



MPA2

Access Control Unit Installation Guide

Release 1.0

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Installing the MPA2 Panels

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1.0 Introduction

This document describes how to install the MPA2 Standard Enclosure access control unit.

Note: All pictures shown in this manual are for illustration purpose only. Actual product may vary due to product enhancement.

1.1 Access Control Overview

An access control system protects and preserves an enterprise's resources by providing authentication, authorization, and administration services. Authentication is a process that verifies a user's identity. If the user is verified, the system then either grants or denies access to specific areas and resources. Administration includes the creation and modification of user accounts and access privileges.

An access control system consists of hardware and software, usually configured in a network environment over a standard network protocol. Access control units, readers, door strikes, and video and other devices, for example, are configured to control and monitor the access to a company site.

1.2 MPA2 Overview

A MPA2 access control is a full-featured two-door web-based access control system. The MPA2 panel includes a built-in web server, built-in Ethernet and USB support, and Power over Ethernet (PoE) capability. You can manage the access control system using either the built-in web browser, MAXPRO® Cloud (MPC) or WIN-PAK. For supported configurations, see "System Configuration" on page 46 to view illustrations of the supported MPA2 system configurations.



Notes:

- The MPA2 web server/browser is intended for monitoring and programming use only.
- MPC and WIN-PAK software are intended for monitoring and programming use only, and have not been evaluated by UL.
- MPA2 system is ULC-Listed for Class I installations.

1.3 Compliance Note

This Class B digital apparatus complies with Canadian ICES-003/ULC 319.



Notes: This equipment has been tested and found to comply with the limits for Class B and Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the installation and user guides, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This Class A digital apparatus complies with Canadian ICES-003.

To obtain applicable EU compliance Declaration of Conformities for this product,

please refer to our website,

http://www.security.honeywell.com/hsce/international/index.html.

For any additional information regarding the compliance of this product to any

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2.0 Panel Components and Descriptions



Note: This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The MPA2 panel consists of a web-browser-enabled controller, a power-over-Ethernet (PoE) power supply, and a battery (MPA2 Standard only).

The following figures show the MPA2 panel wiring and components.



Figure 1: MPA2 Compact Enclosure Wiring and Components



Figure 2: MPA2 Standard Enclosure Panel Wiring and Components



Note: Maintain at least a 0.25-inch (0.65 cm) distance between the non-power limited wiring (110/220 VAC/50-60 Hz input wiring, power line filter wiring, and battery backup/charger wiring) and all other wiring, which is power-limited Class 2 wiring.

2.1 Ferrites

All EMC/CE/FCC compliancy testing was executed using in this manual specified CAT7 F/STP cable.

Emission compliancy tests have been executed using a ferrite on following RJ45/USB connections (when used):

J4 = Main Ethernet; USB2 = Host; J16 = Interface Bus; J17 & J18 = Downstream Bus.

See below the ferrite specification:





The used ferrite has a high impedance (>= 200) in the range of 50 to 250 Mhz. Make sure similar ferrite characteristics is used in your installation for CE emission compliancy.

2.2 Supervised and Non-Supervised Input Wiring

The supervised inputs are located on the following terminal blocks:

	Table 1	Supervised	Input	Terminal	Blocks/RJ45
--	---------	------------	-------	----------	-------------

Board Configuration	Terminal Block	RJ45
Main Board Rdr/Door1	P10 (GND, DoorCnt1)	J12 (pin1,3)
connector	P10 (GND, DoorCnt Aux1)	J13 (pin1,3)
Main Board Rdr/Door2	P18 (GND, DoorCnt1)	J14 (pin1,3)
connector	P18 (GND, DoorCnt Aux1)	J15 (pin1,3)
Main Board Additional Input connector	P24 (GND, InputX (X=1-8))	

 Table 2 Non- Supervised Input Terminal Blocks/RJ45

Board Configuration	Terminal Block	RJ45		
Main Board Rdr/Door1	P10 (GND, REX1)	J12 (pin2,3)		
connector	P10 (GND, REX Aux1)	J13 (pin2,3)		
Main Board Rdr/Door2	P18 (GND, REX2)	J14 (pin2,3)		
connector	P18 (GND, REX Aux2)	J15 (pin2,3)		

Door Status (Drcnt) and Request to Exit (REX) for all doors may be configured for Normally Open or Normally Closed contacts as supervised or non-supervised. All inputs on the Controller Board and eight additional inputs have default functions, but they can be configured for general purpose inputs. The following figure shows the typical wiring for a supervised and non-supervised inputs.



Figure 3: Typical Supervised and Non- Supervised Input Wiring Diagram

Standard 2.2K ohm resistors will be used. The MPA2 panel accepts 1K, 2.2K, 4.7K, or 10K ohm values. Note that both resistors must have the same value.

In addition, the Reader tampers can be supervised and capable of being used as additional inputs if the default functionality is not needed.

The wire used for the inputs cannot exceed 30 ohms over the entire length of the cable. Remember that the distance from the panel to the door must be doubled to determine the total resistance.



Caution: The system has not been verified for compliance with UL1076 Burglar Alarm units and systems.

2.3 MPA2 Access Control Unit

The MPA2 panel is a one and two-door access control unit. The following table shows the MPA2 input/output options:

	Configuration		Inputs/Outputs	Wiegand	OSDP
	1 door/1 direction		Relay 1, Doorcnt 1, REX 1		
	1 door/2 direction	ale	Relay 1, Doorcnt 1	Hold A/B	
	2 door/1 direction	■☐₲₽₫₲₽	Relay 1-2, Doorcnt 1-2, REX 1-2		
	2 door/2 direction	aleale	Relay 1-2, Doorcnt 1-2	Hold A/B	
	3 door/1 direction	■∐ ₽ ■ <u>∏</u> ₽	Relay 1-2-Aux1 , Doorcnt 1-2-Aux1, REX 1-2-Aux1	Hold A/B	
Future	3 door/2 direction	a <u>l</u> ea <u>l</u> ea	Relay 1-2-Aux1 , Doorcnt 1-2-Aux1	N.A.	
Development	4 door/1 direction	∎⊡ଢ଼∎⊡ଢ଼	Relay 1-2-Aux1-Aux2 , Doorcnt 1-2-Aux1-Aux2, REX 1-2-Aux1-Aux2	Hold A/B	
L L	4 door/2 direction	a <u>l</u> ba <u>l</u> ba <u>l</u> ba	Relay 1-2-Aux1-Aux2 , Doorcnt 1-2-Aux1-Aux2	N.A.	

