



FLEXIBLE
+
RELIABLE
+
PRACTICAL

Introducing REACH Wireless
Apollo's latest hybrid-wireless fire alarm system





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- IBC** We're here to help

REACH Wireless is brought to you by Apollo Fire Detectors, the UK's leading manufacturer of fire detection and alarm devices. With a global reputation for innovation, quality and reliability, Apollo products keep people safe from fire in over 100 countries around the world.

“ REACH Wireless is the latest in our range of hybrid-wireless fire detection. Created to make installation and commissioning quicker and easier, we have introduced a full suite of products including red and white flash VADs.

REACH Wireless has been designed to make extending an Apollo wired loop effortless. With an easy-to-use survey kit, REACH Wireless is **FLEXIBLE + RELIABLE + PRACTICAL.** ”

Craig Mole
Product Manager, Apollo Fire Detectors



apollo-fire.co.uk

REACH

WIRELESS

Apollo's hybrid-wireless fire alarm systems deliver flexible solutions for listed buildings, temporary structures and high-rise residential apartments, extending detection without compromising the level of protection from fire. Keeping people safe from fire, every second of every day.

REACH Wireless is Apollo's latest hybrid range. It saves you time and solves installation problems, making it ideal for time-sensitive installations where lengthy downtime or disruption is not an option.

This guide has been designed to offer you a comprehensive understanding around the specification of our REACH hybrid-wireless range. If you would like additional support, our Business Development team are available to meet you. Please contact: enquiries@apollo-fire.com



WELCOME TO APOLLO

SPECIALISTS IN THE MANUFACTURE OF FIRE DETECTORS AND ALARM DEVICES, SINCE 1980

Our purpose is simple; to keep people safe from fire every second of every day.

We specialise in the design and manufacture of high-quality fire detection solutions that protect people from fire in over 100 countries around the world.

Based in Havant, Hampshire, on the UK's south coast, we operate through regional offices in the UK, Germany and China and support a global network of partners and distributors.

We are proud to be a part of Halma, a global FTSE 50 group of life-saving technology companies.

We were awarded The Royal Warrant in 2009 in recognition of our high level of personal service to the Household of HM The Queen. We continually strive to deliver an exceptional customer experience and offer a full support service that includes training, troubleshooting and technical advice whenever and wherever needed.



Rob Barcik
Managing Director EMEA








PRODUCT APPROVALS & LIFETIME GUARANTEE

Apollo products meet **global type approval standards** including EN 54, UL, CCC as well as **specific approvals for specialist or extreme applications** such as Marine or explosive environments. **Type approval** is granted to

products that meet the given set of regulatory, technical and safety requirements for its specific market or territory. The compliance to these standards can be denoted by a third-party marking on the product including LPCB, VdS and BOSEC.

Global standards

UK	Europe	Australasia	Middle East	USA/Canada
EN 54	AS 7240	EN 54 ISO 7240 UL	UL/ULC	
CPR (Construction Products Regulation)	Australian Requirements	UAE Fire Code	NFPA State Regulations	
				

Product Life-cycle Guarantee

Our Product Life-cycle Guarantee supports the recommended working life of Apollo detectors and further endorses our commitment to customers in providing them with reliable, quality products. The warranty covers ten years for detectors, alarm devices, interfaces and call points and five years for detectors containing CO cells, batteries or that are

wireless. IP67 Manual Call Points, Beam and Flame detectors and test equipment have a three-year warranty period.

Apollo acknowledges the importance of life safety and system integrity and recommends the routine replacement of detectors after 10 years.

How to buy our products

Our partners are fundamental to our business and are key to helping us deliver our company purpose of keeping people safe from fire, every second of every day. To purchase our products, visit our website to find your ideal partner: <https://www.apollo-fire.co.uk/partners/>

APPLICATIONS FOR REACH WIRELESS

REACH Wireless is Apollo's latest hybrid range. It saves you time and solves installation problems. It is ideal for **time sensitive installations** where lengthy downtime or disruption is not an option.



Extensions

REACH Wireless allows an existing fire system to be extended by **bridging wireless devices** to the wired loop, using the REACH Loop Interface. A new fire loop is not required, reducing **cost and effort** – especially if the existing panel doesn't have any more available loops, as long as there is spare capacity on the loop.

Outbuildings

Similar to extensions, REACH Wireless can **extend the existing loop seamlessly** to outbuildings, without having to dig a trench and lay trunking. This eliminates the need for a second, independent panel and loop for your outbuilding or additional structure.

Heritage

Heritage or listed buildings typically have **additional restrictions** on disrupting the fabric of the building by breaking walls or adding trunking. In this case, it is **easier to install surface-mounted wireless products** to meet fire system requirements.

Temporary buildings

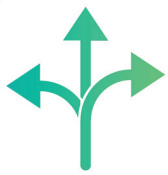
Temporary or retail structures can have restrictions on allowable modifications, or may need to be **installed in a short timeframe**. REACH Wireless can be surveyed ahead of time off-site and installation is quick, **minimising time onsite or downtime for the building**.

Black detectors

Black detectors provide a premium aesthetic for high end interiors. Specifiable feature in projects with exposed or black ceilings in industrial themed commercial facilities, such as cinemas, nightclubs, hotels, industrial high-end interiors, airports and restaurants.

WHY CHOOSE REACH WIRELESS?

REACH Wireless delivers optimised radio coverage while minimising battery use, which gives greater flexibility and enhanced performance compared to a wired system.



