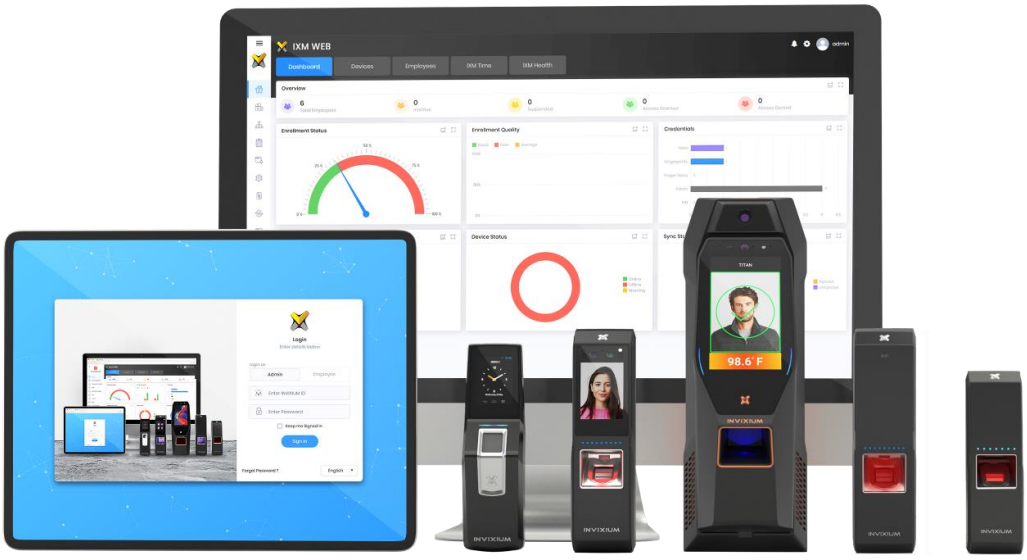


Feature Description Document

Configuring Inputs & Outputs

Purpose

This document describes the functional specifications of the Input & Output (SPI & SPO) feature.

Applies to

TITAN	TFACE	TOUCH 2	SENSE 2	MERGE 2	MYCRO
All Devices	All Devices	All Devices	All Devices	All Devices	All Devices

Description

IXM WEB allows users to manage/configure Input/Output changes on IXM Devices.

1. **Input Line: (Not available on MERGE Series)**
   Specific Purpose Input is detected by a trigger of a certain duration pulse (in millisecond resolution) on the input line. Pulse duration can be set from 10 to 2000 milliseconds. Users need to select events to determine which event needs to generate an Input pulse on the IXM Device. Following events are supported by IXM WEB:

   - None – Device will not take any action.
   - Release alarm – Any alarm signal triggered will be cleared.
   - Restart Device – Restarts device
   - VoIP Call (only supported in SENSE 2, TOUCH 2 & TITAN) – Establishes VoIP call based on the VoIP configuration.

   Users can also determine which action will be performed when SP Input is applied. These actions are:

   - Falling edge – Input pulse edge will be lowered
   - Rising edge – Input pulse edge will be raised

2. Output Line:

IXM WEB allows users to choose various SP Output events, On Time, Off Time and Counter value which will be generated for specific events. Specific purpose output generates a pulse from 10 to 2000 milliseconds for On time and from 10 to 2000 milliseconds for Off time, with 0 to 100 counts. Pulse can be generated based on events occurring on the IXM Device. Specific purpose output can support the following event triggers:

- Authentication Success
- Authentication Fail
- Anti-shock On
- Door Open
- Door Close
- Forced Open Door
- Door Held Open
- Duress Finger
- Device Boot Up

Users will also able to select default status when SP Output line is generated on an IXM Device which are as follows:

- Low Level
- High Level

Hard Wire Connections

The SPIO connections are highlighted below and are located on the Top Connector of the Wiring Harness of the IXM devices.

