



BARCODE TECHNOLOGIES

Wasp WDI4250

2D USB Barcode Scanner



Quick Reference Guide

Wasp Barcode Technologies

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Design patents: EM004032241, GB90040322410001, USD849747, ZL201830016932.4

Utility patents: EP1825417B1, EP1828957B1, EP2517148B1, EP2521068B1, EP2616988B1, EP2649555B1, EP2795534B1, US10740580, US10762405, US7234641, US7721966, US8245926, US8561906, US8888003, US8915443, US9122939, US9430689, US9798948, ZL200980163411.X, ZL201080071124.9, ZL201180044793.1

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The number of arbitrators will be three, with each side to the dispute being entitled to appoint one arbitrator. The two arbitrators appointed by the parties will appoint a third arbitrator who will act as chairman of the proceedings. Vacancies in the post of chairman will be filled by the president of the SIAC. Other vacancies will be filled by the respective nominating party. Proceedings will continue from the stage they were at when the vacancy occurred. If one of the parties refuses or otherwise fails to appoint an arbitrator within 30 days of the date the other party appoints its, the first appointed arbitrator will be the sole arbitrator, provided that the arbitrator was validly and properly appointed. All proceedings will be conducted, including all documents presented in such proceedings, in the English language. The English language version of these terms and conditions prevails over any other language version.

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- END -

NOTES

Wasp WDI4250

About the Scanner

The WDI4250 is an hand-held entry level corded scanner. It has been specifically created for small to medium size Retailers, such as groceries and convenience stores, operating in both food and non-food sectors.

Providing the quickest response to the operator for its class of products, the WDI4250 scanner is able to capture whatever barcode, hard-to-read, poor or damaged. It easily scans from mobile devices and through plexiglass barriers. Lightweight and easy to handle also for female users, it is a reliable and seamless companion throughout the whole shift.

The WDI4250 scanner features a precise aiming system developed with the unique intent to reduce visual stress of the operator during the daily scanning activities.

Very responsive at the pull of the trigger, the WDI4250 provides a superior robustness for its class of products, thanks to an accurate design and quality of parts, right there where the product is mostly stressed.

Perfect for manual reading, the WDI4250 uses Motionix™ motion detection technology that detects the operator's natural actions to automatically switch the scanner into 'ready to read' scan mode.

Omni-Directional Operating

To read a symbol or capture an image, simply aim the reader and pull the trigger. The WDI4250 is a powerful omni-directional reader, so the orientation of the symbol is not important. The 'Green Spot' for good-read feedback helps to improve productivity in noisy environments or in situations where silence is required.

Decoding

The WDI4250 reliably decodes all standard 1D (linear) and 2D bar codes, including GS1 DataBar™ linear codes, Postal

Codes (China Post), Stacked Codes (such as GS1 DataBar Expanded Stacked, GS1 DataBar Stacked, GS1 DataBar, Stacked Omnidirectional). The data stream - acquired from decoding a symbol - is rapidly sent to the host. The reader is immediately available to read another symbol.

Imaging

The WDI4250 can also function as a camera by capturing entire images or image portions of labels, signatures, and other items.

Hands Free Stand/Holder

An accessory is available which holds the reader (except those with integrated stand) at a convenient angle, allowing hands free scanning of items. It can also be used as a holder.



NOTE

Read the following label to change Scan Mode to allow the user to operate in hands-free mode.



Scan Model = Stand Mode/Object Detection

Setting Up the Reader

Follow the steps below to connect and get your reader up and communicating with its host.

1. Connect the Cable to the reader and the Host as shown below.
2. Configure the Interface ([see page 8](#)).
3. Program the Reader starting on page 15 (optional, as needed).

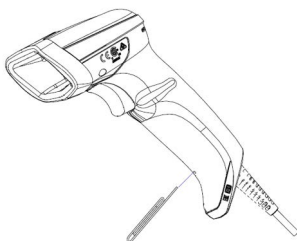
Connecting to the Host Interface



Disconnecting the Cable

To remove the interface cable from the reader follow the steps below.

1. Unplug the host end of the cable (also remove the power supply if an auxiliary wall adapter has been used).
2. Locate the hole on the bottom of the handle.
3. Take a paper clip and modify it as shown in the figure below. Insert the end of the paper clip into the hole and press it to push on the clip that holds the connector. As you apply pressure, pull out the cable.
4. When reinserting the cable, make sure the host end of the cable is unplugged and the connector clip is on the same side as the reader release hole. Insert the cable, it should click when it is fully inserted.
5. Plug the other end of the cable into the host port.



