

# OMRON

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# OMRON

Programmable Terminal

# NP Series



## Easy Setup with the Low-cost, Compact NP Series

# NP



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# Simpler and More Versatile. OMRON's Compact NP Series Connect!

Easier connection to OMRON PLCs and Temperature Controllers, plus high-speed transfer of image data via USB.



Note : The above illustration is a conceptual diagram only. For information on connecting the PT, refer to the user manuals.

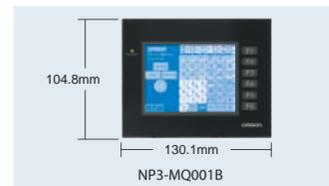
## Easy Assembly



### Compact Operating Section

Compact design reduces the mounting work.

At 130.1x104.8mm (NP3:WxH), this NP Series is small enough to be mounted in the same space as a handful of switches, and it requires only one mounting hole in the control panel. You get less work and a less crowded operating section.



### Install in Most Environments

IP65 water resistance.

The front of the panel has IP65 water resistance, allowing the NP Series to be used in environments where mist or splashing cooling water is present.

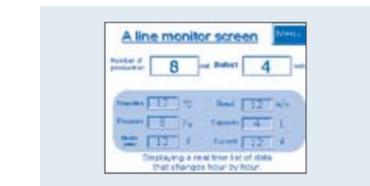
Note :The unit may not be able to be used in locations with long-term exposure to oil and water. For details on the installation environment, refer to the user manual.



### Compact, Yet Plenty of Information

The NP3 can display the same amount of information as a 5-inch NP Series.

Using a 3.8-inch QVGA LCD, this NP3 is able to clearly display 8 grayscale levels in monochrome. The advanced display capabilities equivalent to those of a 5-inch NP Series improve the efficiency of onsite operations.



H a r d w a r e

## Easy Connection, Easy Wiring



### Reduce Connection Design and Onsite Work

Excellent matching with OMRON control devices.

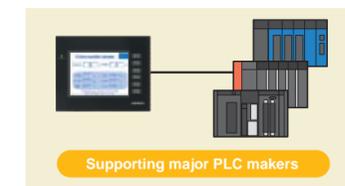
The NP Series provides an OMRON CP1L/CP1H PLC Programming Console function, and connects to OMRON EJ1 Temperature Controllers. The NP Series can be operated immediately using the sample screens included with the NP-Designer (Support Software).



### Use PLCs from Other Companies

Multivendor support is provided for major global manufacturers.

Including OMRON and Mitsubishi, support is provided for PLCs from major global manufacturers. The NP Series can be used with your current PLC without redesigning the system. It doesn't matter if you use a different PLC manufacturer for each project.

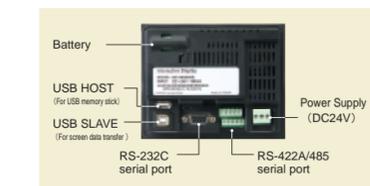


C o n n e c t a b i l i t y

### Reduced Wiring Work

Wiring with a single cable.

The NP Series is equipped with both a RS-232 port and a switchable RS-422A/485 port so you can connect to a PLC or Temperature Controller with a single cable. You get reduced wiring work and easier maintenance.



\* NP3-MQ000B, NP3-MQ000, NP3-MQ001B, NP3-MQ001

# Compact design and easy setup! Compatible with your current PLC.



### Use a Computer USB Port

Transfer screens at high speed.

The USB interface lets you take full advantage of the computer software environment. Transfer screens created on the computer to the NP Series at high speeds. Or use a USB memory stick to transfer screen data without bringing a computer on-site.



### Easier On-site Operation

Models are available with either of two function key layouts.

Models with two different function key layouts are available to meet the needs of your application design. The NP Series case is also available in two different colors: black or silver.



### Use the Same Equipment Worldwide

Multi-language Support.

The NP Series, screens, and Support Software are supported in English, Chinese, many European languages, and Japanese. Also, the NP Series meets international standards so it can be exported or imported across country borders easily.



## Operation

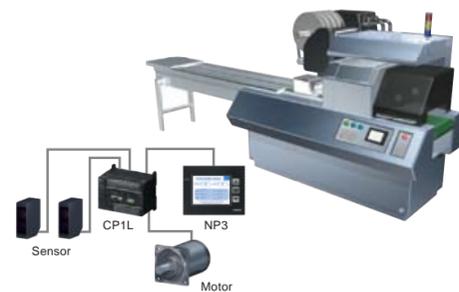
## NP Series Line Up

	3Key Type	6Key Type
<b>3.8</b> inches Monochrome STN QVGA 320x240 pixels	NP3-MQ000B   NP3-MQ000 	NP3-MQ001B   NP3-MQ001 
<b>5.7</b> inches Monochrome STN QVGA 320x240 pixels	NP5-MQ000B   NP5-MQ000 	NP5-MQ001B   NP5-MQ001 
<b>5.7</b> inches Color STN QVGA 320x240 pixels	NP5-SQ000B   NP5-SQ000 	NP5-SQ001B   NP5-SQ001 

### Example of Applications That Provide Added Value to Equipment

#### Packing Machines

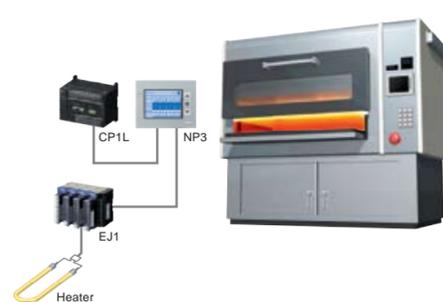
Simplified design and processing.  
Operated by touching the screen.



