumption	2.5W max. (at max. DC load with all indicators lit.)	
Ambient temperature	Operating: -10°C to 55°C (with no icing or condensation)	
Ambient humidity	Operating: 25% to 85% (with no condensation)	
Ambient temperature	Storage: -25°C to 65°C (with no icing or condensation)	
Altitude	2,000m max.	
Weight	Approx. 100g (Digital Panel Meter only)	
Installation environment	Installation category II, pollution degree 2 (according to IEC61010-1)	
Input impedance	Voltage range: 1MΩ min. Current range: 60Ω max. Minute voltage range: 1MΩ min.	
Input range	K3GN-ND□□ / -PD□□	K3GN-NL□□
	4 to 20mA (0 to 22mA) or 1 to 5V (0 to 5.5V) ±5V (-5.5 to +5.5V) or ±10V (-11 to +11V)	±199.99mV, ±19.99mV
Max. input rating	K3GN-ND□□ / -PD□□	K3GN-NL□□
	±30mA (4 to 20mA) ±13.5V (1 to 5V, ±5V) or ±26V (±10V)	+8.2V/-15.54V (±199.9mV/±19.99mV)
Pulse frequency	Switchable between 30 Hz and 5 kHz	
Accuracy	K3GN-ND□□ / -PD□□	K3GN-NL□□
	4 to 20mA : ±0.1% FS ±1 digit at 23°C ±3°C 1 to 5V : ±0.1% FS ±1 digit at 23°C ±3°C ±5V : ±0.1% FS ±1 digit at 23°C ±5°C ±10V : ±0.1% FS ±1 digit at 23°C ±5°C	±199.99mV : ±0.3%FS±1 digit at 23°C ±5°C ±19.99mV : ±0.5%FS±1 digit at 23°C ±5°C
Displayable range	-19999~99999	
Control outputs	Relay outputs: 2 outputs, OUT1 and OUT2 Transistor outputs: 3 outputs, PASS, OUT1, and OUT2	
Communication function	RS-485	
Output ratings	Relay output	30VDC, 1A
	Transistor output	Maximum load voltage : 24VDC Maximum load current : 50mA
	Linear output	0 to 20mA DC, 4 to 20mA DC : 500Ω load max. Resolution : Approx. 10,000 ; Output error : ±0.5% FS 0 to 5VDC, 1 to 5VDC, 0 to 10VDC : 5KΩ load min.; Resolution : Approximately 10,000 Output error : ±0.5% FS, except for 1V or less : ±0.15V, 0V
Response time of linear output	Approx. 2s (Time from power supply ON to linear output.) 750ms or less (Settling time to the final value of linear output when output changes suddenly from 95% into 15% or 15% from 95%.)	

● Dimensions

- Package Contents
- Digital Panel Meter
- Watertight packing (1)
- Adapter (1)
- Instruction Manual



● Mounting



● Troubleshooting

Problem	Remedy
Display does not change when inputting.	Confirm that wiring and input category (└─┘) are correct.
Scaling method is difficult to understand.	For example, when displaying with "rpm" for one pulse per one revolution, the following formula is available for use. Displayed value (dSP) = Input value (└─┘) × 60 Isp=10, dsp=600 or Isp=1, dsp=60
"Advanced function setting level transition" (Rāōū) are not displayed.	Set "0" for setting level protect (└─┘) at protect level.
Compulsory zero does not work when pressing $\overline{P_{max}}$ key.	• When using type K3GN as a revolution indicator, the compulsory zero function cannot be used. • Enable the compulsory zero at protect level.
The display indicates zero when the number of revolutions decreases.	• Set the setting of the parameter "Auto Zero" larger than the longest frequency of input pulse. • When the input range is 5 kHz and if the number of revolutions is not 1 Hz, the display indicates zero.

**Suitability for Use**

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product. At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases. NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY OR IN LARGE QUANTITIES WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

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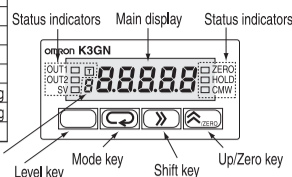
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## Nomenclature

Level indicator	Characters
P	Protection
Not lit	Operation
A	Adjustment
S	Initial setting
C	Communications setting
F	Advanced function setting
U	User calibration



Name	Functions
Main display	Displays process values, parameters, and set values.
OUT1	Lit when output 1 is ON.
OUT2	Lit when output 2 is ON.
SV	Lit when a set value is being displayed or changed.
T	Lit when the teaching functions is enabled and flashes when the K3GN is in teaching operation. Lit when a calibration value is being displayed during user calibration. Flashes while reading a calibration value.
ZERO	Lit when the forced-zero function is activated.
HOLD	Lit when HOLD input is ON.
CMW	Lit when both reading and writing for communications are possible. Unit when writing is prohibited. Reading is possible even when this indicator is not lit.
Level indicator	Displays the current level, which K3GN is in.
Level key	Used to change the level.
Mode key	Used to allow the Main Display to indicate parameters sequentially.
Shift key	Used to confirm the set value for the displayed parameter or to enable that set value to be changed. When changing a set value this key is used to move along the digits.
Up/Zero key	Used to change a set value when changing is enabled. Used to set or clear a forced-zero function when a measurement value is being displayed.