Flexible

system for 'hard to wire' applications



Extend
an Apollo wired
system seamlessly



Reliable

design that meets
EN54:25



Regular
monitoring by the
panel for signal
integrity



Practical

installation that saves
time and effort



Training
online and
in-person to reinforce
best practice



Complete

system with Dual
Optical Detectors
and VADs

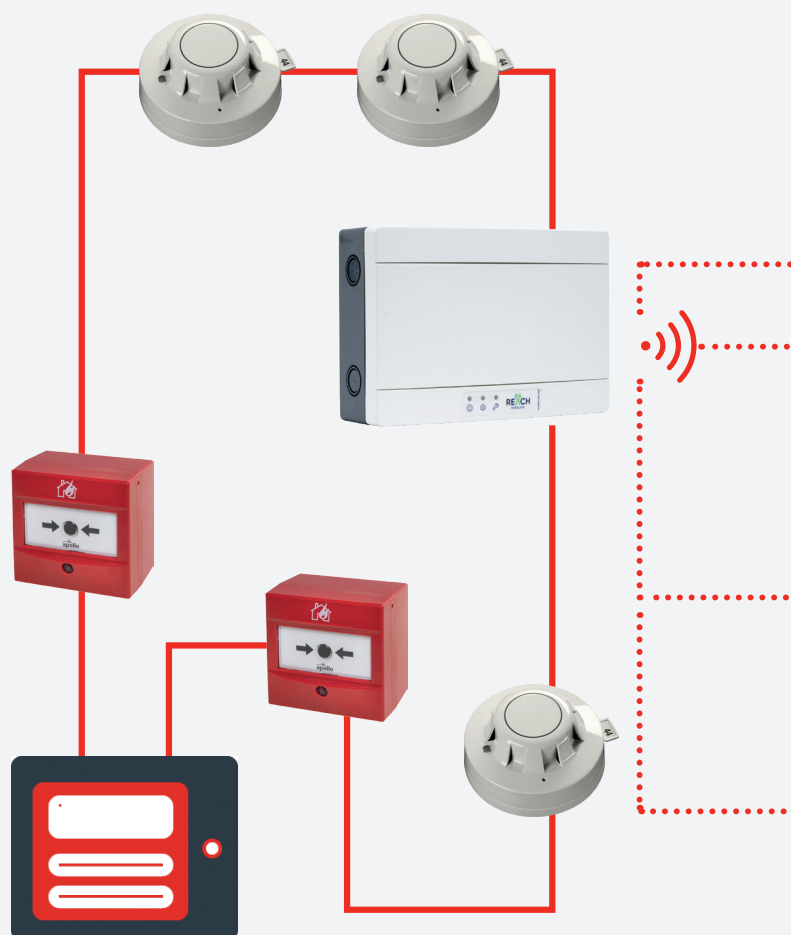


Survey Kit
for easy onsite
surveying and
commissioning

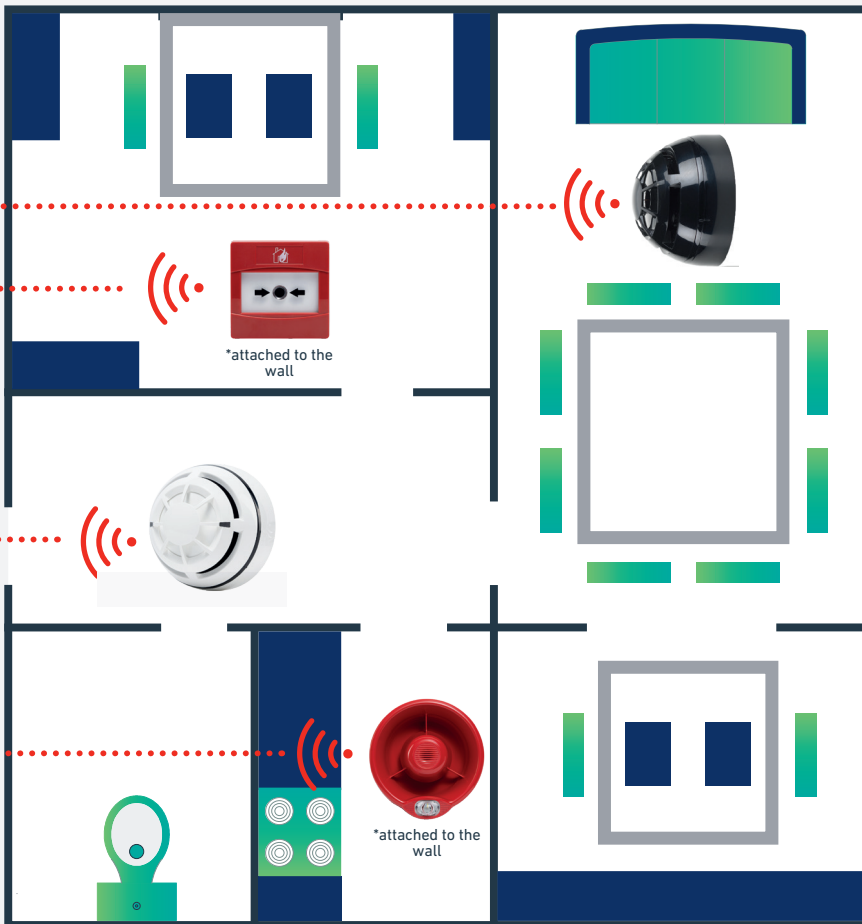
SYSTEM ARCHITECTURE

Product features:

- Up-to 32 wireless devices per loop-interface
- 100m radio range (clear line of sight)
- 44 RF channels in redundancy pairs, enabling reliable wireless connection
- Multi-angle antennas to maximise signal coverage
- Up-to 10 interfaces per loop, powered by the loop
- Built-in short-circuit isolator
- Compatible with all Apollo wired addressable systems



MAIN BUILDING



EXTENSION

Products shown in diagram:

Wired

SA5900-908APO

Intelligent Manual Call Point

55000-600APO

XP95 Optical Smoke Detector

RW1700-030APO

REACH XP95 Loop-Interface Module

Wireless

RW1000-600APO

REACH Optical Smoke Detector

RW1000-760APO

REACH Multi-Sensor Detector (Optical/Heat) – Black Body

RW1500-220APO

REACH Open-Area Sounder VAD Cat. W - Red Body (White-Flash) (W-2.5-7)

RW1900-901APO

REACH Manual Call Point

Please visit apollo-fire.co.uk for the full range of REACH Wireless products.

A COMPREHENSIVE SYSTEM

REACH Wireless offers a wide-range of EN54 product solutions to help overcome installation barriers. To view the latest product options and information visit: apollo-fire.co.uk

DETECTORS

PART NUMBER	ITEM NAME
RW1000-400APO	REACH Heat Detector – White Body
RW1000-460APO	REACH Heat Detector – Black Body
RW1000-600APO	REACH Optical Smoke Detector – White Body
RW1000-660APO	REACH Optical Smoke Detector – Black Body
RW1000-700APO	REACH Multisensor Detector (Optical/Heat) – White Body
RW1000-760APO	REACH Multisensor Detector (Optical/Heat) – Black Body

INTERFACES

PART NUMBER	ITEM NAME
RW1700-030APO	REACH XP95 Loop-Interface Module
RW1700-052APO	REACH Input Module Heat
RW1500-800APO	REACH Output Module
RW1700-051APO	REACH Remote Indicator Module
RW1900-901APO	REACH Manual Call Point

ACCESSORIES

PART NUMBER	ITEM NAME
RW1800-060APO	REACH Survey Kit Lite
RW1300-010APO	REACH AV Base Cap – White
RW1300-020APO	REACH AV Base Cap – Red

AUDIO VISUAL (AV)

PART NUMBER	ITEM NAME
RW1300-110APO	REACH Sounder Base – White Body
RW1300-160APO	REACH Sounder Base – Black Body
RW1300-210APO	REACH Sounder VAD Base – White Body (White-Flash) (C-3-15)
RW1300-260APO	REACH Sounder VAD Base – Black Body (White-Flash) (C-3-15)
RW1300-211APO	REACH Sounder VAD Base – White Body (Red-Flash) (C-3-10)
RW1500-110APO	REACH Open-Area Sounder – White Body
RW1500-120APO	REACH Open-Area Sounder – Red Body
RW1500-210APO	REACH Open-Area Sounder VAD Cat.W – White Body (White Flash) (W-2.5-7)
RW1500-220APO	REACH Open-Area Sounder VAD Cat.W – Red Body (White Flash) (W-2.5-7)

REACH

WIRELESS



FLEXIBLE + RELIABLE + PRACTICAL



REACH Wireless for
heritage buildings

TECHNICAL SPECIFICATION

REACH WIRELESS

Heat Detector



PRODUCT OVERVIEW

Part number	RW1000-400APO (White Body) RW1000-460APO (Black Body)
Digital communication	Apollo protocol compatibility is handled via the Loop-Interface device, RW1700-030APO. See product for more detail.

