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on the examination of an independent flame detector device

Test Laboratory TÜV SÜD Industrie Service GmbH
Abteilung Feuerungs- und Wärmetechnik
Prüfbereich Sicherheits-, Kontroll-
und Regeleinrichtungen

Subject of Test Type **UVC1**

Product description Independent flame detector device
with UV flame sensor

Ordering Company Elster GmbH
D-49504 Lotte (Büren)

Basis of Test DIN EN 298:2012-11,
DIN EN 13611:2011-12,
DIN EN 60730-2-5:2015-10;
DIN EN 61508:2011-02, parts 1 – 7

Test Report no. C-F 1563-00/16 dated 2017-01-27

The basis of test, the results in detail, the evaluation of the results and the conclusions out of the results are described in the above mentioned test report. Excerpts from this test report and from the test documentation are printed on the reverse.

Feuerungs- und Wärmetechnik

Johannes Steiglechner

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Page 1

The document consists of
2 pages

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The test results refer exclusively
to the units under test.

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Product description Independent flame detector device

Type designation **UVC1**

Flame failure detection time $\leq 0,5$ seconds

Electrical supply data 100...230 V AC, 50/60 Hz

The independent flame detector device conforms to the requirements of DIN EN 298:2012-11 and of DIN EN 60730-2-5:2015-10.

The independent flame detector device also conforms to the requirements of DIN EN 61508:2011-02 parts 1-7 for safety functions up to safety integrity level **SIL 3**.

The following safety parameters have been determined:

Probability of a dangerous failure (high demand / continuous mode)	PFH_D	$10,4 \cdot 10^{-9} 1/h$
Safe failure fraction	SFF	98,9 %
Average diagnostic coverage	DC_{AVG}	94,7 %

These parameters have been calculated under the assumption of a Mean Time To Restoration MTTR = 8 hours and of a Proof Test Interval $T_1 = 10$ years, which is equivalent to the specified life time of the independent flame detector device.

The independent flame detector device is suitable for flame detection of burners and combustion systems for gaseous and liquid fuels with permanent operation.

The independent flame detector device also conforms to the applicable requirements of DIN EN 746-2:2011-02 for flame detection in industrial thermo processing equipment.

Conditions

The conditions mentioned in clause 15 of test report no. C-F 1563-00/16 dated 2017-01-27 shall be considered during installation, commissioning and operation.

