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TESTED®
DEVICE

KUKA Roboter GmbH
KR3 R540 (prototype)
Report No. KU 1607-835

DUPLICATE

Statement of
Qualification

Electrostatic
Resistance

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Statement of Qualification

Customer

KUKA Roboter GmbH
Zugspitzstrasse 140
86165 Augsburg
Germany

Component tested

Category: Automation Components

Subcategory: Robotics

Product name: KR3 R540 (prototype)
(manufacturing date: 6/2016; serial number: 495007; payload: 3 kg; reach: 540 mm; color: white)

Electrostatic discharge measurements at representative points (surface resistivity, volume resistivity, discharge resistance)

Standards/Guidelines: DIN EN 61340-5-1; DIN EN 61340-4-1
The norms stated generally refer to the version valid at the time of the tests.

Test devices:
- Data capture: ..... Tera-Ohm-Meter, type 6206, ... Eltex-Elektrostatik-GmbH
- Insulating mount:
  – type: ..... 4x hexagonal insulators with $R > 10^{14}\,\Omega$
  – material: ..... Polyester, glassfilled
  – thickness: ..... 35 mm

Test environment parameters:
- Cleanroom Air Cleanliness Class (according to ISO 14644-1): ..... ISO 1
- Airflow velocity: ..... 0.45 m/s
- Airflow pattern: ..... vertical laminar flow
- Temperature: ..... 22 °C ± 0.5 °C
- Relative humidity: ..... 45 % ± 5 %

Test procedure parameters:
- Speed: ..... 50 %
- Attached payload: ..... no tool mounted
- Motion sequence: ..... representative pick & place movement

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Test result / Classification

The robot KR3 R540 (prototype) fulfills the ESD requirements for EPAs (ESD-protected areas) of discharge resistance according to DIN EN 61340-5-1 and DIN EN 61340-4-1.

	Operating voltage [V]	Resistance [Ω]	Rating
Discharge resistance	10	< 10 E + 03	electrostatically conductive

The measuring devices used for the qualification tests are calibrated at regular intervals; their results can be traced back to national and international standards. In cases where no national standards exist, the test procedure implemented complies with the technical regulations and norms applicable at the time of the test. The relevant documentation can be viewed on request at any time.

For further information about the test environment and parameters, please refer to the Fraunhofer IPA test report.

Fraunhofer Institute for Manufacturing Engineering and Automation IPA

Department of Ultraclean Technology and Micromanufacturing

Nobelstrasse 12
70569 Stuttgart
Germany

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Place, date of first document issued

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Place, current date

on behalf of
Frank Bürger, Project Manager Fraunhofer IPA

This document only applies to the named product in an unchanged state and is valid from the date of issue for a period of 5 years. The document can be verified under **www.tested-device.com**.