

# How to allow access with Biometric switch on HMI ?

## I- Type of publication

<input type="checkbox"/>	Typical application
<input checked="" type="checkbox"/>	Best know Method (BKM)
<input type="checkbox"/>	Troubleshooting guide

<input type="checkbox"/>	Level 2 use
<input type="checkbox"/>	Internal use
<input checked="" type="checkbox"/>	Customer

## II- Product

- Product range :

Harmony Ø 22 ▼

- Product family :

Style 5 ▼

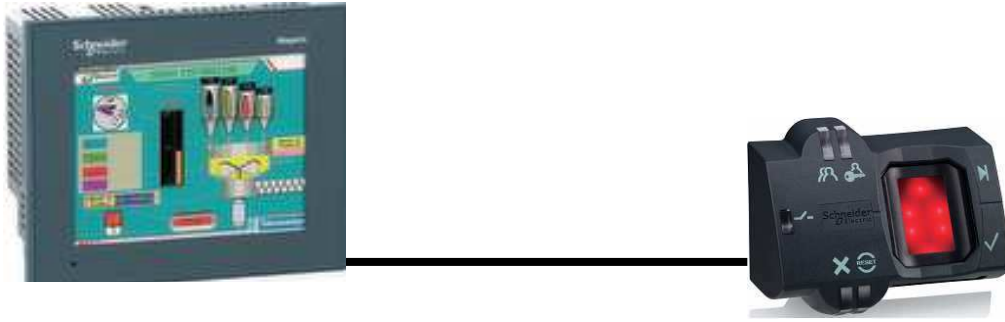
## III- Introduction

This application sheet describes the way to use a Biometric switch as an access control of HMI.

# IV- Description

## 1. Set of equipment:

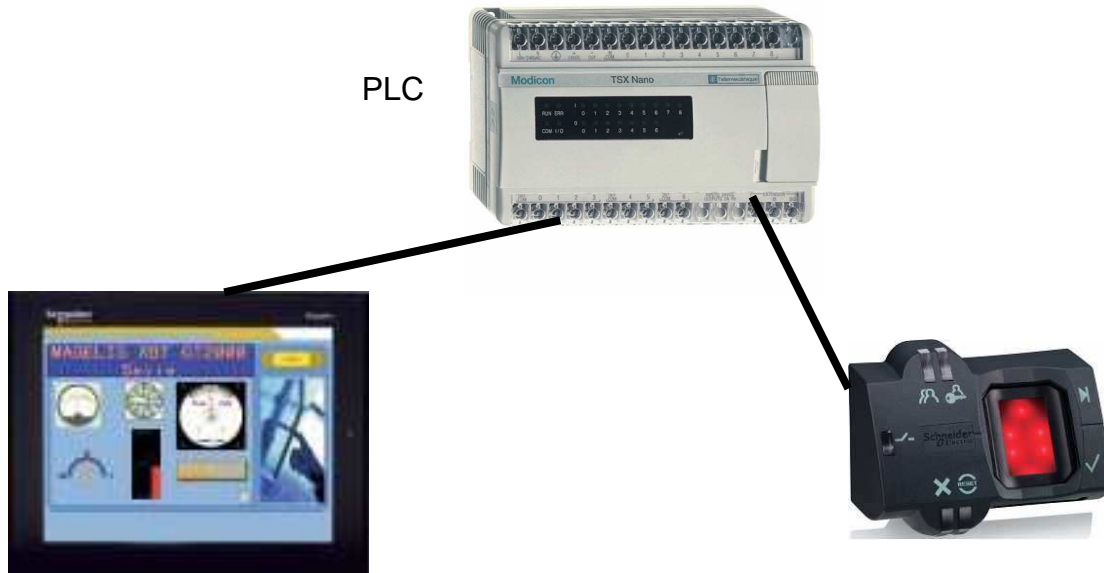
Method #1:



XBTGCxx

XB5S

Method #2:



PLC

XBTGT

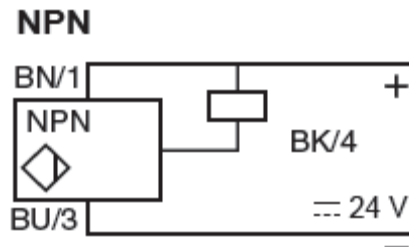
XB5S

## 2. Wiring :

Connect the output of XB5Sxxx to an input of PLC.

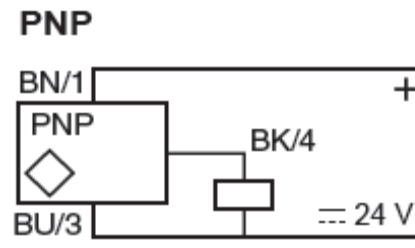
For source input :

**XB5 S●B3L2 / ●M12**



For sink input :

**XB5 S●B2L2 / ●M12**

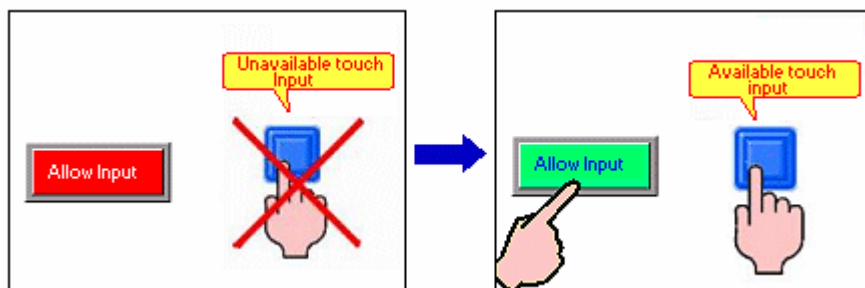


## 3. Configuration for method #2:

In VijeoDesigner :

