Quick guide

EQTrace T/T-Key

13 June 2018

EQTrace T/T-Key

Content

EQTrace T/T-Key

Functionality

The EQTrace T (with connection for key module: T-Key) is a GPS monitoring device which provides the following functions:

- collection of operating data on 1 input
- detection of the current position
- theft protection function
- logbook function (for vehicles)
- worldwide use
- activation via electronic key (optional, T-Key)
- switching off of the machine or function, 1 output

Due to the simple installation and the minimal power consumption during sleep mode it can be used in many areas. A few examples: motor vehicles, construction machines, trucks, boats, electric bicycles, motorcycles, etc.

All data will be transmitted to the Obserwando-Server www.obserwando.de via mobile internet (GPRS). It can be accessed via the Obserwando-Portal with the corresponding vehicle name. The vehicle position can also be accessed from Android, Windows 10, iPhone or smartphones.

The SIM card is part of the yearly flat rate. When delivered it will already be installed and activated.

Installation

The EQTrace T/T-Key should be installed horizontal, with the flange side at the bottom and distant of shielding metal pieces to provide the best GPS reception. The device can be installed under plastic covers but under no circumstances under metal.

The case can be painted in the same color as the vehicle. However, no metalic paint is allowed.

EQTrace T/T-Key can be used in vehicles and machines with operating voltage of up to 60VDC. Thus, it can be installed in cars, trucks, construction machines, lifting platforms or forklifts. In case of higher operating voltage a voltage transformer (e.g. TR20-150 or TR-230VAC) is required.

To ensure theft protection when the vehicle is turned off the device needs to be connected to a continuous voltage of 10...60VDC.

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LED - states

The installed LED's can display the following states when operating voltage is supplied:

Red LED
1. LED flashes every 2 seconds: The device is on.
2. LED flashes every 5 seconds: The device is in energy saving mode.
3. LED flashes two times every 5 seconds: The device is awake, i.e. sending data, in energy saving mode.

Green LED
1. LED is off: The device is not connected to the GSM network and has no GPS signal.
2. LED flashes shortly every second: The device is connected to the GSM network, but has no GPS signal.
3. LED flashes long every second: The device is connected to the internet and server, but has no GPS signal.
4. LED flashes long and two times shortly every second: The device is connected to the internet and the server, and has GPS signal.

The LED´s are at the bottom of the device. When installed they are covered (manipulation and theft protection). The allocation can be obtained from the type plate.

Wiring table:

white	VPP (plus, max)
brown, green	GND (minus)
yellow	Input 1 (ignition)
blue	Output (max 500 mA, switched against minus)

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Wiring of the relay (EQTrace T-Key)

One output of the EQTrace T/T-Key is available to block one function of the used vehicle. (e.g. the starter for vehicles, lifting for platforms, etc.)
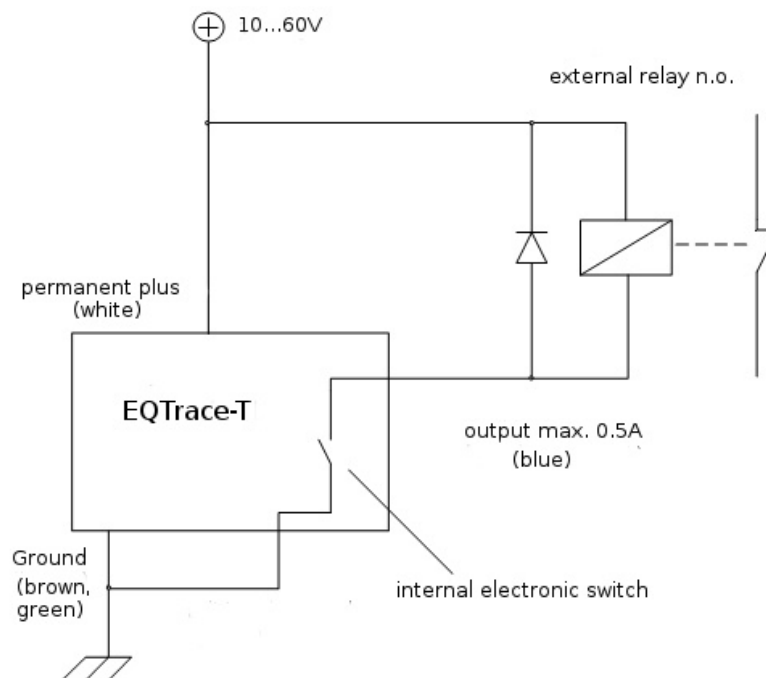
Warning:
When switching inductive load (e.g. power relays) a free-wheeling diode needs to be used.

