

Aspirating smoke detectors with laser technology

ONE AIR
ASPIRATING SMOKE DETECTOR



Conventional aspirating smoke detector. Laser detection optics, Part-Flow sampling technique. Three models are available with three sensitivity levels: Class C (normal sensitivity), Class B (increased sensitivity) and Class A (high sensitivity).

Coverage of an area up to 1600m². Aspirating network with Ø25mm ABS piping with a maximum length of 400m.

Air temperature -20°C...+60°C. Design of the aspirating network using the TecnoASD software supplied. Depending on the application, the software sizes and verifies the flow data of the network, defines the detector programming and draws up the project compliance declaration. The detector is equipped with automatic fault controls for: power supply, air flow and internal filter contamination. Serial bus for connecting optional TFT-4.3C repeater panels, which can be used to program and constantly monitor the detector's operation. Wi-Fi module and web page for monitoring and programming the detector.

The connection between the detector and a PC or smartphone in Access Point mode allows you to monitor and program the detector.

The WLAN or WAN network connection only allows you to monitor the detector. Programmable functions: Prealarm and Alarm signalling thresholds, alarm signalling delay and motor speed. Signalling interface consisting of 6 LEDs and 3 relay outputs: Prealarm, Alarm and Fault. 24V DC power supply. IP3x protection rating. Operating temperature -5°C...+55°C. ABS casing. Grey colour.

Dimensions (L x H x D) 260 x 252 x 110mm.

EN 54-20:2006. Approval certificate: 1415-CPR-128-(C-3/2024).

MODELS		EN 54-20	WI-FI	LASER DETECTION	PART-FLOW AIR SAMPLING	SENSITIVITY 0.005%...1% obs/m	COVERAGE 1 ZONE 1600m ²	AIR TEMPERATURE -20°...+60°C	ABS BOX
Name	Item no.								
TF-ONE AIR CV05	TF26TFONEAIRCV	Sensitivity from 0.5%...1% obs/m (Class C normal sensitivity)							
TF-ONE AIR CV01	TF26TFONEAIRCVA	Sensitivity from 0.1%...1% obs/m (Class B increased sensitivity)							
TF-ONE AIR CV005	TF26TFONEAIRCVH	Sensitivity from 0.005%...1% obs/m (Class A high sensitivity)							

OBLIGATIONS AND WARNINGS

The TF-ONE AIR CV aspirating smoke detector has been designed within an ISO 9001 quality management system, which requires the application of a series of rules for the design phase and plans all subsequent testing and inspection activities necessary for its production.

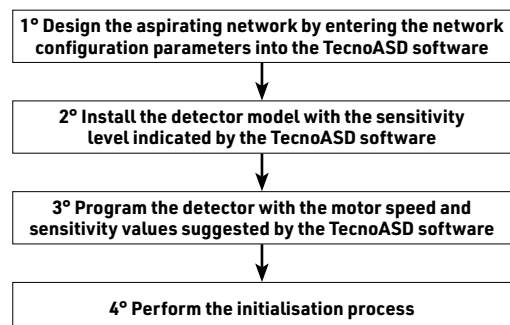
All components used have been selected for their intended purpose, and their characteristics are guaranteed when the environmental conditions correspond to those specified for class 3K5 of standard EN IEC 60721-3-3:2019.

Indoor use: the aspirating smoke detector must be installed in an area protected from accidental impact; temperature and humidity control is not required in the installation environment.

For best use of the product, all system design and installation activities must be carried out in accordance with current national regulations.

COMMISSIONING PROCEDURE

To commission the aspirating smoke detection system correctly, follow the four steps indicated in the procedure below.



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DISTINCTIVE FEATURES

All detector functions can only be programmed via the repeater panel or the web page. This is an advantage in detector management, especially when the installation location is not easily accessible. TF-ONE AIR CV aspirating smoke detectors with laser technology are the most advanced solution for early fire detection. They are particularly suitable for use in critical fire environments where high sensitivity and rapid response are required. The air taken from the protected environment through the aspirating network is analysed in the detection chamber, which is equipped with a highly sensitive semiconductor laser.

TF-ONE AIR CV detectors use the Part-flow sampling technique, which optimises the analysis of the aspirated air, as only part of the total air flow is subjected to analysis in the detection chamber.

Most of the aspirated air is diverted before it reaches the filter and the analysis chamber.

The Part-flow technique reduces, over time, the accumulation of particulate matter and dust that deposits on sensitive components; the lower accumulation of contaminants reduces maintenance and related costs.

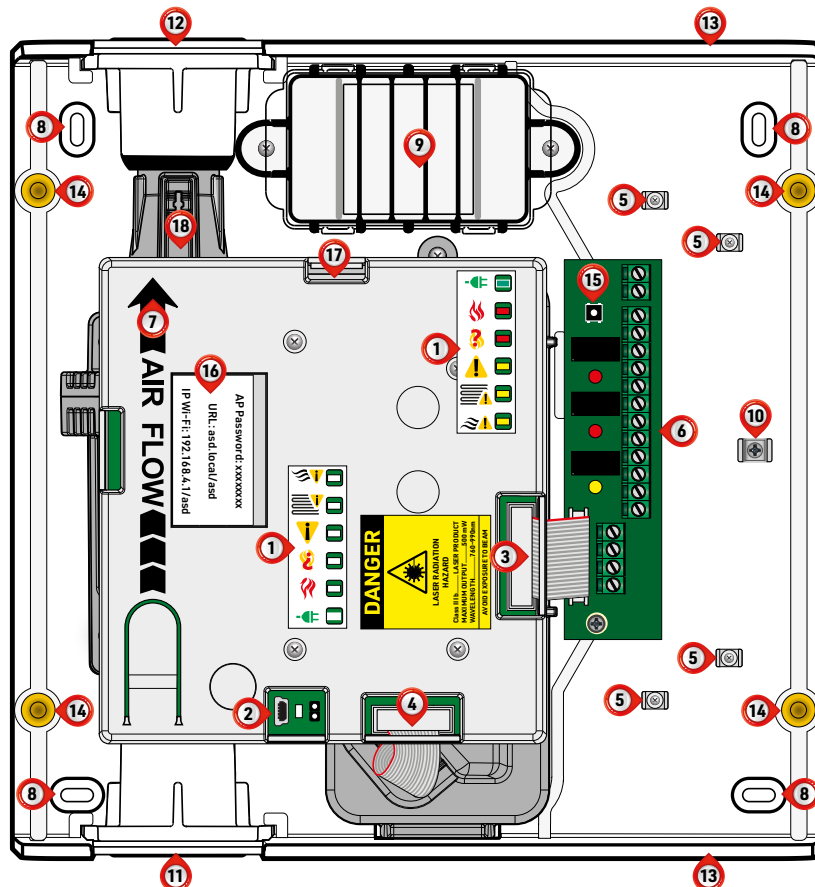
OVERVIEW

The aspirating smoke detector consists of an ABS housing and five main components: a CPU board, which integrates the user interface consisting of signal LEDs, a cable connection board with terminals for connecting the detector, the motor unit, the detection chamber and the air filter.

PROGRAMMING RESET PROCEDURE

The procedure described below allows you to reset the detector to the factory default settings.

