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RE : Commissioning checklist for the Access Request Module AI (CE-SA-017-0001__2)

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1. Introduction

The Access Request Module AI is a safety device realizing safety logic.
Therefore, it is essential to verify that it is correctly integrated and that the safety functions that it supports are performed as expected.

2. Supported safety functions

System emergency stop output at the Safety OUT port from the Safety IN port :
When the rOSSD signals of the input unit connected to the safety IN port go low, the OSSD signals at the Safety OUT port go low.
This function is not latching.

Guardlock safety function with safe position input :
When requested by a not safety rated signal but when the position of the machinery is safely controlled the access request module opens the OSSD signals at the safety OUT port in order to bring the hazardous motions to a stop. After 5 seconds, the guard locks are open.
Unexpected start up is prevented as long as the doors are open and no reset request is made.

3. Checklist

Compliance to the requirements of table 1 shall be verified

Table 1 Commissioning checklist for safety

Requirement	Description	YES	NO	N/A	Comments / Reference
System ES from Safety IN	4.1				
Guardlock with safe position input	4.2				

Signature

Name	
Function / Title	
Signature	

4. Procedures

4.1. System ES from Safety IN

The state of the OSSD signals of the Safety IN port is propagated to the Safety OUT port. This safety function shall be verified as per the following procedure.

Procedure :
Install a estop-reset-module upstream to the module (Safety IN port) and ensure that the doors are close and not access request is made :

- Press the emergency stop button;
- Release the emergency stop button;

Behavior :
Following the above procedure, the system emergency stop shall be activated and reseted :

- When pressing the emergency button or activating the system emergency stop at the Safety IN port, the LED shall turn solid red and the connected end effectors (Machine Motion and robot) shall goes in emergency stop;
- When releasing the emergency button or restoring the system emergency stop signal at the Safety IN port, the LED should turn solid GREEN.

4.2. Guardlock functions

The guardlock function works only when the MachineMotion is programmed to place the machinery in a safe position and send feedback to the Access Request Module AI. More details are provided in the user manual of the module.

Procedure :
When the MachineMotion is programmed to place the cell in a safe state and all doors are closed :

1. Disconnect the Position IN port;
2. Press the unlock button of the module;
3. Reconnect the Position IN port
4. Press the unlock button of the module
5. Wait completion of the unlocking process;
6. Open a door;
7. Press the lock button of the module;
8. Close all the doors;
9. Repeat item 6 to 8 with all doors;
10. Press the lock button of the module.

Behavior:
Following the above procedure,

- At item 2 of the procedure, nothing should happen. The LED of the module should remain solid GREEN
- At item 4 of the procedure, the cell should reach the safe position. Then the LED should turn flashing RED. After 5 seconds, the doors shall unlock;
- When performing item 6 to 8, the doors shall stay unlocked, the LED shall remains flashing RED and the MachineMotion and the Robot shall stay in the emergency stop state;
- When performing item 10 of the procedure, the doors shall lock and the LED shall turn solid GREEN and the end effector shall be ready for reset.