T4T – Simple Current Programming 4

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1 About Tuner4TRONIC – Simple Current Programming Tool

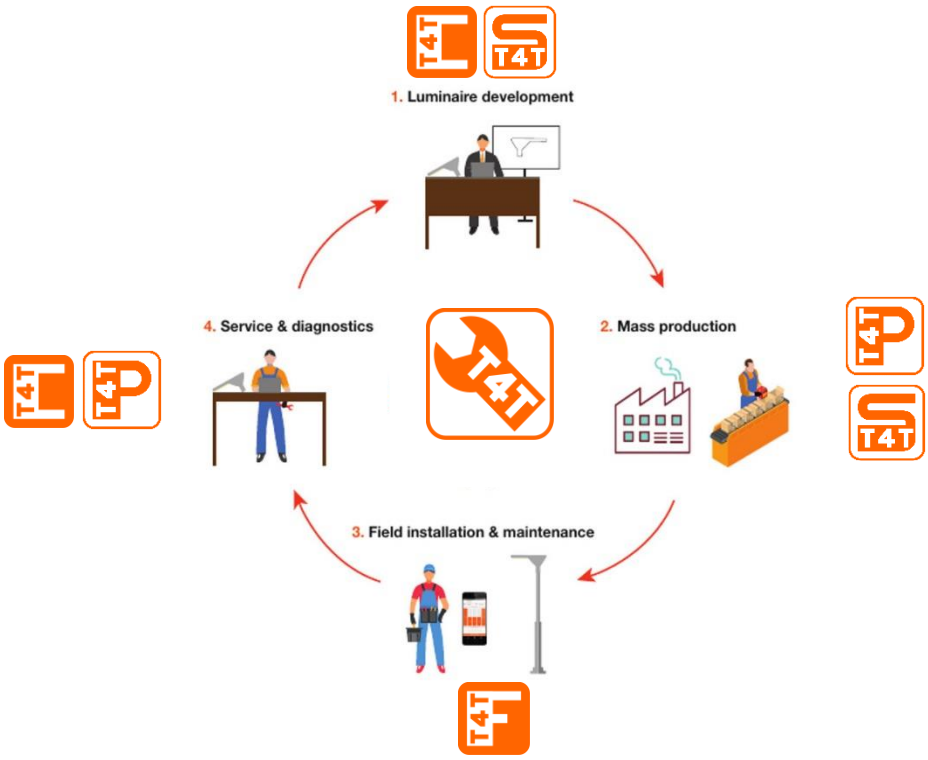
1.1 Purpose and Application

The Tuner4TRONIC Simple Current Programming Tool (T4T-S) allows output current setting in INVENTRONICS wide range LED drivers via NFC instead of LEDset and stick to default settings with any other functionality provided with INVENTRONICS drivers. T4T-S can be operated without permanent internet connection – though it is recommended to update driver database manually, in case of no internet. T4T-S does not require creating production files, since it reads data from a sample driver and sets output current in drivers of the same type.

Since no validation rule is applied by the tool - other than checking min/max limits – the user needs to ensure, that output current values to not interfere with other settings in the driver (e.g. DALI settings, CLO, Tuning Factor, ..). Therefore, it is recommended to use T4T-S with blank drivers with default settings only. Please also note, that programming via DALI interface is not supported by T4T-S. PW setting with T4T-S is recommended to avoid reprogramming by unauthorized persons, since exceeding rated current of the light engine may cause defects in the luminaire.

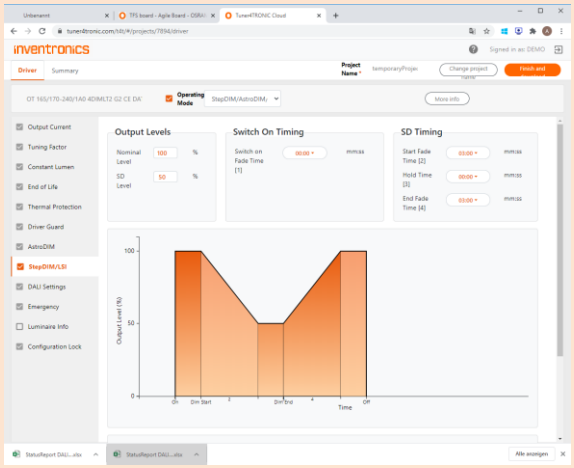
Please explore the full functionality of LED drivers by using T4T tool chain with T4T-Configurator, T4T-Production and T4T Field app. Tuner4TRONIC tools can be downloaded from www.inventronics-light.com/tuner4tronic.

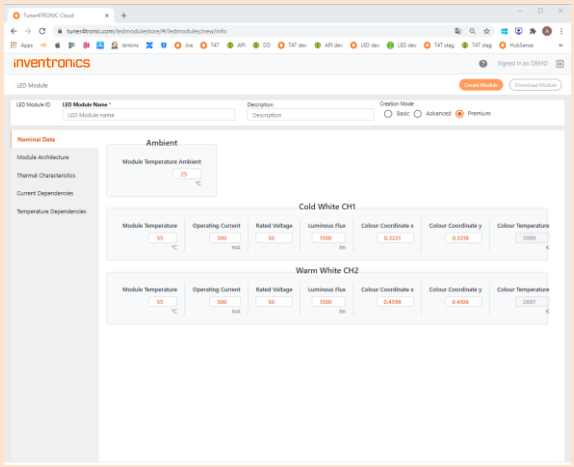
The Tuner4TRONIC (T4T) software suite allows luminaire manufacturers to program INVENTRONICS drivers via DALI and/or NFC in a simple, fast, reliable and cost-effective way, speeding up the production process.
Click here to watch a short video that gives a great overview about Tuner4TRONIC.



