MiX 2310i with IP Housing

Product Information Guide

MiX TELEMATICS

VISION

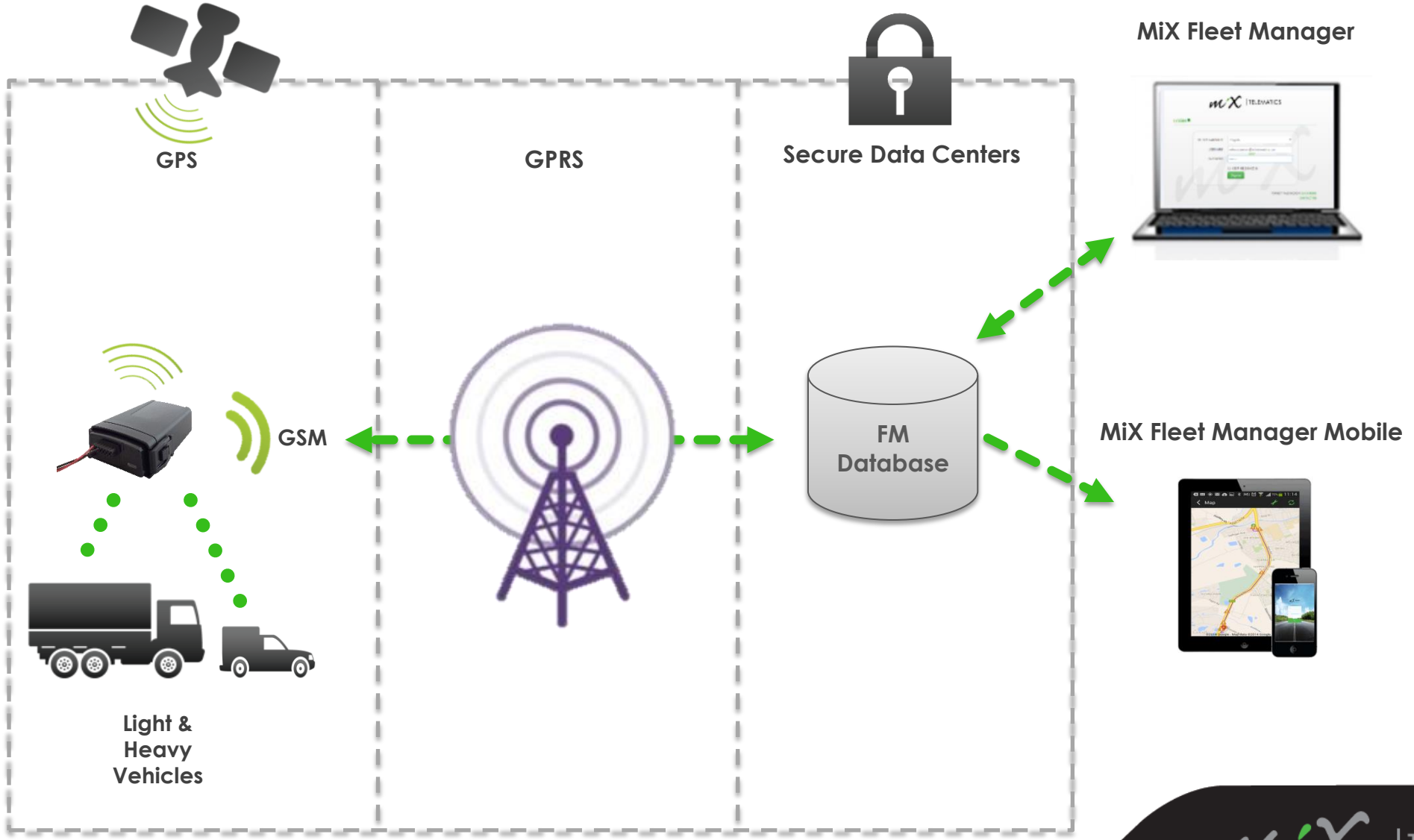
The **MiX 2310i** extends the MiX Telematics range of fleet tracking hardware, **complementing** the **FM Communicator** and **FM Tracer** products. The MiX 2310i gives **fleet managers** access to **essential vehicle tracking and fleet management** services **through DynaMix or MiX Locate**.

WHO IS IT FOR?