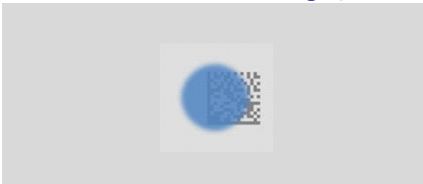
Using the Wasp WDI4250

The Wasp WDI4250 normally functions by capturing and decoding codes. The reader is equipped with an internal Motionix™ motion-sensing function which activates the aiming system on device motion. The intelligent aiming system indicates the field of view which should be positioned over the bar code.

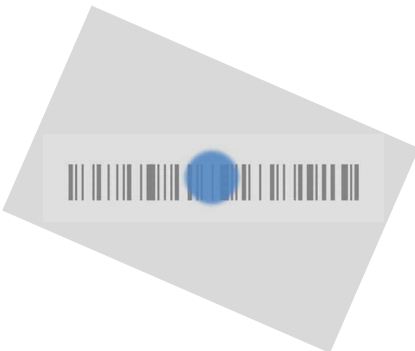
Aiming System



Relative Size and Location of Aiming System Pattern



2D Matrix Symbol



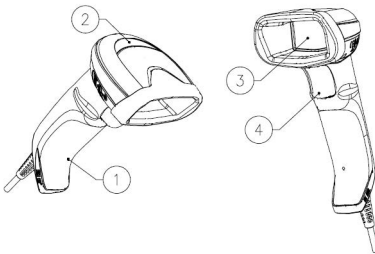
Linear Barcode

A beam illuminates the label. The projected pattern of the aiming system will be smaller when the reader is closer to the bar code and larger when it is farther from the code. Symbologies with smaller bars or elements (mil size) should be read closer to the unit. Symbologies with larger bars or elements (mil size) should be read farther from the unit. If the aiming system is centered you will get a good read. Successful reading is signaled by an audible tone plus a good read green spot LED indicator.

Relative Size and Location of Green Spot



Parts of the Reader



- | | |
|-----------------------|----------------|
| 1. Cable Release Hole | 3. Scan Window |
| 2. LED | 4. Trigger |

Selecting the Interface Type

Upon completing the physical connection between the reader and its host, proceed directly to Interface Selection below for information and programming for the interface type supported by the reader and scan the appropriate bar code to select your system's correct interface type, according to your application.

Interface Selection

The reader model will support all the following host interfaces:

- USB HID POS
- USB Toshiba TEC
- USB (Keyboard, COM, OEM)
- USB Composite (Keyboard + COM)
- USB for Magellan Scanners

Information and programming options for each interface type are provided in this section.

Configuring the Interface

Scan the appropriate programming bar code to select the interface type for your system.



NOTE

Unlike some other programming features and options, interface selections require that you scan only one programming bar code label. **DO NOT** scan an ENTER/EXIT bar code prior to scanning an interface selection bar code.

Some interfaces require the scanner to start in the disabled state when powered up. If additional scanner configuration is desired while in this state, pull the trigger and hold for 5 seconds. The scanner will change to a state that allows programming with bar codes.

USB-OEM
USB-OEM (can be used for OPOS/UPOS/JavaPOS)  Select USB-OEM
USB-COMPOSITE
USB-Composite (Keyboard + COM)  Select USB-Composite

Keyboard Interface

Use the programming bar codes to select options for USB Keyboard interface.

KEYBOARD

AT, PS/2 25-286, 30-286, 50, 50Z, 60, 70, 80, 90 & 95 w/
Standard Key Encoding



Select KBD-AT

AT, PS/2 25-286, 30-286, 50, 50Z, 60, 70, 80, 90 & 95
w/Alternate Key



Select KBD-AT-ALT

KEYBOARD (continued)

USB Keyboard with standard key encoding



Select USB Keyboard

USB Keyboard with alternate key encoding



Select USB Alternate Keyboard

Country Mode

This feature specifies the country/language supported by the keyboard.