- **Using Interlock to Prevent Accidental Touch Inputs**

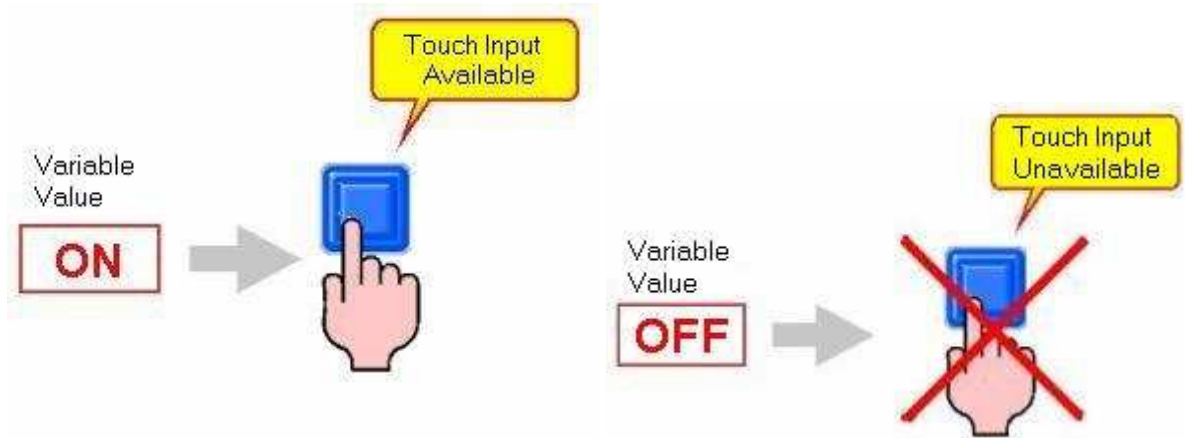
If you enable the Interlock feature for your switch, selector or action, touch input is enabled only if a certain condition is met. This feature prevents accidental touch inputs.



Select Enable Interlock and specify the discrete or integer variable or expression used to allow touch input. Assign this variable to the input of PLC or XBTGC. On the selector or switch, this check box is on the Advanced tab. In the action, this check box is in the first step of the wizard.

When the defined variable is true, touch input is possible; when false, touch input is ignored. The following example uses a BOOL variable as the Enable Interlock variable.

**BIOMETRIC SWITCH**



- Use discrete or integer variables or boolean expressions with the Interlock feature.

Data Type	ON/True	OFF/False
BOOL	ON(1)	OFF(0)
Integer	Any value other than 0	0
Boolean Expression	True	False

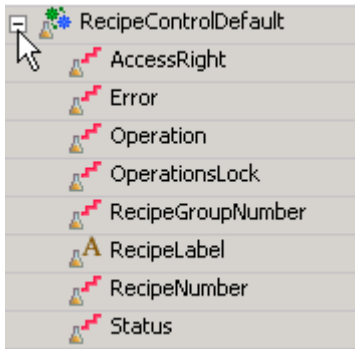
- **Setting the User Access Right**

The following instructions provide two different methods of setting up the current access right for the user with Biometric connected to PLC.

### Defining the User Access Right Variable

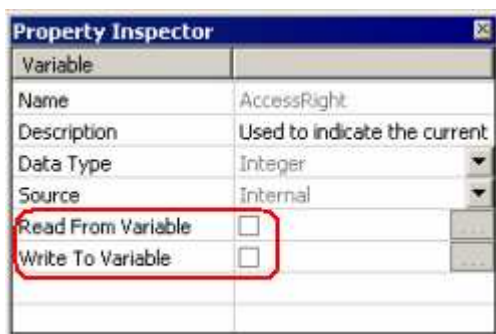
When you add a new access group, the RecipeControlDefault structure variable is created. Use this variable to control the current User access right.

1. Expand the RecipeControlDefault variable to view its elements.



2. Select the AccessRight variable element and define the Read From Variable or Write To Variable.

Use these variables to define the device address with the access right of the current user. Use Read From when the User access right is defined on the equipment and needs to be copied into the AccessRight variable. Use Write To when the User access right is defined on the target machine and needs to be copied from the AccessRight variable to the equipment.



**Setting Up the PLC**

Connect the I/O lines from the lock to control the bit values in the device address associated with the Recipe Control Group's AccessRight variable.



The above biometric switch has three settings: Run, Monitor, and Program. Setup the input so that different bits in the device address turn on depending on the current setting.

1. Use the Lock to set the User access right as shown.

Setting	Access Right	in binary format	Description
Run	0	0000 0000 0000 0000	Operation Level - Enables normal panel operations
Monitor	1	0000 0000 0000 0001	Supervisory Level - Some security: hides recipes from panel operator and prevents operator from running recipe operations
Program	3	0000 0000 0000 0011	Programming Level - Security: hides <i>secret</i> recipe information from panel operators and supervisors

2. For each Recipe Group and Recipe, assign the appropriate access right.

Any Recipe Groups or Recipes with an access right of 0 will be visible to the panel operator.

To add security, the minimum access right should be 1.

If you want to hide *secret* recipes from supervisors who have a key that can change the PLC to the Monitor setting, assign an access right of 3 to the Recipe or Recipe Group. Only approved maintenance staff are provided with a key to change the PLC to the Program setting.