

NT2S

Small Function Key Terminals

The NT2S series Terminals are designed as a human machine interface for simple control tasks. Their small dimensions and low installation depths ensure that they will fit into any machine. Of the six NT2S types, four can be connected directly to the peripheral port and two can be connected to OMRON PLCs via an RS-232C port.

- Easy programming
- Small size and installation depth
- IP65 protection
- Real-time clock
- Printer connection
- Excellent value for money



Performance Data (Max. Values)

	NT2S-SF121B-EV2	NT2S-SF125B-E	NT2S-SF122B-EV2	NT2S-SF126B-E	NT2S-SF123B-EV2	NT2S-SF127B-E
Programmable	Yes	Yes	Yes	Yes	No (PLC controlled)	No (PLC controlled)
Terminal size (W,H,D)	109x60x36 mm	107x107x36	109x60x36 mm	107x107x36	109x60x36 mm	107x107x36
Display size	56x11 mm	56x11 mm	56x11 mm	56x11 mm	56x11 mm	56x11 mm
Number of screen pixels	5x7 pixel/character	5x7 pixel/character	5x7 pixel/character	5x7 pixel/character	5x7 pixel/character	5x7 pixel/character
Number of lines/characters	2/16	2/16	2/16	2/16	2/16	2/16
Number of function/control keys	6	20	6	20	6	20
Memory	24 kB for applications	24 kB for applications	24 kB for applications	24 kB for applications	PLC memory is used	PLC memory is used
Max. screen pages	250	250	250	250	Depending on PLC memory	Depending on PLC memory
Number input	Yes	Yes	Yes	Yes	Yes	Yes
Bar graph	Yes	Yes	Yes	Yes	Yes	Yes
Trend/line diagram	-	-	-	-	-	-
Alarm handling	-	-	-	-	-	-
Real-time clock/date	Yes	Yes	-	-	-	-
Printer interface	Yes	Yes	Yes	Yes	-	-

Communication

Host Link	Yes (RS-232C)	Yes (RS-232C)	Yes (peripheral port)	Yes (peripheral port)	Yes (peripheral port)	Yes (peripheral port)
1:1 NT Link	-	-	-	-	-	-
1:n NT Link	-	-	-	-	-	-
ASCII protocol	-	-	-	-	-	-

System Configuration

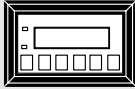




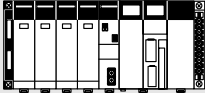
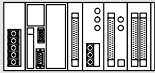

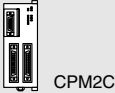
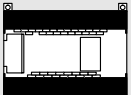

Host Link

Data is exchanged quickly between the Control Terminal and an OMRON PLC using the Host Link protocol.

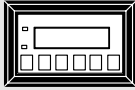
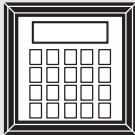


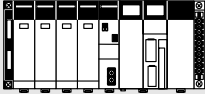
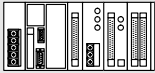

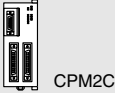
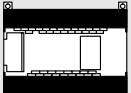

The RS-232C communication method can be used.

The following OMRON PLC systems feature the Host Link protocol:

- CPM1 family
- CPM2 family
- CQM1 family
- CJ1
- CS1

 <p>NT2S-SF121B</p>  <p>NT2S-SF125B</p>	<p>Miniature Peripheral port</p>  <p>NT2S-CN223-V1 for CS1, CJ1, CQM1H</p> <p>RS232C port</p>  <p>RS-232C cable for CPM1A, CPM2C (CIF adapter required)</p> <p>Peripheral port</p>  <p>NT2S-CN212/215 for CPM1A, CPM2A</p>	 <p>CS1</p>  <p>CJ1</p>  <p>CQM1H</p>  <p>CPM2C</p>  <p>CPM2A</p>  <p>CPM1A</p>
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Power supply: 24 VDC, external

