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### TROUBLESHOOTING GUIDE

# Datalogic Matrix 220 and Matrix 220 XAI troubleshooting guide: errors, faults and fixes

Updated 21 October 2026 · By TIMCOD maintenance technicians · Source: official Datalogic documentation, Matrix 220 Product Reference Guide (Datalogic) and Matrix 220 Quick Reference Guide (821012941 Rev. B) (list at the end of the page)

TIMCOD PRODUCT PAGE (IN FRENCH)

**See the Datalogic Matrix 220 XAI product page** →

**In brief.** The Datalogic Matrix 220 is a compact industrial fixed-mount scanner with a 1.2 MP sensor, available in standard, DPM (direct part marking, red or blue illumination), high power, ESD, PoE and UV versions; the XAI version adds artificial intelligence algorithms for difficult DPM markings. It reports its status through its lights, a beeper and two spots, green and red, projected onto the target; its X-PRESS button sets the focus, image and code without a PC, and can back up the configuration to a BM100 module. The Datalogic reference guide links most no-reads to the reading distance, the mounting angle and the choice of illumination. This guide brings together 29 entries, from error signals to resetting, including PoE, ID-NET and browser-based discovery. Click a question to open its entry.

- **A light or spot comes on, the scanner beeps:** find the signal in the [lookup table](#) and open the matching entry.

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- **The scanner does not read, especially on marked parts:** start with [the scanner does not read](#), then [DPM markings](#) and the [reading](#) section.
- **The scanner cannot be found on the network:** see the [DL.CODE](#), [browser-based discovery](#) and [PoE](#) entries.
- **The problem keeps coming back:** the [preventive maintenance](#) section explains how it reduces this type of fault.

## What do the lights, spots and beeps on my Datalogic Matrix 220 mean? Find your signal

The Matrix 220 combines three types of signal: the lights on the housing (including the blue PWR light, on the back near the bracket), the green and red spots projected onto the target and the beeps that conclude the X-PRESS procedures. The table links each signal described by Datalogic to its cause and to the troubleshooting entry.

| Signal                             | Lights or spots<br>(Datalogic guide)          | Likely cause                                   | Entry                                                      |
|------------------------------------|-----------------------------------------------|------------------------------------------------|------------------------------------------------------------|
| All lights flash<br>for one second | ● ● ● STATUS,<br>COM, TRIGGER,<br>GOOD, READY | Normal start-up (reset or<br>restart)          | <a href="#">The<br/>scanner<br/>does not<br/>switch on</a> |
| PWR (Power On)<br>light on         | blue, on the back<br>near the bracket         | The scanner is powered                         | <a href="#">The<br/>scanner<br/>does not<br/>switch on</a> |
| NET light on                       | ● yellow                                      | On-board Ethernet network<br>connection active | <a href="#">Scanner<br/>greyed<br/>out in<br/>DL.CODE</a>  |

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| Signal                                     | Lights or spots<br>(Datalogic guide) | Likely cause                                                                         | Entry                              |
|--------------------------------------------|--------------------------------------|--------------------------------------------------------------------------------------|------------------------------------|
| READY light on                             | ● green                              | The scanner is ready to operate                                                      | <u>The scanner does not scan</u>   |
| GOOD light on or green spot on the target  | ● green                              | Good read according to the configured criteria                                       | <u>Good read and several codes</u> |
| TRIGGER light on                           | ● yellow                             | Reading phase in progress, external trigger active                                   | <u>Triggering</u>                  |
| COM light permanently on                   | ● yellow                             | Communication on the main serial port; stays on with a fieldbus via CBX500 (polling) | <u>Industrial network</u>          |
| STATUS light on or red spot on the target  | ● red                                | NO READ: no valid code decoded                                                       | <u>Red spot, NO READ</u>           |
| Five-light bar graph (20, 40, 60, 75, 95%) | ● ● ● five X-PRESS lights            | Test mode: good read rate                                                            | <u>Test mode</u>                   |
| STATUS flashes on its own in Test mode     | ● red                                | No code read during the test                                                         | <u>Test mode</u>                   |
| STATUS and READY flash together            | ● ● red and green                    | Diagnostic error                                                                     | <u>Diagnostic error</u>            |
|                                            |                                      |                                                                                      |                                    |

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| Signal                                                         | Lights or spots<br>(Datalogic guide)  | Likely cause                                                   | Entry                                        |
|----------------------------------------------------------------|---------------------------------------|----------------------------------------------------------------|----------------------------------------------|
| All lights flash for about 3 seconds (button held at power-on) | ● ● ● all                             | Environment reset window                                       | <a href="#"><u>Reset</u></a>                 |
| All lights solid after power-on                                | ● ● ● all, solid                      | The scanner has entered the Loader program                     | <a href="#"><u>Loader mode</u></a>           |
| Aim light flashing, two aiming squares projected               | —                                     | Aim mode: automatic focusing in progress                       | <a href="#"><u>Aim mode and focusing</u></a> |
| 3 high beeps at the end of Aim mode                            | the Aim light stops flashing          | Reading distance saved                                         | <a href="#"><u>Aim mode and focusing</u></a> |
| 3 high beeps and green spot                                    | ● the function's light stops flashing | Automatic Setup or Code Autolearn successful, parameters saved | <a href="#"><u>X-PRESS button</u></a>        |
| 1 long low beep                                                | the function's light stops flashing   | Automatic Setup or Image Auto Setup failed, nothing is saved   | <a href="#"><u>Long low beep</u></a>         |

The signals come from the “Indicator and Keypad Button”, “LED Spots”, “X-PRESS Human Machine Interface” and “Step 3 - Configure the Reader” sections of the Datalogic Matrix 220 Product Reference Guide. The multilingual quick start guide gives the French labels: READY “le lecteur est prêt à fonctionner” (the scanner is ready to operate), GOOD “lecture correcte” (good read), TRIGGER “en phase de lecture” (in reading phase), COM “communication active sur le port série principal” (active communication on the main serial port), STATUS “NO READ, lecture échouée” (NO READ, read failed). A dash means that the guide does not specify the colour of the light.

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# Datalogic Matrix 220 error lights, spots and beeps: causes and solutions

Red spot, STATUS and READY flashing simultaneously, long low beep, solid lights at start-up: what these signals mean according to Datalogic.

## Why are the STATUS and READY lights on my Datalogic Matrix 220 flashing together?

Lights: STATUS (red) and READY (green) flash simultaneously.

**Short answer:** This is how the Matrix 220 signals a diagnostic error. To find out which one, open the Diagnostic page of the DL.CODE monitor, or enable the sending of diagnostic messages on the interfaces: the host will then receive the details of the error.

### LIKELY CAUSE

According to the Datalogic reference guide, the simultaneous flashing of the STATUS (red) and READY (green) lights is the scanner's diagnostic indication. It does not specify the error: the table of error conditions is on the Diagnostic page of the DL.CODE monitor.

### WHAT TO DO

1. Locate the scanner in DL.CODE or with a browser (see [DL.CODE](#) and [web discovery](#)).
2. In DL.CODE, open the monitor then the Diagnostic page to read the error condition.
3. If the PLC or host software needs to be notified, enable the transmission of diagnostic messages on the interface concerned.
4. Deal with the cause reported, then check that STATUS and READY are no longer flashing together.

