Text Comparison

Documents Compared

K3MA-J_DS_E_2_1.pdf

K3MA-J_DS_E_3_1.pdf

Summary

18 word(s) differ

45 word(s) added

3 word(s) deleted

To see where the changes are, please scroll down.

Process Meter

K3MA-J

CSM_K3MA-J_DS_E_2_1

Highly Visible LCD Display with 2-color (Red and Green) LEDs

- Multi-range DC voltage/current input.
- Front-panel key operation for easy setting.
- Average processing function suppresses flicker.
- Scaling, front-panel forced-zero, zero-limit functions.
- Easy confirmation of max/min display.
- Short 80-mm depth (measured from edge of face plate).
- Finger protective cover (standard equipment) guards against electric shock.
- Water- and dust-proof NEMA4X (IP66 equivalent) front panel.
- Recognized to U.S. and Canadian requirements under the Component Recognition Program of UL.
- CE marking.

Model Number Structure

■ Model Number Legend

K3MA-J-□ □
1 2 3

1. **Input Type**
   J: DC voltage/current
2. **Output Type**
   None: No output
   A2: 2 relay contact outputs (SPST-NO)
3. **Supply Voltage**
   100-240VAC: 100 to 240 VAC
   24VAC/VDC: 24 VAC/VDC

Ordering Information

■ List of Models

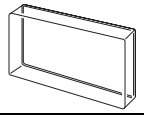
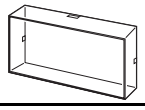
Input type	Supply voltage	Output	Model
DC voltage/current	100 to 240 VAC	None	K3MA-J 100-240VAC
		2 relay contact outputs (SPST-NO)	K3MA-J-A2 100-240VAC
	24 VAC/VDC	None	K3MA-J 24VAC/VDC
		2 relay contact outputs (SPST-NO)	K3MA-J-A2 24VAC/VDC

■ Rubber Packing

Model
K32-P1

Note: Rubber packing is provided with the Controller.

■ Accessories (Order Separately)

Name	Shape	Model
Splash-proof Soft Cover		K32-49SC
Hard Cover		K32-49HC

Process Meter

K3MA-J

CSM_K3MA-J_DS_E_3_1

Highly Visible LCD Display with 2-color (Red and Green) LEDs

- Multi-range DC voltage/current input.
- Front-panel key operation for easy setting.
- Average processing function suppresses flicker.
- Scaling, front-panel forced-zero, zero-limit functions.
- Easy confirmation of max/min display.
- Short 80-mm depth (measured from edge of face plate).
- Finger protective cover (standard equipment) guards against electric shock.
- Water- and dust-proof NEMA4X (IP66 equivalent) front panel.
- Recognized to U.S. and Canadian requirements under the Component Recognition Program of UL.
- CE marking.

Refer to *Safety Precautions for All Digital Panel Meters.*

Model Number Structure

■ Model Number Legend

K3MA-J-□ □□□
1 2 3

1. **Input Type**
   J: DC voltage/current
2. **Output Type**
   None: No output
   A2: 2 relay contact outputs (SPST-NO)
3. **Supply Voltage**
   100-240VAC: 100 to 240 VAC
   24VAC/VDC: 24 VAC/VDC

Ordering Information

■ List of Models

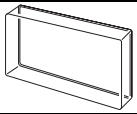
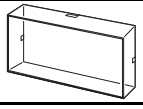
Input type	Supply voltage	Output	Model
DC voltage/current	100 to 240 VAC	None	K3MA-J 100-240VAC
		2 relay contact outputs (SPST-NO)	K3MA-J-A2 100-240VAC
	24 VAC/VDC	None	K3MA-J 24VAC/VDC
		2 relay contact outputs (SPST-NO)	K3MA-J-A2 24VAC/VDC

■ Rubber Packing

Model
K32-P1

Note: Rubber packing is provided with the Controller.

■ Accessories (Order Separately)

Name	Shape	Model
Splash-proof Soft Cover		K32-49SC
Hard Cover		K32-49HC

Specifications

■ Ratings

Model	K3MA-J 100-240VAC, K3MA-J-A2 100-240VAC	K3MA-J 24VAC/VDC, K3MA-J-A2 24VAC/VDC
Supply voltage	100 to 240 VAC	24 VAC/VDC
Operating voltage range	85% to 110% of the rated supply voltage	
Power consumption (under maximum load)	6 VA max.	4.5 VA max. (24 VAC) 4.5 W max. (24 VDC)
Insulation resistance	20 MΩ min. (at 500 VDC) between external terminal and case. Insulation provided between inputs, outputs, and power supply.	
Dielectric strength	2,000 VAC for 1 min between external terminal and case. Insulation provided between inputs, outputs, and power supply.	
Noise immunity	±1,500 V on power supply terminals in normal or common mode. ±1 µs, or 100 ns for square-wave noise with 1 ns.	±480 V on power supply terminals in normal mode. ±1,500 V in common mode. ±1 µs, or 100 ns for square-wave noise with 1 ns.
Vibration resistance	Vibration: 10 to 55 Hz, Acceleration: 50 m/s^2 5 min each in X, Y, and Z directions for 10 sweeps.	
Shock resistance	150 m/s^2 (100 m/s^2 for relay contact outputs) 3 times each on 3 axes, 6 directions.	
Ambient temperature	Operating: −10°C to 55°C (with no condensation or icing) Storage: −25°C to 65°C (with no condensation or icing)	
Ambient humidity	Operating: 25% to 85% (with no condensation)	
Approved safety standards	UL3121-1, conforms to EN61010-1 (Pollution degree 2/overvoltage category II) Conforms to VDE0106/P100 (finger protection)	
EMC	(EMI) EN61326+A1 Industry Emission Enclosure: CISPR 11 Group 1 class A: CISRP16-1/-2 Emission AC Mains: CISPR 11 Group 1 class A: CISRP16-1/-2 (EMS) EN61326+A1 Industry Immunity ESD: EN61000-4-2: 4 kV contact discharge 8 kV air discharge Immunity RF-interference: EN61000-4-3: 10 V/m (amplitude-modulated, 80 MHz to 1 GHz) Electrical Fast Transient Noise: EN61000-4-4: 2 kV (power line) Immunity Burst Noise: 1 kV line to line (I/O signal line) Immunity Surge: EN61000-4-5: 1 kV (power line) 2 kV line to ground (power line) Immunity Conducted Disturbance: EN61000-4-6: 3 V (0.15 to 80 MHz) Immunity Voltage Dip/Interrupting: EN61000-4-11: 0.5 cycle, 0, 180°, 100% (rated voltage)	
Weight	Approx. 200 g	

