



DEFENDR DS-200 USER MANUAL 2025



DEFENDER

1

INTRODUCTION.....

3

1.1

STANDARDS.....

3

1.2

COPYRIGHT NOTICE

4

1.3

LEGAL NOTICE.....

4

1.4

DESCRIPTION

5

2

CONTROLS AND INDICATIONS.....

6

2.1

GRAPHICAL DISPLAY.....

6

2.2

LED STATUS INDICATORS

7

2.3

ZONE LED STATUS INDICATORS

7

2.4

CONTROL BUTTONS

8

2.5

NUMBER AND LETTER BUTTONS

8

2.6

BUZZER

8

3

OPERATION.....

9

3.1

FIRE ALARM CONDITION.....

9

3.2

ZONE CROSSING AND SUPPRESION CONDITION

10

3.3

FAULT CONDITION.....

11

4

WIRING DIAGRAM AND TERMINALS DESCRIPTION.....

12

CONCLUSION.....

14

1 Introduction

1.1 Standards

DEFENDER SYSTEMS LLC declares that the products DS-200 conform to the essential requirements specified in the Construction Products Regulation (CPR) No. 2011/305 :

A. EN 54-2

Control and indicating equipment for fire detection and fire alarm systems for buildings

B. EN 54-4

Power supply equipment for fire detection and fire alarm systems for buildings

C. EN 12094-1

**Fixed firefighting systems Components for gas extinguishing systems
Part 1: Requirements and test methods for electrical automatic control and delay devices.**

In addition, the products comply with the following:

-Low Voltage Directive 95/2006/EC

-BS EN 60950-1 Safety of information technology equipment

-Electromagnetic Compatibility Directive 108/2004/EC

-BS EN 55022 Emissions, Class B

-BS EN 50130-4 Immunity, Product Family Standard

DEFENDER

1.2 COPYRIGHT NOTICE

The information contained in this document is proprietary and is subject to all relevant copyright, patent and other laws protecting intellectual property, as well as any specific agreement protecting DEFENDER SYSTEMS LLC rights in the aforesaid information. Neither this document nor the information contained herein may be published, reproduced or disclosed to third parties, in whole or in part, without the express, prior, written permission of DEFENDER SYSTEMS LLC. In addition, any use of this document or the information contained herein for any purposes other than those for which it was disclosed is strictly forbidden. DEFENDER SYSTEMS LLC reserves the right, without prior notice or liability, to make changes in equipment design or specifications. Information supplied by DEFENDER SYSTEMS LLC is believed to be accurate and reliable. However, no responsibility is assumed by DEFENDER SYSTEMS LLC for the use thereof nor for the rights of third parties, which may be affected in any way by the use thereof. Any representation(s) in this document concerning performance of DEFENDER SYSTEMS LLC product(s) are for informational purposes only and are not warranties of future performance either express or implied. DEFENDER SYSTEMS LLC standard limited warranty, stated in its sales contract or order confirmation form, is the only warranty offered by DEFENDER SYSTEMS LLC in relation thereto. This document may contain flaws, omissions or typesetting errors; no warranty is granted nor liability assumed in relation thereto unless specifically undertaken in DEFENDER SYSTEMS LLC sales contract or order confirmation. Information contained herein is periodically updated and changes will be incorporated into subsequent editions. If you have encountered an error, please notify DEFENDER SYSTEMS LLC. All specifications are subject to change without prior notice

1.3 LEGAL NOTICE

Fire alarm systems are composed and assembled of different devices and subsystems, such as control panels, annunciators, smoke detectors, heat detectors, manual call points, extinguishing activation devices, and annunciating devices intended to alert to fire / smoke

Using this system does not ensure protection from or prevention of fire and/or smoke damages, but proper use of the system may reduce fire and smoke damages

Proper system configuration design, including all of its components and infrastructure, as well as proper installation according to the manufacturers instructions and the applicable standards are a conditioned precedent for the proper and efficient function of the system

The designer and installer should have the appropriate skills and qualifications for performing said installation and all damages or losses resulting from improper design and/or installation lie with the designer and/or installer alone

All loss or damage caused by improper action shall lie with the originator of said improper action

The manufacturer shall not be liable for any fire and/or fire damages caused by fire in location where fire systems are installed and or results of direct or indirect fire damage that may be caused to any persons and/or property and/or third parties as a result of using the product and/or resulting from its inaction

DEFENDER

1.4 DESCRIPTION

The DEFENDER DS 200 is a modern, reliable two-zone Fire Alarm Control Panel with integrated automatic extinguishing functionality, offering a powerful solution for early fire detection and suppression.