MiX 2310i is designed for the **Fleet Manager** who needs **essential fleet management and safety** services

- Stand alone fleets
- Mixed fleets requiring FM compatible driver ID
- Driver route and behaviour monitoring
- Integrated MiX Insight reporting tools
- Service and license schedule reminders

SOLUTION OVERVIEW



BENEFITS

Improve Operational Efficiency

Integrated reporting suite
Reports via e-mail

Eliminate unnecessary costs

Service and license reminders
Fuel saving due to driver behaviour modification

Reduce Risk

Reduce unauthorised vehicle usage with starter interrupt immobilizer
Report vehicle battery tampering while powered from internal battery
Event notifications in-vehicle via driver feedback buzzer
Improved safety due to driver behaviour modification
Real-time tracking giving regular vehicle position updates

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PRODUCT HIGHLIGHTS

Designed for both 12V and 24V vehicles:

- Driver identification compatible with FM Communicator/Tracer
- Starter interrupt immobilizer option
- Two digital inputs
- Select between internal or external GPS antenna
- Select between wired ignition or automatic trip start/stop determination
- Internal 1100 mAh backup battery
- IP Housing that is dust-tight and protects against water ingress
- IP66 rating with main harness and external GPS antenna connected
- IP67 rating with 3-wire ignition harness and no external GPS antenna connected
- Events: over-speeding, harsh acceleration, harsh braking, harsh cornering, severe impact, moderate impact, low vehicle battery, change in digital input state, vehicle battery disconnect and reconnect

BASICS OF OPERATION

Start Trip Event incl. Position:
If ignition input connected:
- When ignition ON detected

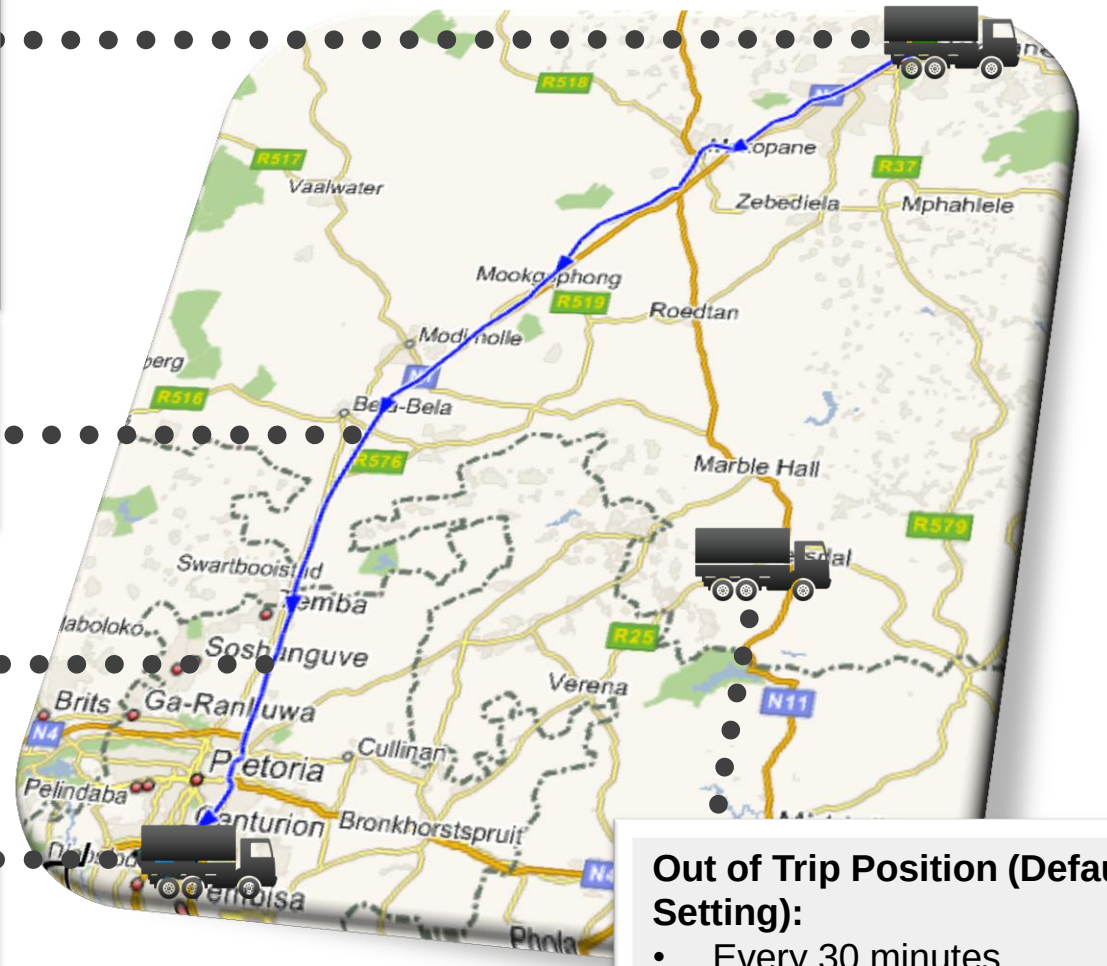
If ignition input not connected:
- When movement or increased supply voltage from alternator detected

