

## TFD-1251

INTELLIGENT ADDRESSABLE OPTICAL SMOKE DETECTOR  
WITH BUILT-IN ISOLATOR

Installation & User Manual



Release Date: 04/01/2021  
Rev:01

### Critical Warnings

#### General

- ✓ Read this manual with care before operating the device and keep it for further reference.
- ✓ Comply with all warnings and measures provided in the manual. Follow all respective operation and usage instructions.
- ✓ Keep the devices away from water and humidity.

#### Ortam Şartları

Do not operate the device under extreme temperature conditions that fall outside the following values.  
Temperature: Between -10°C and +70°C  
Relative Humidity: Max. 95% RH

#### Service

Do not attempt to repair the device on your own, you may be exposed to electric shock in case you open the device housing.  
Contact your dealer or authorized service in case of a failure. Technical interventions to the device must be carried out by qualified personel of authorized service.

**Warning:** Do not attempt to take the card out of its plastic protection. It is sealed solely for your safety. Users must avoid intervention.

#### Failures That Require Service Intervention

Contact your authorized service or dealer in case of a failure or in following cases.

- ✓ If the power line or plug is damaged,
- ✓ If any liquid has leaked or a substance has fallen into the device,
- ✓ If the device is exposed to water or rain,
- ✓ If the device is dropped or the housing is damaged,
- ✓ If there is significant performance change in the device,
- ✓ If the device is not operating normally according to the operating instructions in the user manual

Call the service since erroneous operations may cause further failures.

#### What You Can Do On Your Own

Do not attempt to repair the device on your own since you may be exposed to electric shock in case you open the device housing. Contact your dealer or authorized service in case of a failure. Technical interventions to the device must be carried out by qualified personel of authorized service. The device must be cleaned with a dry cloth. No chemical must be used for cleaning purposes.

#### Handling and Transportation

The device must be handled with care in manner that it does not get exposed to impacts and liquid influx. The damages that may occur during improper handling are out of guarantee.

#### Human and Environment Health

This device does not contain any chemical or biological substance that may harm human health.

### General Features

- ✓ Advanced smoke detection algorithm that minimizes false alarms
- ✓ Denial of temporary signals that may be perceived as alarm
- ✓ Adaptive protection by continuous sampling of the present environment
- ✓ Debris algorithm that perceives inoperability due to dirt accumulation and respective warning
- ✓ Easy to clean smoke chamber
- ✓ External notification light connection means
- ✓ Two LED's used for state indication purposes
- ✓ 15s starting time
- ✓ Three different sensitivity settings that can be selected on the panel
- ✓ Compatible with TFA-0120 Universal Detector Base

### Technical Specifications

Power Input	18V(min) – 32V(max)
Average (Quiescent) Current Consumption	80uA (@32V)
Maximum Alarm Current	3mA (@32V)
Maximum External Device Current	10mA (@32V) – (2K2 resistance limit)
Alarm Levels (appr.)	H: 0.12, M: 0.15, L: 0.18 dB/m
Operating Temperature Range	-10°C ~ 55°C (14°F ~ 131°F)
Humidity	95% RH (max.)
Size (mm)	Ø110, h42
Housing Material	White Color, ABS Plastic
Attached Cable Cross-section	0.4mm <sup>2</sup> ~ 1.5mm <sup>2</sup>
Weight (wit base / without base)	183 gr / 125 gr
Starting Time	15 sec
<b>Isolator</b>	
Average Current Consumption (Normal Op.) @24V	15uA
Vmax.	32V
Vnom.	28V
Vmin.	15V
Vso_max.	18V
Vso_min.	9V
Vsc_max.	5V
Vsc_min.	0,7V
Ic_max.	0,5A
Is_max.	3A
IL_max.	0,026A
Zc_max.	0,026Ω

## Indicator LEDs

	Blue LED	Red LED	Yellow LED
Any error situation (Pollution etc..)	Blinks with 1 sec. intervals	X	X
The device is in normal operation mode (can be turned off.)	Blinks with 20 sec. intervals	X	X
Alarm state	X	Constant	X
Short circuit state	X	X	Constant

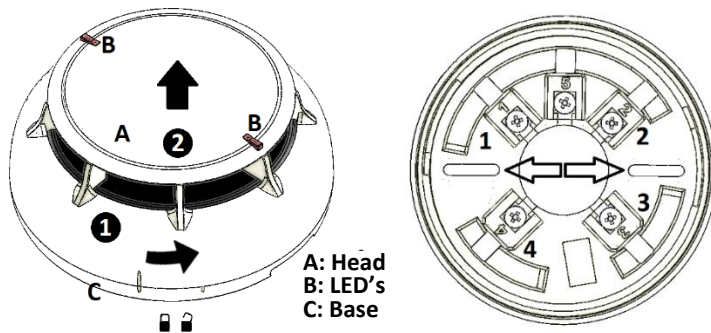
## Terminals

No. 1	NEG.(-) supply input
No. 2	NEG.(-) supply output, NEG. (-) input of parallel notification light
No. 3	POS. (+) input of parallel notification light
No. 4	POS.(+) supply input, POS.(+) supply output
No. 5	Earth connection

**Warning:** The product operates only with Teknim TFP-121x, TFP-122x and TFP-123x Intelligent Addressable Fire Alarm panels.