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Source: [Indicator and Keypad Button; X-PRESS Human Machine Interface – Diagnostic Indication](#) – Matrix 220 Product Reference Guide (Datalogic) (official documentation).

## Why does my Matrix 220 project a red spot onto the part?

Red spot on the target · Light: STATUS (red) “NO READ, read failed”.

**Short answer:** The red spot lights up the target when no valid read has taken place: no code has been decoded. The red STATUS light indicates the same NO READ result. Check the distance, illumination and placement of the code, then run the Automatic Setup again.

### LIKELY CAUSE

The Datalogic reference guide describes two LED spots projected onto the target: the green spot for a good read according to the configured criteria, the red spot when there is no valid read. The events that turn on each spot are set in DL.CODE; the spot turns off on a signal or after a timeout. By default, output 1 is also assigned to the no-read (No Read).

### WHAT TO DO

1. Check that the part is presented at the distance saved by Aim mode (see [Aim mode](#)).
2. For direct part marking, check the illumination and the type of Automatic Setup (see [DPM markings](#)).
3. If several codes are expected, check the good read logic (see [several codes](#)).
4. If the red spot does not turn off as expected, check in DL.CODE the event and the timeout that control it.

Sources: [LED Spots; Indicator and Keypad Button; Outputs](#) – Matrix 220 Product Reference Guide (Datalogic) · [User interface \(French section\)](#) – Matrix 220 Quick Reference Guide, multilingual (Datalogic, 801000590 Rev. B) (official documentation).

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## Why does my Matrix 220 give a long low beep at the end of Automatic Setup?

Beep: one long low beep · Light: the Setup light stops flashing, no green spot.

**Short answer:** The automatic setup did not complete and the scanner exited without saving anything. Present a single code, sharp and stationary, at the distance saved by Aim mode, then run the function again.

### LIKELY CAUSE

The Datalogic reference guide provides this beep for two X-PRESS procedures.  
Automatic Setup: if learning cannot be completed, the scanner exits without saving.  
Image Auto Setup: if image acquisition calibration is not achieved within about 5 seconds, the same result. Automatic Setup does not recognise Pharmacode, MSI, Standard 2 of 5 or Matrix 2 of 5.

### WHAT TO DO

1. Check that the symbology is not one of those that Automatic Setup does not recognise; if it is, configure the code in DL.CODE.
2. First redo Aim mode to save the correct reading distance (see [Aim mode](#)).
3. Present a single code, centred between the two aiming squares, without moving it.
4. Hold down the X-PRESS button until the Setup light comes on, release it and wait for the flashing to end.
5. If it succeeds: green spot, three high beeps and solid light.

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Source: [Step 3 - Configure the Reader \(Automatic Setup\); X-PRESS Human Machine Interface \(Automatic Setup; Image Auto Setup\)](#)  – Matrix 220 Product Reference Guide (Datalogic) (official documentation).

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## Why do all the lights on my Matrix 220 stay on after power-on?

Lights: all permanently on, the scanner does not go into operation.

**Short answer:** The X-PRESS button was released after the flashing ended during power-on: the scanner is in its Loader program. A power cycle (switching off and then on again) returns it to normal operation.

### LIKELY CAUSE

The Datalogic reference guide specifies that, during the environment reset procedure, releasing the button once the lights stay permanently on makes the scanner enter Loader mode instead of resetting its parameters.

### WHAT TO DO

1. Switch off the power to the Matrix 220, or unplug the Ethernet cable on a PoE model.
2. Power on again without pressing the button: the lights flash for one second, then the scanner operates.
3. For a reset, start again, releasing and pressing again during the flashing that lasts about 3 seconds (see [resetting](#)).

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Source: [Step 3 - Configure the Reader – Reset Reader to Factory Default Environment](#) – Matrix 220 Product Reference Guide (Datalogic) (official documentation).

## My Datalogic Matrix 220 does not read codes or DPM markings: causes and solutions

Reading distance saved by Aim mode, DPM illumination, YAG filter, triggering and line speed: the settings described by Datalogic.

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## Why won't my Datalogic Matrix 220 fixed-mount scanner read barcodes?

Symptoms: red spot, red STATUS light, no data sent to the host.

**Short answer:** On the Matrix 220, the reading distance is saved with Aim mode (automatic focusing), then the image and code are calibrated with Automatic Setup. Redo these two steps with the actual code, with the scanner tilted 10 to 20° relative to the label, then check in Test mode.

### LIKELY CAUSE

The Datalogic reference guide organises the quick setup in three stages: mounting (“pitch” or “skew” angle of 10 to 20°, “tilt” rotation of 0°, entire code within the field of view, distance chosen from the diagrams for the 7 mm or 12 mm optics), Aim mode for the reading distance, then Automatic Setup for the acquisition, image processing and decoding parameters. A code that is out of range, poorly lit or of an unconfigured symbology is not decoded.

### WHAT TO DO

1. Check the mounting: angle of 10 to 20° relative to the label and entire code within the field of view.
2. Place a single code at the application's reading distance and run Aim mode (see [Aim mode](#)).
3. Run Automatic Setup with the same code: a green spot and three high beeps confirm that it has been saved.
4. For a marked part (DPM), see the [DPM markings](#) entry.
5. Measure the result in Test mode (see [Test mode](#)).
6. For moving parts, check the exposure time (see [fast conveyor](#)).

For several symbologies, several image settings or code quality grading, Datalogic points to the DL.CODE manual configuration (Manual Setup).

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Sources: [Step 2 - Mount and Position the Reader](#); [Step 3 - Configure the Reader](#); [Step 6 - Device Configuration](#) [↗](#) – Matrix 220 Product Reference Guide (Datalogic) · [Installation Procedure; HMI X-PRESS Interface](#) [↗](#) – Matrix 220 Quick Reference Guide (Datalogic, 821012941 Rev. B) (official documentation).

## How does my Matrix 220 focus with Aim mode?

Light: Aim light flashing, two red aiming squares projected · Beeps: three high beeps at the end.

**Short answer:** In Aim mode, the Matrix 220 turns on its two aiming pointers and starts automatic focusing. Within 3 seconds, centre a code between the two squares and do not move it again: three high beeps indicate that the reading distance has been saved.

### LIKELY CAUSE

According to the Datalogic reference guide, the Matrix 220 aiming system projects two equidistant squares using two red LED pointers; the code must be centred between them. Aim mode, accessible without a PC via the X-PRESS button, triggers automatic focusing and stores the reading distance.

### DATALOGIC PROCEDURE

1. Power on the scanner: all the lights flash for one second, then the blue POWER ON light, on the back near the bracket, stays on.
2. Place a single code at your application's reading distance (field diagrams for the 7 mm or 12 mm optics).
3. Hold down the X-PRESS button until the Aim light comes on, then release it: the aimer comes on and automatic focusing starts, with the Aim light flashing.
4. Within 3 seconds, before the scanner flashes, centre one of the largest codes between the aiming indicators and keep it still.
5. When the distance has been saved, the Aim light stops flashing and the scanner gives three high beeps.