Table 3 MPA2 Input/Output Options

You can use the MPA2 panel as a standalone panel with independent card and transaction storage or, with a host software upgrade, as a fully monitored Online access control device.

Panel inputs are capable of four state supervision: Normal, Alarm, Short and Cut. One input is used for door status on each door. Inputs for Reader Tampers are supplied as well. They can also be used as additional inputs when not required for their default purpose. Non-supervised inputs are used for Request to Exit button on each door.



Note: For MPA2 reader specifications, see Hardware Specifications, page 54.

2.3.1 Real-Time Clock Protection

The panel RTC is backed up using a super capacitor. The super capacitor will power the real-time clock for approximately 60 minutes in the absence of primary power or backup battery.

2.4 Power Supply

The MPA2 Compact can be powered by Power Over Ethernet (PoE). This PoE can supply a total system current of 2300mA @12VDC. However the MPA2 controller board can consume 250 mA of current. This leaves 2050mA of total current for the 12VDC external power. See Hardware Specifications, page 54, for further details on current limits using PoE.

The Standard Enclosure uses a 13.8 VDC 3.5A power supply with an international input of 100VAC to 240VAC. The MPA2 also charges and monitors the condition of the battery. Wire the unswitched electrical power to the supply per the National Electrical Code as well as any local electrical codes, including the safety ground wire.

An additional output can be programmed to indicate input voltage (100-240 VAC) is present.



2.5 Battery

For the MPA2 Standard Enclosure panel, includes one 12 VDC, 7Ah sealed lead-acid battery. The battery provides standby backup power, depending upon system configuration and activity. When AC is lost, the power supply automatically switches to the backup battery for continuous 12VDC power. Replace the battery every 2 to 2.5 years, or more often if the system has a high rate of backup use.



Caution: MPA2 units should powered by a 120/240 VAC fused line. Always disconnect the battery and AC- power before servicing.

3.0 Installation



Perform the following steps to install the MPA2 Compact panel:

Warning: Use a static strap whenever touching the panel to ensure protection from Electrostatic Discharge (ESD).

- 1. Connect the Ethernet cable as shown below:
- 2. Set DIP switch settings for the panel address, communication termination and biasing. See DIP Switch Settings, page 32.
- 3. Check all wiring at this time.



Caution: Improper wiring can cause damage to the MPA2 at power up and result in a loss of warranty.

- 4. Apply power to the panel.
- 5. Check for the Run LED for a successful power-up. If the LED is blinking green, the panel is powered up successfully.

3.1 Installing the Standard Enclosure Panel



Perform the following steps to install the MPA2 Standard Enclosure panel:

Warning: Use a static strap whenever touching the panel to ensure protection from Electrostatic Discharge (ESD).

1. (Optional) Remove the green ground wire and the door.





2. Install the four power supply screws to mount the PSU to the metal plate:



3. Connect Mains from the prepared IEC chassis socket (USA model only) to the PSU terminals (PE, N, L):

4. Fit the three Power Supply Screws through the key holes in the left bottom side of the cabinet, and seat the power supply by pulling down:





5. Connect prepared Low Voltage supply cable (RED, BLACK) to the PSU terminals (V+, V-):



6. Plug Low Voltage (13.8 V) cable (BLUE connector) and the Battery (ORANGE connector) to the MPA2 Main Board:



Warning: Do not apply power at this time. Be sure the power cable is disconnected from the external power source before following this step.



7. Plug in the prepared **Tamper** connectors (1 = Off Wall tamper, 2 = Panel door tamper):

8. Connect the battery:

- 9. Attach the door to the cabinet.
- 10. Re-connect the green/yellow **Ground** wire to the cabinet door:

11. Power up the MPA2 Controller Board and configure the system. Refer to the *MPA2 Quick Startup Guide* (800-25470) for instructions.

3.2 Wiring the Readers

3.2.1 Wiegand

Each reader port supports one or two readers (entry and exit readers) with Wiegand output format. The maximum power draw is 500 mA for readers and AUX Power combined.

To fully utilize each reader port, a shielded 8-conductor cable (18-24 AWG) is required. You can use standard FTP cable with RJ45 plug 8-wire CAT 5E/6E/7 (recommended) 6-conductor cable (HAS part number NC186-BL).

Note: If you are using HOLD lines for readers, this signal is standard included in the RJ45 reader connectors.

The cable is shielded and grounded at the panel. Grounding at both ends can cause ground loops which can be disruptive. The maximum recommended length of wiring is 50 m (150 feet) per reader.

Figure 4 shows a single reader on the controller reader port, with the readers wired to RJ45 (J11) on the Controller Board. The wires are color-coded* to their labeled terminals. Figure 5 shows a 2-reader pair attached to the reader ports for Door 1 (J11, J10).

3.2.2 OSDP

The MPA2 Access Control panel also supports OSDP readers. OSDP (Open Supervised Device Protocol) is a bi-directional RS485 Multi-drop AES128 Encrypted protocol.

The MPA2 provides 2 separate OSDP ports, one for DOOR1 and one for DOOR2. Each port can have 2 OSDP readers connected (Address 00 = Entry reader and Address 01 = Exit reader).

The OSDP readers are connected through CAT7 S/FTP RJ45 cable (See Figure 4). The (OSDP) bus (TRX+, TRX-, 12V, GND) supplies standard 12V for the readers.

The maximum power drawn is 500mA for the readers including AUX power. The maximum recommended length of the OSDP readers wiring is 150 m (500 feet) per OSDP port.

Figure 4 shows a single reader on the controller board. The wires are color-coded* to their labeled terminals. Figure 5 shows a two reader pair attached for Door1 (J11, J10).

Notes:

• Make sure your MPA2 DIP switch settings (SW1, S1) are set correctly for corresponding Wiegand and/or OSDP reader usage.

OSDP readers address is default (factory) set to '00'. No extra setting needs to be done when using one reader (Entry) and one door configuration.
 In case of two reader and one door configuration, make sure the Exit reader (Reader B) is address '01'.
 (For OSDP reader addressing settings, see reader Instruction/Installation Manuals = Manufacturer dependent).

Figure 4: Wiring of Single Reader to the Controller Board (Door 1)

* For color-code, see info-card on the controller card assembly.

