

Demo Project for Security

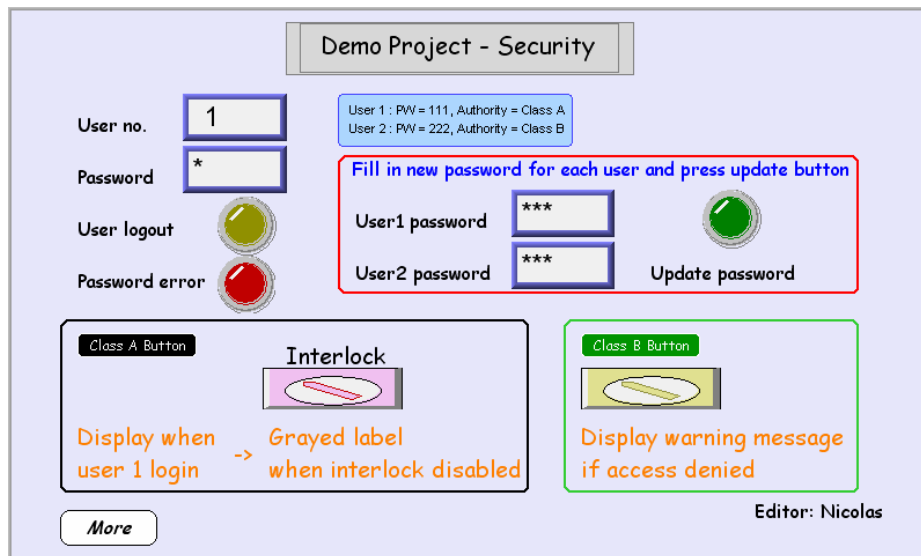
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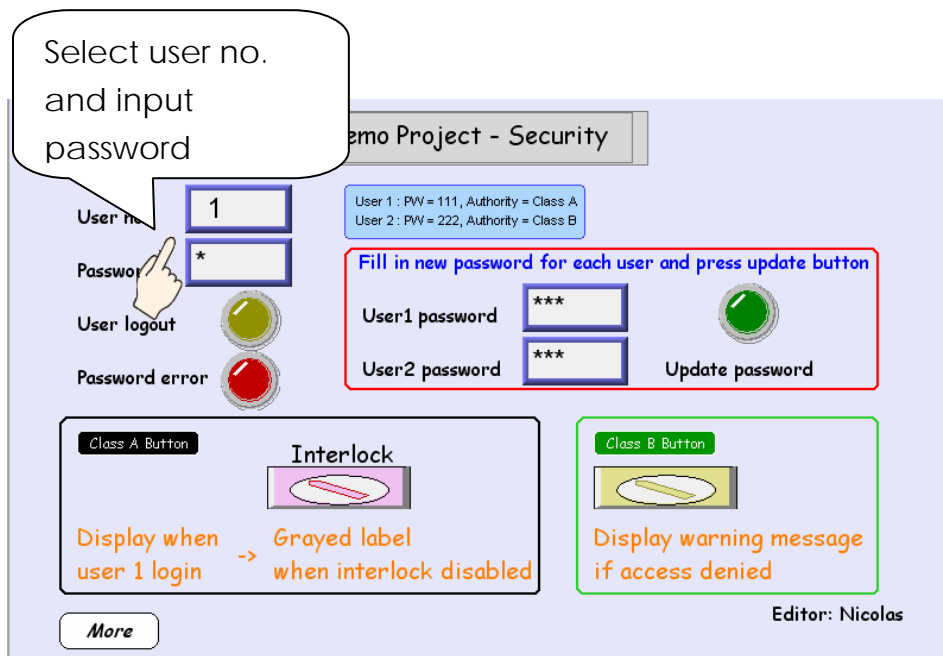
1. Overview and Operation