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6. To cancel, press the button once: focusing is abandoned and the aimer turns off after a short delay.

The Datalogic product page presents this focusing as electronic ("Electronic Focus").

Sources: [Step 3 - Configure the Reader \(Aim Mode\)](#); [Aiming System](#); [X-PRESS Human Machine Interface \(Aim Mode\)](#) [↗](#) – [Matrix 220 Product Reference Guide \(Datalogic\)](#) · [Matrix 220 2D Imager Barcode Reader Datalogic - Datalogic](#) [↗](#) – [Datalogic product page \(official documentation\)](#).

## Why won't my Matrix 220 read direct part markings (DPM)?

Symptoms: dot-peened, laser-etched or inkjet codes not decoded, while labels read fine.

**Short answer:** DPM markings require a suitable model and setting: red or blue DPM illumination, and Automatic Setup in DPM mode, available only on the Matrix 220 X and XAI. The Matrix 220 XAI adds artificial intelligence algorithms intended for scratched, faded or stamped markings.

### LIKELY CAUSE

The Datalogic reference guide states that DPM models have three separately selectable types of illumination, in red or blue, and that high power DPM models offer polarised and non-polarised red illumination that is twice as powerful. On the M220 X and XAI, Automatic Setup exists in a standard version and a DPM version; the other models only have the standard version. Datalogic presents the Matrix 220 XAI as its most advanced DPM scanner, with an artificial intelligence processing platform (Decode X technology).

### WHAT TO DO

1. Check the scanner part number: a DPM model (DPM-R red or DPM-B blue) and, for DPM Automatic Setup, an X or XAI version.
2. Choose the illumination colour that gives the best contrast: according to Datalogic, red or blue models maximise contrast when the code or background is coloured.
3. In DL.CODE, select the appropriate illumination combination (diffuse top, bottom, top + bottom, polarised or not) depending on the model.

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4. Run Automatic Setup in the DPM version (DL.CODE Enhanced AutoSetup on XAI models).
5. Check the result in Test mode (see [Test mode](#)).

Datalogic states that reconfiguring the Matrix 220 XAI with the DL.CODE Enhanced AutoSetup generally takes less than 60 seconds.

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Sources: [Internal Lighting Systems](#); [Direct Part Marking Applications](#); [Available Models](#); [Step 6 - Device Configuration](#) [↗](#) – [Matrix 220 Product Reference Guide \(Datalogic\)](#) · [Matrix 220 2D Imager Barcode Reader Datalogic - Datalogic](#) [↗](#) – [Datalogic product page](#) · [Matrix 220 XAI: Ultimate DPM with the fastest auto-setup ever, AI-Powered - Datalogic](#) [↗](#) – [Datalogic press release \(27 February 2025\)](#) (official documentation).

## Why isn't the illumination on my Matrix 220 enough to read certain codes?

Symptoms: dark or low-contrast image, coloured codes read poorly.

**Short answer:** The Matrix 220 is available with several illumination systems: standard (4 white LEDs), standard high power (8 white LEDs, twice as powerful), red or blue DPM, high power DPM. Check that the installed model suits the contrast of the code and choose the most suitable illumination in DL.CODE.

### LIKELY CAUSE

According to the Datalogic reference guide, the power and colour of the internal illumination depend on the model. For coloured codes or backgrounds, Datalogic states that models with red or blue illumination make it possible to maximise contrast. The HDR (High Dynamic Range) function also allows shorter exposure times (example from the guide: 100 µs with HDR compared with 250 µs without).

### WHAT TO DO

1. Identify your model's illumination from its part number (STD, HP, DPM-R, DPM-B).
2. In DL.CODE, compare the illumination combinations available on your model (top, bottom, central, chained).

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3. For a coloured code, choose the red or blue illumination that offers the best contrast.
4. Run Image Auto Setup or Automatic Setup again to recalibrate acquisition.
5. If the contrast is still insufficient, consider a high power or DPM model.

Source: [Internal Lighting Systems; Application Examples \(Color Code/Background\); Maximum Line Speed and Exposure Time Calculations](#)  – Matrix 220 Product Reference Guide (Datalogic) (official documentation).

## Why could my Matrix 220 be damaged when reading codes during laser marking?

Symptoms: scanner installed just after a laser marking station.

**Short answer:** Radiation from real-time laser marking can burn the CMOS sensor. To read codes during or just after laser marking, Datalogic requires a scanner fitted with a YAG filter, in the form of a window cover.

### LIKELY CAUSE

The Datalogic reference guide offers three window covers: ESD (93ACC0227), YAG filter (93ACC0228) and ESD + YAG (93ACC0229). It warns against reading codes produced by real-time laser marking without a YAG filter, which can burn the sensor.

**Caution:** Without a YAG filter, real-time laser marking can burn the scanner's CMOS sensor, according to Datalogic.

### WHAT TO DO

1. Check whether the scanner sees the marking laser beam while it is operating.
2. If so, fit it with the YAG filter cover (93ACC0228) or the ESD + YAG cover (93ACC0229).
3. Fit the cover following the procedure in the [window cover](#) entry.
4. Run Automatic Setup again after fitting the cover.

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Source: [Mounting Accessory Covers](#)  – Matrix 220 Product Reference Guide (Datalogic) (official documentation).

## How does Test mode on my Matrix 220 show the reading quality?

Lights: five-light bar graph, steps at 20, 40, 60, 75 and 95%; red STATUS flashing on its own if nothing is read.

**Short answer:** Test mode turns the five lights into a bar graph of the good read rate, with steps at 20, 40, 60, 75 and 95%. If only the red STATUS light flashes, the code is not being read. Pressing the button ends the test, which stops on its own after three minutes.

### LIKELY CAUSE

The Datalogic reference guide makes Test mode the last step of the quick setup: it checks the good read rate for the code presented once the distance and Automatic Setup have been saved. The quick start guide describes it as a “Test mode with bar graph display”.

### WHAT TO DO

1. Hold down the X-PRESS button until the Test light comes on, then release it.
2. Present the code and read the number of lights on: five lights correspond to a rate of at least 95%.
3. If only STATUS flashes, redo Aim mode and Automatic Setup (see [the scanner does not read](#)).
4. Press the button once to exit (automatic exit after three minutes by default).

Sources: [Step 7 - Test Mode; X-PRESS Human Machine Interface \(Test Mode\)](#)  – Matrix 220 Product Reference Guide (Datalogic) · [X-PRESS HMI interface \(French section\)](#)  – Matrix 220 Quick Reference Guide, multilingual (Datalogic, 801000590 Rev. B) (official documentation).

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## Why doesn't my Matrix 220 respond to the signal from the trigger photocell?

Light: TRIGGER (yellow) off when the part arrives.

**Short answer:** Check that input 1 (External Trigger) is receiving the signal: the yellow TRIGGER light should come on when it is active. On a PoE model, the photocell must have its own power supply, as Datalogic specifies that PoE models do not power the external trigger.