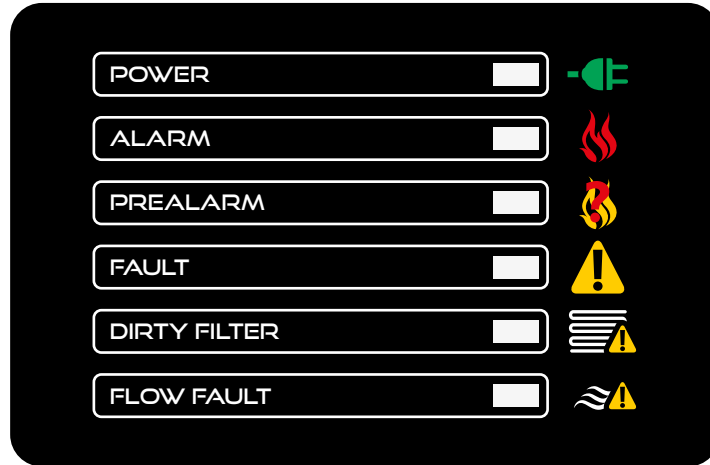
- 1 - Disconnect the power supply to the detector.
- 2 - Press and hold the Default key
- 3 - Connect the power supply to the detector
- 4 - Wait 5 seconds before releasing the key



1	Signalling LEDs	10	Cable screen anchor clamp
2	USB port	11	Aspirating network pipe connection
3	Flat cable for connection to the cable wiring board	12	Possible drain pipe connection
4	Flat cable for connecting the laser chamber	13	Entry for electrical wiring conduit
5	Columns for securing cable ties	14	Threaded bushings for closing the container
6	Cable wiring board	15	Default button (deletes the detector programming)
7	Arrow indicating the direction of air flow	16	Label with information for accessing the Access Point
8	Holes for fixing to surface	17	CPU board protection cover
9	Air filter	18	Aspirating motor unit

SIGNALLING LEDS

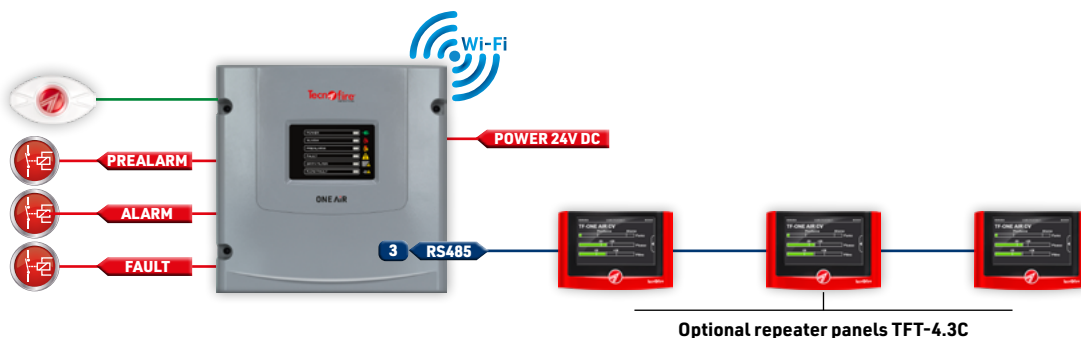
The detector's signalling interface consists of six LEDs. The following table describes the various signalling modes of the detector.



Signalling	Colour	Type of signalling	Signalling states	
			State	Description
	POWER	Green Signals that the detector is properly powered.	Off	No power supply
			Flashing	System initialisation process in progress
			On	Power supply present (device operational)
	ALARM	Red Signals the alarm status.	Off	No alarm in progress
			On	Fire alarm in progress
	PREALARM	Red Signals the prealarm status.	Off	No prealarm in progress
			On	Fire prealarm in progress
	FAULT	Yellow Signals the presence of a fault status. See note 1.	Off	No fault in progress
			On	Detector fault in progress (at least one)
	DIRTY FILTER	Yellow Monitors the operating status of the air filter.	Off	No anomaly to report
			Flashing	Filter anomaly status (transient filter fault)
			On	Filter anomaly fault status
	FLOW FAULT	Yellow Monitors the operating status of the air flow.	Off	No anomalies to report
			Flashing	Flow anomaly status (transient flow fault)
			On	Flow anomaly fault status

Note 1 - The DIRTY FILTER and FLOW FAULT LEDs always light up together with the FAULT LED (except during the transition phase). The DIRTY FILTER and FLOW FAULT LED signals remain visible until the activation of the reset or auto-reset command.

TF-ONE AIR CV detector - Application diagram



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CABLE WIRING BOARD

Description of terminal block M1		
1	-	24V DC power supply negative (from external power supply compliant with EN 54-4)
2	+	Positive 24V DC power supply (from external power source compliant with EN 54-4)

Description of terminal block M2			
3	NC	Normally closed contact	Prealarm relay output. Potential-free contacts, I _{max} 750mA @ 30V DC.
4	NO	Normally open contact	
5	C	Common contact	
6	NC	Normally closed contact	Alarm relay output. Potential-free contacts, I _{max} 750mA @ 30V DC.
7	NO	Normally open contact	
8	C	Common contact	
9	NC	Normally closed contact	Relay output Fault. Potential-free contacts, I _{max} 750mA @ 30V DC. The status indicated for terminals 9 and 10 is in the detector powered condition. With the detector not powered, the status of the terminals is reversed: terminal 9 is in the NO state and terminal 10 is in the NC state.
10	NO	Normally open contact	
11	C	Common contact	
12	RES-	Negative reset input (see connection diagram)	
13	RES+	Positive reset input (see connection diagram)	
14	RIP	Positive control output for optical repeater (the output follows the alarm status of the detector)	

N.B. Restriction on use of outputs. The outputs are not supervised (type J according to EN 54-1 nomenclature) therefore, in accordance with EN 54-2, the outputs must not be used to control alarm and fault notification transmission devices.

Description of terminal block M3				
15	B	RS485 bus communication channel B	Bus reserved for connecting TFT-4.3C repeater panels	The detector manages max. 3 repeater panels
16	A	RS485 bus communication channel A		
17	-	RS485 bus line negative power supply	Power supply output for repeater panels; do not use for other purposes	Current limitation max. 500mA @ 24V DC
18	+24V	RS485 bus line positive power supply		

CONNECTION MODE

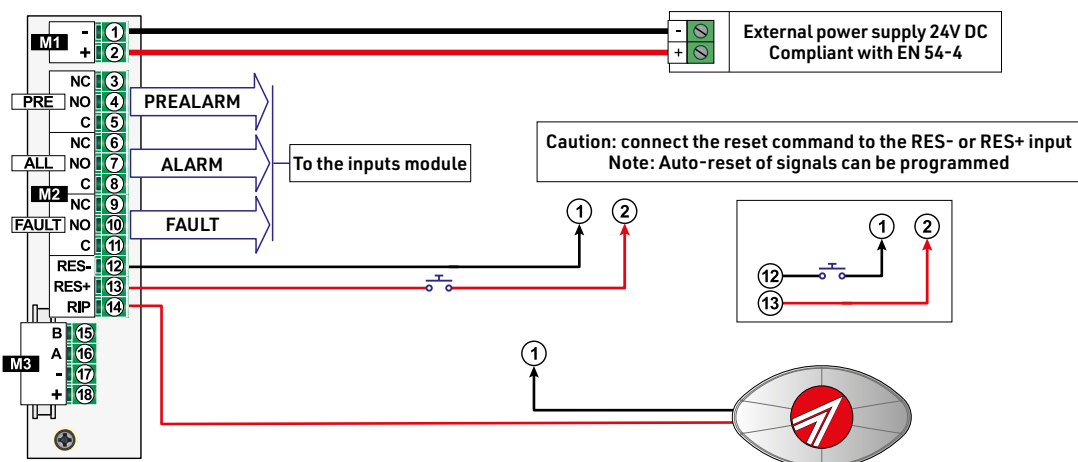
Power supply - To power the detector, you must use a power supply that complies with the requirements of EN 54-4. We recommend using a twisted multi-core cable to connect the power supply. The conductor cross-section must be proportional to the length of the line and the sum of the power consumption of the devices being powered.

