Rockwell Automation
Allen-Bradley

Bulletin 2707 MicroView Operator Interface

(Catalog Number 2707-MVH232, -MVP232)
Product Data

The MicroView Operator Interface extends the Bulletin 2707 product line, providing an interface with the Allen-Bradley MicroLogix™ family of processors. The MicroView is designed for the OEM who wants a low cost, feature packed operator interface for plant floor control and data monitoring.

RS-232 Port. The MicroView supports RS-232 DF1 communications which allows point-to-point connection with a MicroLogix programmable controller. The RS-232 port also allows the MicroView to be connected to an IBM® compatible personal computer for the uploading or downloading of application programs.

Offline Configuration Software. Our software simplifies the creation of linked screens including data display, data entry and recipe screens. MicroView programming software is available for the MicroView specifically or as a subset of the DTAM family programming software.

Memory Capability. Storage of the operating system, configuration information, and user-programmed screens are maintained in nonvolatile memory providing storage for up to 50 screens.

Recipe Operations. Recipe functions allow operators to quickly modify blocks of data. Each recipe screen can download data to 10 non-sequential addresses. You can link multiple recipe screens to download to additional addresses.

Flexible Function Key Operations. Two function keys provide a convenient way to trigger screen displays and control screen navigation. Function keys can also be used to set or clear data table bits.

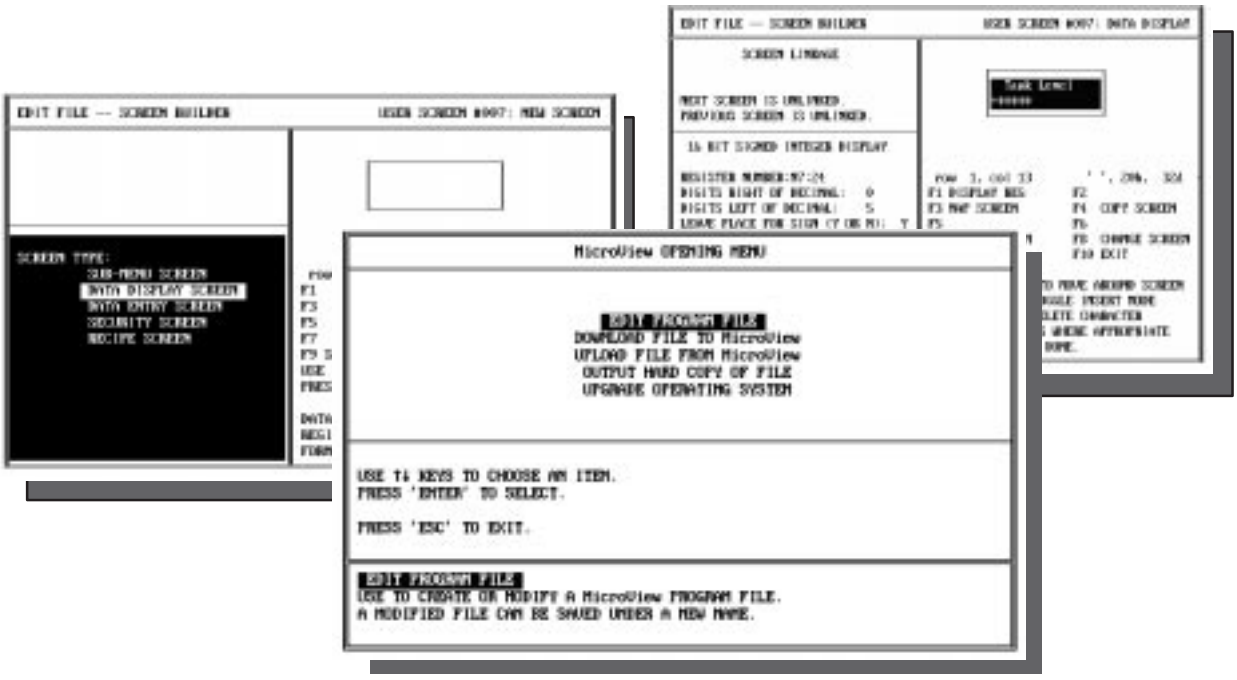
Point-Access/Display Feature. Operators can easily monitor or modify data files in a MicroLogix controller (regardless of programmed screen) using the Point-Access/Display feature, via the front panel Mode key.