In Trip Positions(Default Settings):
- Heading change > 10° OR
- Distance > 1 km OR
- Time > 30 sec

Active Events:
Over-speeding, harsh acceleration, harsh braking, harsh cornering, severe impact, moderate impact, low vehicle battery, change in state of digital input and vehicle battery disconnect and reconnect

End Trip Event incl. Position:
If ignition input connected:
- When ignition OFF detected

If ignition input not connected:
- When no movement or reduced supply voltage from alternator detected



Out of Trip Position (Default Setting):
- Every 30 minutes

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HOW DOES DRIVER ID WORK?

- The MiX 2310i uses the blue code plug interface, compatible with the FM Communicator and FM Tracer, for driver identification
- Support for extended driver ID information is provided
- No local (in-vehicle) validation of authorized drivers is performed
- Any valid driver code plug will be read and transmitted as driver information for the trip
- The buzzer will beep on and off for the duration for the Driver ID buzzer beep duration set in the device config. or until a valid driver code plug is inserted (zero seconds/don't beep is default)
- Successful reading of a valid driver code plug is acknowledged by sounding two short beeps
- No beep will sound if an invalid/incorrectly programmed code plug is inserted
- The red LED on the code plug socket will flash until a valid driver code plug is inserted
- The LED turns off once a valid driver is associated with the current trip

HOW DOES THE IMMOBILIZER WORK?

- The Starter interrupt immobilizer works with the Driver ID system and should always be used in conjunction with a wired ignition
- The fleet harness available with the MiX 2310i includes a relay socket for the starter interrupt relay (relay not included)
- A suitable relay must be added and the harness wired to interrupt the vehicles starting circuit if the immobilizer is required
- When a vehicle is wired for immobilization, the immobilizer will be active at the start of a trip and starting the vehicle will not be possible
- Plugging a valid blue driver code plug into the code plug socket will deactivate the immobilizer and allow starting of the vehicle
- The immobilizer will automatically arm 30 seconds after the end of a trip
- Restarting within 30 seconds of a trip end will not require the code plug
- Thereafter the driver code plug will have to be reinserted to allow starting

Note: If immobilization is not required the relay need not be added , no additional configuration of the MiX2310i is necessary

MIX FLEET MANAGER/MIX LOCATE FEATURES

- Show trail on a map
- Show trip timeline
- Live tracking
- Historical tracking
- Replay historical trips
- Event notifications
- Location management
- Service and license management

MIX FLEET MANAGER APPLICATION

- Track your fleet on a map
- Quick view of fleet's status
- Latest speed and positioning details
- Trips for last 48 hours
- See start and end points
- Choice of Maps – street, satellite and hybrid
- Your position relative to your fleet
- Available on iPhone, iPad and Android phones and tablets

MiX Insight Reporting Features*

Trip and Utilisation Reports

- Daily Trip Report
- Detailed Trip Report
- Monthly Trip Report
- Trip Summary Report
- Vehicle Performance Report

Movement Reports

- Daily Movement Report
- Location Overview Report
- Location visits by week and day Report
- Movement Overview Report
- Summary Movement Report

MiX Insight Reports

Event Reports

- Detailed Event Report
- Event Overview Report
- Event Summary Report

*** Note: all fields within the above reports will be available due to limited data generated by the MiX 2310i**

MiX TELEMATICS

TECHNICAL SPECIFICATIONS

Communication	GSM Quad-Band 2G modem (GPRS), internal antenna
GPS	GPS with internal antenna and option to attach external antenna
Operating voltage	Compatible with 12 and 24 volt vehicles (operating range 10.5V DC to 33V DC)
Battery	1100mAh internal backup battery providing power for between 4 and 8 hours
Buffered messages	Approximately 20,000 messages buffered if communication unavailable
Driver Identification	FM Compatible blue driver code plug interface
Inputs	Digital inputs x 2
Accelerometer	3-axis for wake-up and impact detection
Installation	Permanent power, Ignition connection (Optional), 2 x Inputs (optional), Starter Interrupt Relay (optional), Driver ID Code Plug socket (Optional)