Connecting the key module

The 5 pole plug will be inserted into the jack of the EQTrace T-Key-Module. When the function is activated on the Obserwando server and the user is authorised to operate the vehicle, keys will be automatically detected.

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Login into the portal

To login into the portal you need your username and password. If you are new to Obserwando, please enter the supplied user ID as your username and password.

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Machine parameters

You can start with the configuration of your machine in the following mask.

The following fields are available:

Machine name: When the device is delivered the IMEI-Nr. will be in this field. You can freely choose a machine name which will then be shown in all machine selections.

Car registration: You can provide the car registration for a vehicle.

Machine group: When you have created machine groups (e.g. rental, service vehicles, etc.) you can assign the device to one of the groups.

Upload new picture: You can upload a picture of the machine in JPG format. The maximal size is 1MB.

Label input 1:   Channel text for input 1.

Description: Memo field for arbitrary text.

IPAF category: At the moment of no meaning.

To save your changes click on "Save".

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Device parameters

After selecting this menu the following mask will appear.

Please ignore the red box and don`t consider the text inside.

The EQTrace T/T-Key devices can automatically detect several operating states.

Yet, since this does not work reliably for every machine the necessary settings can also be configured manually.

Important note: The channels record on a per second basis. The channel state is queried 1 * per second.

Automatic operation detection switched off

Please select "Automatic operation detection: none" to switch it off.

Is an operating hour counter available in the machine the current value n can be used for channel 1 (motor runs).

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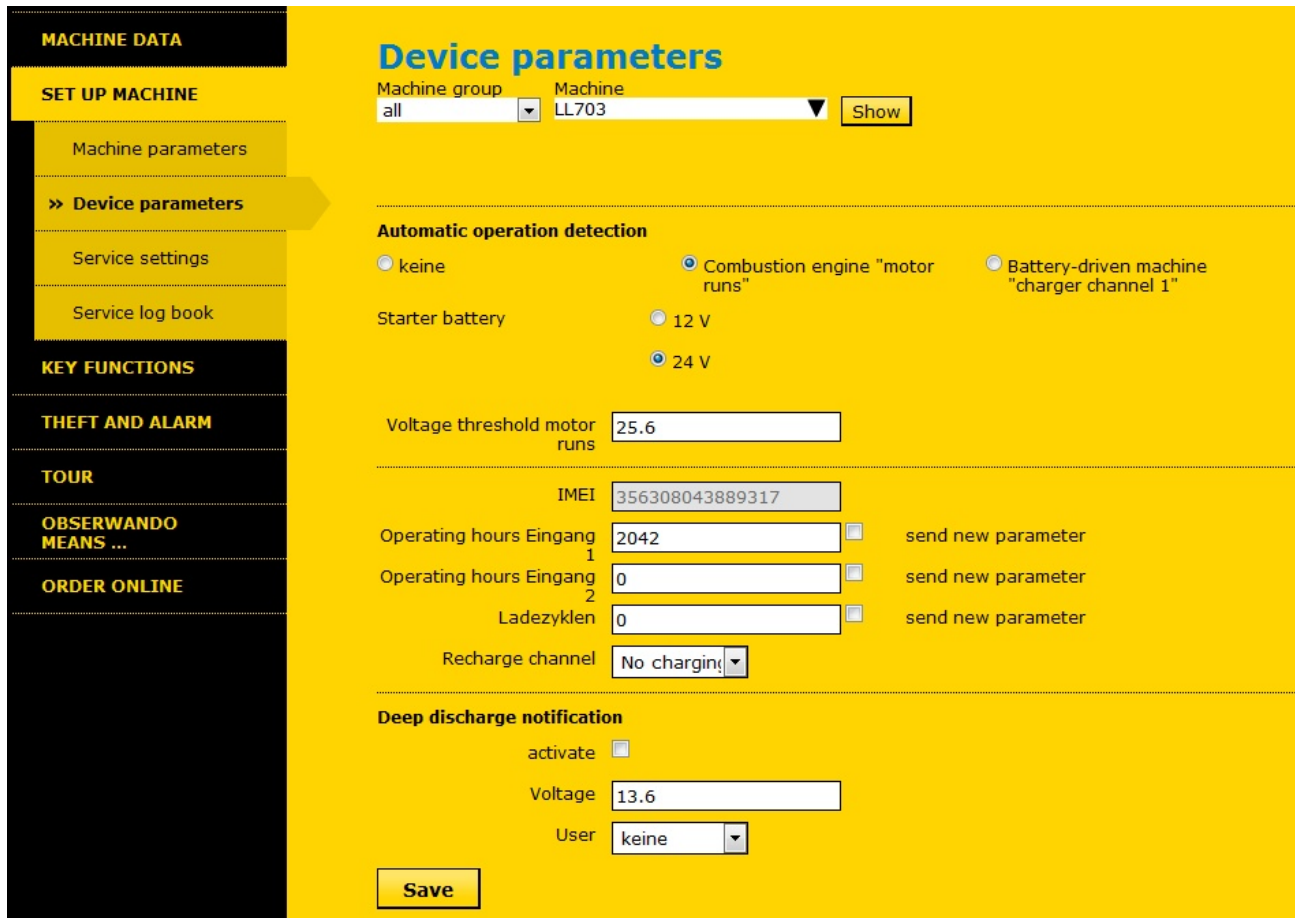
Automatic operation detection activated: diesel machine

