FireVibes EWT100 Fire Detection and Alarm Wireless System Instruction Manual

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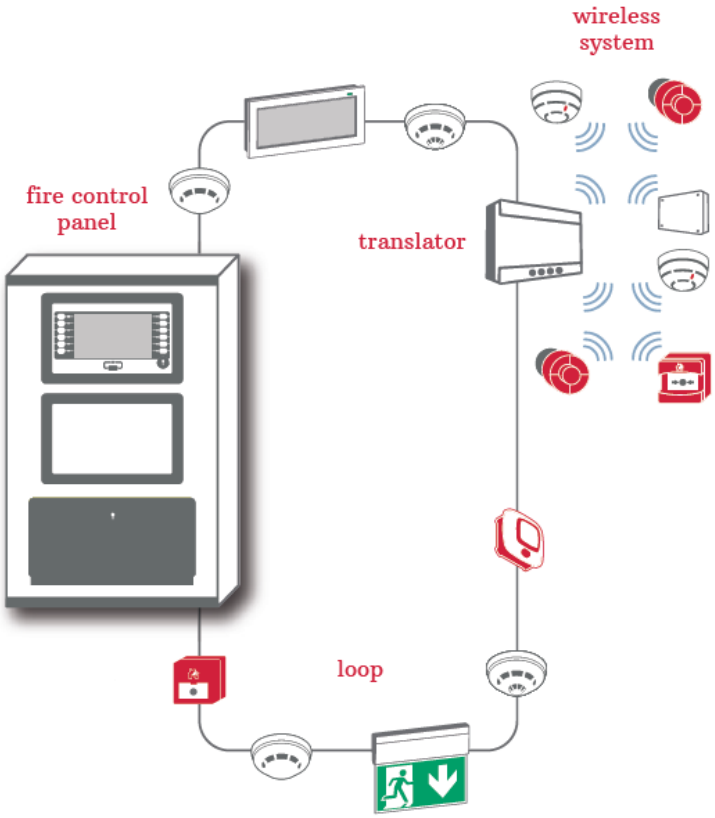
FireVibes EWT100 Fire Detection and Alarm Wireless System

FireVibes is a wireless system for fire safety installations, ideal for those installations that prove difficult for the laying of cables or the connection of devices. The protocol translator, which connects to and is powered directly from the loop set to Inim protocol, allows communication with up to 128 wireless devices. This can be either direct or through repeater modules (expansions). The expansions make it possible to extend the signal range and to create a redundant network, that is a network that offers alternative routes in the event of the loss of a node. Wireless communication is based on two-way dual channel technology capable of guaranteeing a distance of up to 200 meters between translators/expansions and devices (“field communication”) and up to 1000 meters between translators and expansions (“infrastructure communication”). The range of wireless devices available includes optical smoke detectors,heat detectors, optical/heat detectors, alarm buttons (call points), input modules and sounders.

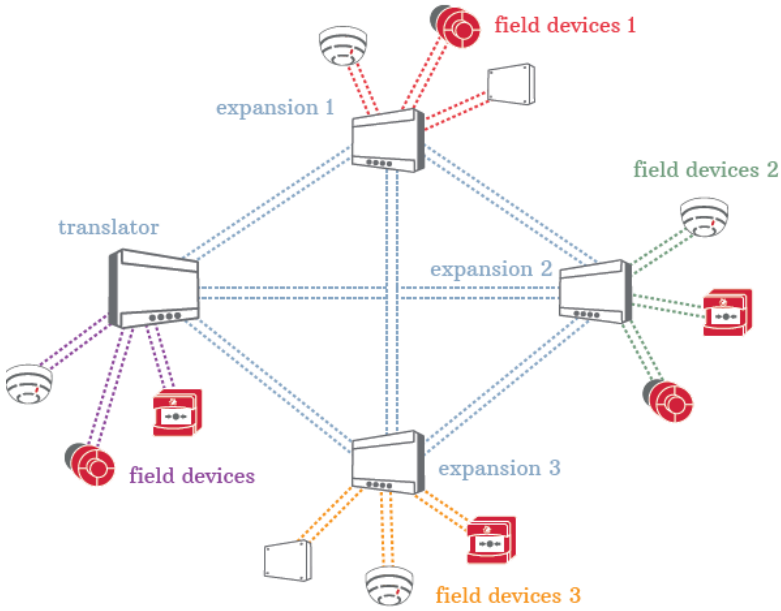
MAIN FEATURES



- Maximum 128 devices of any type for a single FireVibes system
- 60 communication channels (between translators and with field devices)
- Scalable architecture
- Redundant communication between expansions
- Search for alternative transmission routes
- Up to 15 expansion boards for each translator
- Up to 32 devices for each translator or expansion
- Up to 8 between expansion
- Infrastructure coverage (between translator and expansions) up to 1000m in open air
- Field coverage (with devices) up to 200m in open air
- Redundancy with dual transmission channel
- Synchronized transmission
- CR123A lithium batteries
- Battery life guaranteed for up to 10 years for input devices
- Battery life guaranteed for up to 5 years for output devices