Specifications

■ Ratings

Model	K3MA-J 100-240VAC, K3MA-J-A2 100-240VAC	K3MA-J 24VAC/VDC, K3MA-J-A2 24VAC/VDC
Supply voltage	100 to 240 VAC	24 VAC/VDC
Operating voltage range	85% to 110% of the rated supply voltage	
Power consumption (under maximum load)	6 VA max.	4.5 VA max. (24 VAC) 4.5 W max. (24 VDC)
Insulation resistance	20 MΩ min. (at 500 VDC) between external terminal and case. Insulation provided between inputs, outputs, and power supply.	
Dielectric strength	2,000 VAC for 1 min between external terminal and case. Insulation provided between inputs, outputs, and power supply.	
Noise immunity	±1,500 V on power supply terminals in normal or common mode. ±1 µs, or 100 ns for square-wave noise with 1 ns.	±480 V on power supply terminals in normal mode. ±1,500 V in common mode. ±1 µs, or 100 ns for square-wave noise with 1 ns.
Vibration resistance	Vibration: 10 to 55 Hz, Acceleration: 50 m/s^2 5 min each in X, Y, and Z directions for 10 sweeps.	
Shock resistance	150 m/s^2 (100 m/s^2 for relay contact outputs) 3 times each on 3 axes, 6 directions.	
Ambient temperature	Operating: −10°C to 55°C (with no condensation or icing) Storage: −25°C to 65°C (with no condensation or icing)	
Ambient humidity	Operating: 25% to 85% (with no condensation)	
Approved safety standards	UL3121-1, conforms to EN61010-1 (Pollution degree 2/overvoltage category II) Conforms to VDE0106/P100 (finger protection)	
EMC	(EMI) Emission Enclosure: Emission AC Mains: (EMS) Immunity ESD: Immunity RF-interference: Electrical Fast Transient Noise: Immunity Burst Noise: Immunity Surge: Immunity Conducted Disturbance: Immunity Voltage Dip/Interrupting:	EN61326+A1 Industry CISPR 11 Group 1 class A: CISRP16-1/-2 CISPR 11 Group 1 class A: CISRP16-1/-2 EN61326+A1 Industry EN61000-4-2: 4 kV contact discharge 8 kV air discharge EN61000-4-3: 10 V/m (amplitude-modulated, 80 MHz to 1 GHz) EN61000-4-4: 2 kV (power line) 1 kV line to line (I/O signal line) EN61000-4-5: 1 kV (power line) 2 kV line to ground (power line) EN61000-4-6: 3 V (0.15 to 80 MHz) EN61000-4-11: 0.5 cycle, 0, 180°, 100% (rated voltage)
Weight	Approx. 200 g	

■ Characteristics

Input signal	DC voltage/current (0 to 20 mA, 4 to 20 mA, 0 to 5 V, 1 to 5 V, ±5 V, ±10 V)
A/D conversion	Double integral method
Sampling period	250 ms
Display refresh period	Sampling period (sampling times multiplied by number of measurements for averaging if average processing is selected.)
Max. displayed digits	5 digits (–19999 to 99999)
Display	7-segment digital display, Character height: 14.2 mm
Polarity display	"–" is displayed automatically with a negative input signal.
Zero display	Leading zeros are not displayed.
Scaling function	Programmable with front-panel key inputs (range of display: –19999 to 99999). The decimal point position can be set as desired.
Hold function	Max. hold (maximum value), Min. hold (minimum value)
Hysteresis setting	Programmable with front-panel key inputs (0001 to 9999).
Other functions	Forced-zero (with front-panel key) Zero-limit Scaling teach function Display color change (green (red), green, red (green), red) OUT type change (upper limit, lower limit, upper/lower limit) Average processing (simple average)
Output	Relays: 2 SPST-NO
Delay in comparative outputs	750 ms max.
Degree of protection	Front panel: NEMA4X for indoor use (equivalent to IP66) Rear case: IEC standard IP20 Terminals: IEC standard IP00 + finger protection (VDE0106/100)
Memory protection	Non-volatile memory (EEPROM) (possible to rewrite 100,000 times)

■ Measuring Ranges

Process Voltage/Current Inputs

Input	Measuring range	Measuring accuracy	Input impedance	Displayable range
DC voltage	1.000 to 5.000 V	±0.1% FS ±1 digit max. (at 23±3°C)	1 MΩ min.	–19999 to 99999 (with scaling function)
	0.000 to 5.000 V			
	–5.000 to 5.000 V	±0.1% FS ±1 digit max. (at 23±5°C)		
	–10.00 to 10.00 V			
DC current	4.00 to 20.00 mA/ 0.00 to 20.00 mA	±0.1% FS ±1 digit max. (at 23±3°C)	45 Ω	

■ Input/Output Ratings

Relay Contact Output

Item	Resistive load (cosϕ = 1)	Inductive load (cosϕ = 0.4, L/R=7 ms)
Rated load (UL ratings)	5 A at 250 VAC, 5 A at 30 VDC	1.5 A at 250 VAC, 1.5 A at 30 VDC
Max. contact voltage	250 VAC, 150 VDC	
Max. switching capacity	1,250 VA, 150 W	250 VA, 30 W
Min. permissible load (P level, reference value)	10 mA at 5 VDC	
Mechanical life	5,000,000 times min. (at a switching frequency of 1,200 times/min)	
Electrical life (at an ambient temperature of 20°C)	100,000 times min. (at a rated load switching frequency of 10 times/min)	

■ Characteristics

Input signal	DC voltage/current (0 to 20 mA, 4 to 20 mA, 0 to 5 V, 1 to 5 V, ±5 V, ±10 V)
A/D conversion	Double integral method
Sampling period	250 ms
Display refresh period	Sampling period (sampling times multiplied by number of measurements for averaging if average processing is selected.)
Max. displayed digits	5 digits (–19999 to 99999)
Display	7-segment digital display, Character height: 14.2 mm
Polarity display	"–" is displayed automatically with a negative input signal.
Zero display	Leading zeros are not displayed.
Scaling function	Programmable with front-panel key inputs (range of display: –19999 to 99999). The decimal point position can be set as desired.
Hold function	Max. hold (maximum value), Min. hold (minimum value)
Hysteresis setting	Programmable with front-panel key inputs (0001 to 9999).
Other functions	Forced-zero (with front-panel key) Zero-limit Scaling teach function Display color change (green (red), green, red (green), red) OUT type change (upper limit, lower limit, upper/lower limit) Average processing (simple average)
Output	Relays: 2 SPST-NO
Delay in comparative outputs	750 ms max.
Degree of protection	Front panel: NEMA4X for indoor use (equivalent to IP66) Rear case: IEC standard IP20 Terminals: IEC standard IP00 + finger protection (VDE0106/100)
Memory protection	Non-volatile memory (EEPROM) (possible to rewrite 100,000 times)