TECHNICAL SPECIFICATIONS

Status Indication	Two LEDs one for GPS/trip status and one for GSM/communication settings received status
Mounting	Base mounting clip provided for OBC. Clip has options to attach with screws or cable ties
Harnesses	Fleet harness includes , buzzer, ignition wire, 2 x input wires , starter interrupt relay socket and driver ID code plug socket. Other harness options are available for power only, power and ignition etc.
Dimensions	33 x 75 x 100 mm
Enclosure	• IP66 with main harness and external GPS antenna connected • IP67 with 3-wire ignition harness and no external GPS antenna connected
Temperatures	• Operating : -20° to 55°C • Storage: 5 to 35°C • Backup Battery Charge: 0 to 45°C • Backup Battery Discharging: -20 to 50°C
Standard events	Over Speeding, Harsh Acceleration, Harsh Braking, Harsh cornering, Severe impact, moderate impact, Low Vehicle Battery, Vehicle battery disconnected/reconnected
Optional Events/Data	Real ignition On/Off event (requires ignition to be wired), Driver ID per trip (requires driver code plug socket to be installed), Input High/Low events (requires inputs to be wired)

PART NUMBERS

Part Number	Name	Picture
440FT0923	MiX 2310i Electronic Unit - IP Housing	
440FT0942	MiX 2000 Main Harness - with IP seal	
440FT0920	MiX 2000 Ignition Harness with IP Seal (3-Wire)	

Please note:

The MiX 2310i is not shipped with a harness – one of the options must be ordered for each MiX 2310i ordered

PART NUMBERS

Driver ID add-on : Add these components only when Driver ID is going to be installed		
440FT0623	Code Plug Socket Harness and Clip	
440FT0073	Blue Driver Plug	
Optional Extras: Add to order only when required		
440FT0785	MiX 2000 mounting clip	
440FT0694	GPS antenna	
440FT0681	MiX 2000 Serial Programming Harness	

MIX 2310i DOCUMENTATION

Product Documentation Repository

https://confluence.mixtelematics.com/display/MFHF/MiX+2000+Home+Page

Product Documentation

- MiX 2310i with IP Housing Product Fact Sheet
- MiX 2310i with IP Housing Product Information Guide
- MiX 2310i with IP Housing Installation Manual
- MiX 2310i with IP Housing Part IDs and Harness Options

VEHICLE TRACKING SUPPORT

- Technical support issues can be raised via MiX Assist with the International support team
- Product Management support will be provided by:

Cellstop Namibia
Tel : +264 (61) 30-9828
Fax : +264 (61) 30-9827
Email : michaelm@cellstop.com