COUNTRY MODE
 ENTER/EXIT PROGRAMMING MODE
 Country Mode = U.S. (default)
 Country Mode = Belgium
 Country Mode = Croatia
 Country Mode = Czech Republic

COUNTRY MODE (continued)
 Country Mode = Denmark
 Country Mode = France
 Country Mode = French Canadian
 Country Mode = Germany
 Country Mode = Hungary

COUNTRY MODE (continued)



Country Mode = Italy



Country Mode = Japanese 106-key



Country Mode = Lithuanian



Country Mode = Norway



Country Mode = Poland

COUNTRY MODE (continued)
 Country Mode = Portugal
 Country Mode = Romania
 Country Mode = Spain
 Country Mode = Sweden
 Country Mode = Slovakia
 Country Mode = Switzerland

Programming

The reader is factory-configured with a set of standard default features. After scanning the interface bar code from the Interfaces section, select other options and customize your reader through use of the programming bar codes.

Using Programming Bar Codes

This manual contains bar codes which allow you to reconfigure your reader. Some programming bar code labels, like the ["Resetting Product Defaults" on page 15](#), require only the scan of that single label to enact the change.

Other bar codes require the reader to be placed in Programming Mode prior to scanning them. Scan an ENTER/EXIT bar code once to enter Programming Mode; scan the desired parameter settings; scan the ENTER/EXIT bar code again to accept your changes, which exits Programming Mode and returns the reader to normal operation.

Resetting Product Defaults

If you aren't sure what programming options are in your reader, or you've changed some options and want your custom factory settings restored, scan the bar code below to reset the reader to its initial configuration.



NOTE

Factory defaults are based on the interface type. Be sure your reader is configured for the correct interface before scanning this label. See ["Selecting the Interface Type" on page 7](#) for more information.



Reset Default Settings

Reading Parameters

Move the reader toward the target and center the aiming pattern and illumination system to capture and decode the image. See ["Using the Wasp WDI4250" on page 5](#) for more information.

The aiming system will briefly switch off after the acquisition time, and if no code is decoded will switch on again before the

next acquisition. The illuminator will remain on until the symbol is decoded.

As you read code symbols, adjust the distance at which you are holding the reader.

Good Read Green Spot Duration

Successful reading can be signaled by a good read green spot. Use the bar codes that follow to specify the duration of the good read pointer beam after a good read.

GOOD READ GREEN SPOT DURATION	
 ENTER/EXIT PROGRAMMING MODE	
 Disabled	 ◆ Short (300 ms)
 Medium (500 ms)	 Long (800 ms)
◆ = default value	

Operating Modes

Scan Mode

The following scanning modes can be set:

Trigger Single (Default) — This mode is associated with typical handheld reader operation. When the trigger is pulled, illumination is turned on and the scanner attempts to read a label. Scanning is activated until one of the following occurs:

- the programmable Scanning Active Time expires
- a label has been read
- the trigger is released

Trigger Hold Multiple — When the trigger is pulled, scanning starts and the product scans until the trigger is released or Scanning Active Time expires. Reading a label does not disable scanning. Double Read Timeout prevents undesired multiple reads while in this mode.

Trigger Pulse Multiple — Scanning begins when the trigger is pulled and continues after the trigger is released, until the trigger is pulled again or until the programmable Scanning Active Time expires. Reading a label does not disable scanning. Double Read Timeout prevents undesired multiple reads while in this mode.

Flashing — The reader illuminator flashes on and off regardless of the trigger status. Code reading takes place only during the Flash On Time. Double Read Timeout prevents undesired multiple reads.

Always On — The illuminator is always ON and the reader is always ready for code reading. Double Read Timeout prevents undesired multiple reads.

Stand Mode — The scanner looks for changes within its field-of-view. The Aiming Pattern is always on to show the optimum reading area. If a predefined amount of movement is detected, the white illumination switches on. Scanning continues until a label is read or Scanning Active Time is reached.

SCAN MODE



ENTER/EXIT PROGRAMMING MODE



♦ Scan Mode = Trigger SingleScan Mode = Trigger Pulse Multiple



Scan Mode = Trigger Hold MultipleScan Mode = Flashing



Scan Mode = Always OnScan Mode = Stand Mode

♦ = default value

Pick Mode

This option specifies the ability of the reader to decode labels only when they are close to the center of the aiming pattern, which is the area indicated by the red cross. Pick Mode is a Decoding and Transmission process where bar codes that are not within the configurable distance from the center of the aiming pattern are not acknowledged or transmitted to the host. It is active only while the scanner is in Trigger Single mode. If the scanner switches to a different Read Mode, Pick Mode is automatically disabled.