PRODUCT INFORMATION

The RW1000-400APO/RW100-460APO is a wireless analogue addressable heat detector that can be configured as either rate-of-rise (A1R) or high temperature (BS) classification as specified in the EN 54-5. Multiple EN 54-5 classes (either A1R and BS) can be configured via the Loop-Interface during setup.

- Twin alarm, bi-colour LEDs for 360° visibility
- Programmable for rate-of-rise (A1R) or static temperature (BS)
- Bi-directional wireless communication
- Dual channel redundancy
- Ten-year battery life
- Five-year product warranty

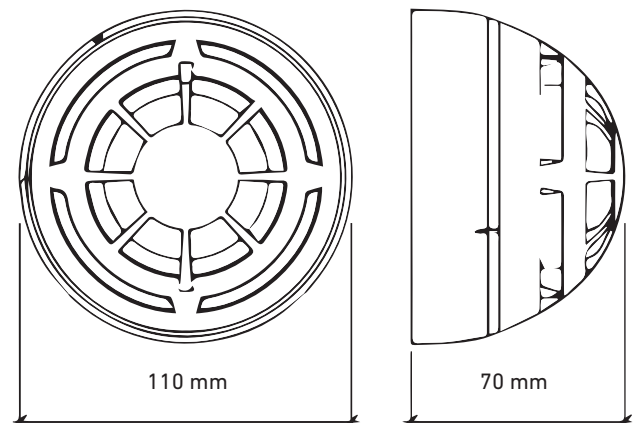
APPROVALS



TECHNICAL DATA

All data is supplied subject to change without notice. Specifications are typical at 24 V, 25°C and 50% RH unless otherwise stated.

Detection principle	Single NTC Thermistor.
Communication range between loop-interface and devices	100 m (in open space)
Field device radio frequency channel pairs	22 pairs
Status LED	Green and red
Radiated power	14 dBm (25 mW)
Battery type	2x VARTA CR123A Lithium 3V, 1250mAh typical
Battery lifespan	10 years in normal operation with good signal strength (no dropped messages)
Operating temperature	-10°C to +55°C
Maximum relative humidity (non-condensing)	95%
IP Rating	40
Standards and approvals	EN54-5 Class P, EN54-25
Dimensions	110 mm diameter x 70 mm height
Weight (including base and batteries)	190 g



REACH WIRELESS

Heat Detector



OPERATING PRINCIPLES

The REACH Wireless Heat Detector is flexible – offering either static (BS) or rate-of-rise (A1R) functionality.

STATUS LED

It also includes a 360° LED indicator which illuminates red or green to indicate status conditions.

DEVICE ADDRESSING

Device addressing is handled by the REACH Wireless Loop-Interface device (RW1700-030APO).

Devices are soft-addressed automatically when pairing with the Loop Interface and can be changed manually. Hard-addressing using Apollo XPERT cards are not supported.

TABLE 1: REACH Wireless device indication

Device status	LED indication
Power up	Blinks green four times
Power up (dip switch ON)	Blinks red four times
Entering wake-up	Blinks alternatively green/red four times
Link success	Blinks green four times then repeats
Link failure	Enters wake-up mode and signals 'Entering wake-up mode' following this failure
Normal condition	LED off
Alarm	Red 1s, period 2s
Battery faults	LED off
Tamper fault	LED off
Replaced	Blinks amber twice

COMMUNICATION

REACH Wireless Devices use 'radio-frequency' wireless communication to connect to the Loop-Interface.

The Loop-Interface (RW1700-030APO / RW1700-031APO) translates the wireless communication into wired Apollo protocol communication, with each device addressable individually by the fire panel. See the technical specification for the Loop-Interface for more information.

MAINTENANCE AND SERVICE

Maintenance must be performed in accordance with all applicable standards. Clean the detector externally using a soft damp cloth. For full cleaning and recalibration detectors should be returned to Apollo Fire Detectors.

TAMPER DETECTION

REACH Wireless devices contain an anti-tamper mechanism. In the event of removal from its base, it sends a tamper detection message to the Loop-Interface. Tampering detection is not signalled visually by the device.

BASE COMPATIBILITY

The device is supplied with a standard wireless base and is compatible with the following sounder bases:

TABLE 2: REACH Wireless base compatibility

Part number	Product name
RW1300-110APO	REACH Wireless Sounder Base
RW1300-210APO	REACH Wireless Sounder VAD Base (White Flash) (C-3-15)
RW1300-211APO	REACH Wireless Sounder VAD Base (Red Flash) (C-3-10)
RW1300-160APO	REACH Wireless Sounder Base – Black Body
RW1300-260APO	REACH Wireless Sounder VAD Base – Black Body (White Flash) (C-3-15)

BATTERIES

REACH Wireless devices are supplied with two CR123 batteries, battery A and B. The device switches periodically between the two batteries on a controlled sequence. For correct operation of the device, both batteries are required with adequate capacity reserves.

When battery A reaches a low power threshold, it will trigger a fault. This fault requires both batteries to be replaced in every instance as both batteries should be discharging equally.

When one (or both) batteries lack power, the Loop-Interface receives a low battery message and will signal this event on its in-built display, as well as relay the low battery message to the fire control panel. The battery fault will also be signalled by the device itself through its LED indicators if programmed (see table 1).

EMC DIRECTIVE 2014/30/EU

REACH Wireless Heat Detector complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described in this specification.

A copy of the Declaration of Conformity is available from Apollo on request.

Conformity of the REACH Wireless Heat Detector with the EMC Directive does not confer compliance with the directive on any apparatus or systems connected to it.

CONSTRUCTION PRODUCTS REGULATION (EU) 305/2011

The REACH Wireless Heat Detector complies with the essential requirements of the Construction Products Regulation (EU) 305/2011. A copy of the Declaration of Performance is available from Apollo on request.

