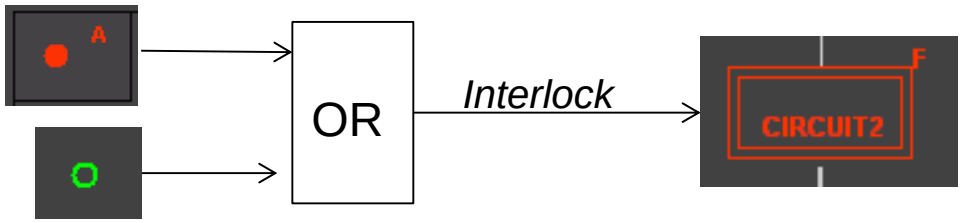
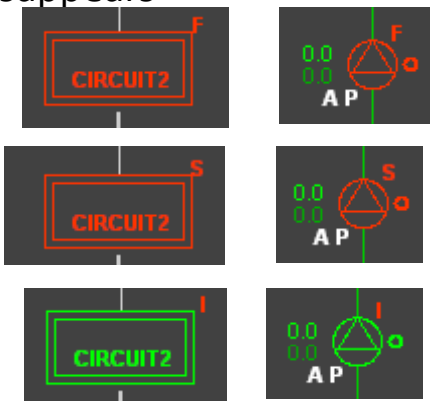
Alarm concepts

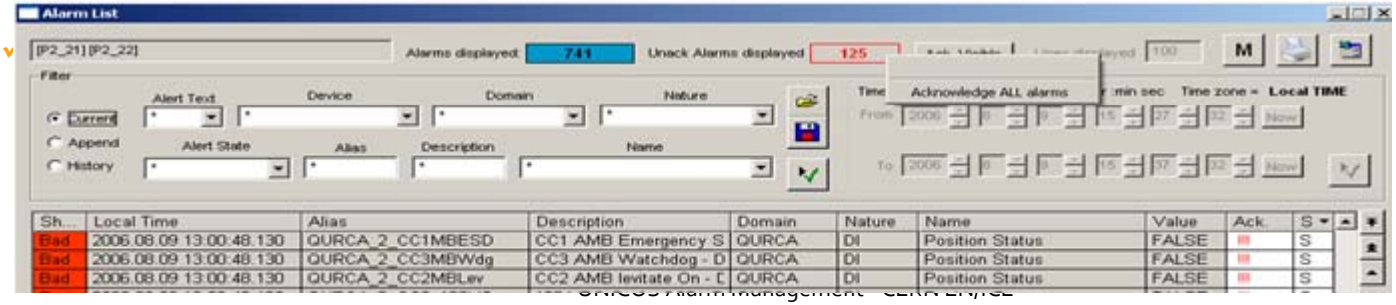
- **Alarm**: PLC object signaling a problem (**A**)
  - ✓ Represented by a round in synoptic

- **Interlock**: Signal allowing a *unit* or an *actuator* to go in its fail-safe position
  - ✓ Interlocks are triggered by alarm objects
  - ✓ **Full Stop Interlock** (**F**): Stopping and restart after explicit order from operators
  - ✓ **Stop Interlock** (**S**): Stopping and restart automatically when interlock disappears
  - ✓ **Start Interlock** (**I**): Impossibility to start, stay in fail-safe position

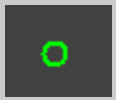




- **Alert**: Message in WinCC-OA indicating a problem (alarm or interlock)