This feature is not compatible with Multiple Labels Reading in a Volume.

NOTE

PICK MODE
ENTER/EXIT PROGRAMMING MODE
◆ Pick Mode = Disable
Pick Mode = Enable
◆ = default value

Multiple Label Reading

The reader offers a number of options for multiple label reading. See the software configuration tool for descriptions of these features and programming labels.

Technical Features

Electrical Features	
Power Supply	5 Vdc ± 5%
Consumption (typical)	Operating: <400 mA @ 5 V Standby/Idle: <90 mA @ 5 V
Max. Scan Rate	60 frames/sec
Reading Indicators	Top Illumination, Good Read Spot, Beep
Optical Features	
Optical Format	1/6"
Active Imager Size	2396 um (H) x 1797 um (V)
Active Pixels	640 H x 480 V
Illumination System	LED source Red Emission (wavelength = 624 nm)
Aiming System	LED source Blue emission (wavelength = 468 nm)
Ambient Light	Up to 100,000 lux
Tilt Tolerance	0° - 360°
Pitch Tolerance	± 65°
Skew Tolerance	± 65
Field of View	33°x 25°
DOF Depth of Field (Typical)	Code 39 5 mil: 0.5 - 25.0 cm (0.19" - 9.8") 10 mil: 0.5 - 38 cm (0.19" - 14.9") EAN13 13 mil: 0.5 - 51.0 cm (0.19" - 20.1") PDF417 6.7 mil: 0.5 - 21.0 cm (0.19" - 8.3") Datamatrix 10 mil: 0.5- 21.5 cm (0.19" - 8.5") Code 128 5 mil: 2 - 21.5 cm (0.8" - 8.5") QR Code 20 mil: 0- 37 cm (0" - 14.6")
Max. Resolution	1D Min = 3 mil PDF417 Min = 3 mil Datamatrix Min = 5 mil
PCS (Wasp Test Chart)	minimum 20% (15% with specific configuration)

Environmental Features	
Working Temperature	0 °C to + 50 °C (+32° to +122 °F)
Storage Temperature	-40 °C to + 70 °C (-40° to +158 °F)
Humidity	95% non condensing
Drop Resistance	IEC 68-2-32 1.5 m (4.9 ft)
Trigger Resistance	10 Mhits
ESD Protection	16 KV
Protection Class	IP52
Weight	approx. 145g (5.1 oz)
Cable Length	Refer to www.waspbarcode.com
Decode Capability	
1D Bar Codes UPC/EAN/JAN (A, E, 13, 8); UPC/EAN/JAN (including P2 /P5); UPC/EAN/JAN (including; ISBN / Bookland & ISSN); UPC/EAN Coupons; Code 39 (including full ASCII); Code 39 Trioptic; Code39 CIP (French Pharmaceutical); LOGMARS (Code 39 w/ standard check digit enabled); Danish PPT; Code 32 (Italian Pharmacode 39); Code 128; Code 128 ISBT; Interleaved 2 of 5; Standard 2 of 5; Interleaved 2 of 5 CIP (HR); Industrial 2 of 5; Discrete 2 of 5; Matrix 2 of 5; IATA 2of5 Air cargo code; Code 11; Codabar; Codabar (NW7); ABC Codabar; EAN 128; Code 93 ; MSI; PZN; Plessey; Anker Plessey; GS1 DataBar Omnidirectional; GS1 DataBar Limited; GS1 DataBar Expanded; GS1 DataBar Truncated; DATABAR Expanded Coupon.	
2D / Stacked Codes The WDI4250 scanner is capable of decoding the following symbologies using multiple frames (i.e. Multi-Frame Decoding): Data Matrix; Inverse Data Matrix; Data Matrix is configurable for the following parameters; Normal or Inverted; Square or Rectangular Style; Data length (1 -3600 characters); Maxicode; QR Codes (QR, Micro QR and Multiple QR Codes); Aztec; Postal Codes - (Australian Post; Japanese Post; KIX Post; Planet Code; Postnet; Royal Mail Code (RM45CC); Intelligent Mail Barcode (IMB); Sweden Post; Portugal Post); LaPoste A/R 39; PDF-417; MacroPDF; Micro PDF417; GS1 Composites (1 - 12); French CIP13 ^a ; GS1 DataBar Stacked; GS1 DataBar Stacked Omnidirectional; GS1 DataBar Expanded Stacked; GSI Databar Composites; Chinese Sensible Code; Inverted 2D codes ^b .	