■ Measuring Ranges

Process Voltage/Current Inputs

Input	Measuring range	Measuring accuracy	Input impedance	Displayable range
DC voltage	1.000 to 5.000 V	±0.1% FS ±1 digit max. (at 23±3°C)	1 MΩ min.	–19999 to 99999 (with scaling function)
	0.000 to 5.000 V			
	–5.000 to 5.000 V	±0.1% FS ±1 digit max. (at 23±5°C)		
	–10.00 to 10.00 V			
DC current	4.00 to 20.00 mA/ 0.00 to 20.00 mA	±0.1% FS ±1 digit max. (at 23±3°C)	45 Ω	

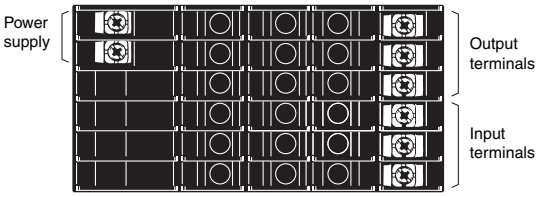
■ Input/Output Ratings

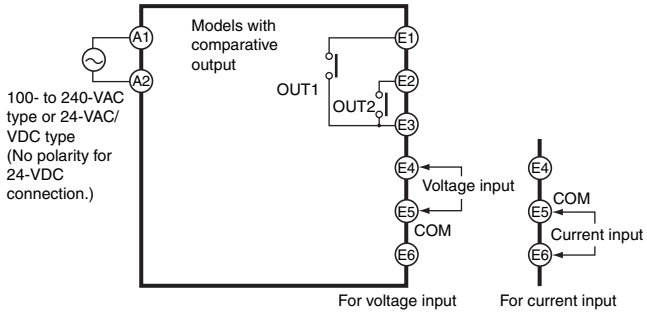
Relay Contact Output

Item	Resistive load (cosϕ = 1)	Inductive load (cosϕ = 0.4, L/R=7 ms)
Rated load (UL ratings)	5 A at 250 VAC, 5 A at 30 VDC	1.5 A at 250 VAC, 1.5 A at 30 VDC
Max. contact voltage	250 VAC, 150 VDC	
Max. switching capacity	1,250 VA, 150 W	250 VA, 30 W
Min. permissible load (P level, reference value)	10 mA at 5 VDC	
Mechanical life	5,000,000 times min. (at a switching frequency of 1,200 times/min)	
Electrical life (at an ambient temperature of 20°C)	100,000 times min. (at a rated load switching frequency of 10 times/min)	

Connections

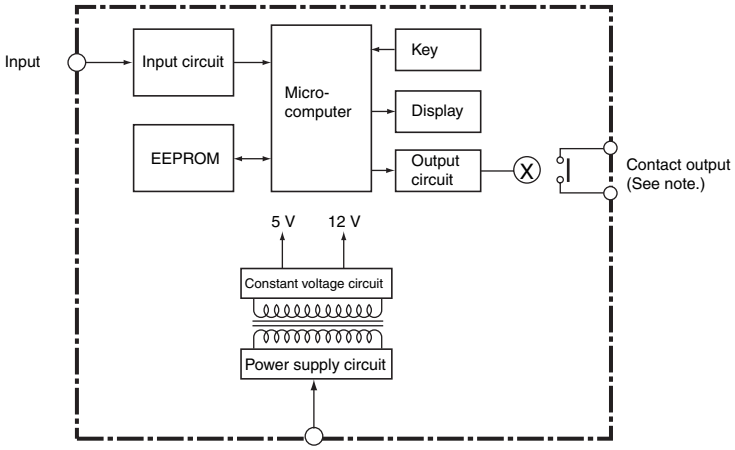
■ Terminal Arrangement





Terminal No.	Name	Description
A1 - A2	Operation power	Connects the operation power supply.
E4, E6 - E5	Analog input	Connects the voltage or current analog input.
E1, E2 - E3	Outputs	Outputs the relay outputs.

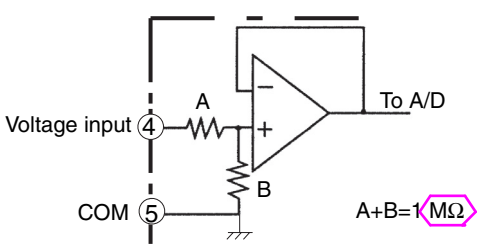
■ Block Diagram

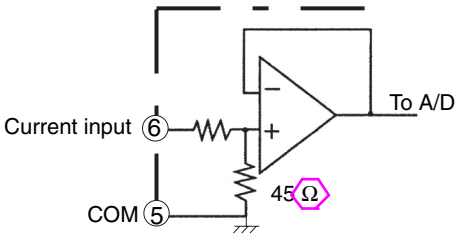


Note: Relay output models only.

■ Input Circuits

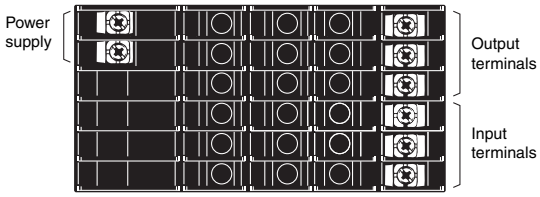
Analog Input (DC Voltage/Current)