TECHNICAL SPECIFICATION

REACH WIRELESS

Optical Smoke Detector



PRODUCT OVERVIEW

Part number	RW1000-600APO (White Body) RW1000-660APO (Black Body)
Digital communication	Apollo protocol compatibility is handled via the Loop-Interface device, RW1700-030APO. See product for more detail.

PRODUCT INFORMATION

The RW1000-600APO is a wireless addressable optical smoke detector that utilised dual-optical smoke detection technology for improved performance; maintaining the highest levels of false-alarm rejection.

- Twin alarm, bi-colour LEDs for 360° visibility
- Advanced dual-optical chamber design
- Advanced drift compensation
- Bi-directional wireless communication
- Dual channel redundancy
- Ten-year battery life
- Five-year product warranty

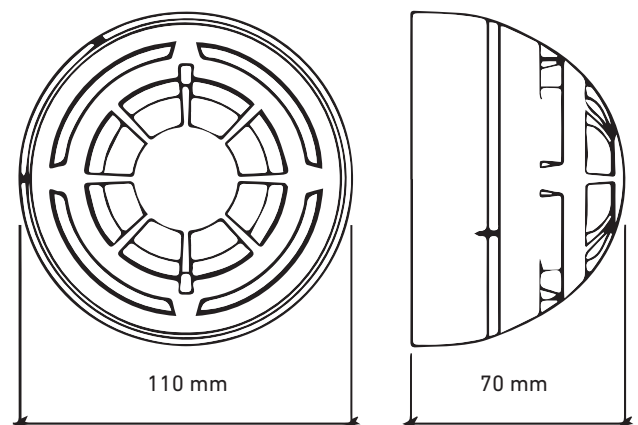
APPROVALS




TECHNICAL DATA

All data is supplied subject to change without notice. Specifications are typical at 24 V, 25°C and 50% RH unless otherwise stated.

Detection principle	Photo-electric detection of light scattered in a forward direction by smoke particles
Communication range between loop-interface and devices	100 m (in open space)
Field device radio frequency channel pairs	22 pairs
Status LED	Green and red
Radiated power	14 dBm (25 mW)
Battery type	2x VARTA CR123A Lithium 3V, 1250mAh typical
Battery lifespan	10 years in normal operation with good signal strength (no dropped messages)
Operating temperature	-10°C to +55°C
Maximum relative humidity (non-condensing)	95%
IP Rating	40
Standards and approvals	EN54-7, EN54-25
Dimensions	110 mm diameter x 70 mm height
Weight (including base and batteries)	190 g



REACH WIRELESS

Optical Smoke Detector



OPERATING PRINCIPLES

The REACH Wireless Optical Smoke Detector features an advanced dual-optical chamber design.

STATUS LED

It also includes a 360° LED indicator which illuminates red or green to indicate status conditions.

DEVICE ADDRESSING

Device addressing is handled by the REACH Wireless Loop-Interface device (RW1700-030APO).

Devices are soft-addressed automatically when pairing with the Loop Interface and can be changed manually. Hard-addressing using Apollo XPERT cards are not supported.

TABLE 1: REACH Wireless device status & LED indication

Device status	LED indication
Power up	Blinks green four times
Power up (dip switch ON)	Blinks red four times
Entering wake-up	Blinks alternatively green/red four times
Link success	Blinks green four times then repeats
Link failure	Enters wake-up mode and signals 'Entering wake-up mode' following this failure
Normal condition	LED off
Alarm	Red 1s, period 2s
Battery faults	LED off
Tamper fault	LED off
Replaced	Blinks amber twice

COMMUNICATION

REACH Wireless Devices use 'radio-frequency' wireless communication to connect to the Loop-Interface.

The Loop-Interface (RW1700-030APO) translates the wireless communication into wired Apollo protocol communication, with each device addressable individually by the fire panel. See the technical specifications for the Loop-Interface for more information.

MAINTENANCE AND SERVICE

Maintenance must be performed in accordance with all applicable standards. Clean the detector externally using a soft damp cloth. For full cleaning and recalibration detectors should be returned to Apollo Fire Detectors.

TAMPER DETECTION

REACH Wireless devices contain an anti-tamper mechanism. In the event of removal from its base, it sends a tamper detection message to the Loop-Interface. Tampering detection is not signalled visually by the device LED.

BASE COMPATIBILITY

This device is supplied with a standard wireless base and is compatible with the following AV bases::

TABLE 2: REACH Wireless base compatibility

Part number	Product name
RW1300-110APO	REACH Wireless Sounder Base
RW1300-210APO	REACH Wireless Sounder VAD Base (White Flash) (C-3-15)
RW1300-211APO	REACH Wireless Sounder VAD Base (Red Flash) (C-3-10)
RW1300-160APO	REACH Wireless Sounder Base – Black Body
RW1300-260APO	REACH Wireless Sounder VAD Base – Black Body (White Flash) (C-3-15)

BATTERIES

REACH Wireless devices are supplied with two CR123 batteries, battery A and B. The device switches periodically between the two batteries on a controlled sequence. For correct operation of the device, both batteries are required with adequate capacity reserves.

When battery A reaches a low power threshold, it will trigger a fault. This fault requires both batteries to be replaced in every instance as both batteries should be discharging equally.

When one (or both) batteries lack power, the Loop-Interface receives a low battery message and will signal this event on its in-built display, as well as relay the low battery message to the fire control panel. The battery fault will also be signalled by the device itself through its LED indicators if programmed (see table 1).

EMC DIRECTIVE 2014/30/EU

REACH Wireless Optical Smoke Detector complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described in this specification.

A copy of the Declaration of Conformity is available from Apollo on request.

Conformity of the REACH Wireless Optical Smoke Detector with the EMC Directive does not confer compliance with the directive on any apparatus or systems connected to it.

CONSTRUCTION PRODUCTS REGULATION (EU) 305/2011

The REACH Wireless Optical Smoke Detector complies with the essential requirements of the Construction Products Regulation (EU) 305/2011. A copy of the Declaration of Performance is available from Apollo on request.

TECHNICAL SPECIFICATION

REACH WIRELESS

Multisensor Detector



PRODUCT OVERVIEW

Part number	RW1000-700APO (White Body) RW1000-760APO (Black Body)
Digital communication	Apollo protocol compatibility is handled via the Loop-Interface device, RW1700-030APO. See product for more detail.

PRODUCT INFORMATION

The RW1000-700APO is a wireless addressable dual-optical and heat detection multisensor detector, offering both technologies for improved performance and high levels of false-alarm rejection.