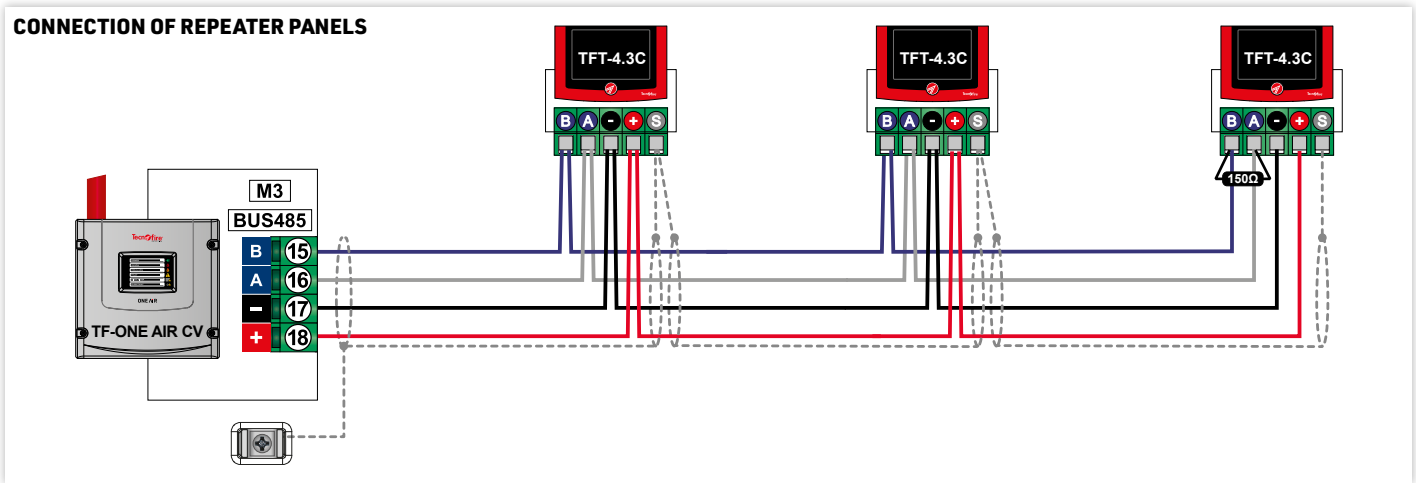
Repeater panels - Up to three TFT-4.3C repeater panels can be connected to the detector's Bus485, connected in open loop mode.

A 150Ω balancing resistor must be inserted between terminals A and B on the last panel connected to the Bus.

Connection warnings - For connecting the detector, we recommend using shielded, twisted multi-core cables. The conductor section must be proportionate to the length of the line and the sum of the power consumption of the devices supplied. The cable shield can be connected inside the casing to the designated anchor terminal.

CONNECTION DIAGRAM

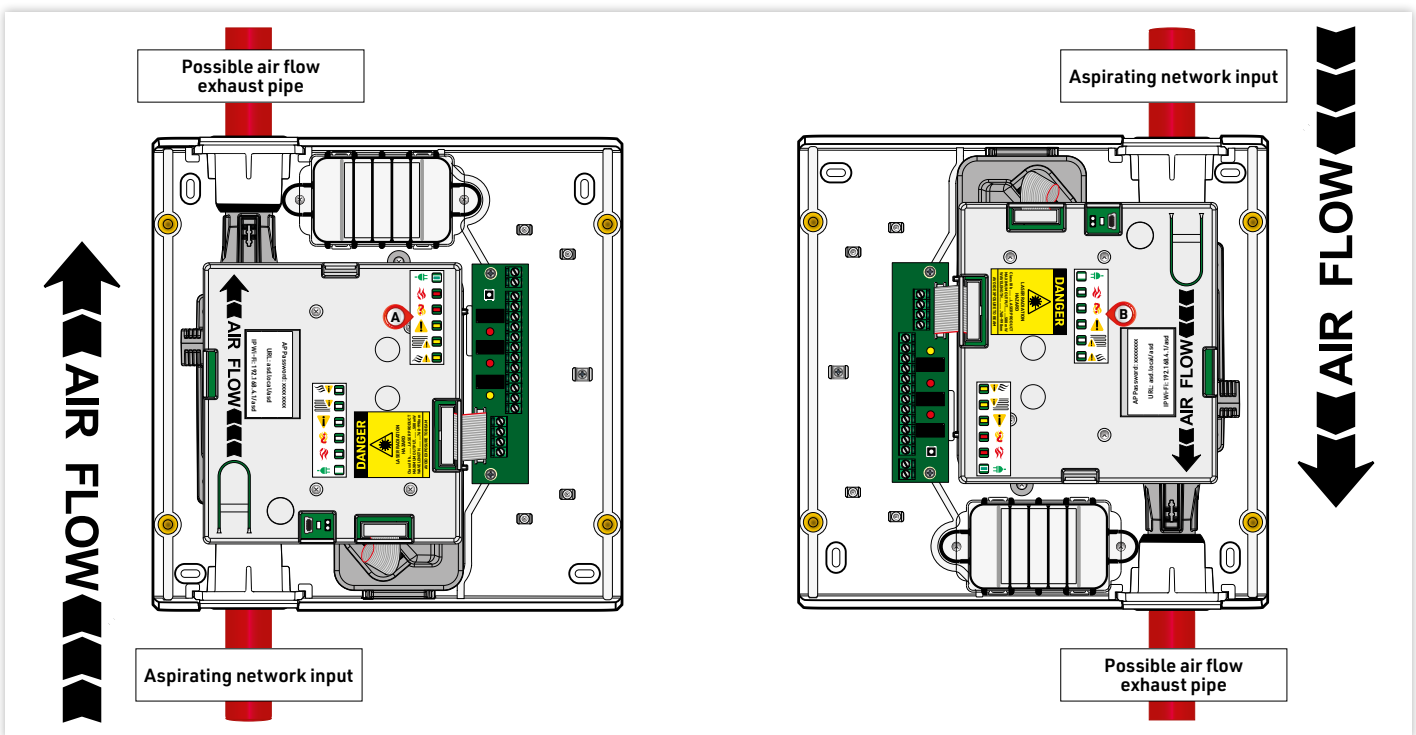




ASPIRATING DIRECTION

The detector housing can be rotated depending on whether the aspirating pipe enters from above or below. Closing the casing activates the LED indicators for group A or group B. When the housing is open, only the LED indicator group A is always lit.

