



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx VTT 18.0004X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2018-03-01

Applicant: **Sintrol Oy**
Ruosilantie 15
FI-00390 Helsinki
Finland

Equipment: **Dust sensor, type DUST0304**

Optional accessory:

Type of Protection: **Ex ia and Ex ta/tb**

Marking: Ex ia IIC T6 Ga
Ex ta/tb IIIB T85 °C Da/Db
 $U_i = 10 \text{ V}$, $I_i = 150 \text{ mA}$, $C_i = 1 \text{ nF}$, $L_i = 10 \mu\text{H}$

Approved for issue on behalf of the IECEx
Certification Body:

Jenni Hirvelä

Position:

Expert

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

VTT Expert Services Ltd.
Kivimiehentie 4, Espoo
P.O.Box 1001
FI-02044 VTT
Finland





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Date of issue: 2018-03-01

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Manufacturer: **Sintrol Oy**
Ruosilantie 15
FI-00390 Helsinki
Finland

Additional
manufacturing
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[FI/VTT/ExTR18.0006/00](#)

Quality Assessment Report:

[FI/VTT/QAR13.0001/02](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The dust sensor DUST0304 is intended to measure the dust particle density in gas, which is flowing in a duct. The sensor consist of a sensor rod and a preamplifier and it is intended to be used with various Sintrol Dust Monitor 300 series measuring instruments.

There is X2 connector (4 lines) to connect the supply cable. The output circuit shall be connected to V_{OUT}/V_{REF} connector. V_{REF} is connected galvanically to the enclosure ground. The input circuit is connected to the connectors $V+/V-$. The maximum input values of the intrinsically safe two circuits are: $U_i = 10\text{ V}$, $I_i = 150\text{ mA}$, $C_i = 1\text{ nF}$, $L_i = 10\text{mH}$.

The apparatus was tested for use in presence of combustible dust with standard IEC 60079-31 requirements. The thermals endurance to heat and cold and the mechanical tests were done first according to the standard IEC 60079-0 before the tightness tests, degree of protection IP65 tests.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The allowed ambient temperature range is $-20\text{ °C} \dots +45\text{ °}$
2. The enclosure of the sensor is of light metal so there may be sparks, if the enclosure is subjected to friction or impact.
3. The intrinsically safe circuits are galvanically connected to the metallic enclosure. The enclosure of the sensor shall be grounded.
4. The sensor steel rod may be inserted in Zone 0 or Zone 20 areas and satisfies the requirements for EPL Ga and Da equipment.