

Laser Sentinel Window Replacement Quick Reference Guide

This Quick Reference Guide does not replace the Instruction Manual. Download the Instruction Manual at www.datalogic.com. Click on Support > Search by product and enter the Laser Sentinel family name, then select your product from the dropdown list. Click on the Manuals & Technical Literature link to download your Instruction Manual. The Instruction Manual must be available at all times when installing and working with the product.

WINDOW REPLACEMENT

When a "Clean Window" error is shown on the device display even after cleaning the window, check for any scratches or spots. If the window is **scratched or spotted**, but not cracked (which would compromise the IP65 protection of the device), the user is allowed to replace the Laser Sentinel optical window.

Order the replacement window from Datalogic and carefully follow the procedure below.

In all other cases, please contact Datalogic for device replacement.

WARNING TERMS - DISCLAIMER FOR WINDOW REPLACEMENT AND CALIBRATION



PLEASE READ CAREFULLY THIS STATEMENT. BY REPLACING AND CALIBRATING THE WINDOW, YOU ACKNOWLEDGE AND ACCEPT THE FOLLOWING WARNING TERMS.

Window replacement is allowed **solely when the optical window is scratched or spotted or in case of unresolvable "Clean Window" error**. You are kindly requested to check and comply with this section of the manual, where you can find all conditions, prerequisites, and terms according to which such procedure shall be performed.

The window replacement procedure is allowed provided that:

1. you and your qualified personnel **fully comply with the proper instructions set forth in this manual**. Instructions are technical and specific rules that shall be understood, acknowledged and applied by you and your qualified personnel;
2. only **qualified personnel**, as defined below, will perform this procedure;
3. window replacement is performed in a **clean environment** that shall be set up in accordance with "Prerequisites for Window Replacement" to prevent any contamination of the internal optical surface;
4. any **dangerous procedure is interrupted and all safety sensors are disconnected**, including any system related to the product;
5. the **replacement window is not dirty or scratched and has never been used. Avoid any contamination (dirt, fingerprints, scratches, etc.) on or inside the new window during installation.**

For the avoidance of doubt, "qualified personnel" means those personnel who have a suitable technical education; who are acquainted with and are used to working in accordance with the rules and regulations for labor protection, safety at work and safety technology; and who keep their knowledge up to date through continuous training. Certified professionals could be involved in some activities; such certified professionals shall fulfill the requirements of accident prevention regulations to the extent applicable and as set forth by the applicable law.

With regards to window replacement, **you shall be, *inter alia*, responsible for:**

- **complying with the instructions** set forth in this manual;
- **training the qualified operator** accordingly;
- carrying out the activities under your accountability in a proper way and in compliance with the instructions provided herein;
- **maintaining the safe operation** of the product and the environment in which it is installed;
- **abiding by all regulations and directives for labor protection and safety at work;**
- **regularly having the product tested and calibrated by competent persons, who shall report any anomalies and track the performance of the product in written records, which shall be sent to Datalogic.**

BY REPLACING THE OPTICAL WINDOW, YOU DECLARE TO ACKNOWLEDGE AND ACCEPT THE POTENTIAL RISKS AND LIABILITIES ARISING FROM THE WINDOW REPLACEMENT PROCEDURE, AS WELL AS FROM FAILURE TO COMPLY WITH THE INSTRUCTIONS PROVIDED BY DATALOGIC IN THIS RESPECT. TO THE FULLEST EXTENT PERMITTED BY LAW, DATALOGIC (AND ITS DIRECTORS, OFFICERS, AFFILIATES) SHALL NOT BE HELD LIABLE FOR ANY DAMAGES (DIRECT, INDIRECT, OR CONSEQUENTIAL) WHICH MIGHT OCCUR TO YOU AND ANY THIRD PARTIES AS A CONSEQUENCE OF THE WINDOW REPLACEMENT PROCEDURE PERFORMED BY YOU OR YOUR QUALIFIED PERSONNEL.