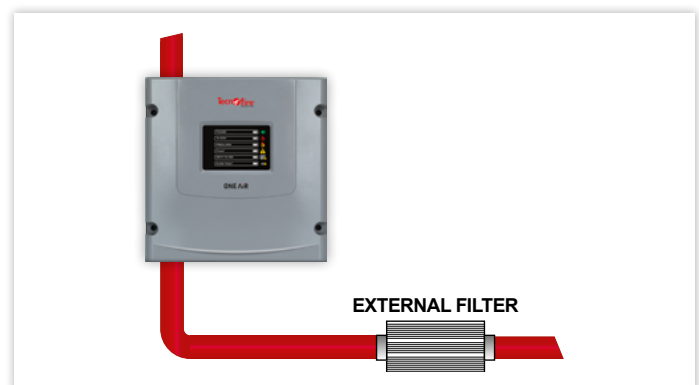
The AIR FLOW arrow indicates the direction of air aspiration. If the aspirated air cannot be released into the same environment in which the aspiration unit is installed, an exhaust pipe must be installed to convey the air back into the environment from which it was sampled.



AIR FILTERING

The detector is equipped with a monitored internal filter; however, in order to better protect the motor unit, it is recommended to also install an external filter. The purpose of the filters is to remove dust, dirt and moisture from the extracted air, allowing only smoke particles to pass through. Filter maintenance is an essential activity to ensure the proper functioning of the Aspirating system. Subjecting the filter to regular maintenance allows you to:

- prolong the useful life of the Aspirating system;
- guarantee the necessary filtering performance;
- maintain over time the cleanliness of the detection chamber;
- prevent breakdowns and costly repair work.



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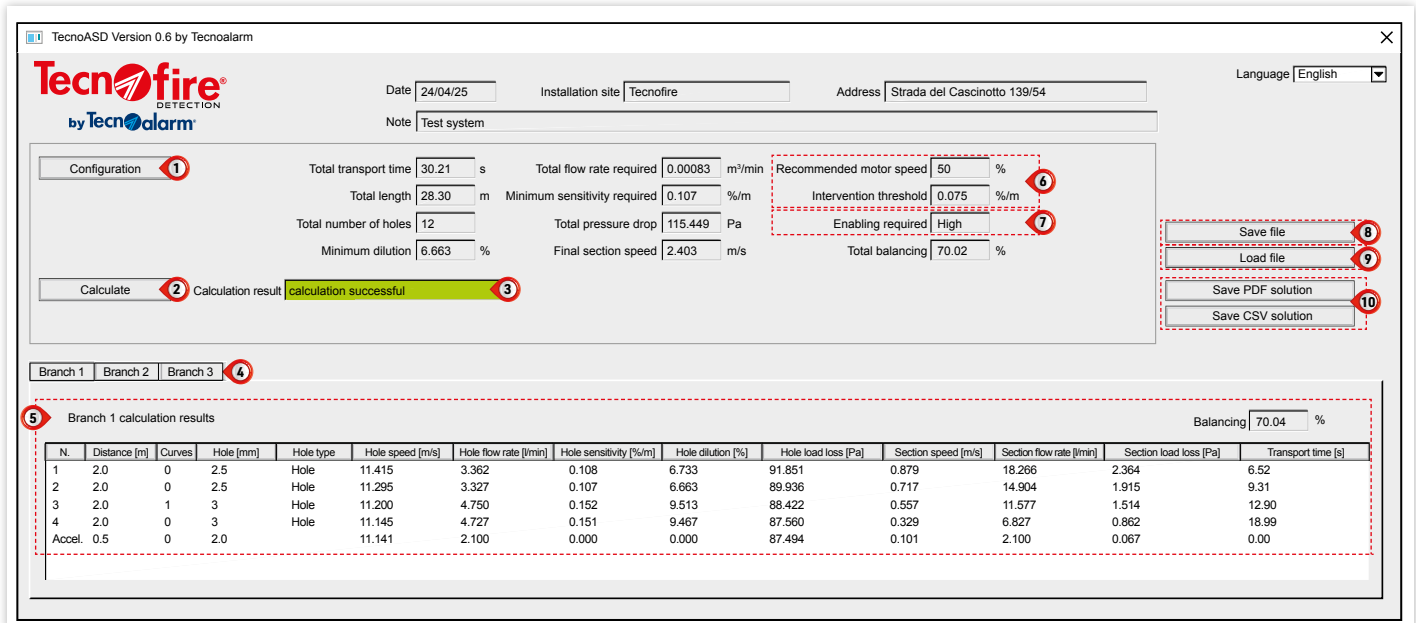
ASPIRATING NETWORK DESIGN

The TecnoASD software automatically configures the aspirating network based on the general parameter settings and the configuration of each branch of the network.

The software acquires the specified parameters, calculates the flow rate of the aspirating network and verifies its suitability. At the end of the configuration, the software offers the option

of saving and printing the declaration of conformity, which certifies that the design of the aspirating system complies with the requirements of EN 54-20.

The declaration contains the project data certifying the suitability of each branch of the network and each aspirating or acceleration hole.



TecnoASD	
① Configuration - Opens the configuration window for the aspirating network	⑦ Field indicating the required software plu-in / sensitivity TF-ONE AIR CV05 normal sensitivity, TF-ONE AIR CV01 increased sensitivity TF-ONE AIR CV0005 high sensitivity
② Calculate - Key that starts the calculation of the aspirating network	
③ Calculation result - Information field for the calculation result	⑧ Save file - Saves the system configuration file
④ Branch no. - Keys for selecting the branches that form the aspirating network	⑨ Load file - Loads the configuration file of a system
⑤ Branch calculation results - The window displays the technical data for each hole	⑩ Save PDF/CSV solution - Save the file containing the technical data of the system configuration and the declaration of conformity
⑥ Fields suggesting the detector programming parameters	

ALARM THRESHOLD

The TecnoASD software calculates the alarm threshold that must be programmed on the detector.