Addendum

MiX 2310i Additional information

MiX TELEMATICS

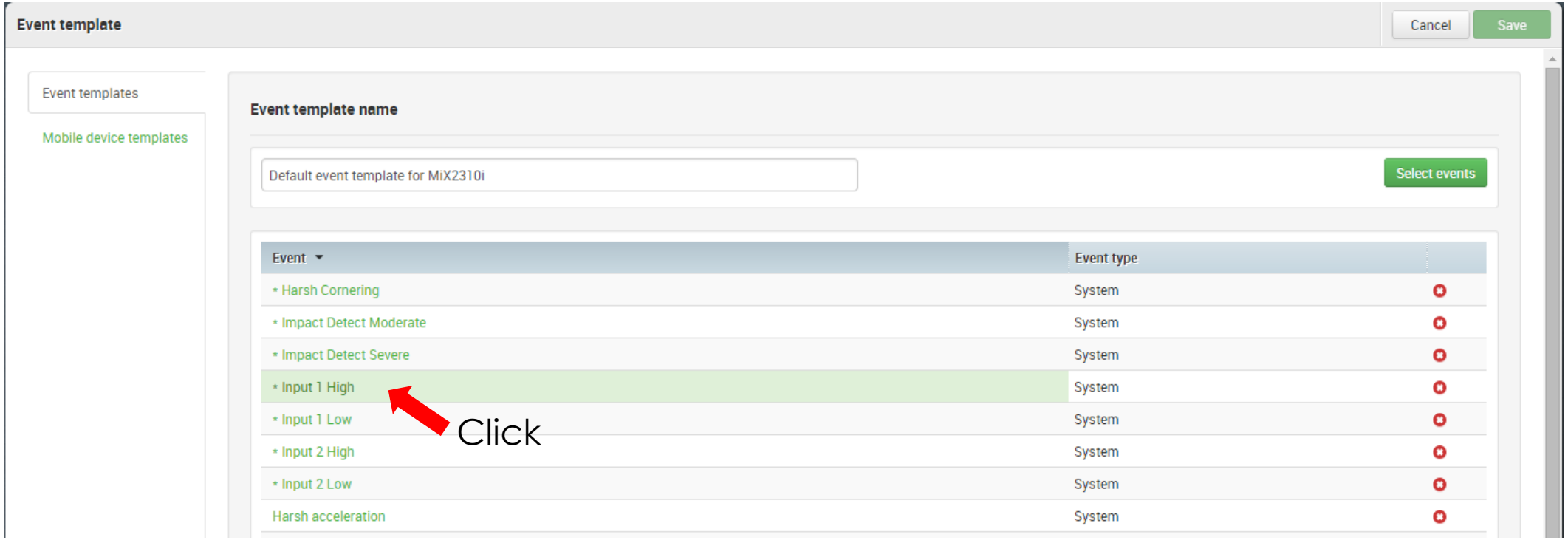
MiX 2310i AND EVENT TEMPLATES

- Event templates are not mobile device aware until linked to a mobile device template in a config group
- The default MiX 2310i event template will include all configurable system events
- Events that cannot be removed or adjusted e.g. Ignition on/off and battery disconnect will not be shown in an event template but are enabled by default
- Depending on user permissions it may be possible to add events or make event logic changes in an event template that are not supported by the MiX 2310i
- If any other unsupported changes are made the error will only be flagged when and the event template is linked to a MiX 2310i mobile device and the config is compiled
- The MiX 2310i does not support any configurable conditional event logic
- The only parameter that can be edited are the event thresholds visible in the system events included in the default event template
- The renaming of input events is accomplished by creating a generic custom event associated with the input threshold and deleting the standard event

RENAMING INPUT LINES - 1

Steps 1 – In Event template

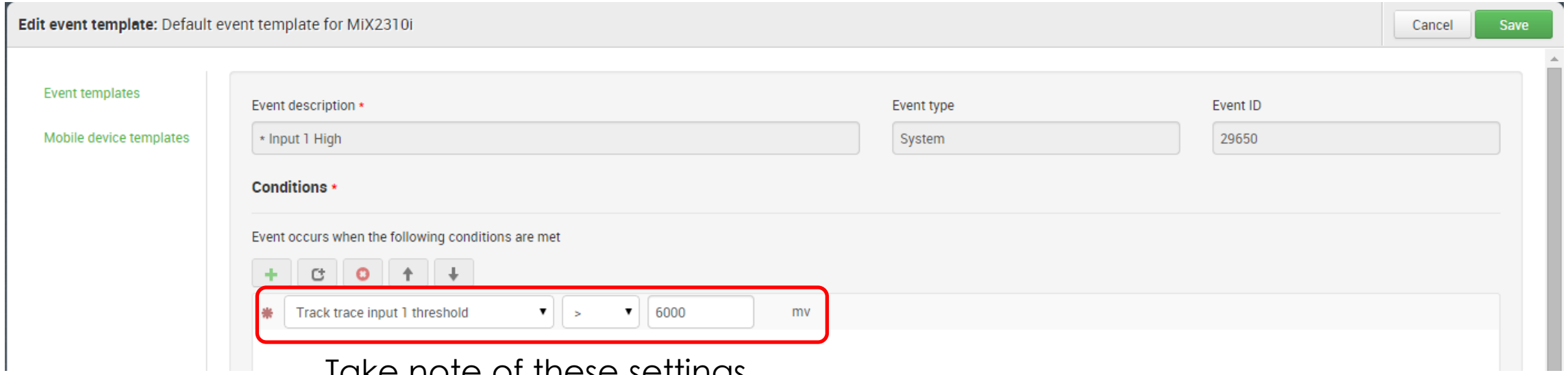
- Click on the event to be renamed - *Input 1High in the example below