- Activation of devices within 10 seconds

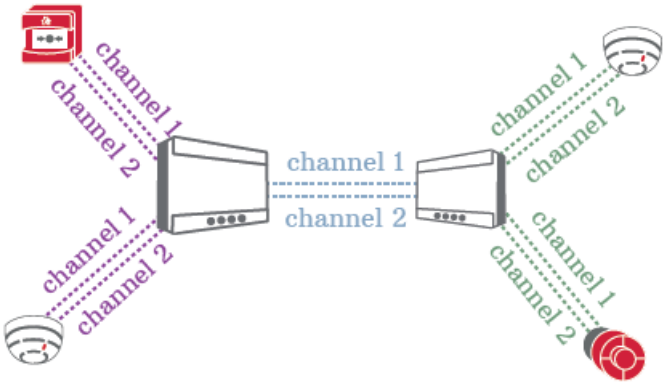
Communication channels



60 communication channels available. These are divided into infrastructure channels, used for communication between translator and expansions (8 pairs), and field channels for communication with field devices (22 pairs). These channels ensure data transmission and do not interfere with external wireless transmissions. This structure permits the scalable architecture of the installation which is thus easily expandable.

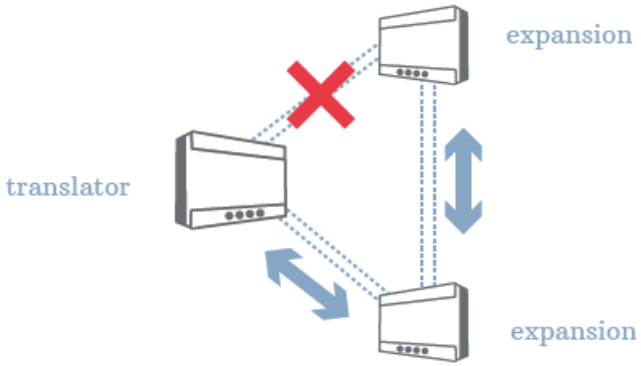
Double transmission channel

The FireVibes system has a redundancy due to a double transmission channel. The dual channel is guaranteed for each translator, expansion or field device. If a channel blocks, it is promptly replaced by another, guaranteeing the completeness of the transmission.



Transmission route search

The communication between the expansions consists of automatically defined and tested routes starting from the first commissioning. This communication is based on a redundant “mesh” network. If transmission with an expander fails, the system maintains continuity by using an alternate route



Optimized infrastructure transmission
The technology of finding the best communication route between the expansions allows to cover transmission inside large buildings. The adopted transmission routes can pass from one expansion to another up to a maximum of 8 steps. The supplied antennas are guaranteed to perform in different frequencies and environments.

Optimized consumption
FireVibes uses a synchronized communication protocol for both infrastructure and field devices. This allows fast direct fast responses from input devices (detectors, alarm buttons (call points), input modules) and output devices (soumders, flashers) with reduced consumption.

Translators and expansion boards

EWT100 – Translator from Inim loop to wireless devices

Translator from loop (Inim protocol) to devices via FireVibes wireless. The translator is recognized on the loop as an Inim-addressed device and, in addition to its own address, occupies an address for each wireless device associated with it. The translator can manage directly up to a maximum of 32 wireless devices or, by adding XWT100 expansion modules, up to a maximum of 128 wireless devices. The translator is powered by the loop or by a local power source by connecting a 24V power supply to the local power terminals.