Developed based on 20 years of experience in the fire protection industry, the DS200- is engineered in accordance with EN 54 (Europe) standards. It is equipped with a large 4x20 character LCD display that clearly presents system status, and dedicated LED indicators for all possible system events, ensuring easy monitoring and rapid response.

Each of the two zones supports up to 23 smoke or heat detectors And manual call point, providing robust coverage for diverse environments.

The panel also features full input protection against short circuits, enhancing reliability and reducing the risk of system failure.

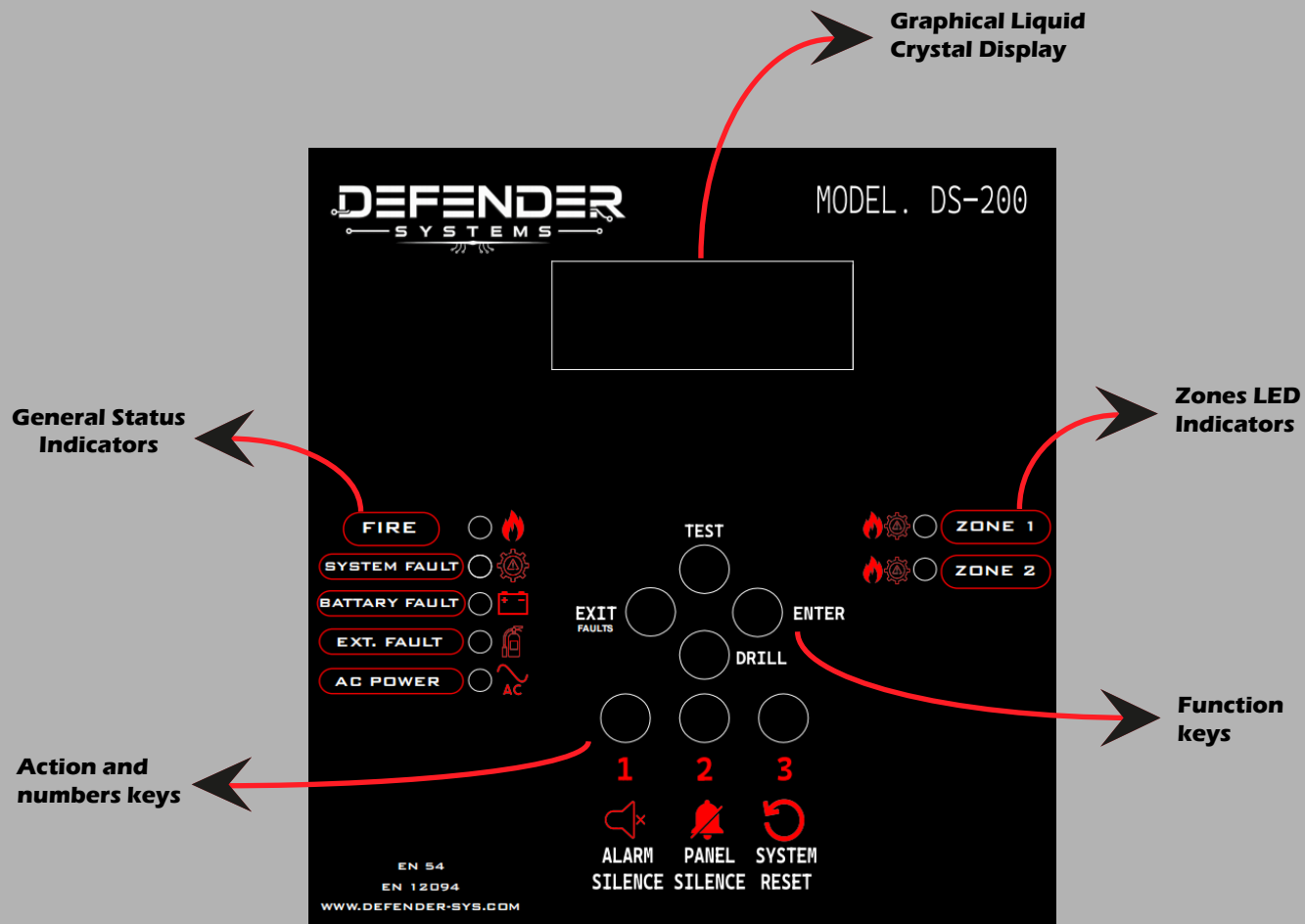
Additional key features include:

- A dedicated input for gas cylinder pressure monitoring, supporting extinguishing system readiness checks.
- Selectable operating mode: the DS 200 can be configured either as a conventional fire alarm panel or as a fully functional extinguishing control unit, depending on the needs of the application.