Warning: MPA2 reader connections are using CAT 6E/7 (S)/FTP cable with RJ45 connections. Be aware that this is NOT an Internet/Ethernet protocol and so should not be mixed or connected to standard Ethernet Network devices as switches or routers.

Note: Dip switch 1 to 4 should be OFF for Wiegand in S1. For SW1, Wiegand 1 and 10 should be OFF and OSDP 1 and 10 should be ON.

Figure 5: Wiring of Multiple Readers to the Controller Board (DOOR 1)

Warning: MPA2 reader connections are using CAT 6E/7 (S)/FTP cable with RJ45 connections. Be aware that this is NOT an Internet/Ethernet protocol and so should not be mixed or connected to standard Ethernet Network devices as switches or routers.

The following three tables list the factory controller board I/O default settings for door-1 and door-2 configurations. These are the mappings for

readers, inputs, and outputs. Reader A and Reader B have their own connections but share the same Wiegand communication port using the hold A/B signals.

Table 4 shows the input/output factory default wiring for a one-door configuration on the Controller Board.

Table 5 shows the input/output factory default wiring for a two-door configuration on the Controller Board.

Table 6 shows the Factory Default Configuration for AdditionalInputs/Outputs on the Controller Board.

Туре	Purpose	Web Default Name	Terminal Block Label	RJ45 PIN
INPUT	Egress/REX	Door 1 Egress/REX	P10 REX1/GND	J12 1,3
	Status	Door 1 Status	P10 DoorCnt1/GND	J12 2,3
	Reader Tamper A	Door 1 Tamper A		J11 5
	Reader Tamper B	Door 1 Tamper B		J13 5
OUTPUT	Lock	Relay 1	P10 Ret1, C Rel1, NO/NC Rel1	J12 6+7+8,3+4+5
	Reader A LED	Door 1 Rdr LED A		J11 7
	Reader A Buzzer	Door 1 Rdr Buz A		J11 6
	Reader B LED	Door 1 Rdr LED B		J13 7
	Reader B Buzzer	Door 1 Rdr Buz B		J13 6

 Table 4 Factory Default Configuration Settings for Door 1

Table 5 Factory Default Configuration Settings for Door 2

Туре	Purpose	Web Default Name	Terminal Block Label	RJ45 PIN
INPUT	Egress/REX	Door 2 Egress/REX	P18 REX2/GND	J14 1,3
	Status	Door 2 Status	P18 DoorCnt2/GND	J14 2,3
	Reader Tamper A	Door 2 Tamper A		19 5
	Reader Tamper B	Door 2 Tamper B		J8 5
OUTPUT	Lock	Relay 2	P18 Ret2, C Rel2, NO/NC Rel2	J14 6+7+8,3+4+5
	Reader A LED	Door 2 Rdr LED A		J9 7
	Reader A Buzzer	Door 2 Rdr Buz A		J9 6
	Reader B LED	Door 2 Rdr LED B		J8 7
	Reader B Buzzer	Door 2 Rdr Buz B		J8 6

Туре	Purpose	Web Default Name	Terminal Block Label	RJ45 PIN
INPUT	External Tamper	Panel Tamper Ext	P27 Ext. Tamp/GND	
	Internal Tamper(s)	Panel Tamper Int	Jumper P2, P3	
	General (1-8)	Aux Inp 1-8	P24 INPUT 1-8/GND	
	Additional Egress/REX input	Aux 1 Egress	P10 REX Aux1/GND	J13 1,3
	Additional Door Status input	Aux 1 Status	P10 DoorCnt Aux1/GND	J13 2,3
	Additional Egress/REX input	Aux 2 Egress	P18 REX Aux1/GND	J15 1,3
	Additional Door Status input	Aux 2 Status	P18 DoorCnt Aux1/GND	J15 2,3
OUTPUT	Additional Lock/Relay	Aux Relay 1	P10 RetAux1, C RelAux1, NO/NC RelAux1	J13 6+7+8,3+4+5
	Additional Lock/Relay	Aux Relay 2	P18 RetAux1, C RelAux1, NO/NC RelAux1	J13 6+7+8,3+4+5
	General (1-4)	Aux Out 1–4	P27 OUTPUT 1-4/GND	

Table 6 Factory Default Configuration Additional Inputs/Outputs

Notes:

- The Controller Board includes Inputs 6 and 8 but they are reserved for system use.
- Reader LED, while it is an output, should never be used to control anything other than its associated reader's LED.
- MPA2 supports a variety of Wiegand reader models. Some readers have only one brown wire for LED control; others have two possible LED control inputs--orange for the green LED and brown for the red LED. RED is the normal state of the Reader LED operation. The LED turns GREEN for two seconds after a valid card read. Although readers operate similarly, LED control can vary, depending on the manufacturer. Therefore, your readers may require some testing to identify the right LED wire when the reader uses Dual LED wires. If you are using Dual Line LED control, it's recommended that you try the ORANGE-colored wire for a GREEN LED.
- The Reader Buzzer feature is shared with the RED LED signal on the MPA2 panels.
- In case 2 Readers are used per door (Exit + Entry) with WIEGAND, then the used Readers should support Hold A/B lines.

3.3 Wiring Door Strikes

Follow these steps to wire the door strikes to the Controller Board:

1. Use the following figure to locate the door strike terminals on the board and to wire the door strike/mag lock according to the power supply used. Be sure to use the S4 suppressor kits as shown below:

Figure 6: Wiring an Access Control Door (Lock, Request to Exit, and Door Contact)

Figure 7: S4 Suppressor Kit

Notes:

- As shown in the illustration above, the Dry C terminal for the On-Board option should not be connected. Similarly on the External Power Supply side, the Return terminal should not be connected.
- The On-Board option is used when jumpers are set for 12VDC. The External Power Supply options is used when the jumpers are set to External Power (see Jumper Settings, page 36 for details).
- For dry configuration types, the power supply must be voltage compatible, listed to UL 294 or UL 609 for Ul installations and CAN/ULC-S318 for ULC installations, and able to supply sufficient backup power.

3.4 Wiring the RS485 bus connections

3.4.1 RS485 Interface bus (IB2 = future development / NX4-I/O = USA only) J16

The MPA2 panel has a dedicated RS-485 Interface bus for connecting extra I/O. A maximum of two NX4IN and a maximum of four NX4OUT for a total of six Downstream I/O Devices can be added to the downstream bus.