EN 54-17
EN 54-18
EN 54-25

- Certified EN54-17, EN54-18 and EN54-25

- Powered by loop or local power source (optional)
- Built-in loop short-circuit isolator
- Two-way wireless communication
- Manages up to 15 XWT100 expansions
- Mesh network with redundant route to expansion modules
- Internal antenna
- Wireless communication range up to 1km for translators and expansion modules, up to 200m between translator/expansion modules and wireless devices
- Wireless links based on dual channel
- Wireless devices completely managed individually via control panel
- Configuration of wireless devices from keypad and local display screen or via FireVibes Studio software
- Power supply voltage 18 Vdc – 30 Vdc
- Frequency 868 – 870 MHz
- Maximum radiated power 14dBm (25mW)
- IP protection grade Certified IP30 – Designed for compliance with IP65
- Operating temperature from -10°C to +55°C
- Maximum humidity (without condensation) 90% RH
- Current consumption 20mA (@ 24V dc)
- Weight 700 g
- Dimensions 235 mm x 160 mm x 70 mm
- Available colours white, black

XWT100 – Wireless expansion

The XWT100 expansion module allows you to increase the range and extension of the wireless system of the Inim EWT100 loop translator. Each expansion can support a maximum of 32 wireless devices, each FireVibes system manages up to 15 XWT100 expansions. Expansions automatically manage redundant routes, so that if one expansion in the chain should fail, communication can still find an alternate route. Redundant routes are identified and tested during system commissioning for maximum reliability. All expansions are monitored to ensure that the highest levels of safety are maintained. The module is powered by a voltage of 24V.

- Certified EN54-18 and EN54-25
- 24V local power supply
- Two-way wireless communication
- The system is capable of managing up to 15 XWT100 expansions
- Mesh network with redundant route between expansion modules and translator
- Internal antenna
- Wireless communication range up to 1Km for translators and expansion modules, up to 200m between

translator/expansion modules and wireless devices

- Wireless links based on dual channel
- Wireless devices completely managed individually via control panel
- Configuration of wireless devices from keypad and local display screen or via FireVibes Studio software
- Power supply voltage 9 Vdc – 30 Vdc
- Frequency 868 – 870 MHz
- Maximum radiated power 14dBm (25mW)
- IP protection grade Certified IP30 – Designed for compliance with IP65
- Operating temperature from -10°C to +55°C
- Maximum humidity (without condensation) 90% RH
- Current consumption 40mA (@ 12V dc)
- Weight 700 g
- Dimensions 235 mm x 160 mm x 70 mm
- Available colours white, black

Input/output modules

WM110 – Wireless input module

The WM110 wireless input module is equipped with a supervised input and is compatible with the EWT100 addressed translator and with the XWT100 expansion module.

- Certified EN54-25 and EN54-18
- Two-way wireless communication
- Can be used with the EWT100 addressed translator or the XWT100 expansion module
- One supervised input
- Wireless communication based on two redundant channels
- Wireless communication range extendable up to 200m
- Operating frequency 868 – 870 MHz
- Maximum radiated power 14dBm (25mW)
- Relay output Max. 2A @ 30V dc
- Maximum current on supervised outputs 100mA @ 12V dc / 50mA @ 24V dc
- Batteries 2x CR123A
- Battery life 10 years
- Dimensions 88 mm x 87 mm x 61 mm
- Weight (without batteries) 233 g
- Operating temperature from -10°C to +55°C

- Maximum humidity (without condensation) 95% RH
- IP protection grade Certified IP30 – Designed for compliance with IP65

WM202SR – Wireless output module

The WM202SR wireless output module is equipped with a relay output (dry contact) and a supervised output capable of supplying a voltage of 12 or 24Vdc thanks to the presence of the internal battery. The outputs can be activated from the control panel and the module is completely managed from the control panel.

- Certified EN54-25 and EN54-18
- Two-way wireless communication
- Can be used with the EWT100 addressed translator or the XWT100 expansion module
- One relay output
- Two supervised outputs capable of supplying 12 or 24Vdc
- Wireless communication based on two redundant channels
- Wireless communication range extendable up to 200m
- Operating frequency 868 – 870 MHz
- Maximum radiated power 14dBm (25mW)
- Relay output Max. 2A @ 30V dc
- Maximum current on supervised outputs 100mA @ 12V dc / 50mA @ 24V dc
- Batteries 2x CR123A
- Battery life 5 years (depending on the activation frequency)
- Dimensions 88 mm x 87 mm x 61 mm
- Weight (without batteries) 233 g
- Operating temperature from -10°C to +55°C
- Maximum humidity (without condensation) 95% RH
- IP protection grade Certified IP30 – Designed for compliance with IP65

Smoke detectors

WD100 – Wireless smoke detector

The WD100 wireless smoke detector, based on a double infrared detection optics (double reflection angle), guarantees rapid smoke detection and high rejection of false alarms. The detector is completely managed by the control panel (if combined with addressed control panels) and the single details relating to the status of the device are shown on the same

- Certified EN54-25 and EN54-7
- Detection based on double detection (double reflection angle)

- Compensation for contamination of the smoke sampling chamber
- Two-way wireless communication
- Can be used with the EWT100 addressed translator or the XWT100 expansion module
- Wireless communication based on two redundant channels
- Wireless communication range up to 200m

WD200 – Wireless temperature detector

The WD200 wireless heat detector is able to signal the presence of a fire hazard based on the temperature detected in the environment. The detector is completely managed by the control panel (if combined with addressed control panels) and the single details relating to the status of the device are shown on the same. It can be set from the control panel as rate-of-rise (A1R) or fixed high temperature (BS).