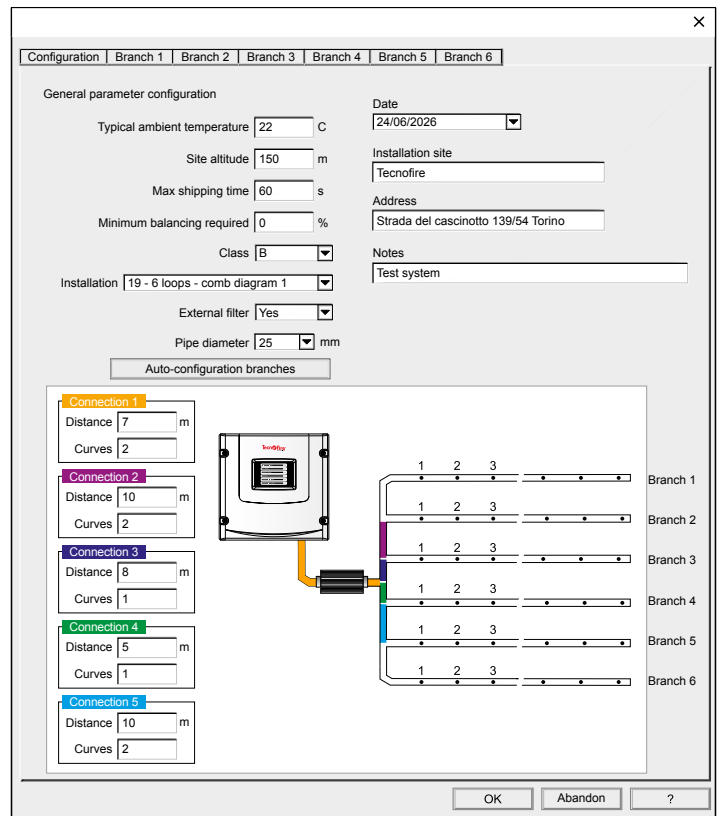
The detector model to be used must be selected based on the alarm threshold suggested by the TecnoASD software.

TF-ONE AIR CV05	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.500	0.550	0.600	0.650	0.700	0.750	0.800	0.850	0.900	0.950	1.000	-	-
TF-ONE AIR CV01	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	0.100	0.150	0.200	0.250	0.300	0.350	0.400	0.450
	0.500	0.550	0.600	0.650	0.700	0.750	0.800	0.850	0.900	0.950	1.000	-	-
TF-ONE AIR CV0005	0.005	0.010	0.015	0.020	0.025	0.030	0.035	0.040	0.045	0.050	0.055	0.060	0.065
	0.070	0.075	0.080	0.085	0.090	0.100	0.150	0.200	0.250	0.300	0.350	0.400	0.450
	0.500	0.550	0.600	0.650	0.700	0.750	0.800	0.850	0.900	0.950	1.000	-	-

SYSTEM CONFIGURATION WINDOW

Window for entering data identifying the system and the configuration parameters of the aspirating network.

General configuration parameters	
Typical ambient temperature	Average temperature of the installation environment
Site altitude	Indicates the altitude of the site (altitude above sea level)
Maximum transport time required	Air flow transport time (determines the motor speed)
Minimum balancing required	Percentage of branch balancing (optional parameter)
Sensitivity class	Indicates the sensitivity class you want to achieve: A, B or C
Installation	The number of loops and the configuration diagram of the branches that make up the aspirating network
External filter	Indicate the presence of an external filter (Yes or No)
Pipe diameter	Indicate the diameter of the aspirating network pipe
Auto-configuration branches key	Activates automatic configuration of the branches that make up the aspirating network
Connection 1	Connection (number)
Connection 2	Distance - Length of the connection segment Bends - Number of bends in the connection segment
Connection 3	
Connection 4	N.B. Each connection segment is identified by a specific color. The connection segments are displayed depending on the type of installation selected
Connection 5	



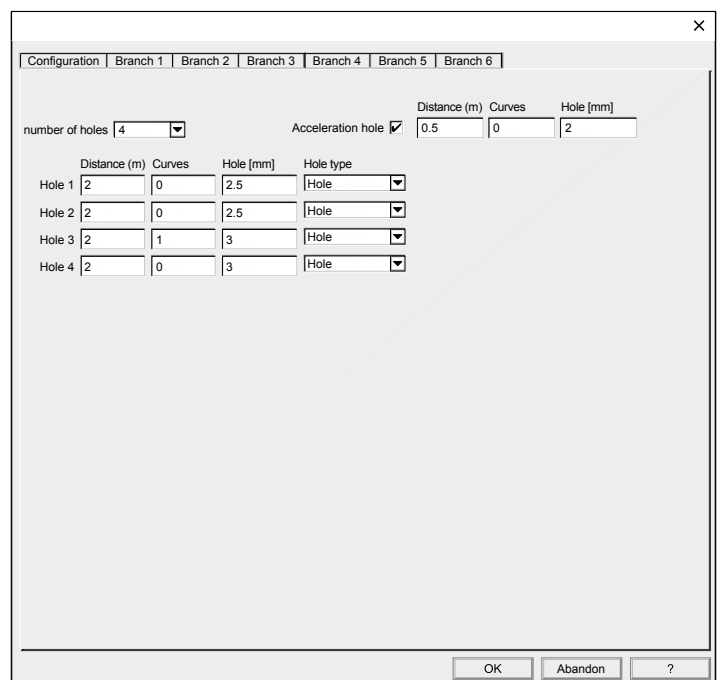
Installation types			
1 - 1 loop - "I" diagram	7 - 2 loops - comb diagram	13 - 4 loops - comb diagram 4	19 - 6 loops - comb diagram 1
2 - 2 loops - "U" diagram	8 - 3 loops - comb diagram 1	14 - 5 loops - comb diagram 1	20 - 6 loops - comb diagram 2
3 - 3 loops - "W" diagram	9 - 3 loops - comb diagram 2	15 - 5 loops - comb diagram 2	21 - 6 loops - comb diagram 3
4 - 4 loops - "UU" diagram	10 - 4 loops - comb diagram 1	16 - 5 loops - comb diagram 3	22 - 6 loops - comb diagram 4
5 - 5 loops - "UW" diagram	11 - 4 loops - comb diagram 2	17 - 5 loops - comb diagram 4	23 - 6 loops - comb diagram 5
6 - 6 loops - "WW" diagram	12 - 4 loops - comb diagram 3	18 - 5 loops - comb diagram 5	24 - 6 loops - comb diagram 6

BRANCH CONFIGURATION WINDOW

Window for compiling the configuration parameters of the aspirating branches.

Click on the key corresponding to the branch you want to configure.

Branch configuration parameters	
Number of holes	Number of holes in the branch max. 32
Acceleration hole	Enables the presence of an acceleration hole
	Distance from the last aspirating hole
	Number of curves preceding the acceleration hole
Aspirating hole 1	Hole diameter
	Distance from detector
	Number of curves preceding the hole
	Choice of hole type: Hole, Capillary, 1m offset, 6m offset
Aspirating hole 2	Distance from the first element, filter or curve
	Number of curves preceding the hole
	Hole diameter
	Choice of hole type: Hole, Capillary, 1m offset, 6m offset



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DECLARATION OF CONFORMITY

When the design of the aspiration network is complete, the TecnoASD software automatically generates the "EN 54-20 Declaration of Conformity" document. The declaration certifies that the aspiration smoke detection system has been designed in accordance with the requirements of European standard EN 54-20. The declaration drawn up by the TecnoASD software must be attached to the documentation that makes up the declaration of conformity of the fire detection system.

Declaration of conformity data

The declaration of conformity contains the data identifying the system and the installation site.

- 1 - The document contains the configuration parameters declared in the design that determined the results of the system's flow calculation.
- 2 - The overall results of the flow calculation.
- 3 - For each branch, it shows the details of the flow performance of each hole.