- Design** Easy screen design by using NP-Designer.
- Assembly** No panel processing and wiring for lamp switches needed.
- Operation** Operation and monitoring status can now be achieved with one NP Series. No need for additional processing for additions or modifications.

#### Food Processing Equipment

Direct connection to Temperature Controllers.  
Operate the NP Series even with wet hands.



- Design** Enhanced design with silver case that matches stainless-steel equipment.
- Assembly** Connect directly to EJ1 to reduce wiring.
- Operation** IP65 protection allows application in wet environments.

## Ordering Information

Model name	Specifications				Model number
	Effective display area	Number of pixels	Number of function keys	Case color	
NP3	3.8-inch STN monochrome	320x240	3	Black	NP3-MQ000B
				Silver	NP3-MQ000
			6	Black	NP3-MQ001B
				Silver	NP3-MQ001
NP5	5.7-inch STN monochrome	320x240	3	Black	NP5-MQ000B
				Silver	NP5-MQ000
			6	Black	NP5-MQ001B
				Silver	NP5-MQ001
	5.7-inch STN color	320x240	3	Black	NP5-SQ000B
				Silver	NP5-SQ000
			6	Black	NP5-SQ001B
				Silver	NP5-SQ001

# Performance / Specifications

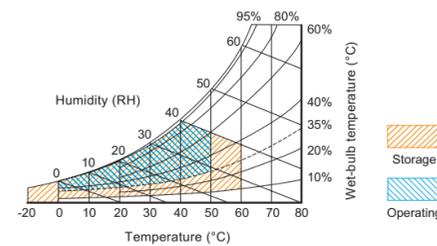
Series	NP3				NP5							
Type	3.8 STN LCD				5.7 STN LCD							
Model number	NP3-MQ000	NP3-MQ001	NP3-MQ000B	NP3-MQ001B	NP5-MQ000	NP5-MQ001	NP5-MQ000B	NP5-MQ001B	NP5-SQ000	NP5-SQ001	NP5-SQ000B	NP5-SQ001B
Display device	Monochrome LCD				Monochrome LCD				Color LCD			
Effective display area	Width 78.8mm × height 59.6 mm (3.8 inches)				Width 121.4mm × height 92.6 mm (5.7 inches)							
Case color	Silver		Black		Silver		Black		Silver		Black	
Number of function keys	3	6	3	6	3	6	3	6	3	6	3	6
Display color	Monochrome/8 grayscale levels								256 colors			
Number of pixels	320 pixel horizontal × 240 pixel vertical											
View angle	Left / right ±30°, Top 10°, Bottom 30°											
Screen data capacity	3MB											
Image data (BMP or JPG images)	8 grayscale levels								256 colors			
Memory Card	Supported (Use USB memory stick (FAT32) )											
Touch panel	Method	Resistive membrane analog type										
	Input	Pressure-sensitive										
	Service life	1,000,000 touch operations min.										
Serial Communications	COM1 Connector	Conforms to EIA RS-232C D-Sub female 9-pin connector 5 VDC output (250 mA max.) through pin 6										
	COM2 Connector	Conforms to RS-422A / 485 10-pin terminal block										
USB SLAVE Specifications	USB rating	USB1.1										
	Connector	TYPE-B (Slave)										
USB HOST Specifications	USB rating	USB1.1										
	Connector	TYPE-A (Host)										

# General Specifications

Item	Specifications
Rated power supply voltage	24 VDC
Allowable voltage range	21.6 to 27.6 VDC (24 VDC -10% to +15%)
Allowable input power interruption time	No restriction
Power consumption	12W max
Ambient operating temperature	0 to 50°C (See notes 1 and 2)
Storage temperature	-20 to + 60°C
Ambient operating humidity	35 to 85%RH with no condensation (0 to 40°C) (See notes 2.) 35 to 50%RH with no condensation (40 to 50°C) (See notes 2.)
Operating environment	No corrosive gases
Noise immunity	Conforms to IEC61000-4-4, 2 KV (power lines)
Vibration resistance (during operation)	5 to 9 Hz with 3.1 mm amplitude and 9 to 150 Hz with 9.8 m/s <sup>2</sup> acceleration for 30 min in each of X, Y, and Z directions
Shock resistance (during operation)	147 m/s <sup>2</sup> 3 times in each of X, Y, and Z directions
Weight	NP5 : 900 g max NP3 : 500g max
Enclosure rating	Front panel: IP65F oil proof (See note 3)
Battery life	5 years (at 25°C)
International standards	EC Directives, cULus (UL508)

(Note 1) When a STN LCD display device is used, the display quality will decline (e.g., the contrast ratio will be reduced) if the temperature exceeds 40°C. Also, when the temperature drops, the response speed is lowered due to characteristics of liquid crystals.