5364386-2B (Side-B)

## Operations

"Level" refers to a grouping of parameters. The K3GN has seven levels of parameters. The Mode Key is used to change between parameters.

### 1 Changing to Operation Level

K3GN will enter to the Operation Level when power is turned ON.

### 2 Changing to Protection Level

The main display will start flashing if the Level and Mode Keys are pressed together in Operation Level. If these keys are pressed for 5 s, Protection Level will be entered. The time required to change to Protection Level can be set as a parameter. Press the Level and Mode Keys together for 1 s to return to Operation Level.

### 3 Changing to Adjustment Level

Adjustment Level will be entered if the Level Key is pressed and released in Operation Level. Press the Level to return to Operation Level.

### 4 Changing to Initial Setting Level

The main display will start flashing if the Level Key is pressed for 1 s in Operation Level. If the Level Key is pressed for 2 s, Initial Setting Level will be entered. Press the Level Key together for 1 s to return to Operation Level.

### 5 Communications Setting Level

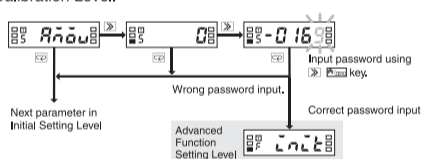
Communications Setting Level will be entered if the Level Key is pressed and released in Initial Setting Level. Press the Level Key to return to Initial Setting Level.

### 6 Advanced Function Setting Level

Manipulate the parameters in the Initial Setting Level as shown below to enter Advanced Function Setting Level. Password [-0169]

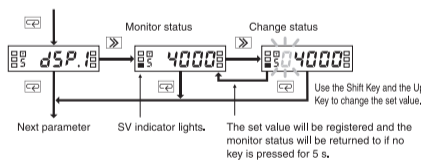
### 7 Calibration Level

Refer to the Cat · No. N102 User's Manual for information on Calibration Level.



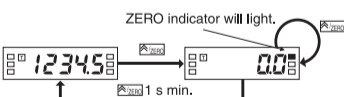
## Changing Settings

The set value will be displayed if the Shift Key is pressed while a parameter is being displayed (monitor status). Press the Shift Key again to enable changing the setting of the parameter (change status). If the Mode Key is pressed, the setting will be registered and the next parameter will be displayed.



## Forced Zero

If the Up/Zero Key is pressed when the present value is being displayed, the ZERO indicator will light and the present value will be calibrated to zero. Press the Up/Zero Key for at least 1 s to release the forced zero.

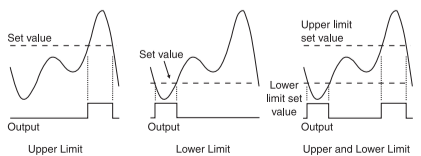


## Operating action

Any of the following three actions can be used for outputs 1 and 2.

- Upper limit alarm : The OUT1/2 turns ON if the measurement value exceeds the set value.
- Lower limit alarms : The OUT1/2 turns ON if the measurement value goes below the set value.
- Upper and lower limit alarms : The OUT1/2 turns ON if the measurement value goes below or exceeds the set values.

There is also a PASS output for models with transistor outputs. The PASS output turns ON with both OUT1 and OUT2 are OFF.

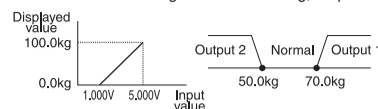


## Application as a Process Meter

The initial settings required when using the K3GN as a process meter are explained below using the following example.

<Setting Example>

Inputs in the range 1 to 5 V are scaled to the range 0 to 100.0 kg and displayed. If the measurement value goes over 70.0 kg, output 1 turns ON. If the measurement value goes below 50.0 kg, output 2 turns ON.



