

The New NTH25 Hand-Held Operator Interface Puts Powerful Application Control in the Palm of Your Hand

- 4.7" color and monochrome LCDs
- 320 x 240 pixel resolution
- 13 function keys
- 192 touch cells per screen
- 5 meter communications cable
- Monitor and change PLC program and values with the embedded programming console
- Hard wired emergency stop button
- Wrist strap secures the unit to the operator
- Communicate with Omron PLCs using NT Link protocol
- Control a single-board computer or soft PLC using the NT Memory Link protocol



Ordering Information

Item	Part number
4.7" color, 13 function keys, hand-held touch screen	NTH25C-ST141B
4.7" monochrome, 13 function keys, hand-held touch screen	NTH25-ST121B
NT Programming Software	NT-ZJCAT1-EV3
NTH25 Operation Manual	V054-E1-1

Specifications

■ GENERAL

Features		Description	
Rated power supply voltage		24 VDC	
Allowable power supply voltage range		20.4 VDC to 26.4 VDC (24 VDC -15% to 10%)	
Allowable power interruption time		No regulation	
Power consumption		15 W max	
Ambient operating temperature		0°C to 50°C	
Ambient storage temperature		-20°C to 60°C with no icing	
Ambient operating humidity		35% to 85% RH with no condensation	
Operating environment		No corrosive gases	
Dielectric strength		1000 VAC for 1 minute (between power terminal and FG)	
Noise resistance		Noise voltage: 1000 Vp-p (across power supply terminals and panel) Pulse width of 100 ns to 1 μs (by noise simulator)	
Vibration resistance (operating)		10 to 57 Hz with 0.075 mm amplitude 57 to 150 Hz with 9.8 m/s ² acceleration for 60 min. in each of X, Y, Z directions	
Weight		0.7 kg max (excluding cables), 1.2 kg max (including cables)	
Dimensions		205 (W) x 140 (H) x 71.2 (D) mm (excluding cables)	
Enclosure ratings		Equivalent to IP65 dust-proof/drip-proof structure or equivalent (See Note 1.)	
Applicable EC directives or standards	EC directives	EMC directive 89/336/EEC, 92/31/EEC Low voltage directive 73/23/EEC	
	Standards	EMI	EN50081-2:1993
		EMS	EN61131-2:1995
		Electrical safety	EN61131-2:1995
Display panel	Display device	NTH25: Monochrome STN LCD (with backlight) NTH25C: Color STN LCD (with backlight)	
	Number of dots (resolution)	320 dots horizontally x 240 dots vertically	
	Size of a double-width character	4.8 mm	
	Effective display area (H) x (V)	96 x 72 (4.7 inches)	
	View angle	NTH25: Up: 30°; Down: 20°; Left/right: ±30° NTH25C: Up: 30°; Down: 30°; Left/right: ±50°	
	Display color	NTH25: Black, white (2 colors) NTH25C: 8 colors (and intermediate colors can be displayed with tiling patterns)	
	Life expectancy (until contrast is reduced by half)	50,000 hours minimum	
	Contrast adjustment	Adjustable in 3 levels by operation at the touch panel	
Backlight (white cold cathode tube)	Life expectancy (See Note 2.)	10,000 minimum	
	Replacement	Not possible	
Indicators	POWER (green LED)	Lit while power is being supplied	
	+ (green LED)	Switched between alternate and momentary by settings on NTH Screen Data Converter	
	- (green LED)		
Touch panel	Resistive type		
	Number of switches: 192 (16 horizontally x 12 vertically)		
	Maximum number that can be registered to one screen: 192		
	Cell size: 6 x 6 mm		
	Input: Pressure-sensitive type		
	Operating force: 1 N minimum		
Life expectancy: 1 million operations minimum			
Function switch	Number of switches : 13		
Push lock switch	Number of switches : 1		

Note: 1. The NTH25/NTH25C may not be used at a location where it is exposed to splashing oil for a long period.
2. Time taken for brightness to reduce to half at normal temperature and humidity.