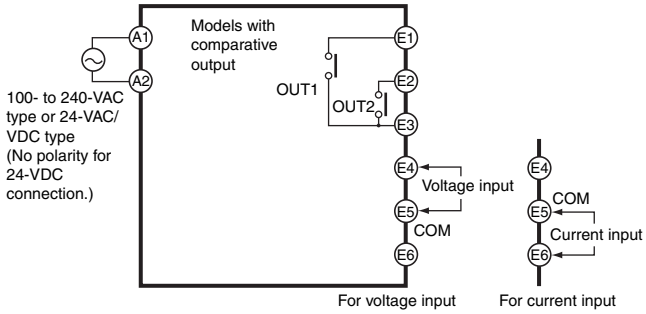




Connections

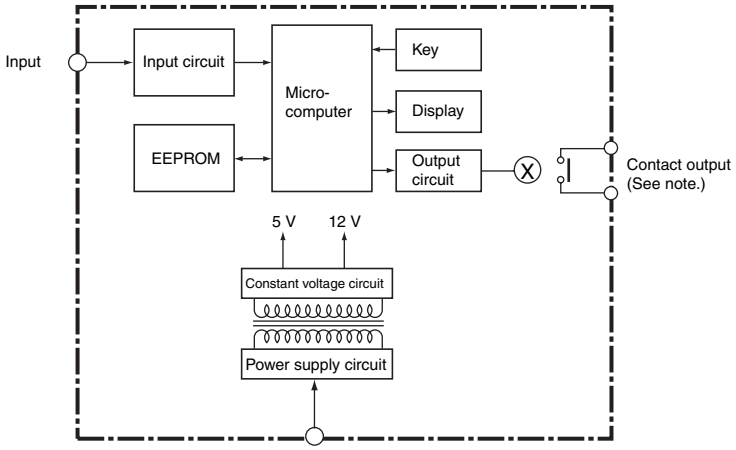
■ Terminal Arrangement





Terminal No.	Name	Description
A1 - A2	Operation power	Connects the operation power supply.
E4, E6 - E5	Analog input	Connects the voltage or current analog input.
E1, E2 - E3	Outputs	Outputs the relay outputs.

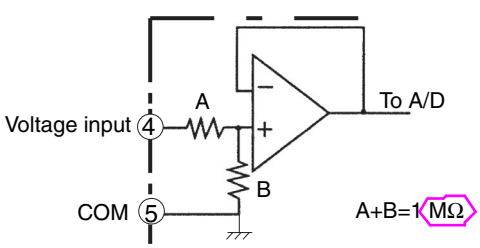
■ Block Diagram

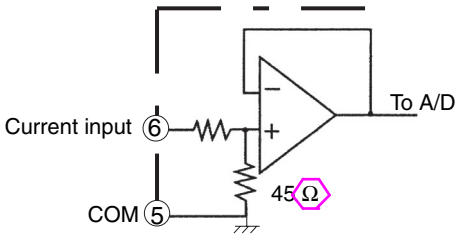


Note: Relay output models only.

■ Input Circuits

Analog Input (DC Voltage/Current)





Operation

■ Main Functions

Input Types and Ranges

Input type (setting parameter)	Function	Input range (setting parameters)		Setting range
Input range (in-t)	Selects DC voltage/current signal input	0 to 20 mA	(0-20)	Displayable from –19999 to 99999 with scaling function. The position of the decimal point can be set as desired.
		4 to 20 mA	(4-20)	
		0 to 5 V	(0-5)	
		1 to 5 V	(1-5)	
		±5 V	(5)	
		±10 V	(10)	

Note: The initial value for the input range is "4 to 20 mA (4-20)."

Scaling

• Analog (Process) Inputs

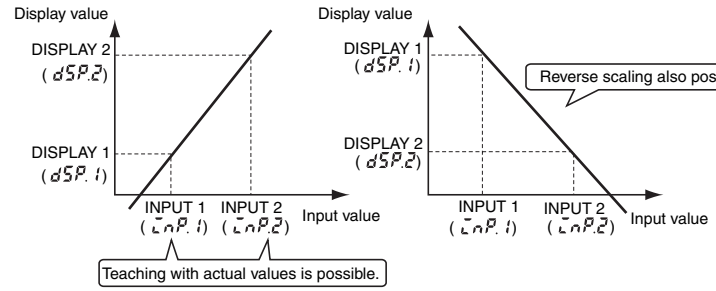
The K3MA-J converts input signals into desired physical values.

INPUT2: Any input value
DISPLAY2: Displayed value corresponding to INPUT2
INPUT1: Any input value
DISPLAY1: Displayed value corresponding to INPUT1

When DISPLAY1 is set for INPUT1, and DISPLAY2 is set for INPUT2, a line will be displayed joining the two points. (Raise shift, reverse scaling, plus/minus display, etc., can be adjusted as desired.)

Parameter	Setting value	Meaning
inp.1	-19999 to 99999	Input value for dsp.1
dsp.1	-19999 to 99999	Display value for inp.1
inp.2	-19999 to 99999	Input value for dsp.2
dsp.2	-19999 to 99999	Display value for inp.2

Parameter	Setting value	Meaning
dp	%.%%%%	Display four digits after decimal point
	%%.%%%	Display three digits after decimal point
	%%%.%%	Display two digits after decimal point
	%%%%.%	Display one digit after decimal point
	%%%%%	No decimal point



The decimal point can be optionally displayed. When displaying the decimal point, consider the number of digits to follow the decimal point prior to setting the scaling display value.

Reverse scaling, where the display value decreases as the input value increases, is also possible.

Instead of setting by inputting with the Up Key and Shift Key, current values can be input as scaling input values for teaching. This is useful for making settings while checking the operation status of the K3MA-J.

Operation

■ Main Functions

Input Types and Ranges

Input type (setting parameter)	Function	Input range (setting parameters)		Setting range
Input range (in-t)	Selects DC voltage/current signal input	0 to 20 mA	(0-20)	Displayable from –19999 to 99999 with scaling function. The position of the decimal point can be set as desired.
		4 to 20 mA	(4-20)	
		0 to 5 V	(0-5)	
		1 to 5 V	(1-5)	
		±5 V	(5)	
		±10 V	(10)	

Note: The initial value for the input range is "4 to 20 mA (4-20)."

Scaling

• Analog (Process) Inputs

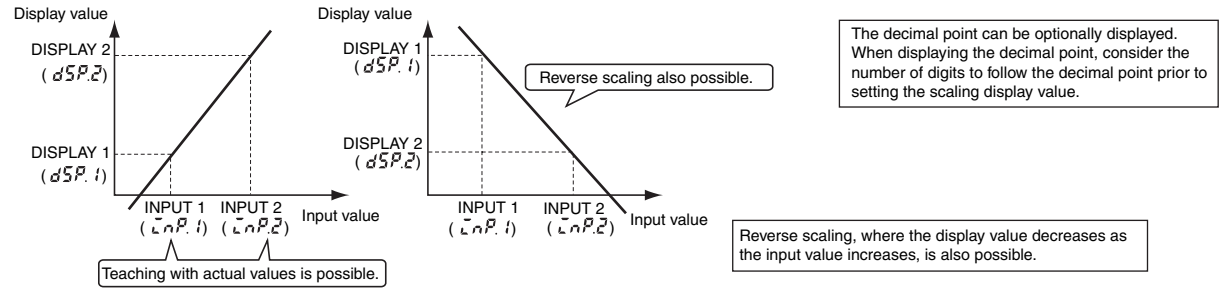
The K3MA-J converts input signals into desired physical values.