The Interface bus is wired into the MPA2 using standard RJ45 connection (Preferably use CAT 7 S/FTP cable) (J16) on the board. Use pin1&2 (TRX+/TRX-) to connect the NX4 I/O boards. Make sure the NX4 I/O boards are powered with an external 24Vdc Power supply. If the MPA2 controller is physically terminating one end of the RS-485 bus line as shown below, S1 positions 5 & 6 need to be set to ON

51 ^a	S2 ^a	S3"	\$4 [*]	\$5 *	56 *	57 ^a	58*	Selection
OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	Default Settings
OFF	OFF							OSDP/Reader Port DOOR1 termination (EoL) DISABLED
ON	ON							OSDP/Reader Port DOOR1 termination (EoL) ENABLED
		OFF	OFF					OSDP/Reader Port DOOR2 termination (EoL) DISABLED
		ON	ON					OSDP/Reader Port DOOR2 termination (EoL) ENABLED
				OFF	OFF			RS485-1 (IB2/NX4 Bus) termination (EoL) DISABLED
-1				ON	ON			RS485-1 (IB2/NX4 Bus) termination (EoL) ENABLED
						OFF	OFF	RS485-2 (Downstream Bus) termination (EoL) DISABLED
						ON	ON	RS485-2 (Downstream Bus) termination (EoL) ENABLED

For additional information concerning the Downstream I/O, See section Downstream Devices (I/O).

3.4.2 RS485 Panel Downstream bus (IN/OUT) J17, J18

The MPA2 panel has a RS-485 downstream bus for connecting downstream panels (MPA2 or NetAXS123). A maximum of 31 MPA2 and/or NetAXS123 downstream panels can be connected.

The Downstream bus is wired from/into the MPA2 using standard RJ45 connections on the board (J17 IN/J18 OUT) (Preferably use CAT 7 S/FTP cable). Use pin1&2 (TRX+/TRX-) to connect the downstream panels. Make sure the downstream panels are powered by their local Power supply. If the MPA2 controller is physically terminating one end of the RS-485 bus Line, S1 positions 7 & 8 need to be set to ON.

							+
RJ45	Code A	Code B	WIEGAND	OSDP	DOOR	INTERFACE	DOWNSTREAM
01	A	8	D1	TRX+	REX	TRX+	TRX+
02	A	В	00	TRX-	DRCNT	TRX-	TRX-
03	A	B	12V	12V	GND	12V	12V
04	A		GND	GND	GND	GND	GND
05	A	8	Tamper		GND		
06	Α	8	Buzz/Led		NO/NC Rel		
07	A	8	Led Green		NO/NC Rel		
08	A	8	Hold/Arm-Disarm		NO/NC Rel		

J17,J18

S1 [*]	\$2 [*]	\$3 *	54 [*]	S5*	S6 *	\$7 [*]	58 ⁸	Selection
OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	Default Settings
OFF	OFF							OSDP/Reader Port DOOR1 termination (EoL) DISABLED
ON	ON							OSDP/Reader Port DOOR1 termination (EoL) ENABLED
		OFF	OFF					OSDP/Reader Port DOOR2 termination (EoL) DISABLED
		ON	ON					OSDP/Reader Port DOOR2 termination (EoL) ENABLED
				OFF	OFF			RS485-1 (IB2/NX4 Bus) termination (EoL) DISABLED
				ON	ON			R5485-1 (IB2/NX4 Bus) termination (EoL) ENABLED
						OFF	OFF	RS485-2 (Downstream Bus) termination (EoL) DISABLED
						ON	ON	RS485-2 (Downstream Bus) termination (EoL) ENABLED

For additional information concerning the Downstream Panel interface, See section **Downstream Devices (I/O)**.

3.5 Setting DIP Switches and Jumpers

3.5.1 Controller Board DIP Switch and Jumper Settings

Figure 8: Controller Board DIP Switch and Jumper Location

DIP Switch Settings

Use the following (Figure 9) DIP switch configurations to set up your MPA2 panel.

S1	S 2	53	S 4	S 5	S6	S 7	S 8	S 9	S10	Selection
OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF	Factury Settings
OFF										Readers DOOR 1 = Wiegand
ON										Readers DOOR 1 = OSDP
	N.U.									Future Use
		OFF								Downstream/Secondary Panel
		ON								Master/Primary Panel
			OFF							Uses the User Provided Ethernet IP address (Default)
			ON							Uses the Default IP address (192.168.1.150)
				OFF	OFF	OFF	OFF	ON		Address 1
				OFF	OFF	OFF	ON	OFF		Address 2
				OFF	OFF	OFF	ON	ON		Address 3
				OFF	OFF	ON	OFF	OFF		Address 4
				OFF	OFF	ON	OFF	ON		Address 5
				OFF	OFF	ON	ON	OFF		Address 6
				OFF	OFF	ON	ON	ON		Address 7
				OFF	ON	OFF	OFF	OFF		Address 8
				OFF	ON	OFF	OFF	ON		Address 9
				OFF	ON	OFF	ON	OFF		Address 10
				OFF	ON	OFF	ON	ON		Address 11
				OFF	ON	ON	OFF	OFF		Address 12
				OFF	ON	ON	OFF	ON		Address 13

 Table 7 MPA2 SW1 DIP Switch (1-10) Settings

S1	S2	S 3	S 4	S 5	S6	\$7	S8	S 9	S10	Selection
				OFF	ON	ON	ON	OFF		Address 14
				OFF	ON	ON	ON	ON		Address 15
				ON	OFF	OFF	OFF	OFF		Address 16
				ON	OFF	OFF	OFF	ON		Address 17
		6		ON	OFF	OFF	ON	OFF		Address 18
				ON	OFF	OFF	ON	ON		Address 19
				ON	OFF	ON	OFF	OFF		Address 20
				ON	OFF	ON	OFF	ON		Address 21
				ON	OFF	ON	ON	OFF		Address 22
				ON	OFF	ON	ON	ON		Address 23
				ON	ON	OFF	OFF	OFF		Address 24
				ON	ON	OFF	OFF	ON		Address 25
				ON	ON	OFF	ON	OFF		Address 26
				ON	ON	OFF	ON	ON		Address 27
				ON	ON	ON	OFF	OFF		Address 28
				ON	ON	ON	OFF	ON		Address 29
				ON	ON	ON	ON	OFF		Address 30
				ON	ON	ON	ON	ON		Address 31
									OFF	Readers DOOR 2 = Wiegand
									ON	Readers DOOR 2 = OSDP

MPA2 SW1 DIP Switch (1-10) Settings (Continued)

DIP Switch 4 (SW1) does NOT require a panel reboot to take effect. This does not affect the USB IP address.