PREREQUISITES FOR WINDOW REPLACEMENT



PLEASE READ CAREFULLY THIS STATEMENT. BY REPLACING AND CALIBRATING THE WINDOW, YOU ACKNOWLEDGE AND ACCEPT THE FOLLOWING WARNING TERMS.

Clean environment	Avoid the window replacement on field. The optical window must be replaced in a controlled, pollution-reduced environment.
Non-condensing environment	The environment where the window replacement is performed must have a temperature of 18 – 30 °C and a non-condensing humidity (preferably < 80%).
Free area	A 2-meter free area around the 275° angle range of the Laser Scanner is necessary to calibrate and validate the new optical window.
Visual inspection	A visual inspection is needed before replacement to establish whether the optical window can be replaced or the whole device needs replacing instead.
Use of dedicated tools	To perform the window replacement procedure a 2.5 mm hex key is necessary, preferably with adjustable torque driver.
Skilled, authorized personnel	The replacement of the optical window must be performed by skilled, authorized personnel only.

WINDOW REPLACEMENT PROCEDURE

After establishing that the replacement of the optical window is necessary and after making sure that all above-mentioned prerequisites are met, start the window replacement procedure.

The new optical window package contains the following parts:

- 1 optical window;
- 1 seal;
- 4 Tuflok® screws.

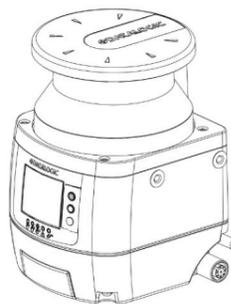


When handling the new optical window, avoid contaminating it with fingerprints, dirt, scratches, dust, and polluting agents. It is recommended to wear clean, thin gloves to unpack and install the new window.



Always disconnect power to the Safety Laser Scanner before starting the window replacement procedure.

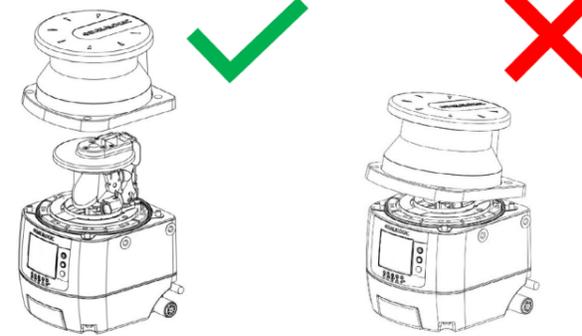
1. Place the Safety Laser Scanner on an even base in a controlled, pollution-reduced environment.



2. Remove the four screws fixed on the damaged optical window.

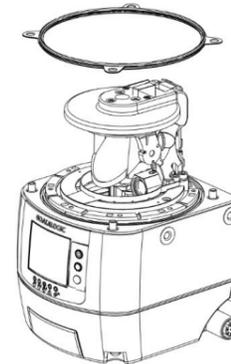


3. Remove the optical window with a linear, vertical movement.



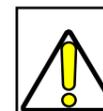
Take the utmost care to avoid touching or damaging the internal parts of the device.

4. Remove the seal positioned on the device body. Avoid touching or damaging the internal parts of the device.

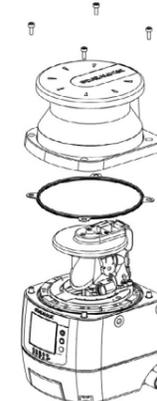


After removing the damaged window, avoid contaminating all the internal optical parts with fingerprints, dirt, scratches, dust, and polluting agents.

5. Position the new seal, gently pressing it on the device body and making sure it perfectly adheres to it.

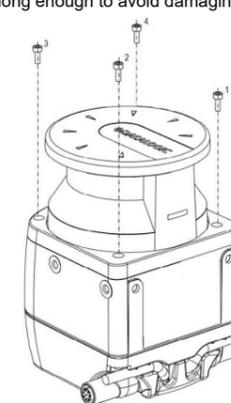


Before closing the window, take sufficient measure to prevent dust and any polluting agent from entering the device, as this could affect the detection capability of the Safety Laser Scanner. In case of contamination, use dry compressed air to remove it.