With its user-friendly interface and high-tech safety features, the DEFENDER DS-200 ensures maximum protection and peace of mind for any facility

DEFENDER

2 CONTROLS AND INDICATIONS



2.1 GHRAPHICAL DISPLAY

The front panel is equipped with a 4×20 characters Liquid Crystal Display (LCD) that provides clear and reliable visual information about the system's operating status.

The LCD is used to display messages, alarms, faults, and configuration data in real time.

Description

The LCD is a low-power, high-contrast alphanumeric display designed for continuous operation.

It consists of 4 lines with 20 characters per line, allowing clear text presentation for easy reading under various lighting conditions.

The display enables the operator to monitor and interact with the system efficiently.

Functions

Displays system conditions such as Normal, Alarm and Fault states.

Shows zone numbers and event messages when an alarm or fault occurs.

Provides menu options for configuration and manual control (if applicable).

Indicates system version and other operational data.

Operation

During normal operation, the LCD shows the system name and (system normal) text.

When an alarm or fault occurs, the corresponding message automatically appears, identifying the affected zone or device. If multiple faults occur enter faults key and messages will scroll sequentially to ensure all information is displayed.

Maintenance

Keep the LCD surface clean and free from dust.

Use only a soft, dry cloth to clean the screen.

Do not apply pressure, liquids, or cleaning chemicals directly onto the display.

DEFENDER

2.2 LED STATUS INDICATORS

FIRE Indicator (LED)

-The FIRE LED lights up when a fire alarm condition is detected in the system. This can be triggered either automatically by smoke or heat detectors, or manually via a Manual Extinguishing Call Point (MCP).

SYSTEM FAULT Indicator (LED)

-The SYSTEM FAULT LED lights up when a general fault occurs in the system. This fault is non-specific and indicates that an error has been detected, but not necessarily localized to a specific component.

BATTERY FAULT Indicator (LED)

-The BATTERY FAULT LED lights up in the following conditions:
-No battery is connected to the control panel.
-The connected battery is defective, disconnected, or has insufficient voltage.

EXT. FAULT Indicator (LED)

The EXT. FAULT LED lights up when:

-The End-of-Line (EOL) resistor is missing or disconnected.
-The automatic extinguishing function is disabled via programming (if applicable in version).

AC POWER Indicator (LED)

-The AC POWER LED lights up when there is AC mains power supply connected to the control panel, indicating the system is running on AC power source.

2.3 ZONE LED STATUS

ZONE 1 Indicator (LED)

-The ZONE 1 LED lights solid red when a fire alarm is detected in Zone 1. It flashes orange when the End-of-Line resistor for Zone 1 is missing or disconnected.

ZONE 2 Indicator (LED)

-The ZONE 2 LED behaves identically to Zone 1:
-Solid red for fire alarm in Zone 2.
-Flashing orange for missing or disconnected End-of-Line resistor in Zone 2.

2.4 Function and Navigation Keys

TEST (Up) Key

- The TEST button is used to navigate upwards through the menu options on the control panel (if applicable in version).
- Additionally, it activates a full system test, which illuminates all indicator LEDs and sounds the panel's buzzer to verify their proper operation.

ENTER Key

- The ENTER Key is used to View Manufacturer Data, serial number and version.

EXIT and Faults Key

- The EXIT and Faults Key is used to View Faults In Panel.
- Additionally, it Exits the Configuration menu when pressed (if applicable in version).

DRILL (Down) Key

- The DRILL Key is used to navigate downwards through the menu options (if applicable in version).

2.5 Actions and numbers Keys

PANEL SILENCE

- It is used to silence the panel Buzzer.
- Additionally, it presents number one (1).

ALARM SILENCE

- Used to Silence The sirens and stop strobes in case of alarm.
- Additionally, it presents number two (2).