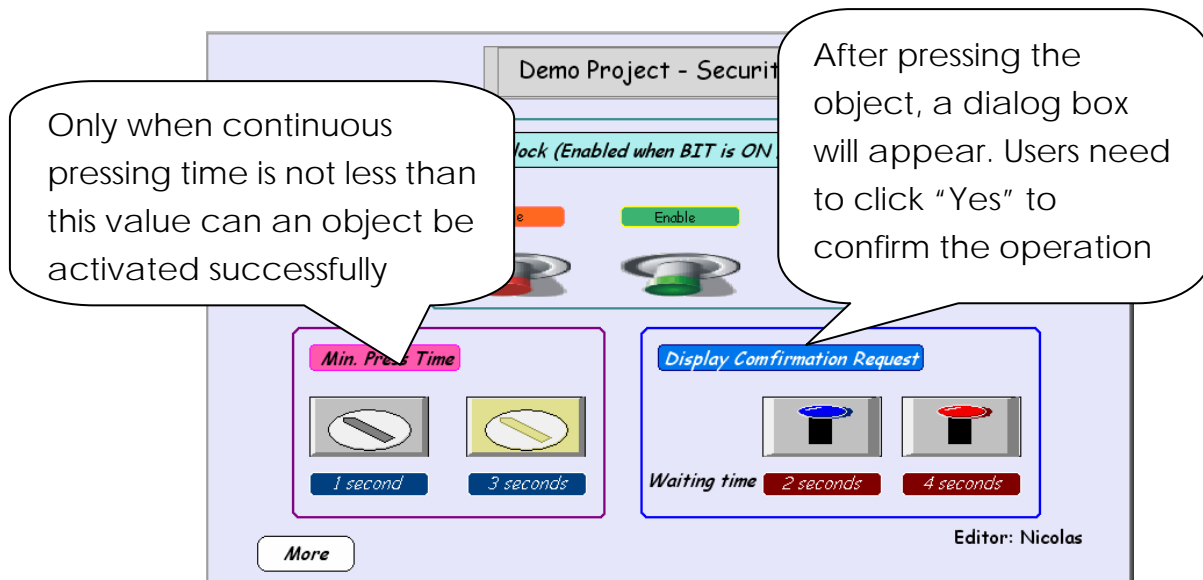
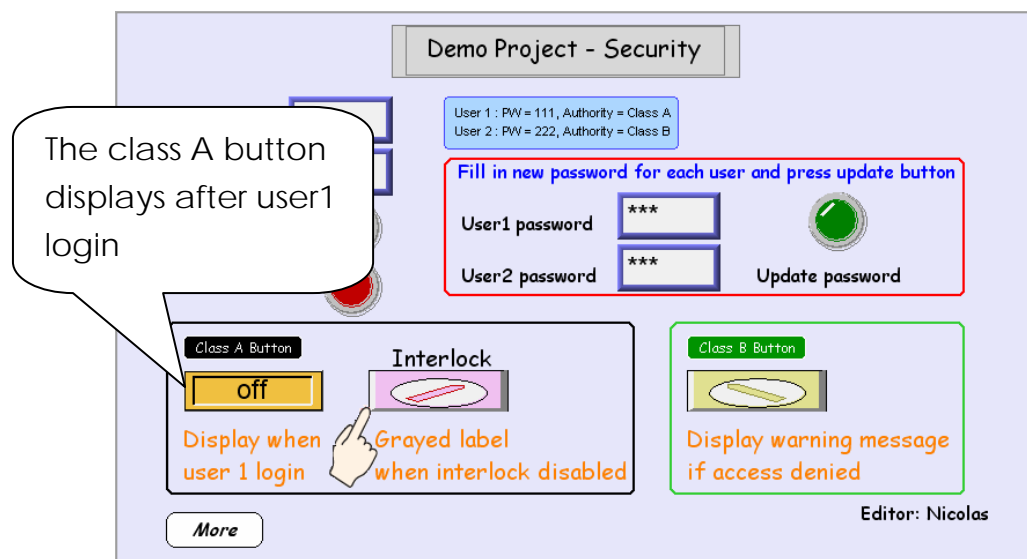
Overview

This demo project introduces the security function, which includes two parts: “user security and operable classes” and “object security”.



Operation





2. Setting up the screen

[In window10]

1. Users have to set up the Security in system parameter settings. Then create two numeric input objects and set addresses to LW9219_user no. and LW9220_password.