To activate the automatic operation detection for a diesel machine select „Automatic operation detection: combustion machine runs".

Additionally, the operating voltage of the battery needs to be selected. Possible options are „12V" and „24V".

The voltage threshold is predefined but can also be changed individually for the machine. The operating hours are automatically collected on channel 1.

To activate the settings click on "Save".

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Deep discharge notification

When the operating voltage falls under a predefined threshold a corresponding notification can be sent from the Obserwando portal via email. To do this the checkbox "activate" needs to be selected in the menu "Deep discharge notification".

The threshold value of the operating voltage needs to be provided. In the options menu "user" an user can be selected who will receive the notification.

Warning: Only users will apear who have provided a valid email address.

The duration of the deep discharge can be obtained from the battery diagram of the operating data.

Please click on "Save" to activate the changes.

Deep discharge notification

activate	☑
Voltage	13.6
User	keine

Save

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Service settings

Service intervals and yearly examinations such as TÜV or UVV can be defined in the service settings. When a reporting deadline is reached it will be shown in the operating data. The notification of an user via email is also possible. The user must be selected in the field "user".

The meanings of the fields are:

Name:	Name of the event.
Hour limit:	Notification when hour limit is reached.
Km limit:	Notification when km limit is reached. (determined via GPS tracking)
Current km state:	Entry of the km state obtained from the machine. When selecting "update" the value will be saved.
Date:	Notification when date is reached.

Under "notifications" an user with a valid email address can be selected who will be informed via email when an event is reached.

To activate the settings click on "Save".

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Service log book

In the service log book the logs of a machine, e.g. notes about service intervals or damages, photos or circuit diagrams, can be deposited.

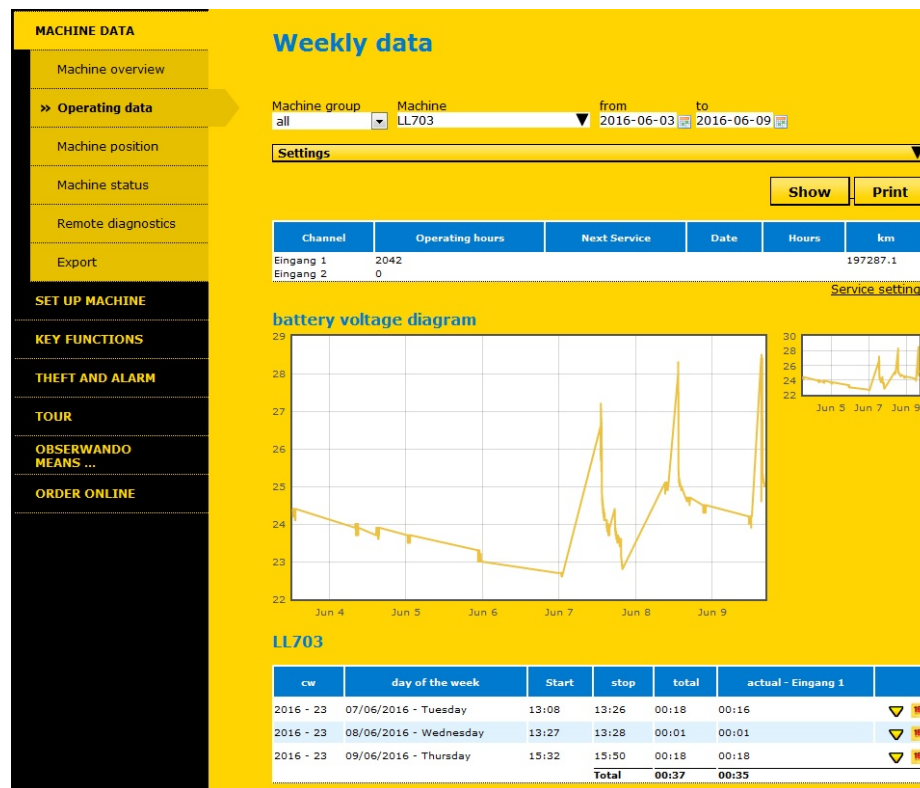To create a new log click on "New log".