INPUT2: Any input value
DISPLAY2: Displayed value corresponding to INPUT2
INPUT1: Any input value
DISPLAY1: Displayed value corresponding to INPUT1

When DISPLAY1 is set for INPUT1, and DISPLAY2 is set for INPUT2, a line will be displayed joining the two points. (Raise shift, reverse scaling, plus/minus display, etc., can be adjusted as desired.)

Parameter	Setting value	Meaning
inP.1	-19999 to 99999	Input value for dSP.1
dSP.1	-19999 to 99999	Input value for inP.1
inP.2	-19999 to 99999	Input value for dSP.2
dSP.2	-19999 to 99999	Input value for inP.2

Parameter	Setting value	Meaning
dP	0.0000	Display four digits after decimal point
	00.000	Display three digits after decimal point
	000.00	Display two digits after decimal point
	0000.0	Display one digit after decimal point
	00000	No decimal point



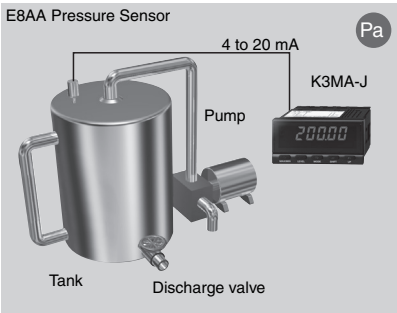
The decimal point can be optionally displayed. When displaying the decimal point, consider the number of digits to follow the decimal point prior to setting the scaling display value.

Reverse scaling, where the display value decreases as the input value increases, is also possible.

Instead of setting by inputting with the Up Key and Shift Key, current values can be input as scaling input values for teaching. This is useful for making settings while checking the operation status of the K3MA-J.

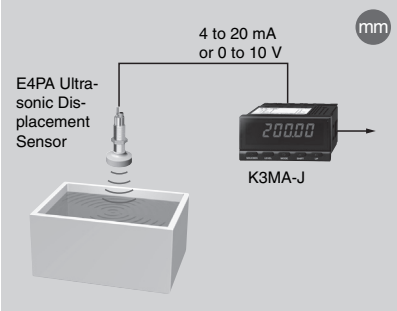
Application Examples

Monitoring interior tank pressure



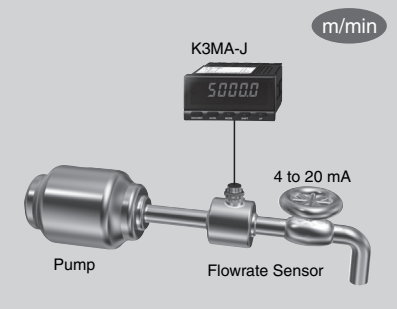
- Monitoring gas pressure
- Inspection instruments in food or pharmaceutical plants

Displaying/outputting liquid level



- Monitoring liquid level in cleaning tanks
- Water tanks, devices using chemicals, etc.

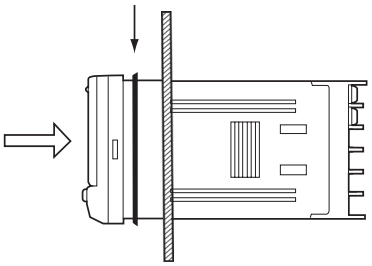
Flowrate sensor



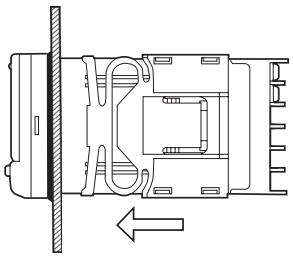
- Monitoring sendout flowrate
- Water processing devices, etc.

Installation

1. Insert the K3MA-J into the panel cut-out hole.
2. For a waterproof installation, insert the rubber gasket onto the body of the K3MA-J.

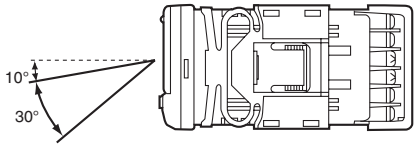


3. Fit the adaptor into the grooves on the left and right sides of the rear case, then push it until it contacts the panel to secure the K3MA-J.



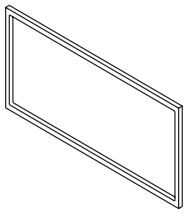
■ Angle of View

The K3MA is designed to provide the best visibility at the angles shown in the following diagram.



■ Rubber Packing (Sold Separately)

K32-P1



If the rubber packing is lost or damaged, it can be ordered using the following model number : K32-P1.
(Depending on the operating environment , deterioration, contraction, or hardening of the rubber packing may occur and so, in order to ensure the level of waterproofing specified in NEMA4, periodic replacement is recommended.)

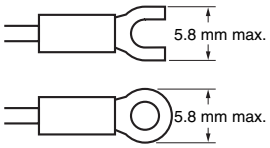
Note: Ruber packing is provided with the Controller.

■ Wiring Precautions

- Use crimp terminals.
- Tighten the terminal screws to a torque of approximately 0.5 N·m.
- To avoid the influence of noise, route signal lines and power lines separately.

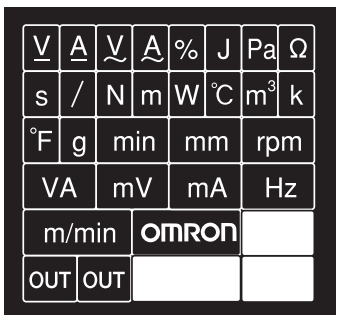
■ Wiring

- Use the following M3 crimp terminals.



■ Unit Labels (Provided)

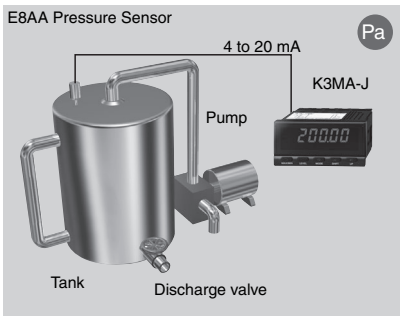
- The unit labels are not attached to the K3MA-J. Select the desired labels from the provided sheet.



Note: For scales and gauges, use the unit labels that are specified by the relevant laws or regulations.