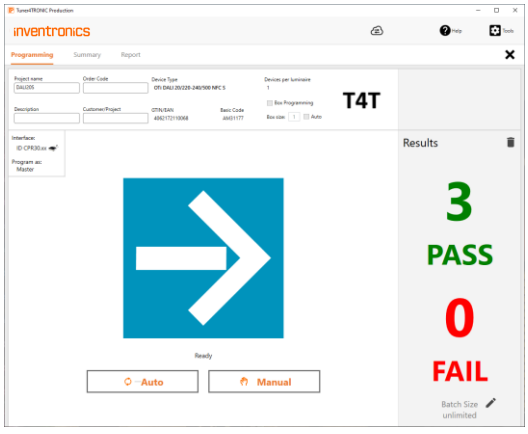
This software consists of different modules according to the environment of use:

Tuner4TRONIC Configurator
With this web based browser application luminaire designers can configure LED drivers by setting parameters such as output current, dimming levels, constant lumen output, operating modes and much more.
Thanks to its multi-level password system, Configuration Lock protects LED drivers against unauthorized changes while service technicians can still be granted access rights for selected features.
Once the configuration has been completed, the settings are exported as an encrypted read-only production file and transmitted to the production line.
www.tuner4TRONIC.com





Tuner4TRONIC Production
Factory workers can easily load encrypted production files in order to start automatic programming for the fast mass production of LED drivers.
Provides a multilingual user interface.

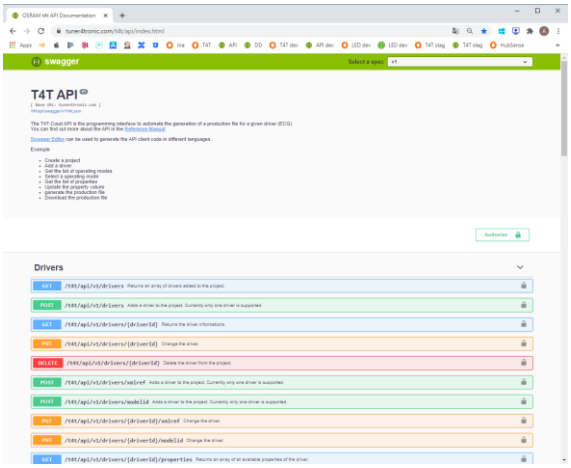


Tuner4TRONIC Machine

The DLL and command line tools enable to integrate INVENTRONICS LED driver programming into automatic programming stations in the production line.

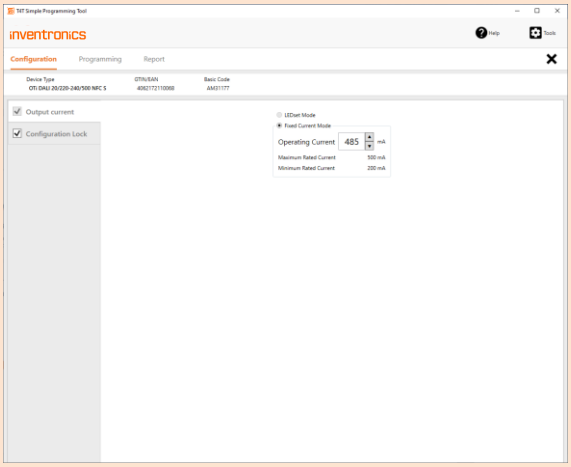
Tuner4TRONIC REST API

While the Configurator, Development and Production versions provide the users an intuitive graphical interface, the API („Application Programming Interface“) provides software developers a collection of functions and tools to create luminaire configurations automatically. Typically, the API is used to create luminaire files when a new order is available in the ERP system. The API is based on modern standards (REST) and conventions, comes with a comprehensive documentation and must be integrated into your system by a software developer (INVENTRONICS does not provide ERP system integrations).



Tuner4TRONIC Simple Current Programming

The simple current programming tool is a PC based tool that allows programming driver output current without creating production files. The user can read data from a driver edit output current and upload current setting to drivers of the same type. The tool also supports setting password protection



Tuner4TRONIC Field

T4T-Field is an app for smartphones that can program INVENTRONICS outdoor OT 1DIM and OT 4DIM as well as indoor OTi DALI Compact LED drivers via NFC - wireless and without mains-voltage.

The app can change the light output and the dimming levels of the driver. In addition, a driver configuration can be copied to another driver in a breeze.