### LIKELY CAUSE

According to the Datalogic reference guide, the Matrix 220 has two polarity-insensitive optocoupled inputs. Input 1 triggers acquisition in One Shot mode or controls the reading phase in Phase mode; input 2 acts as a second trigger in Phase mode or as the storage command in Match Code. The active state is set in the software and a debounce filter is active by default. Both inputs accept NPN and PNP commands.

**Caution:** The voltage on the CBX Vdc/GND terminals powers the sensor without going through the box's switch: switch off the power before working inside it. On a CBX500, input 3 (I3A, I3B) is reserved: Datalogic asks you not to connect anything to it.

### WHAT TO DO

1. In DL.CODE, check that the reading mode is One Shot or Phase Mode (in Continuous, no trigger is expected).
2. Check the photocell wiring on input 1 and its power source; on a PoE model, provide an external power supply for the photocell.
3. Check the active level of the input and adjust the debounce filter if triggers are missed or repeated.
4. Respect the limits: 30 Vdc between the input terminals, 10 mA on the scanner side plus 12 mA on the CBX side.
5. Pass a part through and check that the TRIGGER light comes on.

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Sources: [Inputs; Indicator and Keypad Button; Step 1 - Connect the System](#)  – Matrix 220 Product Reference Guide (Datalogic) · [Ethernet connectors – PoE note \(French section\)](#)  – Matrix 220 Quick Reference Guide, multilingual (Datalogic, 801000590 Rev. B) (official documentation).

## Why does my Matrix 220 miss codes when the line speeds up?

Symptoms: good reads at low throughput, no-reads at full speed.

**Short answer:** Beyond a certain speed, the code moves during exposure and the image is blurred. Datalogic requires an exposure time below  $X / LS$  (module size divided by line speed). The HDR function, which allows shorter exposures, significantly increases the permissible speed.

### LIKELY CAUSE

The Datalogic reference guide gives a worked example: a 13 mil (0.33 mm) Code 128 read at 200 mm theoretically supports 1,320 mm/s with HDR disabled (250  $\mu$ s exposure) and 3,300 mm/s with HDR enabled (100  $\mu$ s exposure).

### WHAT TO DO

1. Measure the line speed and the module size of the code.
2. Calculate the maximum exposure time:  $X / LS$ .
3. In DL.CODE, set an exposure time below the result obtained.
4. If the image becomes too dark, enable the HDR function or switch to more powerful illumination (see [illumination](#)).
5. Check reading at full throughput.

Source: [Maximum Line Speed and Exposure Time Calculations](#)  – Matrix 220 Product Reference Guide (Datalogic) (official documentation).

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# My Matrix 220 reads a code but does not validate the read: causes and solutions

A good read depends on the collection type and on the logic between the expected codes defined in DL.CODE.

## Why doesn't my Matrix 220 validate the read when only one of the codes is present?

Symptoms: a code is read but the red spot comes on and nothing is transmitted.

**Short answer:** With several codes expected, the default rule in DL.CODE is a logical AND: a good read requires all of them to be decoded. For a single code to be enough, combine them with an exclusive OR (XOR) in the Good Read configuration.

### LIKELY CAUSE

The Datalogic reference guide describes four types of data collection (Code Collection, Code Combination, Presentation, Match Code), with varying availability depending on the reading mode, and a default combination of the expected codes with a logical AND. The green spot, the red spot and the outputs then follow the result of this logic.

**Caution:** Avoid having the same signal or the same channel trigger several identical events: Datalogic warns that they then occur in a random order and make the scanner's behaviour unpredictable.

### WHAT TO DO

1. In DL.CODE, open the Good Read configuration and note the type of collection chosen.
2. Group the codes concerned in a single XOR box and delete the box that has become empty.
3. Check in Output Setup that the green and red spots and outputs 1 and 2 follow the required events.

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4. Check the message sent to the host in the data formatting.
5. Save the configuration to permanent memory (see [lost settings](#)).

Source: [Step 6 - Device Configuration \(Good Read Setup; Output Setup\)](#) [↗](#) – Matrix 220 Product Reference Guide (Datalogic) (official documentation).

## My Matrix 220 does not communicate: Ethernet, web discovery, ID-NET, industrial network and outputs

The Matrix 220 communicates via Ethernet (TCP, UDP, FTP, industrial protocols, OPC UA), via its serial ports, on an ID-NET network and through its outputs.

### Why does DL.CODE show my Matrix 220 greyed out?

Symptoms: the scanner is detected but greyed out in the device list.

**Short answer:** The scanner is not on the same local network as the PC. Find it by its serial number, click its spanner and enter the IP address, subnet mask and gateway provided by your network administrator: it then reappears in colour.

#### LIKELY CAUSE

According to the Datalogic reference guide, DL.CODE lists the devices on the local network and greys out those outside the LAN. The Matrix 220 Ethernet interface has auto-crossover and communicates via TCP client or server, UDP and FTP client; the yellow NET light indicates an active connection.

**Caution:** Datalogic asks that Ethernet and data port connections be limited to networks routed within the plant or building.

#### WHAT TO DO

1. Check the yellow NET light and the Ethernet cable (CAB-ETH-X-MOx).

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2. In DL.CODE, identify the scanner by its serial number and click its spanner icon (Device Environment Configuration).
3. Enter a valid IP address, subnet mask and gateway for your network, then confirm with OK.
4. Double-click the scanner, now in colour in Online Devices, to configure it.
5. Without DL.CODE, you can also use web discovery (see [browser-based discovery](#)).

Source: [Step 5 - Installing DL.CODE Configuration Program \(Device Discovery\); On-Board Ethernet Interface; Compliance – Power Supply](#)  – Matrix 220 Product Reference Guide (Datalogic) (official documentation).

## How do I find my Matrix 220 on the network without installing DL.CODE?

Symptoms: scanner IP address unknown, PC without DL.CODE.

**Short answer:** Open a browser on a PC on the same network and go to <http://datalogic.local/> : the Web Discovery page lists the reachable scanners. Click a scanner's spanner to set its IP address in DHCP or static mode.

### LIKELY CAUSE

The Datalogic reference guide describes configuration via Web Discovery, which lets you find and configure scanners from a browser, without DL.CODE. At least one scanner must be reachable from the PC; if there are several subnets, at least one scanner must be on the PC's subnet.

### WHAT TO DO

1. From a PC connected to the same network, open <http://datalogic.local/> in a browser.
2. Find your scanner in the list of reachable devices.
3. Click its spanner and enter the IP parameters provided by your network administrator, with an optional description.

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4. Only choose DHCP mode if the network has a DHCP server; otherwise, use static mode.
5. If needed, open the Web Monitor to monitor the scanner remotely.

On a slave scanner, the description can only be changed if the master scanner is reachable.

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Source: [Configuration using Web Discovery](#)  – Matrix 220 Product Reference Guide (Datalogic) (official documentation).

## Why do the Matrix 220 scanners on my ID-NET network communicate poorly with each other?

Symptoms: slave scanners lost, missing data on a master/slave network.

**Short answer:** First check the termination: the ID-NET termination switch on the CBX box must be ON at the first and last scanner on the network. Then check the cable, the shield earthing at the master only and the length suited to the chosen baud rate.

