



MobileView 2 Handheld Operator Terminals

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Allen-Bradley

by ROCKWELL AUTOMATION

Important User Information

Read this document and the documents listed in the additional resources section about installation, configuration, and operation of this equipment before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice.

If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

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Throughout this manual, when necessary, we use notes to make you aware of safety considerations.



WARNING: Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.



ATTENTION: Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard, and recognize the consequence.

IMPORTANT

Identifies information that is critical for successful application and understanding of the product.

These labels may also be on or inside the equipment to provide specific precautions.



SHOCK HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that dangerous voltage may be present.



BURN HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that surfaces may reach dangerous temperatures.



ARC FLASH HAZARD: Labels may be on or inside the equipment, for example, a motor control center, to alert people to potential Arc Flash. Arc Flash will cause severe injury or death. Wear proper Personal Protective Equipment (PPE). Follow ALL Regulatory requirements for safe work practices and for Personal Protective Equipment (PPE).

The following icon may appear in the text of this document.



Identifies information that is useful and can help to make a process easier to do or easier to understand.

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About This Publication

This manual provides detailed information on how to install, configure, and operate MobileView™ 2 handheld operator terminals, junction boxes, and accessories.

Summary of Changes

This publication contains the following new or updated information. This list includes substantive updates only and is not intended to reflect all changes.

Topic	Page
Added information supporting 2711T-PTO Mobile Thin Client terminals	Throughout

Abbreviations

This publication uses the following abbreviations.

Abbr	Description	Abbr	Description
BSS	Bootable Service System	OS	Operating System
DHCP	Dynamic Host Configuration Protocol	PCB	Printed Circuit Board
ESD	Electrostatic Discharge	PXE	Preboot Execution Environment
HORM	Hibernate Once/Resume Many	SD	Secure Digital
IP	Internet Protocol	TFT	Thin Film Transistor
ISO	International Organization for Standardization	USB	Universal Serial Bus
ISP	Internet Service Provider	UWF	Unified Write Filter

Additional Resources

These documents contain additional information concerning related products from Rockwell Automation. You can view or download publications at rok.auto/literature.

Resource	Description
MobileView 2 Terminals Technical Data, publication 2711T-TD200	Provides technical specifications and certifications for MobileView 2 handheld operator terminals and junction boxes.
MobileView 2 Terminals Product Information, publication 2711T-PC003	Provides product dimensions and an accessory list for MobileView 2 handheld operator terminals.
MobileView IP20 Junction Box Product Information, publication 2711V-PC001	Provides product dimensions, an accessory list, and a cutout template for a MobileView IP20 junction box.
MobileView IP65 Junction Boxes and Accessories Product Information, publication 2711V-PC002	Provides product dimensions, an accessory list, and a mounting template for a MobileView IP265 junction box.
MobileView 2 Terminal Protective Cases Installation Instructions, publication 2711V-IN001	Describes how to install a protective case on a MobileView 2 handheld operator terminal.
MobileView 2 Terminal Protective Overlay Installation Instructions, publication 2711V-IN002	Describes how to install a protective overlay on a MobileView 2 handheld operator terminal.
MobileView 2 Terminal Handle and Hand Strap Installation Instructions, publication 2711V-IN003	Describes how to install a replacement handle and hand strap on a MobileView 2 handheld operator terminal.
MobileView 2 Terminal Mounting Brackets Installation Instructions, publication 2711V-IN004	Provides product dimensions and a mounting template for a MobileView 2 handheld operator terminal mounting bracket.
ThinManager 13.2 User Guide, publication TM-UM001	Provides instructions to define sources, deploy content, configure devices, and user access between a server and thin clients.
Rockwell Automation Advisor, rok.auto/advisor	A cloud-based platform that delivers product selection, configuration, and design experiences.
Product Selection and Configuration tools, rok.auto/systemtools	Helps configure complete, valid, catalog numbers and build complete quotes based on detailed product information.
Product Certifications website, rok.auto/certifications	Provides declarations of conformity, certificates, and other certification details.
Technical Documentation Center, rok.auto/techdocs	Quickly access and download technical specifications, installation instructions, and user manuals.

Notes:

MobileView 2 Terminal Overview

MobileView™ 2 terminals offer lightweight, mobile system control with high-end capacitive touch screen technology and intuitive, ergonomic design.

There are two terminal types available.

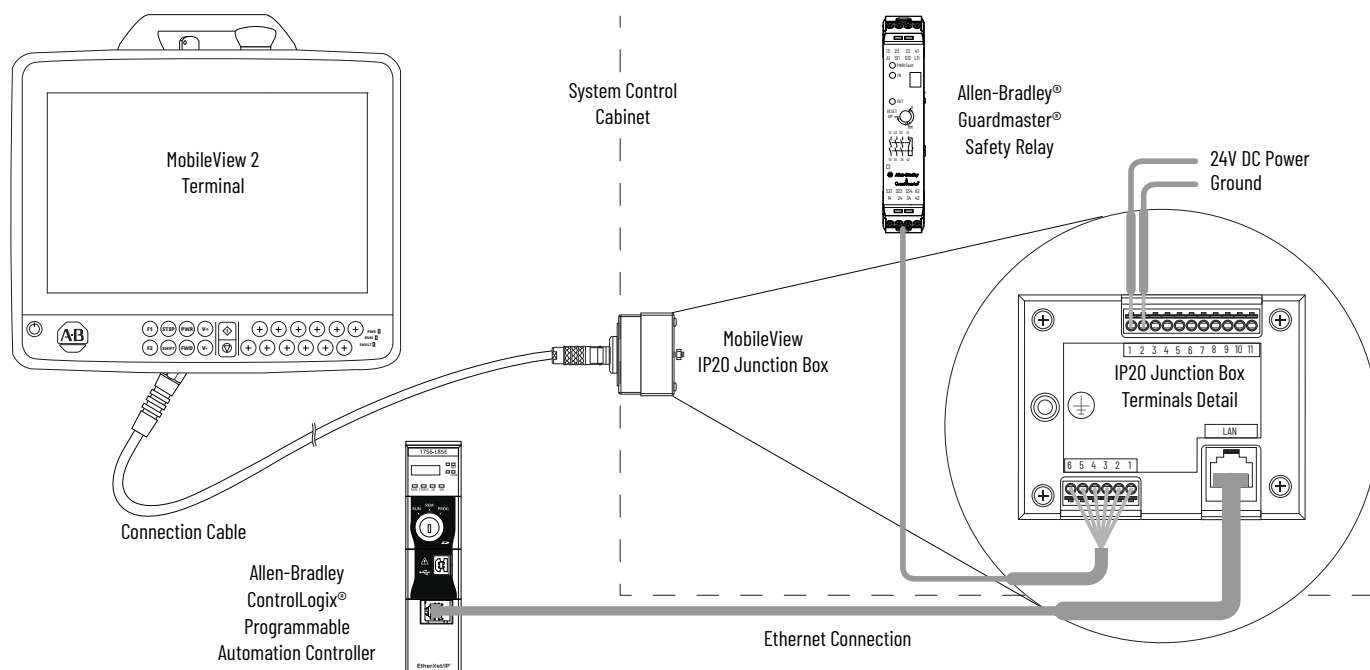
- The 2711T-PP0 is a mobile PC.
- The 2711T-PT0 is a mobile thin client that is configured with ThinManager® Ready firmware, providing an easy connection to Rockwell Automation ThinManager software. As an alternative, PXE (Preboot Execution Environment), a network-based booting mechanism that allows thin clients to load OS images and software from a central server, is also available for download in the Rockwell Automation Product Compatibility and Download Center (PCDC) at rok.auto/pcdc.

The terminals include these features:

- 10 in. full color, high-resolution, capacitive touch screen
- Back-lit color status indicators
- Intel Atom x6211E, 1.2 GHz processor
- Windows 10 IoT Enterprise 2021 LTSC operating system (2711T-PP0 mobile PC only)
- MicroSD card slot
- USB port
- 8 GB RAM

The terminals are connected to the control system via Ethernet with a junction box and connection cable.

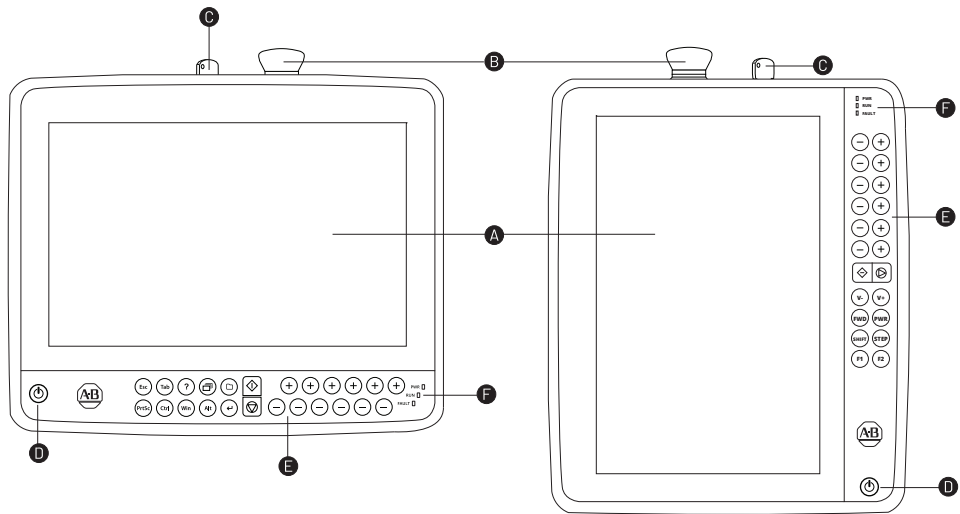
Figure 1 - Sample MobileView 20-pin System Configuration



Hardware Features

The following illustrations show the location of primary hardware features.

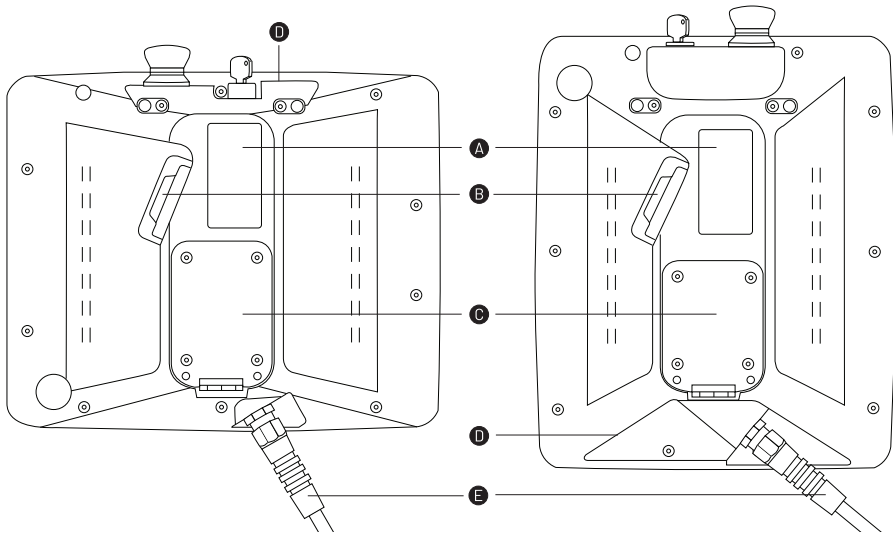
Figure 2 - MobileView 2 Terminal, Front View



Item	Feature	Description
A	Display	10.1 in. TFT color graphic display with a projected capacitive multi-touch screen
B	Stop button	Illuminated E-stop, Red/Yellow non-illuminated E-stop, or Gray Stop
C	Optional ⁽¹⁾	Button, key-switch, or other
D	Power button	Controls the power state of the terminal
E	Membrane keypad ⁽¹⁾	Durable, low profile keypad input
F	Status indicators	Indicates Power, Run, Fault status

(1) Select terminals only

Figure 3 - MobileView 2 Terminal, Back View

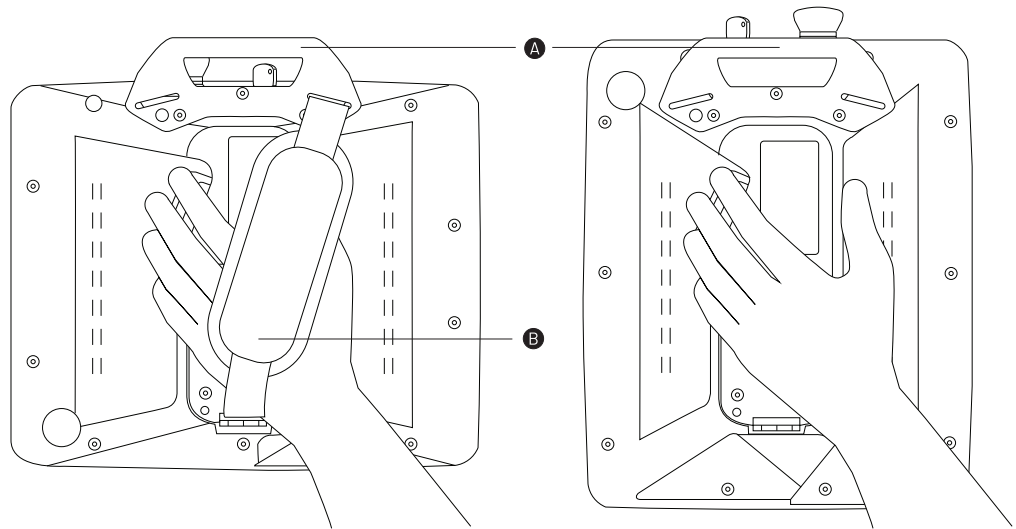


Item	Feature	Description
A	Product nameplate	10.1 in. TFT color graphic display with a capacitive multi-touch screen.
B	Enabling switch	3-position (OFF-ON-OFF) safety switch
C	Back cover	Provides access connection compartment
D	USB port	Used only for terminal maintenance
E	Connection cable strain relief	Helps protect the connection cable from bending or straining

IMPORTANT The maximum USB cable length for MobileView 2 terminals is 100 m (328 ft). The maximum connection cable length is 20 m (65.6 ft).

The MobileView 2 terminal is held with the left or right hand. The enabling switch is operated with the fingers of the holding hand, and the touchscreen and keypad are operated with the opposite hand.

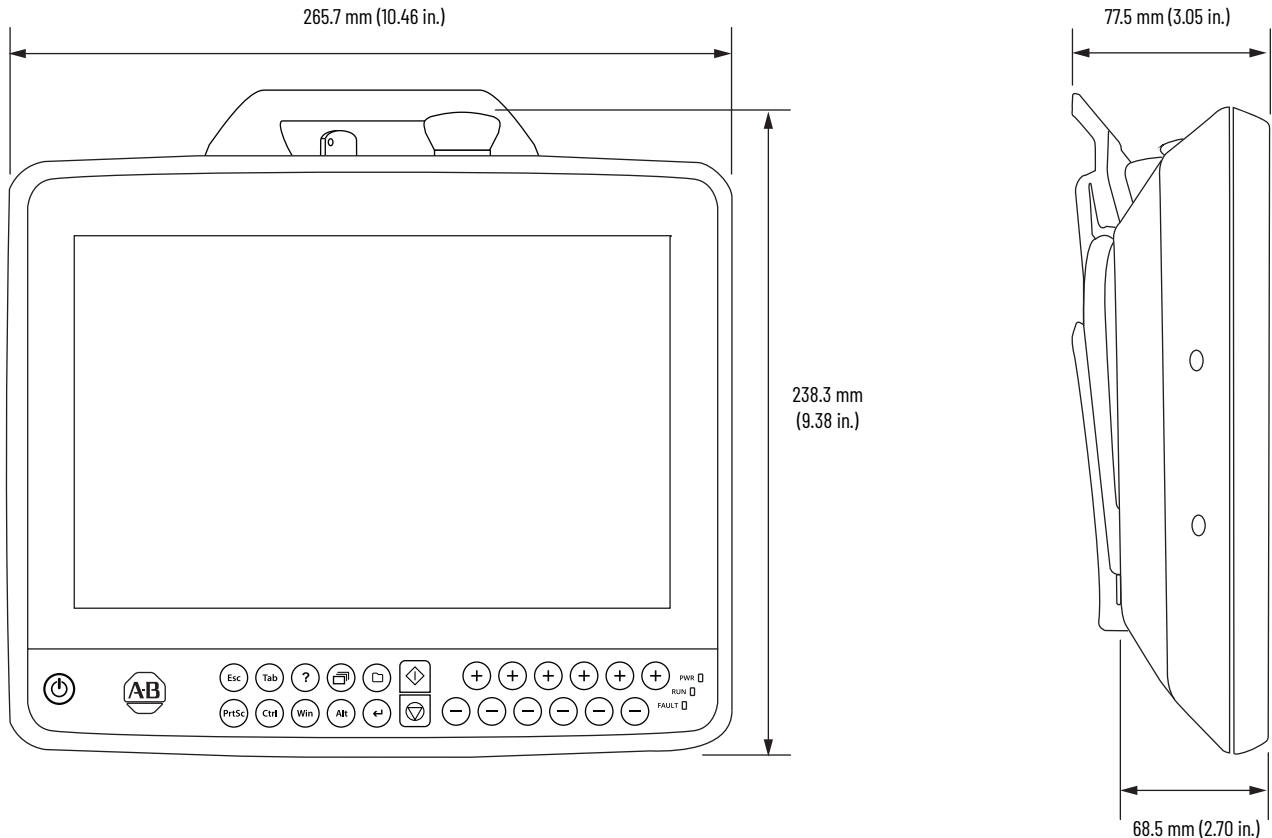
Figure 4 - MobileView 2 Terminal Handling



Item	Feature	Description
A	Handle	Required for use with terminal hand strap and mounting bracket accessory
B	Hand strap	Allows for stable, one-handed operation

Dimensions and Weight

This illustration provides dimensions for the MobileView 2 terminals.



MobileView 2 terminals (including the stop button) weigh approximately 1200 g (2.47 lb).

Operator Control

All MobileView 2 terminals have a full-color, projected capacitive touch screen for operator control that offers high-level accuracy and enhanced optical quality. They are durable, easy to clean, and resistant to scratches.

Keypad models feature function keys along the bottom (landscape format) or to the right (portrait format) of the display.

The capacitive touch screen and keypad are used during runtime to initiate actions, control navigation, and enter data.



- ATTENTION:** Do not perform multiple operations simultaneously. Multiple simultaneous operations can result in unintended operation.
- Touch only one operating element on the screen with one finger at one time.
 - Press only one key on the terminal at one time.

Capacitive Touch Screen

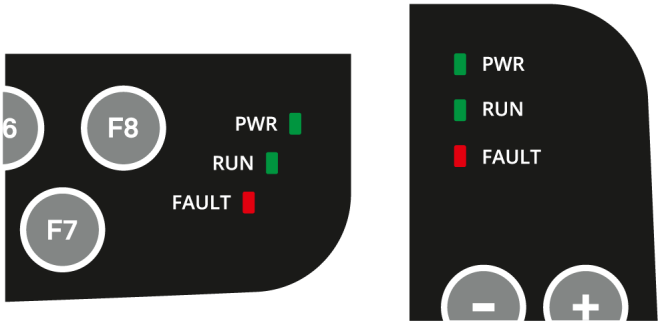
All MobileView 2 terminals have a high-resolution color display with a projected capacitive touch screen for operator control. Projected capacitive touch terminals offer high-level accuracy and enhanced optical quality. They are durable, easy to clean, and scratch-resistant.



- ATTENTION:**
- The capacitive touch screen supports input from one or more fingers, conductive stylus, or gloved hand for operation.
 - The tip of the stylus must be made of soft rubber and have a minimum radius of 2.5 mm (0.098 in.).
 - Gloves must be made of conductive material no thicker than 2 mm (0.079 in.), feature a conductive coating, or be knitted with conductive threads. Ensure that no metal filings or sharp objects (sand, grinding paste, and so on) are embedded in the surface of the glove.
 - Any other object or tool can damage the touch screen.
 - Do not expose the touch screen to continuous direct sunlight.

Status Indicators

MobileView 2 terminals are equipped with three status indicators.



Indicator	Color
PWR	Green
RUN	Green
FAULT	Red

Keypad Options

Select MobileView 2 terminals feature keypads along the right or bottom of the display, which are used during runtime to initiate actions, control navigation, and enter data. The keys on the keypads operate similar to the keyboard of a Windows personal computer.



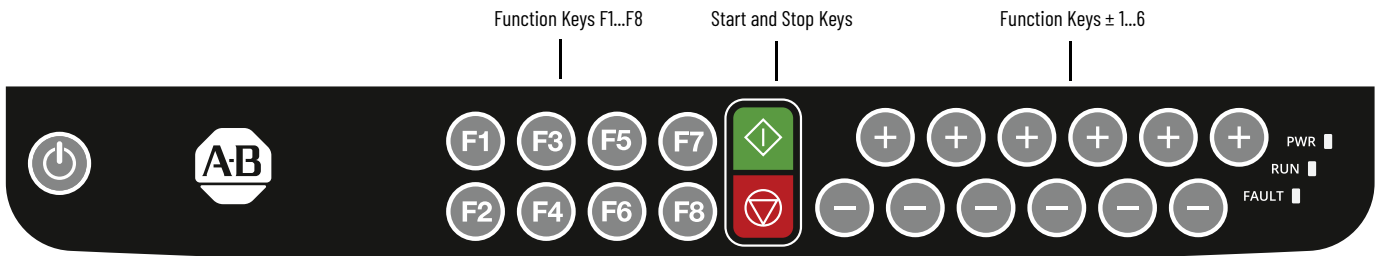
ATTENTION: Keypads register input from a finger, gloved hand, or plastic stylus that has a minimum tip radius of 1.3 mm (0.051 in.). Any other object or tool can damage the keypad.

The following figures detail the standard PC, combination (legacy), and robotics keypad options that are available for landscape and portrait format terminals. Select options may only be available in semi-custom or custom configurations.