Standard File Access Options for MicroLogix controllers include I/O, status, binary, timer, counter, control and integer files.

MicroView Application Development Software

Application programs for the MicroView are created off-line using a personal computer running the Offline Software Development Package (Catalog No. 2707-NP, Version 5.00 or later) or software written specifically for the MicroView (Catalog No. 2707-NP2, Version 1.00 or later). During application development you can:

- Create Data Display and Data Entry Screens
- Create Recipe and Security Screens
- Create Main and Sub-menu Screens
- Set configuration parameters for the MicroView



Application screens are developed in a flow chart manner and then linked to provide a logical flow of displays. Menu prompts guide you through the programming steps. For information on the Offline Programming Software (2707-NP), refer to Publication 2707-801. For detailed information on MicroView Programming Software (2707-NP2), refer to the Publication No. 2707-805.

The software is available on a $3^1/_2$ inch (1.44 Mb) disk and runs on an IBM AT® or 100% compatible personal computer with a minimum of 640K RAM. A hard disk drive with a minimum of 2 Mb of free disk space is recommended but not required.

Application programs are downloaded to the MicroView with the DF1 operating system for proper operation with the MicroLogix family of processors.

File Type Access

The MicroView supports the following file types when connected to the MicroLogix family of processors.

MicroLogix File Types	
File Type	**Data Access**
Output	Read Only
Input	Read Only
Status	Read/Write
Binary	Read/Write
Timer	Read/Write
Counter	Read/Write
Control	Read/Write
Integer	Read/Write