- Twin alarm, bi-colour LEDs for 360° visibility
- Advanced dual-optical chamber design
- Advanced drift compensation
- Head detection – rate-of-rise (A1R)
- Bi-directional wireless communication
- Dual channel redundancy
- Ten-year battery life
- Five-year product warranty

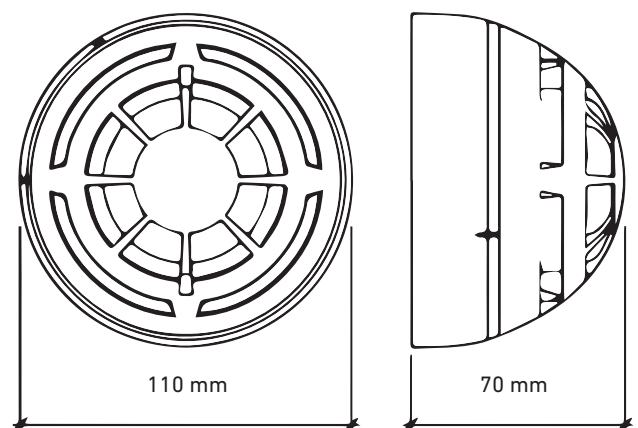
APPROVALS



TECHNICAL DATA

All data is supplied subject to change without notice. Specifications are typical at 24 V, 25°C and 50% RH unless otherwise stated.

Detection principle	Photo-electric detection of light scattered in a forward direction by smoke particles. Single NTC Thermistor.
Communication range between loop-interface and devices	100 m (in open space)
Field device radio frequency channel pairs	22 pairs
Status LED	Green and red
Radiated power	14 dBm (25 mW)
Battery type	2x VARTA CR123A Lithium 3V, 1250mAh typical
Battery lifespan	10 years in normal operation with good signal strength (no dropped messages)
Operating temperature	-10°C to +55°C
Maximum relative humidity (non-condensing)	95%
IP Rating	40
Standards and approvals	EN54-7, EN54-5 Class P, EN54-25
Dimensions	110 mm diameter x 70 mm height
Weight (including base and batteries)	190 g



REACH WIRELESS

Multisensor Detector



OPERATING PRINCIPLES

The REACH Multisensor Detector features a dual-chamber optical smoke sensor and rate-of-rise (A1R) heat detector. Alarm is triggered based on an algorithm that considers both sensor readings.

STATUS LED

It also includes a 360° LED indicator which illuminates red or green to indicate status conditions.

TABLE 1: REACH Wireless device status & LED indication

Device status	LED indication
Power up	Blinks green four times
Power up (dip switch ON)	Blinks red four times
Entering wake-up	Blinks alternatively green/red four times
Link success	Blinks green four times then repeats
Link failure	Enters wake-up mode and signals 'Entering wake-up mode' following this failure
Normal condition	LED off
Alarm	Red 1s, period 2s
Battery faults	LED off
Tamper fault	LED off
Replaced	Blinks amber twice

DEVICE ADDRESSING

Device addressing is handled by the REACH Wireless Loop-Interface device (RW1700-030APO).

Devices are soft-addressed automatically when pairing with the Loop Interface and can be changed manually. Hard-addressing using Apollo XPERT cards are not supported.

COMMUNICATION

REACH Wireless Devices use 'radio-frequency' wireless communication to connect to the Loop-Interface.

The Loop-Interface (RW1700-030APO) translates the wireless communication into wired Apollo protocol communication, with each device addressable individually by the fire panel. See the technical specification for the Loop-Interface for more information.

MAINTENANCE AND SERVICE

Maintenance must be performed in accordance with all applicable standards. Clean the detector externally using a soft damp cloth. For full cleaning and recalibration detectors should be returned to Apollo Fire Detectors.

TAMPER DETECTION

REACH Wireless devices contain an anti-tamper mechanism. In the event of removal from its base, it sends a tamper detection message to the Loop-Interface. Tampering detection is not signalled visually by the device LED.

BASE COMPATIBILITY

This device is supplied with a standard wireless base and is compatible with the following sounder bases:

TABLE 2: REACH Wireless base compatibility

Part number	Product name
RW1300-110APO	REACH Wireless Sounder Base
RW1300-210APO	REACH Wireless Sounder VAD Base (White Flash) (C-3-15)
RW1300-211APO	REACH Wireless Sounder VAD Base (Red Flash) (C-3-10)
RW1300-160APO	REACH Wireless Sounder Base – Black Body
RW1300-260APO	REACH Wireless Sounder VAD Base – Black Body (White Flash) (C-3-15)

BATTERIES

REACH Wireless devices are supplied with two CR123 batteries, battery A and B. The device switches periodically between the two batteries on a controlled sequence. For correct operation of the device, both batteries are required with adequate capacity reserves.

When battery A reaches a low power threshold, it will trigger a fault. This fault requires both batteries to be replaced in every instance as both batteries should be discharging equally.

When one (or both) batteries lack power, the Loop-Interface receives a low battery message and will signal this event on its in-built display, as well as relay the low battery message to the fire control panel. The battery fault will also be signalled by the device itself through its LED indicators if programmed (see table 1).

EMC DIRECTIVE 2014/30/EU

REACH Wireless Multisensor Detector complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described in this specification.

A copy of the Declaration of Conformity is available from Apollo on request.

Conformity of the REACH Wireless Multisensor Detector with the EMC Directive does not confer compliance with the directive on any apparatus or systems connected to it.

CONSTRUCTION PRODUCTS REGULATION (EU) 305/2011

The REACH Wireless Multisensor Detector complies with the essential requirements of the Construction Products Regulation (EU) 305/2011. A copy of the Declaration of Performance is available from Apollo on request.

TECHNICAL SPECIFICATION

REACH WIRELESS

Sounder Base



PRODUCT OVERVIEW

Part number	RW1300-110APO – White Body RW1300-160APO – Black Body
Digital communication	Apollo protocol compatibility is handled via the Loop-Interface device, RW1700-030APO. See product for more detail.

PRODUCT INFORMATION

The RW1300-110APO is a wireless analogue addressable sounder base that can be used as a stand-alone notification device (with a blanking cap, see next page) or as a combined solution with a REACH Wireless detector.

- Compatible only with REACH Wireless
- 16 number of tone settings (primary and secondary for alert and evacuation), selectable via on-board DIL Switches
- Four volume settings
- Head detection – rate-of-rise (A1R)
- Bi-directional wireless communication
- Dual channel redundancy
- Five-year battery life
- Five-year product warranty

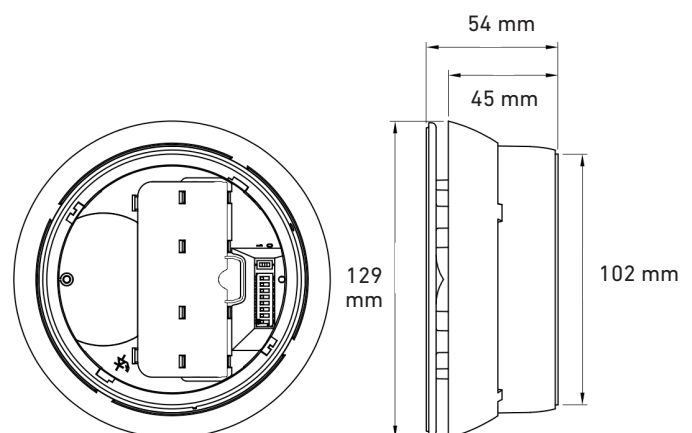
APPROVALS



TECHNICAL DATA

All data is supplied subject to change without notice. Specifications are typical at 24 V, 25°C and 50% RH unless otherwise stated.