6. Hold the new optical window on the sides and carefully place it in the correct position. Exert pressure on the angles and make sure that the window is perfectly attached to the device body without any inclination.

7. Snug the 4 Tuflok® screws down (do not overtighten them). Use a 2.5x100 ball-end hex screwdriver with a shank long enough to avoid damaging the optical window.



7. Tighten the screws with a torque wrench (tightening torque 0.6 Nm, bit 2.5 mm).
8. Remove any contamination (e.g. fingerprints, dust, etc.) on the optical window.



After replacing the window, always perform window calibration to guarantee proper working of the device.

NEW WINDOW CALIBRATION



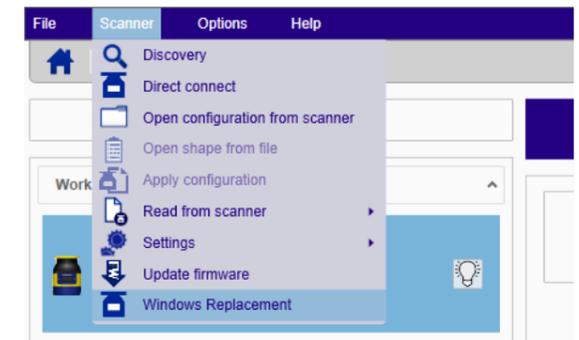
A 2-meter free area around the 275° angle range of the Laser Scanner is necessary to calibrate and validate the new optical window. Keep this area free for the whole duration of the procedure.



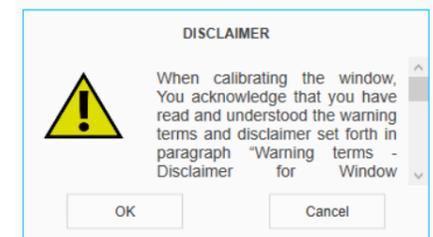
If the Window Replacement procedure is performed on a Slave device, this must be connected to a Master device. In this case, the last configuration is preserved only if the optical window is replaced while the Slave device is connected to the same Master device of said configuration. On the other hand, if the Slave device is connected to a different Master device during Window Replacement, the last configuration will be lost.

9. After replacing the optical window, supply power to the Safety Laser Scanner and connect it to DL Sentinel.

10. On DL Sentinel, discover your device. On the Discovery page, go to *Scanner > Window Replacement* and enter your password (if any), then start the procedure.



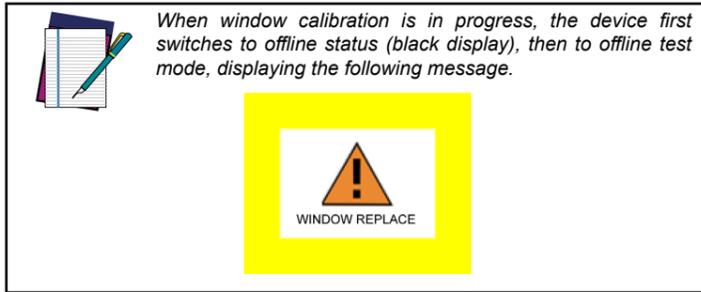
12. Carefully read the disclaimer. By clicking OK you accept the terms and disclaimer contained herein.



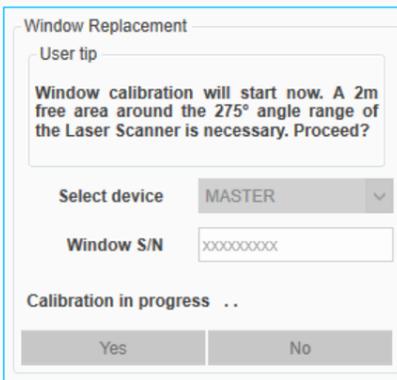
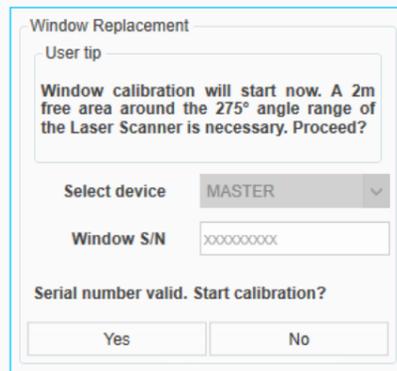
13. Select the device undergoing window replacement and enter the serial number of the new window.