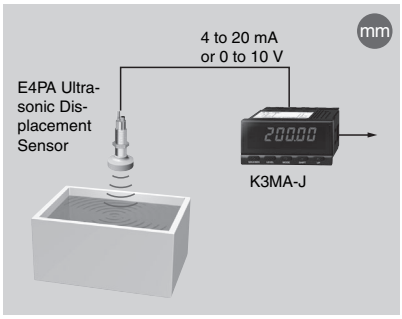
Application Examples

Monitoring interior tank pressure



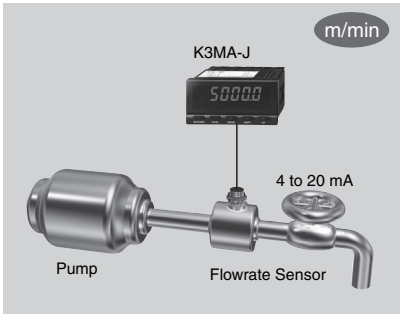
- Monitoring gas pressure
- Inspection instruments in food or pharmaceutical plants

Displaying/outputting liquid level



- Monitoring liquid level in cleaning tanks
- Water tanks, devices using chemicals, etc.

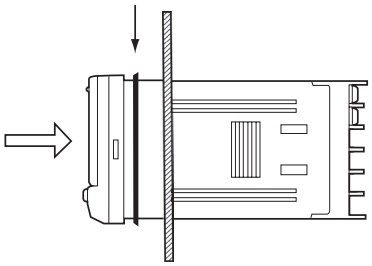
Flowrate sensor



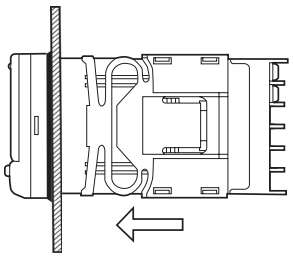
- Monitoring send-out flowrate
- Water processing devices, etc.

Installation

1. Insert the K3MA-J into the panel cut-out hole.
2. For a waterproof installation, insert the rubber gasket onto the body of the K3MA-J.

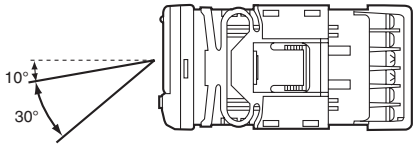


3. Fit the adaptor into the grooves on the left and right sides of the rear case, then push it until it contacts the panel to secure the K3MA-J.



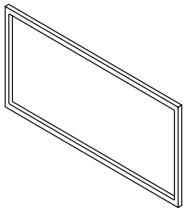
■ Angle of View

The K3MA is designed to provide the best visibility at the angles shown in the following diagram.



■ Rubber Packing (Sold Separately)

K32-P1



If the rubber packing is lost or damaged, it can be ordered using the following model number: K32-P1.
(Depending on the operating environment, deterioration, contraction, or hardening of the rubber packing may occur and so, in order to ensure the level of waterproofing specified in NEMA4, periodic replacement is recommended.)

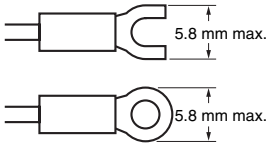
Note: Rubber packing is provided with the Controller.

■ Wiring Precautions

- Use crimp terminals.
- Tighten the terminal screws to a torque of approximately 0.5 N·m.
- To avoid the influence of noise, route signal lines and power lines separately.

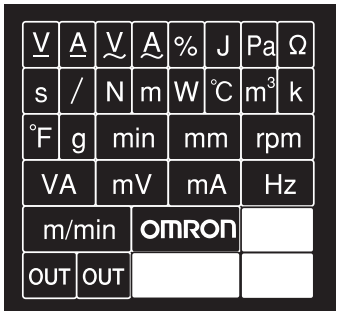
■ Wiring

- Use the following M3 crimp terminals.

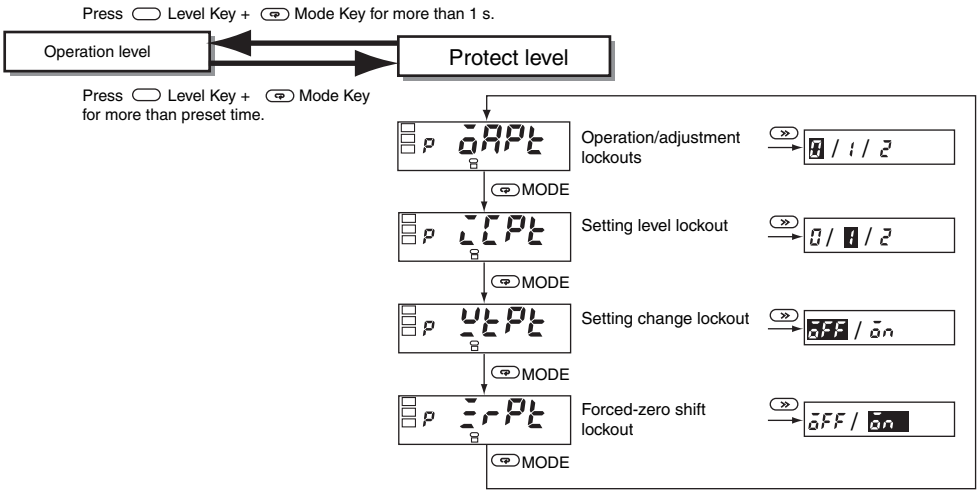


■ Unit Labels (Provided)

- The unit labels are not attached to the K3MA-J. Select the desired labels from the provided sheet.



Note: For scales and gauges, use the unit labels that are specified by the relevant laws or regulations.



Operation/Adjustment Lockouts

Restricts key operations for operation level and adjustment level.

Parameter	Setting	Operation level	
		Current value display	Set value display
oapt	0	Allowed	Allowed
	1	Allowed	Allowed
	2	Allowed	Prohibited

- Initial setting is 0.
- This cannot be displayed on models not equipped with the comparative output function.

Setting Level Lockout

Restricts shifting to initial setting level or advanced-function setting level.

Parameter	Setting	Shift to initial setting level	Shift to advanced-function setting level
icpt	0	Allowed	Allowed
	1	Allowed	Prohibited
	2	Prohibited	Prohibited

Setting Change Lockout

Restricts setting changes by key operation. When this lockout is set, it is no longer possible to shift to a setting change mode.

