



## **TECHNICAL NOTE NTN 177-L**

### **Video Fire Detectors**

#### **Part L: Additional requirements to ISO/TS 7240-29 - Prescriptions and laboratory tests**

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## CONTENTS

1. INTRODUCTION .....	5
2. SCOPE .....	5
3. NORMATIVE REFERENCES .....	5
4. TERMS AND DEFINITIONS, AND ABBREVIATED TERMS .....	6
5. VERIFICATION OF CONFORMITY .....	6
6. REQUIREMENTS .....	6
6.1 General .....	6
6.2 Detection principle .....	6
6.3 §4.2 Fire phenomena .....	6
6.4 §4.5 Camera lenses .....	6
6.5 §4.10 Connection of more than one VFD to the FDCIE transmission path .....	7
7. TESTS .....	8
7.1 §5.1.7.2 Small scale test fire .....	8
7.2 §5.1.7.3.1.2 .....	8
7.3 §5.1.7.3.2.3 .....	8
7.4 §5.7 Fire sensitivity .....	8
7.5 §5.8 Ambient light (indoor) .....	9
7.6 §5.9 Ambient light (outdoor) .....	9
7.7 §5.10 Non uniform illumination .....	9
7.7.1 §5.10.2.1 .....	9
7.7.2 §5.10.2.2 .....	9
7.8 §5.11 Light source immunity .....	10
7.8.1 §5.11.4. Metal halide light .....	10
7.8.2 §5.11.5 Halogen light .....	10
7.8.3 §5.11.6 LED Beacon .....	10
7.8.4 §5.11.7 Rotating beacon — Optional .....	10
7.8.5 §5.11.8 Xenon beacon — Optional .....	10
7.8.6 §5.11.9 High pressure sodium light — Optional .....	10
7.8.7 §5.11.10 Low pressure sodium light — Optional .....	10
7.8.8 §5.11.11 Incandescent light — Optional .....	10
7.8.9 §5.11.12 HID xenon light — Optional .....	10
7.8.10 §5.11.13. Laser light — Optional .....	10
7.9 §5.14 Dry heat (operational) .....	10
7.10 §5.15 Dry heat (operational) — Optional .....	10
7.10.1 §5.15.1 Object of the test .....	10
7.10.2 §5.15.2.3 Conditioning .....	10
7.11 §5.16 Cold (operational) .....	11
7.12 §5.17 Cold (operational) — Optional .....	11
7.12.1 §5.17.1 Object of the test .....	11
7.12.2 §5.17.2.3 Conditioning .....	11

7.13 §5.19 Damp heat, steady-state (endurance).....	11
7.14 §5.23 Impact cameras (operational).....	11
7.14.1 Apparatus .....	11
7.14.2 State of specimen during conditioning.....	11
7.14.3 Conditioning .....	11
7.14.4 Measurements during conditioning .....	12
7.14.5 Final measurements .....	12
7.15 §5.25 Vibration, sinusoidal, (operational) .....	12
7.16 §5.26 Vibration, sinusoidal (endurance) .....	12
7.17 §5.27 Electromagnetic compatibility (EMC) immunity (operational) .....	12
7.18 §7.4 Installation and user documentation.....	12

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## 1. INTRODUCTION

This Technical Note forms part of the benchmark standards for certification in accordance with the rules of the ANPI mark.

It lays down the scope, the requirements, the necessary test configurations and the tests to be conducted.

This document sets out the requirements supplementing the ISO/TS 7240-29:2017 technical specification for initial type testing. Such a technical specification is recognized to be a trial document published in view of being criticised before correcting it into an ISO standard. Hence, some requirements of this ISO technical specification are modified by the present Technical Note in order to correct mistakes and inconsistencies.

The intention of the present Technical Note is to verify the detection performances and robustness of video fire detectors (VFD) in order for them to be considered as fire detectors in the sense of function A from EN 54-1. Such detectors, when complying with the present Technical Note, are suitable for use as type 1 component according to EN 54-13.

This document replaces the earlier version from August 2019.

In 2024, the ISO 7240-29:2024 has been published, but an error was detected: It's described (in Annex P of the ISO 7240-29:2024) that a test fire shall be located at the midpoint of the minimally illuminated area. This should have been: 'maximally illuminated area'.

We received in meanwhile a written confirmation of M. Chaplyn (President of TC21/SC3) that this will be corrected soon.

In order to be able to continue while the correction is being made, this NTN 177-L has been adapted to be in line with the ISO 7240-29:2024, but already correcting this mistake mentioned before.

This document supersedes the previous version of the NTN 177-L and all its amendments and corrigenda (if any). A transition period of 6 months after publication of this document is foreseen.

## 2. SCOPE

This Technical Note applies to video fire detectors as defined within the scope of the ISO 7240-29:2017.

## 3. NORMATIVE REFERENCES

This Technical Note incorporates requirements from other publications with dated or undated references. For dated references, later amendments and revisions apply to this Technical Note only after their incorporation via an amendment or revision of this Technical Note. For undated references, the latest edition of the referenced publication applies (including amendments).

ISO/TS 7240-29:2017: Fire detection and alarm systems – Part 29: Video fire detectors.

EN 54-1: Fire detection and fire alarm systems - Part 1: Introduction

by a low illumination level (15 lx) on at least 1 spot of the background behind the smoke plume. This deviation shall be described in the test report.

For TF5 and TF5c, if agreed between the applicant and the laboratory, the black background (ISO/TS 7240-29:2017 §5.7.2.8) may be ignored. This deviation shall be described in the test report.

NOTE 1: It is considered to be covered by the low illumination background required in the non-uniform illumination test (ISO/TS 7240-29:2017 §5.10).

NOTE 2: These TF5 and TF5c may not be performed with a low illuminated background as the purpose of the non-uniform illumination test (ISO/TS 7240-29:2017 §5.10) is to compare the time to alarm between normal illumination and low illumination.

For TF2c, TF3c, TF4a, TF5c, TF6a and TF8a:

- clause §5.7.2.17, replace the criteria on y and m by "clean from smoke",
- clause §5.7.2.19 is disregarded,
- clause §5.7.2.21 is limited to the recording of the time of response, no relation with  $\Delta T_a$ ,  $y_a$  and  $m_a$ , is required.

#### 7.5 §5.8 Ambient light (indoor)

Note: As the time to alarm with this scene has to be compared to the RTV measured as described in ISO/TS 7240-29:2017 §5.3 (reproducibility), it is recommended, for repeatability considerations, to use this scene (at a light level between 15 and 500 lx) as the basis for the recorded fire video.

#### 7.6 §5.9 Ambient light (outdoor)

This test shall be performed indoor with the same scene as the one used for ISO/TS 7240-29:2017 §5.8 (ambient light (indoor)).

The scene shall be illuminated with a light level of at least 10 000 lx while keeping the room temperature within the general test conditions as defined in ISO/TS 7240-29:2017 §5.1.1.1.

#### 7.7 §5.10 Non uniform illumination

##### 7.7.1 §5.10.2.1

The TF2 or TF2c fire shall be placed in area with the high light level.

The TF5 or TF5c fire shall be placed in the area with the low light level.

##### 7.7.2 §5.10.2.2

For detectors with a detection range of not more than 9 m, subject the specimens to test fires TF2 and TF5.

For detectors with a detection range of more than 9 m, subject the specimens to test fires TF2c and TF5c.