RENAMING INPUT LINES - 2

Steps 2 – In Edit event template

- Take note of the event conditions that trigger the event to be renamed
- These conditions need to be duplicated for the new renamed custom event

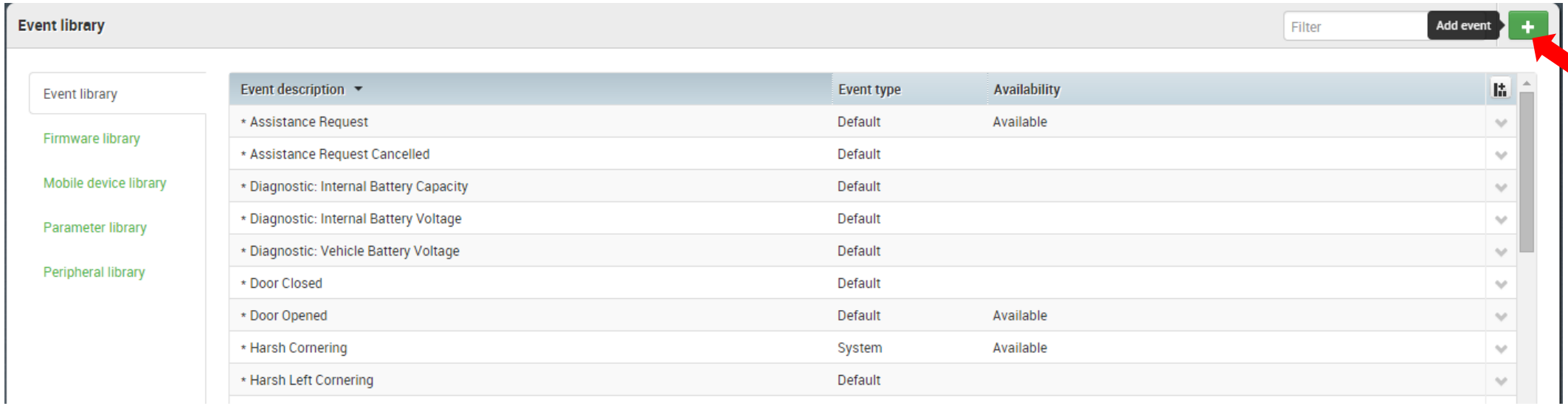


Take note of these settings

RENAMING INPUT LINES - 3

Steps 3 – In Event Library

