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SAFE HUMAN DETECTION IN A COLLABORATIVE WORK CELL

PRODUCTION MANAGER TUTORIAL

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Purpose of the module

- This module provides safety model for industrial robots by utilizing safety scanners and cameras for monitoring the robot’s workspace in terms of safe human-robot collaboration.
- System is divided into safety approved devices such as safety scanners and light curtains. And to non safety approved devices providing additional features for flexible safety solutions.
- Safety relies only on safety approved devices

Hardware

- Following hardware is utilized in module setup:
  - Sick S300 laser scanner
  - Kuka KR6 R900 SIXX industrial robot

Preparation steps

- Physical location and installation of device
  - Device has to be installed following manufacturer and safety standard guidelines
- Connecting device to robot controller
  - Device installation according to manufacturer instructions
- Configuration of safety areas
  - Safety areas have to be defined according to safety standards

Environmental requirements

- Module was developed for industrial robot but can be utilized for other industrial equipment
- Sick S300 laser scanner is not immune to dust, fog, or smoke. These can cause mis-detection.
- Operating environment temperatures according to manufacturer guidelines

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