

Chapter 1

Terminal Overview

This chapter covers the following topics:

- MessageView 421 Terminal types
- Intended uses
- 421D Terminal features
- 421N Terminal features
- 421F Terminal features
- Communications overview
- Applications
- Accessories and replacement parts.

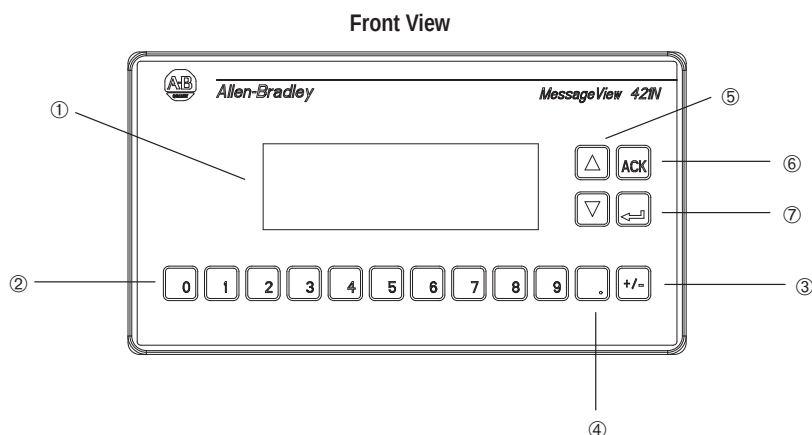
MessageView 421 Terminal Types

The table below lists the types of MessageView 421 terminals. Differences in the terminals relate to the number of keys and communication port(s). Differences in the firmware relate to the communication protocols.

MessageView Terminal	Catalog Number	Number of Keys	Physical Port Main Daughter	Firmware Version (FRN)	Protocols
421D	2706-M1D1	4 Message Control Keys	RS-232 Remote I/O	1.02-1.xx	File Transfer, RIO
421N	2706-M1N1	4 Message Control Keys 12 Numeric Entry Keys	RS-232 Remote I/O	1.00-1.xx	File Transfer, RIO
421F	2706-M1F1	4 Message Control Keys 12 Numeric Entry Keys 16 Function Keys	RS-232 Remote I/O	1.00-1.xx	File Transfer, RIO
421D	2706-M1D1	4 Message Control Keys	RS-232 Remote I/O	2.00-2.xx	File Transfer, RIO, Slaving, ASCII Input
421N	2706-M1N1	4 Message Control Keys 12 Numeric Entry Keys	RS-232 Remote I/O	2.00-2.xx	File Transfer, RIO, Slaving, ASCII Input
421F	2706-M1F1	4 Message Control Keys 12 Numeric Entry Keys 16 Function Keys	RS-232 Remote I/O	2.00-2.xx	File Transfer, RIO, Slaving, ASCII Input
421D	2706-M1D	4 Message Control Keys	RS-232	1.00-1.xx	File Transfer, Slave Device, ASCII Triggering
421N	2706-M1N	4 Message Control Keys 12 Numeric Entry Keys	RS-232	1.00-1.xx	File Transfer, ASCII Triggering
421F	2706-M1F	4 Message Control Keys 12 Numeric Entry Keys 16 Function Keys	RS-232	1.00-1.xx	File Transfer, ASCII Triggering

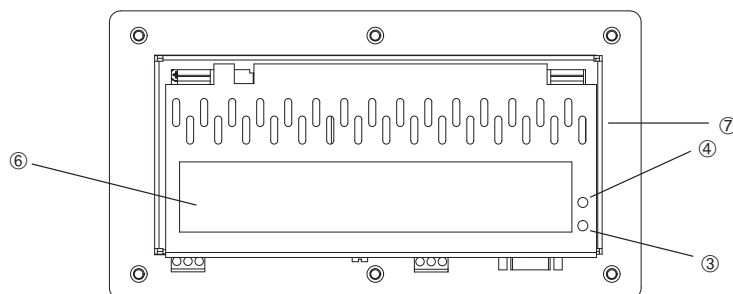
421N Terminal Features

The following illustrations show the major features of the MessageView 421N terminals (Catalog No. 2706-M1N1 and -M1N).