1 Declared configuration parameters	
Typical ambient temperature	Class
Site altitude	Installation
Maximum transport time required	External filter
Minimum balancing required	Pipe diameter

2 Overall results of the flow calculation	
Total transport time [s]	Total pressure drop [Pa]
Total length [m]	Final section speed [m/s]
Total number of holes	Recommended motor speed [%]
Minimum dilution [%]	Intervention threshold [%/m]
Total flow rate required [m ³ /min]	Sensitivity / enabling required
Minimum sensitivity required [%/m]	Total balancing [%]

3 Flow performance of each branch hole	
Hole number	Hole sensitivity [%/m]
Distance [m]	Hole dilution [%]
Curves	Hole pressure drop [Pa]
Hole diameter [mm]	Section velocity [m/s]
Hole type	Section flow rate [l/min]
Hole speed [m/s]	Section pressure drop [Pa]
Hole flow rate [l/min]	Transport time [s]

Tecnofire by **Tecnoalarm** 05/06/26 **Installation site : Tecnofire**
Address : via Ciriè 38
Note : Test ASD

Declaration of conformity
design in accordance with the requirements of standard EN 54-20

1

Typical ambient temperature : 26.00 C
Site altitude : 200 m
Maximum transport time required : 120s
Minimum balancing required : 0 %
Class : B
Installation : 19 - 6 loops - comb diagram 1
External filter : NO
Pipe diameter : 25 mm

2

Total transport time : 119.79 s
Total length : 216.00 m
Total number of holes : 32
Minimum dilution : 2.467 %
Total flow rate required : 0.00162 m³/min
Minimum sensitivity required : 0.084 %/m
Total pressure drop : 242.765 Pa
Final section speed : 4.678 m/s
Recommended motor speed : 80 %
Intervention threshold : 0.060 %/m
Sensitivity / enabling required : Increased
Total balancing : 94.70 %

Signature of the technician

Note: Page 1 - 2

Tecnofire by **Tecnoalarm** 05/06/26 **Installation site : Tecnofire**
Address : via Ciriè 38
Note : Test ASD

Branch 1 Number of holes 5 Balancing 94.703 %

3

N.	Distanza [m]	Curve	Foro [mm]	Tipo foro	Velocità foro [m/s]	Portata foro [l/min]	Sensibilità foro [%/m]	Diluzione foro [%]	Perdita carico foro [Pa]	Velocità tratto [m/s]	Portata tratto [l/min]	Perdita carico tratto [Pa]	Tempo trasporto [s]
1	1.0	1	2.0		14.149	2.667	0.416	11.568	138.438	1.109	23.055	1.734	3.90
2	2.0	1	2.0		14.005	2.640	0.412	11.451	135.651	0.981	20.388	2.787	5.94
3	3.0	1	2.0		13.823	2.606	0.407	11.302	132.133	0.854	17.748	3.518	9.45
4	4.0	1	2.0		13.615	2.566	0.401	11.132	128.200	0.729	15.142	3.933	14.94
5	5.0	1	2.0		13.399	2.526	0.394	10.955	124.159	0.605	12.576	4.041	23.21
Ac	2.0	0	4.0	Foro	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00

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CLEANING BEFORE COMMISSIONING

Cleaning the pipes of a vacuum cleaner system before commissioning is an essential step in order to remove residual chips, dust, debris and foreign bodies that may have accidentally

been deposited inside during installation. accidentally deposited inside during the installation phase. The two main cleaning techniques used are blowing and suction.

INITIALISATION PROCESS

After installing and programming the system by arming the parameters requested by the TecnoASD software, the initialisation process must be started.

The process can be started via a repeater panel or via the Web App. The process lasts approximately three minutes and, during this time, the POWER LED flashes.

At the end of the process, the detector initialises the airflow and filter efficiency percentages to 100%.

ATTENTION! Please only perform the initialisation process with new or thoroughly cleaned filters.

During the initialisation process, normal operating conditions of the system must be maintained and the intake holes and the airflow outlet duct must not be obstructed, even momentarily. The detector can only operate normally after the initialisation process has been carried out.

If the detector is de-energised and re-powered, it uses the data from the previous initialisation.

If the motor speed programming is changed, the detector automatically triggers a new initialisation process.

WI-FI MODULE

The internal Wi-Fi module allows connection to the detector via a web page in Access Point or Station mode.

Access Point mode

The management device (PC or smartphone) connects to the Wi-Fi network generated by the detector's Access Point.

The detector presents itself on the network with the following credentials:

AP SSID: the network name is "TFOneAirCVxxxxxx" (composed of device name + serial number).

AP PSW: the default access password is the detector serial number "xxxxxx" composed of eight digits.

The data for accessing the Wi-Fi module can be found on the label stuck to the black cover that protects the detector CPU board.

With Access Point mode it is possible:

- program the motor speed, the Alarm and Pre-alarm thresholds and their signalling delay;
- switch off the detector suction motor;
- monitor physical quantities;
- monitor the status of the Wi-Fi connection.;
- change Station mode connection parameters.

Station mode

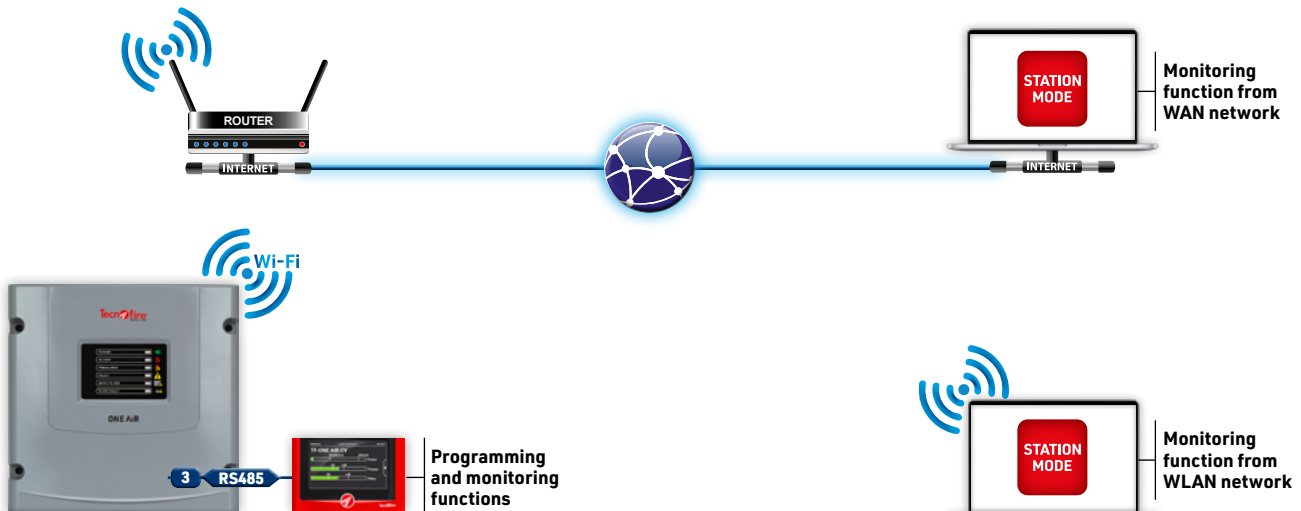
The detector and management device must be connected to a WLAN or WAN network.

Station mode allows you to view only the pages that monitor the detector's operation.