Click here to download the app from Google Play (Android version)

Click here to download the app from the App Store (iPhone version)

Click here to download the dedicated manual for T4T-Field

1.2 Files Types

Tuner4TRONIC Development uses different file types:

- Tuner4TRONIC production file = .osrtup
- Driver description file = .osrtud
- Driver data (raw format) = .osrtur
- Password file = *.osrpwd
- Tuner4TRONIC luminaire project file = .osrtul (phased out)

1.3 Workflow between the different T4T Versions

The luminaire product manager/designer creates his desired configuration (e.g. setting the operating current, CLO and dimming) using T4T Configurator. Our optional T4T API allows to create luminaire and production files directly from an ERP system removing the need to create those files manually. When the configuration is finished, a read-only *.osrtup production file is exported and sent to the assembly line. At the assembly line, the production file is loaded using T4T Production and the mass programming can start. Alternatively, T4T Machine (DLL and command line tools) can be used to integrate with automatic programming and testing stations.

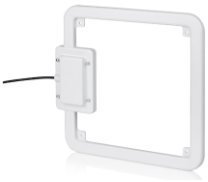
1.4 System Requirements

The minimum system requirements:

- 1 GB main memory
- Windows 7 (both 32 or 64-bit), Window 8 / 8.1 (both 32 or 64-bit), or Windows 10 (both 32 or 64-bit) latest SP installed
- 100 MB hard disk memory
- Monitor with a resolution of 1024x768 pixels, the recommended zoom factor is 100%
- one free USB 2.0 port for Programming Interface

1.5 Programming Interfaces

To program a luminary containing an INVENTRONICS driver, a programming interface (suitable for the used driver) is needed:

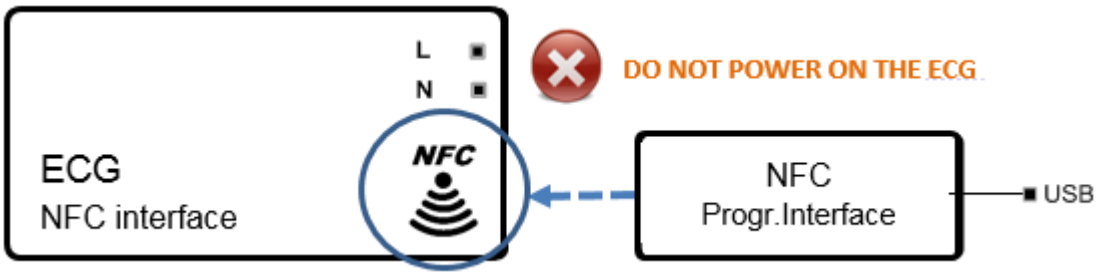
[1]	Driver with DALI interface (only single programming)	FEIG ISC.PRH101	
		FEIG CPR30	
		FEIG ISC.MR102 (separate antenna ISC.ANT310/310 needed)	
		FEIG ISC.LR1002 (separate antenna ISC.ANT310/310 or ISC.ANT800/600 needed)	
		ID ECCO Smart HF.BLE FEIG order code: 5738.000.00 ID BLE USB-Dongle FEIG order code: 5903.000.00 required for BT connection w/ ECCO Smart	
[2]		FEIG ISC.ANT310/310	

FEIG ISC.ANT800/600

The Tuner4TRONIC is capable to handle more than one programming interface connected to the same PC

1.6 Preparing a driver with NFC interface for programming

Step	Activity
1	Connect a Programming Interface FEIG PRH101 or. FEIG CPR30 or FEIG MR102 to the PC with the enclosed USB cable.
2	Put the Programming interface close in contact with the NFC area of the driver (see logo) and do not move driver(s) and programming interface till the process is completed



Important Information:
Keep the driver powered OFF during programming via NFC unless otherwise indicated in the documentation of the driver.
Keep both Programming interface antenna and driver with NFC close in contact during the complete programming process.