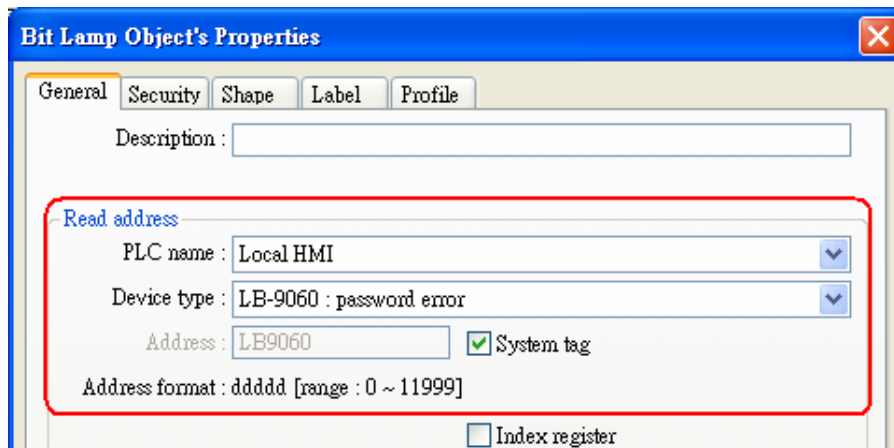
The screenshot shows the 'Numeric Input Object's Properties' dialog box with the 'Read address' tab selected. The 'PLC name' is set to 'Local HMI'. The 'Device type' is 'L W-9219 (16bit) : user no. (1~12)'. The 'Address' is 'LW9219'. The 'System tag' checkbox is checked. The 'Address format' is 'dddddd [range : 0 ~ 10500]'.

The screenshot shows the 'Numeric Input Object's Properties' dialog box with the 'Read address' tab selected. The 'PLC name' is set to 'Local HMI'. The 'Device type' is 'L W-9220 (32bit) : password'. The 'Address' is 'LW9220'. The 'System tag' checkbox is checked. The 'Address format' is 'dddddd [range : 0 ~ 10500]'.

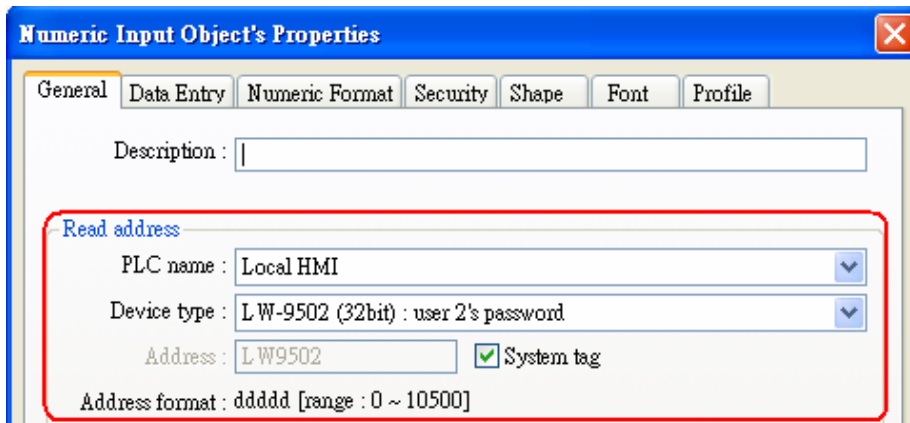
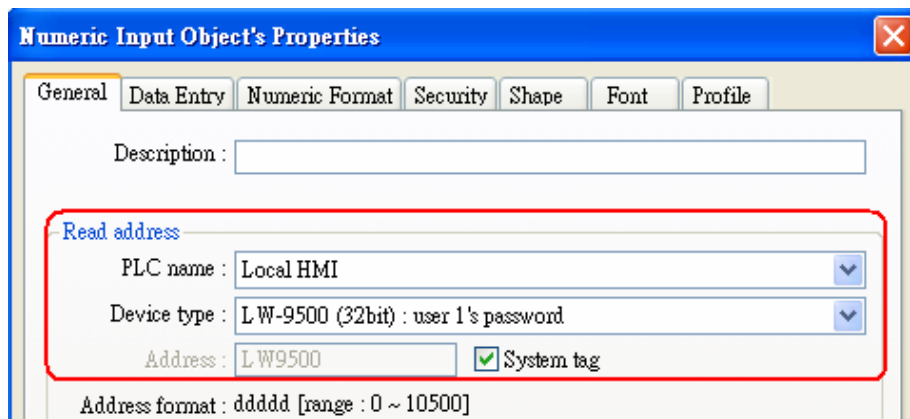
2. Create set bit object for user logout.