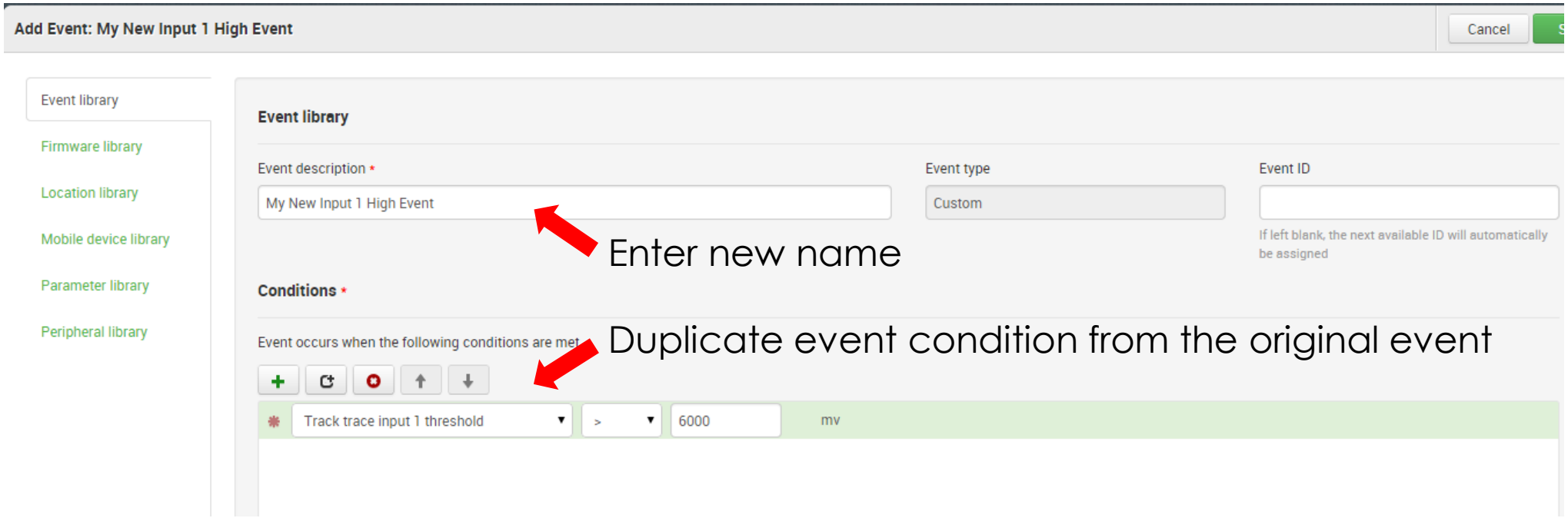
- Click on add an event



RENAMING INPUT LINES - 4

Steps 4 – In Add Event

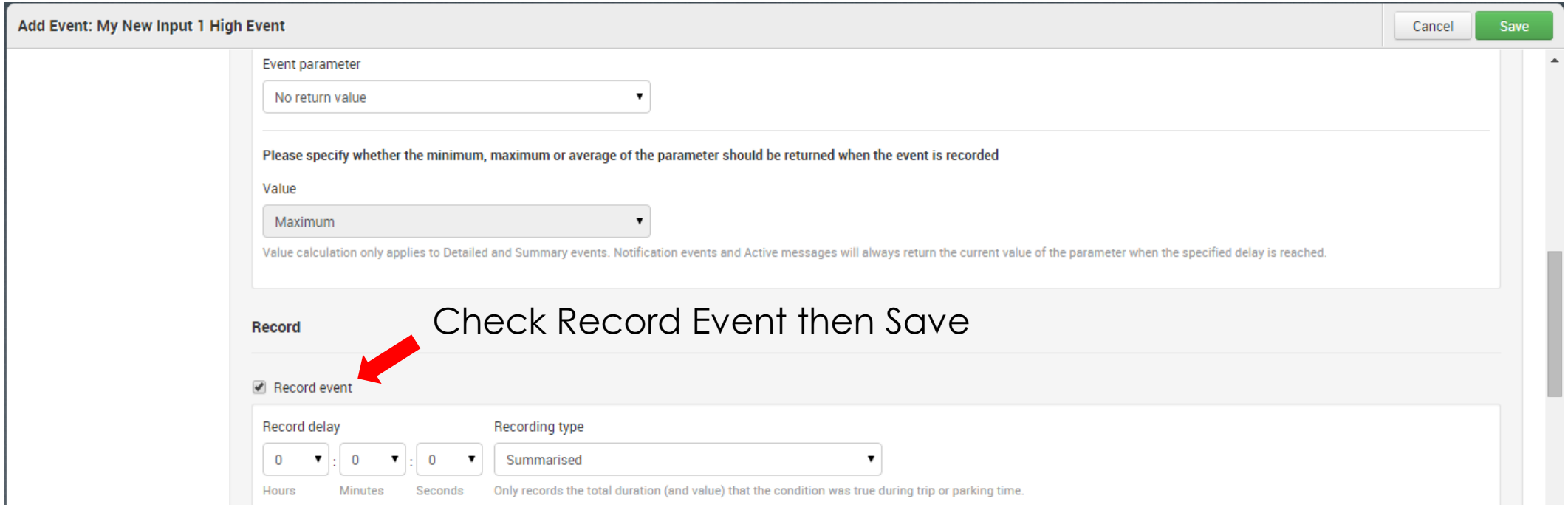
- Enter the new event name in the Event description text box
- Enter the correct conditions to be monitored for this event as observed in Step 2