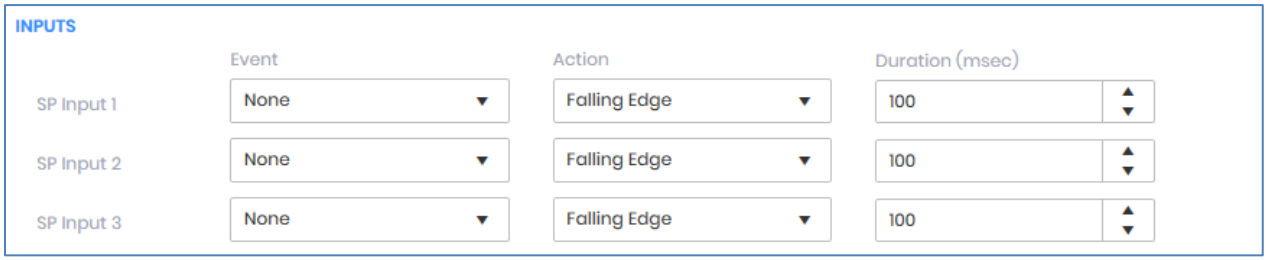
INVIXIUM recommends the use of all the ground wires.

Get Wired Top Connector

Wire Color	Wire	Label	Pin(s)	Wire Color	Wire	Label	Pin(s)
White/Red		RLY_NC	1	Orange/Yellow		SPO_1	2
Grey		RLY_COM	3	Yellow/Green		SPO_2	4
Grey/Red		RLY_NO	5	Green/Orange		SPO_3	6
Brown		ACP_LED1	7	Black/Orange		SPO_GND	8
Yellow		ACP_LED2	9	Yellow/Cyan		SPI_1	10
Black/Yellow		ACP_LED_GND	11	Cyan/Brown		SPI_2	12
White/Purple		DAC_IN1	13	Brown/Yellow		SPI_3	14
Purple/Yellow		DAC_IN2	15	Black/Cyan		SPI_GND	16
Blue/White		DAC_IN3	17	Orange		DAC_OUT	18
Black/White		DAC_GND	19	Purple		No Connect	20

Configure Input setting in IXM WEB

1. From **Home** >> Click the **Devices tab** on the top >> Select the required **device** >> Navigate to the **Access Control** tab of the device >> Click **Input/Output**.



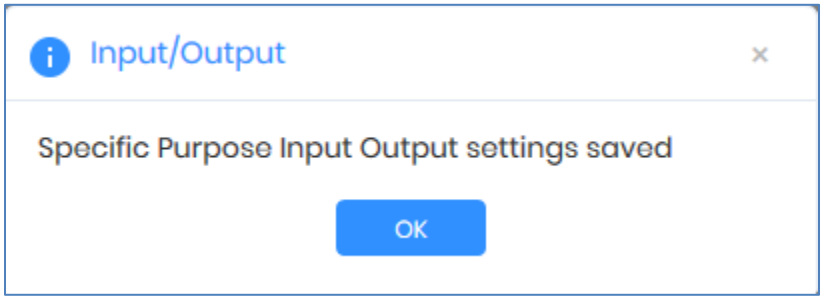
2. Each Specific Purpose Input setting is explained below:

- **Event:** Upon receiving Input pulse the device performs any one of the selected SPI events.
  - **None:** The device will take no action if None event is selected.
  - **Release Alarm:** Any alarm signal triggered will be cleared.
  - **Restart Device:** The device will be restarted.
  - **VoIP Call:** The device will establish a VoIP call with configured VoIP contact. VoIP call event is available in SENSE Series, TOUCH Series, and TITAN Series devices only.

- **Action:** The device supports two actions when an input pulse is received.
  - Rising Edge: Input pulse edge will be raised.
  - Falling Edge: Input pulse edge will be lowered.