### LIKELY CAUSE

The Datalogic reference guide sets the rules for the ID-NET network: shielded CAT5-type cable with an additional twisted pair (AWG 24 or 22, DeviceNet-type cables recommended), shield connected to earth only on the master side and never used as a common reference, default baud rate of 500 kbit/s. The maximum length depends on the baud rate: 1,200 m at 125 kbit/s, 900 m at 250 kbit/s, 700 m at 500 kbit/s.

### WHAT TO DO

1. Set the CBX ID-NET termination switch to ON at the first and last scanner, and only at those.
2. Check that the cable shield is connected to earth only at the master.
3. Compare the total network length with the limit for the chosen baud rate; reduce the baud rate to extend the network.



4. With a common power supply, use only two wires (ID+ and ID-), keep the DC cable separate from AC cables and keep the voltage drop below 0.8 V.
5. Check the master/slave configuration in DL.CODE.

Source: [ID-NET Interface \(ID-NET Cables; ID-NET Network Termination; ID-NET Response Time\)](#)  – Matrix 220 Product Reference Guide (Datalogic) (official documentation).

## Why doesn't my Matrix 220 exchange data with the PLC via PROFINET, EtherNet/IP or a fieldbus module?

Light: COM (yellow) permanently on with a fieldbus connection via CBX500.

**Short answer:** The Matrix 220 natively supports EtherNet/IP, PROFINET IO and Modbus TCP Client on its Ethernet port, as well as OPC UA. With a fieldbus module in a CBX500 box, do not connect anything to the main interface terminals; the COM light then stays on permanently, which is normal.

### LIKELY CAUSE

The Datalogic reference guide lists the protocols available on the on-board Ethernet interface (EtherNet/IP, PROFINET IO, Modbus TCP Client) and the OPC UA IoT protocol. It specifies that the COM light stays on permanently with a fieldbus network via CBX500, due to polling, even without data, and warns against connecting the main interface terminals when a fieldbus interface module is used.

### WHAT TO DO

1. Check in DL.CODE that the industrial protocol expected by the PLC is enabled.
2. With a fieldbus module in the CBX500, leave the main interface terminals free.
3. Do not try to turn off the COM light: with a fieldbus, it stays on by design.
4. For OPC UA, use a compatible OPC UA client and the DL.CODE OPC UA settings.



Sources: [On-Board Ethernet Interface](#); [OPC UA protocol](#); [Indicator and Keypad Button](#); [Electrical Connections](#)  – Matrix 220 Product Reference Guide (Datalogic) · [Technical Features – Electrical](#)  – Matrix 220 Quick Reference Guide (Datalogic, 821012941 Rev. B) (official documentation).

## Why does output 3 on my Matrix 220 never change state?

Symptoms: output inactive, reject or validation signal missing.

**Short answer:** Output 3 only exists on the CBX500 box and is not assigned to any event by default: you must assign one to it in DL.CODE. Outputs 1 and 2 signal the no-read and the good read by default.

### LIKELY CAUSE

According to the Datalogic reference guide, the Matrix 220 has three programmable outputs. Outputs 1 and 2, connected via the CBX, are opto-isolated and polarity-sensitive, with a line type to be set to NPN (NPN or PNP wiring possible) and limits of 30 Vdc, 40 mA continuous and 130 mA pulsed. Output 3, non-isolated and specific to the CBX500, accepts NPN, PNP or push-pull types, with 100 mA maximum.

**Caution:** Switch off the power before working inside the CBX box.

### WHAT TO DO

1. In Output Setup, check the event assigned to each output and assign one to output 3.
2. Set the line type of outputs 1 and 2 to NPN; choose NPN, PNP or push-pull for output 3.
3. Check the wiring and that the maximum currents are respected.
4. Save the configuration to permanent memory.

Source: [Outputs; Step 6 - Device Configuration \(Output Setup\)](#)  – Matrix 220 Product Reference Guide (Datalogic) (official documentation).



# My Matrix 220 does not power on: 10–30 Vdc power supply and PoE

Standard power supply, PoE models and ground references: the checkpoints given by Datalogic.

## Why does my Matrix 220 stay off when powered on?

Lights: PWR (blue, on the back near the bracket) off, no start-up flashing.

**Short answer:** A powered Matrix 220 turns on its blue PWR light, on the back near the bracket, after all the lights flash for one second. If it stays off, check the source: 10 to 30 Vdc and at least 1 A for standard models, a PoE injector for PoE models.

### LIKELY CAUSE

The Datalogic reference guide requires a UL-listed LPS or Class 2 source: a computer powering the scanner directly, a 10 to 30 V mains power supply of at least 1 A, or a Power over Ethernet source. It also points out a risk of damage: connecting GND, SGND and REF to different ground references can, beyond a 0.8 Vdc difference, permanently destroy the internal filtering.

**Caution:** According to Datalogic, installation is reserved for qualified personnel and neither use nor maintenance requires opening the scanner. Switch off the power before working inside the CBX.

### WHAT TO DO

1. Identify the type of model: standard (powered by cable) or PoE (part numbers 3xx-x4x, see [PoE](#)).
2. On a standard model, measure the voltage on the CBX Vdc/GND terminals (10 to 30 Vdc) and check the CAB-DSxx-S cable.
3. Check that GND, SGND and REF are not connected to different external grounds.

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4. Connect the chassis to the installation's earth with a flat copper braid shorter than 100 mm.
5. Restore the power: a correct start-up shows as a brief flash of all the lights, then the blue PWR light on.

**When to call a technician:** the PWR light stays off with a compliant power supply: installing and maintaining the scanner does not require opening it, and Datalogic reserves installation for qualified personnel.

Sources: [Compliance – Power Supply; Step 1 - Connect the System; Indicator and Keypad Button](#)  – Matrix 220 Product Reference Guide (Datalogic) · [Electrical Features; Compliance](#)  – Matrix 220 Quick Reference Guide (Datalogic, 821012941 Rev. B) (official documentation).

## Why won't my Matrix 220 PoE start up on the Ethernet cable?

Symptoms: PoE model with no PWR light, or trigger photocell inactive.

**Short answer:** PoE models (part numbers 3xx-x4x) are powered only via the Ethernet cable, in accordance with the IEEE 802.3af standard (alternative A or B). Check that the switch or injector is actually supplying PoE on that port. PoE does not power the external trigger: the photocell must have its own power supply.

### LIKELY CAUSE

The Datalogic reference guide states that PoE models only accept configuration via the Ethernet cable: configurations with a power cable are not supported. Power can be carried over the data pairs according to alternative A (midspan or endspan) or B of IEEE 802.3af. The quick start guide gives 48 Vdc and 4.8 W for these models and states, in its French section, that “PoE models do not power the external trigger”.

### WHAT TO DO

1. Check that the switch port or the injector supplies PoE (IEEE 802.3af).
2. Check the Ethernet cable; a separate power cable cannot be used on these models.

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3. Power the trigger photocell separately (see [triggering](#)).
4. If the COM/Trigger connector is not used, leave its cap in place: it provides IP67 protection.