Number of tone pairs	16 (see table 6)
Volume levels	Four (see table 3)
Sound output (typical)	88 - 91 dBA (tone dependant)
Communication range between loop-interface and devices	100 m (in open space)
Field device radio frequency channel pairs	22 pairs
Radiated power	14 dBm (25 mW)
Battery type	2x VARTA CR123A Lithium 3V, 1250mAh typical
Battery lifespan	5 years in normal operation with good signal strength (no dropped messages)
Operating temperature	-10°C to +55°C
Maximum relative humidity (non-condensing)	95%
IP rating	IP 21C (type A indoor use)
Standards and approvals	EN54-7, EN54-5 Class P, EN54-25
Dimensions	129 mm diameter x 54 mm height
Weight (including batteries)	190 g



REACH WIRELESS

Sounder Base



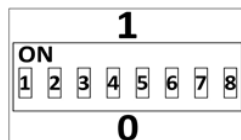
STATUS LED

The REACH Wireless Sounder Base includes a 360° LED indicator to indicate status conditions. See table 1.

TABLE 1: REACH Wireless device status & LED indication

Device status	LED indication	
Power up	Blinks green four times	
Power up (dip switch ON)	Blinks red four times	
Entering wake-up	Blinks alternatively green/red four times	
Link success	Blinks green four times then repeats	
Link failure	Enters wake-up mode and signals 'Entering wake-up mode' following this failure	
	Tamper not activated	Tamper activated
Normal condition	LED off	LED off
Activation	LED off	Red on
Battery faults	LED off	Amber blinking every 5s
Tamper fault	LED off	
Replaced	Blinks amber twice	

TONE & VOLUME SELECTION DIP SWITCH SETTINGS



DEVICE ADDRESSING

Device addressing is handled by the REACH Wireless Loop-Interface device (RW1700-030APO).

Devices are soft-addressed automatically when pairing with the Loop Interface and can be changed manually. Hard-addressing using Apollo XPERT cards are not supported.

TABLE 2: REACH Wireless DIP switch functionality

Dip switch number	Dip switch group function	Notes
1	Tone selection	Check tone table (table 6)
2		
3		
4		
5		
6	Volume selection	Check volume table (table 3)
7		
8	High/low power LED output	N/A

TABLE 3: REACH Wireless volume table

Volume	Dip configuration
High*	11
Medium high	01
Medium low	10
Low	00

*EN54-3 certified, for Tone Table (table 6), see appendix

COMMUNICATION

REACH Wireless Devices use 'radio-frequency' wireless communication to connect to the Loop-Interface.

The Loop-Interface (RW1700-030APO) translates the wireless communication into wired Apollo protocol communication, with each device addressable individually by the fire panel. See the technical specification for the Loop-Interface for more information.

BASE COMPATIBILITY

This device is compatible with the following detector products (see table 4). It can also be used standalone with a blanking cap (see table 5).

TABLE 4: REACH Wireless detector compatibility

Part number	Product name
RW1000-400APO RW1000-460APO	REACH Wireless Heat Detector – White/Black Body
RW1000-600APO RW1000-660APO	REACH Wireless Optical Smoke Detector – White/Black Body
RW1000-700APO RW1000-760APO	REACH Wireless Multisensor Optical/Heat Detector – White/Black Body

TABLE 5: REACH Wireless blanking cap compatibility

Part number	Product name
RW1300-010	REACH Wireless AV Base Cap – White
RW1300-020	REACH Wireless AV Base Cap – Red
RW1300-060	REACH Wireless AV Base Cap – Black

MAINTENANCE AND SERVICE

Maintenance must be performed in accordance with all applicable standards. Clean the detector externally using a soft damp cloth. For full cleaning and recalibration detectors should be returned to Apollo Fire Detectors.

BATTERIES

REACH Wireless devices are supplied with two CR123 batteries, battery A and B. The device switches periodically between the two batteries on a controlled sequence. For correct operation of the device, both batteries are required with adequate capacity reserves.

TECHNICAL SPECIFICATION

REACH WIRELESS

Sounder VAD Base



PRODUCT OVERVIEW

Part number	RW1300-210APO (White Flash) RW1300-211APO (Red Flash) RW1300-260APO (Black Body, White Flash)
Digital communication	Apollo protocol compatibility is handled via the Loop-Interface device, RW1700-030APO. See product for more detail.

PRODUCT INFORMATION

The RW1300-210APO and RW1300-211APO are wireless analogue addressable sounder VAD bases that can be used as a stand-alone notification device (with a blanking cap, see next page) or as a combined solution with a REACH Wireless detector.

- Compatible only with REACH Wireless
- 16 number of tone settings (primary and secondary for alert and evacuation), selectable via on-board DIL Switches
- Four volume settings
- Bi-directional wireless communication
- Dual channel redundancy
- Five-year battery life
- Five-year product warranty

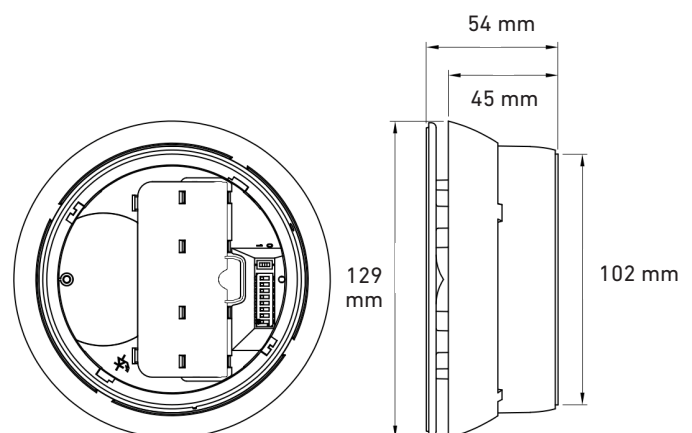
APPROVALS



TECHNICAL DATA

All data is supplied subject to change without notice. Specifications are typical at 24 V, 25°C and 50% RH unless otherwise stated.

