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| **FRONTEND** | **BACKEND** | **description** |
| **Button “START SCANNING” triggered messages** | | |
| START 🡪 |  | The backend listens to the START COMMAND. |
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| **CYCLIC MESSAGES FROM BACKEND TO FRONTEND** | | |
|  | 🡨 CAMERA1 1 | The backend sends “CAMERA1: 1” (with a Boolean value 1 in the end) in a cyclic routine (every 1 second). If the CAMERA 1 has some problem, the backend sends the Boolean value 0 in the end: “CAMERA1: 0”.  The value needs to be displayed in the label near to “CAMERA 1:” OK. If it is bool(1), a OK is displayed. If it is bool(0), a ERROR is displayed in this label in a red color. |
|  | 🡨 CAMERA2 1 | Same as CAMERA 1 |
|  | 🡨 CAMERA3 1 | Same as CAMERA 1 |
|  | 🡨 LASERSCANNER 1 | Same as CAMERA 1 |
|  | 🡨 CONTROLUNIT 1 | Same as CAMERA 1 |
|  | 🡨 LIGHTCURTAIN 1 | Same as CAMERA 1 |
|  | 🡨 LINEARAXIS 0 | Same as CAMERA 1 |
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| **BUTTON “UPDATE SETTINGS” triggered messages** | | |
| MODULE 1 1 1🡪 |  | This command will be sent to the backend when pressing the button “update settings”. This 3x bool(1) in a row are representing the state of the checkboxes. |
| SCREWS 1🡪 |  | Same as “MODULE”, do with Check-Screw checkbox, send when pressing the “upate settings” button. |
| **RESULT messgaes from backend to frontend** | | |
|  | 🡨 SCANNING 63728465 | While the scanning process is going on, the backend sends SCANNING one time.  The backend adds a unique number (uint64) to the message, which identifies the scanning process. This is a number, which is incremented by each scanning cycle. (e.g. 156, 157, 158,…). This number is used to identify the scanning cycle.  The frontend needs to deactivate all the control inputs after receiving this message and wait for the SCANNING\_COMPLETE. |
|  | 🡨 SCANNING\_COMPLETE 63728465 | After approx. 7 seconds the the backend sends SCANNING\_COMPLETE to the frontend. The same number is returned to identify the scanning cycle.  After receiving this command, the GUI-control can be re-activated. |
|  | 🡨 OVERALLRESULT: 63728465 **1** | The 1 or 0 shall be displayed in the label “Overallresult” near to the START SCANNING-Button.  If the OVERALLRESULT is bool(1), then display a String “TEST PASSED” in green letters in this label. If the OVERALLRESULT is bool(0), then display a string “TEST FAILED” in red letters there.  The cycle-number is also sent by the backend in order to identify the cycle. |