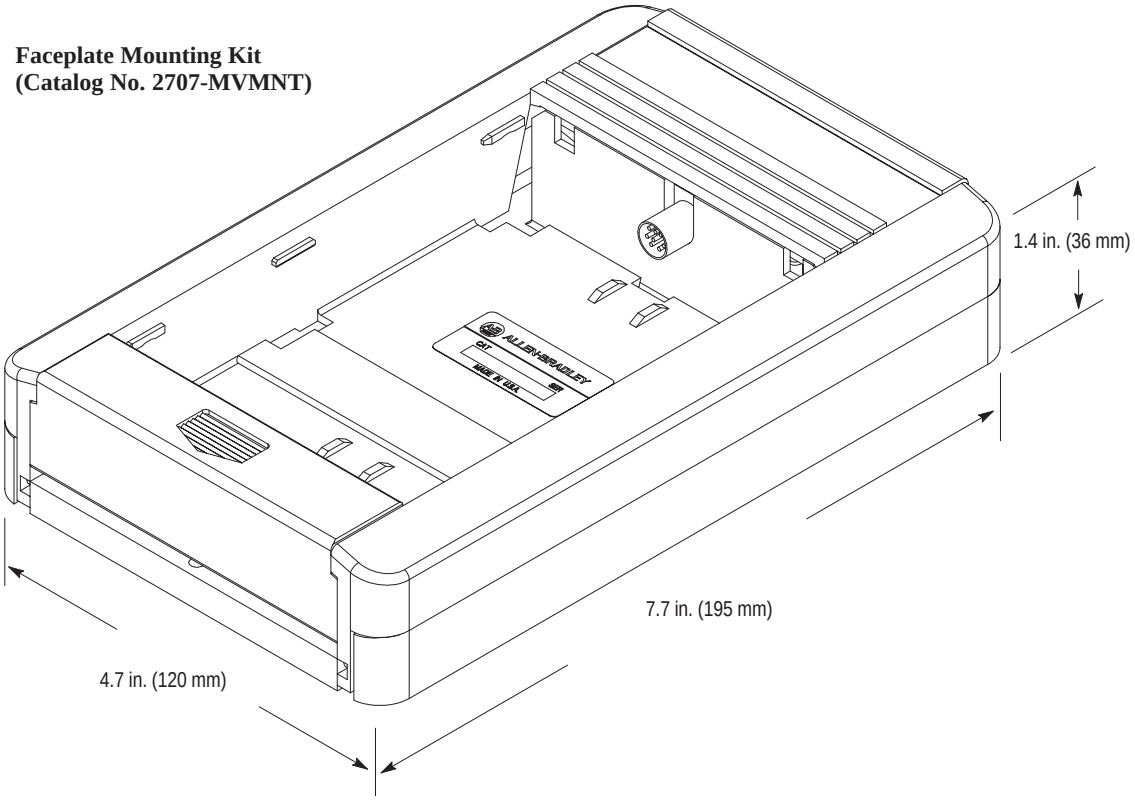
Terminal Features

The MicroView Operator Interface, hand-held version, (Catalog No. 2707-MVH232) does not need to be mounted in an enclosure. An optional Faceplate Mounting Kit (Catalog No. 2707-MVMNT) is available if you wish to surface mount the MicroView to a panel.

The MicroView Operator Interface, panel mount version, (Catalog No. 2707-MVP232) must be mounted in a panel or enclosure.

The front panel of the MicroView has a sealed unit with a 2-line by 16-character display window and 20 tactile feedback keys. The display uses high contrast LCD technology with LED backlighting.

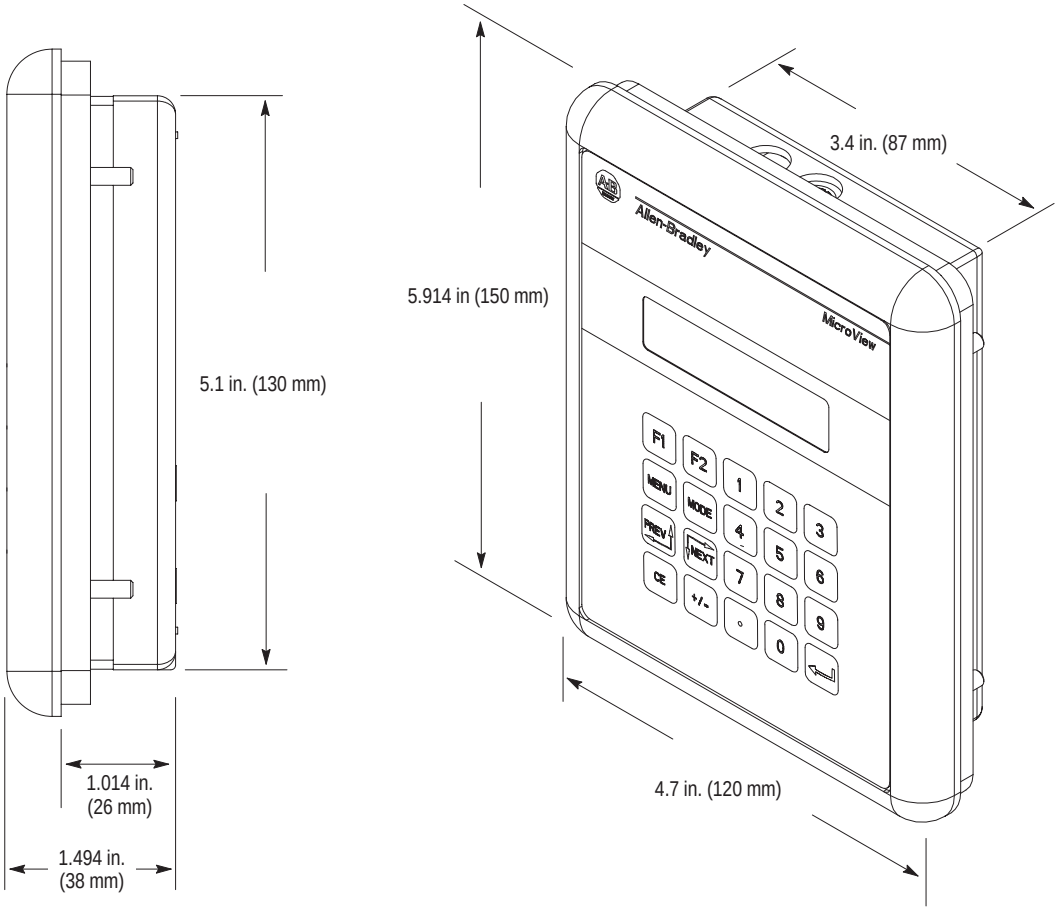
Faceplate Mounting Kit
(Catalog No. 2707-MVMNT)



