Cleanroom (atmospheric)

valid until: November 10, 2030

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TESTED®
DEVICE

KUKA Deutschland GmbH
KR AGILUS-2 series
Report No. KU 2507-1650

Statement of
Qualification

Product series
Electrical
Resistance

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Statement of Qualification · Product series

Customer

KUKA Deutschland GmbH
Zugspitzstrasse 140
86165 Augsburg
Germany

Tested product

Category: Automation Components

Subcategory: Robotics

Product name: KR AGILUS-2 series
Tested products:
- KR 6 R700-2
  (manufacturing date: 3/2025; color: white; article number: 0010027948; serial number: 4613800; weight: 56 kg; max. payload: 6 kg; range: 726 mm)
- KR 10 R1100-2
  (manufacturing date: 3/2025; color: white; article number: 0010028057; serial number: 4613772; weight: 59 kg; max. payload: 10 kg; range: 1101 mm)

Electrical resistance measurements at representative points (resistance to groundable point (R_{gp1}) and (R_{gp2})

Standards/guidelines: IEC 61340-2-3, -5-1
The norms stated generally refer to the version valid at the time of the tests.

Test equipment:
- Data acquisition:
  – Type: ..... Metriso 3000
  ..... Wolfgang Warmbier GmbH & Co. KG

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:
- Insulating support:
  – Model: ..... 4x 2 insulation cylinders with centering collar
  ..... total insulation resistance > 10^{13} Ω
  – Material: ..... polytetrafluorethylene
- Contact points: ..... metallic flange for mountable tools
- Groundable points ..... on the robot base

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Test result / Classification

The KR AGILUS-2 series was examined for its electrical resistance at representative points in accordance with IEC 61340-2-3.
The resistance to groundable point (R_{gp1}) and (R_{gp2}) values obtained from the test pieces lies within the limits of the limiting value of 1 x 10^9 Ω required by IEC 61340-5-1 for ESD protective elements.

Measuring point	Operating voltage [V]	Resistance to groundable point R_{gp1} [Ω]	Resistance to groundable point R_{gp2} [Ω]	Compliance with limit value as per IEC 61340-5-1
Contact point 1	10	< 1 x 10^3	< 1 x 10^3	**fulfilled**
Contact point 2	10	< 1 x 10^3	< 1 x 10^3	**fulfilled**

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.

Detailed information and parameters of the test environment can be found in the Fraunhofer IPA test report.

Fraunhofer Institute for Manufacturing Engineering and Automation IPA

Business unit
Testing and Certification

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on behalf of
Dr.-Ing. Frank Bürger, head of business unit Testing and Certification

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