The screenshot shows the 'Set Bit Object's Properties' dialog box with the 'Write address' tab selected. The 'PLC name' is set to 'Local HMI'. The 'Device type' is 'LB-9050 : user logout'. The 'Address' is 'LB9050'. The 'System tag' checkbox is checked. The 'Address format' is 'dddddd [range : 0 ~ 11999]'. The 'Index register' and 'Write after button is released' checkboxes are unchecked. The 'Set style' is 'Set ON'.

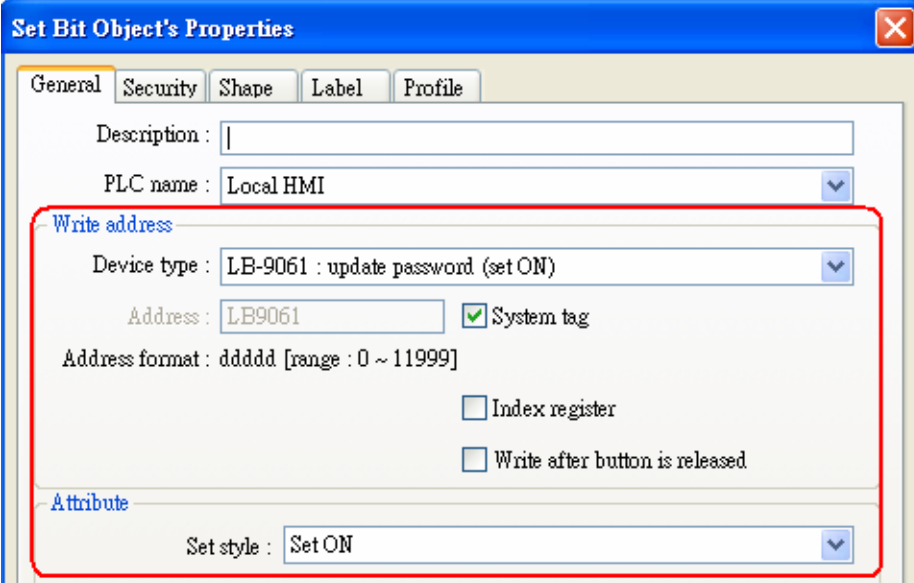
3. Create bit lamp for indicating when password error occurs.



4. Create two numeric input objects for user to change password on-line.



5. Create set bit object for user to update password.



Set Bit Object's Properties

General Security Shape Label Profile

Description :

PLC name : Local HMI

Write address

Device type : LB-9061 : update password (set ON)

Address : LB9061 ☒ System tag

Address format : ddddd [range : 0 ~ 11999]

