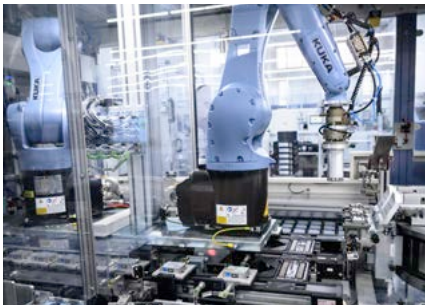**SIEMENS**
Ingenuity for life

Robots and automation working hand in hand

Easy integration of KUKA robots with SIMATIC Robot Integrator

Increasing digitalization requires robot integration

Shorten downtimes, lower operating costs and increase productivity: A consistent, end-to-end flow of data and greater networking of all plants, machinery and robots involved in production are the basis for advancing digitalization in industry and tapping its full potential.

The joint operation of plants and robots plays a key role here, as do concepts for ensuring that PLC experts can carry out robot engineering and maintenance work.

### Programming robots with the SIMATIC Robot Integrator

Bring robots and the PLC world together – with the right solution. The mxAutomation block library from KUKA Roboter GmbH for SIMATIC S7 lets you integrate KUKA robots with a KR-C4 controller in your plant and machine control system with a SIMATIC device. With SIMATIC Robot Integrator, you can program robots in the TIA Portal - easily without programming knowledge and an external specialist. You can also operate and monitor your robots with the same HMI as your plant, such as a SIMATIC HMI Mobile Panel.

siemens.com/robot-integrator

A block library for SIMATIC S7

The mxAutomation library for STEP 7 con-tains all blocks for all SIMATIC S7 controllers (with the exception of SIMATIC S7-200). It covers all robot functions, including those with individual blocks for different robot movements, such as MoveLinear, MoveDirect, etc. The blocks are based on the PLC open standard and can be easily copied to and used in an existing PLC project.

Connecting and controlling the robots

The robot controller is connected to the machine controller via a GSDML file as the PROFINET I/O device, so that the robot can be addressed via SIMATIC blocks. A server program on the robot controller ensures that the commands transmitted from SIMATIC S7 are interpreted correctly, and the robot moves to the position specified by the S7. The robot curves can be defined right on site both in the TIA Portal and via a SIMATIC HMI. The robots can be moved in inching mode via the HMI, and all specified path
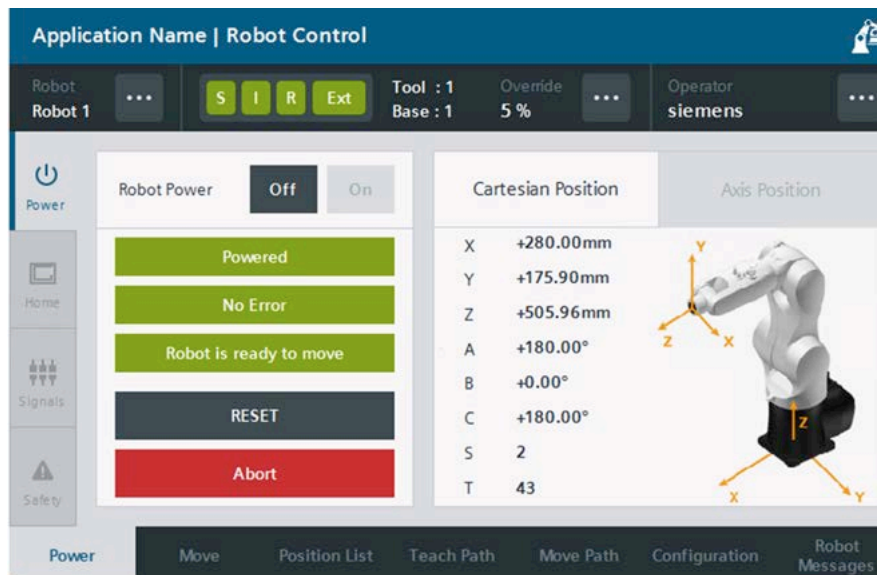
positions can be taught in SIMATIC S7.

In addition to plant components, any robots that are not needed for the time being can also be shut down and subsequently reacti-vated via PROFIenergy to save energy. In addition, safety-oriented functions, such as emergency stop, safe working space and a safely reduced speed can be extended to robots via PROFIsafe.

Integrated condition monitoring

Integrating robot control into your automa-tion system enables you to display diagnos-tics and the condition of your plant and robots on a shared SIMATIC HMI. This lets you see every-thing at a glance in one place. You can also include the robots into your plant´s condition monitoring function for more plannable and on-time

maintenance of your entire production process.

Full support

Would you like to learn more about robot integration and easy robot operation with SIMATIC Robot Integrator? Siemens provides comprehensive commissioning support in this area as well as workshops on program-ming with mxAutomation. Contact us via the form on our website: siemens.com/robot-integrator