### Initial Setting Procedure

- Check the wiring and supply power.
- Set analog input as the input type.
  - When a measurement value is displayed (operation level), move to the initial setting level by pressing the level key for 3 s min.
  - Set parameter [c-n-t] to [RnRLG].
- Set the analog range to 1 to 5 V.
  - Set parameter [r-RnGE] to [1-5].
- Set the scaling values.
  - Set parameter [c-n-P.1] to [1.0000].
  - Set parameter [dSP.1] to [0].
  - Set parameter [c-n-P.2] to [5.0000].
  - Set parameter [dSP.2] to [100.0].
- Set the position of the decimal point.
  - Set parameter [dP] to [00000].
- Set operating action for OUT1 set value and OUT2 set value.
  - Set parameter [dUt.1] to [Hi].
  - Set parameter [dUt.2] to [Lo].
- Set OUT1 set value to 70.0 and OUT2 set value to 50.0.
  - When an initial setting level parameter is displayed, press the level key for 1 s min. to return to the operation level.
  - Set parameter [dUt.1] to [70.0].
  - Set parameter [dUt.2] to [50.0].
- Start actual operation.

## Application as a Tachometer

The initial settings required when using the K3GN as a tachometer are explained below using the following example.

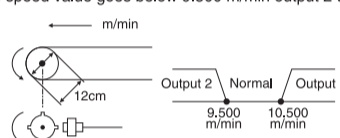
<Setting Example>

The speed of a conveyor belt is displayed in m/min units.

For every revolution of the shaft, 4 pulses are output.

The diameter of the axis of rotation is 12 cm. If rotational speed goes over 10,500 m/min, output 1 turns ON.

If the speed value goes below 9,500 m/min output 2 turns ON.



### Deciding the Scaling value

$$\text{Rotational speed (m/min)} = \pi \times \text{Diameter (m)} \times \text{rotational speed (rpm)}$$

$$\text{Revolution per minute (rpm)} = \text{Input frequency (Hz)} \div \text{Number of pulses per revolution} \times 60$$

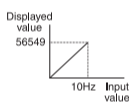
Applying the appropriate values to these 2 equations.

$$\text{Speed (m/min)} = 5.654866... \times \text{Input frequency (Hz)}$$

Multiply this coefficient by 1,000 to display the 3 digits to the right of the decimal point.

$$\text{Speed (m/min)} = 5654.866... \times \text{Input frequency (Hz)}$$

To limit inaccuracies due to scaling, select a round number for the scaling input number that will give a display value of as many digits as possible. In this example, scaling is performed so that an input value of 10 gives a Displayed value of 56549.



### Initial Setting Procedure

- Check the wiring and supply power.
- Set pulse input as the input type.
  - When a measurement value is displayed (operation level), move to the initial setting level by pressing the level key for 3 s min.
  - Set parameter [c-n-t] to [PUL.5E].
- Set the pulse frequency to 30 Hz.
  - The input pulse frequency for the application is approximately 2 Hz and so can be assumed not to exceed 30 Hz. Set parameter [P-Fr-E] to [30].
- Set the scaling values.
  - Set parameter [c-n-P.1] to [10.000].
  - Set parameter [dSP.1] to [56549].
- Set the decimal point.
  - Set parameter [dP] to [00000].
- Set operating action for OUT1 set value to upper limit and set the operating action for OUT2 set value to lower limit.
  - Set parameter [dUt.1] to [Hi].
  - Set parameter [dUt.2] to [Lo].
- Set OUT1 set value to 10,500 and OUT2 set value to 9,500.
  - When an initial setting level parameter is displayed, press the level key for 1 s min. to return to the operation level.
  - Set parameter [dUt.1] to [10.500].
  - Set parameter [dUt.2] to [9.500].
- Start actual operation.

## Error Indicators

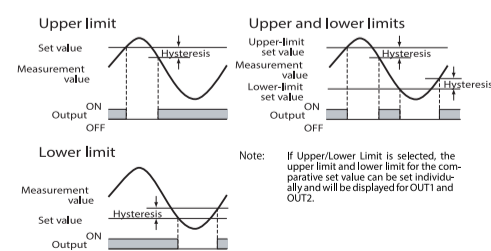
Level indicator	Main display	Error contents
Not lit	E!!!	Internal memory error
S	E!!!	Non-volatile memory error
Not lit	5.Err (flashing)	Input error
Not lit	99999 (flashing)	Outside displayable range
Not lit	-99999 (flashing)	Outside displayable range