Figure 5 - No Keypad, Landscape and Portrait Format- Power Button and Status Indicators Only



Figure 6 - Combination (Legacy) Keypad



Key	Shortcut	Key	Shortcut	Key	Shortcut	Key	Shortcut	Key	Shortcut	Key	Shortcut
F1	F1	F5	F5	Start	Right ALT+F13	1+	Right ALT+F1	3+	Right ALT+F5	5+	Right ALT+F9
F2	F2	F6	F6	Stop	Right ALT+F14	1-	Right ALT+F2	3-	Right ALT+F6	5-	Right ALT+F10
F3	F3	F7	F7			2+	Right ALT+F3	4+	Right ALT+F7	6+	Right ALT+F11
F4	F4	F8	F8			2-	Right ALT+F4	4-	Right ALT+F8	6-	Right ALT+F12

Figure 7 - Standard PC Keypad

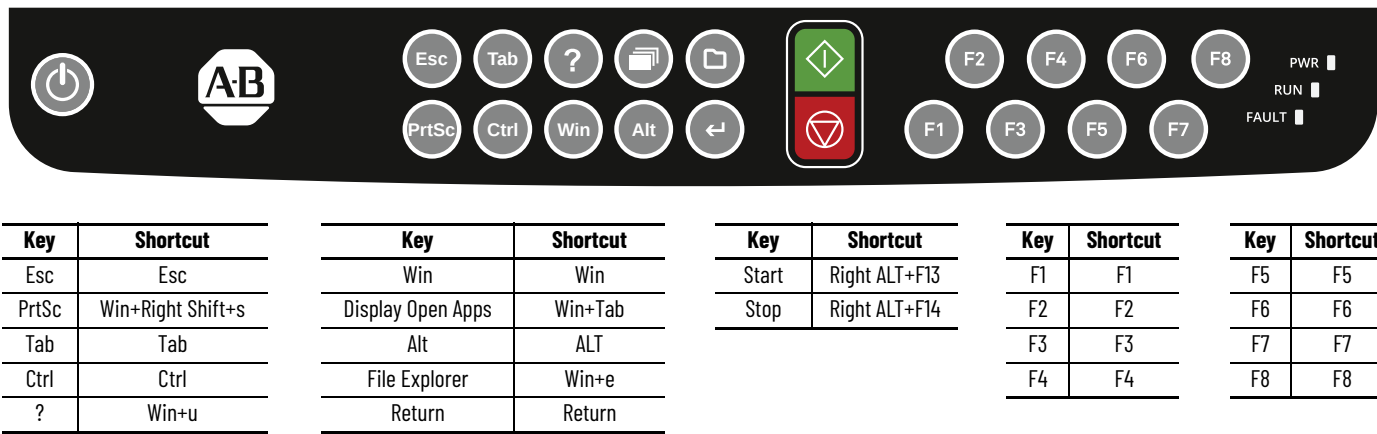
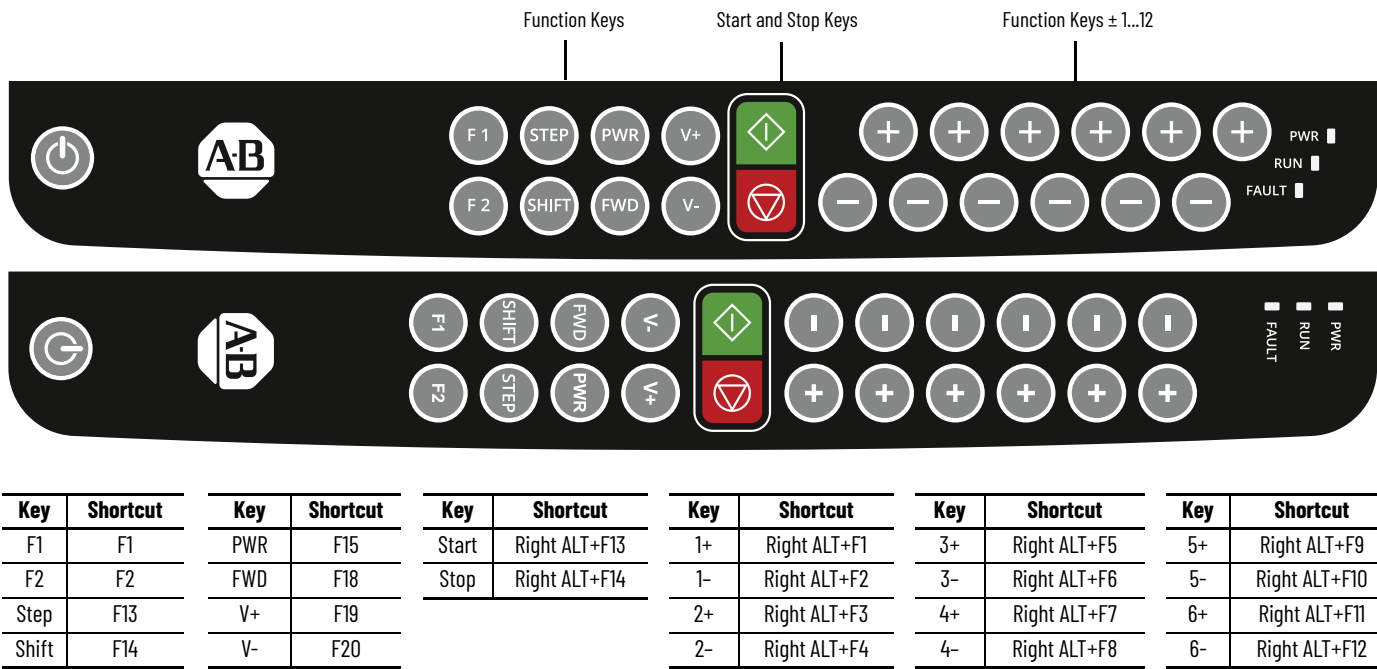


Figure 8 - Robotic Keypad, Landscape and Portrait Format



For information about how to modify the function key shortcuts, see [Key Management on page 90](#)

USB 2.0 Port

Use the USB 2.0 port on the back of the terminal to perform the following tasks:

- Connect a USB storage device for the following:
 - Create a backup
 - Restore a backup
 - Performing a software or firmware update
- Connect a USB keyboard or mouse
- Connect a USB hub to use multiple USB devices simultaneously

IMPORTANT

Any task that is performed through the USB port must be done while the terminal is not used for operation.
Do not use or keep a USB storage drive connected in the USB port while the terminal is operated.

Junction Boxes, Cables, and Junction Box Accessories

All MobileView 2 terminals connect to the control system via Ethernet with either:

- An IP20 junction box and a 20-pin connection cable with a silver cable connector
- An IP65 junction box and a 22-pin connection cable with a dark gray cable connector

The connection cables are available in 5 meters, 10 meters, or 15 meters (16.4 feet, 32.8 feet, or 49.2 feet) in length. They withstand water, cleaning agents, motor oil, drilling oils, grease, lubricants, and condensates that contain hydrochloric acid.

An optional bridge connector can place the junction box in a bridge active state, when the junction box is powered on but not connected to a terminal, bypassing its E-stop circuits.

These are the same junction boxes, cables, and connectors compatible with previously released MobileView terminals.

IMPORTANT

Because of the pin differences, you cannot mix cables and bridge connectors between IP20 and IP65 connection options.

Ensure that the junction box, cable, and connector is compatible with the specific catalog number of your terminal. For more information, see the MobileView 2 Terminals Technical Data, publication [2711T-TD200](#).

IP20 Junction Box

The IP20 junction box (catalog number 2711V-IP20JNCTNBOX) comes with a cap that protects the opening and its pin connection from environmental elements when the cable is not connected. It meets an IP54 rating when mounted in an enclosure with an equivalent rating.

The IP20 junction box pairs with the following accessories:

- 20-pin connection cables with quick and easy, silver, push-pull cable connectors
- an optional, 20-pin, silver bridge connector

Figure 9 - IP20 Junction Box



Table 1 - IP20 Junction Box Accessories

Item		Cat. No.
IP20 Junction Box		2711V-IP20JNCTNBOX
Connection cables	5 meter, 20-pin	2711V-IP20CBL5M
	10 meter, 20-pin	2711V-IP20CBL10M
	15 meter, 20-pin	2711V-IP20CBL15M
Bridge connector		2711V-IP20BRDGCNN

The IP20 junction box must be installed inside a control cabinet.

For more information about how to install and use an IP20 junction box with your terminal, see [Install an IP20 Connection on page 29](#).

IP65 Junction Boxes

There are two IP65 junction boxes that work with MobileView 2 terminals. One has cord grip connections. The other has M12 On-Machine™ connections, allowing the junction box to be closer to the machine, reducing the number of components in a control cabinet.

Both IP65 junction boxes have status indicators on their front plate that signify different operating and error states. IP65 junction boxes check the connection and indicate, for example, whether the plug is fully seated or the cable is interrupted (cable break detection).

IP65 junction boxes can be installed inside or outside a control cabinet.

The IP65 junction boxes pair with the following accessories:

- a 22-pin connection cable with a quick and easy, dark gray cable connector
- an optional, 22-pin, black bridge connector
- an optional back cover plate that allows for rear access to configurable junction box components from inside a control cabinet

IMPORTANT

The safety electronics of the E-stop of an IP65 junction box are designed with double circuits, and facilitates implementation up to Category 4, Performance Level e (CAT. 4, PL_e) in accordance with EN ISO 13849-1 or SIL 3 in accordance with EN 61508.

IP65 junction boxes are hot-plug capable. The terminal can be disconnected from an IP65 junction box for 10 seconds without opening the machine, equipment, or system-based E-stop circuits. A black, 22-pin bridge connector or another terminal must be connected within 10 seconds, or the two junction box E-stop circuits are opened for safety reasons and an E-stop is triggered.

Figure 10 - IP65 Junction Boxes



Table 2 - IP65 Junction Boxes and Accessories

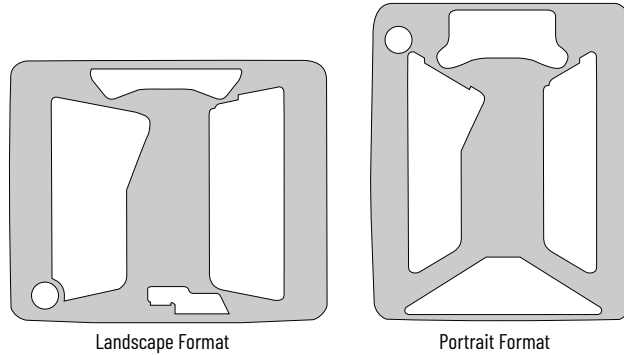
Item		Cat. No.
IP65 junction boxes	Cord grip wiring	2711V-IP65JNCTNBOXCG
	M12 On-Machine connectors	2711V-IP65JNCTNBOXOM
Connection cables	5 meter, 22-pin	2711V-IP65CBL5M
	10 meter, 22-pin	2711V-IP65CBL10M
	15 meter, 22-pin	2711V-IP65CBL15M
Bridge connector		2711V-IP65BRDGCNN
Back cover plate		2711V-IP65BKCVR

For more information about how to install and use an IP65 junction box and 22-pin cables with your terminal see, [Install an IP65 Connection on page 35](#).

Terminal Accessories

Protective Cases

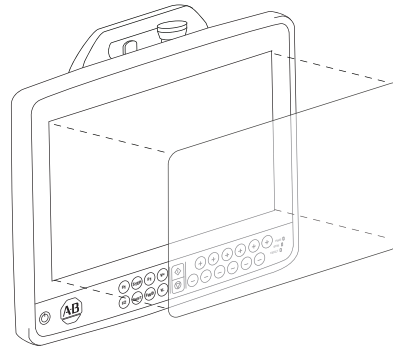
MobileView 2 terminal protective cases help protect the terminals from scratches, drops, and external damage from chemicals or abrasive materials. Both landscape (2711V-LBUMPER) and portrait (2711V-PBUMPER) options are available.



For instructions on how to install a protective case on your terminal, see the MobileView 2 Terminal Protective Cases Installation Instructions, publication [2711V-IN001](#).

Protective Overlay

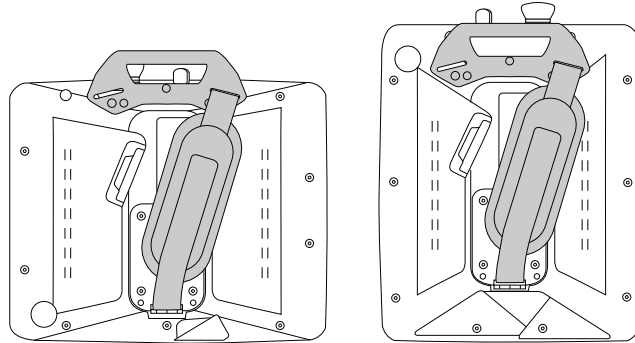
The MobileView 2 terminal protective overlay (cat. no. 2711V-PRCTOVL) helps protect the capacitive touchscreen of the terminal from scratches, dust, fingerprints, and external damage from chemicals or abrasive materials.



For instructions on how to install a protective overlay on your terminal, see the MobileView 2 Terminal Protective Overlay Installation Instructions, publication [2711V-IN002](#).

Replacement Handle and Hand Strap

The MobileView 2 terminal handle and hand strap replacement kit (cat. no. 2711V-HNDLSTRAP) provides replacement parts for your terminal.



For instructions on how to install a replacement handle and hand strap on a terminal, see the MobileView 2 Terminal Handle and Hand Strap Installation Instructions, publication [2711V-IN003](#).

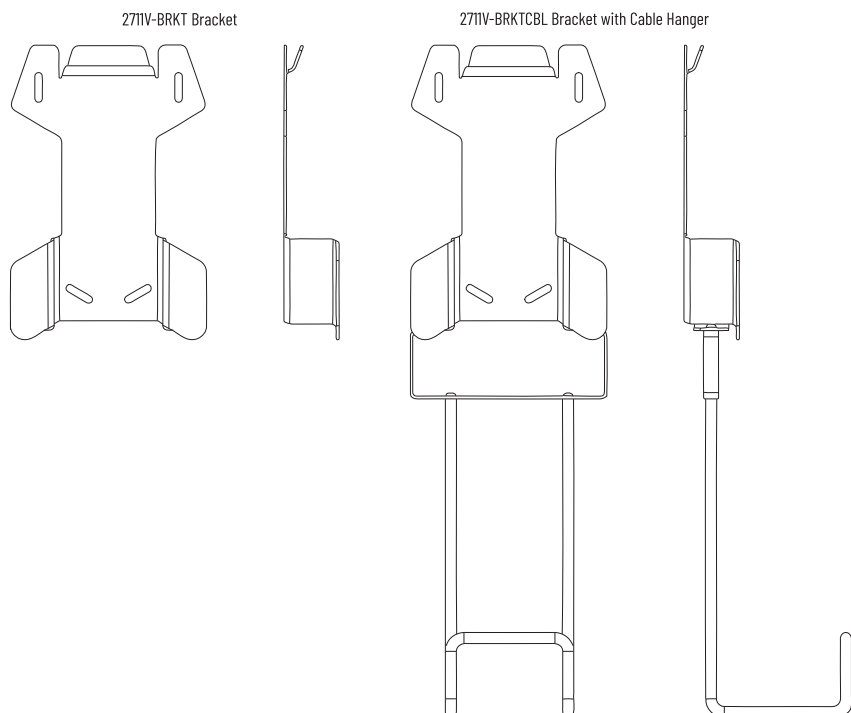
Terminal Mounting Brackets

MobileView 2 terminal wall mounting brackets are used for the stationary operation or storage of a terminal. They are available with (catalog number 2711V-BRKTCLB) or without (catalog number 2711V-BRKT) a cable hanger.

IMPORTANT

Use of the mounting bracket requires that the handle accessory is installed on the terminal.

MobileView 2 mounting brackets are different than those available for use with previously released MobileView terminals. Do not attempt to use an MobileView bracket with a MobileView 2 terminal.



For product dimensions and a mounting template for use during installation, see the MobileView 2 Terminal Mounting Brackets Installation Instructions, publication [2711V-IN004](#).

Safety Considerations

General Safety

It is important to follow the instructions in this document in all circumstances. Failure to do so can result in potential sources of danger or the possible override of safety features that are integrated into your MobileView™ 2 terminal.

In addition to the safety instructions in this document, you must also use safety precautions and accident prevention measures that are appropriate to the situation.



ATTENTION: Consider or perform the following as part of general safety.

- Verify that interrupted processes can be properly restarted after power failures or power dips. Do not allow any dangerous operating conditions to occur, even temporarily.
- In situations where faults that occur within the automation system could cause personal injury or significant damage to machinery and equipment, take extra safety measures to confirm that the system remains in an acceptable operating condition.
- When applying functional safety, restrict access to qualified, authorized personnel who are trained and experienced.
- Verify that unauthorized persons are not allowed to adjust settings or make memory modifications that can lead to dangerous situations.
- Test the functionality of the E-stop button and enabling switch at least once every six months. Verify that the machine or plant operation stops when the button is pushed.
- When a terminal has been exposed to shock (for example, it is dropped on the ground), test to verify that the E-stop button and enabling switch still function properly.
- The USB port on the backside of the terminal is only for maintenance. Do not operate the terminal while a USB drive is connected to it.
- Risk assessment and risk reduction are important precautionary measures for machine safety. For more information, see ISO 12100.

Proper care and handling contribute to terminal and junction box safety. For more information, see [Care and Handling on page 69](#).

Programmable Electronic Systems



ATTENTION: Personnel responsible for the application of safety-related Programmable Electronic Systems (PES) shall be aware of the safety requirements of the system environment and be trained in using the system.

Power Supply

All MobileView 2 terminals meet the Safety Class III requirements for electrical shock in accordance with EN 61131-2. For more information about the DC power supply requirements of the terminals, junction boxes, and connection cables, see the MobileView 2 Terminals Technical Data, publication [2711T-TD200](#).



SHOCK HAZARD: Supply a terminal and junction box exclusively from power sources with SELV or PELV circuit protection according to EN 61010-2-201. Only connect voltages and circuits that are separated from dangerous voltages (for example, with sufficient insulation) to connections, terminals or interfaces up to a rated voltage of 50V DC.

Specifications of power supply lines in the connection cables are:

- Cross section: 26 AWG (0.126 mm²)
- Material: Zinc-coated copper strand
- Line resistance: <136 Ω/km (<219 Ω/mi)



WARNING: The 24V DC power supply to the control cabinet or operator panel must have a fuse that is rated 3.15 A (max) and complies with UL 248. Failure to install a fuse can result in fire from component failure.

Enabling Switch

On the MobileView 2 terminal, the enabling switch consists of a 3-position operating element with two independent circuits.



WARNING: Only the operator of the enabling switch on the terminal is allowed in the dangerous area or zone. The enabling switch is only suitable as a safety device if the operator of the enabling switch on the terminal recognizes the dangerous situation and reacts in time to avoid the danger. Consider reduced speed of movements as a precautionary measure, which can be done through the risk assessment of machinery.

Foreseeable Misuse of the Enabling Switch

Foreseeable misuse is when the enabling switch is modified so it stays in the enabling position. The foreseeable misuse of the enabling switch must be restricted. The following measures are recommended, which cause the machine to stop in manual mode.

- Inquiry of the enabling switch when you turn on the machine/plant, and inquiry of the enabling switch when you change the operating mode from automatic to manual (the enabling switch must not be in the enabling position).
- The enabling switch must be released within a defined time period and pushed into the enabling position again, with the time length defined by the activity.

Enabling Switch Connection Example with a Control Relay

This figure shows the suggested wiring for the enabling switch with an Allen-Bradley safety control relay. If this wiring example is followed, then the safety function meets Category 4, Performance Level e (CAT. 4, PLe) in accordance with ISO 13849-1 or SIL 3 in accordance with EN 61508.

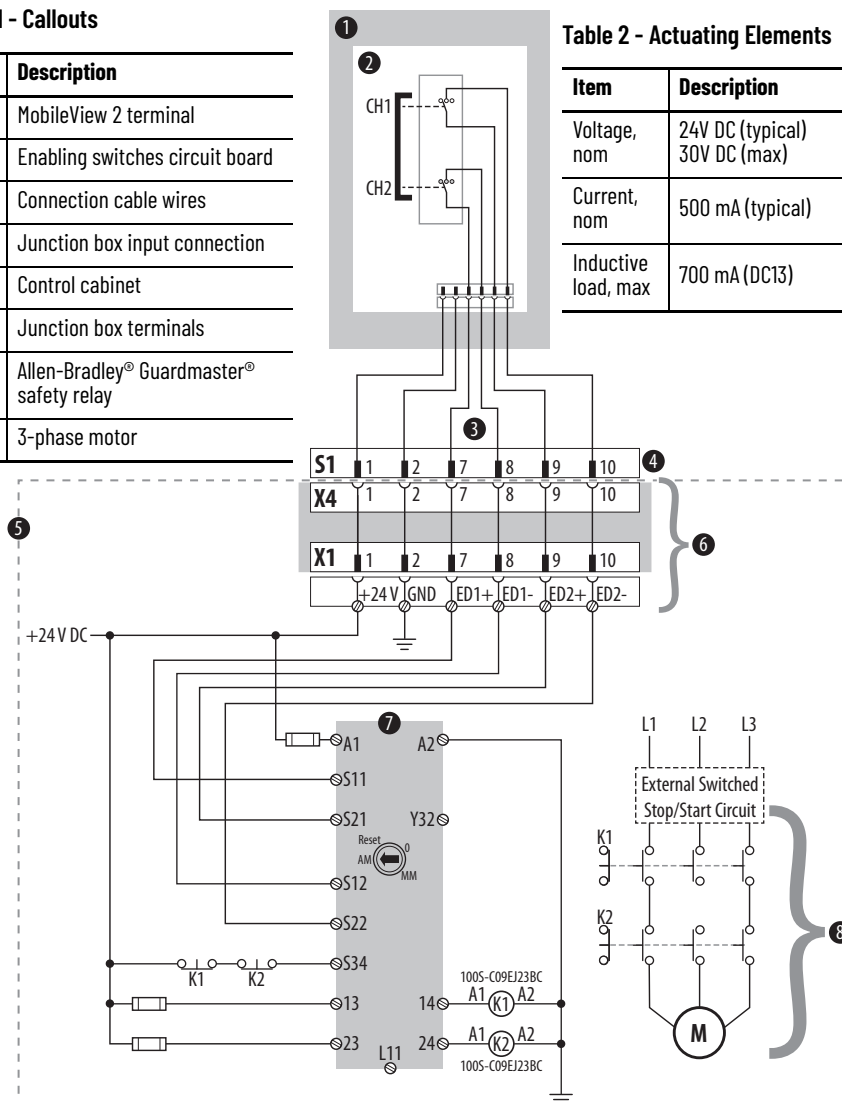
Figure 11 - Enabling Switch Wiring Example, MobileView 2 Terminal to an IP20 Junction Box

Table 1 - Callouts

Item	Description
1	MobileView 2 terminal
2	Enabling switches circuit board
3	Connection cable wires
4	Junction box input connection
5	Control cabinet
6	Junction box terminals
7	Allen-Bradley® Guardmaster® safety relay
8	3-phase motor

Table 2 - Actuating Elements

Item	Description
Voltage, nom	24V DC (typical) 30V DC (max)
Current, nom	500 mA (typical)
Inductive load, max	700 mA (DC13)



- Only if both channels (CH1 and CH2) of the enabling switch are activated 'simultaneously' do output contacts 13-14 and 23-24 close, and output relays K1 and K2 energize.
- The output relays K1 and K2 do not energize if:
 - Only one enabling channel is activated.
 - The tolerance value for the simultaneity period is exceeded.
 - The feedback control loop at S34 is open.
- If one enabling channel is released after being simultaneously activated, the forced-guided output contacts 13-14 and 23-24 open, and output relays K1 and K2 return to their initial position. The output relays only energize again after both enabling channels have been released and operate simultaneously again.