- It is acceptable to handle this with ULE.
- The SW can apply the Normal/Reverse Decoding Control to the following symbologies: Data Matrix, QR, Micro QR, Aztec and Chinese Sensible Code.

LED and Beeper Indications

The imager’s beeper sounds and its illumination flashes or changes color to indicate various functions or errors on the reader. A ‘Green Spot’ also lights to indicate a good read. The tables below list these indications.

Indication	LED	Beeper
Power-up	Upper LED flashes/blinks on power-up, however, this may be too rapid to view. With a USB interface, the LED blinks until enumeration with the host is completed.	Imager beeps four times at highest frequency and volume upon power-up.
Good Read	Upper green LED comes on for programmed time (default).	One beep at current frequency, volume, mono/bi-tonal setting upon a successful label scan.
ROM Failure	200ms on / 200ms off	Imager sounds one error beep at highest volume for 200 mS.
Limited Scanning Label Read	N/A	Imager 'chirps' six times at the highest frequency and current volume.
Imager Disabled	The LED blinks continuously 100mS on / 900 mS off	N/A

Troubleshooting

Problem	Possible Cause	Possible Solutions
Nothing happens when the scan button is pulled.	No power to the imager.	Check system power. Ensure power supply is connected.
	Interface or power cables are loose.	Ensure all cable connections are secure.
LED comes on, but bar code does not decode.	Imager not programmed for correct bar code type.	Ensure imager is programmed to read the type of bar code scanned.
	Bar code label is unreadable.	Check the label to ensure it is not defaced. Try scanning another bar code type.
	Distance between imager and bar code is incorrect.	Move imager closer to or further from the bar code.
Bar code is decoded but not transmitted to the host.	Imager not programmed for the correct host type.	Scan the appropriate host type barcode.

Wasp Technologies Limited Factory Warranty

Warranty Coverage

Wasp warrants to Customer that Wasp's products will be free from defects in materials and workmanship for a period of five years from product shipment. Wasp Barcode Technologies ("Wasp") hardware products are warranted against defects in material and workmanship under normal and proper use. The liability of Wasp under this warranty is limited to furnishing the labor and parts necessary to remedy any defect covered by this warranty and restore the product to its normal operating condition. Repair or replacement of product during the warranty does not extend the original warranty term. Products are sold on the basis of specifications applicable at the time of manufacture and Wasp has no obligation to modify or update products once sold. If Wasp determines that a product has defects in material or workmanship, Wasp shall, at its sole option repair or replace the product without additional charge for parts and labor, or credit or refund the defective products duly returned to Wasp. To perform repairs, Wasp may use new or reconditioned parts, components, subassemblies or products that have been tested as meeting applicable specifications for equivalent new material and products. Customer will allow Wasp to scrap all parts removed from the repaired product. The warranty period shall extend from the date of shipment from Wasp for the duration published by Wasp for the product at the time of purchase (Warranty period). Wasp warrants repaired hardware devices against defects in workmanship and materials on the repaired assembly for a 90 day period starting from the date of shipment of the repaired product from Wasp or until the expiration of the original warranty period, whichever is longer. Wasp does not guarantee, and it is not responsible for, the maintenance of, damage to, or loss of configurations, data, and applications on the repaired units and at its sole discretion can return the units in the "factory default" configuration or with any software or firmware update available at the time of the repair (other than the firmware or software installed during the manufacture of the product). Customer accepts responsibility to maintain a back up copy of its software and data.

Refer to:

<http://www.waspbarcode.com/support/warranty-claims>

Warranty Claims:

<http://www.waspbarcode.com/support/warranty-claims>

Warranty Exclusions

The Wasp Factory Warranty shall not apply to:

- (i) any product which has been damaged, modified, altered, repaired or upgraded by other than Wasp service personnel or its authorized representatives;
- (ii) any claimed defect, failure or damage which Wasp determines was caused by faulty operations, improper use, abuse, misuse, wear and tear, negligence, improper storage or use of parts or accessories not approved or supplied by Wasp;
- (iii) any claimed defect or damage caused by the use of product with any other instrument, equipment or apparatus;
- (iv) any claimed defect or damage caused by the failure to provide proper maintenance, including but not limited to cleaning the upper window in accordance with product manual;
- (v) any defect or damage caused by natural or man-made disaster such as but not limited to fire, water damage, floods, other natural disasters, vandalism or abusive events that would cause internal and external component damage or destruction of the whole unit, consumable items;
- (vi) any damage or malfunctioning caused by non-restoring action as for example firmware or software upgrades, software or hardware reconfigurations etc.;
- (vii) the replacement of upper window/cartridge due to scratching, stains or other degradation and/or
- (viii) any consumable or equivalent (e.g., cables, power supply, batteries, keypads, touch screen, triggers etc.).