If the panel will be configured in EVL Mode, leave S5 through S9 set to factory default.

S1 ^a	S2 ^a	S3 ^a	S4 ^a	S5 ^a	S6 ^a	S7 ^a	S8 ^a	Selection
OFF	Default Settings							
OFF	OFF							OSDP/Reader Port DOOR1 termination (EoL) DISABLED
ON	ON							OSDP/Reader Port DOOR1 termination (EoL) ENABLED
		OFF	OFF					OSDP/Reader Port DOOR2 termination (EoL) DISABLED
		ON	ON					OSDP/Reader Port DOOR2 termination (EoL) ENABLED
				OFF	OFF			RS485-1 (IB2/NX4 Bus) termination (EoL) DISABLED
				ON	ON			RS485-1 (IB2/NX4 Bus) termination (EoL) ENABLED
						OFF	OFF	RS485-2 (Downstream Bus) termination (EoL) DISABLED
						ON	ON	RS485-2 (Downstream Bus) termination (EoL) ENABLED

Table 8 MPA2 S1 DIP Switch (1-8) Settings

Both DIP Switches need to be either ON or OFF to be properly configured.

Note: When you use the DIP switches to reset a panel to the original factory default values, the Event History is lost and any customized databases are removed, so the panel is reset with the original factory default database. This does not affect the Ethernet IP address.

You can also use this ASCII command:

_I=pn_R

This command resets the panel to the original factory default values, but it only removes the customized databases and restores the original factory default database. The Event History is retained.

To reset the panel to the factory default values:

- 1. Make a note of the existing settings on SW1 and S1 DIP switches.
- 2. While the panel is powered up, turn all SW1 DIP switches to the OFF position.
- 3. Power down, then power the panel back up.
- 4. Wait for the panel to come up. The RUN LED should flicker fast.
- 5. Set the DIP switches back to their original positions.
- 6. Power down, then power the panel back up.
- 7. After the panel comes up, the RUN LED should flash normal.

The panel is now reset to the original factory default values.

Note: Address O is not a valid setting.

Jumper Settings

The MPA2 Controller Board provides four jumper sets, one each for output relay 1, relay AUX 1, output relay 2, relay AUX 2. Each relay has two 3-pin jumpers associated with it. One jumper selects either external power (EXT) or self-wetted (on-board, +12V) power to be applied to the relay contact load. The other jumper is used to select Normally Open (NO) or Normally Closed (NC) relay contacts. There is a total of eight 3-pin jumpers (two per relay) on the Controller Board.

Figure 9: MPA2 Controller Board Jumpers

Each relay is associated with two jumpers. As shown below, a relay's left jumper configures the relay's load source (12VDC or External), and the right relay jumper configures the relay contact type (Normally Closed or Normally Open).

• Setting the jumpers to configure the power source:

Note: The power source selected by the jumper settings shown above configure the power source for the relay. It does not configure the power source for the panel.

• Setting the jumpers to configure the relay contact type:

3.6 Downstream Devices (I/O)

Note: UL has not evaluated the compatibility of downstream I/O devices with the MPA2 panel.

In some applications, the number of system inputs or outputs exceeds the number that is standard on the MPA2 panel. The solution is to add a combination of NX4IN and NX4OUT downstream I/O devices external to the MPA2 enclosure on a dedicated RS-485 Interface bus. A maximum of two NX4IN and a maximum of four NX4OUT for a total of six Downstream I/O Devices can be added to the downstream bus.

A NX4IN module has 32 supervised, four-state inputs that are limited to 2.2K ohms resistance. The NX4OUT has two supervised inputs and 16 SPDT relay outputs; each input is limited to 2.2K ohms resistance. Refer to the individual installation manuals for I/O wiring details.

The Interface bus is wired into the MPA2 using standard CAT6E/7 (S)/FTP/ UTP cable with RJ45 plug (J16) on the board. The Interface bus has a fixed baud rate and communicates to the downstream I/O devices using a polling technique.

Each downstream I/O device needs to have a unique address for proper communication. Each one also has some configuration jumpers that need to be positioned correctly. The following table lists the DIP switch and jumper settings for the NX4IN and NX4OUT downstream devices.

If the MPA2 controller is physically terminating one end of the RS-485 bus line as shown in Figure 10 on page 40, set S1 positions 5 & 6 to ON.

Note: Downstream I/O is not supported. Please contact Technical support for more details.

Module	Setting	Value
NX4IN	DIP switches	Address (switches 1-6) - 1 or 2
		Baud rate (switches 7 and 8) - 7 = OFF, 8 = ON
		OP Mode (switches 9 and 10) - 9 = OFF, 10 = OFF
	Jumper settings	JP1 – ON, positions 1 and 2 (if the module is the last module on the downstream bus), OFF positions 2 and 3 (if the module is not the last module on the downstream bus)
		JP2 - any setting
		JP3 - any setting
		JP4 - NORMAL (Positions 1 and 2)
NX4OUT	DIP switches	Address (switches 1-6) - 3 through 6
		Baud rate (switches 7 and 8) - 7 = OFF, 8 = ON
		OP Mode (switches 9 and 10) - 9 = OFF, 10 = OFF
	Jumper settings	JP1 - ON, positions 1and 2 (if the module is the last module on the downstream bus); OFF, positions 2 and 3 (if the module is not the last module on the downstream bus)
		JP2 - NORMAL, positions 1 and 2

Table 9	Downstream	<i>I/0</i>	Devices	DIP	Switch	and	Jumper	Settings
---------	------------	------------	---------	-----	---------------	-----	--------	----------

Note: If a NX4IN is not required in a system, start addressing the NX4OUT at DIP switch 3. If a NX4IN is configured with an address other than 1 or 2, the MPA2 panel will not communicate with it. Likewise, if a NX4OUT is configured with an address other than 3 through 6, the MPA2 panel will not communicate with it.

The MPA2 board is not intended to provide either module power or module output load power for downstream I/O. A separate 24 VDC supply should be used to provide power to all downstream modules and output loads.