In this way, the enabling switches avoid the one single error that makes the safety function inoperable. At the least, one error is recognized at the next cycle.

Emergency Stop (E-stop) Push Button

The E-stop push button of a MobileView 2 terminal meets the requirements of ISO 13850. The button must be designed as a Category 0 or Category 1 emergency stop by the risk assessment for the machine. The connection of the force-guided contacts to an appropriate monitoring system must meet the safety level that results from the risk assessment of the machine.

The E-stop has two potential-free, normally closed contacts to connect external peripherals, a nominal operating voltage of 24V (safety low voltage in accordance with EN 61131-2), and a maximum operating current of 500 mA at 24V DC.



WARNING: E-stop push buttons (red-yellow in color) that are not fully functional can have fatal consequences. E-stop push buttons must be effective under all circumstances in all operating modes of a machine or plant.

- When the E-stop push button is not wired into an emergency stop circuit, the terminal must be stored where it is not visible to operators.
- The reset of an activated E-stop push button must not result in the uncontrolled startup of machines or installations.
- The E-stop push button does not replace other safety devices or E-stop buttons that are mounted directly on machines.
- Do not use an IP20-compatible MobileView 2 terminal with a red-yellow E-stop button IP20 junction box in applications where the terminal is plugged in and out of junction boxes frequently or meant for temporary use. Only MobileView 2 terminals compatible with a gray stop push button IP20 junction box or an illuminated E-Stop button IP65 junction box are meant for these applications.
- Test the functionality of the E-stop push button at least once every six months. Verify that machine or plant operation stops when the button is pushed.
- When a terminal has been exposed to shock (for example, it is dropped on the ground), test to verify that the E-stop push button still functions properly.

Risk Assessment of Machinery

For the risk assessment for the machinery, use the standards in ISO 12100, "Safety of machinery - General principles for design - Risk assessment and risk reduction."

The control system must be designed for the safety level that results from the risk assessment of ISO 12100.

Install the MobileView 2 Terminal

This chapter describes how to prepare a MobileView 2 terminal for use with a control system via Ethernet. Each MobileView 2 terminal is predesignated for use with either:

- An IP20 junction box and a 20-pin connection cable with a silver cable connector
- An IP65 junction box and a 22-pin connection cable with a black cable connector

Terminal connection cables that are used with each junction box type are available in 5 meters, 10 meters, or 15 meters (16.4 feet, 32.8 feet, or 49.2 feet) in length. The connection cable installation process is the same, regardless of which type of cable, length of cable, or junction box used.

Install a Connection Cable to the Terminal

Required Tools

To install a connection cable to a MobileView 2 terminal, you need a #10 Torx screwdriver and a 19 mm open-end wrench.

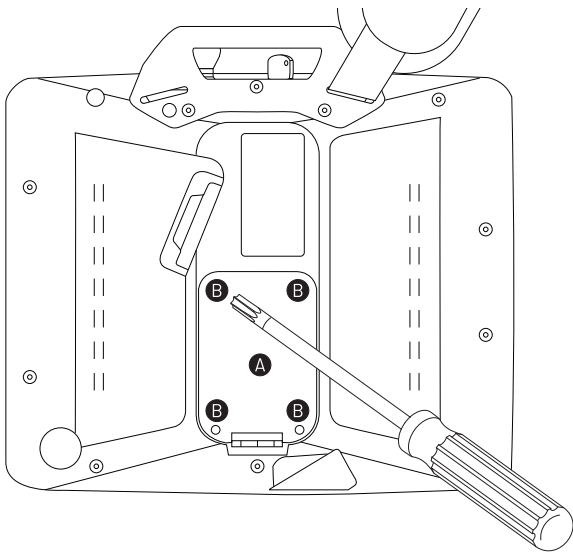
Remove the Back Cover

This section shows how to remove the back cover of your terminal to gain access to the area that contains the cable connections.



SHOCK HAZARD: Disconnect all power to the terminal before you remove its back cover. When the back cover is removed, the terminal is sensitive to electrostatic discharge (ESD).

1. Place the terminal display side down on a stable, flat surface free of debris.
2. Use a Torx T10 screwdriver to remove the three screws that secure the back cover.



Item	Description
A	Back Cover
B	Torx Screws

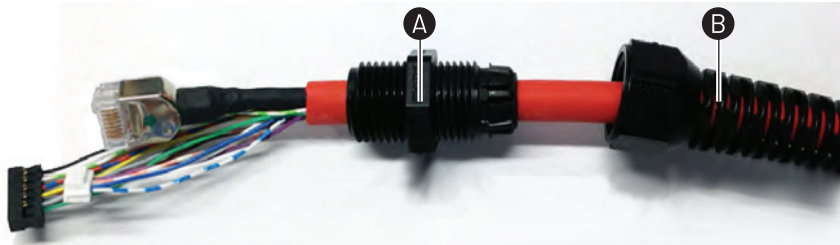
3. Open the back cover.

Mount the Connection Cable

- 1. Ensure that the cable connectors are not damaged.
- 2. Unscrew, remove, and discard the gray fitting from the cable mounting assembly.



- 3. Unscrew the strain relief from the cable mounting assembly to allow the red cable to slide freely.



Item	Description
A	Insertion sleeve
B	Strain relief

- 4. Gently feed the three connectors and at the end of the red cable into the cable opening, up through the cable channel, and into the cable entrance area of the terminal.
Ensure that a portion of the red cable sheathing is visible inside the terminal housing and the three connectors are able to reach the main circuit board.



IMPORTANT Do not force the cable connectors through the channel. If you encounter resistance, slowly pull the cable towards you until it moves freely again. If necessary, slide the connector-cable assembly farther down the cable to assist cable feed through the channel.

- 5. Use a 19 mm wrench to secure the insertion sleeve inside the cable opening. Torque the sleeve to 3 N•m (26.55 lb•in).

Install the Cable Connectors

To install cable connectors inside a MobileView 2 terminal, carefully plug each connector into the appropriate port.

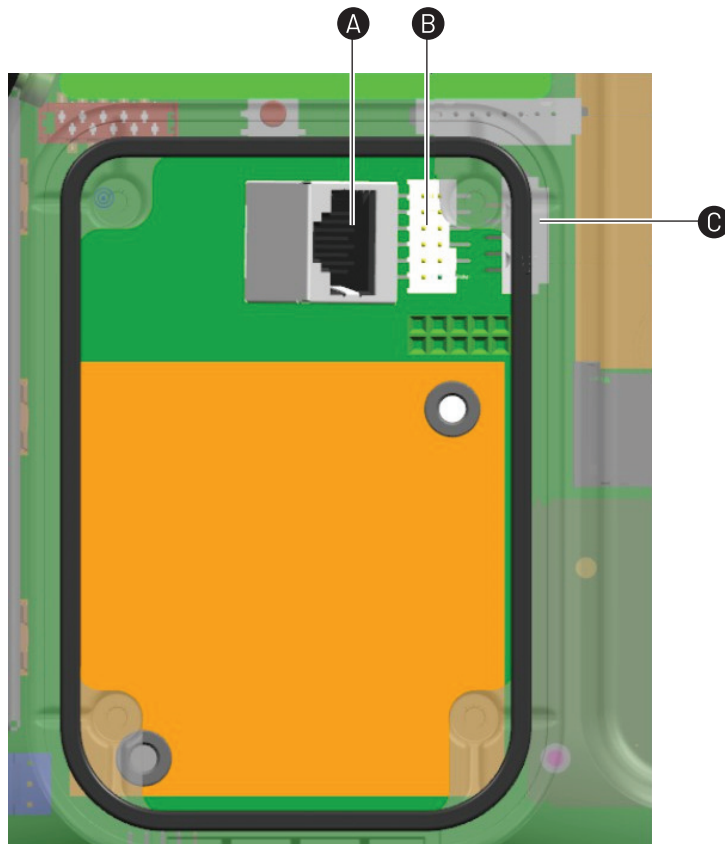
IMPORTANT

Confirm that each connector is properly installed by listening for a snap sound when you plug it into its corresponding port.

Connector Ports

These connector ports are found inside the cable entrance area of the terminal.

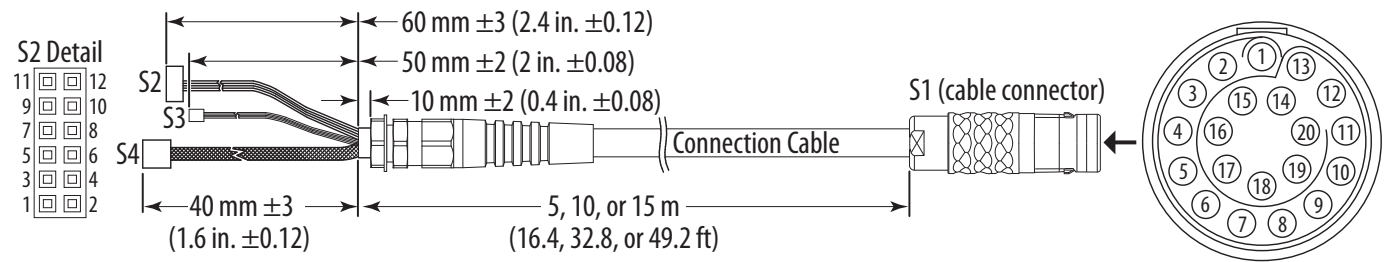
Figure 12 - Connector Ports Inside a MobileView 2 Terminal



Item	Description	Corresponding Cable Connector
A	Ethernet port / communication interface	S3
B	Pin strip - main port / supply and control lines	S2
C	Pin strip - port for the operating element signals	S4

20-pin MobileView Cable Connectors

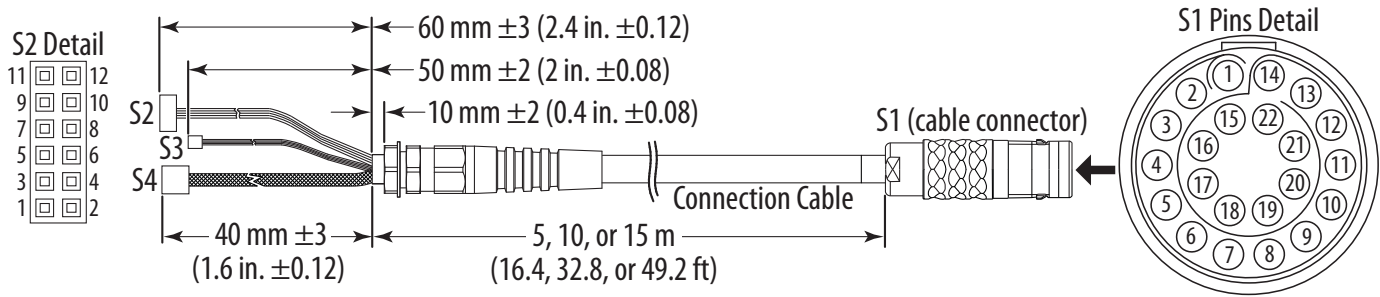
The 20-pin cable connects a MobileView 2 terminal to an IP20 junction box.



MobileView 2 Terminal		Connection Cable			IP20 Junction Box		
PCB Connector	Connector No.	Connector Pin No.	S1 Cable Pin No.	Cable Wire Color	Junction Box Input	Signal Description	Junction Box Output
Power and safety connection	S2	1	1	Pink	1	24V DC	X1, #1
		2	2	Black	2	GND_IN	X1, #2
		3	3	Brown	3	E-stop, circuit 2 (+)	X1, #5
		4	4	White-green	4	E-stop, circuit 2 (-)	X1, #6
		5	5	Gray	5	E-stop, circuit 1 (+)	X1, #3
		6	6	Red-blue	6	E-stop, circuit 1 (-)	X1, #4
		7	7	Green-brown	7	Enabling switch, circuit 1 (+)	X1, #7
		8	8	Yellow	8	Enabling switch, circuit 1 (-)	X1, #8
		9	9	Green	9	Enabling switch, circuit 2 (+)	X1, #9
		10	10	Gray-pink	10	Enabling switch, circuit 2 (-)	X1, #10
		11, 12	11	—	11	Not used	—
Communication interface	S3	1 (shielded)	13	Blue	13	TD+ (transmit)	X3, #1
		2 (shielded)	14	Orange	14	TD- (transmit)	X3, #2
		3 (shielded)	15	White	15	RD+ (receive)	X3, #3
		6 (shielded)	16	Red	16	RD- (receive)	X3, #6
Push button or key switch connection	S4	1	12	Violet	12	External 1	X2, #1
		2	17	White-pink	17	External 2	X2, #2
		3	18	White	18	External 3	X2, #3
		4	19	Blue	19	External 4	X2, #4
		5	20	White-blue	20	Not used	—

22-pin MobileView Cable Connectors

The 22-pin cable connects a MobileView 2 terminal to an IP65 junction box.

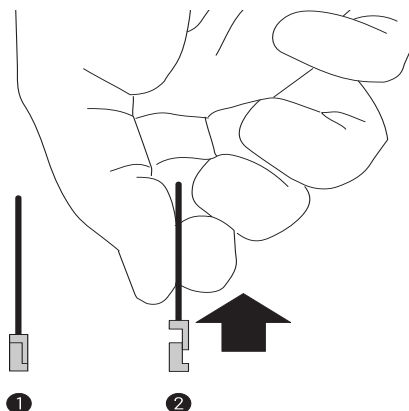


MobileView 2 Terminal	Connection Cable				
PCB Connector	Connector No.	Connector Pin No.	S1 Cable Connector Pin No.	Cable Wire Color	Signal Description
S1 Power and safety connection	S2	1	10	Pink	24V DC
		2	9	Black	GND_IN
		3	7	Brown	E-stop, circuit 2 (+)
		4	22	White-green	E-stop, circuit 2 (-)
		5	6	Gray	E-stop, circuit 1 (+)
		6	19	Red-blue	E-stop, circuit 1 (-)
		7	18	Green-brown	Enabling switch, circuit 1 (+)
		8	20	Yellow	Enabling switch, circuit 1 (-)
		9	8	Green	Enabling switch, circuit 2 (+)
		10	21	Gray-pink	Enabling switch, circuit 2 (-)
ETH Communication interface	S3	1 (shielded)	1	Blue	TD+ (transmit)
		2 (shielded)	2	Orange	TD- (transmit)
		3 (shielded)	3	White	RD+ (receive)
		6 (shielded)	4	Red	RD- (receive)
S2 Illuminated push button	S4	2	11	Violet	E-stop, illuminated (+)
		4	12	White-pink	E-stop, illuminated (-)
		1	5	White	Semi-wireless jumper
		3	14	Blue	Semi-wireless jumper
		5	13	White-blue	Box ID
—			15	Li1	Bridge
			16	Li1	Bridge
			17	—	Not used

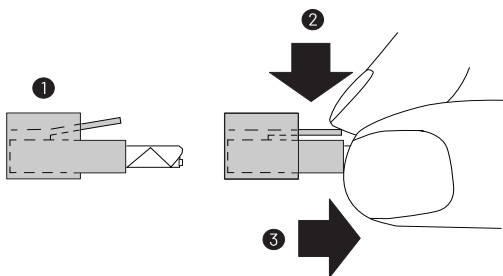
Uninstall Main and Ethernet Connections

If you must uninstall the main and Ethernet connectors, follow these instructions.

To unplug the main connector, pull the cable with your fingers.



To unplug the RJ45 Ethernet connector, press down and release the locking mechanism, then pull the cable with your fingers.



IMPORTANT Do not use sharp objects or tools, such as pliers or a screwdriver, to uninstall a cable connection.

Reinstall the Back Cover

1. Reinstall the strain relief to the connector-cable mounting assembly.
Ensure that the rubber ring of the strain relief lies correctly under the insertion sleeve.
2. Tighten the strain relief and the connector-cable mounting assembly with the 19 mm open-end wrench or spanner.
Torque the connector-cable mounting assembly to 1.2 N•m (10.6 lb•in).
3. Reattach the back cover using the Torx screws.
Torque the screws to 0.8...1 N•m (7...8.85 lb•in).

IMPORTANT When reinstalling the back cover, ensure that:

- The seal is clean and not damaged
- The cables are not pinched or crushed
- All screws are tightened to preserve the protection class

Install the Mounting Bracket

There are two wall mounting brackets available for your MobileView 2 terminal.

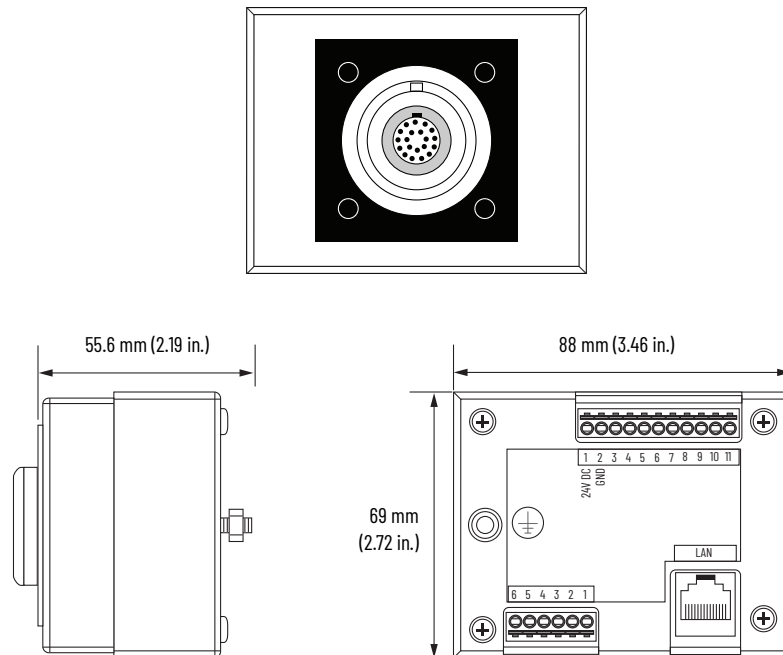
IMPORTANT Use of the mounting bracket requires that the handle accessory is installed on the terminal.

For product dimensions and mounting template to use during the installation of a mounting bracket, see the MobileView 2 Terminal Mounting Brackets Installation Instructions, publication [2711V-IN004](#).

Install an IP20 Connection

The IP20 junction box connects an IP20-compatible MobileView™ 2 terminal to a controller via Ethernet, power, safety connections, and any other optional accessories using a 20-pin connection cable. The IP20 junction box must be wired during installation.

Figure 13 - IP20 Junction Box Dimensions



Mount an IP20 Junction Box

The IP20 junction box must be installed inside a control cabinet. A mounting template is included in the MobileView IP20 Junction Box Product Information, publication [2711V-PC001](#).

Install the Junction Box Cap

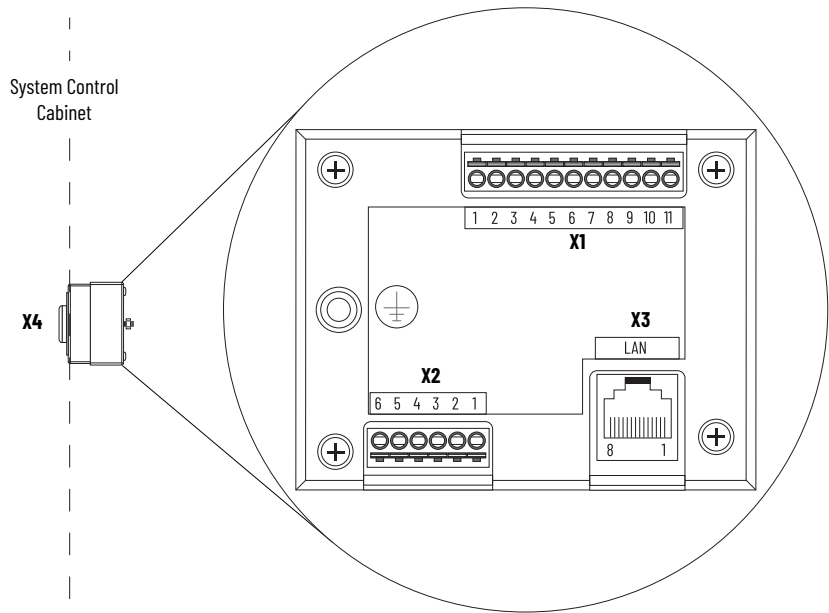
A cap is provided to cover the IP20 junction box opening when the cable is not connected. The cap helps protect the opening and its pin connections from environmental elements.



Use one of the two bottom mounting screws of the junction box to attach the tethered cable of the cap to the control cabinet.

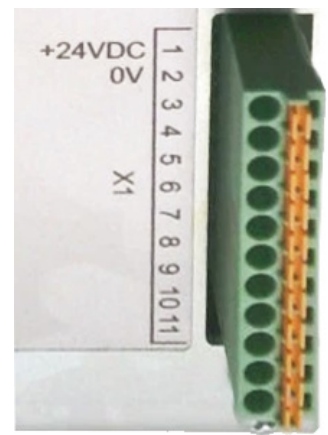
Connect an IP20 Junction Box to Field-side Wiring

Figure 14 - IP20 Junction Box Dimensions and Connector Descriptions



Connector	Description
X1	11-pin terminal for power, and the MobileView 2 terminal E-stop push button and enabling switch safety circuits
X2	6-pin terminal for the optional push button or key switch
X3	LAN switch for Ethernet connectivity to a control system network
X4	20-pin female connection for the MobileView connection cable; see page 26 for cable pinout details

X1 Terminal Pin Connections



Pin No.	Description
1	24V DC
2	GND_IN
3	E-stop, circuit 2 (+)
4	E-stop, circuit 2 (-)
5	E-stop, circuit 1 (+)
6	E-stop, circuit 1 (-)
7	Enabling switch, circuit 1 (+)
8	Enabling switch, circuit 1 (-)
9	Enabling switch, circuit 2 (+)
10	Enabling switch, circuit 2 (-)
11	24V DC

See [Power Supply on page 20](#) for safety information regarding supplying a MobileView 2 terminal or junction box with power.

For more information about the DC power supply requirements of a terminal and junction box, see the MobileView 2 Terminals Technical Data, publication [2711T-TD200](#).