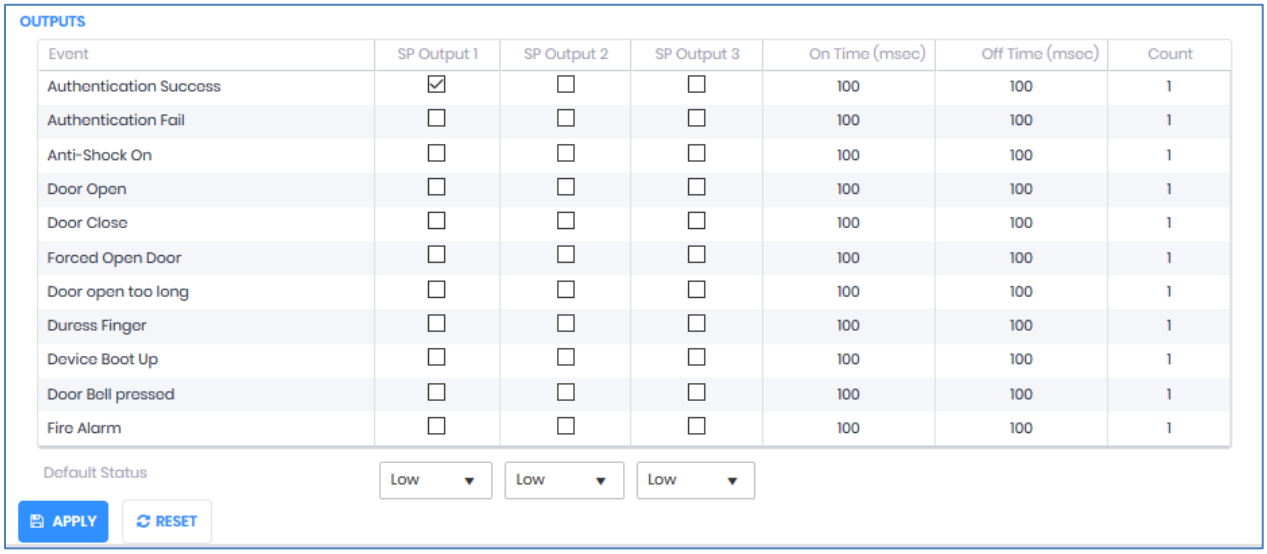
- **Duration:** Enter a value to determine the duration between two input pulses.

3. Enter the required details for Event, Action, and Duration under the Inputs section and click **Apply**. The application will show a success message once settings are saved on the device.



Configure Output settings in IXM WEB

1. From **Home** >> Click the **Devices tab** on the top >> Select the required **device** >> Navigate to the **Access Control** tab of the device >> Click **Input/Output**.



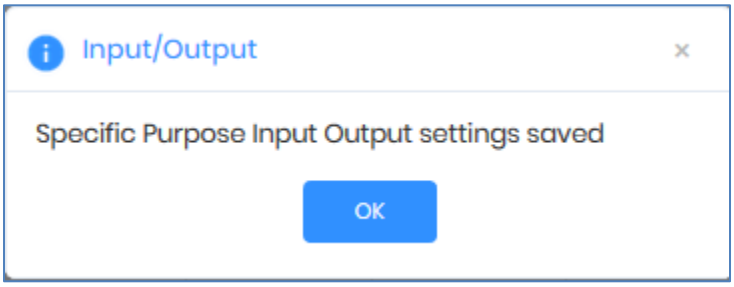
2. The list of settings along with their functions are as below:

- **SP Output 1:** In enabled mode, it will allow the pulse to pass on the first SPO line.
- **SP Output 2:** In enabled mode, it will allow the pulse to pass on the second SPO line.
- **SP Output 3:** In enabled mode, it will allow the pulse to pass on the third SPO line.
- **On Time (msec):** On-time (10 to 2000 milliseconds) of a pulse generated for selected events.
- **Off Time (msec):** Off time (10 to 2000 milliseconds) of a pulse generated for the selected event.
- **Count**: Pulse will be generated for the value (0 to 100) provided in this field.

3. The following is a description for each Specific Purpose Output events:

    - **Authentication Success:** On successful authentication, the device will send an output pulse.
    - **Authentication Fail:** On failed authentication, the device will send an output pulse.
    - **Anti-Shock On:** When an Anti-Shock event triggers the device will send an output pulse.
    - **Door Open:** When a door will open the device will send an output pulse.
    - **Door Close:** When a door will close the device will send an output pulse.
    - **Door Open too long:** When Door Open too long event triggers the device will send an output pulse.
    - **Duress Finger:** When a user will authenticate using duress finger the device will send an output pulse.
    - **Device boot up:** When boot up event triggers the device will send an output pulse.
    - **Fire Alarm:** When fire alarm triggers the device will send an output pulse.
    - **Default Status:** There is two status for Output configuration, that is as follows:
        - **Low:** The device will send a low output pulse.
        - **High:** The device will send a high output pulse.

4. Enter the required details for SP Output 1, SP Output 2, SP Output 3, On Time, Off Time and Count under the Outputs section and click **Apply**. The application will show a success message once the settings are saved on the device.



FAQ

1. **Who can configure Input and Output settings on Device?**
   All users who have access to the CONFIG Tile can configure Input and Output settings on the Device from IXM WEB.

2. **Can I provide multiple events to a single output line?**
   Yes, IXM Devices can accept multiple events to a single output line.

Support

For more information relating to this Feature Description document, please contact us at support@invixium.com

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