Number of tone pairs	16 (see table 7)
Volume levels	Four volume settings
Sound output (typical)	88 - 91 dBA (tone dependant)
VAD coverage rating (EN54-25)	Configurable (see table 4)
Flash rate	0.5 Hz
Communication range between loop-interface and devices	100 m (in open space)
Field device radio frequency channel pairs	22 pairs
Radiated power	14 dBm (25 mW)
Battery type	2x VARTA CR123A Lithium 3V, 1250mAh typical
Battery lifespan	Five years in normal operation with good signal strength (no dropped messages)
Operating temperature	-10°C to +55°C
Maximum relative humidity (non-condensing)	95%
IP rating	IP 21C (type A indoor use)
Standards and approvals	EN54-3, EN54-23, EN54-25
Dimensions	129 mm diameter x 54 mm height
Weight (including batteries)	190 g



REACH WIRELESS

Sounder VAD Base



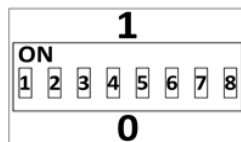
STATUS LED

The REACH Wireless Sounder VAD Base includes a 360° LED indicator to indicate status conditions. See table 1.

TABLE 1: REACH Wireless device status & LED indication

Device status	LED indication	
Power up	Blinks green four times	
Power up (dip switch ON)	Blinks red four times	
Entering wake-up	Blinks alternatively green/red four times	
Link success	Blinks green four times then repeats	
Link failure	Enters wake-up mode and signals 'Entering wake-up mode' following this failure	
	Tamper not activated	Tamper activated
Normal condition	LED off	LED off
Activation	LED off	Red on
Battery faults	LED off	Amber blinking every 5s
Tamper fault	LED off	
Replaced	Blinks amber twice	

TONE & VOLUME SELECTION DIP SWITCH SETTINGS



DEVICE ADDRESSING

Device addressing is handled by the REACH Wireless Loop-Interface device (RW1700-030APO).

Devices are soft-addressed automatically when pairing with the Loop Interface and can be changed manually. Hard-addressing using Apollo XPERT cards are not supported.

TABLE 2: REACH Wireless DIP switch functionality

Dip switch number	Dip switch group function	Notes
1	Tone selection	Check tone table (table 7)
2		
3		
4		
5		
6	Volume selection	Check volume table (table 3)
7		
8	High/low power LED output	N/A

TABLE 3: REACH Wireless volume table

Volume	Dip configuration
High*	11
Medium high	01
Medium low	10
Low	00

*EN54-3 certified, for Tone Table (table 7), see appendix

TABLE 4: REACH Wireless VAD output table

Power	Dip configuration	EN54-23 Class
High	1	White: C3-15
		Red: C3-10
Low	0	White: C3-10
		Red: 01.7-6.0

COMMUNICATION

REACH Wireless Devices use 'radio-frequency' wireless communication to connect to the Loop-Interface.

The Loop-Interface (RW1700-030APO) translates the wireless communication into wired Apollo protocol communication, with each device addressable individually by the fire panel. See the technical specification for the Loop-Interface for more information.

BASE COMPATIBILITY

This device is compatible with the following detector products (see table 5). It can also be used standalone with a blanking cap (see table 6).

TABLE 5: REACH Wireless detector compatibility

Part number	Product name
RW1000-400APO RW1000-460APO	REACH Wireless Heat Detector – White/Black Body
RW1000-600APO RW1000-660APO	REACH Wireless Optical Smoke Detector – White/Black Body
RW1000-700APO RW1000-760APO	REACH Wireless Multisensor Optical/Heat Detector – White/Black Body

TABLE 5: REACH Wireless blanking cap compatibility

Part number	Product name
RW1300-010	REACH Wireless AV Base Cap – White
RW1300-020	REACH Wireless AV Base Cap – Red
RW1300-060	REACH Wireless AV Base Cap – Black

MAINTENANCE AND SERVICE

Maintenance must be performed in accordance with all applicable standards. Clean the detector externally using a soft damp cloth. For full cleaning and recalibration detectors should be returned to Apollo Fire Detectors.

REACH WIRELESS

Sounder VAD Base



BATTERIES

REACH Wireless devices are supplied with two CR123 batteries, battery A and B. The device switches periodically between the two batteries on a controlled sequence. For correct operation of the device, both batteries are required with adequate capacity reserves.

When battery A reaches a low power threshold, it will trigger a fault. This fault requires both batteries to be replaced in every instance as both batteries should be discharging equally.

When one (or both) batteries lack power, the Loop-Interface receives a low battery message and will signal this event on its in-built display, as well as relay the low battery message to the fire control panel. The battery fault will also be signalled by the device itself through its LED indicators if programmed (see table 1).

TAMPER DETECTION

REACH Wireless devices contain an anti-tamper mechanism. In the event of removal from its base, it sends a tamper detection message to the Loop-Interface. Tampering detection is not signalled visually by the device LED.

EMC DIRECTIVE 2014/30/EU

REACH Wireless Sounder VAD Base complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described in this specification. A copy of the Declaration of Conformity is available from Apollo on request.

CONSTRUCTION PRODUCTS REGULATION (EU) 305/2011

The REACH Wireless Sounder Base complies with the essential requirements of the Construction Products Regulation (EU) 305/2011. A copy of the Declaration of Performance is available from Apollo on request.

TABLE 7: Tone table

Apollo tone pair no.	Dip switch value	Primary tone (Evacuation)			Secondary tone (Alert)		
		Temporal pattern icon	Temporal pattern description	Frequencies	Temporal pattern icon	Temporal pattern description	Frequencies
1*	0000		Apollo fire systems evacuate tone	660Hz for 0.5s, 925Hz for 0.5s		Apollo Fire Systems alert tone	1s off, 925Hz for 1s
2*	00001		Alternating warble (Hochiki & Fullleon)	925Hz for 0.25s, 626Hz for 0.25s		Continuous (Hochiki & Fullleon)	925Hz
3*	00010		Sweep (med) @ 1Hz	800Hz - 970Hz @ 1Hz		Continuous	970Hz continuous (BS5839-1:2002)
4*	00011		Sweep (fast) @ 9 Hz	2500Hz-2850Hz @ 9Hz		Continuous	2850Hz continuous
5*	00100		Netherlands - NEN 2575: 2000 (Dutch slow whoop)	500 - 1200Hz for 3.5s, 0.5s OFF		Continuous	825Hz continuous
6*	00101		German DIN 33 404	1200Hz - 500Hz Sweep 1s (1Hz)		Continuous	825Hz continuous
7*	00110		Swedish fire signal	660Hz 0.15s ON, 0.15s OFF		Swedish all clear	660Hz continuous
8*	00111		Australia fast-rise sweep (AS1670:4-2004 evacuation tone)	3x (500Hz - 1200Hz for 0.5s, 0.5s off), 1s OFF		Australia AS1670: 4-2004 alert tone	420Hz 0.625s ON, 0.625s OFF
9*	01000		New Zealand slow-rise sweep evacuation tone (NZS 4512)	500Hz - 1200Hz, 3.75s Sweep, 0.25s OFF		New Zealand alert tone (NZS 4512)	420Hz 0.625s ON, 0.625s OFF
10*	01001		US temporal LF (ISO 8201 low tone)	3x(970Hz 0.5s ON, 0.5s OFF), 1s OFF		Continuous	970Hz continuous
11*	01010		US temporal HF (ISO 8201) high tone	3x(2850Hz 0.5s ON, 0.5s OFF), 1s OFF		Continuous	2850Hz continuous
12*	01011		Simulated bell - continuous	827Hz for 16ms followed by 990Hz for 16ms.		Simulated bell - intermittent	827Hz for 16ms followed by 990Hz for 16ms for 1s then 1s off.
13*	01100		Emergency warning siren	600Hz - 1200Hz 4s followed by 1200-600Hz 4s		Emergency warning siren all clear	1200Hz continuous
14*	01101		France - AFNOR NF S 32 001	554Hz, 0.1s, 440Hz, 0.4s		Continuous	970Hz continuous
15*	01110		Australia evacuation (AS7240-3)	520Hz, 0.5s ON, 0.5s OFF x 3, 1s OFF		Australia alert (AS7240-3)	520Hz +/-5%, 0.5s ON, 3.5s OFF
16*	10000		Silent tone (REACH Wireless ONLY)	0Hz Continuous		Silent tone (Reach Wireless ONLY)	0Hz continuous