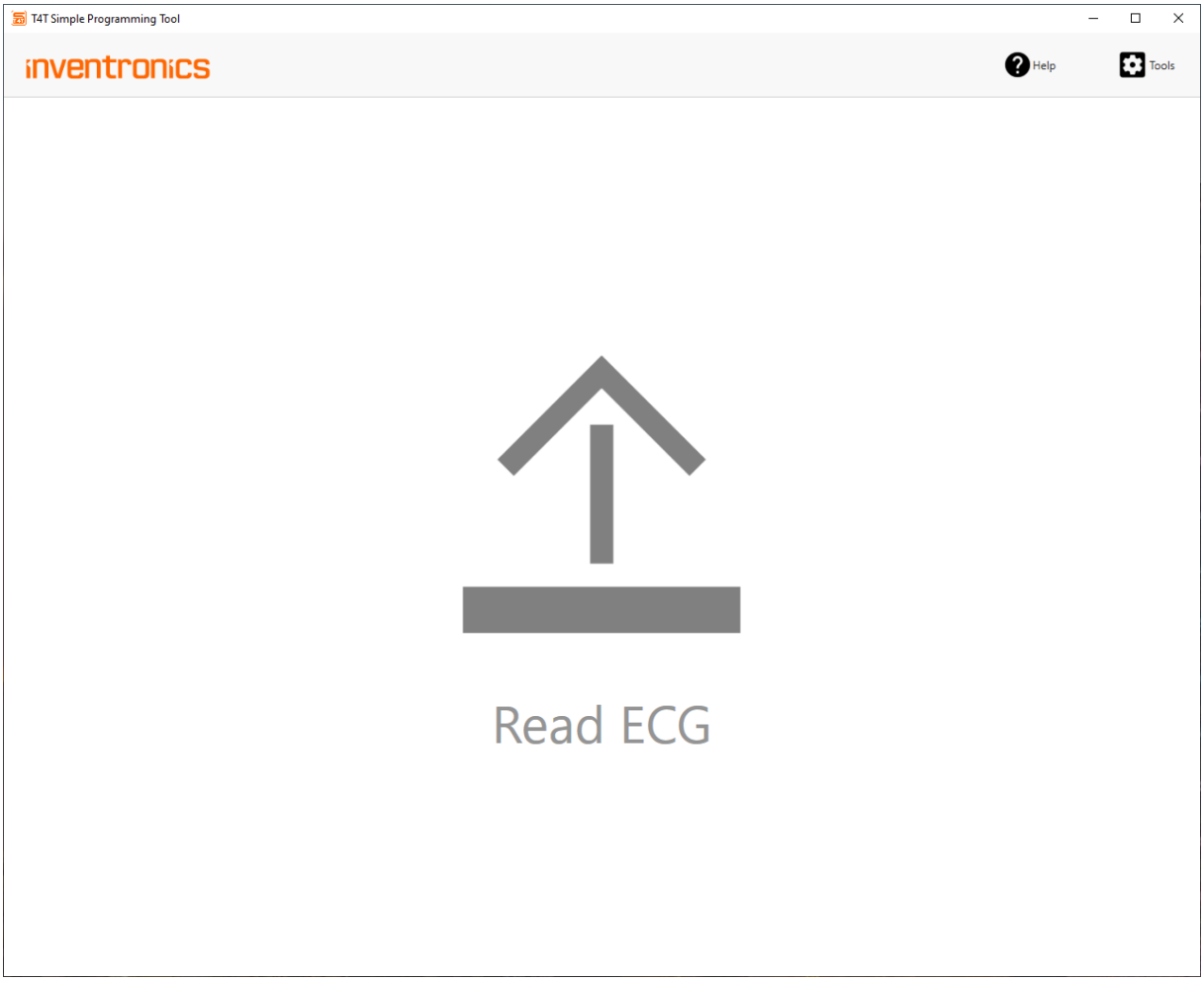
1.7 Software Installation

NOTE: Always read the "Release Notes" in the zip file before installing the SW.
To install the file you must have Windows administrator rights.
Extract the Tuner4TRONIC zip file into your local hard drive and then run "Install T4T.exe" located in that folder. **Running the Installer from inside the zip file will cause a faulty installation!**

Tuner4TRONIC Production can be launched from "Start" => "Tuner4TRONIC 4" => “SimpleCurrent” or by double-clicking the desktop icon.

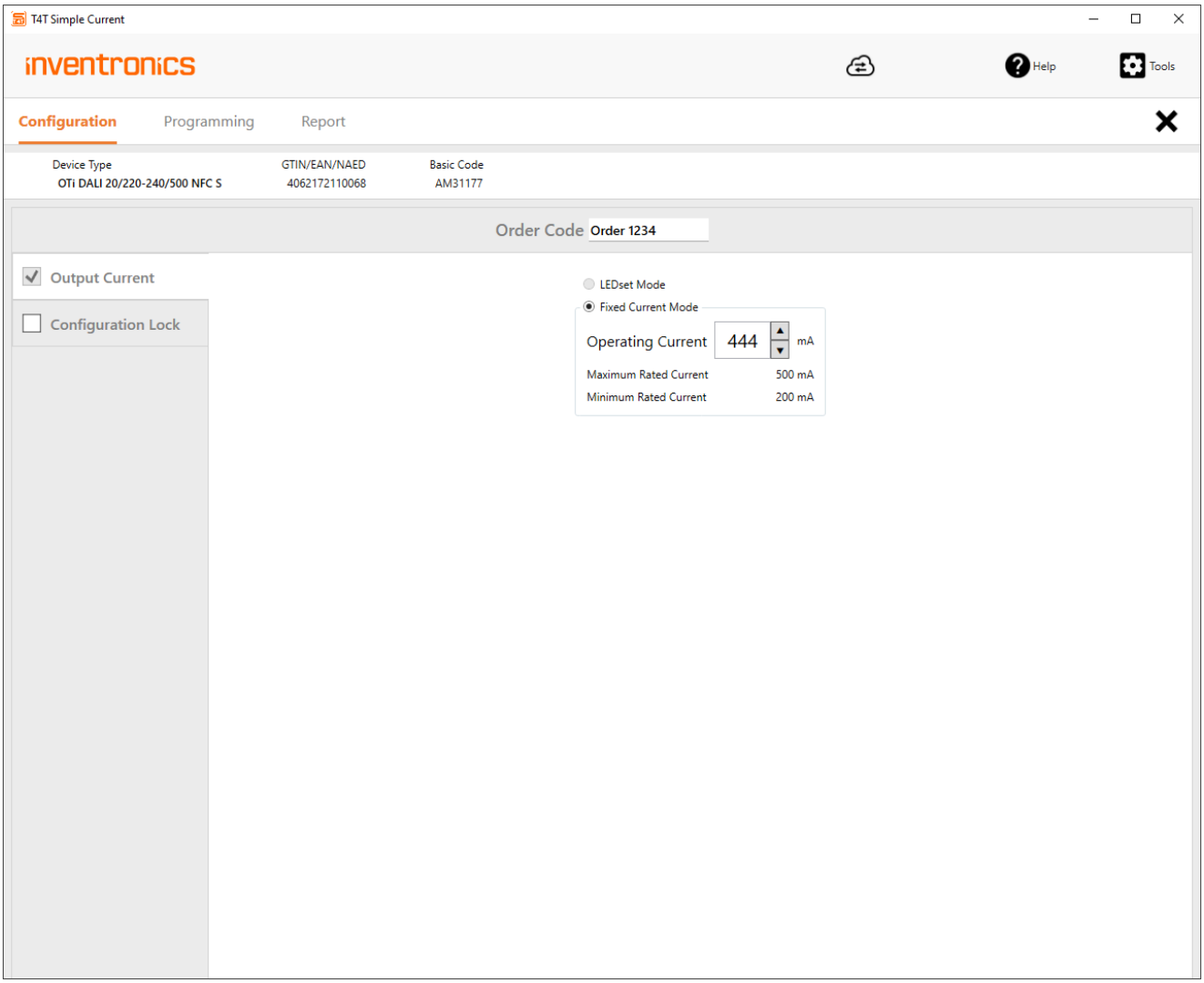
2 Using T4T – Simple Current Programming Tool