X2 Terminal Pin Connections

The X2 6-pin terminal is used to connect an optional push button or key switch.

Pin #	3-Position Key Switch	Pin #	Illuminated (White) Push Button
1	Left position	1	Contact (normally open)
2	Center position	2	24V / 0V illumination
3	Common	3	Common
4	Right position	4	0V / 24V illumination
5	Not used	5	Not used
6	Not used	6	Not used

Ethernet (X3) Connection

MobileView 2 terminals are equipped with an Ethernet interface that supports TCP/IP protocol at 10/100Mbps for half/full-duplex communication.

The Ethernet connector at X3 on the IP20 junction box connects the terminal to an Ethernet network and the system controller. The connector uses an 8-pin, RJ45 modular jack connector. Pinouts are as follows.

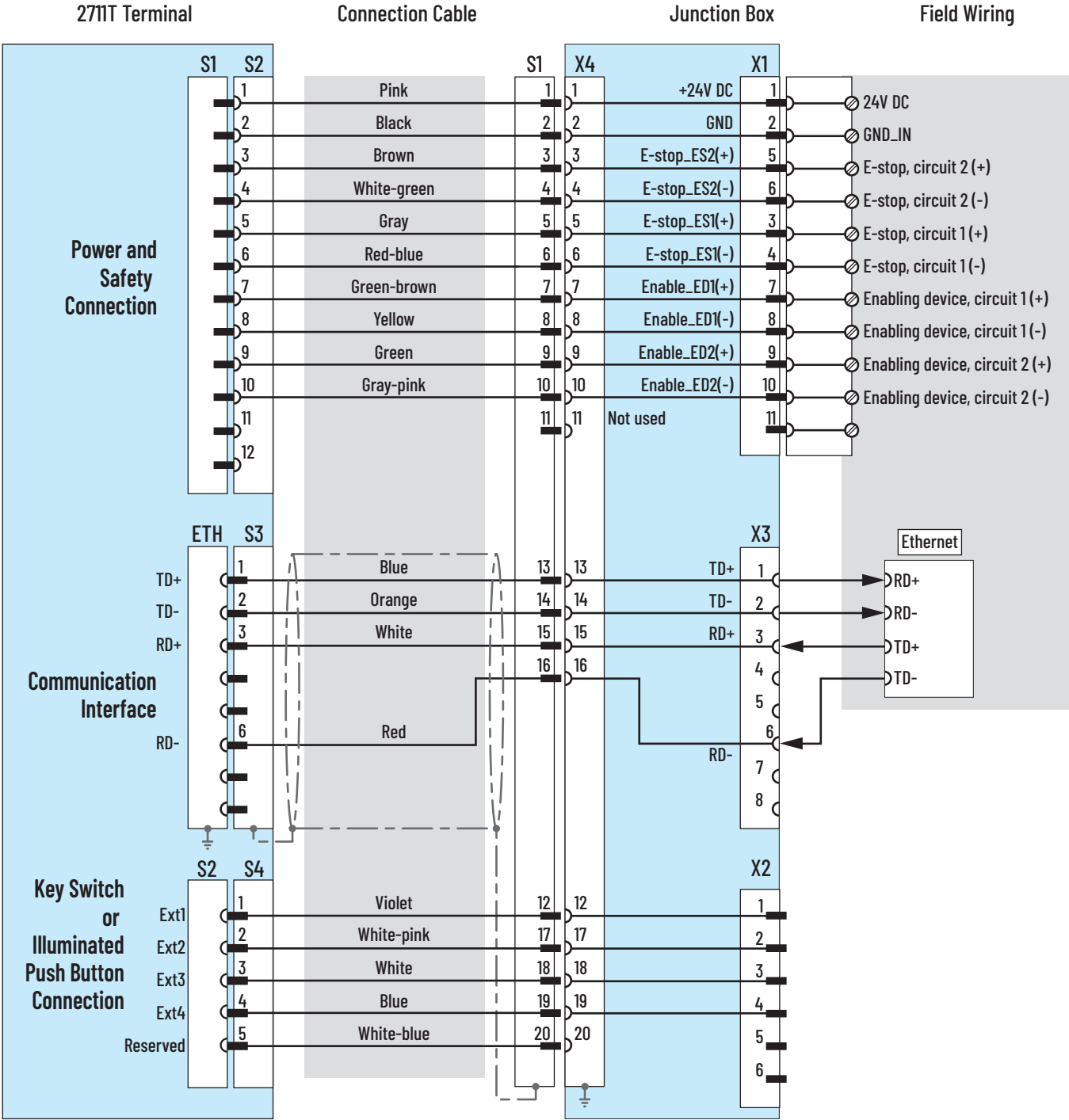
Table 3 - IP20 Junction Box Ethernet Pinouts (X3)

Pin #	Ethernet Signal	Pin #	Ethernet Signal	Pin #	Ethernet Signal
1	TD+	4	Not used	7	Not used
2	TD-	5	Not used	8	Not used
3	RD+	6	RD-		



ATTENTION: Under high noise situations, the Ethernet network can have packet loss of <10% at 100 Mbps. By design, Ethernet communication resends packets, so there is no data loss but there is a possible reduction in communication speed.

Figure 15 - IP20 Junction Box Pinout and Wiring



Electrical Specifications

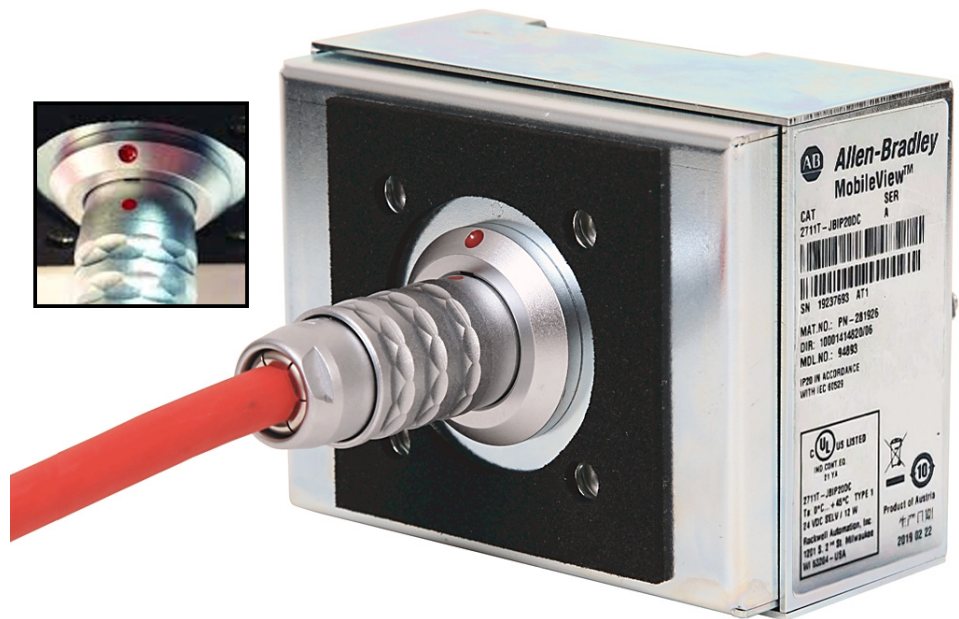
24V DC power supply

- For additional 24V DC power supply requirements, see the MobileView 2 Terminals Technical Data, publication [2711T-ID200](#).
- For related safety information, see [Power Supply on page 20](#).

Connect a Terminal to the IP20 Junction Box

To power up or start a MobileView 2 terminal, insert a 20-pin connection cable into the IP20 junction box.

The 20-pin connection cable has a silver cable connector, as shown. The red dot on cable connector must align with red dot on junction box.



For more information about the connections between a 20-pin connection cable and an IP20 junction box, refer to [20-pin MobileView Cable Connectors on page 26](#).

Connect a Silver Bridge Connector to an IP20 Junction Box

An optional silver, 20-pin bridge connector (catalog number 2711V-IP20BRDGCONN) is available for the IP20 junction box. It is for applications where one MobileView 2 terminal is moved between multiple IP20 junction boxes.

The bridge connector serves to bypass emergency stop (E-stop) contacts so that a machine or automation system can operate without a terminal connected.



WARNING: Personal injury or death can result due to electrical shock, equipment misuse, or unsafe conditions. Consider the following as part of general safety.

- Use the bridge connector exclusively with systems that use power sources with safety extra-low voltage (SELV) or protected extra-low voltage (PELV) circuit protection according to EN61131-2.
- In situations where faults that occur within the automation system could cause personal injury or significant damage to machinery and equipment, take extra safety measures to confirm that the system remains in an acceptable operating condition.
- The installation and application of the bridge connector must only be performed by qualified personnel.
- To prevent short-circuiting or a dangerous situation due to use of an incorrect bridge connector, the qualified personnel who install the bridge connector must also confirm that the connector is installed to the proper pins.
- When you use a bridge connector, it overrides the E-stop function of a terminal. Therefore, an additional E-stop function must be present on the automation system.
- The E-stop on the machine or automation system is triggered whenever a 20-pin, bridge connector is removed from an IP20 junction box. Machine damage is possible from abrupt stoppage due to bridge connector removal.
- In systems where multiple bridge connector is installed, take extra measures to identify where bridge connectors are used.
- Risk assessment and risk reduction are important precautionary measures for machine safety. For more information, see ISO 12100.

IMPORTANT

The IP20 bridge connector is not an E-stop device. Therefore, verify that another E-stop is present on the machine or automation system before you use a bridge connector.

Install the IP20 Bridge Connector

To install a bridge connector, perform the following steps.

1. Remove the junction box cap from the opening.
2. Use the red dots on the bridge connector and the junction box to align and correctly insert the bridge connector into the junction box opening.
3. Push the bridge connector into the junction box opening until you hear a click, which verifies that the bridge connector is properly connected.
4. Use one of the bottom mounting screws on the junction box to secure the tethered cable included on the bridge connector.



Install an IP65 Connection

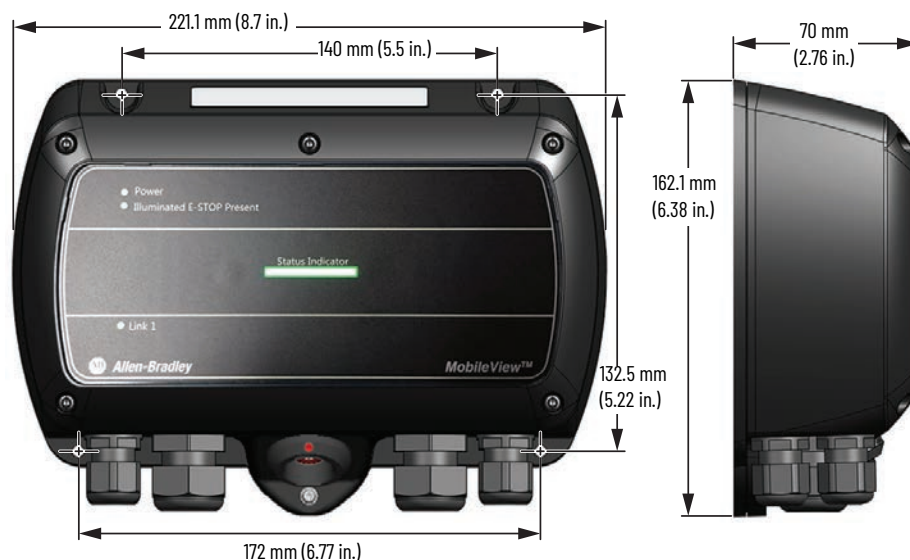
There are two IP65 junction boxes that connect an IP65-compatible MobileView™ 2 terminal to a controller via Ethernet, using a 22-pin connection cable:

- The 2711V-IP65JNCTNBOXCG junction box with cord grips, which is wired during installation
- The 2711V-IP65JNCTNBOXOM junction box, which comes factory-wired and features M12 On-Machine™ connectors



WARNING: Although IP65 junction box 2711V-IP65JNCTNBOXOM provides On-Machine connectivity, do not install this junction box in an area or on a surface that is a hazardous location.

Figure 16 - IP65 Junction Box Dimensions



IP65 junction boxes can be installed inside or outside a control cabinet.

Mount the IP65 Junction Box Back Plate

An IP65 junction box is shipped with the back plate removed so you can easily perform certain installation or maintenance functions. This section provides information on how to mount an IP65 junction box back plate or the optional back cover plate accessory.

IMPORTANT Consider the following before you mount an IP65 junction box:

- Do not mount near a heat source or where direct sunlight is likely.
- Do not mount where excessive mechanical vibrations, excessive dust, humidity, or strong magnetic fields are likely.

To mount the IP65 junction box back plate, perform the following steps.

1. Use the dimensions in [Figure 16](#) to decide where to locate the junction box.
2. Use the junction box back plate or the mounting template included in the MobileView IP65 Junction Box and Accessories Product Information, publication [2711V-PC002](#) to determine where to drill the mounting holes.

IMPORTANT Take precautions so metal cuttings do not enter components that are already installed in the control cabinet or in the junction box.

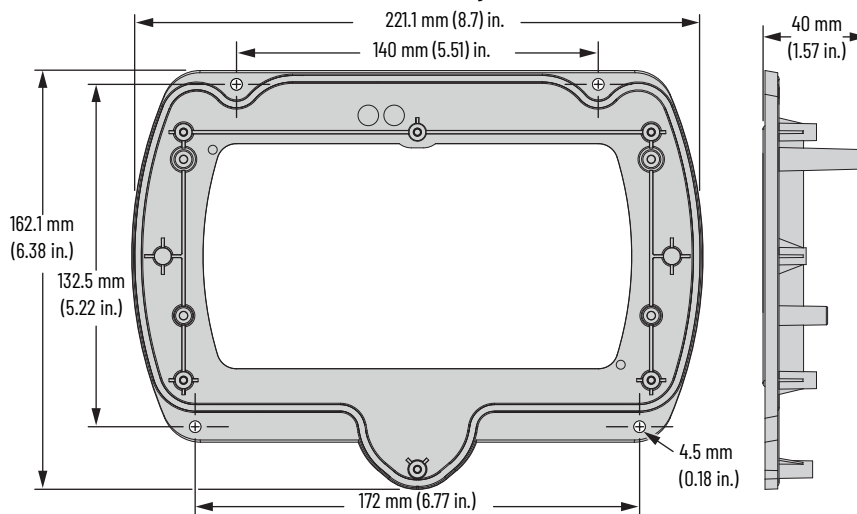
3. With a drill and drill bit, drill the four holes.
4. Attach the back plate to the mounting surface.

We recommend using four M4 bolts with a maximum bolt head diameter of 9 mm, and with self-locking M4 nuts. Use fasteners that are best suited for the mounting surface.

2711V-IP65BKCVR Back Cover Plate Accessory

This optional, back cover plate accessory provides continued rear access to configurable IP65 junction box components from inside a control cabinet. It also reduces the number of cables that are directed through cord grips of the 2711V-IP65JNCTNBOXCG junction box.

Figure 17 - 2711V-IP65BKCVR Back Cover Plate Accessory Dimensions



The 2711V-IP65BKCVR back cover plate accessory is fitted with a seal. To maintain a tight seal and the IP65 rating (when installed on an IP65-rated control cabinet), install the back cover plate accessory on an even surface.

IMPORTANT Any cable that is fed through the control cabinet wall must be smaller than the hole in the cabinet wall.

Provide stress relief for the cables on the control cabinet side when you wire an IP65 junction box with this back cover accessory plate.

Temporarily Install an IP65 Junction Box

Temporarily install an IP65 junction box to the mounted back plate for:

- Hands-free wiring and subsequent configuring of the IP65 junction box with cord grips, catalog number 2711V-IP65JNCTNBOXCG
- Box ID and brightness configuration of the IP65 junction box with M12 On-Machine connections, catalog number 2711V-IP65JNCTNBOXOM

To temporarily install the junction box to a mounted back plate, perform the following steps.

1. Turn around the junction box so that the front plate is facing the mounted back plate.
2. Both the standard back cover that is included with your junction box and the optional back cover plate accessory have longer screw bosses that protrude out from the rest of the mounting plate.

Use these longer screw bosses as positioning aids and slide the IP65 junction box onto the mounted back plate; no screws are needed.



Connect a
2711V-IP65JNCTNBOXCG
Junction Box to Field-side
Wiring

To wire the 2711V-IP65JNCTNBOXCG junction box, perform the following steps.

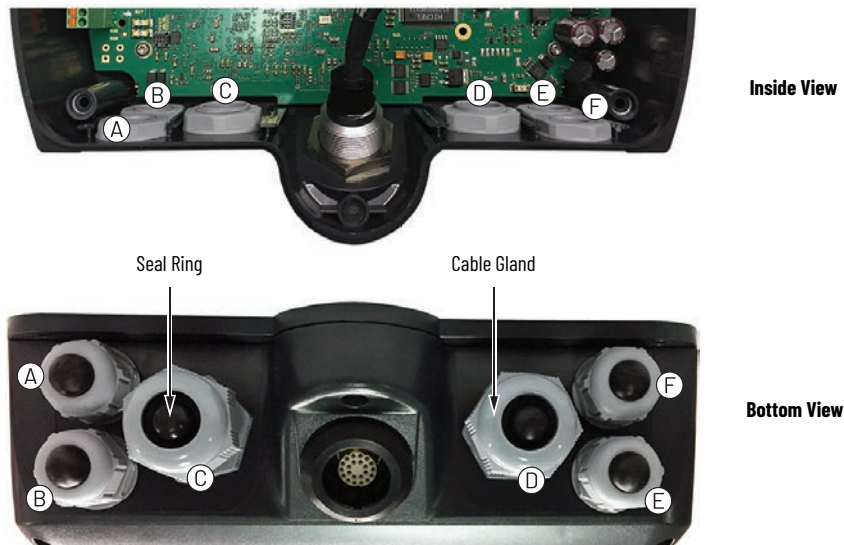
- 1. Separate the junction box from the back cover plate.



SHOCK HAZARD: When the back plate is removed, the circuit board inside the junction box is sensitive to ESD. Use an anti-static wrist strap that is connected to the work surface, and properly grounded tools and equipment.

- 2. Determine the appropriate cable outlets for the wires to be installed.

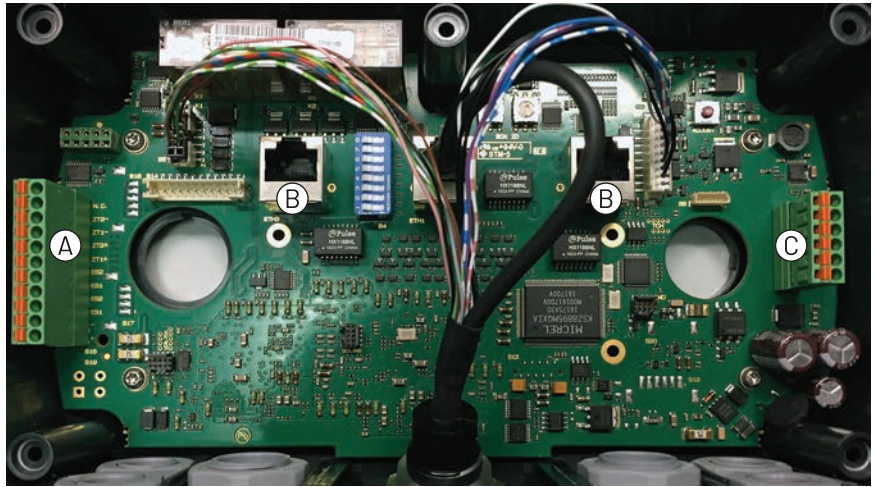
Figure 18 - 2711V-IP65JNCTNBOXCG Junction Box Cable Outlets (with back cover plate removed)



Item	Cable Outlet Description	Gland Size	Cable Dia. Range	Protection Class
A	Standard	M16 x 1.5	4...10 mm (0.16...0.4 in.)	IP68
B	Standard			
C	Ethernet	M20 x 1.5	3...6 mm (0.12...0.24 in.)	IP66
D	Ethernet			
E	Standard	M16 x 1.5	4...10 mm (0.16...0.4 in.)	IP68
F	Standard			

- 3. Remove the cable glands from the cable outlets at the bottom of the junction box that you plan to use.
- 4. With a small screwdriver, remove the black plugs from the seal rings that you plan to use.
- 5. Place the corresponding black seal rings over each wire.
- 6. Place the corresponding light gray cable gland over each wire.
- 7. Feed each wire through the corresponding cable outlet.
- 8. Attach each wire to the appropriate terminal.

Figure 19 - 2711V-IP65JNCTNBOXCG Junction Box Printed Circuit Board (PCB) Components



Item	PCB Description	Description
A	S16	11-pin terminal for power, and safety circuits of E-stop push button and enabling switch of the terminal. For more details, see S16 Terminal Pin Connections on page 40 .
B	ETH3, ETH2	8-pin, RJ45 terminal for Ethernet connectivity to a control system network. Use one terminal for input and the other terminal for output. For more details, Ethernet (ETH3, ETH2) Connections on page 40 .
C	S10	6-pin terminal for an application or control system where multiple IP65 junction boxes are used. This terminal helps identify which IP65 junction box has a terminal that is attached to it. For more details, S10 Terminal Pin Descriptions on page 40 .

9. After all wires are attached, hand-tighten the cable glands to secure the wires.

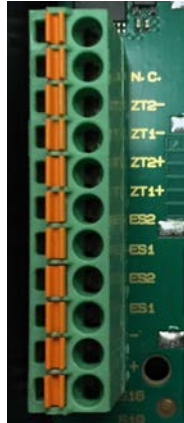
IMPORTANT To maintain the protection class, any unused cable outlet must be sealed with a black plug.

10. Before you reinstall the junction box to its back plate, consider how you plan to use the junction box with a terminal.

If	Then
You plan to use a terminal that does not have Box ID functionality	You must activate a DIP switch; see DIP Switch on page 41 .
You plan to use a terminal with Box ID functionality with multiple IP65 junction boxes	You can assign an identification (ID) number for each junction box specific to its application; see Box ID Functionality on page 42 .
You want to adjust the brightness of the illuminated E-stop button on a terminal	You can press an adjustment button for four possible brightness levels; see Illuminated E-stop Button Brightness on page 42 .

11. After you complete any suggestions in [step 9](#), use a Torx 10 screwdriver and the six screws to reinstall the junction box to its cover plate.