 <p>NT2S-SF122B NT2S-SF123B</p>  <p>NT2S-SF126B NT2S-SF127B</p>	<p>Miniature peripheral port</p>  <p>NT2S-CN224-V1</p> <hr/> <p>Peripheral port</p>  <p>NT2S-CN222-V1 NT2S-CN225-V1</p>	 <p>CS1</p>  <p>CJ1</p>  <p>CQM1H</p>  <p>CPM2C</p> <hr/>  <p>CPM2A</p>  <p>CPM1A</p>
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Power supply: from the PLC, via port connection

Programmable Terminals

Product Overview

Model code	NT2S-SF121B-EV2	NT2S-SF125B-E	NT2S-SF122B-EV2	NT2S-SF126B-E	NT2S-SF123B-EV2	NT2S-SF127B-E
	- Programmable using software - Real-time clock - Printer port - PLC connection via RS-232C port - Supply voltage 24 V		- Programmable using software - Printer port - PLC connection via peripheral port - Supply voltage connection via peripheral port		- Functions are controlled using the PLC - PLC connection via peripheral port - Supply voltage connection via peripheral port	
Display size (WxHxD)	108x60x43 mm	108x108x43 mm	108x60x43 mm	108x108x43 mm	108x60x43 mm	108x108x43 mm
Number of screen pixels	5x7 pixel/character					
Number of lines/characters	2/16	2/16	2/16	2/16	2/16	2/16
Number of function/control keys	6	20	6	20	6	20
Memory	24 kB Flash memory for applications				PLC memory is used	
Supply voltage	24 V DC	24 V DC	---			
Degree of protection	IP65F (front side)					

Specifications

Model code	NT2S-SF121B-EV2	NT2S-SF125B-E	NT2S-SF122B-EV2	NT2S-SF126B-E	NT2S-SF123B-EV2	NT2S-SF127B-E
Function keys						
Key type	Membrane keyboard					
Key function	As well as fixed or system functions, functions can be assigned dynamically using software (Softkeys), while global, i.e. screen-independent, keys can also be defined					
Display elements						
Characters	5x7 pixel/character					
Image colours	Monochrome					
Character display attributes	Normal, flashing (entire screen)					
Display specification						
Display	- LED backlit LCD Module, 2x16 characters, 5x7 pixel/character - Character size 4.35 mm - Extended ASCII character set (semi-graphic)					
Function displays	2 status LEDs ¹ , programmable via PLC					
Display capacity						
String display	Entire display area can be used					
Numeric display	Entire display area can be used					
Bar graph display	Entire display area can be used					
Character string input	-					
Alarm list	-					
Time display	Either by output from Controller real-time clock or output from Terminal's integrated real-time clock		From Controller			
Screen page						
Number of stored screen pages	Max. 250				-	
Screen page numbers	1..250				-	
Storing of screen pages	Transfer of data from a PC to the Terminal				All programming in the PLC	
General						
Battery backup	Data backup in EEPROM				-	
Supply voltage	10..30 V DC		via PLC			
Power consumption	approx. 1.5 W		-			
Immunity	Between power supply and panel: 1700 Vss Normal: 480 Vss Pulse width: 100 ns..1 µs Pulse rise time: 1 ns					
Vibration resistance (in operation)	10..61.2 Hz with 0.1 mm amplitude 61.2..150 Hz with an acceleration of 1.5 g in X, Y and Z directions 4 times for 8 minutes each					
Shock resistance (in operation)	147 m/s ² , 3x in X, Y and Z directions					
Ambient temperature	0 °C..50 °C					
Ambient humidity	35%..85%					
Operating environment	No corrosive gases					
Storage temperature	-20 °C..60 °C					
Degree of protection	Front side: IP65F, Rear side: IP20					
Approvals	CE, c-UL					
Weight	150 g	230 g	135 g	205 g	130 g	200 g
Host Link Direct communication						
Communication method	RS-232C or Peripheral port		Peripheral port			
Communication protocol	C series SYSWAY (1:1)					
Communication settings	Start/stop synchronisation Communication speed: 9600 bps Data length: 7 bits Stop bit: 2 bits Parity: even					
Connection	1 x 9-pin D-Sub female for PLC 1 x 9-pin D-Sub female for PC/Printer, SW download/printer		1 x 9-pin D-Sub male for PLC 1 x 9-pin D-Sub female for PC/Printer		1x9-pin D-sub male for PLC	
Number of devices	1					
Printer						
Communication method	ASCII protocol printer				No	
Connection	Serial RS-232C port				No	