PANEL RESET

- Used to reset the Panel to normal condition.
- Additionally, it presents number three (3).

2.6 Buzzer

The internal buzzer provides an audible indication of system status. It sounds continuously during a fire alarm and during a fault condition. The buzzer can be muted by pressing the Buzzer Silence button and will re-activate if a new event occurs.

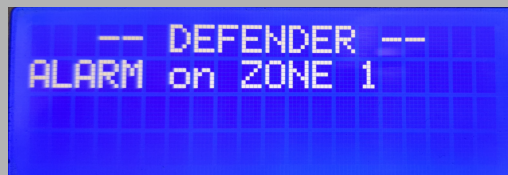
3 OPERATION

3.1 Fire Alarm Condition

When the system registers a fire alarm condition, the internal buzzer sounds intermittently, the NAC output activates, the fire alarm relay activates and the display shows the cause of the fire alarm in more detail

-Fire Alarm on Zone 1

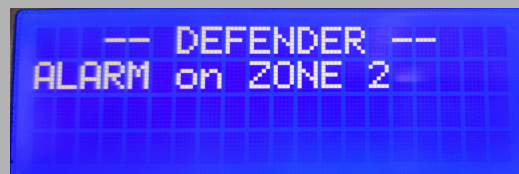
In the event of a fire alarm in Zone 1, the red general fire indicator light and the red Zone 1 fire indicator light will illuminate. The buzzer and siren output (NAC) will also be activated, as will the fire alarm relay. The screen will display that there is a fire in Zone 1, as shown in the image.



-- DEFENDER --
ALARM on ZONE 1

-Fire Alarm on Zone 2

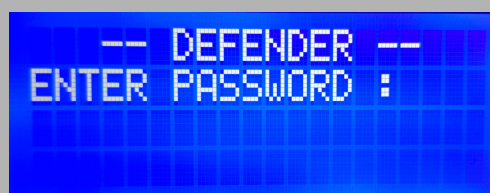
In the event of a fire alarm in Zone 2, the general red fire indicator light and the Zone 2 red fire indicator light will illuminate. The buzzer and siren output (NAC) will also be activated, as will the fire alarm relay. The screen will display that there is a fire in Zone 2, as shown in the image.



-- DEFENDER --
ALARM on ZONE 2

-Instructions

In case of fire, after hearing the buzzer and sirens, you can mute the buzzer using the mute button and mute the sirens using the mute siren button by entering the password (1 2 3). This is done after verifying that there are no people inside the building. Then start searching for the cause of the fire alarm in the affected area. After knowing the cause of the fire and its location, you can now reset the system using the reset button and enter the password (1 2 3).

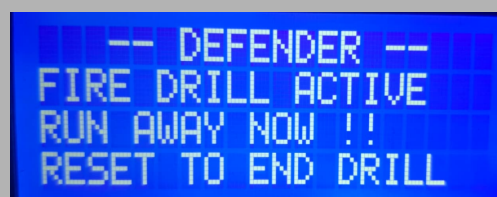


-- DEFENDER --
ENTER PASSWORD :



-- DEFENDER --
ALARM on ZONE 1-----
buzzer,sounder muted

In the case of fire appears, you must act quickly and press the drill button on the alarm panel or the break glass button in the area where the fire started in order to evacuate people and warn them



-- DEFENDER --
FIRE DRILL ACTIVE
RUN AWAY NOW !!
RESET TO END DRILL

DEFENDER

3.2 ZONE CROSSING AND SUPPRESSION CONDITION

-The Defender DS200- control panel is specifically designed for automatic fire suppression according to the EN 12094-1 standard.

-In the event of a fire in an area equipped with an automatic fire suppression system, one of the detectors connected to either Zone 1 or Zone 2 will activate. The panel buzzer will sound, the siren output (NAC) will be activated, and the fire alarm relay will activate. When another detector from a different zone is activated, the system enters Zone Crossing mode, and the countdown timer starts from 30 seconds to 0 seconds. When the countdown ends, the gas release output (Extinguisher terminal) will activate, releasing gas to extinguish the fire.

```
-- DEFENDER --  
Two zones ACTIVE  
TIME DELAY : 26  
Press Abort To Stop
```

```
-- DEFENDER --  
Two zones ACTIVE  
Gas Released ...  
Press Reset...
```