## Models with Normally Energized Relays

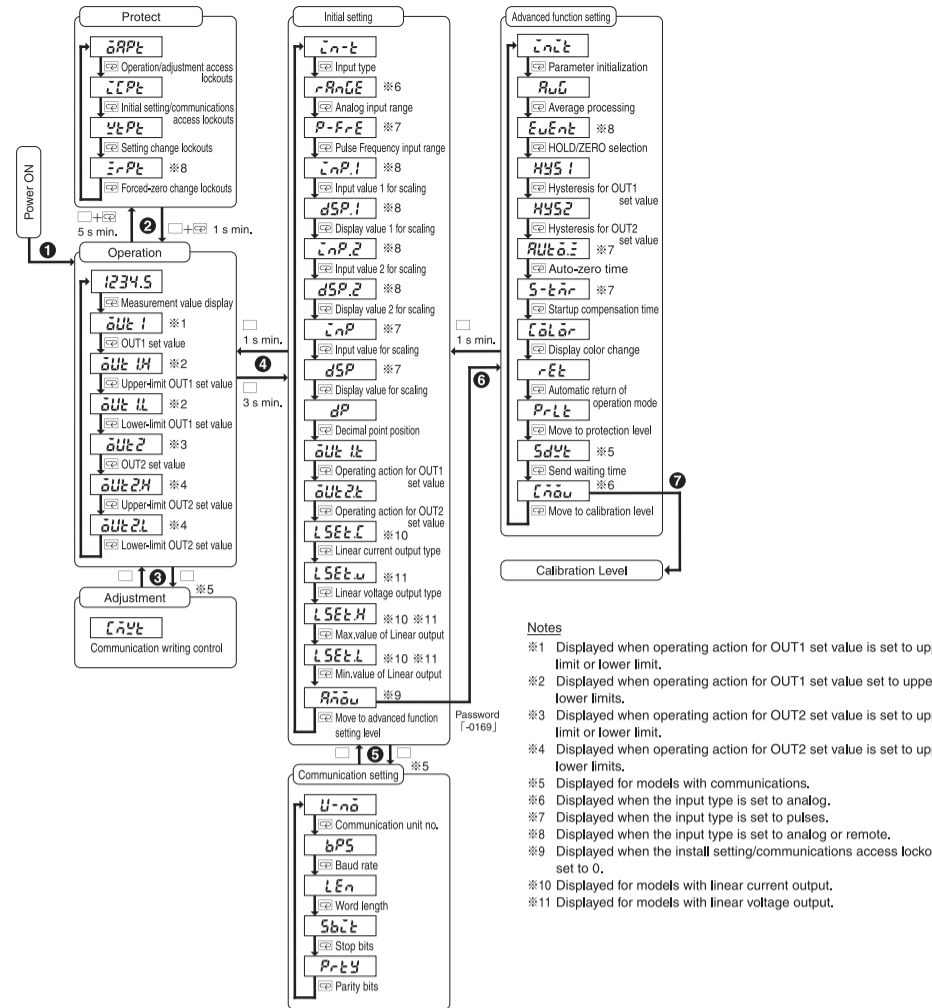
K3GN-NDC-□-400 24 VDC

- The drive operation for the output relay is reversed in these models.
- Relay contacts can be made open (i.e., OFF) when comparative set values are being judged. This is effective when constructing systems that take failsafe measures into consideration.