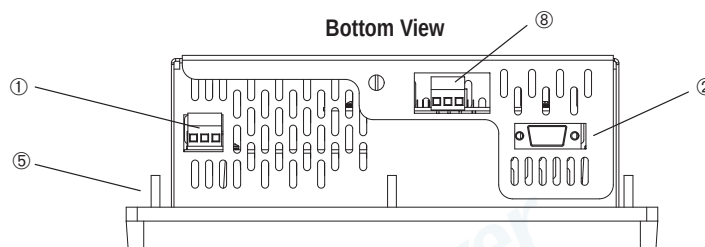


Item	Description
1	Vacuum Florescent Display (VFD) can display graphics and text: 4 lines of 21 quarter size characters 2 lines of 10 half size characters or 2 lines of 5 graphic symbols 1 line of 7 full size characters.
2	Numeric keys allow an operator to enter numeric values.
3	+/- key for entering either positive or negative values.
4	Decimal point key for entering decimal values.
5	Up and Down cursor keys: Enter / edit numeric values Scroll through and highlight options on the Front Panel Editor menu Scroll through the Historical Event Stack Select data entry fields within a message.
6	ACK key acknowledges messages which require an operator response.
7	Enter key selects an option from the Front Panel Editor menu or sends data to a PLC/SLC.