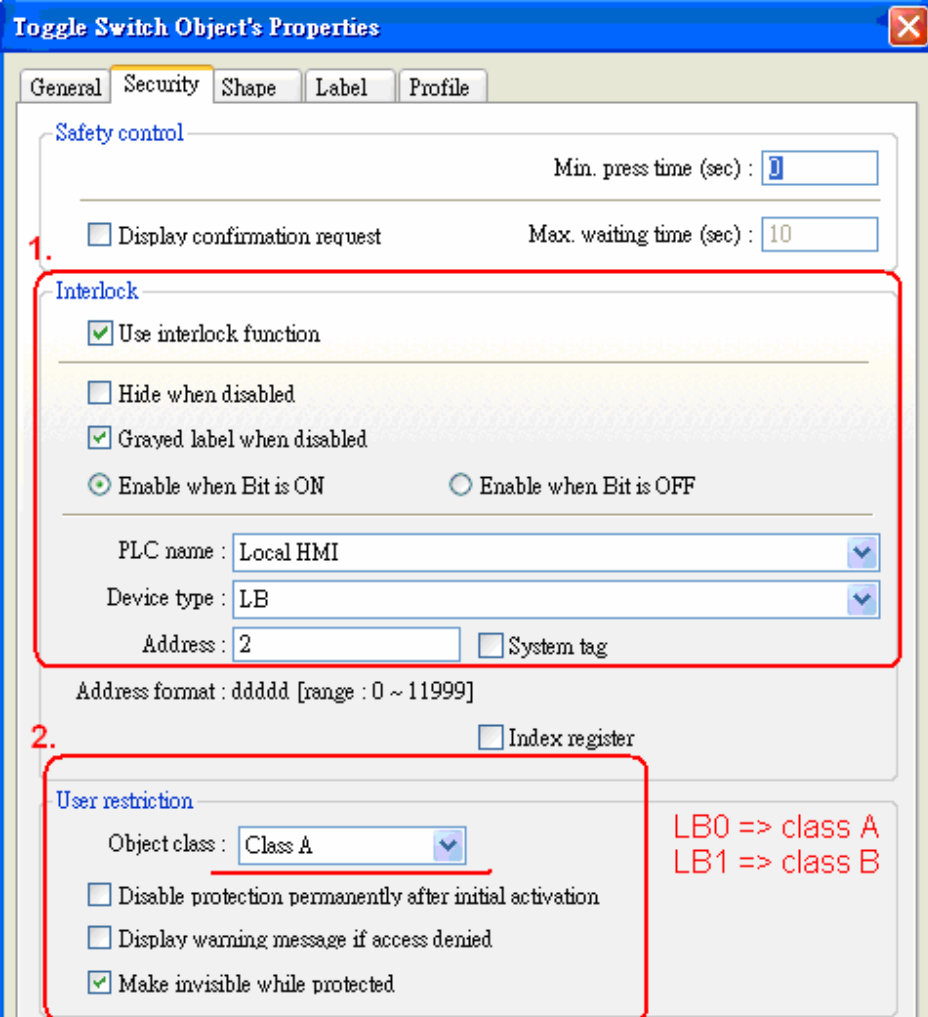
☐ Index register

☐ Write after button is released

Attribute

Set style : Set ON

6. Create two toggle switch objects, and set different object classes.



Toggle Switch Object's Properties

General Security Shape Label Profile

Safety control

Min. press time (sec) : 1

☐ Display confirmation request Max. waiting time (sec) : 10

Interlock

☒ Use interlock function

☐ Hide when disabled

☒ Grayed label when disabled

☒ Enable when Bit is ON ☐ Enable when Bit is OFF

PLC name : Local HMI

Device type : LB

Address : 2 ☐ System tag

Address format : ddddd [range : 0 ~ 11999]