- Certified EN54-25 and EN54-5
- Temperature detection configurable as rate-of-rise (A1R) or fixed high temperature (BS)
- Two-way wireless communication
- Can be used with the EWT100 addressed translator or the XWT100 expansion module
- Wireless communication based on two redundant channels
- Wireless communication range extendable up to 200m

WD300 – Wireless smoke and temperature detector

The WD300 detector combines the features of the WD100 wireless smoke detector and the WD200 temperature detector in a single device. The detector is completely managed by the control panel (if combined with addressed control panels) and the individual details relating to its status are shown on the same.

- Certified EN54-25 and EN54-5
- Smoke detection based on double detection (double reflection angle)
- Compensation for contamination of the smoke sampling chamber
- Temperature detection configurable as rate-of-rise (A1R) or fixed high temperature (BS)
- Two-way wireless communication
- Can be used with the EWT100 addressed translator or the XWT100 expansion module
- Wireless communication based on two redundant channels

- Wireless communication range extendable up to 200m
- Operating frequency 868 – 870 MHz
- Maximum radiated power 14dBm (25mW)
- Batteries 2 x CR123A
- Battery life 10 years
- Dimensions 110 mm x 70 mm
- Weight (without batteries) 155 g
- Operating temperature from -10°C to +55°C
- Maximum humidity (without condensation) 95% RH
- IP protection grade 40
- Available colours white, black

Sounder bases

WSB1010 – Sounder base for wireless detectors

The sounder base for wireless detectors (detector models WD100, WD200, WD300) has its own address in order to be managed independently from the detector to which it is combined. It manages 32 different tones selectable via DIP switch and can be activated with two different tones (prealarm and alarm activation). The sounder base is compatible with the EWT100 addressable translator or the XWT100 expansion module. The signaller can be used as a standalone ceiling-mount signaller (without detector) using the optional white or red cap.

- Certified EN54-25 and EN54-3
- 32 different tones settable via DIP switch
- Level adjustable via DIP switch (4 levels)
- Two-way wireless communication
- Can be used with the EWT100 addressed translator or the XWT100 expansion module
- Wireless communication based on two redundant channels
- Wireless communication range extendable up to 200m
- Use combined with a detector or as a ceiling-mount sounder with the optional cap.

WSB1020 – WSB1021 – Sounderbeacon base for wireless detectors

The sounder/flasher base for wireless detectors (detector models WD100, WD200, WD300) has its own address in order to be managed independently from the detector to which it is combined. It manages 32 different tones selectable via DIP switch and can be activated with two different tones (prealarm and alarm activation). The sounder base is compatible with the EWT100 addressable translator or the XWT100 expansion module. The signaller can be used as a standalone ceiling-mount signaller (without detector) using the optional white or red cap.

- Certified EN54-25, EN54-23 and EN54-3
- 32 different tones settable via DIP switch
- Level adjustable via DIP switch (4 levels)
- Adjustable flash power
- Two-way wireless communication
- Can be used with the EWT100 addressed translator or the XWT100 expansion module
- Wireless communication based on two redundant channels
- Wireless communication range extendable up to 200m
- Use combined with a detector or as a ceiling-mount sounder with the optional cap.

	WSB1010	WSB1020 WSB1021
Operating frequency		868 – 870 MHz
Maximum radiated power		14dBm (25mW)
Sound output		from 88 to 91 dB (depending on the set tone)
Visual range (EN54-23)	/	with high-powered flasher: C-3-15/ O-4.6-15 with low-powered flasher: C-3-10
Batteries		2x CR123A
Battery life		5 years (depending on the activation frequency)
Dimensions		Diameter: 129 mm; Height: 54 mm
Weight (without batteries)		221 g
Batteries		2x CR123A
Operating temperature		from -10°C to +55°C
Maximum humidity		(without condensation) 95% RH
IP protection grade		21C
Available colours		white, black
LED colours	/	White red
Available cap colours		white, red

Audible and visual/audible signalling devices

WS2010RE – WS2020RE – WS2010WE – WS2020WE – Wireless wall mount audible and visual/audible signalling devices

The WS20x0 series wall-mounted wireless alarm signallers are compatible with the EWT100 addressable translator or the XWT100 expansion module. In the various versions they have an audible signaller with 32 selectable tones and a white light flasher. The devices are available in a red or white plastic enclosure.