S16 Terminal Pin Connections



Pin No.	PCB Description	Description
1	N.C.	Not connected
2	ZT2-	Enabling device 2 safe input
3	ZT1-	Enabling device 1 safe input
4	ZT2+	Enabling device 2 test input
5	ZT1+	Enabling device 1 test input
6	ES2	One side of E-stop 2 relay (no polarity)
7	ES1	One side of E-stop 1 relay (no polarity)
8	ES2	One side of E-stop 2 relay (no polarity)
9	ES1	One side of E-stop 1 relay (no polarity)
10	-	Ground (GND) input
11	+	24V DC power supply

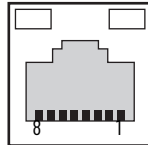
See [page 20](#) for safety information regarding supplying a MobileView 2 terminal or junction box with power.

For more information about the DC power supply requirements of a terminal and junction box, see the MobileView 2 Terminals Technical Data, publication [2711T-TD200](#).

Ethernet (ETH3, ETH2) Connections

MobileView 2 terminals are equipped with an Ethernet interface that supports TCP/IP protocol at 10/100Mbps for half/full-duplex communication.

The Ethernet connectors at ETH3 and ETH2 on the IP65 junction box connect the terminal to an Ethernet network and the system controller. The connectors use an 8-pin, RJ45 modular jack connector. Pinouts are as follows.



Pin #	Ethernet Signal	Pin #	Ethernet Signal	Pin #	Ethernet Signal
1	TD+	4	Not used	7	Not used
2	TD-	5	Not used	8	Not used
3	RD+	6	RD-		



ATTENTION: Under high noise situations, the Ethernet network can have packet loss of <10% at 100 Mbps. By design, the packets are resent, so there is no data loss, but there is a possible reduction in communication speed.

S10 Terminal Pin Descriptions



Pin No.	PCB Description	Description
1	DRY	One side of dry contact relay (no polarity). These are closed when a terminal is connected. When an application or control system has multiple IP65 junction boxes available, this I/O is used to determine which junction box has a terminal that is connected to it.
2		
3	KEY3	No connection
4	KEY2	
5	KEY1	
6	KEY0	

IMPORTANT The DRY contact signal can be used in the control application and is only designed for purposes that are not safety related.

Configure IP65 Junction Box Components

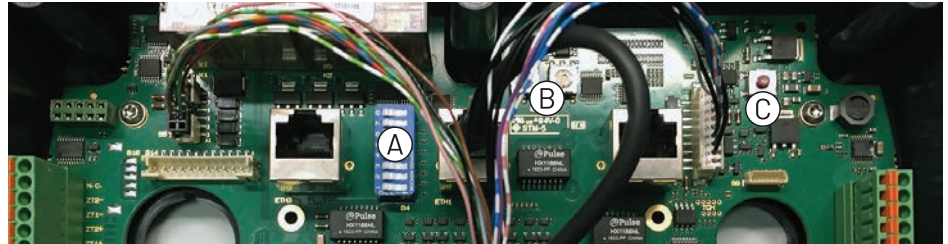
The 2711V-IP65JNCTNBOXCG junction box can be configured to work with MobileView 2 terminals with illuminated E-stop buttons and Box ID functionality.

The 2711V-IP65JNCTNBOXOM junction box with M12 On-Machine connectors comes factory-wired. You can configure Box ID functionality or adjust the brightness of the illuminated push button on a terminal before you mount the junction box to its back plate and connect the M12 On-Machine connections.



SHOCK HAZARD: When the back plate is removed, the circuit board inside the IP65 junction box is sensitive to electrostatic discharge (ESD). Use an anti-static wrist strap that is connected to the work surface, and properly grounded tools and equipment.

Figure 20 - IP65 Junction Box Configurable Components



Item	PCB Description	Description
A	B4	A DIP switch for terminals <u>without</u> Box ID functionality. Activate this DIP switch if the terminal has an illuminated E-stop button.
B	BOX ID	Two hexadecimal rotary switches for terminals <u>with</u> Box ID functionality. Use these switches to set an identification (ID) number on an IP65 junction box.
C	ADJUST	Use this switch to set the brightness of the illuminated E-stop button on a terminal.

DIP Switch

If a MobileView 2 terminal does not have Box ID functionality, then use this DIP switch to configure whether an illuminated E-stop button is used on the terminal.

If	Then
The terminal to be used does not have Box ID functionality or an illuminated E-stop button	All DIP switches must be deactivated (standard factory setting)
The terminal to be used has no Box ID functionality but has an illuminated E-stop button	Activate DIP switch 8



IMPORTANT If the MobileView 2 terminal being used has Box ID functionality and an illuminated E-stop button, then no action is needed. The IP65 junction box automatically detects the illuminated E-stop button, and all factory set DIP switch settings remain deactivated.

Box ID Functionality

If you have a MobileView 2 terminal with Box ID functionality, then you can use the two hexadecimal rotary switches to set an ID number on an IP65 junction box. Set Box IDs from 0 to 255 as hexadecimal values.

With an ID number, only settings specific to that application are available on the terminal, especially where one terminal with Box ID functionality is used between multiple IP65 junction boxes in various locations.

Use the two hexadecimal rotary switches to set Box IDs from 0 to 255 as hexadecimal values.

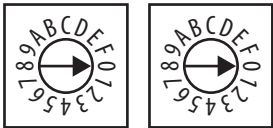
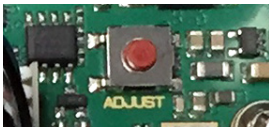


Table 4 - Hexadecimal Rotary Switch Setting Examples

Left Switch Setting	Right Switch Setting	MobileView 2 Terminal Number
0	0	0 (Factory standard setting)
0	F	15
1	0	16
1	F	31
A	0	160
A	F	175
F	0	240
F	F	255

Illuminated E-stop Button Brightness

You can use a button on the IP65 junction box terminal to adjust the illuminated E-stop push button on a MobileView 2 terminal.



WARNING: To adjust the brightness, power must be applied to the IP65 junction box, and a terminal must be connected to the junction box. To avoid ESD damage to the junction box and to avoid electrical shock to the adjuster, only qualified personnel should perform this adjustment.

Available brightness levels are 95% (factory setting), 50%, 25%, and 12.5%. Each button press advances to the next brightness level. One press after 12.5%, the level cycles back to 95%.

IMPORTANT Only adjust the brightness level of the illuminated E-stop button if it is appropriate for the environment where the terminal is being used. Too low of a brightness setting can be difficult to see or can be misinterpreted.

The set brightness level is maintained, even after a power loss.

Mount the IP65 Junction Box to Its Back Plate

To mount an IP65 junction box to its back plate or the back plate cover accessory, perform the following steps.

1. If you temporarily mounted the IP65 junction box as detailed in [Temporarily Install an IP65 Junction Box on page 37](#), remove the junction box from the screw bosses and turn it around so that the front plate is facing outward.

IMPORTANT

To maintain a tight seal and the IP65 rating, verify that the junction box is seated properly to either the back plate or back cover plate accessory.

2. Mount the junction box to its back plate or back plate cover accessory with the six supplied screws.

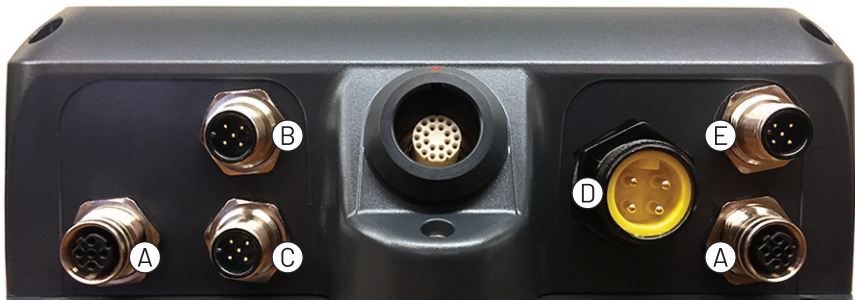
Torque the six screws to 0.85...1.15 N•m (7.5...10.2 lb•in).



Connect M12 On-Machine Connectors to the 2711V-IP65JNCTNBOXOM Junction Box

Reference the following to connect M12 On-Machine connectors to the junction box.

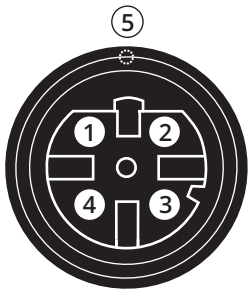
Figure 21 - 2711V-IP65JNCTNBOXOM Junction Box M12 On-Machine Connections



Item No.	Connector Description	Connector Type ⁽¹⁾
A	Ethernet I/O	D-code pin female
B	Dry contact	5-pin micro-style male
C	Enabling device	5-pin I/O male
D	DC control power	Mini-DIN 4-pin male
E	E-stop	5-pin I/O male

(1) All connectors are M12 except for the Mini-DIN power connector.

M12 Ethernet Pin Descriptions

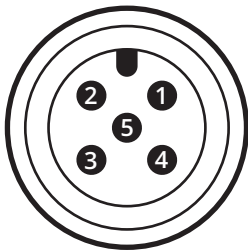


Pin No.	Description	Wire Color	8-way Modular RJ45 Pin
1	M12_Tx+	White-orange	1
2	M12_Rx+	White-green	3
3	M12_Tx-	Orange	2
4	M12_Tx-	Green	6
5	Connector shell shield GND		

For the D-code female network connectors, use polyamide, small-body, unshielded mating connectors or zinc, die-cast, large-body, shielded, mating connectors.

If you use shielded (STP) cable with metal housing, isolate the shield at the junction box end of the cable to minimize ground offsets.

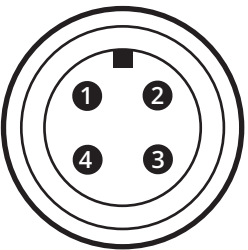
M12 Dry Contact, E-stop, and Enabling Device Pin Descriptions



Pin No.	M12 Dry Contact Pin Descriptions
1	External 24V input
2	—
3	Ground (GND)
4	Dry contact output
5	—

Pin No.	M12 E-stop Pin Descriptions
1	E-stop 2 test output
2	E-stop 2 safe input
3	—
4	E-stop 1 safe input
5	E-stop 1 test output

Pin No.	M12 Enabling Device Pin Descriptions
1	Enabling device 2 test output
2	Enabling device 2 safe input
3	—
4	Enabling device 1 safe input
5	Enabling device 1 test output



Mini-DIN DC Power Pin Descriptions

Pin No.	Description
1	Power -
2	—
3	Power +
4	—

Connect Power to IP65 Junction Boxes

After an IP65 junction box has been mounted, configured, and wired or connected, you can apply power to the junction box.

See [page 20](#) for safety information regarding supplying the IP65 junction box with power.



SHOCK HAZARD: Supply the IP65 junction box and the MobileView 2 terminal exclusively from power sources with SELV or PELV circuit protection according to EN 61131-2. Only connect voltages and circuits that are separated from dangerous voltages (for example, with sufficient insulation) to connections, terminals or interfaces up to a rated voltage of 50V DC.

After power has been applied, perform the following steps to verify that the IP65 junction box is performing correctly.

IMPORTANT

See [IP65 Junction Box Status Indicator Lights on page 46](#) or [Troubleshoot the IP65 Junction Box on page 78](#) for what the following colors represent.

1. Verify that the power status and the Ethernet status indicators on the front of the IP65 junction box are lit and green.
2. Connect a MobileView 2 terminal.
 - a. If the terminal has an illuminated E-stop button, verify that the illuminated E-stop status indicator on the front of the IP65 junction box is lit and green.
 - b. Verify that the status indicator bar on the front of the IP65 junction box is lit and steady green.
3. Push the illuminated E-stop push button on the terminal to trigger a stop. Verify that the status indicator bar on the front of the IP65 junction box is lit and steady red.
4. Disconnect the terminal.

IMPORTANT

When you disconnect a terminal from an IP65 junction box, a 10-second countdown to system emergency stop begins. You have 10 seconds to connect a terminal or a black bridge connector to keep the safety circuit complete.

- a. Verify that the status indicator bar on the front of the IP65 junction box changes from steady red to steady yellow.
- b. Verify that the status indicator bar reduces one flashing yellow light after each 1.67 second period of disconnect time.

IMPORTANT

Only perform [step c](#) if you are commissioning the unit, performing maintenance, or testing safety equipment, because [step c](#) triggers a system emergency stop.

- c. After 10 seconds of disconnect time, verify that all six lights of the status indicator bar are off and subsequently replaced by a flashing yellow status indicator bar. The flashing yellow status indicates that the relay outputs of the IP65 junction box are de-energized and therefore open, which triggers an emergency stop of the system or machine.



WARNING: An IP65 junction box does not protect against the restart of a system or machine. Separate protection must be provided on the system or machine, such as an acknowledgment key.

IP65 Junction Box Status Indicator Lights

The front of each IP65 junction box has three status indicators and a status indicator bar.



Table 5 - IP65 Junction Box Status Indicators and Bar Colors

Indicator	Color Displayed	Status Indicated
Power	Green	Power is present and the IP65 junction box is ready for operation.
	No color	No power is present or there is a fault during startup.
Illuminated E-stop	Green	A terminal with an illuminated E-stop button is connected to the junction box.
	No color	A terminal without an illuminated E-stop button is connected to the junction box.
Ethernet	Green	The junction box is connected to an Ethernet network.
	No color	The junction box is not connected to an Ethernet network.
Status indicator bar ⁽¹⁾	Steady green	A terminal with an E-stop button is connected correctly and the E-stop has not been pressed.
	Solid white	No terminal is connected but a 22-pin bridge connector is connected correctly.
	Blinking white	No terminal or 22-pin bridge connector is connected to the junction box.
	Steady yellow	Begins the disconnect count time of 10 seconds after a terminal or 22-pin bridge connector is disconnected from the junction box.
	Partial yellow	Going from right to left, a light on the status bar shuts off after 1.67 seconds of disconnect time has passed. For example, only three of the six lights remain lit after five seconds of disconnect time.
	Flashing yellow	When no plug is connected after 10 seconds, the disconnect timeout forces the junction box into a safe mode.
	Steady red	An E-stop button on a terminal has been pressed and safe mode is activated.

(1) The IP65 junction box must have power (green at power status indicator) for the status bar to display status.



ATTENTION: Other colors signify when a MobileView 2 terminal or IP65 junction box are in an error state. To identify these colors, see [Troubleshoot the IP65 Junction Box on page 78](#).

Restore Power to IP65 Junction Boxes

If the IP65 junction box is powered off, the relays of the emergency stop circuits are no longer actively held closed and the emergency stop circuit is then opened, which is comparable to an activated E-stop.

When powered off, the input states and E-stop state are saved in the IP65 junction box memory. When power is restored, these saved states are then retrieved.

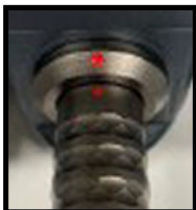
Therefore, the IP65 junction box can have the following states.

State	Description
Normal	A MobileView 2 terminal (with an unactivated E-stop push button) is connected.
Bridge active	A black, 22-pin bridge connector is connected.
E-stop	The E-stop push button on the terminal has been activated.
Error state	The E-stop push button on the connected terminal and the retrieved E-stop in the IP65 junction box memory are not the same. In this case, the E-stop push button of the connected terminal is unactivated but the saved, retained E-stop in the IP65 junction box memory is activated. Therefore, the E-stop push button on the terminal must be activated and then unlocked to reset the IP65 junction box.

Connect a Terminal to the IP65 Junction Box

To power up or start an IP65-compatible MobileView 2 terminal, insert a 22-pin connection cable into the IP65 junction box.

A 22-pin connection cable has a dark gray cable connector, as shown. The red dot on cable connector must align with red dot on junction box.



Connect a Black Bridge Connector to an IP65 Junction Box

An optional black, 22-pin bridge connector (catalog number 2711V-IP65BRDGCONN) is available for the IP65 junction box. It is for applications where one MobileView 2 terminal is moved between multiple IP65 junction boxes.

The bridge connector serves to bypass emergency stop (E-stop) contacts so that a machine or automation system can operate without a terminal connected.



WARNING: Personal injury or death can result due to electrical shock, equipment misuse, or unsafe conditions. Consider the following as part of general safety.

- Use the bridge connector exclusively with systems that use power sources with safety extra-low voltage (SELV) or protected extra-low voltage (PELV) circuit protection according to EN61131-2.
- In situations where faults that occur within the automation system could cause personal injury or significant damage to machinery and equipment, take extra safety measures to confirm that the system remains in an acceptable operating condition.
- The installation and application of the bridge connector must only be performed by qualified personnel.
- To prevent short-circuiting or a dangerous situation due to use of an incorrect bridge connector, the qualified personnel who install the bridge connector must also confirm that the connector is installed to the proper pins.
- When you use a bridge connector, it overrides the E-stop function of a terminal. Therefore, an additional E-stop function must be present on the automation system.
- The E-stop on the machine or automation system is triggered whenever the 10-second countdown time elapses after a 22-pin bridge connector is removed from an IP65 junction box. Machine damage is possible from abrupt stoppage due to bridge connector removal.
- In systems where multiple bridge connector is installed, take extra measures to identify where bridge connectors are used.
- Risk assessment and risk reduction are important precautionary measures for machine safety. For more information, see ISO 12100.

IMPORTANT

The IP65 bridge connector is not an E-stop device. Therefore, verify that another E-stop is present on the machine or automation system before you use a bridge connector.

Install the IP65 Bridge Connector

To install a bridge connector, perform the following steps.

1. Use the red dots on the bridge connector and the junction box to align and correctly insert the bridge connector into the junction box opening.
2. Push the bridge connector into the junction box opening until you hear a click, which verifies that the bridge connector is properly connected.
3. Use one of the bottom mounting screws on the junction box to secure the tethered cable included on the bridge connector.



Connected/Disconnected Timer State

An IP65 junction box must be connected to a MobileView 2 terminal or a black bridge connector. When you disconnect one to connect the other, the IP65 junction box recognizes the disconnection and enters a timer state, during which time, the operator has a maximum of 10 seconds to reconnect.

During this disconnected time, the E-stop of the IP65 junction box is bypassed until a terminal with an unactivated E-stop push button or a black bridge connector is connected.

If	Then
The connected terminal has an illuminated E-stop push button that is unactivated ⁽¹⁾	The E-stop push button is recognized by the IP65 junction box and it is illuminated.
The connected terminal has an illuminated E-stop push button that is properly configured but activated	The E-stop push button on the terminal must be deactivated and reset before the IP65 junction box returns to the normal state mentioned in Restore Power to IP65 Junction Boxes .
A black bridge connector is being connected	The black bridge connector must be connected within 10 seconds for the IP65 junction box to recognize the connection and enter the bridge active state that is mentioned in Restore Power to IP65 Junction Boxes .
No terminal or black bridge connector is connected within 10 seconds	The IP65 junction box timer state times out and an E-stop is triggered.

(1) You must first configure an IP65 junction box to recognize an illuminated E-stop push button on a MobileView 2 terminal. For more information, see [DIP Switch on page 41](#).

Operate the 2711T-PP0 Mobile PC

Initial Startup

When a 2711T-PP0 mobile PC is connected to a junction box with 24V DC power applied, the green power status indicator illuminates and the startup sequence automatically begins.



If the green power status indicator does not illuminate or a startup screen does not appear, check the 24V DC power source and cable connections at the junction box and terminal.

Test Safety Functions

Test the E-stop push button and the enabling switch on your terminal to verify that each safety function is operating properly. Verify that the machine or plant operation stops when the button is pushed.

Change the Account Password

IMPORTANT Do not disconnect power from a terminal until after the initial startup is complete. If power is disconnected during this procedure, it can result in a corrupted system image.

Upon initial startup, you must change the account password.

1. When the blue, change password screen appears, select OK.
2. Enter an account password, and press the Enter key.

IMPORTANT When you touch any data field, an on-screen keyboard appears so that you can enter information. You can also connect an external keyboard using the USB port on the back of the terminal.



An account password is recommended but not mandatory; if you do not want one, leave the password field empty and press the Enter key.

A dialog box appears stating that, 'Your password has been changed.'

IMPORTANT As the terminal operating system loads on initial startup, the process can take up to 3 minutes. During this time, multiple command prompt windows appear and disappear, and the display orientation on a landscape device is temporarily rotated 90°.

When the initial system setup is complete, the terminal desktop appears with the correct display orientation and the command prompt windows cease to appear.

Terminal Desktop

The desktop is the main graphical interface of the terminal.



Each desktop icon provides access to information or configurable options.



Rockwell Admin - A central location for user-specific files



This PC - Displays the drives and network locations connected to your terminal



Recycle Bin - A temporary location for deleted files and folders



Control Panel - A central location to view and configure system settings



Command Prompt - A command-line interpreter used to execute commands



Microsoft Edge - The default web browser for Windows operating system



Utilities Folder - A central location to view and configure terminal settings



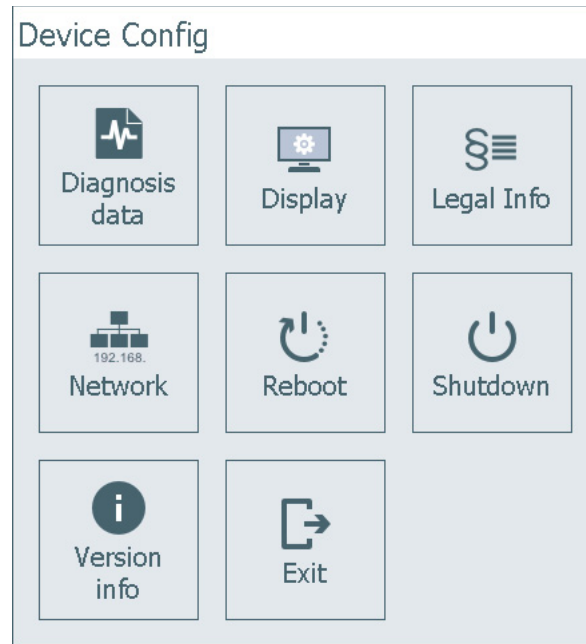
Start Menu - Provides quick access to apps, settings, files, and system search

Terminal Configuration

This section describes the basic configuration settings for your terminal.

To access the Device Configuration dialog from the desktop, select Utilities > DeviceConfig.

Figure 22 – Device Configuration Dialog



The icons on the Device Configuration dialog serve the following functions.

Diagnostic Data

To save diagnostic data for your terminal to a USB stick, perform the following.

1. Plug a USB stick into the handheld terminal.
2. Press Diagnosis Data.
The Diagnostics Data dialog appears.
3. Select USB stick.
The diagnosis data is copied to the USB stick.

IMPORTANT Never remove a USB stick during the saving process! This may otherwise result in loss of data.

Display Brightness

The Display settings allow you to rotate or adjust the brightness of your terminal screen. We recommend that you do not rotate the screen orientation.

To adjust the brightness of the display, perform the following.



WARNING: If the display darkens, it can be difficult to read and use could result in a potentially hazardous outcome. Do not use the touch screen under such circumstances.