Figure 10: Default Downstream I/O Configuration with Wiring

3.7 Communications

3.7.1 USB Communications

The MPA2 Controller Board provides a version 2.0 USB port that connects to the web browser or to a MPC/WIN-PAK. The following figure identifies the location of the port on the board.

Note: USB communication requires the USB A to MicroUSB B cable.

You will need to install a USB driver to support the connection. Follow these steps:

Warning: Do NOT connect the USB cable to the panel until AFTER the drivers are installed.

1. Insert the MPA2 Product CD into your Windows-based computer. The MPA2 product menu opens in the web browser.

Note: If the product menu does not open automatically in your browser, right click on the **Start** button and select **Explore**. In the folder tree, find and click the CD drive that is reading the MPA2 Product CD.

2. Click Install USB Drivers on the product menu to start the USB driver installation wizard.

3. Click Next to display the Ready to Install the Program screen.

Note: If confirmation dialog boxes pop up before or during the installation, click the appropriate boxes to allow or approve the installation.

- 4. Click Install to initiate the installation.
- 5. When the installation is complete, the closing screen appears:

🖟 Honeywell USB Device Driver - InstallShield Wizard					
<u>ب</u>	InstallShield Wizard Completed				
	The InstallShield Wizard has successfully installed Honeywell USB Device Driver. Click Finish to exit the wizard.				
44.00					
	< Back Finish Cancel				

- 6. Click Finish.
- 7. Connect the computer to the MPA2 controller with a USB-A to Micro USB-B cable.
- 8. Turn on the power to the MPA2 controller.

For login information, go to https://192.168.2.150.

3.7.2 RS-485 Communications

If a MPA2 panel is to be placed onto a pre-existing RS-485 dropline loop (NetAXS) it must be setup as the Primary panel. The interface allows the wiring of a Multi-drop communication network of up to 4,000 feet (1200 m) in length. Only one host converter device per dropline is supported.

Notes:

- MPA2 must be the Primary panel on an existing NetAXS loop. The MPA2 panel cannot be placed as a Secondary panel when the Primary is a NetAXS system.
- RS-485 communication has not been evaluated by UL or ULC.

DIP switch position SW1 3 on the MPA2 panel selects whether the panel is a Primary or a Secondary panel. The switch in the OFF position configures the panel as a Secondary panel; ON configures a Primary. The panel must be power cycled for a new switch setting to be recognized. DIP switch positions SW1 5-9 are used to select the panel's address on the network. Refer to Table 7 for DIP switch setting information. DIP switch S1 positions 7and 8 are provided for supplying biasing and end-of-line termination for the RS-485 network. The board ships with the switches active. For a Multidrop RS-485 Line, you must turn ON both switch positions 7and 8 of S1. (terminated and biased) at the two end-point panels. At all other panels, set DIP switches 7 and 8 in the OFF position. Both switches on a given panel must be set the same. Note that biasing and termination on both ends are present. Use the S1 positions 7and 8 ON on both ends of the RS-485 network.

Note: For more information on end of line (EOL) termination, contact Honeywell technical support.

Note: If an RS-485 network has a MPA2 Secondary panel, no N1000-II, N1000-III, N1000-IV, or NS2 are allowed on the same network. If they are added to a network with a MPA2 Primary panel, they will not be able to communicate with the host computer.

Figure 11: RS-485 Configuration via MPA2 Primary

This configuration supports a total of 31 NetAXS-123 and MPA2 panels per Multidrop line.

Each MPA2 panel has a port for an Ethernet TCP/IP interface. The Ethernet TCP/IP interface provides 10/100 MB Ethernet support for each panel.

4.0 System Configuration

This section provides wiring diagrams for each of the MPA2 system configurations.

4.1 Ethernet Connection to MPA2 Primary Managing RS485 Loop

Figure 12: Ethernet Connection

Note: You should ground each MPA2 Standard (Metal) Enclosure panel individually with an Earth Ground.

4.2 USB Connection

Figure 13: MPA2 USB Connection

Note: The USB connection is intended to be used for system maintenance and troubleshooting.

Note: You should ground each MPA2 Standard (Metal) Enclosure panel individually with an Earth Ground.

4.3 RS-485 Loop Connection via MPA2

This loop connection supports a total of 31 MPA2 panels (including the Primary) for each drop line.

Figure 14: RS-485 Loop Connection via MPA2

Note: You should ground each MPA2 Standard (Metal) Enclosure panel individually with an Earth Ground.

4.4 RS-485 Connections with Secondary Panels at Both Ends of the Cable

You can connect Secondary panels at both ends of an RS-485 cable via either a MPA2 panel or a PCI-3 device.

RS-485 Connection via MPA2 with Secondary Panels at Both Ends

Note: You should ground each MPA2 Standard (Metal) Enclosure panel individually with an Earth Ground.

4.5 Ethernet Virtual Loop with All Panels on Common IP Subnet

Figure 16: Ethernet Virtual Loop (EVL) with All Panels on Common IP Subnet

Ethernet Connection with EVL Loop

Notes:

- 1. The Network must provide DHCP server (or use dedicated Network configuration with a router, as shown in next section).
- 2. The Network must provide firewall protection from unauthorized access.
- 3. EVL connected MPA2 downstream panel communication has not been evaluated by UL.

4.6 Ethernet Virtual Loop - Network Dedicated to Access Control

Figure 17: Ethernet Virtual Loop - Network Dedicated to Access Control

Ethernet Connection with EVL Loop on Dedicated Network

Note: 1. Router must provide DHCP service. 2. The Router has not been evaluated by UL.

4.7 Ethernet Connection with Ethernet Virtual Loop - Multiple Locations

Figure 18: Ethernet Connection with Ethernet Virtual Loop - Multiple Locations

Ethernet Connection with EVL Loop Multiple Locations

Notes:

- 1. Network must provide DHCP server (or use dedicated Network configuration with a router shown in next section).
- 2. Recommend that Network provide firewall protection from unauthorized access.
- If the locations are in different Geographic time zones, it is recommended that each time zone be served by its own "Ethernet Virtual Loop". The reason for this is, all controllers on the same Ethernet Virtual loop must be set to the same Geographic time zone.
- 4. The Network must allow the Primary in Location 1 to connect to TCP port #9876 in Locations 2 and 3.
- 5. Controllers that are on a different subnetwork than the Primary (which is likely the case for loops across multiple locations) will NOT be automatically discovered by the Primary controller. In

this case, it is recommended that you request an IP address reservation from your network provider or administrator. This address will be needed when the user sets up the Primary controller. There is a "Manual Registration" button on the EVL registration screen for this purpose.