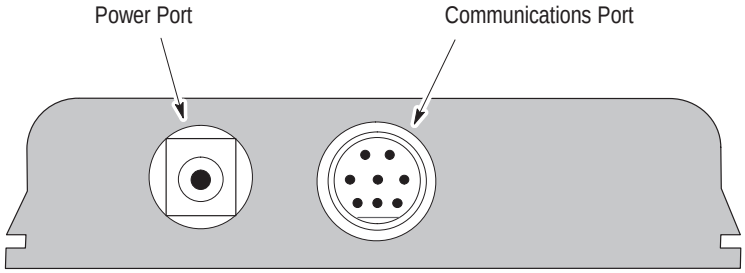
Faceplate Mounting Kit
with Hand-Held MicroView
(Catalog No. 2707-MVH232)

Note: All Dimensions are Approximate

MicroView Operator Interface, Panel Mount
(Catalog No. 2707-MVP232)



Note: All Dimensions are Approximate



Communications Port

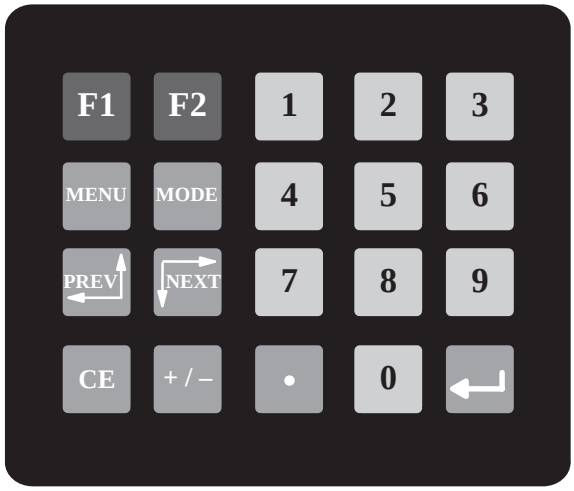
The MicroView operator interface has a communications port located on the top edge. The communications port is an 8-pin mini DIN connector configured with an RS-232 channel and a 24 VDC power supply connection.

Power Connector

The power connector is a 2-conductor power jack used to connect an external power source to the MicroView. This power source is required when the MicroView is connected to a PC for the downloading or uploading of application files.

Keypad

The MicroView uses a sealed membrane, tactile feedback keypad. The keypad is separated by color into easily identified groups or functions. In addition, each key has a raised dome in the center to provide tactile feedback.



Key Color	Function
Blue	Function Keys, F1 and F2
Dark Grey	Display/Format Control
Light Grey	Numeric Entry

The following table defines the function of each keypad key.

Key	Function
MENU	Returns to the main menu of an application.
MODE	Accesses special features and configuration of MicroView operating parameters.
PREV	Steps back through a sequence of linked screens.
NEXT	Steps forward through a sequence of linked screens.
CE	Clears an entire value during data entry.
+ \ –	Toggles a data entry value between positive or negative.
•	Enters a decimal point.
↵	Sends data to the controller. Data can either be default values or data entered at the keyboard.
0 → 9	Enters numbers 0 to 9 during data entry or selects a numbered item shown on the display.
F1 → F2	Displays any application screen assigned to the key. These keys can also set or clear bits at two consecutive registers in the controller data table.