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Sources: [Power Supply – Power Over Ethernet \(PoE\) Models](#); [Mounting Flexible Cables](#) [↗](#) – Matrix 220 Product Reference Guide (Datalogic) · [Electrical Features; Ethernet connectors \(French section\)](#) [↗](#) – Matrix 220 Quick Reference Guide, multilingual (Datalogic, 801000590 Rev. B) (official documentation).

## How do I configure, back up and reset a Matrix 220?

X-PRESS button functions, code learning, backup to a BM100 module, DL.CODE saving and authentication, environment reset.

### How do you use the X-PRESS button on the Matrix 220?

Beeps: three high beeps and green spot when a procedure succeeds.

**Short answer:** A brief press makes the STATUS light respond; when you hold the button, the lights move from one function to the next (Exit, function 1 to 4, then Exit again) and you just release on the function you want. The quick start guide lists Test mode, Aim mode and Automatic Setup; a press exits the function.

#### LIKELY CAUSE

According to the Datalogic reference guide, up to four functions can be assigned to the X-PRESS button, from among Test, Aim, Automatic Setup, Code Autolearn, Match Code Autolearn, Backup, Restore, Backup Erase and Image Auto Setup. The button is software-programmable and launches the X-PRESS interface by default; its functions are configured in DL.CODE.

#### WHAT TO DO

1. Press briefly: the STATUS light confirms that the press has been registered.

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2. Hold the button: the lights cycle in the order Exit, function 1, 2, 3, 4.
3. Release when the light for the function you want is on.
4. Press once to cancel or exit the current function.
5. If the functions are not the ones you expected, check their assignment in DL.CODE.

Sources: [Indicator and Keypad Button; X-PRESS Human Machine Interface \(X-PRESS Functions\)](#)  – Matrix 220 Product Reference Guide (Datalogic) · [X-PRESS HMI interface \(French section\)](#)  – Matrix 220 Quick Reference Guide, multilingual (Datalogic, 801000590 Rev. B) (official documentation).

## How does my Matrix 220 learn a new code or a reference code (Match Code)?

Light: Learn light flashing during learning · Beeps: three high beeps and green spot if successful.

**Short answer:** The Code Autolearn function learns a single code and replaces the previous one; it saves the decoding parameters without changing the image processing. Match Code Autolearn reads the code presented and saves it as the reference string, provided the scanner is already in Match Code mode.

### LIKELY CAUSE

The Datalogic reference guide distinguishes these two X-PRESS functions from Automatic Setup. Code Autolearn only changes the decoding parameters; to configure several codes, Datalogic refers to the DL.CODE Learn Code procedure.

### WHAT TO DO

1. Check that the function you want is one of the four functions assigned to the button (see [X-PRESS button](#)).
2. Present a single code, at the saved reading distance.
3. Select the function with the X-PRESS button and wait for the flashing to end.
4. For Match Code Autolearn, first configure the scanner in Match Code mode in DL.CODE.

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## 5. For several codes, use Learn Code in DL.CODE.

Source: [X-PRESS Human Machine Interface \(Code Autolearn; Match Code Autolearn\)](#)  – Matrix 220 Product Reference Guide (Datalogic) (official documentation).

## How do I back up and restore the configuration of my Matrix 220 without a PC?

Symptoms: replacing a scanner, need to copy a configuration.

**Short answer:** With a BM100 backup module installed in the CBX100 or CBX500 box, the X-PRESS Backup and Restore functions copy the configuration to the module and read it back from there. Backup Erase deletes the last backup from the BM100.

### LIKELY CAUSE

The Datalogic reference guide describes three X-PRESS functions linked to the BM100 module: Backup (saving the configuration to the BM100), Restore (loading the configuration from the BM100) and Backup Erase (deleting the last backup). They can only be used if they are among the functions assigned to the button.

### WHAT TO DO

1. Check that the BM100 module is present in the CBX100 or CBX500 box.
2. Assign the Backup and Restore functions to the X-PRESS button in DL.CODE, if this has not already been done.
3. On the configured scanner, run Backup from the X-PRESS button.
4. On the replacement scanner connected to the same CBX, run Restore.
5. Use Backup Erase to delete the last backup from the module.

Source: [X-PRESS Human Machine Interface \(Backup; Restore; Backup Erase\)](#)  – Matrix 220 Product Reference Guide (Datalogic) (official documentation).

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## How do I restore my Datalogic Matrix 220 to factory settings?

Lights: all flash for about 3 seconds · Beeps: three high beeps.

**Short answer:** Power on the Matrix 220 while holding the X-PRESS button, until all the lights flash together for about 3 seconds; during this flashing, release and press again. Three high beeps confirm that the environment parameters, including the IP address, have been reset.

### LIKELY CAUSE

The Datalogic reference guide calls this procedure “Reset Reader to Factory Default Environment”. It restores the default environment parameters, including the IP address; configurations already saved remain in memory, but the Default configuration becomes the start-up configuration.

### DATALOGIC PROCEDURE

1. Press and hold the X-PRESS button while you power on the scanner.
2. Keep it pressed until all the lights flash simultaneously, which lasts about 3 seconds.
3. During these 3 seconds of flashing, let go of the button and press it a second time.
4. The scanner gives three high beeps and goes into operation after a few seconds.
5. Reassign the IP address (see [web discovery](#) or [DL.CODE](#)) and select your working configuration again.

If the button is released while the lights stay solid, the scanner goes into Loader mode (see [Loader mode](#)).

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Source: [Step 3 - Configure the Reader – Reset Reader to Factory Default Environment](#)  – Matrix 220 Product Reference Guide (Datalogic) (official documentation).

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## Why does DL.CODE ask me to log in before I can configure my Matrix 220?

Symptoms: login window at first launch; software stops at the end of the trial.

**Short answer:** Authentication is mandatory in DL.CODE: choose between logging in with a Datalogic account, signing up, offline access with an activation file and the 15-day trial. Without authentication, the software stops.

### LIKELY CAUSE

According to the Datalogic reference guide, DL.CODE stops if none of the four options is chosen, at the end of the trial if no authentication has been completed, or if the offline activation file does not work. The trial can neither be extended nor reused, whatever the version. The software does not support Windows Embedded.

### WHAT TO DO

1. Install DL.CODE from the mini-DVD .zip file (extraction with the folder structure, start.hta, Install DL.CODE).
2. At first launch, log in with your Datalogic account or create one (Sign Up).
3. Without Internet access, click Offline Login, give the Machine ID displayed to Datalogic technical support and load the file you receive with Load Activation File.
4. On a trial, register online or offline before the 15 days are up.

**When to call a technician:** the offline activation file is rejected: DL.CODE stops and Datalogic asks you to contact its technical support.

Source: [Step 5 - Installing DL.CODE Configuration Program \(Login; Offline Login; 15-day Trial\)](#)  – Matrix 220 Product Reference Guide (Datalogic) (official documentation).

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## Why does my Matrix 220 revert to its old configuration after a power cut?

Symptoms: the latest DL.CODE settings have disappeared on restart.