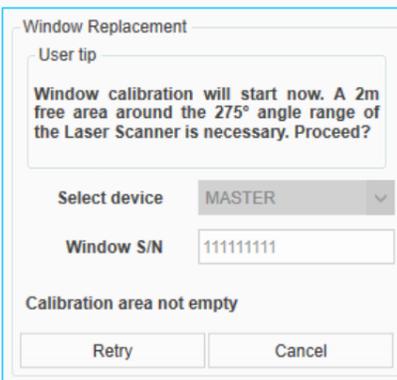
14. Window calibration will start now. Make sure that the device has a 2-meter free area around its 275° angle range.



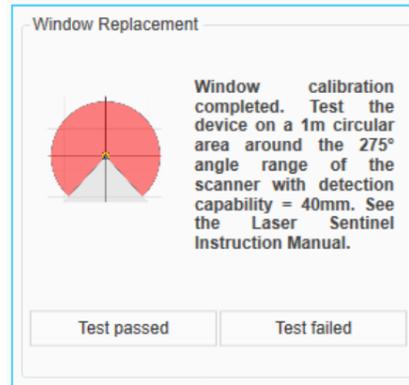
When window calibration is in progress, the device first switches to offline status (black display), then to offline test mode, displaying the following message.



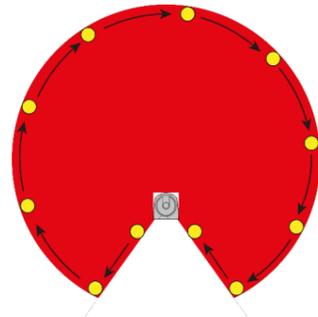
15. If the test area is not compliant, an error message will be displayed. Clear the required area and retry.



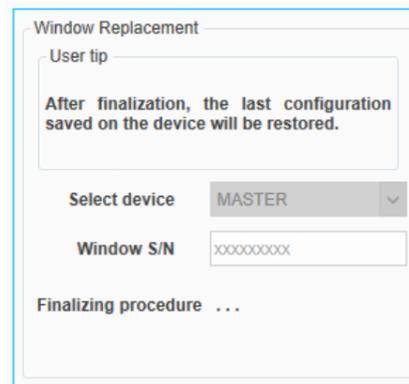
16. To validate the calibration procedure, the user must test the device detection capability with a test configuration.



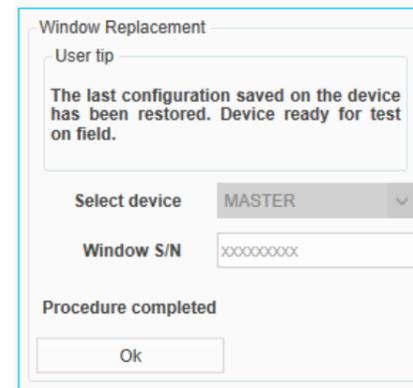
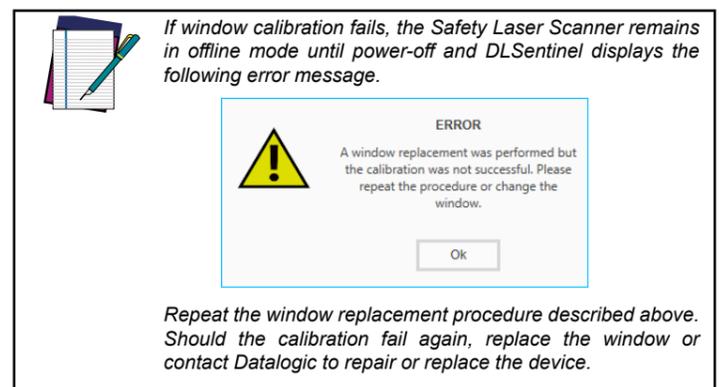
The test area is automatically configured. To test the detection capability of the device(s), use a suitable test piece, e.g. an optically dark, opaque cylinder, with a diameter of 40 mm. Place the test piece on several points at the edges (distance from the device = 1 meter) of the 275° safety area. The safety laser scanner must detect the test piece at each position and go to STOP. The number and location of sites where the test is performed must be chosen so that undetected access to the hazardous area is not possible. Do not attempt to insert the test piece into dangerous parts of the machine located in the safety area.