	WS2010RE	WS2010WE	WS2020RE	WS2020WE
Operating frequency		868 – 870 MHz		
Maximum radiated power		14dBm (25mW)		
Sound output		100dB (+/- 3 dB depending on the set tone)		
Visual range (EN54-23)	/		W-2.5-7	
Batteries		2x CR123A		
Battery life	5 years (depending on the activation frequency)			
Dimensions		Diameter: 129 mm; Height: 54 mm		
Weight (without batteries)		221 g		
Operating temperature		from -10°C to +55°C		
Maximum humidity		(without condensation) 95% RH		
IP protection grade		21C		
Available sounder colours	red	White	red	White
LED colours	/		White	

Remote indicators

WIL0010 – Wireless remote indicator

The WIL0010 wireless remote warning light provides signalling of the activation of any of the detectors installed in non-accessible environments (false ceilings, floating floors) or signalling of the activation of an outdoor alarm.

- Two-way wireless communication
- Can be used with the EWT100 addressed translator or the XWT100 expansion module
- Wireless communication based on two redundant channels
- Wireless communication range extendable up to 200m
- Operating frequency 868 – 870 MHz
- Maximum radiated power 14dBm (25mW)
- Batteries 2x CR123A
- Battery life 5 years (depending on the activation frequency)
- Dimensions 80 mm x 80 mm x 32 mm
- Weight (without batteries) 66 g

- Operating temperature from -10°C to +55°C
- Maximum humidity (without condensation) 95% RH
- IP protection grade Certified IP33C – Designed for compliance with IP65

Manual call points

WC0010 – Wireless call point

The WC0010 wireless alarm button (call point), compatible with the EWT100 addressable translator and the XWT100 expansion module, allows manual signalling of a fire hazard by activating the system signallers. Resettable after activation using the supplied plastic key. It does not require the replacement of any of its parts.

- Certified EN54-25 and EN54-11
- Two-way wireless communication
- Can be used with the EWT100 addressed translator or the XWT100 expansion module
- Wireless communication based on two redundant channels
- Wireless communication range extendable up to 200m
- Operating frequency 868 – 870 MHz
- Maximum radiated power 14dBm (25mW)
- Batteries 2x CR123A
- Battery life 10 years
- Dimensions 88 mm x 87 mm x 61 mm
- Weight (without batteries) 160 g
- Operating temperature from -10°C to +55°C
- Maximum humidity (without condensation) 95% RH

ORDER CODES

- WM110 Wireless input module
- WM202SR Wireless output module
- EWT100 Translator of Inim wireless loop protocol
- EWT100B Inim wireless loop protocol translator, in black enclosure
- XWT100 Expansion for EWT100 translators
- XWT100B Expansion for EWT100 translators, in black enclosure
- WM110 Wireless input module
- WM202SR Wireless output module
- WD100 Wireless smoke detector, in white
- WD100B Wireless smoke detector, in black

- WD200 Wireless temperature detector, in white
- WD200B Wireless temperature detector, in black
- WD300 Wireless smoke and temperature detector, in white
- WD300B Wireless smoke and temperature detector, in black
- WSB1010 Sounder base for wireless detectors, in white
- WSB1010B Sounder base for wireless detectors, in black
- WSB1020 Sounderbeacon base for wireless detectors, white LED light, in white
- WSB1020B Sounderbeacon base for wireless detectors, white LED light, in black
- WSB1021 Sounderbeacon base for wireless detectors, red LED light
- LID100-SG/W White cap for sounder base installation without detector
- LID100-SG/R Red cap for sounder base installation without detector
- WS2010RE Wireless wall-mount audible signalling device, in red
- WS2020RE Wireless wall-mount visual/audible signalling device, in red
- WS2010WE Wireless wall-mount audible signalling device, in white plastic
- WS2020WE Wireless wall-mount visual/audible signalling device, in white plastic
- WIL0010 Wireless remote indicator
- WC0010 Wireless callpoint

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Documents / Resources

	FireVibes EWT100 Fire Detection and Alarm Wireless System [pdf] Instruction Manual EWT100, EWT100 Fire Detection and Alarm Wireless System, Fire Detection and Alarm Wirel ess System, Alarm Wireless System, Wireless System

References

- Inim - Sistemi di sicurezza, domotica e antincendio