Function Key Operations F1 → F2

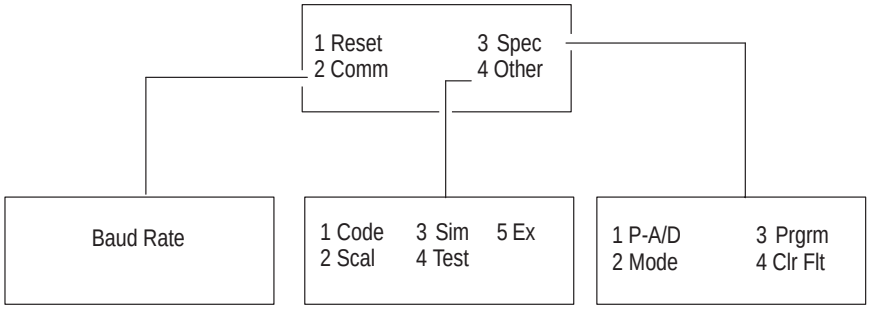
Function keys can be linked to application screens allowing quick access to critical data display or data entry screens. For example, if the F1 function key is linked to Recipe Screen 10, the operator can press F1 at any point in the application to download recipe registers on screen 10 to the processor.

A control mode can be assigned to each function key linked to a screen.

Control Mode	Function
Auto Return	Returns to the screen displayed before the function key was pressed.
Continue	Continues to the next screen in the link regardless of the screen displayed before the function key was pressed.
Bit Write Mode	Allows the function key when pressed to set or clear a bit in the controller. Bit Write Mode operates with either Auto Return or Continue mode. The function keys access 2 contiguous word data elements defined by the user. For example, assign function keys F1 to F2 to N7:20 and N7:21.

MODE Key Operations MODE

The MODE key accesses a menu of options allowing you to set features and operating parameters of the MicroView.



Mode Menu	Select this option:	To perform this function:
1 Reset		Resets the Unit
2 Comm	1 Baud Rate	Specifies 300, 1200, 2400, 9600, 19200 bits per second
3 Special	1 P-A/D	Displays and/or modifies data files in the processor.
	2 Mode	Places MicroLogix in RUN mode or PROGRAM mode.
	3 Prgrm (Program)	Transfers application files between MicroView and PC.
	4 Clr Flt (Clear Fault)	Clears all processor faults in the MicroLogix controller.
4 Other	1 Code	Modifies the master security code of the MicroView.
	2 Scal (Scale)	Converts controller values to engineering units.
	3 Sim (Simulate)	Verifies an application without controller connected.
	4 Test	Tests memory, communications, keyboard and display.
	5 Ex (Exit)	Returns to the Mode menu.

Default Settings

The default operating functions are shown in the table below. The operating functions can be set using the MicroView Mode Menu.

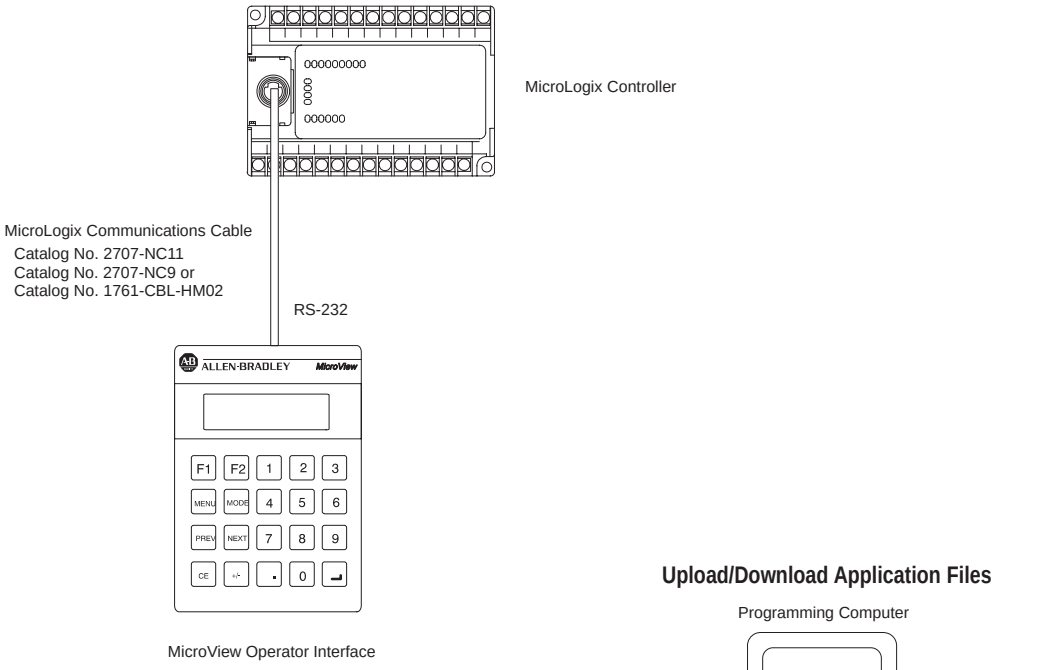
Function	Parameter	Default Value
Comm-Port	Baud	9600
	Data Bits	8 (Fixed)
	Parity	None (Fixed)
Other	Simulate	Off
	Master Code	00000000 (All zeros)
	Scale	On