Back View

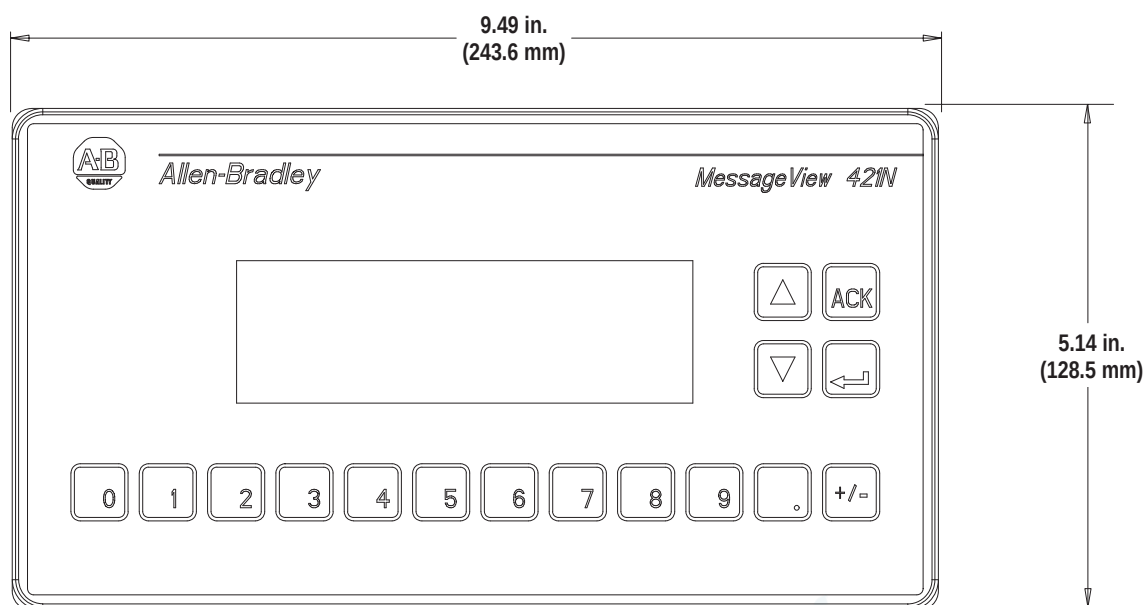


Bottom View

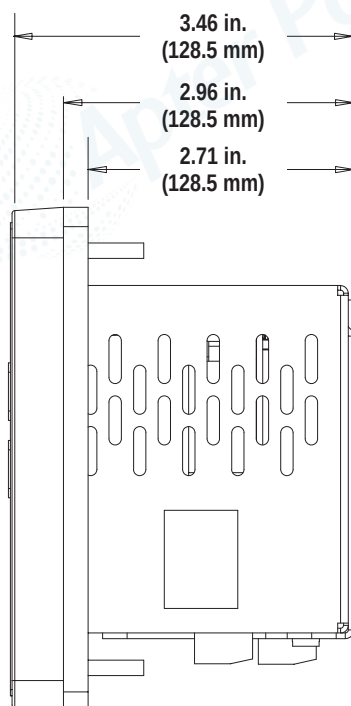


Item	Description
1	Terminal Power Port for 24V DC input. Accepts 18 to 30V DC.
2	RS-232 communications port connects to the RS-232 serial port of a computer for transferring applications.
3	Comm LED indicates when communications is occurring.
4	Fault LED indicates firmware and hardware faults.
5	Mounting studs secure the MessageView to an enclosure or panel.
6	Connection label provides connector pin descriptions and other product information.
7	Nameplate label provides catalog number, series letter, fuse rating, power input and other product information.
8	Remote I/O connector (Catalog No. 2706-M1N1).

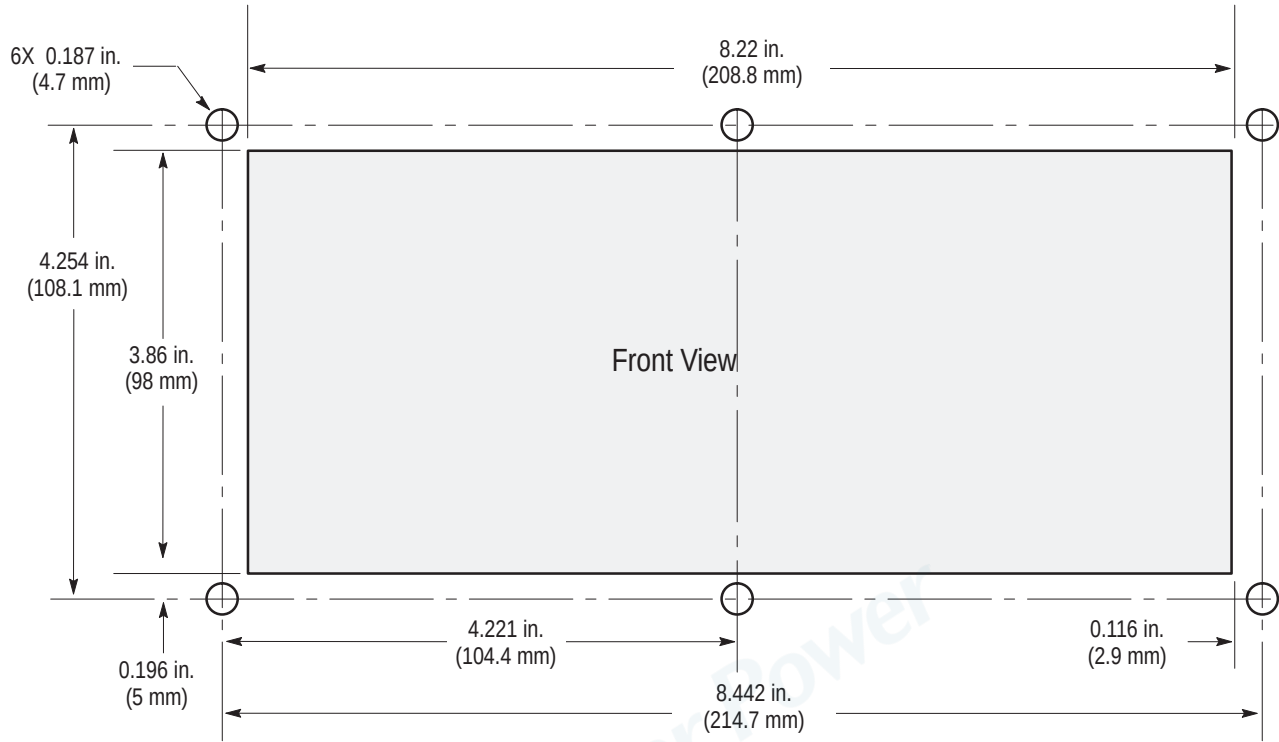
MessageView 421D and 421N Mounting Dimensions