**Short answer:** In DL.CODE, changes remain in temporary memory until they are saved to permanent memory. Save the configuration on the scanner: saving replaces the previous version.

### LIKELY CAUSE

The Datalogic reference guide ends the configuration step by saving the configuration from temporary memory to permanent memory, which overwrites the previously saved configuration. The quick start guide specifies that the parameters are stored in permanent flash memory.

### WHAT TO DO

1. After making your settings, save the configuration on the scanner from DL.CODE.
2. Check the name of the saved configuration and that it is the one loaded at start-up.
3. Keep a backup copy, for example on a BM100 module (see [BM100 backup](#)).
4. After an environment reset, select your configuration again: the Default configuration becomes active at start-up (see [resetting](#)).

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Sources: [Step 6 - Device Configuration](#); [Step 3 - Configure the Reader](#)  – Matrix 220 Product Reference Guide (Datalogic) · [Technical Features – Parameter Storage](#)  – Matrix 220 Quick Reference Guide (Datalogic, 821012941 Rev. B) (official documentation).

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# Covers, UV model and installation conditions for the Matrix 220

Changing the window cover, UV model safety and mounting precautions, based on the Datalogic documentation.

## How do I change the window cover (ESD or YAG) on my Matrix 220?

Symptoms: scratched cover, need for an ESD cover or a YAG filter.

**Short answer:** Remove the original plates and screws, check that the window is clean, fit the cover by pressing on the edges of the frame and not on the window, then tighten the two screws to 25 cN·m. ESD covers are supplied with a label that identifies the scanner as ESD-protected.

### LIKELY CAUSE

The Datalogic reference guide offers three covers: ESD Safe Window Cover (93ACC0227), YAG Cut Filter Window Cover (93ACC0228) and the combined ESD + YAG cover (93ACC0229), and describes how to fit them.

### DATALOGIC PROCEDURE

1. Remove the protective plates and their screws.
2. Check that the window is clean; wipe it with a clean tissue if necessary.
3. Position the cover and press on the edges of the frame until the screw holes are aligned, without pressing on the window.
4. Engage a screw by turning it one or two turns anticlockwise, then partially screw it in clockwise; do the same with the second one.
5. Tighten the two screws to 25 cN·m.

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Source: [Mounting Accessory Covers](#)  – Matrix 220 Product Reference Guide (Datalogic) (official documentation).

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## Why does the Matrix 220 UV (3U2-01U) require special precautions for the eyes?

Symptoms: scanner with UV illumination for fluorescent codes.

**Short answer:** According to standard EN 62471:2008, all Matrix 220 scanners are exempt from photobiological risk (group 0), except the UV model 3U2-01U, classified in risk group 3. Its near-UV radiation only respects the group 0 limit from 370 mm, instead of the usual 200 mm.

### LIKELY CAUSE

The Datalogic reference and quick start guides give this classification in their LED safety section. The reference guide also cites UV fluorescence applications among the examples of use.

**Caution:** Do not look at the UV illumination of the Matrix 220 3U2-01U at close range: Datalogic classifies it in risk group 3 according to EN 62471:2008.

### WHAT TO DO

1. Identify the model from its part number: among the Matrix 220 scanners, only the 3U2-01U is concerned.
2. When laying out the workstation, take into account the 370 mm distance stated by Datalogic: closer than this, the near-UV radiation exceeds the risk group 0 limit.

Sources: [Compliance – LED Safety; Application Examples \(UV Fluorescence applications\)](#)  – Matrix 220 Product Reference Guide (Datalogic) · [Compliance – LED Safety](#)  – Matrix 220 Quick Reference Guide (Datalogic, 821012941 Rev. B) (official documentation).

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## Under what conditions can my Matrix 220 XAI operate without overheating or damage?

Symptoms: installation in a hot environment, mechanical work on the line.

**Short answer:** The quick start guide gives a range of –10 to 50 °C for standard Matrix 220 scanners, but 0 to 45 °C for 3xx-11x models, which include the XAI. Datalogic also asks you not to drop the scanner, not to adjust it by striking it, not to weld it in place and not to spray paint nearby.

### LIKELY CAUSE

The quick start guide distinguishes the temperature ranges by model and gives a higher power consumption for 3xx-11x models (5.1 W compared with 4.2 W for 3xx-01x). The reference guide lists the actions to avoid: dropping, adjusting by striking, welding (electrostatic or thermal damage, damaged reading window) and paint spray on the window. The scanner is IP65 and IP67, with IP67 requiring fully tightened connections with sealed cables.

### WHAT TO DO

1. Check the scanner part number and the corresponding temperature range (0 to 45 °C for 3xx-11x, including the XAI).
2. Fully tighten the connectors with sealed cables to maintain IP67.
3. Adjust the position by loosening the bracket, never by striking.
4. Protect the reading window from paint spray and do not weld the mount with the scanner in place.

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Sources: [Environmental Features](#); [Electrical Features](#)  – Matrix 220 Quick Reference Guide (Datalogic, 821012941 Rev. B) · [Handling](#)  – Matrix 220 Product Reference Guide (Datalogic) (official documentation).

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## When should you call a technician for a Datalogic Matrix 220 or Matrix 220 XAI scanner?

The entries above first suggest a setting, cleaning or a reset. In the following cases, the documentation refers you to support or a technician:

- **PWR light still off with a compliant power supply:** The scanner is not opened for maintenance and Datalogic reserves installation for qualified personnel (see [the scanner stays off](#)).
- **DL.CODE activation file rejected:** DL.CODE stops; Datalogic asks you to contact its technical support (see [DL.CODE login](#)).

## Avoiding recurring faults on the Datalogic Matrix 220 and Matrix 220 XAI scanner: preventive maintenance

Worn battery, degraded reading, lost settings: several entries in this guide cover points that a preventive maintenance visit checks before they cause a breakdown.

TIMCOD preventive maintenance is part of the [through-life maintenance \(MCO\)](#) TIMCOD provides for your fleet (page in French). In particular, it includes:

### Preventive battery replacement

Recommended every 18 to 24 months, for removable batteries.

### General check of the devices

Each device checked and cleaned, minor faults fixed and a report provided.

### Inventory of the fleet under contract

Type, configuration and IP address of each device.

### Training and skills transfer

Transfer of technical skills on using the equipment.

### Detailed report

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Inventory, condition of the fleet and optimisation advice.

In addition, TIMCOD corrective maintenance includes phone support (hotline), repair to working order, express exchange with a replacement device and, as an option, SWAP. Maintenance contracts come in three levels (Essentiel, Confort, Premium).