The design of the system must consider the possibility of the loss of touch screen functionality where it is unable to be used to maintain or change control of the system. The touch screen should not be the single point of control of critical functions and is not intended to replace an E-stop.

Design of the system should follow all applicable code and good engineering practices. Factors to consider include:

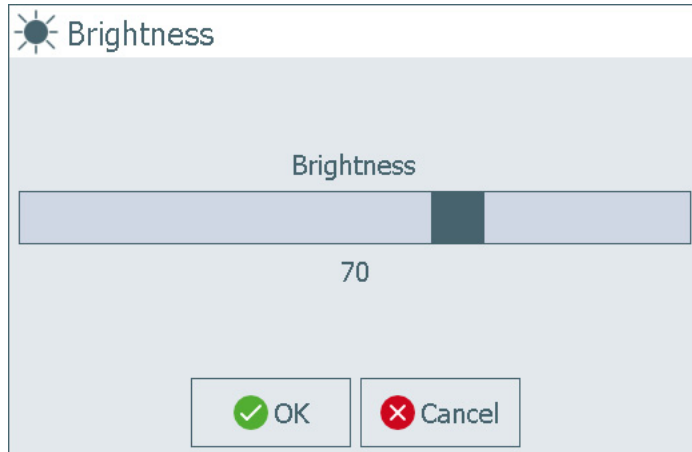
- The possibility of an unreadable display
- The possibility of an inoperable touch screen
- Unexpected communication errors or delays
- Operator error in the control of the system
- Proper use of E-stops and other safety practices

Provide means to achieve a safe state during anomalies and to verify that the system has adequate redundancy for critical functions.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

1. Press Display > Brightness.
The Brightness Settings dialog appears.

Figure 23 - Brightness Settings Dialog



2. To adjust the brightness of the display, use the slider.
3. To save the settings and return to the previous window, press OK.
4. To return to the Device Config dialog without saving any changes, press Cancel.

License Terms

To review the license terms for your terminal, press Legal Info.

To return to the Device Config dialog, press OK.

Network Settings

To configure the Ethernet communications of your terminal, perform the following.

1. Press Network > Ethernet 0

The Ethernet configuration dialog appears.



You can also go to Control Panel > Network and Sharing Center > Network Connections to access the same screen.

2. Use one of the following methods to configure your Ethernet connection:
 - Allow a DHCP server on your network to assign IP addresses to the terminal. This enables the automatic integration into an existing network without manual configuration.

Ethernet 0

Address: 10 220 150 177 7 8 9

Netmask: 255 255 252 0 4 5 6

Gateway: 10 220 148 1 1 2 3

DHCP: ☒

0 C

OK Cancel

- Enter information from your network administrator or ISP into the individual three segments of the network addresses manually, using the on-screen numeric input.

Ethernet 0

Address: 10 150 48 86 7 8 9

Netmask: 255 255 240 0 4 5 6

Gateway: 10 150 63 250 1 2 3

DHCP: ☐

0 C

OK Cancel

Item	Description
Address	Terminal IP address; must be a unique address on the LAN.
Netmask	Associated subnet mask; must be identical to the server subnet mask.
Gateway	Standard gateway (optional)

3. To save the settings and return to the previous window, press OK.
To return to the Device Config dialog without saving any changes, press Cancel.

Restart the Terminal

To restart the terminal, press Reboot.

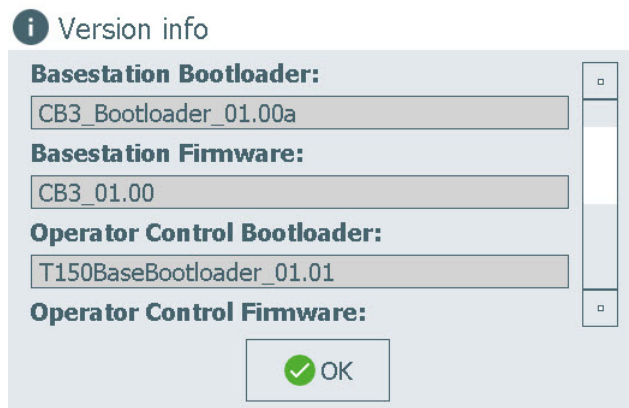
Shutdown the Terminal

To shutdown the terminal, press Shutdown.

Version Info

To display the version information of the following installed software components, press Version Info.

Figure 24 - Version information



To return to the Device Config dialog, select OK.

Exit Device Config

To leave the Device Config dialog, select Exit.

Device Test Tool

The Device Test Tool allows you to retrieve status information about your terminal and related operator controls like the key switch, the key code associated with each key on the keypad, buzzer, junction box, and status indicators.

To access the DeviceTestTool, from the desktop, select Utilities > DeviceTestTool.

IMPORTANT

The DeviceTestTool accesses a Hardware Application Programming Interface (HWAPI) installed on your terminal that allows programs to interact with hardware components.

We recommend that you quit all applications that access the HWAPI before using the DeviceTestTool.

Using the DeviceTestTool and other applications that access the HWAPI simultaneously may cause terminal performance issues.

To view the status of an active device, select the device from the Overview tab or select the corresponding device tab.

Overview	Key Switch	Keyboard	Buzzer	ConnectionBox	LED	Device Status
The following devices are found:						
!	0 Joysticks found.	!	0 Handwheels found.			
!	0 Push Buttons found.	✓	1 Key Switch found.			
!	0 Potentiometers found.	!	0 Rotary Switches found.			
!	0 Selector Switches found.	!	0 Emergency Stops found.			
!	0 Enabling Switches found.	✓	1 Keyboard found.			
✓	1 Buzzer found.	!	0 Push Switches found.			
✓	1 ConnectionBox found.	✓	4 LEDs found.			
✓	1 Device Status found.	!	0 RFID Modules found.			

Determine the Keypad Key Codes

Each key on your terminal keypad has a fixed key code, which is output anytime the key is pressed.

To determine the key code of a desired key, proceed as follows:

1. Select the Keyboard tab on the Device Test Tool dialog.
2. Press Enable Events.
3. Press the desired key.
4. The key code is displayed in the KeyCode column in decimal format.

For more information about the default key code configuration for your terminal, see [Keypad Options on page 13](#).

File Protection Settings

Unified Write Filter (UWF) and Hibernate Once/Resume Many (HORM)

UWF and HORM are features designed to protect the disk integrity of your terminal and provide faster, more consistent reboots.

- UWF helps to protect the internal nonvolatile memory (C:) from unintended changes or operating system corruption. UWF intercepts any write attempts and redirects them to a virtual overlay.



UWF protection applies only to the internal storage drive (C:), not a MicroSD card (not included) inserted in the internal MicroSD drive (D:) of the terminal.

We recommend that, after you install and configure the applications on your terminal, you enable UWF to preserve operating system and application integrity. This is especially important if you frequently connect and disconnect the terminal from one or more junction boxes.

- HORM, an optional feature that can be used with UWF enabled, allows you to boot to the same saved state, with programs running and windows open, in order to speed up overall boot time. When UWF/HORM is enabled, your terminal resumes and restarts from the last saved hibernation file (hiberfil.sys). A terminal with UWF/HORM enabled can quickly be turned off or shut down, and then restarted into the preconfigured state, even if it experiences a sudden loss of power.

By default, both UWF and HORM are disabled.

You can access the following UWF and UWF/HORM setup shortcuts via the Utilities > Security folder on your device desktop.

There are 4 unique enable scripts described in the following table. Select the script that best meets your needs.

IMPORTANT If a UWF or UWF/HORM configuration is already enabled, you must first Disable UWF/HORM in order to enable a different configuration.	
Setup Shortcut	Description
UWF Details	Provides more detailed status information about an enabled UWF configuration
UWF Enable Expert	Enables a custom configuration of UWF, only
UWF Enable	Enables the standard UWF configuration, only
UWF Files	Lists all of the files that are stored in the overlay while UWF is enabled
UWF HORM Disable	Disables UWF and HORM
UWF HORM Enable Expert	Enables UWF and HORM with custom configuration options
UWF HORM Enable	Enables UWF and HORM
UWF Overlay	Provides the amount of memory consumed by the overlay when UWF is enabled
UWF Status	Provides information about whether UWF is enabled or disabled
IMPORTANT We recommend confirming that UWF is disabled before you configure any applications on the terminal. Application changes made while UWF is enabled are lost when the terminal is shut down or restarted. If you disable UWF to make application changes, be sure to enable it again before you shut down the terminal.	

Check the Status of UWF/HORM

To check whether UWF or UWF/HORM is enabled or disabled, perform the following steps.

- From the desktop, select Utilities > Security > UWF Status.
 UWF Filter Enabled (Current Session) is True if UWF is enabled and false if disabled.
 HORM status appears under Current Session Settings, to the right of HORM mode.

Enable UWF Only

To enable the standard UWF configuration, without HORM, perform the following steps.

1. From the desktop, select Utilities > Security > UWF Enable.
The script runs and the Restart Required dialog appears.
2. Select OK.
The terminal restarts, with the standard UWF configuration enabled.

Enable a Custom Configuration of UWF Only

To enable and customize the configuration of UWF, without HORM, perform the following steps.

1. From the desktop, select Utilities > Security > UWF Enable Expert.
The script runs, and your custom configuration options appear.
2. Choose your configuration options and select OK.
Your custom UWF configuration is enabled, and the Restart Required dialog appears.
3. Select OK.
The terminal restarts.

Enable UWF/HORM

To enable the standard UWF/HORM configuration, perform the following steps.

1. From the desktop, select Utilities > Security > UWF HORM Enable.
The script runs, UWF is enabled, and the Restart Required dialog appears.
2. Select OK.
The terminal restarts with the standard UWF configuration enabled.
The HORM enable script runs.

IMPORTANT We recommend that you reconfigure the device [Power Button](#) to 'Do nothing' immediately after you enable UWF/HORM. Use of the device power button (default configuration) while the terminal is powered on will inadvertently overwrite your hibernation file.

3. Configure your terminal (run applications, open files, and so on) to the desired resume or restart state that you want the terminal to return to after a power cycle or restart.
4. To finalize HORM setup, from the desktop, select  Start, enter 'shutdown /h' into the search field, and press the Enter key.

IMPORTANT We recommend that you do not use the device power button to hibernate the terminal during this step. Doing so can cause the creation of your hibernation file to be unsuccessful.

The terminal goes into hibernation and the hibernation file (hiberfil.sys) is saved.

IMPORTANT Wait approximately 30 seconds before power cycling the terminal to ensure that the hibernation file has been created.

5. To bring the terminal out of hibernation, press the power button.

IMPORTANT If you want to establish a different resume or restart state, wait 2 minutes after the terminal resumes, repeat steps [3.](#) and [4.](#), and the existing hibernation file is overwritten.
If you perform hibernation less than 2 minutes after a resume, a dialog states that the terminal is locked.

Enable a Custom Configuration of UWF/HORM

IMPORTANT If UWF (with or without HORM) is already enabled, you must first [Disable UWF/HORM](#) in order to enable a custom configuration of UWF/HORM.

To enable and customize the configuration of UWF/HORM, perform the following steps.

1. From the desktop, select Utilities > Security > UWF HORM Enable Expert.
The script runs, and your custom configuration options appear.
2. Choose your configuration options and select OK.
UWF is enabled, and the Restart Required dialog appears.
3. Select OK.
The terminal restarts with the custom UWF configuration enabled.
The HORM enable script runs.

IMPORTANT We recommend that you reconfigure the device [Power Button](#) to 'Do nothing' immediately after you enable UWF/HORM. Use of the device power button (default configuration) while the terminal is powered on will inadvertently overwrite your hibernation file.

4. Configure your terminal (run applications, open files, and so on) to the desired resume or restart state that you want the terminal to return to after a power cycle or restart.
5. To finalize HORM setup, from the desktop, select  Start, enter 'shutdown /h' into the search field, and press the Enter key.

IMPORTANT We recommend that you do not use the device power button to hibernate the terminal during this step. Doing so can cause the creation of your hibernation file to be unsuccessful.

The terminal goes into hibernation and the hibernation file (hiberfil.sys) is saved.

IMPORTANT Wait approximately 30 seconds before power cycling the terminal to ensure that the hibernation file has been created.

6. To bring the terminal out of hibernation, press the power button.

IMPORTANT If you want to establish a different resume or restart state, wait 2 minutes after the terminal resumes, repeat steps [4.](#) and [5.](#), and the existing hibernation file is overwritten.
If you perform hibernation less than 2 minutes after a resume, a dialog states that the terminal is locked.

Disable UWF/HORM

IMPORTANT Wait approximately 2 minutes after a resume before you disable UWF and HORM.

To disable UWF and HORM, perform the following steps.

1. From the desktop, select Utilities > Security > UWF HORM Disable.
The script runs and the Restart Required dialog appears.
2. Select OK.
The terminal restarts, with UWF and HORM disabled, and the hibernation file is deleted.

Windows Settings

IMPORTANT

We recommend that you avoid the use of the features that are found under Control Panel > Programs and Features that are not detailed in this user manual.

Some of these features can modify your terminal setup and cause certain settings that are detailed in this manual to become unavailable. To avoid malfunction or damage through improper setup, always observe caution when modifying the default settings of your terminal.

Windows Keyboard Layout

An English on-screen keyboard layout is set by default on your terminal.

To add new Windows keyboard layouts or select the primary language using the system control, perform the following steps.

1. From the desktop, select  Start >  Settings > Time & Language.
2. Select Language.

Windows Activation

The terminal is delivered with a valid license and deferred activation. Once the terminal is connected to the Internet, activation takes place automatically. If the terminal isn't ever connected to the Internet, it remains in the state of deferred activation. It is acceptable if the device stays in deferred activation mode indefinitely.

Reinstalling Microsoft Edge

Your terminal comes with Microsoft Edge preinstalled. If you must reinstall Microsoft Edge later and set it as the default browser, proceed as follows:

1. From the desktop, select Control Panel > Programs and Features.
2. Select the WindowsCustomizing from the list of features.
3. Select Next, then Change.
4. Select Microsoft Edge.
5. Select the  icon to the left of Microsoft Edge to access a dropdown menu.
6. Select, "Entire feature will be installed on local hard drive".
7. Select Next, then Change, then Finish.

Microsoft Edge is installed and an application shortcut appears on the desktop after you restart the terminal.

Remote Access

The following remote access services can be activated on your terminal.

Service	Description
SMB activation	Server Message Block (SMB) enables access to specific folders on the terminal
RDP activation	Remote Desktop (RDP) enables access to the terminal via another device, such as a personal computer
PING activation	Allows you to verify the Ethernet connection to the terminal via PING



ATTENTION: Due to the possibility of unauthorized access to the terminal, activating remote access is an IT security risk. If you change the default security settings from the out-of-box condition, you assume responsibility for any potential issues that arise as a result of the changes.

IMPORTANT

Ensure that network settings have been configured before activating remote access. For more information, see [Network Settings on page 55](#).

IMPORTANT

You must disable any write filters in use before you configure remote access settings, then enable them again afterwards. For more information, see [File Protection Settings on page 58](#).

Install Remote Access

To install a remote access service, proceed as follows:

1. From the desktop, select Control Panel > Programs and Features.
2. Select the WindowsCustomizing from the list of features.
3. Select Next, then Change.
4. Select the  icon to the left of the desired service to access a dropdown menu.
5. Select, "Entire feature will be installed on local hard drive".
6. Select Next, then Change, then Finish.
7. The configuration changes take effect after you restart the terminal.

Uninstall Remote Access

To uninstall a service, proceed as follows:

1. From the desktop, select Control Panel > Programs and Features.
2. Select the WindowsCustomizing from the list of features.
3. Select Next, then Change.
4. Select the  icon to the left of the desired service to access a dropdown menu.
5. Select, "Entire feature will be unavailable".
6. Select Next, then Change, then Finish.
7. The configuration changes take effect after you restart the terminal.

FactoryTalk Remote Access

FactoryTalk® Remote Access™ delivers secure communications over the Internet to enable performance and security for on-demand remote assistance, software installation, programming, troubleshooting, and maintenance of your terminal.

When upgraded to FactoryTalk Remote Access Pro it can be used to support any remote automation system and application.

To register and configure your terminal and make a VPN connection, download and install FactoryTalk Remote Access Tools (license required).

Download the Tools

Use the following steps to download FactoryTalk Remote Access Tools.

1. From the desktop, open the Microsoft Edge application.
2. Browse to and sign into the [FactoryTalk Hub](#) with an administrator user account.
3. Start FactoryTalk Remote Access and access the domain.
4. On the main FactoryTalk Remote Access toolbar, select Help > Software Downloads.
Your web browser opens to the [Product Compatibility and Download Center](#).

If the download does not start automatically, use the following steps.

1. Enter FactoryTalk Remote Access in the Search bar.
2. Select FactoryTalk Remote Access XX.xx.
3. In the Available Downloads window, select Tools for FactoryTalk Remote Access.
4. To add the item to your Download Cart, select downloads.
5. In the Download Cart window, select Download Now to start the download.

After the software download starts, perform the following steps.

1. Review the Rockwell Automation End User License Agreement, and then select Accept and Download to continue.
2. If prompted, select Save File.
3. If the download does not start automatically, select the download link to open Direct Downloads.
4. To download the software, in the Direct Downloads window, select the download link for FactoryTalkRemoteAccessToolsSetup*XX.xx*.exe.

Install the Tools

Use the following steps to install the FactoryTalk Remote Access Tools onto your terminal.

1. Run FactoryTalkRemoteAccessToolsSetup*XX.xx*.exe.
2. To allow the software to change your terminal, select Yes.
The FactoryTalk Remote Access Tools installation wizard starts.
3. To install the software, follow the steps in the wizard.

Shut Down

To shut down your terminal, perform the following steps.

1. Close any open applications and return to the terminal desktop.
2. From the desktop, select Utilities > Device Config > Shutdown.
The terminal shuts down.



ATTENTION: Do not shut down your terminal by disconnecting the power supply. Doing so can:

- Corrupt the Windows operating system
- Result in the loss of any modifications that were made to application settings
- Corrupt any applications that were currently running



ATTENTION: When the terminal is shut down, all data in the RAM of the terminal is lost.

Power Button

The default configuration of the power button is as follows:

- If the terminal is powered on and the power button on the terminal keypad is pressed, the terminal is put into a hibernation state.
- If the terminal is powered on and the power button is pressed and held down, the terminal shuts down after 5 seconds.
- If the terminal is powered off and the power button is pressed, the terminal starts up.
- If the terminal is placed into hibernation and the power button is pressed, the terminal resumes from the hibernated state.

IMPORTANT

If [Unified Write Filter \(UWF\) and Hibernate Once/Resume Many \(HORM\)](#) is enabled, we recommend that you reconfigure the device [Power Button](#) to 'Do nothing'. Use of the device power button (default configuration) while the terminal is powered on and UWF/HORM is enabled, inadvertently overwrites your hibernation file.

To reconfigure the function of the power button, perform the following steps.

1. From the desktop, select Control Panel > Power Options.
2. Select 'Choose what the power buttons do'.
3. Select the desired function from the dropdown menu to the right of 'When I press the power button'.
4. To apply the new behavior, select Save changes.

Disconnect Power

To disconnect power from your terminal, shut down the terminal, then remove the connection cable from the junction box.

Unplugging the terminal results in an immediate hard shutdown. When reconnecting, the terminal must go through the complete boot sequence, which takes significantly longer than resuming from hibernation.

-
- IMPORTANT** If you disconnect power from the terminal before you shut it down, then you risk the following:
- The Windows operating system becomes corrupt
 - Any application settings that were changed while the terminal was powered up are lost
 - Any applications that were running become corrupt

You can configure and enable [Unified Write Filter \(UWF\) and Hibernate Once/Resume Many \(HORM\)](#) to help avoid these risks.

Energy Preservation

Select terminals offer an energy preservation feature. Energy Preservation allows your terminal to remain powered for approximately two minutes after being unplugged. During this time, the terminal automatically transitions into a hibernation state. When the terminal is plugged in again, it resumes operation much faster compared to a full reboot.

See Technical Data publication for which catalog numbers offer Energy Preservation.

For more information about which MobileView 2 catalog numbers offer Energy Preservation, see the MobileView 2 Terminals Technical Data, publication [2711T-TD200](#).

Notes:

Operate the 2711T-PTO Mobile Thin Client

Initial Startup

When a 2711T-PTO mobile thin client is connected to a junction box with 24V DC power applied, the green power status indicator illuminates and the startup sequence automatically begins.



When the boot configuration editor screen appears, tap the screen and use the menu that appears to configure the thin manager.

If the green power status indicator does not illuminate or a startup screen does not appear, check the 24V DC power source and cable connections at the junction box and terminal.

Test Safety Functions

Test the E-stop push button and the enabling switch on your terminal to verify that each safety function is operating properly. Verify that the machine or plant operation stops when the button is pushed.

Thin Client Management with ThinManager Software

The 2711T-PTO mobile thin client is configured with ThinManager® Ready firmware, providing an easy connection to Rockwell Automation ThinManager software.

ThinManager allows you to easily manage the configuration of multiple thin client terminals and the delivery of all of your centralized applications and content to those terminals.

With ThinManager you have the ability to control and manage all of your ThinManager Ready thin clients, monitor their status, change configurations, reboot, disable or enable, or shadow them from any location.

For more information about how to define sources, deploy content, configure devices, and control user access between a server and your thin client device with ThinManager software, see the ThinManager User Guide, publication [TM-UM001](#).

Shut Down

To shut down your thin client, use the power button.

The default configuration of the power button is as follows:

- If the terminal is powered on and the power button is pressed and held down, the terminal shuts down after 5 seconds.
- If the terminal is powered off and the power button is pressed, the terminal starts up.

Disconnect Power

To disconnect power from your thin client, shut down the terminal, then remove the connection cable from the junction box.

Unplugging the device results in an immediate hard shutdown.

Maintenance and Troubleshooting

Your MobileView™ 2 terminal and junction box are high-quality products that are equipped with state-of-the-art electronics.

Care and Handling

To avoid malfunction or damage through improper handling, follow these instructions during operation.



ATTENTION: To avoid malfunctions or damage through improper handling, follow these instructions.