☐ Index register

User restriction

Object class : Class A

☐ Disable protection permanently after initial activation

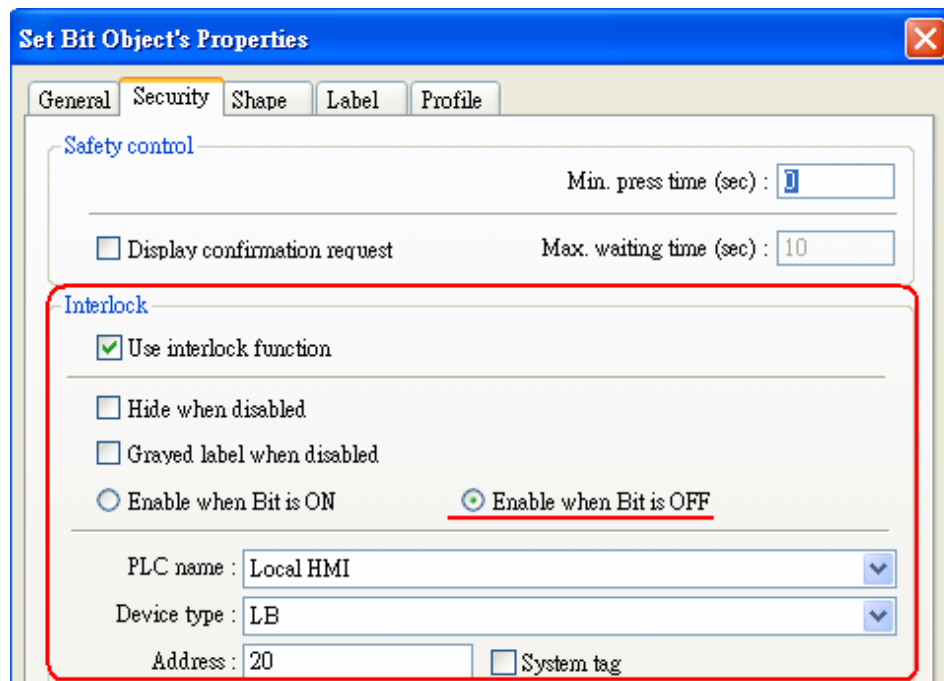
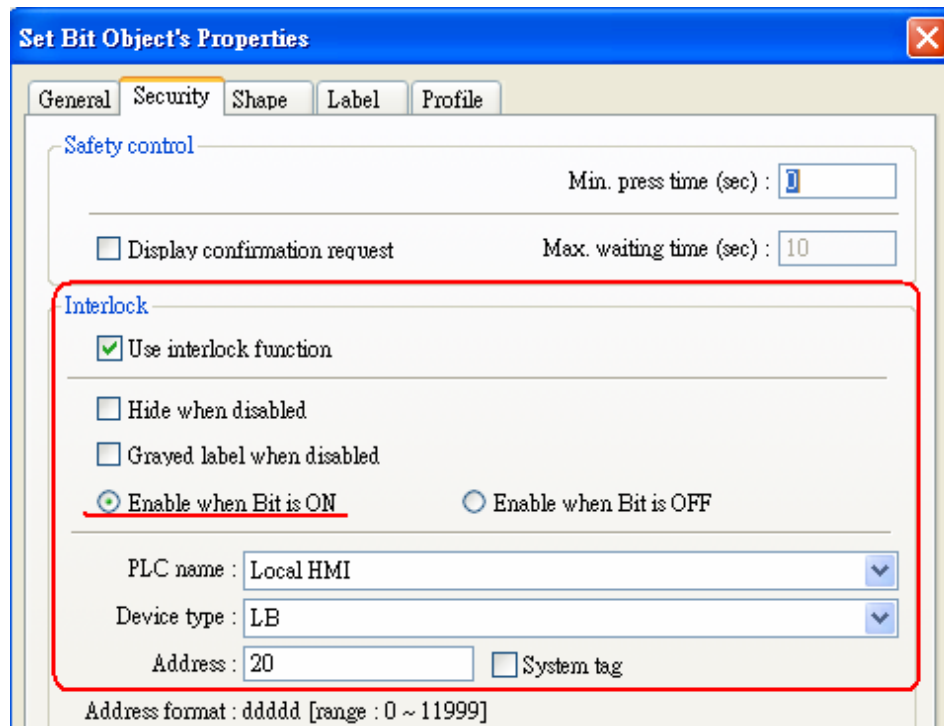
☐ Display warning message if access denied

