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TESTED®
DEVICE

Schneider Electric A. GmbH
PAS42BBM1000A1RAxxxR
Report No. SC 1706-921

DUPLICATE

Statement of
Qualification

Particle Emission

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Statement of Qualification

Customer

Schneider Electric Automation GmbH
Breslauerstrasse 7
77933 Lahr
Germany

Component tested

Category: Automation Components

Subcategory: Linear Units

Product name: Lexium PAS B toothed belt axis (with metal cover tape)_Stroke 1000 mm
PAS42BBM1000A1RAxxxR
(manufacturing date: 14/6/2017; ident. number: 0073000016028)

Random sampling of particle emissions (airborne) at representative sites

Standards/Guidelines: ISO 14644-1, -14
The norms stated generally refer to the version valid at the time of the tests.

Test devices: Optical particle counter:
LasAir II 110 and LasAir III 110 with measuring ranges ≥ 0.1 µm, ≥ 0.2 µm, ≥ 0.3 µm, ≥ 0.5 µm, ≥ 1.0 µm and ≥ 5.0 µm

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:

- Drive: ..... toothed belt drive
- Installation position: ..... horizontal
- Stroke length: ..... s = 1000 mm
- Test load: ..... m = 10 kg
- Extraction volume flow: ..... Q = 11.7 m^3/h
- Parameter Set 1: ..... v_1 = 0.5 m/s; a_1 = 1.0 m/s^2
- Parameter Set 2: ..... v_2 = 1.0 m/s; a_2 = 2.0 m/s^2
- Parameter Set 3: ..... v_3 = 1.8 m/s; a_3 = 4.0 m/s^2

Test result / Classification

When operated with vacuum extraction and under the specified test conditions, the Lexium PAS B toothed belt axis (with metal cover tape)_Stroke 1000 mm/PAS42BBM1000A1RAxxxR is suitable for use in cleanrooms fulfilling the specifications of the following Air Cleanliness Classes according to ISO 14644-1:

Test parameter(s)	Air Cleanliness Class
v_1 = 0.5 m/s; a_1 = 1.0 m/s^2	1
v_2 = 1.0 m/s; a_2 = 2.0 m/s^2	1
v_3 = 1.8 m/s; a_3 = 4.0 m/s^2	2
Overall result	**2**

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.

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Fraunhofer IPA

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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**.