Parameter	Setting	Setting change by key operation
wtpt	off	Allowed
	on	Prohibited

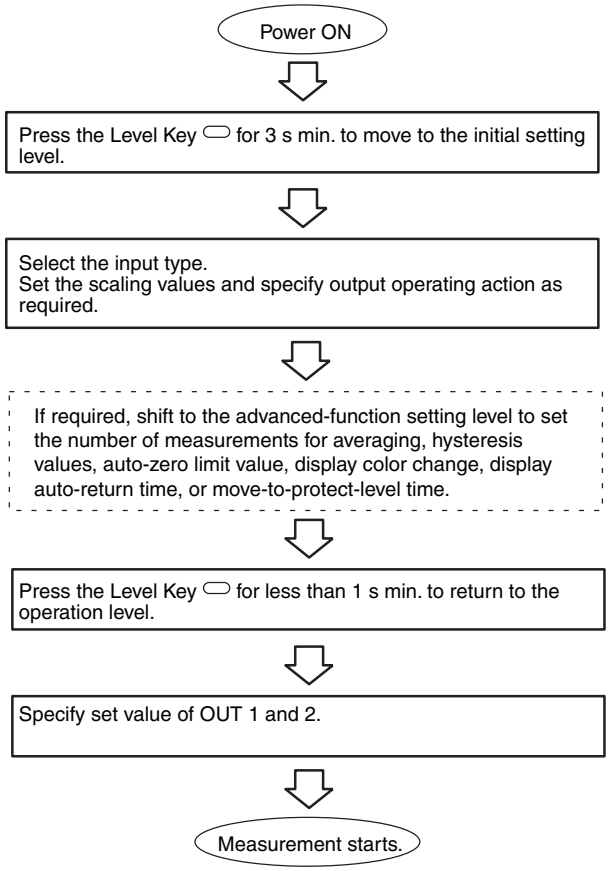
However, all protect level parameters can still be changed.

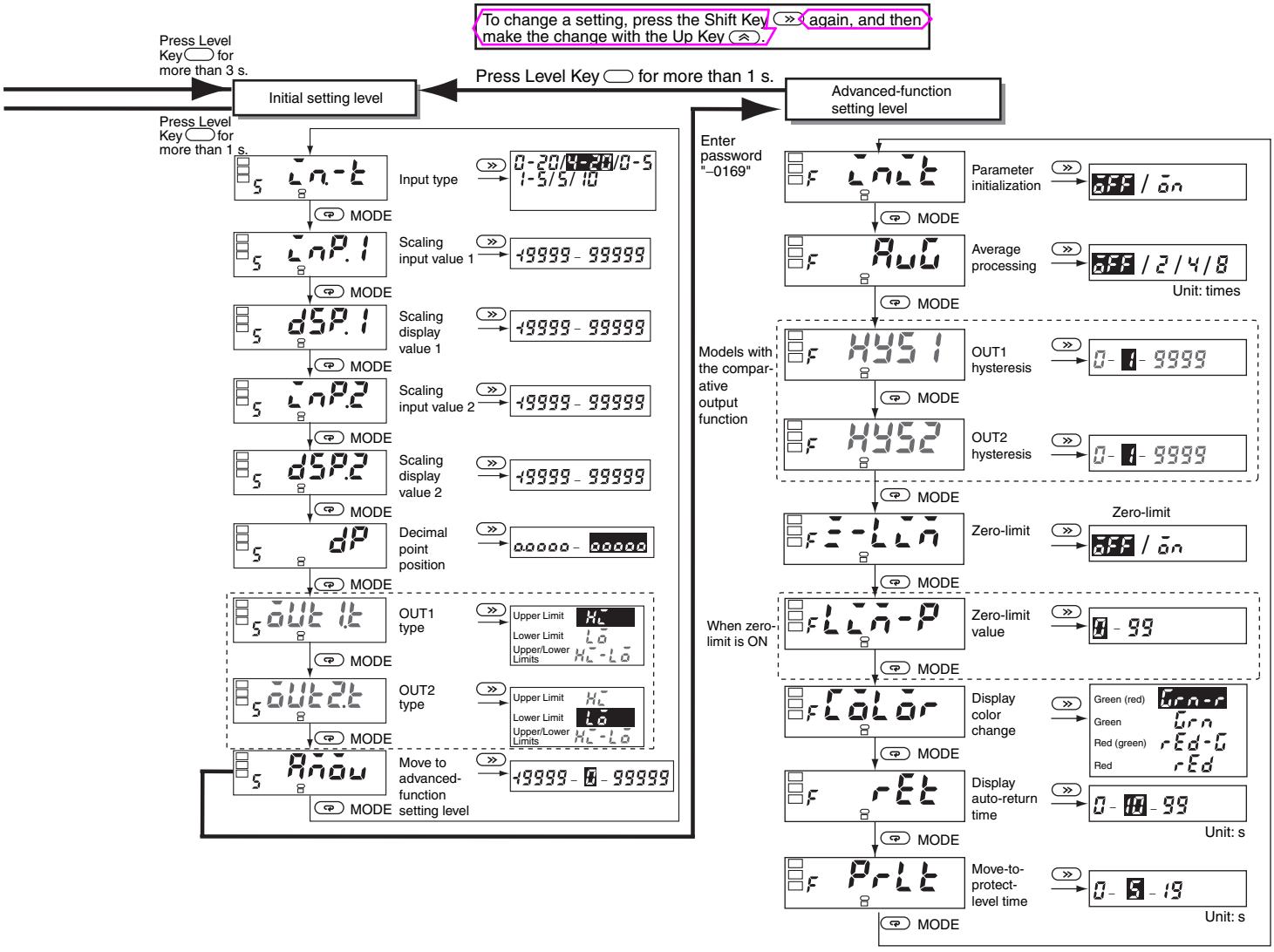
Forced-zero Lockout

Restricts the setting or release of a forced-zero by front-panel key operation.

Parameter	Setting	Setting/release of forced-zero by key operation
=rpt	off	Allowed
	on	Prohibited

■ Initial Settings



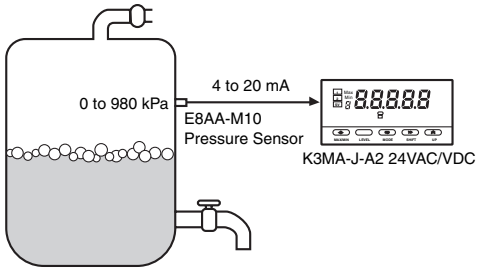

To change a setting, press the Shift Key again, and then make the change with the Up Key.
Press Level Key for more than 3 s.
Initial setting level
Press Level Key for more than 1 s.
Press Level Key for more than 1 s.
Advanced-function setting level
Enter password "−0169"
Input type
MODE
Scaling input value 1
Scaling display value 1
Scaling input value 2
Scaling display value 2
Decimal point position
OUT1 type
Upper Limit
Lower Limit
Upper/Lower Limits
OUT2 type
Move to advanced-function setting level
Parameter initialization
Average processing
Unit: times
Models with the comparative output function
OUT1 hysteresis
OUT2 hysteresis
Zero-limit
When zero-limit is ON
Zero-limit value
Display color change
Green (red)
Green
Red (green)
Red
Display auto-return time
Unit: s
Move-to-protect-level time
Unit: s

■ Setting Example

Initial Settings

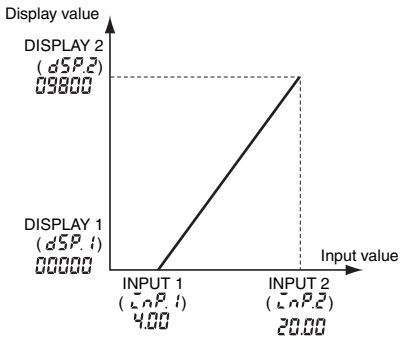
The settings for the following example are shown here.