RS-232 Communications

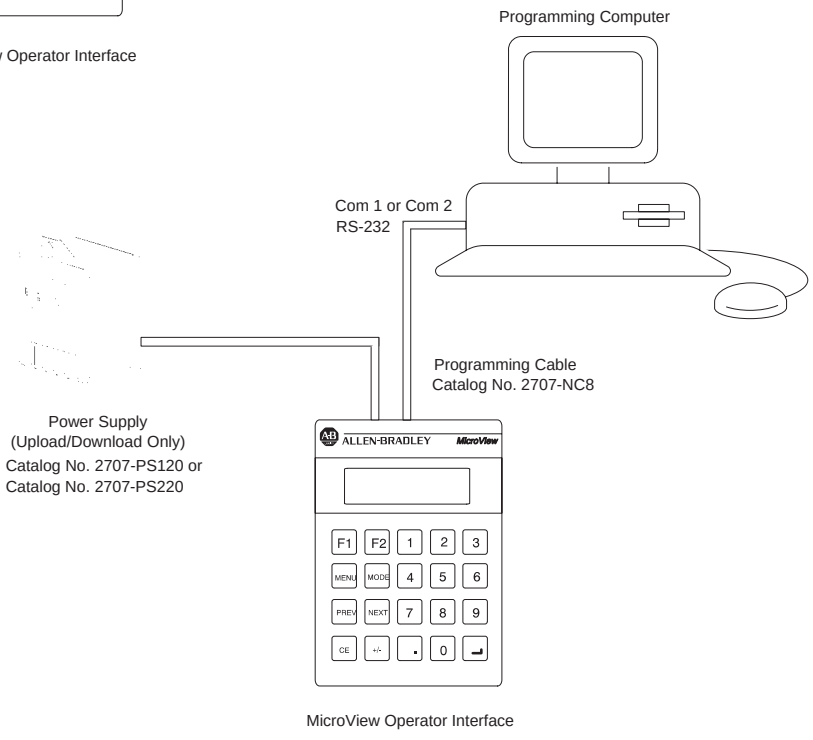
The RS-232 port of the MicroView Operator Interface allows point-to-point communications with:

- MicroLogix controllers
- Communications port of personal computers

MicroView to MicroLogix Controller



Upload/Download Application Files



The MicroView operates on 11 to 25 VDC power supplied either through the power port or the communications port. For run-time operations with the MicroLogix controller, the MicroView is supplied with 24 VDC through the cable from the MicroLogix controller connected to the communications port.

For downloading or uploading of application programs, the MicroView is supplied with 11 to 25 VDC through the power port using a separate power adapter. You can use the AC to DC Adapters: Catalog No. 2707-PS120 for 120 VAC or Catalog No. 2707-PS220 for 220 VAC power.

Product Options

The table below lists the options available for the MicroView.

Item	Catalog No.	Description
MicroView, Hand-Held	2707-MVH232	Hand-Held MicroView with RS-232 Communications Port.
MicroView, Panel Mount	2707-MVP232	Panel Mount MicroView with RS-232 Communications Port.
Programming Software	2707-NP (Version 5.00 or later)	Use to create application screens for the MicroView on a personal computer. Software allows completed applications to be transferred between the MicroView and personal computer. Will also support application development for DTAM Plus and DTAM Micro operator interfaces.
	2707-NP2 Version 1.00 or later	Use to create application screens for the MicroView on a personal computer. Software allows completed applications to be transferred between a personal computer and the MicroView.