## Datalogic Matrix 220 or Matrix 220 XAI scanner troubleshooting: frequently asked questions

### How do I reset a Datalogic Matrix 220?

Power on the scanner while holding the X-PRESS button until all the lights flash together for about 3 seconds. During this flashing, release and then press the button again. Three high beeps confirm that the environment parameters, including the IP address, have been reset; saved configurations remain in memory. [See the detailed entry.](#)

### What is the difference between the Matrix 220 and the Matrix 220 XAI?

The Matrix 220 XAI is the version of the Matrix 220 dedicated to direct part marking (DPM), with artificial intelligence algorithms intended for scratched, faded or stamped codes. Like the X versions, it has Automatic Setup in DPM mode, which the other models do not have. [See the detailed entry.](#)

### What does the red spot on a Matrix 220 mean?

The red spot lights up the target when no valid read has taken place, like the red STATUS light. The events that turn it on and its duration are set in DL.CODE. [See the detailed](#)

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[entry.](#)

### How do I focus a Matrix 220?

Start Aim mode with the X-PRESS button: the two aiming squares light up and automatic focusing starts. Within 3 seconds, centre a code between the squares without moving it; three high beeps indicate that the reading distance has been saved. [See the detailed entry.](#)

### How do I find the IP address of a Matrix 220?

From a PC on the same network, enter the address datalogic.local in a browser: the Web Discovery page lists the reachable scanners and lets you set their IP address. DL.CODE also displays the scanners, greyed out when they are outside the local network. [See the detailed entry.](#)

### Does a Matrix 220 PoE power the trigger photocell?

No. According to Datalogic, PoE models do not power the external trigger: the photocell must have its own power supply. The scanner itself is powered only via the Ethernet cable, in accordance with IEEE 802.3af. [See the detailed entry.](#)

### What do the STATUS and READY lights flashing together mean on a Matrix 220?

This double flashing is the scanner's diagnostic indication. Details of the error can be read on the Diagnostic page of the DL.CODE monitor, or on the host if the sending of diagnostic messages is enabled. [See the detailed entry.](#)

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## How do I back up the configuration of a Matrix 220?

First save the configuration to permanent memory from DL.CODE. With a BM100 module in the CBX box, the X-PRESS Backup function copies the configuration to the module, and Restore reloads it onto a replacement scanner. [See the detailed entry.](#)

## Sources consulted

All the causes, procedures and signals in this guide come from the pages of the official Datalogic documentation listed below, consulted on 20 October 2026.

- [Matrix 220 Product Reference Guide – chapters Compliance, Handling, Introduction, Rapid Configuration, Product Overview, Installation and Electrical Connections \(up to OPC UA\)](#) [↗](#) – Matrix 220 Product Reference Guide (Datalogic, © 2018-2026, DL.CODE 2.0.2 and later) **official**
- [Matrix 220 Quick Reference Guide \(ENG-ZHO\)](#) [↗](#) – Matrix 220 Quick Reference Guide (Datalogic, 821012941 Rev. B, March 2026) **official**
- [Matrix 220 Quick Reference Guide \(Multi\), French section](#) [↗](#) – Matrix 220 Quick Reference Guide, multilingual (Datalogic, 801000590 Rev. B) **official**
- [Matrix 220 2D Imager Barcode Reader Datalogic - Datalogic](#) [↗](#) – Datalogic product page **official**
- [Matrix 220 XAI: Ultimate DPM with the fastest auto-setup ever, AI-Powered - Datalogic](#) [↗](#) – Datalogic press release (27 February 2025) **official**

The “Backup and Restore Through DL.CODE”, “Restore Defaults”, “Diagnostic Alarms”, “BM150 Display Module”, “Maintenance” (cleaning) and “Troubleshooting” chapters of the Matrix 220 Product Reference Guide (beyond about page 85), as well as the DL.CODE User's Manual 1.9 and 1.12 and the DL.CODE 2.0.2 release notes, were not consulted for this guide and are not cited. If the fault falls under these documents, refer to the manufacturer's documentation or ask the TIMCOD technicians.

## See also

- Product page on timcod.fr (in French): [Datalogic Matrix 220 XAI](#)

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- [All troubleshooting guides for Datalogic scanners and mobile computers \(PowerScan 9100, PowerScan 9500, PowerScan 9600, Matrix 120, Matrix 320, Falcon X4, Falcon X60 / X65, Memor X3, Skorpion X3, Skorpion X4, Skorpion X40/X45, Skorpion X5\)](#)
- [Maintenance and repair of Datalogic scanners](#)
- [All barcode scanner and mobile computer troubleshooting guides, all brands](#)
- [TIMCOD repair and maintenance](#)
- [Through-life maintenance \(MCO\): preventive and corrective maintenance \(in French\)](#)
- [Industrial scanners and mobile computers \(in French\)](#)

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## OUR AGENCIES IN FRANCE

## 7 TIMCOD agencies covering all of France

125 experts across 7 agencies, from Lille to Aix-en-Provence. Call the reception desk or the technical hotline of the agency nearest to your sites.

### Contact TIMCOD

A question, a persistent fault, a repair request? Write to us from the contact page on [timcod.fr](https://www.timcod.fr), or call one of our 7 agencies below.

<https://www.timcod.fr/contact>

#### TIMCOD Nord

495 rue Lavoisier  
59112 Annoeullin

|                     |                          |
|---------------------|--------------------------|
| 📞 RECEPTION         | <b>+33 3 74 45 45 35</b> |
| 📞 TECHNICAL HOTLINE | <b>+33 3 74 45 45 37</b> |

#### TIMCOD Île-de-France

10 A rue Blaise Pascal, Bâtiment C  
78990 Élancourt

|                     |                          |
|---------------------|--------------------------|
| 📞 RECEPTION         | <b>+33 1 77 04 86 26</b> |
| 📞 TECHNICAL HOTLINE | <b>+33 1 77 04 86 30</b> |

#### TIMCOD Est

7 rue Icare  
67960 Entzheim

|                     |                          |
|---------------------|--------------------------|
| 📞 RECEPTION         | <b>+33 3 68 33 29 10</b> |
| 📞 TECHNICAL HOTLINE | <b>+33 3 68 41 90 80</b> |

#### TIMCOD Ouest

7 bis rue Augustin Fresnel  
44470 Carquefou

|                     |                          |
|---------------------|--------------------------|
| 📞 RECEPTION         | <b>+33 2 28 00 99 99</b> |
| 📞 TECHNICAL HOTLINE | <b>+33 2 28 00 99 84</b> |

#### TIMCOD Rhône-Alpes

40 route de Lyon, PA de Chambetière  
69960 Corbas

|                     |                          |
|---------------------|--------------------------|
| 📞 RECEPTION         | <b>+33 4 26 22 15 20</b> |
| 📞 TECHNICAL HOTLINE | <b>+33 4 26 22 15 15</b> |

#### TIMCOD Sud-Ouest

3 impasse de los Appares  
31790 Saint-Jory

|                     |                          |
|---------------------|--------------------------|
| 📞 RECEPTION         | <b>+33 5 34 66 61 46</b> |
| 📞 TECHNICAL HOTLINE | <b>+33 5 34 66 76 88</b> |

#### TIMCOD Sud-Est

545 rue François Hennebique, ZI Milles  
13290 Aix-en-Provence

|                     |                          |
|---------------------|--------------------------|
| 📞 RECEPTION         | <b>+33 4 42 60 78 78</b> |
| 📞 TECHNICAL HOTLINE | <b>+33 4 42 60 78 76</b> |

PDF version of the page <https://www.timcod.fr/reparation/en/barcode-scanner-troubleshooting/datalogic/matrix-220>, updated on 21 October 2026.

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