☒ Make invisible while protected

LB0 => class A
LB1 => class B

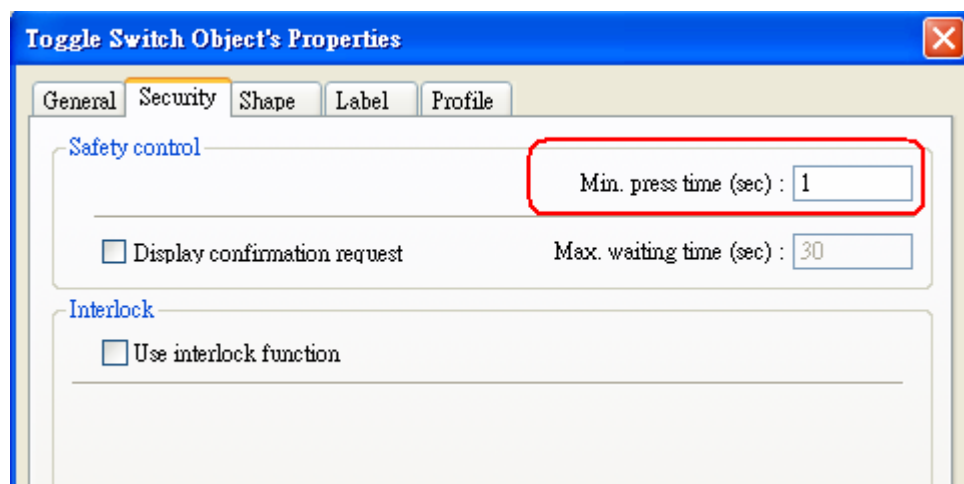
[In window11]

7. Create two set bit objects and set different interlock protections.

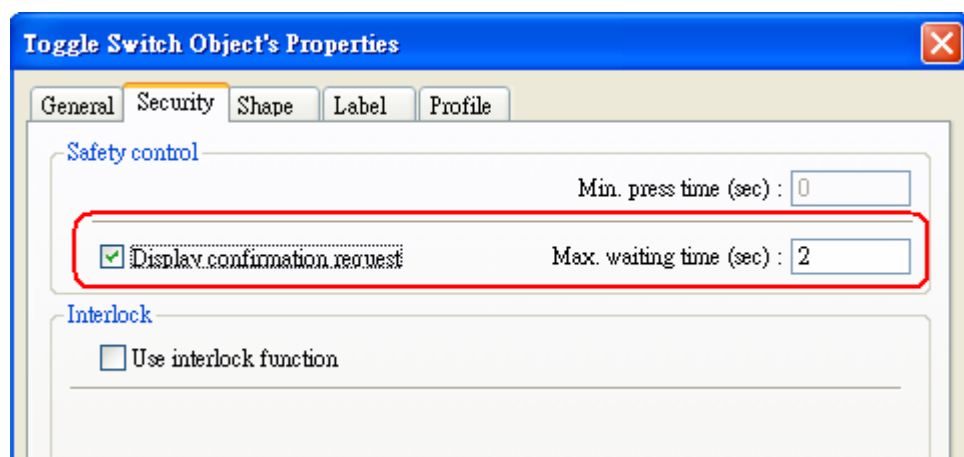


8. Create toggle switch object (LB20) as interlock button.

9. Create two toggle switch objects and set different "min. press time".



10. Create two toggle switch objects and set different "waiting time".



3. Addresses

The addresses used in this demo project are listed below. Please change these addresses according to your system.

| Object | Address | Object ID | Detail |
|-----------------|---------|-----------|---------------------------------------|
| Window10 | | | |
| Numeric input | LW9219 | NE_0 | User no. |
| | LW9220 | NE_1 | Password |
| | LW9500 | NE_2 | User1 password |
| | LW9502 | NE_3 | User2 password |
| Set bit | LB9050 | SB_0 | User logout |
| | LB9061 | SB_1 | Update password |
| Bit lamp | LB9060 | BL_0 | Password error |
| Toggle switch | LB1 | TS_0 | Class B button |
| | LB0 | TS_1 | Class A button |
| | LB2 | TS_2 | Interlock |
| Function key | | FK_0 | Change full-screen window to no.11 |
| Window11 | | | |
| Set bit | LB10 | SB_0 | Button |
| | LB10 | SB_1 | Button |
| Toggle switch | LB20 | TS_0 | Interlock |
| | LB5 | TS_1 | Button (min. press time) |
| | LB6 | TS_2 | Button (min. press time) |
| | LB8 | TS_3 | Button (display confirmation request) |
| | LB9 | TS_4 | Button (display confirmation request) |
| Bit lamp | LB20 | BL_0 | Display text |
| | LB20 | BL_1 | Display text |
| Function key | | FK_0 | Change full-screen window to no.10 |