6. The Ethernet Switch has not been evaluated by UL.

5.0 Hardware Specifications

The specifications in this section apply to both the Standard Enclosure and Compact Enclosure panels.

5.1 Primary input Voltage

- The primary input voltage to the powers supply is 100-240VAC, 50/60Hz.
- The primary input voltage must be conduit connected when installed using 230/240VAC Primary.
- For UL and ULC Installations: the primary input voltage must be conduit connected when installed using 230/240 VAC.

5.2 Relay Contacts

Maximum of 4 Form-C SPDT relays, 3A (at dry contact) or 500mA (at self-wetted) @ 30VDC (PTC limited in the self-wetted mode). The Form-C SPDT relays are configured as Normally Open or Normally Closed outputs only. Normally Open and Normally Closed contacts cannot be used simultaneously.

5.3 Reader Interface

- Reader Power: 12VDC nominal with 500mA maximum Current available for each door. (= 2Reader Ports)
- Reader LED Output: Open collector driver capable of sinking up to 16mA.
- Reader Tamper: ADC input.
- Reader Data Input: Low Voltage CMOS.

5.4 Maximum Output Loading

Use the following guidelines unless you are using Power Over Ethernet (PoE):

- Maximum current for reader port is 500mA per door (= 2 Reader Connections).
- Maximum current for any of the 4 relay outputs at dry contact, or 750mA per door self-wetted.
- Door 1: Rel1/RelAUX1
- Door 2: Rel2/RelAUX2
- Maximum battery charge current for the battery wired in series is 250mA.
- External power is limited to 500mA/12 VDC per AUX Output (2X).

5.5 PoE Power Limitations

If you are using the MPA2 Standard Enclosure and powering the panel with PoE (Power over Ethernet), you must comply with these specifications for proper operation:

• A MPA2 panel powered by PoE is 802.3at compliant, providing a maximum of PSE 30W of input power and maximum of 25.5 W of output power to the panel. This input power is split between on-board power consumption and external load consumption. A maximum current capacity of 1500mA @ 12VDC is available for all external devices combined.

Notes:

- Two readers per door can still be supported as long as the total current is within the external load capacity stated above.
- You can either find the devices' power consumption amounts by referring to the products' documentation or by using a current meter.

Device Element	Current
Panel Power Consumption	250 mA
Door strike or magnetic lock current	600 mA
Reader A maximum current	100 mA
Reader B maximum current	100 mA
Buzzer or sounder current	20 mA
Door position switch	20 mA
Request to exit switch	30 mA
Total current for this example	1120 mA

If the total current consumption of your external devices exceeds the 1650 mA maximum current, then use one of the following system configurations:

• Power the panel with an external 13.8VDC power supply (MPA2PSU).

- Power some or all of the external devices with an external power supply to lower the total external current powered by the MPA2 panel below 1650 mA.
- The maximum power available in the 802.3at standard is 25.5W. This limit is generally at 42.5 57VDC, and it is measured at the output of the power injector or PoE switch. Line losses cause a decrease in the power available at the panel when you use longer Ethernet cable lengths. You can minimize these line losses by using either of the following methods:
 - Connecting the MPA2 panel to the power injector or PoE+ switch with the shortest possible Ethernet cable length.
 - Amids pan power supply, also known as a PoE power injector, is an additional PoE power. Class 4 can only be used by IEEE 802.3at (Type 2) devices, requiring valid Class 2 and Mark 2 currents for the power up stages.

5.6 Mechanical

• Standard Enclosure dimensions: Height = 16 inches (412.0 mm), Width = 14.25 inches (362.0 mm), and Depth = 4.37 inches (111 mm).

5.7 Environment

- Temperature: 0° C to 40° C operating, -55° C to $+85^{\circ}$ C storage.
- Humidity: 5% to 93% RHNC.

5.8 Cable

Use industry-standard cables that meet the following specifications:

Table 1) Rea	ler Wi	iring
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Cable Specifications	Description	AWG	Maximum Distance: Feet (Meters)
Readers	8 Conductor, Shielded. CAT 6E/7 (S)/FTP	22-24	WIEGAND = 50 m (150 Ft) OSDP = 150 m (500 Ft)
Alarm Input	Twisted Pair, Shielded CAT 6E/7 (S)/FTP	22-24	150 m (1000 Ft)

Table 10 Reader Wiring

Relay Outputs	Twisted Pair, Shielded CAT 6E/7 (S)/FTP	22-24	150 m (1000 Ft)
---------------	---	-------	-----------------

5.9 Panel label and Symbols

1. Panel label (Inside panel Door in metal housing MP2ENCM).

EU: EMC/CE

2. Symbols

Symbols	Description
CE	CE marking is a certification mark that indicates conformity with health, safety, and environmental protection standards for products sold within the European Economic Area (EEA). The CE marking is the manufacturer's declaration that the product meets the requirements of the applicable EC directives

(F	UL (Underwriters Laboratories) is a testing facility for light fixtures (and other electrical devices) that vouches for the safety of the product. UL is one of several companies approved to perform safety testing by the U.S. federal agency Occupational Safety and Health Administration (OSHA). OSHA maintains a list of approved testing laboratories, which are known as Nationally Recognized Testing Laboratories
(hE)	ULC (Underwriters Laboratories of Canada) mark on a product means that ULC has tested and evaluated representative samples of the product and determined that it meets ULC's requirements. In addition, products are periodically checked by ULC at the manufacturing facility to make sure they continue to meet ULC requirements.
X	DIRECTIVE 2012/19/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on waste electrical and electronic equipment (WEEE), Art.14, 2-5) This symbol on our product shows a crossed-out "wheelie-bin" as required by law regarding the Waste of Electrical and Electronic Equipment (WEEE) disposal. This indicates your responsibility to contribute in saving the environment by proper disposal of this Waste i.e. Do not dispose of this product with your other wastes. To know the right disposal mechanism please check the applicable law.