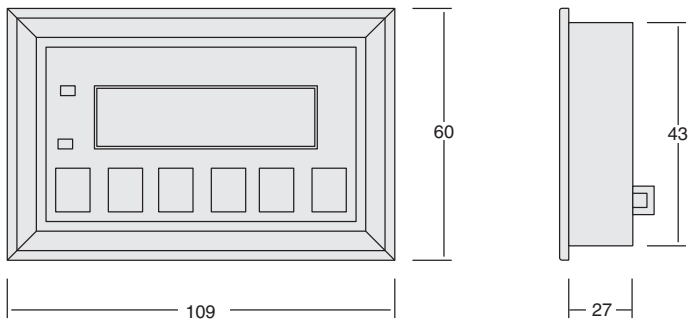
1. The NT2S-SF125/126/127B-E do not have status LEDs

Programming and Accessories

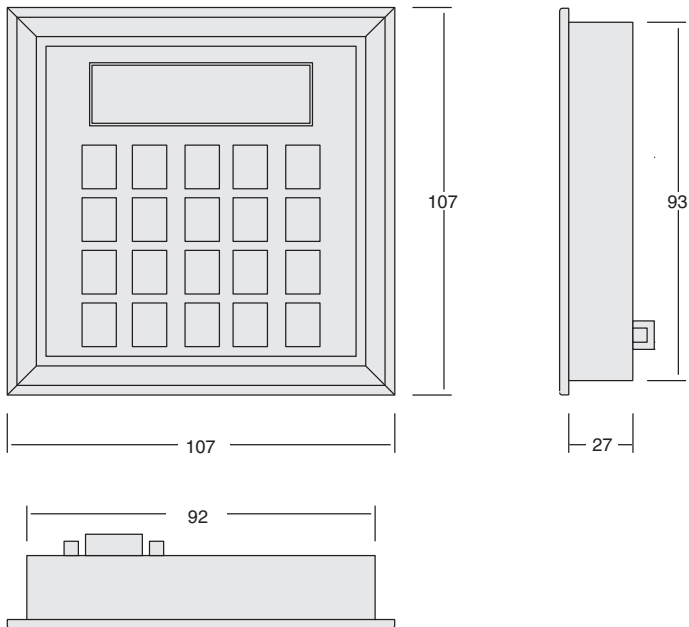
	Description	Cable length	Model code
Programming	NT Shell. Programming software for Control Terminals. For WINDOWS 95/98/ME/2000/NT4.0-SP5 see page 454	-	NT Shell
Accessories, cables etc.	Connecting cable, NT2S SF121B / SF125B <-> PLC (peripheral port)	2 m	NT2S-CN212
		5 m	NT2S-CN215
	Connecting cable, NT2S SF122B / SF123B / SF126B / SF127B <-> PLC (peripheral port)	2 m	NT2S-CN222-V1
		5 m	NT2S-CN225-V1
	Connecting cable, NT2S-SF121B / SF125B <-> PLC (miniature peripheral port)	2 m	NT2S-CN223-V1
	Connecting cable, NT2S-SF122 / SF123B / SF126B / SF127B <-> PLC (miniature peripheral port)	2 m	NT2S-CN224-V1
	Adapter cable, miniature peripheral port <-> PLC (peripheral port)	2 m	CS1W-CN114

Dimensions (mm)

NT2S-SF121B-EV2
NT2S-SF122B-EV2
NT2S-SF123B-EV2



NT2S-SF125B-E
NT2S-SF126B-E
NT2S-SF127B-E



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