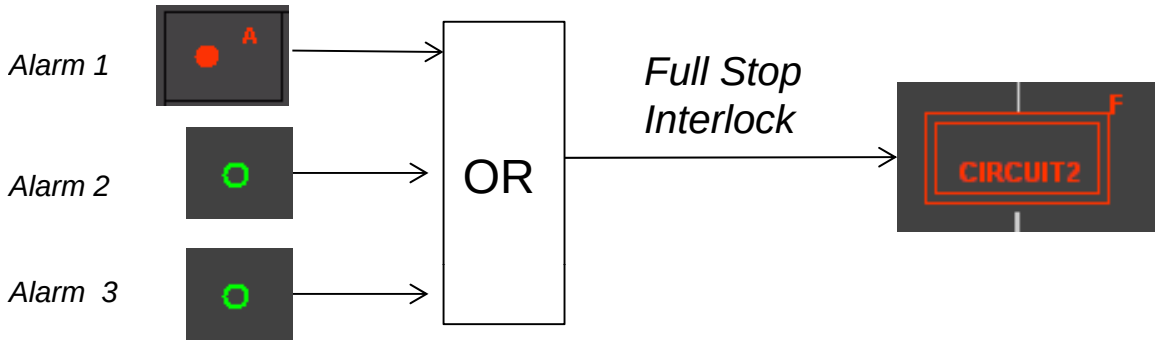


Alarm widget

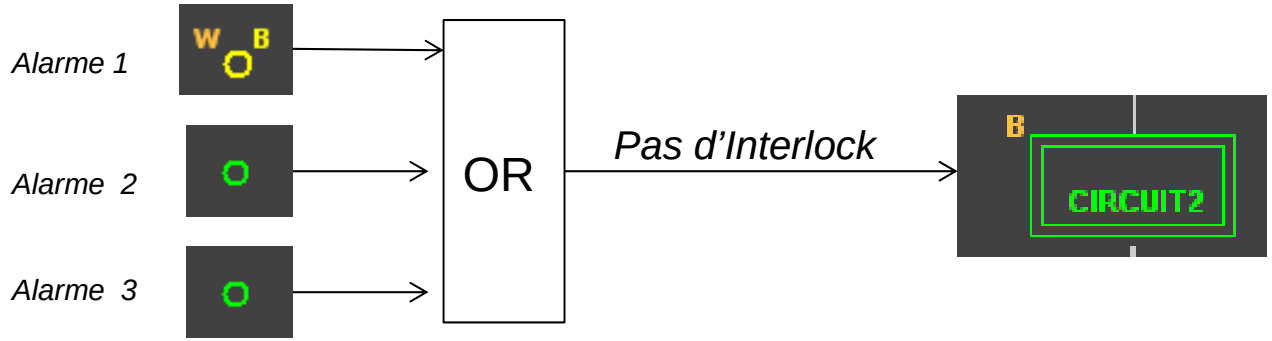
	Alarm condition not full-filed	Alarm condition full-filed
Acknowledged		
Not Acknowledged	 BLINK !!	 BLINK !!
Blocked PLC alarm		
Masked PVSS Alarm *(rarely Used)*		

Alarm block and interlocks

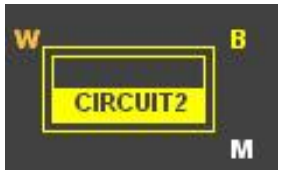
- Interlocks are triggered by alarm objects:



- Alarm object can be blocked (*Block PLC Alarm*):



- All Interlocks can be directly blocked in units or actuators

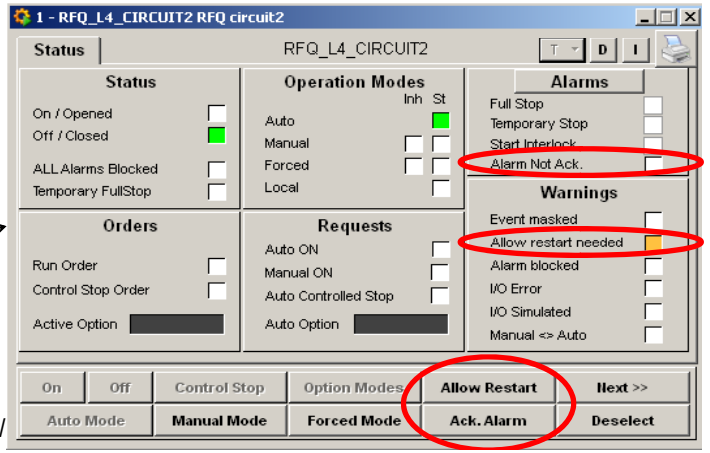


Possible interactions with alarms

- **Acknowledgement**: Stop the blinking
  - ✓ Alarm object or unit/actuator interlocks
  - ✓ Allow to restart unit/actuator after FS if no '*Allow Restart*' configured

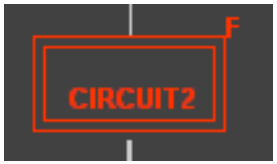
- **Block (B)**: Inhibition of the alarm object or interlock in PLC
  - ✓ Alarm object or unit/actuator interlocks
  - ✓ Can have an incidence on the process behavior

- **Allow Restart (R)**: Allow a unit or an actuator to restart after FS
  - ✓ After Full Stop only
  - ✓ After acknowledgement only



Interlock diagnostic

- From a panel with a unit or an actuator in interlock
  - ✓ Double click on unit/actuator having an interlock (**F**,**S**,**I**)



- Click on button « *Alarms* » to have all the alarm objects linked to this unit/actuator and identify the source of the problem