- Do not operate a terminal or junction box if the connection cable is damaged or pinched. To avoid damage to the cable, do not place the cable over or around sharp objects.
- When your terminal is not in use, place it in the mounting bracket accessory or place inside a cabinet or enclosure.
- To avoid dropping the terminal, do not set the terminal on an unstable surface and keep the cable clear of high traffic areas.
- To avoid damage to the operating elements, do not set the terminal on its operating side.
- If the terminal falls to the ground, test the E-stop switch and enabling switch before resuming use.
- Do not place the terminal or mount the junction box near heat sources and avoid direct sunlight.
- Do not expose the terminal or junction box to strong magnetic fields or excessive mechanical vibration, dust, or humidity.
- Help prevent foreign objects or liquids from getting into the terminal or junction box. Check any protective covers and seals regularly.
- Make sure that all screws are firmly tightened, and that the housing or cable entrance is not damaged.
- Before you remove the back cover of a terminal or back cover plate from an IP65 junction box, remove power from the unit. When the back cover or back cover plate accessory is removed, the terminal or IP65 junction box are sensitive to electrostatic discharge (ESD).
- If a terminal or junction box exhibit an anomaly, have the unit fully tested by the manufacturer or an authorized repair dealer before resuming use.
- Do not use sharp objects, such as a screwdriver, on the touchscreen. Scratching the surface of the touchscreen can damage the display and compromise the IP rating.

Clean the Terminal

To clean the MobileView 2 terminal housing, dampen a cloth with a mixture of 50% water and 50% isopropyl alcohol or a mild detergent. Do not use harsh cleaning additives.

To clean the terminal touchscreen, follow these steps.

1. Use the Touch Clean Utility to deactivate the touchscreen for a configured amount of time (minimum of 20 seconds). This utility allows you to clean the screen without accidentally executing any actions on the touch surface.

To access the utility from the desktop, select Utilities > Touch Clean Utility.

2. Gently clean the touch screen with a soft, lint-free cloth, dampened with water and a mild cleaning agent. Apply the cleaning agent to the cloth and not directly to the touchscreen surface.



ATTENTION: Do not clean the touchscreen with solvents, harsh cleaning additives, scouring agents, or scrubbing sponges. Otherwise the touch surface could be damaged!

3. Dry the display with a chamois or moist cellulose sponge to avoid water spots.

After the configured time in the Touch Clean Utility has passed, the desktop appears again.



A protective overlay can help extend the life of the terminal and make it easier to clean the display. For more information, see [Protective Overlay on page 17](#).

Resistance to Chemicals

The outer surfaces of the MobileView 2 terminal are tested for chemical resistance. Some chemicals cause discoloration, but they do not interfere with the operation of the terminal.

The following table provides an overview of the general chemical resistance of terminal components. Resistance is indicated as good (+), fair (o), or poor (-).

IMPORTANT

In case of doubt, we recommend that you perform a test on a small area before general use.

	Housing	Keypad	Handle	Touchscreen	Hand Strap	Emergency Stop	Enabling Switch	USB	Cable
Acetone	0	+	+	+	+	+	+	0	+
Acetic acid (10%)	+	+	+	+	+	+	+	-	+
Ammonia (10%)	+	+	+	+	+	+	+	+	+
Cutting/Grinding oil	+	-	+	+	+	+	-	-	+
Diesel	+	+	+	+	+	+	+	-	+
Ethanol (95%)	+	+	+	+	+	+	+	+	+
Ethyl alcohol	+	+	+	+	+	+	+	-	+
Gasoline	+	+	+	+	+	+	+	+	+
Grease	+	0	+	+	+	+	+	+	+
Hydraulic oil (mineral oil- based)	+	+	+	+	+	+	+	0	+
Hydrochloric acid (10%)	+	+	+	+	+	-	+	-	0
Linseed oil	+	0	+	+	+	+	0	+	+
Methanol	+	+	+	+	+	+	+	+	+
Methyl benzene (toluene)	+	+	+	+	+	+	0	-	+
Methyl ethyl ketone (butanone)	0	0	0	+	+	+	0	-	0
Motor oil	+	0	+	+	+	+	+	0	+
Petroleum ether (light gasoline)	+	+	+	+	+	+	+	+	+
Potassium hydroxide (10%)	+	+	+	+	+	+	+	0	+
Sulfuric acid (10%)	+	+	+	+	+	+	0	0	+
Silicone oil	+	+	+	+	+	+	+	+	+
Sodium hydroxide (10%)	0	-	+	0	+	+	+	+	0
Turpentine	+	+	+	+	+	+	+	-	+

Back up the Terminal

You can create a backup of the entire system on your MobileView 2 terminal using the Bootable Service System (BSS) application. The BSS runs automatically upon terminal startup when a prepared USB drive is inserted.

The following is required for the backup procedure.

- A 32 GB or 64 GB USB drive for the BSS application, with at least 32 GB of free storage space, formatted with FAT32
- A storage USB drive for the backup image file with at least 20 GB of free storage space, formatted with FAT32

IMPORTANT

You can use the same USB drive for both the BSS application and the backup image file as long as it has at least 20 GB of free memory after the BSS application has been installed.

Create a BSS USB Drive

To create a USB drive with an executable BSS, perform the following.

1. From your personal computer, access the Rockwell Automation Product Compatibility and Download Center (PCDC) at rok.auto/pcdc.
2. Select Find downloads.
3. In the Product Search field, use 'MobileView 2' as your search criteria.
4. Follow the instructions on the site to download the latest version of the MobileView 2 BSS Backup and Restore Utility for your device to your personal computer.



You must be registered with the Rockwell Automation PCDC website to download files.

5. Review the Rockwell Automation End User License Agreement, and then select Accept and Download to continue.
6. If prompted, select Save File.
7. If the download does not start automatically, select the download link to open Direct Download.
8. Extract the archive file.
9. Insert the BSS USB drive into your personal computer.
10. Create a \boot directory in the root directory of the BSS USB drive if one does not already exist.
11. Copy the extracted directory into the \boot directory.

IMPORTANT

Do not remove the USB drive before completing this procedure. It may otherwise result in loss of data.

12. Execute the file, 'prepare.cmd' inside the \boot directory.
13. Remove the USB drive from your personal computer.

Start BSS and Create a Backup

To create a backup of your MobileView 2 terminal, proceed as follows.

1. Insert the prepared BSS USB drive into the USB port of your terminal.
2. Press and hold the device power button for 5 seconds.



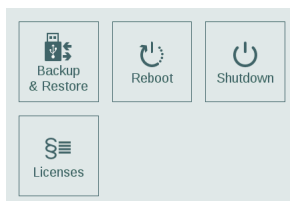
If your terminal is a 2711T-PP0 Mobile PC and you have HORM enabled, we recommend that you do not use the device power button to shutdown the terminal during this step. Doing so can disrupt the function of your hibernation file.

From the desktop, do one of the following:

- select  Start, enter 'shutdown' into the search field, and press the Enter key
- select  Start > Power > Shutdown

The terminal shuts down.

3. Press the device power button.
The terminal starts up and the BSS dialog appears.
4. Select Backup & Restore to access a dropdown menu.



5. Select Backup.
6. From the Backup dialog, select the inserted storage USB drive.



7. Select Backup.
8. To start the backup, select OK.

A dialog box with a progress bar appears. The process takes between 15 minutes and 1 hour, depending on the type of USB drive you use.

IMPORTANT Do not remove the backup USB drive during the write process.

9. When the terminal backup successfully finishes dialog appears, select OK.
10. Remove the backup USB drive from the USB port of your terminal.
11. From the BSS dialog, select Reboot or Shutdown.

The backup image is stored in the \images directory on the storage USB drive. For each backup, a new directory is created with the terminal designation, date, and time.

IMPORTANT We recommended that you copy the backup image files from the USB to a secure Electronic Data Processing (EDP) system. The data security on a USB drive cannot be guaranteed over longer periods of time.

Restore a Backup

The following is required to restore a backup on your MobileView 2 terminal.

- A prepared BSS USB drive with the BSS application installed.
For more information, see [Create a BSS USB Drive on page 71](#)
- A storage USB drive containing the backup image file in the \images directory.
For more information, see [Start BSS and Create a Backup on page 72](#)



If the prepared BSS USB drive had at least 20 GB of additional free memory after the BSS application was installed, it can be used as the storage USB as well.

IMPORTANT

A backup may only be restored to the terminal on which it was created. Cloning terminals is not permitted.

To restore a backup on your terminal, proceed as follows:

1. Insert the prepared BSS USB drive into the USB port of your terminal.
2. Press and hold the device power button for 5 seconds.



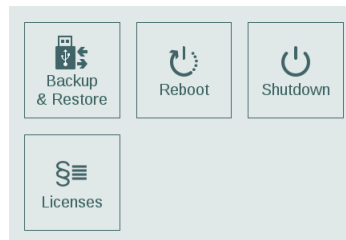
If your terminal is a 2711T-PP0 Mobile PC and you have HORM enabled, we recommend that you do not use the device power button to shutdown the terminal during this step. Doing so can disrupt the function of your hibernation file.

From the desktop, do one of the following:

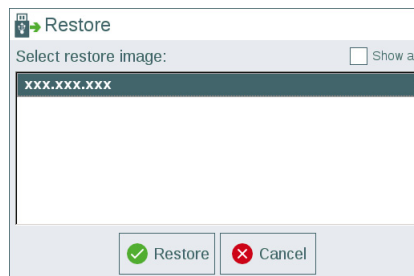
- select  Start, enter 'shutdown' into the search field, and press the Enter key
- select  Start > Power > Shutdown

The terminal shuts down.

3. Press the device power button.
The terminal starts up and the BSS dialog appears.
4. Select Backup & Restore to access a dropdown menu.



5. Select Restore.
6. From the Restore dialog, select the backup image on the inserted storage USB drive.



7. Select Restore.
8. To start the restore process, select OK.

A dialog box with a progress bar appears. The process takes between 15 and 20 minutes, depending on the type of USB drive you use.

IMPORTANT Do not remove the storage USB drive during the write process.

9. When the restore process successfully finishes and a dialog appears, select OK.
10. Remove the USB drive from the USB port of your terminal.
11. From the BSS dialog, select Reboot or Shutdown.

The terminal restarts and Windows runs the configuration process. This can take several minutes and ends with a prompt to enter a Windows password.

IMPORTANT The configuration process must not be interrupted.

The backup has been restored.

Install Updates

The following is required to perform a software or firmware update on your terminal:

- A prepared USB drive with the BSS application installed on it.
For more information, see [Create a BSS USB Drive](#)
- A FAT32-formatted storage USB drive that is appropriately sized to accommodate the software or firmware installation files



If the BSS USB drive has enough additional free memory after the BSS application has been installed to accommodate the software or firmware installation files, you can use it as the storage USB drive as well.

IMPORTANT Firmware updates can apply to MobileView 2 terminals and IP65 junction boxes.

Download and Prepare the Update

To prepare an storage USB drive with software or firmware update files, perform the following.

1. From your personal computer, access the Rockwell Automation Product Compatibility and Download Center (PCDC) at rok.auto/pcdc.
2. Select Find downloads.
3. In the Product Search field, use 'MobileView 2' as your search criteria.
4. Follow the instructions on the site to download the update file to your personal computer.



You must be registered with the Rockwell Automation PCDC website to download files.

5. Review the Rockwell Automation End User License Agreement, and then select Accept and Download to continue.
6. If prompted, select Save File.
7. If the download does not start automatically, select the download link to open Direct Download.
8. Insert the storage USB drive into your personal computer.
9. Create an \images directory in the root directory of the storage USB drive.
10. Copy the update file from your personal computer to the \images directory.

IMPORTANT Do not remove the USB drive before completing this procedure. It can otherwise result in loss of data.

11. Remove the storage USB drive from your personal computer.

Start BSS and Install the Update



ATTENTION: Do not remove the BSS USB drive or interrupt the power supply of the operating panel during a firmware update. This can lead to an incomplete or corrupt firmware installation, which can prevent the hardware from functioning correctly or communicating with other components.

To update the software or firmware on your MobileView 2 terminal, proceed as follows.

1. Insert the prepared BSS USB drive into the USB port of your terminal.
2. Press and hold the device power button for 5 seconds.



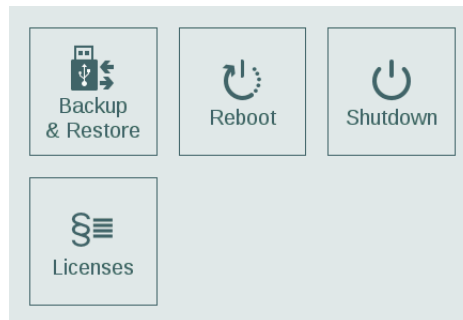
If your terminal is a 2711T-PP0 Mobile PC and you have HORM enabled, we recommend that you do not use the device power button to shutdown the terminal during this step. Doing so can disrupt the function of your hibernation file.

From the desktop, do one of the following:

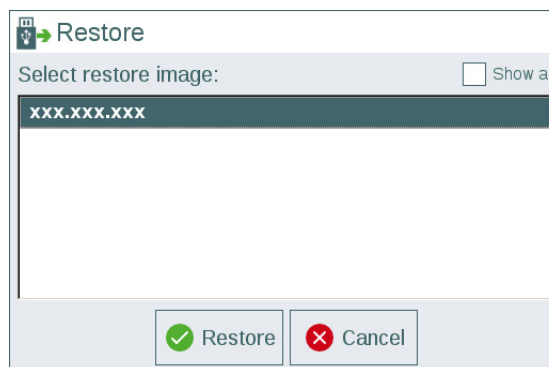
- select  Start, enter 'shutdown' into the search field, and press the Enter key
- select  Start > Power > Shutdown

The terminal shuts down.

3. Press the device power button.
The terminal starts up and the BSS dialog appears.
4. Select Backup & Restore to access a dropdown menu.



5. Select Restore.
6. From the Restore dialog, select the update file on the inserted storage USB drive.



7. Select Restore.
8. To start the software or firmware update, select OK.

A dialog box with a progress bar appears. The process takes between 15-20 minutes, depending on the type of USB drive you use.

IMPORTANT Do not pull out the storage USB drive during the write process.

9. When the software or firmware update successfully finishes and a dialog appears, select OK.
10. Remove the storage USB drive from the USB port of your terminal.
11. From the BSS dialog, select Reboot or Shutdown.

The terminal restarts and Windows runs the configuration process. This takes several minutes and ends with a prompt to enter a Windows password.

IMPORTANT The configuration process must not be interrupted.

The software or firmware has been updated.

Troubleshoot the MobileView 2 Terminal

This table lists anomalies that can occur with your terminal and possible solutions.

Anomaly	Solution	Page
Terminal does not power up	Check for 24V DC power on the connector of the MobileView junction box.	
	For 2711T-JBIP20DC, the IP20 junction box: Check the terminal connections at X1 and X2 of the junction box.	30
	For 2711V-IP65JNCTNBOXCG, the IP65 junction box with cord grip connections, check the power connections at the S16 terminal of the junction box.	40
	For 2711V-IP65JNCTNBOXOM, the IP65 junction box with M12 On-Machine™ connections, check for a solid connection between the power supply cable and the cable connection on the junction box.	44
	Check for a solid connection between the MobileView connection cable and the junction box cable connection.	
	For IP20 junction boxes	33
	For IP65 junction boxes	48
	Check the terminal connections to the main control board of the MobileView 2 terminal.	23
Terminal touchscreen is dim or black	If the screen is readable, adjust the display brightness. (2711T-PP0 mobile PC only)	54
	If the screen is black, check power to the terminal. See the anomaly, 'Terminal does not power up.'	
	If the screen is blinking or rapidly changes brightness, a corrupted registry or OS image can exist. (2711T-PP0 mobile PC only)	
	- Restore the OS image. - If an OS image restoration does not correct the anomaly, contact Rockwell Automation support.	73 78
Terminal screen is static (locked up). Touch screen and keypad activations do not initiate changes.	Check Ethernet communications. See the anomaly, 'Terminal does not communicate on Ethernet network.'	
Terminal does not communicate on Ethernet network	Check Ethernet cable connections at the junction box and your Ethernet hub.	
	- For IP20 junction boxes - For IP65 junction boxes	26, 31 26, 40, 44
	Try to ping the terminal from a personal computer in your network to check for correct configuration settings, then check terminal settings. (2711T-PP0 mobile PC only)	62
	If you are using a DHCP server, check if the DHCP function is set in the network settings of the terminal. (2711T-PP0 mobile PC only)	55
	If you connect to the Ethernet network with fixed settings, verify that the IP address, subnet mask, and default Gateway-network settings are correct in the terminal. (2711T-PP0 mobile PC only)	55
	Check the Ethernet connection on the terminal.	25
Program memory low (2711T-PP0 mobile PC only)	From the terminal desktop, open the Rockwell Admin folder and clean up or delete unnecessary files.	52
An error message alerts you to install Windows (2711T-PP0 mobile PC only)	Power to the terminal was temporarily interrupted during the Windows setup process. Restore the OS image with an image file downloaded from the Rockwell Automation Product Compatibility and Download Center (PCDC) at rok.auto/pcdc .	74
The Windows OS image is corrupt (2711T-PP0 mobile PC only)	Restore the OS image from a backup image or with an image file that is downloaded from the Rockwell Automation Product Compatibility and Download Center (PCDC) at rok.auto/pcdc .	73, 74

Troubleshoot the IP65 Junction Box

There are three LED lights and a status indicator bar on the front of the IP65 junction box. For more information on these lights and the bar, see [IP65 Junction Box Status Indicator Lights on page 46](#).

This table explains the colors the status indicator bar displays when an error is detected and possible solutions.

Table 6 - IP65 Junction Box Status Indicator Bar Colors and Descriptions

Color ⁽¹⁾	Status Description	Solution
Solid blue	The illuminated E-stop button on the MobileView 2 terminal is faulty.	Replace the faulty illuminated E-stop button within five days or use another terminal with a functional illuminated E-stop button. IMPORTANT: If you do not replace the faulty illuminated E-stop button within five days, another fault color is triggered on the status indicator bar. See the first row of 'Blinking half yellow, half red.'
Blinking half yellow, half red	The faulty illuminated E-stop button on the terminal connected to the IP65 junction box was not replaced within five days after being detected, which triggers an emergency stop.	Replace the faulty illuminated E-stop button within five days or use another terminal with a functional illuminated E-stop button.
	The E-stop circuit connection between the terminal and IP65 junction box is not established, which triggers an emergency stop.	Disconnect the terminal and 22-pin connection cable from the IP65 junction box. Verify that the illuminated E-stop button on the terminal is unlocked (pressed and released). Reset the system or machine. Reconnect the terminal and 22-pin connection cable to the IP65 junction box within 10 seconds of returned power.
	The current E-stop status of the system or machine is different than the 'remembered' E-stop status of the IP65 junction box.	If the problem persists, verify that the emergency stop wiring or connections to the IP65 junction box are correct. For 2711V-IP65JUNCTNBOXCG, the IP65 junction box with cord grip connections, verify that the E-stop wiring connections are correct at the S16 terminal of the junction box. For more information, see S16 Terminal Pin Connections on page 40 .
Flashing red	A faulty connection is detected	Disconnect the terminal and 22-pin connection cable from the IP65 junction box. Insert a black bridge connector in the IP65 junction box. Reset the system or machine. Verify that the LED lights and status indicator bar on the front of the IP65 junction box are illuminated green.
	The E-stop circuits between the terminal and the IP65 junction box are cross-circuited	If the IP65 junction box displays any colors other than green, the junction box is faulty and must be replaced. Verify that the illuminated E-stop button on the terminal is unlocked (pressed and released). Remove the black bridge connector, and reconnect the terminal and 22-pin connection cable to the IP65 junction box. If the IP65 junction box returns to the flashing red status, either the connection cable or terminal is faulty and must be replaced.

(1) The IP65 junction box must have power (shown as green for power LED) for the status bar to display status.

Provide Information to Technical Support (2711T-PP0 Mobile PC Only)

To contact Rockwell Automation support, see the back cover of this publication. Be prepared to provide the following information:

- Detailed description of anomaly, including circumstances of when it occurred (for example, programs that were running and what steps were taken)
- Any steps taken to try to resolve an anomaly
- System information for the MobileView 2 terminal

To access version information, see [Version Info on page 56](#).

To access terminal specifications, perform the following steps.

- From the desktop, select  Start >  Settings > System.
- Select About.

Ship or Transport MobileView Equipment

If you must ship a MobileView 2 terminal or junction box via common carrier or otherwise transport it to another location for service or any other reason, you must first uninstall the device and place it in its original packing material.

IMPORTANT

Always use the original packaging material to ship or transport a terminal or junction box.

Verify that all applicable environmental specifications defined in the MobileView 2 Terminals Technical Data, publication [2711T-TD200](#) are fulfilled while the device is shipped or transported. Rockwell Automation is not responsible for damage to equipment during shipment or transport that does not adhere to these specifications.

Dispose of MobileView Equipment



At the end of its life, a terminal or junction box must be collected separately from any unsorted municipal waste.

Do not dispose of a terminal or junction box like other waste material. Most MobileView equipment contains heavy metals that can contaminate the earth. Therefore, check with local health and sanitation agencies for ways to dispose of your equipment safely.

Notes:

Advanced PC Terminal Configuration

The following advanced configurations are available on a MobileView™ 2 PC terminal.

IMPORTANT

We recommend that you avoid the use of the features that are found under Control Panel > Programs and Features that are not detailed in this user manual.

Some of these features can modify your terminal setup and cause certain settings that are detailed in this manual to become unavailable. To avoid malfunction or damage through improper setup, always observe caution when modifying the default settings of your terminal.

Advanced File Protection Settings

Kiosk Desktop

Kiosk Desktop restricts user access to the terminal by adjusting the user interface. This can be useful, for example, as protection against operating errors.

Install Kiosk Desktop

To install Kiosk Desktop, proceed as follows:

1. From the desktop, select Control Panel > Programs and Features.
2. Select the WindowsSecurity from the list of features.
3. Select Next, then Change.
4. Select the  icon to the left of Kiosk Desktop to access a dropdown menu.
5. Select, "Entire feature will be installed on local hard drive".
6. Select Next, then Change, then Finish.
7. The configuration changes take effect after you restart the terminal.

Uninstall Kiosk Desktop

To uninstall Kiosk Desktop, proceed as follows:

1. From the desktop, select Control Panel > Programs and Features.
2. Select the WindowsSecurity from the list of features.
3. Select Next, then Change.
4. Select the  icon to the left of Kiosk Desktop to access a dropdown menu.
5. Select, "Entire feature will be unavailable".
6. Select Next, then Change, then Finish.

The configuration changes take effect after you restart the terminal.

Kiosk Configurator

The Kiosk Configurator is used to configure the Kiosk Desktop. After Kiosk Desktop is installed, a shortcut to Kiosk Configurator appears on the desktop.

IMPORTANT Once a kiosk is configured on a terminal, it always displays after startup.

The interface of the Kiosk Configurator consists of the following tabs.

Use the Settings Tab to make visual adjustments to the kiosk interface including custom logo, header, and footer graphics and shortcut positioning.