2.1 Start Page



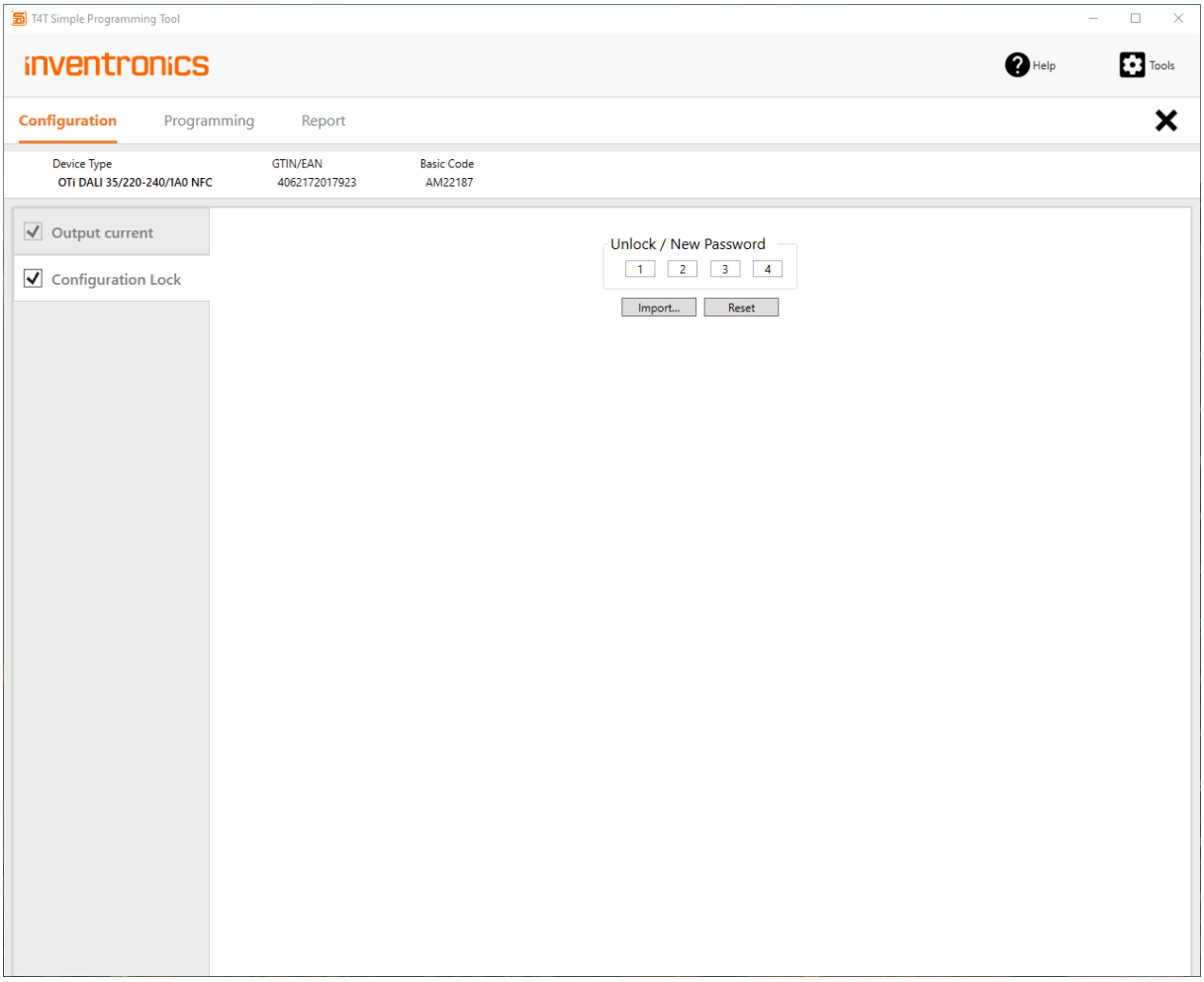
Read ECG	Read data from driver connected by a programming interface (NFC, DALI). After successful reading data from driver, user will the directed to the programming page.
Tools	Open tools page
Help	Open help and about pages

2.2 Programming Page: Configuration



After reading data from a driver, driver name, EAN and IC base code is displayed in the header. User can enter any value within the min/max limits in the tab “Output current” (default: Output current value read from the driver). When programming the driver, LEDset will be deactivated and current setting mode will be switched to “Fixed Current Mode”.