ACCESS POINT MODE - THE MANAGEMENT DEVICE IS CONNECTED TO THE WI-FI NETWORK GENERATED BY THE DETECTOR



STATION MODE - THE DETECTOR AND THE MANAGEMENT DEVICE ARE CONNECTED VIA WLAN OR WAN



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PROGRAMMING AND MONITORING FROM WEB PAGE

Precondition

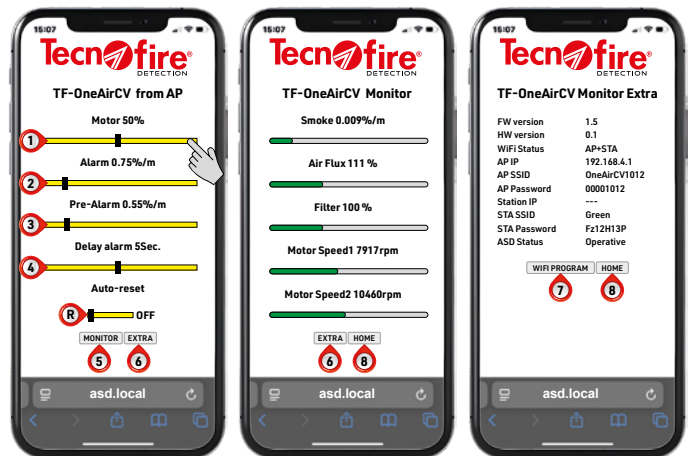
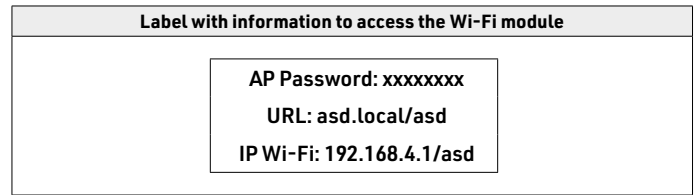
The detector's Wi-Fi module is enabled by default. If the module is not enabled, it must be re-enabled via the repeater panel, following the path "Sensor Programming Menu" > "Programming from Wi-Fi - Enabled".

Connecting to the WEB page

To connect to the Wi-Fi network generated by the device, which is appears with the network name OneAirCV followed by eight digits (e.g. **OneAirCV1012**), open a browser and type the Wi-Fi IP address or URL of the device into the search bar:
 Wi-Fi IP - **192.168.4.1/asd** or URL - **asd.local/asd**
 Start loading the web page by pressing the Enter key.

Accessing the WEB page in Access Point mode

The first page displays the detector programming options; the **MONITOR** and **EXTRA** buttons are also visible on the page, allowing the respective pages to be displayed.
 To change the detector programming touch the yellow bars to the left or right of the cursor to decrease or increase values.



1	Motor - Program the speed suggested by the TecnoASD software
2	Alarm - Program the threshold suggested by the TecnoASD software
3	Pre -alarm - Program the threshold for signalling the Pre-alarm
4	Delay Alarm - Set the alarm delay time

TecnoASD Software	2 Recommended motor speed	50 %
	3 Intervention threshold	0.075 %/m

R	Auto-reset - For signals: Alarm, Pre-alarm and Fault
5	MONITOR - Tap the button to display the Monitor page
6	EXTRA - Tap the button to display the Monitor Extra page
7	WiFi PROGRAM - Tap the button to display the WiFi Programming page
8	HOME - Tap the button to display the previous page
9	WiFi Enable - Tap the jig bar to enable the Station mode
10	WiFi SSID - Enter the name of the WiFi network covering the installation site
11	WiFi Password - Enter the Password of the WiFi network covering the installation site
12	Write UPDATE to confirm - Write the word UPDATE in capital letters to save the settings.
13	DHCP Disable - Enable manual entry of network parameters
14	Network parameters - Fill in the fields with the network data covering the installation site.



Accessing WEB pages in Station mode

Station mode only allows you to view the Monitor and Monitor Extra pages.

14	EXTRA - Tap the button to display the Monitor Extra page
15	HOME - Tap the button to display the Monitor page



PROGRAMMING AND MONITOR FROM REPEATER PANEL

Detector monitor from repeater panel

Normally the repeater panel displays Access Level 1, specifically the bars that monitor the detector status.

Access to functions

To open the management window displaying the function access buttons place your finger on the triangle and move it to the left. The following table describes the available functions.

Password	Enter password for access to Levels 2, 3, 4
Monitor	Displays: motor speed, air flow percentage, filter percentage, and detector status: Initialisation, Operational, Motors off.
Versions	Displays HD and FW versions and detector serial number
Test	Enables the detector test (detection time check)
Initialisation	Only visible with menu level 3. Enables the initialisation process to be carried out

Function Access Levels

The repeater panel manages four Access Levels, Level 1 monitoring functions are always available. Access to Levels: 2, 3, 4 is regulated by passwords, see table.

Level 1	Always available level displays the detector monitor	
Level 2	User access level	Password - 11111
Level 3	Installer/maintenance access level	Password - 12345
Level 4	Authorised personnel access level	Password - 54321