421N Terminal shown, 421D Terminal has similar dimensions



MessageView 421D and 421N Terminal Cutout Dimensions



Appendix **A**

Specifications

Electrical

Supply Voltage (Recommended)	24 VDC
Supply Voltage Range	18 – 30 VDC
Power Consumption	20 Watts maximum (833 mA @ 24V DC)

Mechanical

Enclosure	NEMA Type 12/13 NEMA Type 4X (indoor use only)
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Terminal Status Indicators

COMM	Green
FAULT	Red

Dimensions – Chassis

421D Terminals	inches	3.60 (H) x 7.95 (W) x 4.00 (D)
	mm	91 (H) x 202 (W) x 65 (D)
421N Terminals	inches	3.60 (H) x 7.95 (W) x 4.00 (D)
	mm	91 (H) x 202 (W) x 65 (D)
421F Terminals	inches	5.45 (H) x 7.95 (W) x 4.00 (D)
	mm	138 (H) x 202 (W) x 65 (D)

Dimensions – Front Bezel

421D Terminals	inches	5.10 (H) x 9.45 (W) x 0.63 (D)
	mm	130 (H) x 240 (W) x 16 (D)
421N Terminals	inches	5.10 (H) x 9.45 (W) x 0.63 (D)
	mm	130 (H) x 240 (W) x 16 (D)
421F Terminals	inches	6.95 (H) x 9.45 (W) x 0.63 (D)
	mm	177 (H) x 240 (W) x 16 (D)

Weight

421D Terminals	3.2 lbs 1.45. kg)
421N Terminals	3.2 lbs 1.45. kg)
421F Terminals	3.8 lbs (1.72 kg)

Terminal Memory

Application RAM	4096 messages x 21 characters
Historical Event Stack Memory	4000 messages x 21 characters
Value Trigger Queue	64 messages x 100 characters
Application EEPROM (Flash)	256 K Words x 16 bits
Battery-Backed SRAM	128 K Words x 16 bits

VFD Display

Size (all terminals):	inches	1.06 (H) x 4.27 (W)
	mm	26.9 (H) x 108.5 (W)
Pixels		128 x 32 dot matrix
Characters		
Quarter Size		21 x 4 lines
Half Size		10 x 2 lines
Full Size		7 x 1 line
Graphic Symbols		5 x 2 lines

Communications

Remote I/O		
Baud Rate/Distance		57.6K/10,000 feet (2800 meters) 115.2K/5,000 feet (1400 meters) 230.4K/2,500 feet (700 meters)
RS-232 Point-to-Point (PC Link)		
Baud Rate/Distance		19.2K/50 feet (6.1 meters)

Environment

Ambient Temperature		
Operating		0 to 55 C (32 to 131 F)
Storage		-40 to 85 C (-24 to 185 F)
Relative Humidity (Non-Condensing)		5 to 95%

Shock and Vibration

Impulse Shock (Operating/Non-operating)	30G/50G
Vibration (Operating)	10 to 57Hz (0.012 in / 0.3 mm) 58 to 150Hz (2G)

Battery/Fuse (to be replaced by an authorized Allen-Bradley Field Service Representative)

Battery Module Replacement Kit	Catalog No. 2706-NB
Fuse Replacement	Series 239 2.0 Amp Slo-Blo Type GMC 2.0 Amp Time-Lag

Certifications


UL Listed for ordinary and hazardous locations (Class I Division 2 Groups A,B,C,D)
Temperature Code T5



CSA certified

European Union Directive



Electromagnetic Compatibility Directive
(89/336/EEC)

EN 50082-2 – 1995
Generic Immunity Standard -
Industrial Environment

EN 50081-2 – 1993
Generic Emission Standard -
Industrial Environment