



valid until: October 9, 2028

Fraunhofer

TESTED[®] DEVICE

igus GmbH
TRC.40.ESD + fiber rod
Report No. IG 2309-1461

Single product
Particle Emission
Dry-Cleanroom

Qualification Certificate

This is to certify that the product mentioned above, provided by

igus GmbH
Cologne, Germany

has been awarded a Fraunhofer certificate TESTED DEVICE
bearing the report number IG 2309-1461.

The cable guiding system TRC.40.058.0.ESD with fiber rod
module (color: black) was assessed in compliance with ISO
14644-14. When operated under the specified test conditions,
it is suitable for use in cleanrooms (with a dew point of -40°C
 $\pm 2^{\circ}\text{C}$ and room temperature of $22^{\circ}\text{C} \pm 1^{\circ}\text{C}$) fulfilling the
specifications of the following Air Cleanliness Classes according
to ISO 14644-1:

| Test parameter(s) | Air Cleanliness Class |
|--|-----------------------|
| $v_1 = 0.5 \text{ m/s}; a_1 = 1.0 \text{ m/s}^2$ | 4 |
| $v_2 = 1.0 \text{ m/s}; a_2 = 2.0 \text{ m/s}^2$ | 4 |
| $v_3 = 2.0 \text{ m/s}; a_3 = 4.0 \text{ m/s}^2$ | 5 |
| Overall result | 5 |

Please note: Transport damages, incorrect installation, aging
behavior etc. can influence the test result.

IG 2309-1461
Report No. first document

Stuttgart, October 9, 2023
Place, date of first document issued

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Report No. current document

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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.

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