An optional order code may be entered to track programmings in the report.

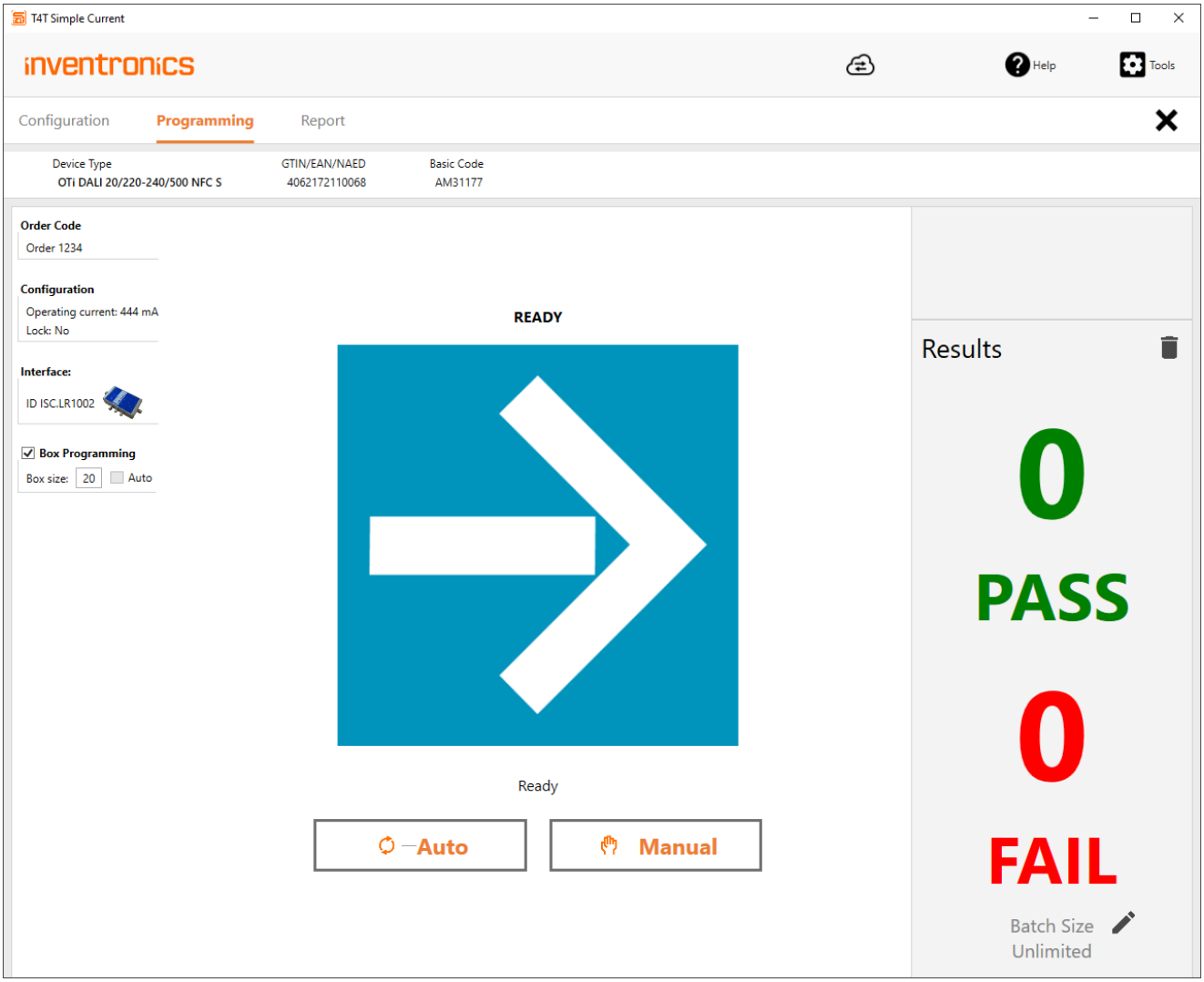


The driver can be protected with master key PW by ticking the check box next to the tab “Configuration Lock”. If check box is not ticked, driver will not be protected. Anybody downloading T4T-Field App on the Smartphone or using T4T PC based tools with programming interfaces may change the output current setting and risk to overload the light engine.

The 4 digit password can be either entered manually or imported from an encrypted *.osrpwd file. Please check Tools/Create PW file for creating encrypted password files. Encrypted password from PW file will be displayed as “*”.

Programming of protected drivers will be rejected, if Configuration Lock is not ticked or PW entered by the user does not matches PW from driver. Please note, that PW protection will be effective after first power cycle of the driver.