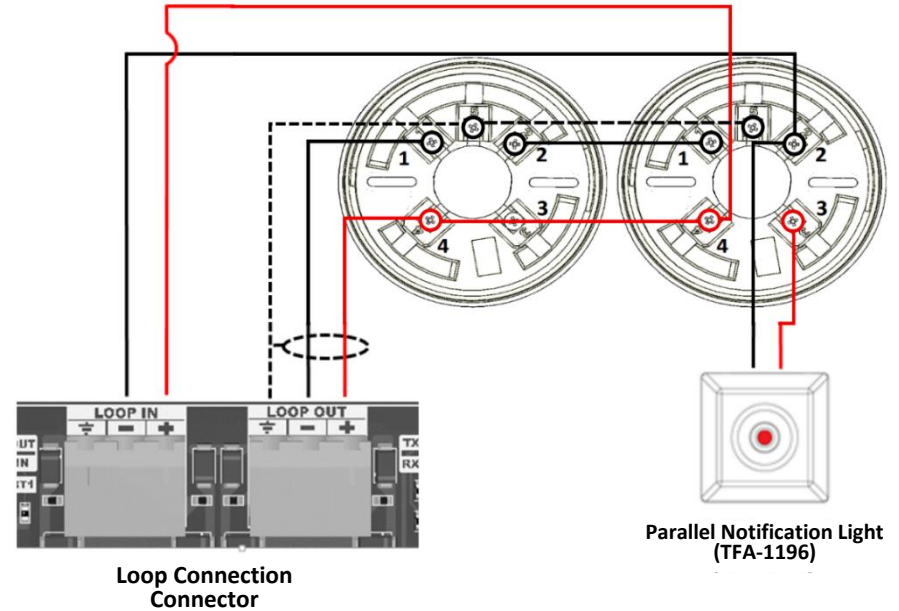
## Installation and Connection

1. Turn (1) the detector head counterclockwise to the short line and pull (2) it up to disassemble from the base.
2. Mount the base part by using the mounting place shown (2).



3. Make the cable connections according to the following diagram. Make the connection by observing that the polarity of Leg No. 4 is (+) and Leg No. 1 is (-), and then by connecting (-) pole from No 2 and (+) pole from No. 4 of the current detector to No.1 of the next detector.
4. Use the connections No. 3(+) and 2(-) for the parallel notification light.

5. Install the detector head into its place. Make sure that the line on the head piece is aligned with the long line on the base.
6. Energize the detector. The LED on the detector will blink blue light once in every 20 seconds in the state without an alarm in order to indicate that the device is in operation. (This feature may be turned off from the panel)
7. Make the chasis(earth) connection of the cable continuously over the Leg No. 5 between the loop output and the last detector.



## Test

Observable smoke flow must be provided in order to obtain correct results.

In order to perform a smoke test, ensure that the smoke goes into the smoke detection chamber min. for 1 minute by using a burning material or test spray. The LED lights and indicates the alarm when sufficient amount of smoke enters into the chamber.

1. Fend of the smoke source when the device goes into the alarm state.
2. Check to see whether the red LED's light continuously. Reset the detector from the panel.
3. The detector must be sent to the service if it does not produce alarm within 1 minute.
4. The system may be activated after the test is performed.



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**20**  
**1922-CPR-1461**

EN 54-7:2000; EN 54-7:2000/A1:2002; EN 54-7:2000/A2:2006  
Point smoke detector (Scattered Light)  
EN 54-17:2005  
Fire Detection and Fire Alarm Systems – Short Circuit Isolators

TFD-1251

Technical data: See BİLGİ-TEC-170908 kept by the manufacturer.

#### Manufacturer Company and Main Service

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\*In compliance with AEEE regulations. This product is manufactured from recyclable and reusable high quality parts and materials. Therefore, do not dispose of the product together with domestic or other wastes at the end of its service lifetime. Take it to a drop-off point for the recycling of electrical and electronic devices.

\*Lifetime of this product specified and announced in the list attached to the After Sales Services Regulations published in the Official Gazette No 29029 dated 13/6/2014 is 5 years.

\*The consumer may apply to the Consumer Arbitration Board or Consumer Court of the place of residence or of the consumer transactions in case of disputes arising from exercising the rights granted by the guarantee.