6.0 Firmware Specification

6.1 Panel Settings

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← → C	् 🖈 < 🛡 🙌 👘 🗄
\equiv Panel Configuration	
MAC00408400DA51 Primary (Panel No 1)	Settings Host / Loop Communications Inputs Outputs Card Formats Advanced OHMMAL
	Panel Name Permaner Version MACOM05400DA51 Reset
	Panel Type Boot Time OS Venion MPA2 Thu Aug 29 0658:44 2019 4 9.141+gf680cc3#1 SMP PREEMPT Wed Aug 28 16:59:5
	NETWORK
	MAC.Address 00:40:84:00:da:51
	IP Address Solinet Mark Default Gamesy State DHCP 10.7632.24 255255.255.0 10.7632.1
	TIME MANAGEMENT Current Panel Time : Thursday, August 29, 2019 - 08/28/26 AM
	Format (In In) 12 24 Genorativit Time Zones New Time (H.M.
	GMT • E AM PM
	Trensferrer Crashe Disable
	URL Update Interval
	time.honeywell.com.pool.ntp.org 15 Minutes Days
	CANCEL SAVE

Note: Due to Cyber Security, firmware upgrade /downgrade will be restricted to just one firmware version. In case of urgency (Rollback), firmware downgrade will be allowed for a grace period of 30 days only*.

6.2 Firmware Upgrades

Panel Requirements

MPA2 panels must first be upgraded to the latest release firmware version. Refer to the release notes for more information.

Note: The secondary (downstream) EVL panels should be upgraded first and then the primary (Primary) panel(s). For detailed upgrade instructions, refer to the MPA2 User Manual.

* : Future development.

7.0 Basic Standalone Operation

7.1 Card Read / Door Lock Operation

- 1. Present a card to a reader.
- 2. The reader sends the card number to a reader input on the panel.
- 3. The panel searches its database and:
 - If it is a valid card, then energize the door relay associated with the particular reader input. The card is valid when it is in the card database on the panel and the current time and date conforms to the time zone associated with the card.
 - If it is not a valid card, the door relay remains locked.

7.2 Door Egress (REX) / Door Lock / Door Status Operation

- 1. Activate the door egress input (REX).
- 2. The panel energizes the door relay associated with the particular door egress input for a default time of 10 seconds.
- 3. If the door status goes from close to open to close again during the 10 second door open period, the door relay will be immediately de-energized.

8.0 Maintenance

Perform the following maintenance on the MPA2 enclosure:

- Change the backup battery every two to two-and-a-half years.
- Oil the lock once per year.

Note: The power supply contains no serviceable parts. There is no replaceable fuse inside the power supply.

9.0 Troubleshooting

Problem	Solution	
The panel powers up, but it does not respond to any communicatio n, cards reads, or input activation.	Ensure that the Address DIP switches are set to a value other than zero. Turn off the power (including battery), change the settings, and re-apply the power.	
No communicatio ns exist with the Ethernet port.	Only a panel set to be a Primary (DIP switch 3 = ON) will have communications on the Ethernet port. If you need to use that port to access the panel, turn off the power (including the battery), change the switch setting, and reapply the power. Note that if the panel is normally not a Primary on a Multidrop communication bus, then the Host RS-485 connection J17/18 should also be disconnected while DIP switch 3 is ON. After completion of the Ethernet session, turn off the power (including the battery), change the switch setting, re-connect the Host RS-485 terminal block, and re-apply the power.	
The panel address is unknown.	Option 1: Set the MPA2 panel's DIP switch 4 to ON. This will default the IP address to 192.168.1.150. Option 2: Connect to the panel through the USB port using the provided USB A to MicroUSB B cable and the USB driver. The default USB Ethernet IP address is: 192.168.2.150.	
	Note USB2 (J2) is micro USB. Jumper on P5 must be not set.	

 Table 11 Troubleshooting Problems and Solutions

Note: The MPA2 EOL network is AC-coupled. There is no resistance difference between the RS-485 positive and negative terminals if the EOL network is on or off (S1, switches 8 and 9).

10.0 Technical Support

10.1 Normal Support Hours

10.1.1 USA

USA	+1 800 323 4576
	Technical Support, Option 2 (Access Control)

• Monday through Friday, 7:00 a.m. to 7:00 p.m. Central Standard Time (CST), except company holidays: (800) 323-4576.

10.1.2 EMEA

ITALY	+390399301301		
UK	+441344238266		
SPAIN	+37911238038		
FRANCE	+33366880142		
THE	+31108080688		
NETHERLANDS			
Technical Support, Option 2 (Access Control)			

Hours of Operation | Monday through Friday, 9:00 am - 7:00 pm EST

Note: We will be updating the phone queue when ready to have an option to select MPA after selecting Option # 2 for technical support.

- YouTube Honeywell Help and Support Channel | https://www.youtube.com/channel/UCBEL6ouNV_LN5lEpYRujMTg /featured
- Discover Customer Portal |
 https://honeywelldiscovertraining.com

"Learning Management - On Line Training:

• Register for classroom training, get product certified, and more.

"E-mail Technical Support:

• Who waits on hold anymore? Submit an e-mail support question and we will respond within 2 business days.

"Schedule Technical Support:

• Coordinate a scheduled time that works best for you and your customer. Hours for Scheduled Support are 10AM - 4PM EST.

"How-To Videos:

• DIY with videos that address some of the most common questions around our products and solutions.

MyWebTech | Customer Portal | https://mywebtech.honeywell.com

- "Download Center: Access the Download Center for the latest firmware and software updates
- **"Knowledge Base Library**: Technical bulletins, user guides, and how to documents.
- "**Case History**: Ability to view cases recorded by Technical Support and view the status of a database service.
- "Notification Center: Sign up to receive up-to-date product notifications.

Following are the tech support E-mail IDs of different countries.

EMEA ITALY	hsgittechsupport@honeywell.com
UK	hsguktechsupport@honeywell.com
SPAIN	hsgestechsupport@honeywell.com
FRANCE	hsgfrtechsupport@honeywell.com
THE NETHERLANDS	hsgnltechsupport@honeywell.com

USA <u>https://www.honeywellsystems.com/ss/techsupp/index.html</u>

Web Support	Technical Assistance: MyWebTech Customer Support	https://honeywellaccess.com https://mywebtech.honeywell.com
	Support	
	Schedule Support:	https://honeywellsystems.com/ss/sche
		<u>dulesupport/index.html</u>
	Online Training:	https://honeywelldiscovertraining.com
	5	

Honeywell Access Systems

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Document 800-25395 - Rev B

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