Following an example of attaching a text. In this case the attachment consists of a pdf manual. It is also possible to add multiple attachments to a log.

To save the log and the attachment click on "Save".

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Operating data collection

The collection of operating data (e.g. motor is running) can be done using the input. The input voltage can range between 10V and 30V. All collected operating data will be automatically transmitted to the server and can be accessed in Obserwando under "machine data"   "operating data". In this view all weekdays on which the machine was operated will be displayed. Weekdays on which the machine was not operated will be hidden, unless changed under "settings". In the column „Start" the time at which the machine was switched on the first time will be shown. In the column "Stop" the last time when the machine was switched off will be shown. The difference of both times is shown as "Total". If you are interested in the effective runtime e.g. of the motor, you can define the corresponding input channel in the settings. The effective sum of the runtimes can then be found in the column "effective".

Principle of data collection

The "start time", "stop time" and "minutes per hour" will be recorded as operating times. This has been proven useful, especially for platforms and other construction machines. The timeline for the effective channel can be made visible by clicking on the yellow arrow in the last column. If you are interested in the data of all input channels you can change to the daily view by clicking on the calendar symbol in the last column.

Times in the columns "total" and "effective" which are marked in red show operating times longer than 8 hours or at the weekend.

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Position determination - map view
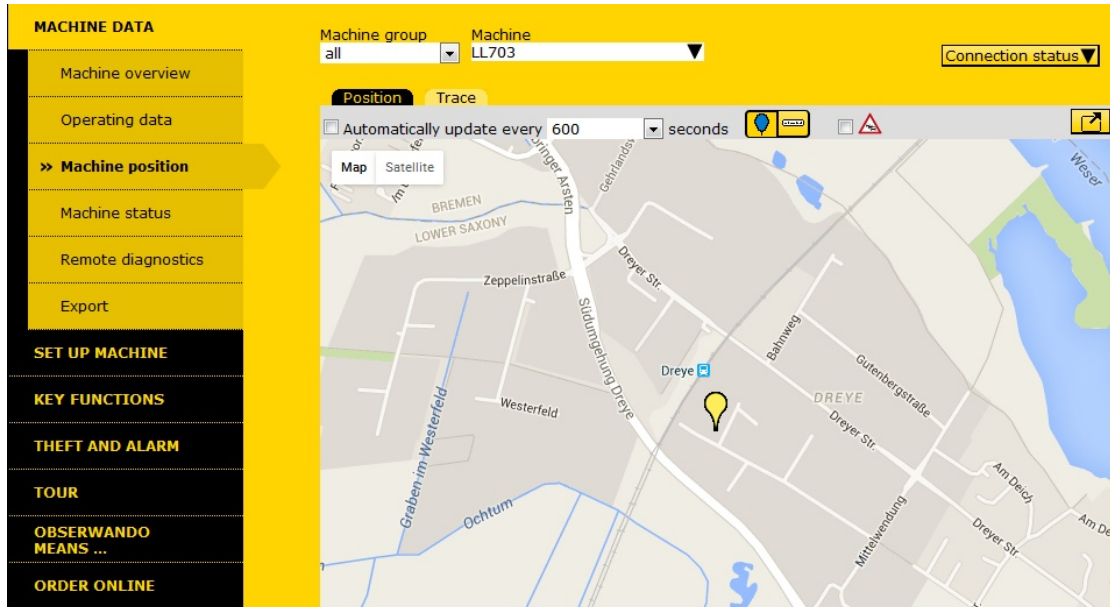
When the vehicle is in sleep mode the last transmitted position will be shown. The EQTrace T/T-Key will automatically switch into sleep mode when a vehicle is parked for more than 10 minutes. Sleep mode will be interrupted every 24 hours to send a control message to Obserwando. If a new position is available it will also be updated. In drive mode the current position will be updated every 60 seconds. Is the mobile network not available the coordinates will be saved in the device. As soon as GPRS is available again the saved data will be transmitted to the server.