2.3 Programming Page: Programming



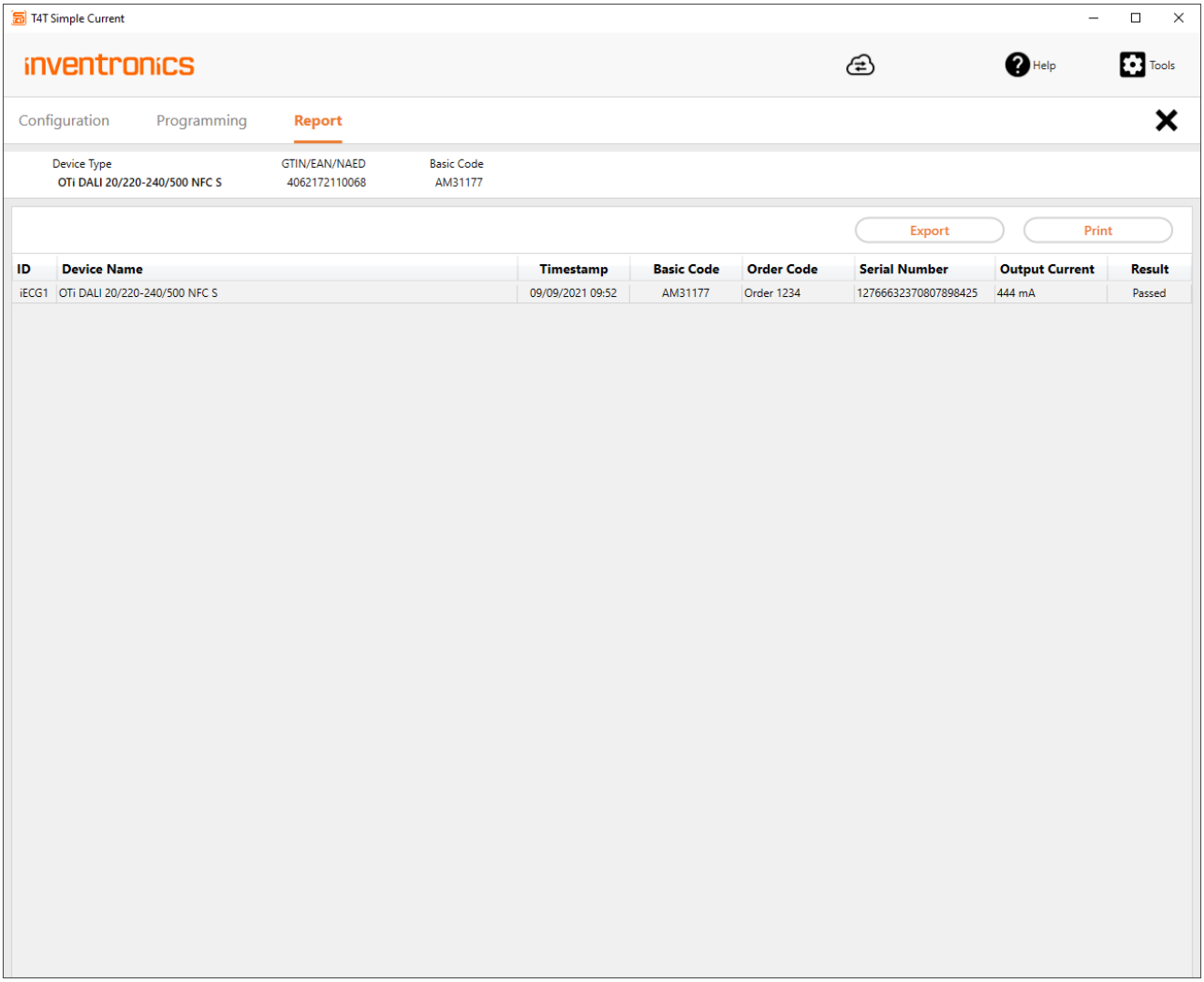
Header	Driver data is displayed in the header. Programming drivers other than the driver type in the header will be rejected.
Order Code	Optional order code entered by the user in the configuration pages is displayed here
Configuration	Data that will be programmed e.g. output current (mandatory) and password setting (optional) is displayed
Interface	Selected programming interface is displayed
Box Programming	Select “Box Programming” to program drivers in the box via NFC. Box programming can only be activated after having selected a programming interface that is suitable for box programming. If the driver is released for box programming, value in “Box size” is greater than “1”. Default setting loaded from production file and can be edited.

Detected Devices	Shows the number of detected drivers (displayed after pressing programming buttons)
Start Programming	Programming is started by pressing either • Manual: Programming drivers in one single luminaire or one box • Auto: Starts programming drivers after being connected to the programming interface. Auto mode continues until batch size is reached. In box programming mode, programming starts when number of identified drivers match the box size
Status	Programming status is indicated by a symbol (see table Programming Status Indicators), a completion bar and text message
Results	The number of passed and failed programmings is displayed. The same driver may be programmed multiple times. Only the last pass/fail will be counted and logged in the production file. The programming log can be viewed in the “Report” tab.
	Press delete icon to delete the programming report in the production file and reset programming counter.
	Press edit icon to edit the batch size

Programming Status Indicators

	Waiting for Luminaire	Connect a luminaire/driver(s) to start/continue programming.
	Programming in progress	Do not remove the connected luminaire/drivers(s) until programming process is completed.
	PASS	Programming process has completed successfully. Remove luminaire/drivers(s)
	FAIL	Programming process has stopped by user or due to errors. Fix the problem then start programming again. Check message on screen for further details.