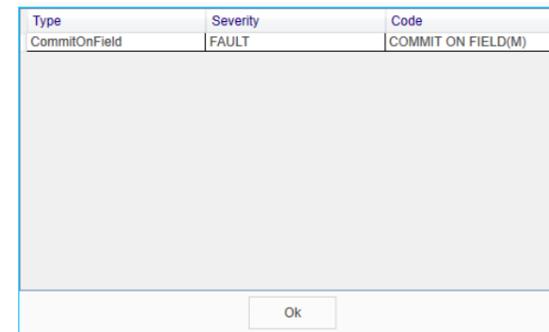
Power off the safety laser scanner(s). Check that both OSSD outputs automatically switch to OFF status and make sure that the machine cannot start until power is re-applied.



The device remains in test mode until the user validates the test (press "Test assessed"). After validation, the device switches to online mode with the last configuration saved before window replacement. If the test is not validated, the device will remain in test mode.



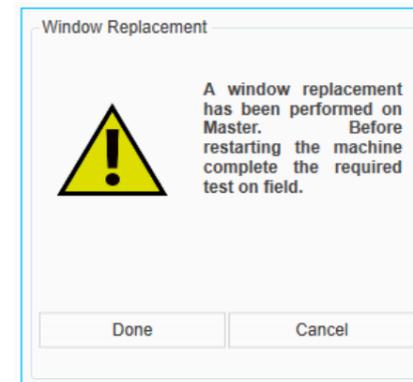
17. After window calibration has successfully completed, the following fault message is displayed. Click OK.



The device display will show the "Commit On Field" warning message.



18. Restore the Safety Laser Scanner on field. Refer to the Laser Sentinel Instruction Manual (Chapter 4 - Installation, Chapter 5 - Mechanical Mounting, Chapter 6 - Electrical Connections). Perform a field test to commit the configuration (see "Checks After First Installation" in the Laser Sentinel Instruction Manual), then go to *Scanner > Window Replacement* and click "Done" on the displayed message.



The device will now switch to online mode.

SUPPORT THROUGH THE WEBSITE

Datalogic provides several services as well as technical support through its website. Log on to www.datalogic.com.

For quick access, from the home page click on the search icon , and type in the name of the product you are looking for. This allows you access to download Data Sheets, Manuals, Software & Utilities, and Drawings. Hover over the Support & Service menu for access to Services and Technical Support.

CE COMPLIANCE

CE marking states the compliance of the product with essential requirements listed in the applicable European directive. Since the directives and applicable standards are subject to continuous updates, and since Datalogic promptly adopts these updates, therefore the EU declaration of conformity is a living document. The EU declaration of conformity is available for competent authorities and customers through Datalogic commercial reference contacts. Since April 20th, 2016 the main European directives applicable to Datalogic products require inclusion of an adequate analysis and assessment of the risk(s). This evaluation was carried out in relation to the applicable points of the standards listed in the Declaration of Conformity. Datalogic products are mainly designed for integration purposes into more complex systems. For this reason, it is under the responsibility of the system integrator to do a new risk assessment regarding the final installation.

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

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