Figure 25 - Kiosk Configurator Settings Tab

Settings

Logo	Header\Logo.png	Browse
Header	Header\Header.png	Browse
Dock	Dock\Dock.png	Browse
ShellMode	Normal	
Interspace X	84	
Interspace Y	72	
Min border X	60	
Min border top	20	
Min border botto	20	

Item	Description
Logo	Select Browse to insert a logo graphic in the top right of the screen
Header	Select Browse to Insert a graphic in the header
Dock	Select Browse to Insert a graphic in the footer
Shell Mode	Choose the Kiosk Desktop level using the dropdown menu
Interspace X	Enter the X distance between shortcuts
Interspace Y	Enter the Y distance between shortcuts
Min border X	Enter the minimum distance to borders
Min border top	Enter the minimum distance upward
Min border bottom	Enter the minimum distance downward

Use the Shortcuts Tab to create and manage icons for the kiosk interface that provide quick access to a file, folder, program, or webpage.

Figure 26 - Kiosk Configurator Shortcuts Tab

Item	Description
Left column	List of all created shortcuts
Remove	Delete a shortcut
New file	Create a shortcut
New dir	Create a group of shortcuts
Right column	List of currently enabled shortcuts that appear on the Kiosk Desktop
▲	Move a selected element up (forward)
▼	Move a selected element down (backward)
New space	Insert an empty space
New line	Begin a new line
New page	Begin a new page
Shortcut enabled	Enable or disable a shortcut, adding or removing them from the Kiosk Desktop
Image	Select Browse to add an image for the shortcut
Image pressed	Select Browse to add an image for the shortcut when pressed
Visible for admins only	Make the shortcut visible for admins only
Rename	Rename a shortcut
Remove	Delete a shortcut
Save	Save the current configuration



If an image is added for both the normal and pressed shortcut display states, the shortcut is immediately enabled and is visible on the Kiosk Desktop.

Use the Blocked Keys Tab to block selected keys and key combinations.

Elements are displayed in the left column (maximum 8) to which blocked keys can be added. The respective added (blocked) keys are displayed in the right column.

By selecting one of the elements from the left column, the blocked keys can be selected in the Key dropdown menu and added to the element using Add key.

Figure 27 – Kiosk Configurator Blocked Keys Tab

Blocked keys

BlockedKeys.1
BlockedKeys.2
BlockedKeys.3
BlockedKeys.4
BlockedKeys.5
BlockedKeys.6
BlockedKeys.7
BlockedKeys.8

Key

▼

Add key

Remove keys

Item	Description
Left column	List of all elements
Right column	List of blocked keys added to the selected element in the left column
Key	Dropdown menu with all available keys
Add key	Block selected key
Remove keys	Remove selected key

Use the Colors Tab to adjust the colors of the Kiosk Desktop.

Figure 28 – Kiosk Configurator Colors Tab

Colors

Background

Font

Test

Select

Select

Item	Description
Background	Press Select to choose a desired background color
Font	Press Select to choose a desired background color
Test	Display of the RGB values of the selected background and font colors

Use the Dock Tab to attach the Shutdown, Restart, Tasks, Lock, Logout, and OSK (On Screen Keyboard) functions to a docked Kiosk Taskbar.

Figure 29 - Kiosk Configurator Dock Tab

Item	Description
Image	Select Browse to add an image for the docked function
Image pressed	Select Browse to add an image for the docked function when pressed
Remove	Remove the function
Save	Save the function

Use the Action tab to restart the Kiosk Desktop, set the Kiosk Desktop as a start application, or export or import the current configuration.

Figure 30 - Kiosk Configurator Action Tab

Item	Description
Restart	Restart the Kiosk Desktop. Changes to the configuration are visible after restarting.
Active shell	
KIOSK as Shell	Run the Kiosk Desktop upon startup. This is the default setting.
KIOSK by ShellLauncher	Run the Kiosk Desktop automatically upon startup NOTE: Only select this option in consultation with Rockwell Automation
Explorer	Deactivate the automatic start of Kiosk Desktop
Export	Export the configuration, including all Kiosk Desktop settings
Import	Import an existing configuration and overwrite the current configuration

AppLocker

AppLocker blocks the execution of programs, scripts, and executables if they are not registered in a list (allow list) and stored with execution rules. These rules are stored in the default settings for each user account (except administrators).

Exceptions are defined by default for the following folders:

- %ProgramFiles%
- %ProgramFiles(x86%)
- Windows folder

The standard configuration allows a standard user to run programs from the excluded directories. Administrators can run all programs.

Install AppLocker

To install AppLocker, proceed as follows:

1. From the desktop, select Control Panel > Programs and Features.
2. Select WindowsSecurity from the list of features.
3. Select Next, then Change.
4. Select the  icon to the left of AppLocker to access a dropdown menu.
5. Select, "Entire feature will be installed on local hard drive".
6. Select Next, then Change, then Finish.

The configuration changes take effect after you restart the terminal.

Uninstall AppLocker

To uninstall AppLocker, proceed as follows:

1. From the desktop, select Control Panel > Programs and Features.
2. Select WindowsSecurity from the list of features.
3. Select Next, then Change.
4. Select the  icon to the left of AppLocker to access a dropdown menu.
5. Select, "Entire feature will be unavailable"
6. Select Next, then Change, then Finish.

The configuration changes take effect after you restart the terminal.

AppLocker Configurator

The configuration of AppLocker can be adjusted after installation by entering, 'secpol.msc' into the Start menu search or by running the command in a command prompt window.

KEBA Write Filter

KEBA Write Filter (KeWF) allows you to write protect specific files. You can be very granular and specify by directory, file extension, and so on. Once KeWF is enabled, any attempt to modify the specified files is blocked and an error appears stating that the write operation was not successful.

IMPORTANT

Before you configure applications on the terminal, verify that KeWF is disabled. Any application changes made while KeWF is enabled are lost when the terminal is powered down or rebooted.

We recommend that, after you install and configure the applications on your terminal, you enable KeWF to preserve operating system and application integrity. This is especially important if you frequently connect and disconnect the terminal from one or more junction boxes.

If you disable KeWF to make further application changes, enable KeWF again before you shut down the terminal.

KeWF protection applies only to the internal storage drive (C:) and not the internal MicroSD card drive (D:) of the terminal.

KeWF prevents files with the following file extensions from being created, renamed, or deleted on the C:\ drive. The pagefile.sys and hiberfil.sys files are exceptions to *.sys denied access.

Table 7 - KeWF Denied Access List

a - g	h - p	m - z
*.ahk	*.hta, *.htm, *.html	*.reg, *.rgs
*.bat, *.bin	*.inf, *.ins, *.inx, *.ipf, *.isp, *.isu	*.scr, *.sct, *.shb, *.shs, *.sys
*.cmd, *.chm, *.com, *.cpl, *.crt	*.job, *.js, *.jse, *.jar	*.u3p, *.url
*.docm, *.dotm, *.dll	*.lnk	*.vb, *.vbe, *.vbs, *.vbscript
*.exe, *.ex_	*.msc, *.msi, *.msp, *.mst	*.ws, *.wsf, *.wsh
*.gadget	*.paf, *.pif, *.ps1, *.pyc, *.pyo, *.pnf	*.xml

Enable KEBA Write Filter

To enable KeWF, proceed as follows:

1. From the desktop, select Control Panel > Programs and Features.
2. Select WindowsSecurity from the list of features.
3. Select Next, then Change.
4. Select the  icon to the left of KEBA Write Filter to access a dropdown menu.
5. Select, "Entire feature will be installed on local hard drive".
6. Select Next, then Change, then Finish.

The configuration changes take effect.

Disable KEBA Write Filter

IMPORTANT

You cannot use WindowsSecurity to disable KeWF.

If KeWF is enabled, the WindowsSecurity feature dialog displays an error message, because KeWF is actively preventing further system changes. KeWF must be stopped manually by an administrator.

To disable KeWF, from the desktop, select  Start, enter 'net stop KeWF' into the search field, and press the Enter key.

Advanced Windows Customization

Activating Additional Ciphers

To activate additional ciphers that are required for WinCC, proceed as follows:

1. From the desktop, select Control Panel > Programs and Features.
2. Select the WindowsCustomizing from the list of features.
3. Select Next, then Change.
4. Select Additional Ciphers Activation.
5. Select the  icon to the left of Additional Ciphers Activation to access a dropdown menu.
6. Select, "Entire feature will be installed on local hard drive".
7. Select Next, then Change, then Finish.

The configuration changes take effect after you restart the terminal.

Program Development

HWAPI Programming Interface

The MobileView 2 terminal features a Hardware Application Programming Interface (HWAPI), which acts as a bridge between the software and the underlying physical hardware, managing the operating elements and allowing queries of hardware properties. You can configure an HWAPI Software Development Kit (SDK) programming environment to further leverage the included hardware programming interface.

Box ID Retrieval

To use the HWAPI to retrieve the Box ID of an IP65 junction box that's connected to your terminal, you must set up a programming environment (for example, Visual Studio), install the HWAPI SDK, compile your application, deploy it to the terminal, and troubleshoot as needed.

The HWAPI SDK supports programming languages such as C, C++, or C# (.NET).

The HWAPI Software Development Kit (SDK) programming environment is available for download in the Rockwell Automation Product Compatibility and Download Center (PCDC) at rok.auto/pcdc. The archive includes documentation and programming examples, including one that demonstrates how to read the Box ID using the HWAPI.

Windows Connectivity Protocols

To transmit data between the terminal and the controller, a connectivity protocol must be defined. The following protocols are supported.

Table 8 - Supported Windows Connectivity Protocols

Type	Description
ModbusIrtf	Installs the Modbus open standard interface
OpcUaIrtf	Installs the OPC UA open standard interface
Adsltf	Installs the ADS interface
S7Irtf	Installs the S7 interface

By default, a protocol is not activated in delivery condition. More information about each protocol can be found in their respective protocol descriptions.

The connectivity protocols allow you to transmit the following from the handheld terminal to the control system:

- State changes of keys on the keypad or of operating elements
- Setting and reading LED states
- Control of the handheld terminal or transfer of various parameters

IMPORTANT While it is possible to use another connection protocol for each individual transmission, we recommend using one connection protocol for all transmissions to avoid interference.

Install a Windows Connection Protocol

To install a connection protocol, proceed as follows:

1. From the desktop, select Control Panel > Programs and Features.
2. Select WindowsPlatformDriver from the list of features.
3. Select Next, then Change.
4. Select the  icon to the left of the desired protocol to access a dropdown menu.
5. Select, "Entire feature will be installed on local hard drive".
6. Select Next, then Change, then Finish.

The configuration changes take effect after you restart the terminal.

Uninstall a Windows Connection Protocol

To uninstall a connection protocol, proceed as follows:

1. From the desktop, select Control Panel > Programs and Features.
2. Select WindowsPlatformDriver from the list of features.
3. Select Next, then Change.
4. Select the  icon to the left of the desired protocol to access a dropdown menu.
5. Select, "Entire feature will be unavailable"
6. Select Next, then Change, then Finish.

The configuration changes take effect after you restart the terminal.

IMPORTANT The WindowsPlatformDriver setup is only used to install one of the [Supported Windows Connectivity Protocols](#). If you use it to install any other device, your terminal will malfunction during operation.

Key Management

For each key on the keypad, there is a predefined key code. Key mapping makes it possible to modify or disable the predefined key codes so that they are no longer evaluated in Windows®.

You can determine the key code of any key on the terminal keypad using the [Device Test Tool](#).

Map Key Functions

To change the function assignments of the keys on your terminal keypad, proceed as follows:

1. From the desktop, select This PC > C: > Program Data

IMPORTANT If the ProgramData directory is hidden in Windows File Explorer, navigate to the View tab and check the Hidden items option within the Show/hide group.

2. Select KEBA Automation > keview > system
3. Select the WinKeyMapExample.cfg file and choose Open with from the Open group in the File Explorer ribbon.
A dialog appears, asking How do you want to open this file?
4. Select a text editor such as Notepad, and then OK.
5. Follow the instructions within the file, to edit, save, and import a new key configuration.

The keys of the keypad are assigned the desired output as follows.

Keypad key = keypad key code, modifier, desired output, desired modifier.

The keypad key code and modifier setting may not be changed.

EXAMPLE KEY_001 = 00,20, 00,00,00,00,00,00, 00,3B, 00,2A,00,00,00,00

For reference, see the [Key and Modifier Codes](#).

6. Save the file as KeyMap.cfg in order to apply the changes.
The date and time are appended to the file name automatically.
The next time that you restart your terminal, the modified key map will be applied.

Key and Modifier Codes

The following tables contain the available key codes and modifiers in hexadecimal notation.

Table 9 - Keypad Modifier Codes

Key	Key Code
Left Ctrl	00 1D
Left Shift	00 2A
Left Alt	00 38
Left Windows	E0 5B

Key	Key Code
Right Ctrl	E0 1D
Right Shift	00 36
Right Alt	E0 38
Right Windows	E0 5C

Table 10 - Keypad Key Codes

Key	Key Code
' "	00 28
, <	00 33
- _	00 0C
. >	00 34
/ ?	00 35
0)	00 0B
1 !	00 02
2 @	00 03

Key	Key Code
Number pad -	00 4A
Number pad . Delete	00 53
Number pad /	E0 35
Number pad 0 Ins	00 52
Number pad 1 End	00 4F
Number pad 2 down	00 50
Number pad 3 Pg Dn	00 51
Number pad 4 left	00 4B

Table 10 - Keypad Key Codes (Continued)

Key	Key Code
3 #	00 04
4 \$	00 05
5 %	00 06
6 ^	00 07
7 &	00 08
8 *	00 09
9 (	00 0A
::	00 27
= +	00 0D
Down arrow	E0 50
Left arrow	E0 4B
Right arrow	E0 4D
Up arrow	E0 48
Backspace	00 0E
Caps Lock	00 3A
Delete	E0 53
End	E0 4F
Esc	00 01
F1	00 3B
F2	00 3C
F3	00 3D
F4	00 3E
F5	00 3F
F6	00 40
F7	00 41
F8	00 42
F9	00 43
F10	00 44
F11	00 57
F12	00 58
F13	00 64
F14	00 65
F15	00 66
F16	00 67
F17	00 68
F18	00 69
F19	00 6A
F20	00 6B
F21	00 6C
F22	00 6D
F23	00 6E
F24	00 76
Pos1	E0 47
Insert	E0 52
Number pad *	00 37
Number pad +	00 4E

Key	Key Code
Number pad 5	00 4C
Number pad 6 right	00 4D
Number pad 7 Home	00 47
Number pad 8 up	00 48
Number pad 9 Pg Up	00 49
Number pad =	00 59
Number pad Enter	E0 1C
Num Lock	00 45
Page Down	E0 51
Page Up	E0 49
Print Screen	E0 37
Enter	00 1C
Scroll Lock	00 46
Space bar	00 39
Tab	00 0F
[{	00 1A
\	00 2B
] }	00 1B
' ~	00 29
a A	00 1E
b B	00 30
c C	00 2E
d D	00 20
e E	00 12
f F	00 21
g G	00 22
h H	00 23
i I	00 17
j J	00 24
k K	00 25
l L	00 26
m M	00 32
n N	00 31
o O	00 18
p P	00 19
q Q	00 10
r R	00 13
s S	00 1F
t T	00 14
u U	00 16
v V	00 2F
w W	00 11
x X	00 2D
y Y	00 15
z Z	00 2C

Notes:

Terminal Conversion

PC to ThinManager Ready Thin Client

You can convert your MobileView™ 2 PC terminal into a ThinManager® Ready thin client terminal using the Bootable Service System (BSS). The BSS application runs automatically upon terminal startup when a prepared service USB drive is inserted.

IMPORTANT

The conversion of your MobileView™ 2 PC terminal into a ThinManager Ready thin client erases all existing data and applications installed on your 2711-PP0 mobile PC, including the operating system, and replaces it with ThinManager Ready firmware.

We recommend that you save any important data and [Back up the Terminal](#) before you begin the conversion process.

The following is required to convert your MobileView 2 PC terminal into a thin client terminal.

- A prepared USB drive with the BSS application installed on it.
For more information, see [Create a BSS USB Drive on page 71](#)
- A storage USB drive with the latest downloaded ThinManager Machine Software image in the \images directory.



If the prepared BSS USB drive had at least 20 GB of additional free memory after the BSS application was installed, it can also be used as the storage USB.

Download ThinManager

1. Download the latest ThinManager Machine Software image from the Rockwell Automation Product Compatibility and Download Center (PCDC) at rok.auto/pcdc.
2. Copy the ThinManager Machine Software image into the \images directory of the root directory of the storage USB drive.

IMPORTANT

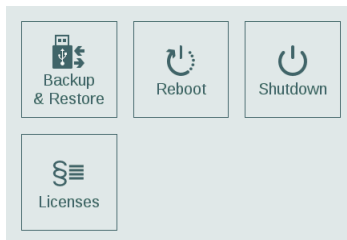
Do not remove the USB drive before completing this procedure. It may otherwise result in loss of data.

3. Remove the USB drive from your personal computer.

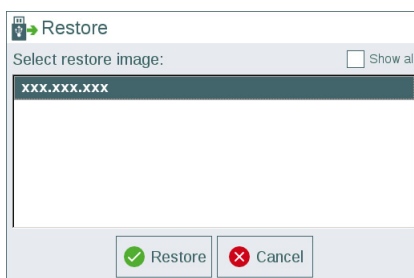
Install ThinManager

To install the ThinManager Machine Software on your terminal, proceed as follows:

1. Insert the prepared BSS USB drive into the USB port of your terminal.
2. Press and hold the device power button for 5 seconds.
The terminal shuts down.
3. Press the device power button.
The terminal starts up and the BSS dialog appears.
4. Select Backup & Restore to access a dropdown menu.



5. Select Restore.
6. From the Restore dialog, select the ThinManager Machine Software image on the inserted storage USB drive.



7. Select Restore.
8. To start the restore process, select OK.
A dialog box with a progress bar appears.

IMPORTANT Do not remove the storage USB drive during the write process.

9. When the restore process successfully finishes and a dialog appears, select OK.
10. Remove the USB drive from the USB port of your terminal.
11. From the BSS dialog, select Reboot or Shutdown.

Upon startup, your device is configured with ThinManager Ready firmware, functioning as a MobileView 2 thin client rather than a PC terminal, and easily connects to Rockwell Automation ThinManager software.

PC or ThinManager Ready Thin Client to PXE Boot

An alternative to using Rockwell Automation ThinManager software, Preboot Execution Environment (PXE) boot thin client management, a network-based booting mechanism that allows terminals to load OS images and software from a central server, is available for download from the Rockwell Automation Product Compatibility and Download Center (PCDC) at rok.auto/pcdc.

IMPORTANT

Installing PXE boot replaces the ThinManager® Ready firmware on your 2711T-PT0 mobile thin client or the operating system on your 2711-PP0 mobile PC.

PXE boot is installed using the Bootable Service System (BSS). The BSS application runs automatically upon terminal startup when a prepared service USB drive is inserted.

The following is required to install PXE boot on your MobileView 2 terminal.

- A prepared USB drive with the BSS application installed on it.
For more information, see [Create a BSS USB Drive on page 71](#)
- A storage USB drive with the latest downloaded PXE boot Machine Software image in the \images directory.



If the prepared BSS USB drive had at least 20 GB of additional free memory after the BSS application was installed, it can also be used as the storage USB.

Download the PXE Boot Machine Software Image

1. From your personal computer, access the Rockwell Automation Product Compatibility and Download Center (PCDC) at rok.auto/pcdc.
2. Select Find downloads.
3. In the Product Search field, use 'MobileView 2' as your search criteria.
4. Follow the instructions on the site to download the latest PXE boot Machine Software image to your personal computer.



You must be registered with the Rockwell Automation PCDC website to download files.

5. Review the Rockwell Automation End User License Agreement, and then select Accept and Download to continue.
6. If prompted, select Save File.
7. If the download does not start automatically, select the download link to open Direct Download.
8. Insert the storage USB drive into your personal computer.
9. Create an \images directory in the root directory of the storage USB drive if it doesn't already exist.
10. Copy the software image into the \images directory.
11. Remove the USB drive from your personal computer.

Install the PXE Boot Machine Software

To install the PXE boot Machine Software on your terminal, proceed as follows:

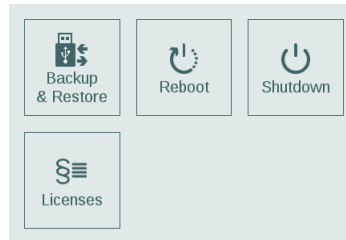
1. Insert the prepared BSS USB drive into the USB port of your terminal.
2. Press and hold the device power button for 5 seconds.

The terminal shuts down.

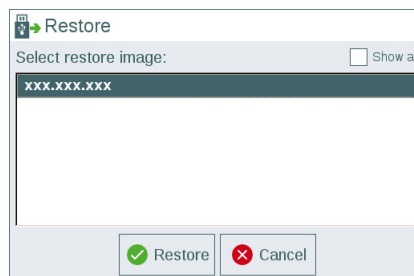
3. Press the device power button.

The terminal starts up and the BSS dialog appears.

4. Select Backup & Restore to access a dropdown menu.



5. Select Restore.
6. From the Restore dialog, select the PXE boot Machine Software image on the inserted storage USB drive.



7. Select Restore.
8. To start the restore process, select OK.

A dialog box with a progress bar appears. The process takes between 15 and 20 minutes, depending on the type of USB drive you use.

IMPORTANT Do not remove the storage USB drive during the write process.

9. When the restore process successfully finishes and a dialog appears, select OK.
10. Remove the USB drive from the USB port of your terminal.
11. From the BSS dialog, select Reboot or Shutdown.

Upon startup, your thin client terminal is able to send a network request to locate a PXE server. The PXE server responds with the boot image files, and the terminal loads the operating system from the network.

Rockwell Automation Support

Use these resources to access support information.

Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, Knowledgebase, and product notification updates.	rok.auto/support
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
Technical Documentation Center	Quickly access and download technical specifications, installation instructions, and user manuals.	rok.auto/techdocs
Literature Library	Find installation instructions, manuals, brochures, and technical data publications.	rok.auto/literature
Product Compatibility and Download Center (PCDC)	Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes.	rok.auto/pcdc

Documentation Feedback

Your comments help us serve your documentation needs better. If you have any suggestions on how to improve our content, complete the form at rok.auto/docfeedback.

Waste Electrical and Electronic Equipment (WEEE)



At the end of life, this equipment should be collected separately from any unsorted municipal waste.

Rockwell Automation maintains current product environmental compliance information on its website at rok.auto/pec.

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