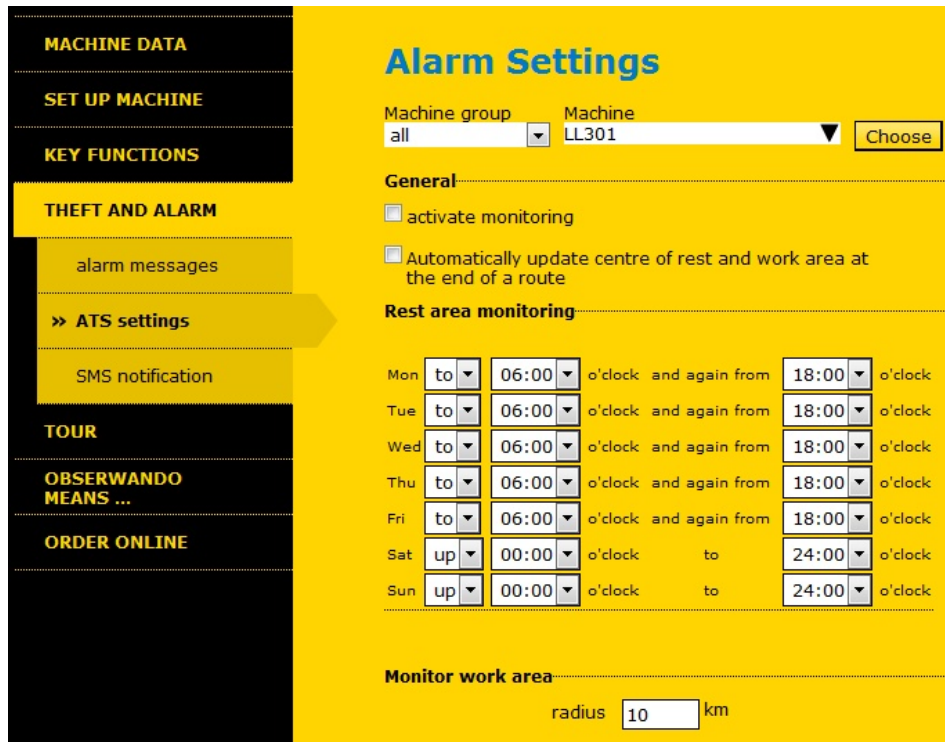
After first commissioning, the current position will be transmitted to Obserwando as soon as it was determined after connecting the supply voltage. For that the vehicle needs to be in the open!
If no new position can be determined the last saved will be displayed.

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Theft protection (Flat rate ATS)

Theft protection in Obserwando can be separated into monitoring of rest and work area.

The rest period can be configured for each weekday individually. During the rest period an alarm will be raised if the rest area of 200 m is left. During working hours the configured work area (radius in km) will be monitored. The centre of the rest and work area is either the last transmitted position (i.e. the current position when the area is defined) or the last used position (of a previous sessions).

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SMS notification

The alarm messages will be sent from the server to all users which are activated for the device via SMS. Important is that every user has a valid mobile number in the master data. After sending the alarm message the monitoring of the device will be deactivated to prevent repeated SMS.

Warning: Monitoring must be reactivated before a new alarm message can be sent (see alarm settings).

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Key module functions (T-Key)

When the EQTrace T-Key is connected to the key module and the read in of keys was activated on the Obserwando server, the output (and thereby the machine) can be activated with an electronic key.

The user who has registered for the key will be logged. The user will be logged off when the vehicles was turned off for at least 30 seconds.

Users who are trying to register while the vehicle is on are not logged.

Use of the key module function

To use these functions please do the following:

Assign a key to every user. All available keys can be found under the corresponding menu.

Under "Key access" you can define for each user individually which machines the user can access. You just need to click on "Assign" for the desired machine. The key will then be marked for the assignment and will be transfered to the machine. If a device is not reachable it will be postponed until the server can establish a connection.