-The panel is equipped with an suppression abort input. If the red button(Break glass) associated with this input is activated during the gas release countdown, the counter will stop counting and the gas release will be stopped

```
-- DEFENDER --  
MANUAL ABORT...  
PRESS RESET.
```

-The panel is equipped with a gas release input. If the yellow button associated with this input is activated in the event of a fire, and the smoke has not yet reached the detectors or the panel has not entered the zone crossing yet, the gas will be released immediately upon activation of the yellow button.

```
-- DEFENDER --  
MANUAL RELEASE...  
PRESS RESET.
```

-After the gas is released, whether after the panel enters zone crossing and countdown mode or by activating the gas release input via the yellow button, the screen will display "release activated" at the bottom, indicating that the gas has been released.

```
-- DEFENDER --  
-- System Normal --  
RELEASE ACTIVATED !!
```

To cancel this message, the panel must be restarted by disconnecting the AC power supply and the batteries (Cold Start).

DEFENDER

3.3 FAULT CONDITION

- In the event of a Fault in the panel, the panel buzzer sounds, the System Fault LED lights up, and the screen writes (FAULTS IN PANEL PRESS EXIT(FAULT) TO VIEW THEM NOW).

- To view errors, you must press on the exit button, then the faults will appear easily.

- When you press on the exit button, the FAULTS will be displayed one by one without the need to scroll, and it will exit automatically when all faults displayed, or by enter exit again you can exit the fault list easily

- THE FAULTS IN THE PANEL ARE:

- 1-ZONE 1 MISSED 2.2K EOL
- 2-ZONE 2 MISSED 2.2K EOL
- 3-SIREN MISSED 2.2K EOL
- 4-EXT. MISSED 2.2K EOL
- 5-AC POWER LOST
- 6-BATTERY DAMAGED OR MISSED
- 7- ZONE 1 LINE SHORT
- 8- ZONE 2 LINE SHORT
- 9- SIREN LINE SHORT
- 10- EXT. LINE SHORT

- If the batteries are damaged, there is no AC power source, and the voltage coming from the batteries is insufficient to operate the panel, the panel will stop working (CUT OFF VOLTAGE IS 22 Vdc) and give a warning on the screen.

```
-- DEFENDER --  
ZONE 1 MISSED  
2K EOL
```

```
-- DEFENDER --  
ZONE 2 MISSED  
2K EOL
```

```
-- DEFENDER --  
SIREN MISSED  
2K EOL
```

```
-- DEFENDER --  
EXT. MISSED  
2K EOL
```

```
-- DEFENDER --  
POWER LOST !!!
```

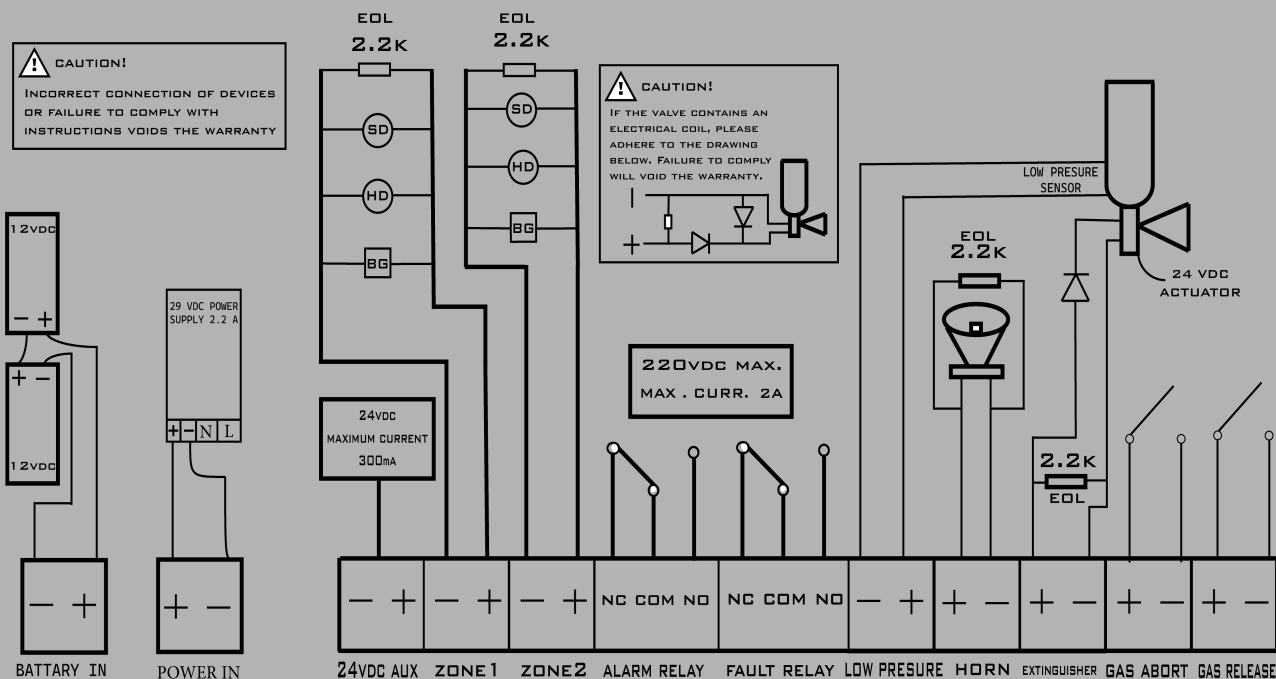
```
-- DEFENDER --  
NO POWER ENOUGH  
CHECK BATTERIES !!!
```

```
-- DEFENDER --  
BATTERY DAMAGED OR  
MISSED
```

