



Fraunhofer

**TESTED[®]
DEVICE**

FANUC Europe Corporation
LR-Mate 200iD/7LC
Report No. FA 1602-808

DUPLICATE

Statement of
Qualification

Electrostatic
Resistance

Statement of Qualification

Customer
 FANUC Europe Corporation
 Zone Industrielle
 6468 Echternach
 Luxembourg

Component tested

Category: Automation Component

Subcategory: Robotics

Product name: LR-Mate 200iD/7LC
 (manufacturing date: 11/9/2015; color: white; serial number: E-81493;
 type: A05B-1112-3321)

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 mounts:
 - 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: $22 \text{ }^\circ\text{C} \pm 0.5 \text{ }^\circ\text{C}$
- Relative humidity: $45 \% \pm 5 \%$

Test procedure parameters:

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

Test result / Classification

The robot LR-Mate 200iD/7LC 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.

Test parameter	Operating voltage [V]	Resistance [Ω]	Rating
Discharge resistance	10	$< 10E + 3$	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

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Place, date of first document issued

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Place, current date

on behalf of 
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