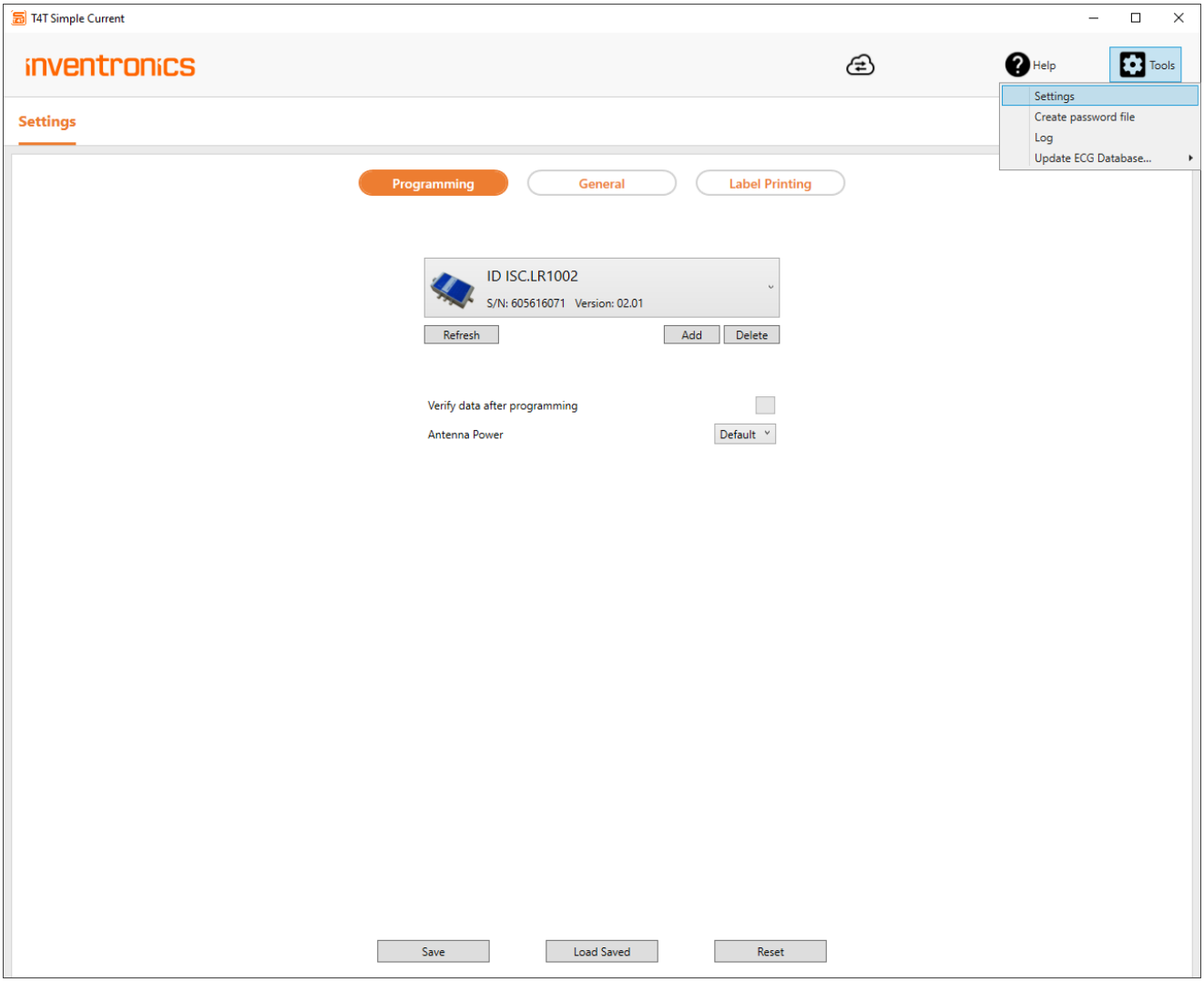
2.4 Report Page



For displaying list of parameters in production file select “Report” on the navigation bar.

Export	Press export to create an html reporting file. Each line represents programming result one driver, luminaire or box
Print	Press Print to print the report

2.5 Tools Page



Press Tools and select tools from drop down list

Tools / Settings	Select “Programming” to select programming interface, set verify options and antenna power. Select “General” to set language, sound, log and cloud options Select „Label Printing to enable label printing
Tools / Create PW file	Encrypt password and save in encrypted file. This allows user to create a password and forward to production department for programming drivers without disclosing the password

Tools / Log	Display log entries for debugging purposes
Tools / Update ECG database	Updates driver database file by either downloading updates from cloud, when being online or importing updates from a file, that has been downloaded from https://www.tuner4tronic.com/ddstore/api/v1/ddfile/simpledb by another computer. Please tick “Use DriverCould Service” and “Check for database updates at startup” in General settings, to update the driver database at any startup of T4T-S. Please note, that new LED drivers will not be identified by T4T-S, if the driver database is outdated
Save	Save options on local computer and in production file where applicable. If settings have not been saved, any changes will be ignored when restarting T4T-P
Load Saved	Load options from local computer and from production file where applicable
Reset	Reset options to factory settings and to data from production file where applicable

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