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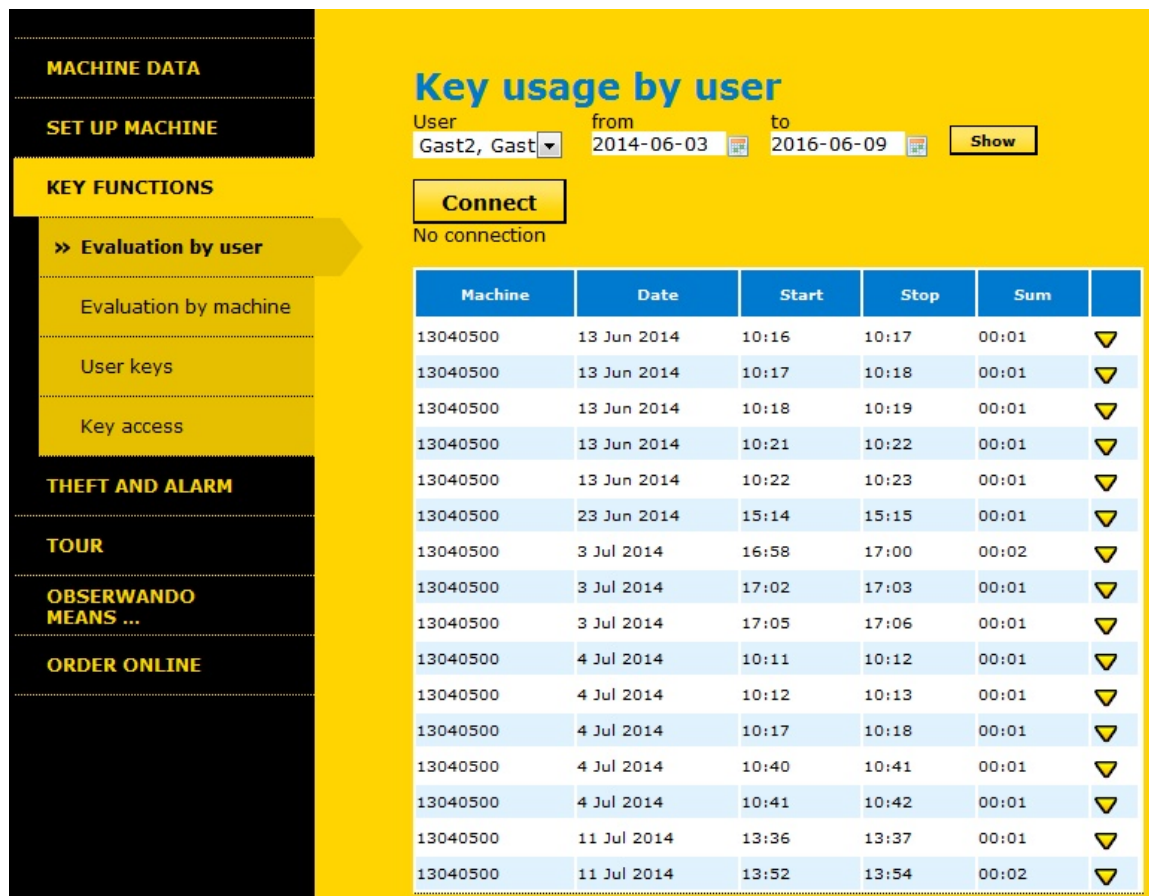![Rösler Software-Technik GmbH logo]

Evaluation of the key data

The evaluation of the periods of use can be done using different viewpoints:

Evaluation by machine shows when and for how long a user has operated the machine.

Evaluation by user shows all machines which a user has operated in the selected period of time.

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Technical Details

Dimensions: 105 x 73 x 35 mm

Operating voltage: 10 – 60 VDC

Operating temperature: -35° C to +65° C

Power consumption:

	12V	24V	48V
Idle mode:	25mA	20mA	25mA
Transmit mode:	120mA	70mA	40mA
Sleep mode:	8,9mA	7,7mA	7,3mA

Internal battery: capacity 1050mAh
- Power consumption increases while charging the internal battery.

Inputs: 1 input

Outputs: 1 shortcircuit proofed output (up to 0.5A); output wired to GND

Box content

1. EQTrace T/T-Key inclusive connection cable 2m