(Note 2) Operate the PT within the temperature and humidity ranges shown in the following diagram



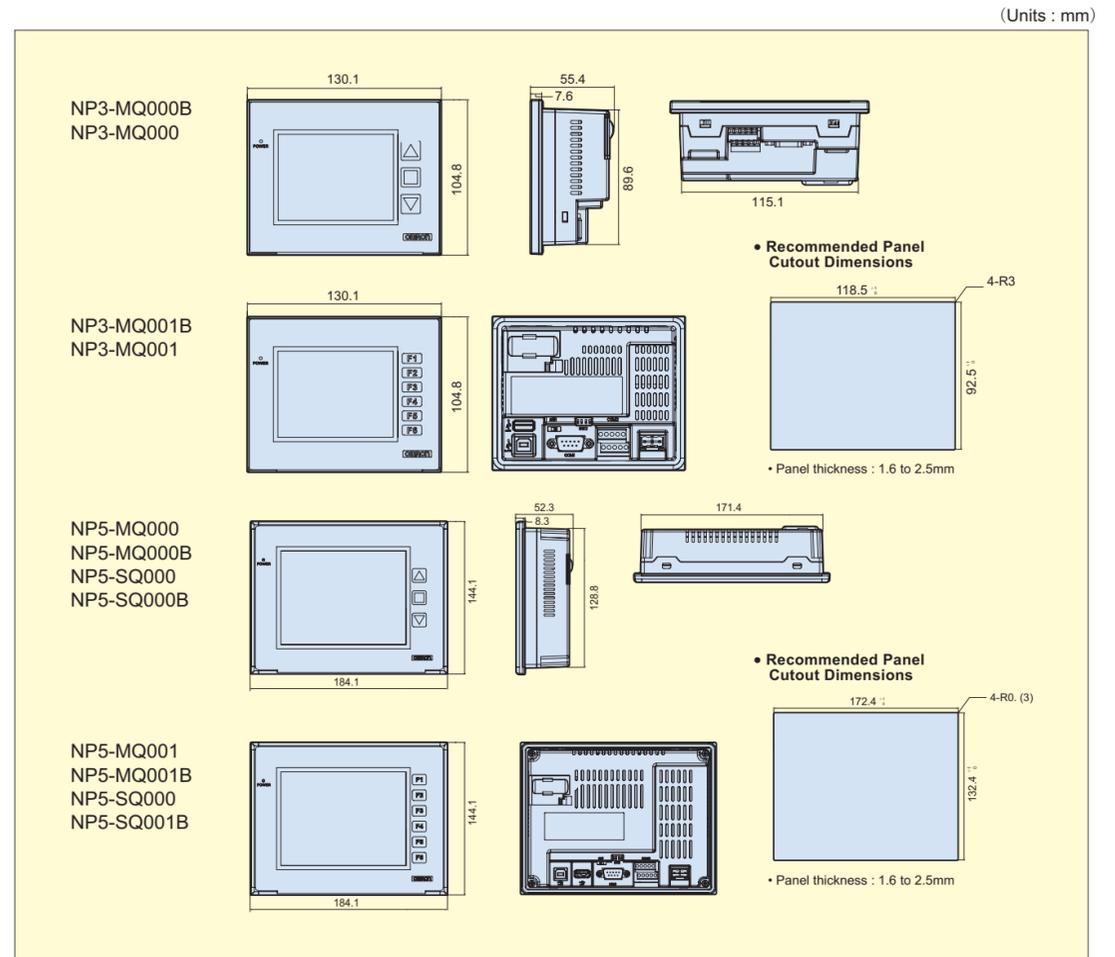
(Note 3) May not be applicable in locations with long-term exposure to water or oil.

# Multivendor List

Brands	Host	Brands	Host
OMRON	Host link: C/CPM/CQM PLC	Mitsubishi	FX / FX2N CPU port
	Host link: CS/CJ/CP1/CV/CVM PLC		FX3U CPU port
	NT link (1:N) (*)		FX Series Computer Link
	NT link (1:1)		A Series Computer Link
	EJ1		A2A/A2AS/A2USH A1SH/A3N/A2ASH CPU Port
Allen Bradley	MicroLogix		Q Series CPU Port
	SLC5		Q Series Computer Link
LG (LS)	Master-K120S/200S		TSX Micro (Uni-Telway) (*)
	Glofa GM6 CNET		NEZA (Uni-Telway) (*)
	Master-K CNET		TWIDO
Matsushita	XGT CNET	SG 200	
	FP Series	S7-300 (with PC Adaptor)	
Modbus	984 RTU / ASCII (Master)	S7-300 (without PC Adaptor) (*)	
	RTU / ASCII Hex Address (Master)	90 Series SNP	
	RTU / ASCII nW, RTU 2W (Master)	Keyence KV/KZ Series	
	RTU / ASCII (Slave)	NULL driver	

\* Please refer to NP Host Connection Manual for details.

# Dimensions



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