Product Accessories

The following accessories are available for the MicroView.

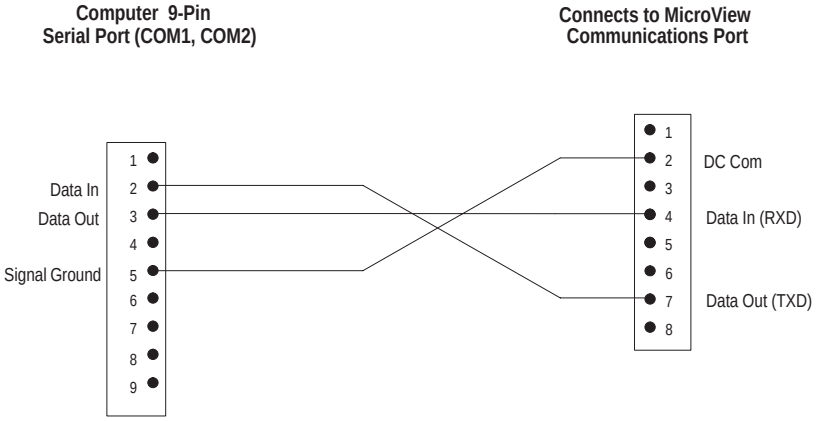
Item	Catalog No.	Description
MicroView Face Plate Mounting Kit	2707-MVMNT	Allows the 2707-MVH232 hand-held MicroView to be surface-mounted to a panel. The MicroView unit slides into the panel adapter housing. An integral cable assembly connects MicroView 8 pin DIN connector to an 8 pin DIN connector on the panel adapter.
MicroView Programming Cable	2707-NC8	RS-232 cable connects MicroView and a personal computer. Use to upload or download applications with a personal computer running DPS or MDPS software.
MicroLogix Communications Cable	2707-NC11 1761-CBL-HM02	Connects MicroView to MicroLogix controller for run-time operations. RS-232 cable, 2 meters (6.6 feet).
MicroLogix Communications Cable	2707-NC9	Connects MicroView to MicroLogix controller. Same as 2707–NC11 except length is 15 meters (49.2 feet).
120V AC to DC Adapter	2707-PS120	Provides DC voltage output for the MicroView. Operates on 120 VAC input line voltage.
220V AC to DC Adapter	2707-PS220	Provides DC voltage output for the MicroView. Operates on 220 VAC input line voltage.

MicroView Cable Diagrams

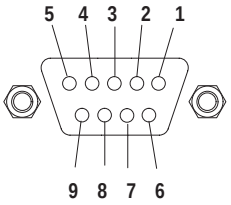
Catalog No. 2707-NC8

Use the MicroView programming cable (Catalog No. 2707-NC8) to connect the MicroView to a PC for the uploading or downloading of application programs. The length of this cable is 2 meters (6.6 feet).

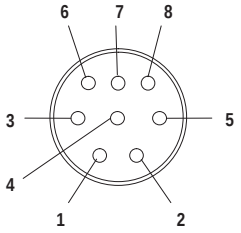
Note: A 25-pin to 9-pin adapter may be required if your computer has a 25-pin communication port.



