valid until: December 14, 2028

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DEVICE

KUKA Deutschland GmbH
KMRiisy CR
Report No. KU 2302-1396

Statement of
Qualification

Single product
Electrostatic
Charge Behavior

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Statement of Qualification · Single product

Customer

KUKA Deutschland GmbH
Zugspitzstrasse 140
86165 Augsburg
Germany

Component tested

Category: Automation Components

Subcategory: Robotics

Product name: KMRiisy CR
(manufacturing date: 4/12/2023; article number: 16010348; serial number: 1041360)

Measurement of charge behavior

Standards/Guidelines: SEMI E78-0222
The norms stated generally refer to the version valid at the time of the tests.

Test devices:
- Data capture: Influence-E-Fieldmeter, type EMF58 Eltex-Elektrostatik-GmbH

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:
- Tool weight: no tool was mounted
- Motion sequence: representative operation
- Velocity: 80 % of maximum velocity
- Acceleration: 0.3 m/s²
- Deceleration: -0.3 m/s²
- Attached payload: m = 200 kg
- Capacity/Utilization: 87,66 % of maximum capacity

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Test result / Classification

The robot KMRiisy CR fulfills the permissible limit values of 8.5 V/cm (0.85 kV/m) for the sensitivity threshold 2033/7.7 nm / 2010/45 nm according to SEMI E78-0222.

Electrostatic field			
Electrostatic level		**Test result**	
Year Node	limit value [V/cm]	mean value [V/cm]	max. single value measured [V/cm]
2033 7.7 nm	8.5	5	10
Limit value (except the vincinity[1] of the Wi-Fi antenna):		**fulfilled**	
2010 45 nm	50	31	100
Limit value (in the vincinity[1] of the Wi-Fi antenna):		**fulfilled**	

[1] sphere with a radius of ≤ 305 mm around the antenna

Note: The instructions given in the user documentation from KUKA Deutschland GmbH must be observed. Only dissipative may be used in the handling area. It is best to do without a sticker on the product in the handling area.

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

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KU 2302-1396 — Report No. first document
Stuttgart, December 14, 2023 — Place, date of first document issued

-- — Report No. current document
-- — Place, current date

on behalf of
Dr.-Ing. Frank Bürger, Project Manager Fraunhofer IPA

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