No Assignment

Customer may not assign or otherwise transfer its rights or obligations under this warranty except to a purchaser or transferee of product. No attempted assignment or transfer in violation of this provision shall be valid or binding upon Wasp.

WASP'S LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ORAL OR WRITTEN, STATUTORY OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NONINFRINGEMENT. WASP SHALL NOT BE LIABLE FOR ANY DAMAGES SUSTAINED BY CUSTOMER ARISING FROM DELAYS IN THE REPLACEMENT OR REPAIR OF PRODUCTS UNDER THE ABOVE. THE REMEDY SET FORTH IN THIS WARRANTY STATEMENT IS THE CUSTOMER'S SOLE AND EXCLUSIVE REMEDY FOR WARRANTY CLAIMS. UNDER NO CIRCUMSTANCES WILL WASP BE LIABLE TO CUSTOMER OR ANY THIRD PARTY FOR ANY LOST PROFITS, OR ANY INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL OR CONTINGENT DAMAGES REGARDLESS OF WHETHER WASP HAD ADVANCE NOTICE OF THE POSSIBILITY OF SUCH DAMAGES.

Risk of Loss

Customer shall bear risk of loss or damage for product in transit to Wasp. Wasp shall assume risk of loss or damage for product in Wasp's possession. In the absence of specific written instructions for the return of product to Customer, Wasp will select the carrier, but Wasp shall not thereby assume any liability in connection with the return shipment.

Ergonomic Recommendations



In order to avoid or minimize the potential risk of ergonomic injury follow the recommendations below. Consult with your local Health & Safety Manager to ensure that you are adhering to your company's safety programs to prevent employee injury.

- Reduce or eliminate repetitive motion
- Maintain a natural position
- Reduce or eliminate excessive force
- Keep objects that are used frequently within easy reach
- Perform tasks at correct heights
- Reduce or eliminate vibration
- Reduce or eliminate direct pressure
- Provide adjustable workstations
- Provide adequate clearance
- Provide a suitable working environment
- Improve work procedures.

Services and Support

Wasp Technologies provides several services as well as technical support through its website. Log on to www.waspbarcode.com and click on the links indicated for further information.

Cleaning

When needed, gently clean the scan window using a lens cloth or lint-free cleaning tissues dampened with a non-abrasive, mild, water-based glass cleaner. The other surfaces can also be cleaned using the same cleaning agents. Do not allow fluids to flow into the internal parts of the scanner.



WARNING

Be sure to turn off power and unplug the device from electrical outlet before cleaning.



CAUTION

DO NOT use abrasive pads or cleaning agents.

Common Cleaning Solution

The cleaners and disinfectants listed below are recommended for use on Wasp WDI4250 enclosures:

Cleaners	Disinfectants
Formula 409® Glass and Surface Cleaner	Clorox® Bleach (diluted 10:1)
70% Isopropyl Alcohol	Hydrogen Peroxide 3%
Windex® Multi-Surface	
100% Gentle dish soap and water	



NOTE

Disinfectants may be harsh on metal. They are recommended for use only on enclosures.



CAUTION

DO NOT spray or pour cleaner directly onto the unit.

DO NOT use solutions in their concentrated form.

DO NOT use aerosols, solvents or abrasives.

DO NOT use paper towels or rough cloths to clean windows.

Cleaning enclosure and window surfaces

1. Moisten a soft cloth with a recommended cleaning solution. Be sure to apply the solution to your cloth first. Wring excessive liquid from the cloth.
2. Use the cloth to wipe down the surface of the unit. Use cotton swabs, lightly moistened, to reach in corners and crevices.
3. Use another clean dry cloth to remove any residue of the cleaning agent and ensure the unit is dry.



NOTES



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