### Relation between Output Type and Relay Output Operation



## Parameters



Parameter	Display	Setting range	Initial value	Description
Operation/adjustment access lockouts	dAPt	0~2	0	0: All functions enabled. 1: Change to Adjustment Level disabled. 2: Same as setting of 1, plus set value display disabled.
Initial setting/communications access lockouts	cCPt	0~2	1	0: All functions enabled. 1: Change to Advanced Function Setting Level disabled. 2: Same as setting of 1, plus change to Initial Setting and Communications Setting Levels disabled.
Setting change lockouts	vEPt	dFF/dn	dFF	OFF: Set value changes via keys enabled. ON: Set value changes via keys disabled.
Forced-zero change lockouts	z-rPt	dFF/dn	dFF	OFF: Forced-zero via keys enabled. ON: Forced-zero via keys disabled. When input type is set as analog.
OUT1 set value	dUt.1	-9999~9999	9999	Output 1 Set Value Used when the operating action for OUT1 set value is set to upper limit or lower limit.
Upper-limit OUT1 set value	dUt.1H	-9999~9999	9999	Output 1 High Set Value Used when the operating action for OUT1 set value is set to upper and lower limits.
Lower-limit OUT1 set value	dUt.1L	-9999~9999	-9999	Output 1 Low Set Value Used when the operating action for OUT1 set value is set to upper and lower limits.
OUT2 set value	dUt.2	-9999~9999	-9999	Output 2 Set Value Used when the operating action for OUT2 set value is set to upper and lower limits.
Upper-limit OUT2 set value	dUt.2H	-9999~9999	9999	Output 2 High Set Value Used when the operating action for OUT2 set value is set to upper and lower limits.
Lower-limit OUT2 set value	dUt.2L	-9999~9999	-9999	Output 2 Low Set Value Used when operating action for OUT2 set value is set to upper and lower limits.
Communication writing control	CnYt	dFF/dn	dFF	OFF: Writing via communications disabled. ON: Writing via communications enabled.
Input type	c-n-t	RnRLG/PUL.5E/RnRLG	RnRLG	ANALG: Operation as a process meter. PULSE: Operation as a tachometer. RMT: Operation as a digital date display.
Analog input range	r-RnGE	4-20/1-5/5/10	4-20	4-20: 4 to 20 mA range 1-5: 1 to 5 V range 5: ±5 V range 10: ±10 V range Set when the input type is set to analog.
Pulse Frequency input range	P-Fr-E	30/5μ	5μ	Upper limit of pulse frequency. Set when the input type is set to pulse. (Unit: Hz)
Input value 1 for scaling	c-n-P.1	-9999~9999	400	Scaling value when the input type is set to analog or remote. Input value corresponding to display 1 value.
Display value 1 for scaling	dSP.1	-9999~9999	400	Display value for input 1.
Input value 2 for scaling	c-n-P.2	-9999~9999	2000	Input value for display 2.
Display value 2 for scaling	dSP.2	-9999~9999	2000	Display value for input 2.
Input value for scaling	c-n-P	-9999~9999	5000	Scaling value when the input type is set to pulse. Input value corresponding to the display value.
Display value for scaling	dSP	-9999~9999	5000	Display value corresponding to input value.
Decimal point position	dP	00000/00000/00000/00000/00000	00000	Position to display decimal point.
Operating action for OUT1 set value	dUt.1t	Hi/Li/dHi/Li/d	Hi	Operation for outputs Hi: Upper limit alarm Li: Lower limit alarm
Operating action for OUT2 set value	dUt.2t	Hi/Li/dHi/Li/d	Li	Hi-Lo: Upper and lower limit alarm
Linear current model	LSEt.C	0-20/4-20	4-20	0-20: 0 to 20mA 4-20: 4 to 20mA
Linear voltage model	LSEt.u	0-5/1-5/10-10	1-5	0-5: 0 to 5V 1-5: 1 to 5V 0-10: 0 to 10V
Linear output upper limit	LSEt.H	-9999~9999	2000 (current) 5000 (voltage)	Linear output upper limit
Linear output lower limit	LSEt.L	-9999~9999	400 (current) 1000 (voltage)	Linear output lower limit
Move to advanced function setting level	Rnau	-9999~9999	0	Used to enter Advanced Function Setting Level. Password: -0169
Communication unit no.	U-no	0~99	1	Communications unit number
Baud rate	bPS	12/24/48/96/192	9.6	Baud rate
Word length	LEn	7/8	7	Word length
Stop bits	Sbct	1/2	2	Stop bits
Parity bits	Prty	nAnE/EuEn/d	EuEn	Parity
Parameter initialization	c-n-t	dFF/dn	dFF	All parameters will be returned to the initial settings when this parameter is set to ON (parameter a clear).
Average processing	AvG	dFF/2/4/8	dFF	Number of times for averaging
HOLD/ZERO selection	EuEnk	HdLd/ZEr-d	HdLd	Set when the input type is set to analog or remote. Function of terminal 3 HOLD: Hold input for measurement value ZERO: Forced-zero input
Hysteresis for OUT1 set value	HY5.1	0~9999	1	Hysteresis for output 1
Hysteresis for OUT2 set value	HY5.2	0~9999	1	Hysteresis for output 2
Auto-zero time	AutZt	00~19.9	19.9	Set when the input type is set to pulse. Time to automatically return the display to 0 when input pulses are not received. Unit: s
Startup compensation time	S-tAr	00~99.9	00	Set when the input type is set to pulse. Time from turning ON power until measurements are begun. Unit: s
Display color change	ColCr	Grn-R/Grn/Red-G/Ed	Grn-R	Display color setting GRN-R: Normally green, red when output is ON. GRN: Always green. RED-G: Normally red, green when output is ON. RED: Always red.
Automatic return of operation mode	rEt	0~99	10	Time to automatically return to present value display when keys are not input in Operation or Adjustment Level. Unit: s
Move to protection level	P-rLt	0~19	5	Time required to change from Operation Level to Protection Level. Unit: s
Send waiting time	SdYt	0~99	20	Wait time for returning a response when a command is received from a host. Unit: ms
Move to calibration level	Cnau	-9999~9999	0	Wait time for returning a response when a command is received from a host. Unit: ms