9-Pin Female D Connector

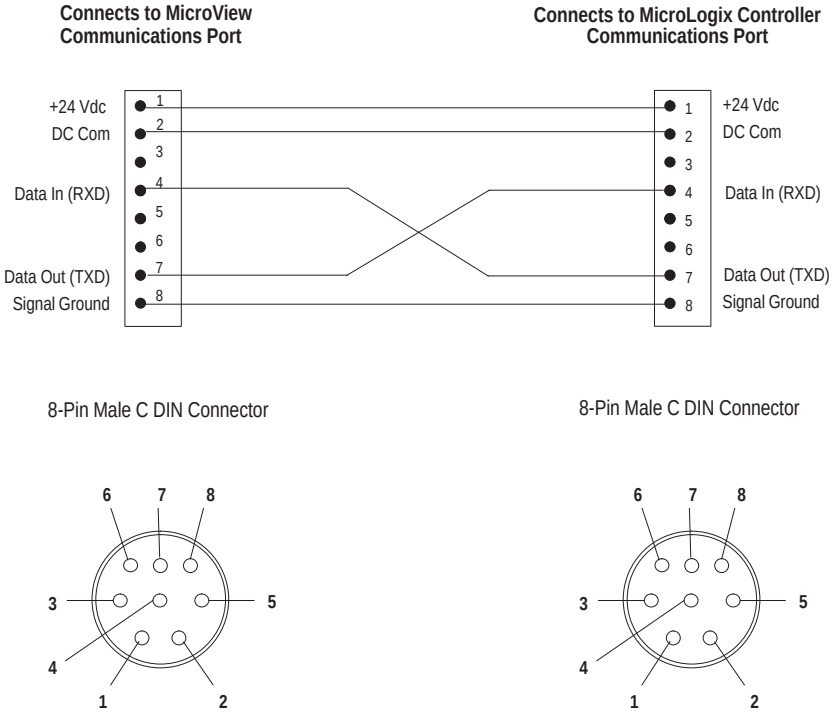


8-Pin Male C DIN Connector



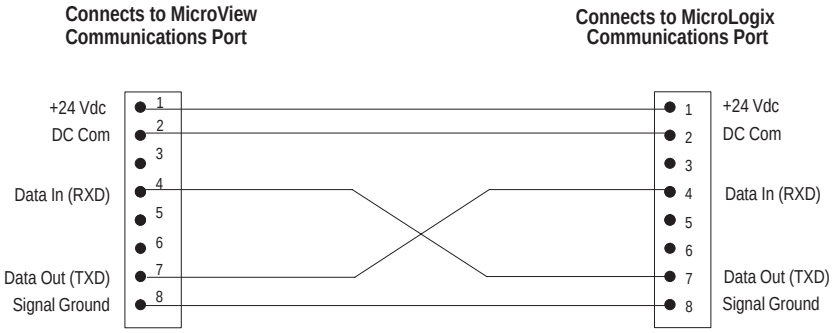
Catalog No. 2707-NC9

Use the MicroView communications cable (Catalog No. 2707-NC9) to connect the MicroView to the MicroLogix controller for run-time operations. The cable length is 15 meters (49.2) feet .



Catalog No. 2707-NC11 or 1761-CBL-HM02

Use the MicroLogix communications cable to connect the MicroView to the MicroLogix controller for run-time operations. This cable is wired the same as Catalog No. 2707-NC9 except it is 2 meters (6.6 feet) long.



MicroView Specifications

LCD Display

Character Size (H x W)	0.22 x 0.12 in (5.56 x 2.96 mm)
Character Format	5 x 7 dot matrix
Column and Character	2 lines x 16 characters
Backlight	Yellow-green LED, fixed intensity
Contrast	Fixed
Display Viewing Area (H x W)	0.58 x 2.35 in (15mm x 60 mm)
Viewing Angle	Horizontal ± 30°, Vertical -20° to +30°

Keypad

Keypad Type	Tactile embossed, domed keys, sealed membrane
Operation Force	16 oz. (453 grams)
Operational Life	1 million operations

Electrical

Communications Port	RS-232
Communication Distances	50 ft. (15 meters) maximum
Input Voltage Range	11-25 VDC, 1.5 Watt
Input Current	140 mA @ 11 Volts 60 mA @ 25 Volts

Environmental

Operating Temperature	0 to 55°C (32 to 131° F)
Storage Temperature	-20 to 70° C (-4 to 158° F)
Relative Humidity	5 to 95%, non-condensing
Shock	30G operating 50G non-operating
Agency Rating	UL, C-UL, CE Pending, CL1 Div. 2 Pending

Mechanical

(Catalog # 2707–MVH232, Hand-Held)

Dimensions (Approximate)

Height:	5.1 inch (129.5 mm)
Width:	3.55 inch (90.2 mm)
Depth:	0.975 inch (24.8 mm)

(Catalog # 2707–MVP232, Panel Mount)

Dimensions (Approximate)

Height:	5.91 inch (150 mm)
Width:	4.7 inch (120 mm)
Depth:	1.49 inch (38 mm)

NOTES:

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