RENAMING INPUT LINES - 5

Steps 5 – In Add Event

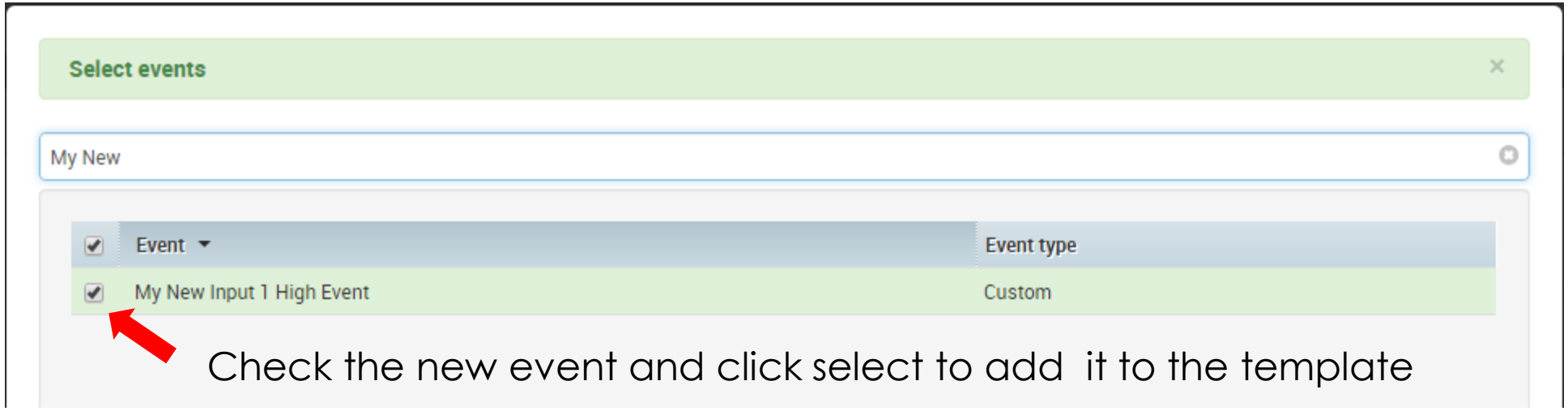
- Scroll down and select Record Event before saving
- **Note: None of the other setting shown are applicable to the MiX 2310i Device type**



RENAMING INPUT LINES - 6

Steps 6 – In Event template – Select events

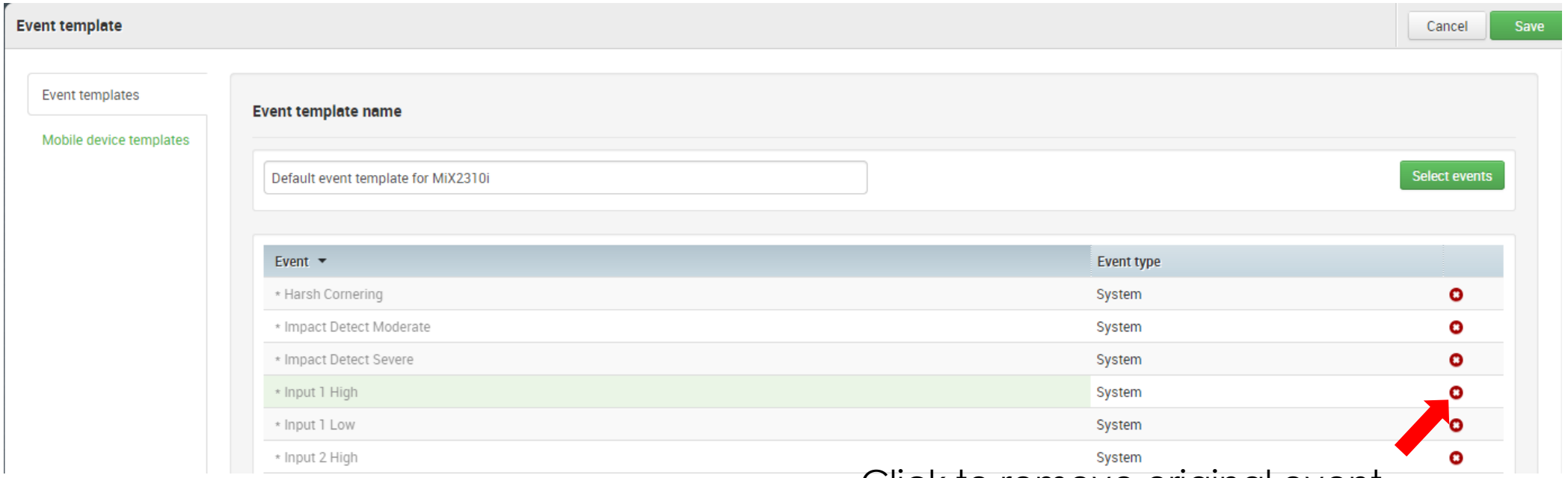
- Click on select events
- In the filter field start typing the name of the new event just added
- Check the box to include the new custom event in the template
- Click select to return to the event template



RENAMING INPUT LINES - 7

Steps 7 – In Event template

- Click on the remove button for the original event to remove it from the template
- In this example Input 1 High will now be reported as “My New Input 1 High”
- Compile the config for the device



Click to remove original event