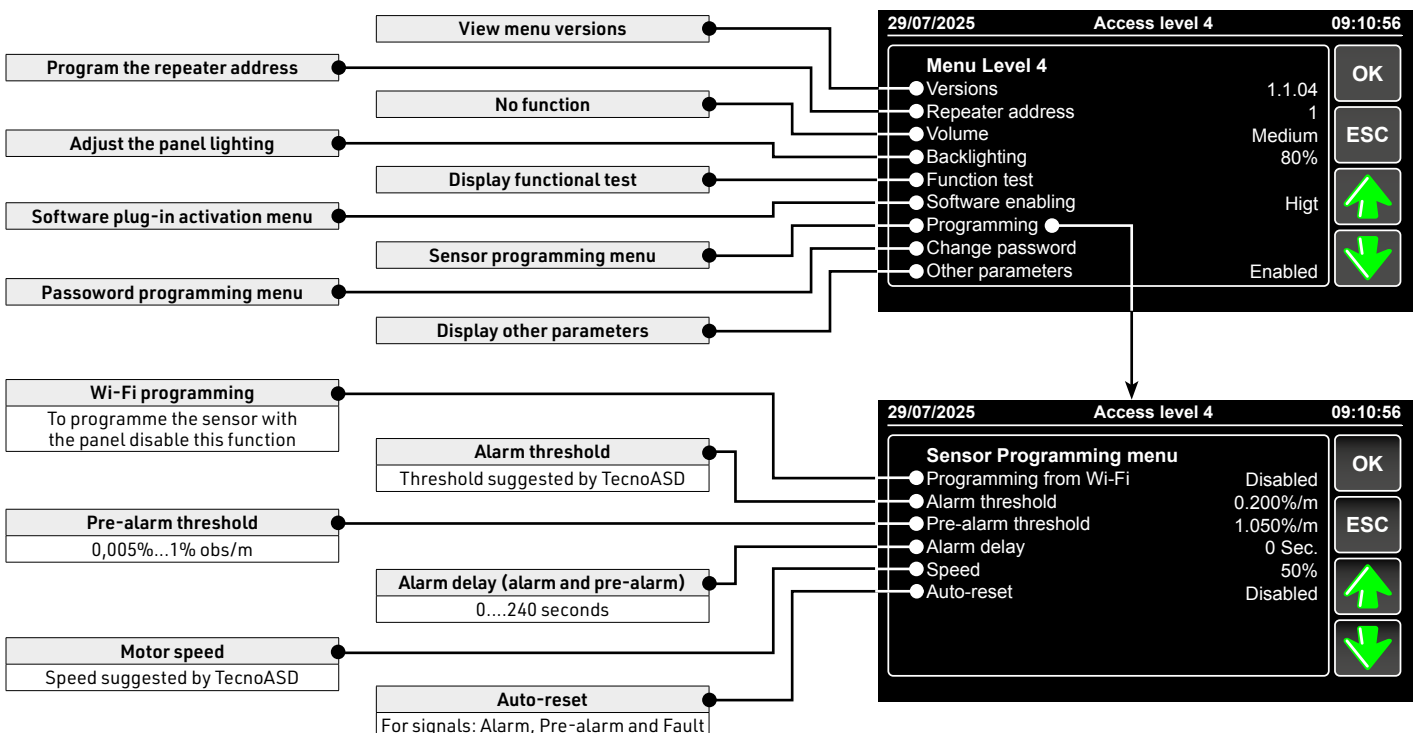
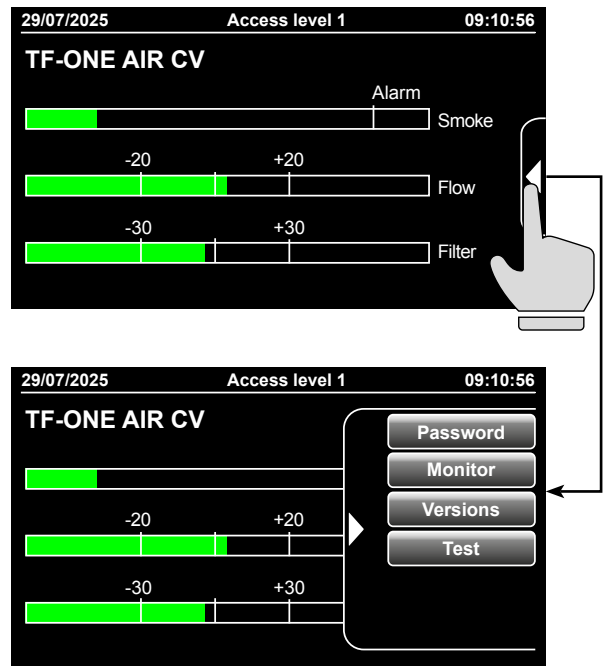
Repeater panel fault reports

Any detector faults are displayed on the repeater panel at the bottom left by means of the 'Fault' icon. To view the detail of the reported fault, place your finger on the icon: the panel displays a label providing detailed information of the reported faults.

Details of reported faults		
	Sensitivity error	Detector fault
	Power failure	Flow fault
	Motor failure	Dirty filter

Programming the Detector from the Repeater Panel


To carry out programming with the repeater panel it is necessary to disable the Wi-Fi module. To disable the module access the "Sensor Programming Menu" and disable the "Programming from Wi-Fi" option.




TF-ONE AIR CV

Aspirating smoke detector

Accessories

	TFRIP-R
	Optical repeater, red LED. 360° visibility Surface mounting. ABS casing. IP22. White colour. Dimensions (L x H x D) 78 x 45 x 25mm.
Item no. TF3TFRIPR	

	TFRIP-R INC
	Optical repeater, red LED. 360° visibility Flush mounting. Protection rating IP67.
Item no. TF3TFRIPRINC	

TF-ONE AIR CV - Technical and functional specifications

General information	Conventional aspirating smoke detector	TF-ONE AIR CV	
	Detection technology	Laser	
	Air sampling technique	Part-Flow	
	Coverage	1 area Max. 1600m²	
Available models	TF-ONE AIR CV05 (Class C)	Normal sensitivity 0,5%...1% obs/m	
	TF-ONE AIR CV01 (Class B)	Increased sensitivity 0,1%...1% obs/m	
	TF-ONE AIR CV0005 (Class A)	High sensitivity 0,005%...1% obs/m	
Aspirating network	Aspirating channels	1	
	Channel length	Max. 400m	
	Pipes	ABS Ø external 25mm Ø internal 21mm	
	Air temperature	-20°C...+60°C	
	Air filter	Integrated	
	Initialisation process	Automatic	
	Calculation of aspirating network: class, length, sampling holes	Parameters determined by TecnoASD software	
Aspirating motors	Expected motor life (approximate hours)	MBTF 70000 / 40°C	
	Noise level (speed 50%)	SPL 47 dB(A)	
TLC features	Telecommunications vector	Wi-Fi	
	Configuration of network parameters	Manual or DHCP	
	Direct connection Access Point mode	Detector programming and monitor	
	WLAN/WAN network connection Station mode	Detector monitor	
Programmable functions	Prealarm threshold	Programmable	
	Alarm threshold	Programmable Defined by TecnoASD software	
	Signalling delay Alarm and Prealarm	Programmable	
	Motor speed	Defined by TecnoASD software	
Automatic functions	Motor speed	Programmable Defined by TecnoASD software	
Management	Web page	asd.local/asd 192.168.4.1/asd	
	Signalling outputs	Specialised relay outputs Max. 1A @ 30V DC	Prealarm Alarm Fault
		Service interface	LEDs front panel
	Equipment	Expansion bus	RS485
Management interface		USB port	
Expansion devices	TFT-4.3C repeater panel	Max. 3	
	Communication protocol	FIRE-BUS	
	TFT-4.3C consumption	50mA @ 24V DC	
Electrical specifications	Repeater panel function	Detector programming and monitor	
	Supply	External power supply	
	Nominal voltage	24V DC	
	Operating voltage	20V...27.6V DC	
	Maximum consumption	Motors off 160mA @ 24V DC	
		Motors speed 50% 250mA @ 24V DC	
		Motors speed 100% 370mA @ 24V DC	
Repeater output	9,4V DC max 3mA		
Physical specifications	Operating temperature	-5°C...+55°C	
	Relative humidity (without condensation)	10%...93%	
	Protection class	IP3x (EN 60529)	
	Casing	ABS	
	Dimensions (L x H x D)	260 x 252 x 110mm	
	Weight	2.4Kg	
Conformity	Standards	EN 54-20:2006	
	System compatibility	EN 54-13:2020	
	Certification number	1415-CPR-128-(C-3/2024)	
	Year of CE marking	24	
	Number of declaration of performance	055_TF-ONE AIR CV	
	Notified body	EMI	

N.B. Declarations of conformity and performance are available on www.tecnofire.com



EMI Tested



Tecnofire
DETECTION
by TecnoAlarm S.r.l. - Via Ciriè 38 - 10099 - San Mauro T.se - Torino (Italy)
Manufacturing plant: Strada del Cascinotto 139/54 - 10156 - Torino (Italy) - www.tecnofire.com

The product features can be subject to change without notice.

MADE IN ITALY

TF-ONE AIR CV - DATA SHEET - REL. 3.0