DEFENDER

4 WIRING DIAGRAM AND TERMINALS DESCRIPTION

-The image below shows the connections we recommend for each terminal on the main card.



-Terminals Description :

1- Power In

This is the main power input from an external adapter, supplying the board with 29V DC to operate all components.

2- Battery In

Connects to two 12V lead-acid batteries, rated between 4.5Ah and 7Ah, which serve as a backup power source in case of main power failure.

3- AUX Output

Provides a constant 24V DC with a maximum current of 300mA. It is used to power external devices such as detectors or indicators.

4-Zone 1 Input

Used to connect detection devices such as smoke detectors, heat detectors, or emergency push buttons. This zone monitors for fire or emergency conditions.

5-Zone 2 Input

Functions similarly to Zone 1. It allows for separating detection areas or adding redundancy by connecting more sensors or devices.

DEFENDER

Terminals Description Complement :

6- Alarm Relay Output

Sends a signal to external systems or devices (e.g., sirens, monitoring systems) when a fire alarm condition is detected

7- Fault Relay Output

Activates when a system fault is detected (e.g., power loss, wiring issue, device failure), allowing the board to notify an external monitoring device of the error.

8- Low Pressure Input

Connects to a pressure switch on the gas cylinder. If the gas pressure drops below a safe level, this input sends a signal to the board, indicating a problem with the suppression system.

9- Horn Output

Used to activate audible and visual alarms such as sirens and flashers during a fire event.

10- Extinguisher Output

Sends a signal to release the gas from the cylinder. This output is activated only when both Zone 1 and Zone 2 are triggered, confirming a valid fire condition.

11- Gas Abort Input

Allows the user to cancel or delay the gas release during the countdown phase, typically by pressing a manual abort button.

12- Gas Release Input

Used to manually trigger the gas release in the event of a confirmed fire, overriding the automatic sequence.

DEFENDER



On behalf of our entire team,
We would like to express our heartfelt appreciation for the trust you have placed in us by choosing our DEFENDER DS-200 Fire Alarm Control Panel to safeguard your valuable facilities.

Your choice is not just a technical decision — it is a powerful statement of your commitment to safety, reliability, and forward-thinking protection. It is also a reflection of your confidence in our long-standing expertise and unwavering dedication to delivering the highest levels of quality and safety in fire alarm systems.

The DEFENDER DS-200 panel is designed in full compliance with the latest European standards, and incorporates the most advanced technologies available in the field of conventional fire alarm systems. It represents a fusion of innovation, engineering precision, and global safety benchmarks.

At the heart of every DEFENDER DS-200 panel lies our promise: A promise built on years of experience, rigorous engineering, and a vision to protect what matters most. Your trust drives us to innovate continuously and maintain the standards that our partners and clients deserve.

We encourage you to stay updated with our latest products and smart safety solutions — each one thoughtfully designed to offer you the peace of mind and protection you've always dreamed of.

Thank you for choosing DEFENDER.
Thank you for choosing trust.

With deep respect and sincere appreciation.
DEFENDER SYSTEMS Team.

DEFENDER