■ DISPLAY ELEMENT

Features	Description	
Display characters	Standard characters (8 x 16): Alphanumeric and standards Marks (16 x 16 dots): User-defined pictographs	
Character enlargement function	Wide, high, 2 x 2, 4 x 4, 8 x 8	
Character display attributes	Standard, flash, inverse flash, transparent	
Image data	Pictographs composed of dots Size: One of 32 x 32, 32 x 64, 64 x 64 or 128 x 64 dots (according to code) Enlarged display and display attributes such as inverse and flash cannot be set	
Library data	Combinations of any graphics Size: Min. 1 x 1 dots, max. 320 x 240 dots (Any size can be set within this range.) Enlarged display and display attributes such as inverse and flash are implemented according to the setting registered.	
Graphics	Polyline, circle, arc, sector, rectangle, polygon	
Line type	4 types only for polylines (solid line, broken line, dot-dash, dot-dot-dash)	
Tiling	7 types	
Graphic display attributes	Standard, inverse, flash, inverse flash	
Display colors	NTH25: 2 colors (black, white) NTH25C: 8 colors (black, blue, red, magenta, green, cyan, yellow, white)	
Color specification	Foreground color, background color	
Text data (fixed display)	Fixed character data (character strings registered to each screen) Maximum combined total with other fixed display elements of 65535 per screen (same applies to window screens)	
Character string displays	Up to 50 per screen (not possible for window screens) (40 bytes per string)	
Numeral displays	Up to 120 per screen (not possible for window screens), max. 8-digit display	
Mark displays (fixed display)	Up to 65535 per screen (same applies to window screens)	
Bar graph displays	Up to 30 per screen (not possible for window screens)	
Trend graphs	Eight lines per frame, one frame per screen (not possible for window screens) With the data logging function: 40 graphs per screen data file	
Graphic displays (fixed display)	Can be displayed wherever required Maximum combined total with other fixed display elements of 65535 per screen (same applies to window screens)	
Standard lamps	Up to 64 per screen (not possible for window screens) 64000 lamps per screen data file	
Image/library lamps	Up to 64 per screen (not possible for window screens) 12800 lamps per screen data file (Note, however, that screen numbers 201 onward cannot be used.)	
Touch switches	Up to 192 per screen (same applies to window screens)	
Image data	Up to 64 per screen (not possible for window screens)	
Library data	Up to 256 per screen (not possible for window screens)	
Numeral inputs	Numeral key type	Total of 80 numeral key types and thumbwheel types per screen (Only one numeral key type numeral input can be registered to one window screen.)
	Thumbwheel type	
Alarm lists	One alarm list or alarm history group per screen	
Alarm histories	(not possible for window screens)	
Standard screen	The standard screen display	
Window screens	Only one window screen can be displayed at the same time. Fixed display elements, touch switches and numeral input field (only 1 numeric type) can be registered.	
Screen attributes	Keyboard screen number	
Max. number of registered screens	1000 screens	
Screen number	0: No display 1 to 1000: User registered screens 9020: Programming console function screen	
Screen registration method	By transmitting screen data created using the Support Tool to the NTH25/NTH25C by the NTH Screen Data Converter	
Screen saving method	Flash memory (screen data memory in the PT)	

COMMUNICATIONS

Features		Host Link	NT Link	Memory Link (RS-232C type)
Communications standard		EIA RS-232C		
Communications settings	Start-stop synchronization	Yes	—	Yes
	Communications speed	1200, 2400, 4800, 9600, 19200 bps	—	1200, 2400, 4800, 9600, 19200 bps
	Data length	7, 8 bits	—	7, 8 bits
	Stop bit	1, 2 bits	—	1, 2 bits
	Parity	Even, odd, none	—	Even, odd, none
Connector		9-pin D-SUB connector (female)		
Number of units connected		1:1		
Transmission distance		Max. 15 m (See Note.)	Max. 15 m (See Note.)	Max. 15 m
Communications protocol		C-Series SYSWAY (1:N)	—	Memory Link (NTH)

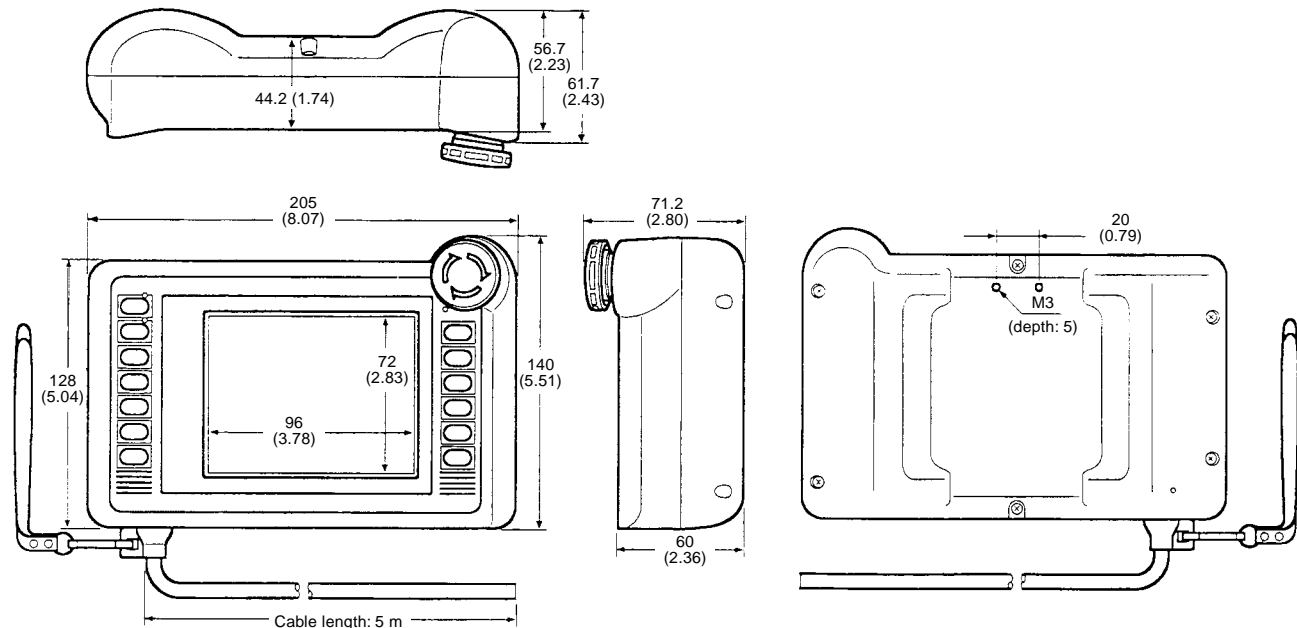
Note: When using an NT-AL001, the specifications are as follows:

- RS-232C cable: Max. 2 m
- RS-422A cable: Total length 500 m max.

Dimensions

Unit: mm (inch)

OPERATOR INTERFACES



OMRON

OMRON ELECTRONICS, INC.

One East Commerce Drive
Schaumburg, IL 60173

1-800-55-OMRON

OMRON CANADA, INC.

885 Milner Avenue
Scarborough, Ontario M1B 5V8

416-286-6465