



## Acceptance Criteria

This handout is intended to support you in mastering the integration of robots successfully. For this, we have described the basic agreements as well as potential acceptance criteria.

### 1. Basic Agreements

The software is delivered to the customer together with the robots. Following the delivery, the manufacturer will provide the following services in order to install the software in connection with the robots at the customer's site. Robots and the associated software are referred to below as the **overall system**. This includes 1) implementation of the robots, 2) interface connection, and 3) project management, if applicable.

### 2. Criteria for Acceptance

The criteria for acceptance are often divided into different categories.

These can be:

- Technical performance
- Robot availability tests
- Test of the overall system (software + robot)
- Optional: Employee training by the manufacturer or integrator

Acceptance values are defined in advance for all categories. These values must be reached by the system for successful acceptance. The **duration of the acceptance**



**steps** should also be determined in advance. The usual acceptance period is between 24 hours and 7 days.

The **technical performance** is usually given in picks per hour or in transports per hour. Regardless of the use case to be tested, the performance of the system can also be specified in UPH (units per hour) or missions per hour.

The **system availability test** is measured in target availability (desired result) and actual availability (current performance). The availability to be achieved must be defined in advance. The system availability calculations are given as a percentage. An example: *“The robot should be in an error state for a maximum of 5 minutes per hour. This results in an availability of ~91.6% during the robot's operational time”*.

The **test of the overall system** ensures that all components (also with integration into a WMS or another software tool) function reliably. The availability and error tolerance of these software systems are also measured. If errors occur during acceptance, it must be regulated who solves these errors and to what extent this error correction can be carried out.

An optional part of the acceptance is the **training of the employees**. This ensures that your employees are proficient in the technology. The training can take place in the form of workshops, which are carried out by the manufacturer. The content of the training should be: 1) basic working of the robot, 2) technical training, 3) creating missions for the robot, 4) extending the scenario for the robot, and 5) troubleshooting.



## 3. Process of Acceptance

For the course of the acceptance it is advisable to keep logs and to check all the measured values obtained. If there are errors that prevent acceptance, you should check with the manufacturer when these errors can be corrected.

**Customer and manufacturer make it clear** that the robots are standard products from the manufacturer, which are agreed upon under the purchase or rental contract. The acceptance, therefore, does not relate to the robots themselves (separate functionality test), but solely to the functionality of the overall system.

**After the overall system has met the acceptance criteria**, the manufacturer informs the customer about this and proves the corresponding performance. The acceptance is then considered successful if there are no acceptance-preventing errors.

**The overall system is considered accepted** when the use of the overall system has started and no errors or problems occur within a specified period (in working days). If there are errors that prevent acceptance, they should be reported to the manufacturer immediately.