Example: Tank pressure display



Here, the pressure inside the tank is to be displayed in units of 0.1 kPa.

- Pressure Sensor: E8AA-M10
  Measuring range: 0 to 980 kPa, output 4 to 20 mA



1. Set the K3MA-J input type to the 4 to 20 mA input range.
   Parameter: in-t (input type), Setting value: 4-20
2. Set the display values for the corresponding input values.
   Set the scaling as shown below for the following correspondence: input 4 mA-->display 0.0, input 20 mA-->display 980.0

Parameter	Setting value
inp.1 (scaling input value 1)	4.00
dsp.1 (scaling display value 1)	00000
inp.2 (scaling input value 2)	20.00
dsp.2 (scaling display value 2)	09800
dp (decimal point position)	%%%%.%

Note: The decimal point position here refers to the position in the number after scaling. When setting the scaling display value, it is necessary to consider the number of digits to be displayed past the decimal point.

■ Troubleshooting

When an error occurs, error details will be displayed on the main indicator. Confirm the error from the main indicator and take the appropriate countermeasures.

Level display	Main indicator	Error contents	Countermeasures
Not lit	e111	RAM memory error	Repair is necessary. Consult your OMRON sales representative.
5	e111	EEPROM memory error	When this error is displayed, press the Level Key for 3 seconds, and the settings will be restored to the factory settings. If the error cannot be recovered, repair is necessary. Consult your OMRON sales representative.
Not lit	Flashes s.err	You will see this indication when turning ON the product the first time after purchase. This is because the input signal value is 0 mA at that time even though the range is factory set to 4 to 20 mA.	At the initial setting level, set the input type and other parameters according to your application.
		Input error	Promptly change the input voltage/current to a value that falls within the measurement range. If the error cannot be recovered, repair is necessary. Consult your OMRON sales representative.
Not lit	Flashes 99999	The scaling display value exceeds 99999.	Promptly change the input to a value that falls within the specified range.
			The scaling value may be inappropriate. Review the scaling value at the initial setting level.
Not lit	Flashes -19999	The scaling display value is lower than –19999.	Promptly change the input to a value that falls within the specified range.
			The scaling value may be inappropriate. Review the scaling value at the initial setting level.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

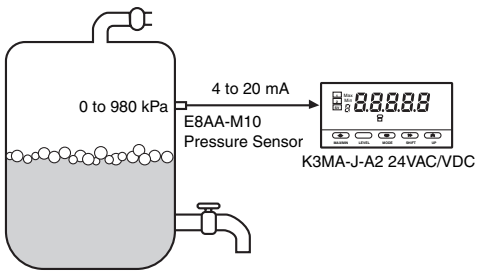
In the interest of product improvement, specifications are subject to change without notice.

■ Setting Example

Initial Settings

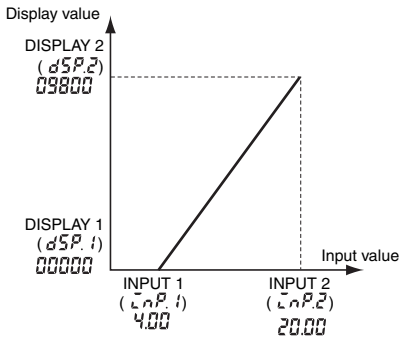
The settings for the following example are shown here.

Example: Tank pressure display



Here, the pressure inside the tank is to be displayed in units of 0.1 kPa.

- Pressure Sensor: E8AA-M10
  Measuring range: 0 to 980 kPa, output 4 to 20 mA



1. Set the K3MA-J input type to the 4 to 20 mA input range.
   Parameter: In-t (input type), Setting value: 4-20
2. Set the display values for the corresponding input values.
   Set the scaling as shown below for the following correspondence: input 4 mA-->display 0.0, input 20 mA-->display 980.0

Parameter	Setting value
InP. 1 (scaling input value 1)	4.00
dSP. 1 (scaling display value 1)	00000
InP.2 (scaling input value 2)	20.00
dSP.2 (scaling display value 2)	09800
dP (decimal point position)	oooo.o

Note: The decimal point position here refers to the position in the number after scaling. When setting the scaling display value, it is necessary to consider the number of digits to be displayed past the decimal point.

■ Troubleshooting

When an error occurs, error details will be displayed on the main indicator. Confirm the error from the main indicator and take the appropriate countermeasures.

Level display	Main indicator	Error contents	Countermeasures
Not lit	E111	RAM memory error	Repair is necessary. Consult your OMRON sales representative.
5	E111	EEPROM memory error	When this error is displayed, press the Level Key for 3 seconds, and the settings will be restored to the factory settings. If the error cannot be recovered, repair is necessary. Consult your OMRON sales representative.
Not lit	Flashes 5.Err	You will see this indication when turning ON the product the first time after purchase. This is because the input signal value is 0 mA at that time even though the range is factory set to 4 to 20 mA. For the K3MA-J-A2, the relay output will be OFF.	At the initial setting level, set the input type and other parameters according to your application.
		Input error	Promptly change the input voltage/current to a value that falls within the measurement range. If the error cannot be recovered, repair is necessary. Consult your OMRON sales representative.
Not lit	Flashes 99999	The scaling display value exceeds 99999.	Promptly change the input to a value that falls within the specified range.
			The scaling value may be inappropriate. Review the scaling value at the initial setting level.
Not lit	Flashes -19999	The scaling display value is lower than –19999.	Promptly change the input to a value that falls within the specified range.
			The scaling value may be inappropriate. Review the scaling value at the initial setting level.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

In the interest of product improvement, specifications are subject to change without notice.