* Apollo approved tone



REACH Wireless for
temporary structure

TECHNICAL SPECIFICATION

REACH WIRELESS

Open-Area Wall Sounder



PRODUCT OVERVIEW

Part number	RW1500-110APO (White Body) RW1500-120APO (Red Body)
Digital communication	Apollo protocol compatibility is handled via the Loop-Interface device, RW1700-030APO. See product for more detail.

PRODUCT INFORMATION

The RW1500-110APO and RW1500-120APO comprise of a wireless addressable interface and conventional open-area wall sounder that can be used as a stand-alone notification device.

- Compatible only with REACH Wireless
- 16 number of tone settings (primary and secondary for alert and evacuation), selectable via on-board DIL Switches
- Four volume settings
- Bi-directional wireless communication
- Dual channel redundancy
- Five-year battery life
- Five-year product warranty

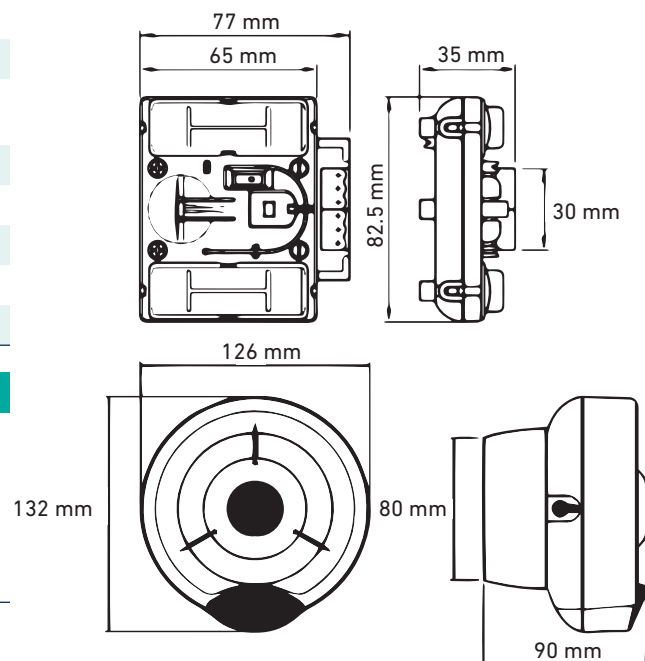
APPROVALS



TECHNICAL DATA

All data is supplied subject to change without notice. Specifications are typical at 24 V, 25°C and 50% RH unless otherwise stated.

Number of tone pairs	16 (see table 4)
Volume levels	Four (see table 3)
Sound output (typical)	88 - 91 dBA (tone dependant)
Communication range between loop-interface and devices	100 m (in open space)
Field device radio frequency channel pairs	22 pairs
Radiated power	14 dBm (25 mW)
Battery type	2x VARTA CR123A Lithium 3V, 1250mAh typical
Battery lifespan	Five years in normal operation with good signal strength (no dropped messages)
Operating temperature	-10°C to +55°C
Maximum relative humidity (non-condensing)	95%
IP rating	IP 35 (type B indoor use)
Standards and approvals	EN54-3, EN54-25
Dimensions	126 mm diameter x 132 mm height x 125 mm depth
Weight (including batteries)	190 g



REACH WIRELESS

Open-Area Wall Sounder



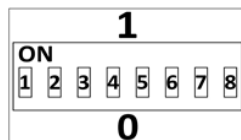
STATUS LED

The REACH Wireless Open-Area Wall Sounder VAD Base includes a 360° LED indicator to indicate status conditions. See table 1.

TABLE 1: REACH Wireless device status & LED indication

Device status	LED indication	
Power up	Blinks green four times	
Power up (dip switch ON)	Blinks red four times	
Entering wake-up	Blinks alternatively green/red four times	
Link success	Blinks green four times then repeats	
Link failure	Enters wake-up mode and signals 'Entering wake-up mode' following this failure	
	Tamper not activated	Tamper activated
Normal condition	LED off	LED off
Activation	LED off	Red on
Battery faults	LED off	Amber blinking every 5s
Tamper fault	LED off	
Replaced	Blinks amber twice	

TONE & VOLUME SELECTION DIP SWITCH SETTINGS



DEVICE ADDRESSING

Device addressing is handled by the REACH Wireless Loop-Interface device (RW1700-030APO).

Devices are soft-addressed automatically when pairing with the Loop Interface and can be changed manually. Hard-addressing using Apollo XPERT cards are not supported.

TABLE 2: REACH Wireless DIP switch functionality

Dip switch number	Dip switch group function	Notes
1	Tone selection	Check tone table (table 4)
2		
3		
4		
5		
6	Volume selection	Check volume table (table 3)
7		
8	High/low power LED output	N/A

TABLE 3: REACH Wireless volume table

Volume	Dip configuration
High*	11
Medium high	01
Medium low	10
Low	00

*EN54-3 certified, for Tone Table (table 4), see appendix

COMMUNICATION

REACH Wireless Devices use 'radio-frequency' wireless communication to connect to the Loop-Interface.

The Loop-Interface (RW1700-030APO) translates the wireless communication into wired Apollo protocol communication, with each device addressable individually by the fire panel. See the technical specification for the Loop-Interface for more information.

MAINTENANCE AND SERVICE

Maintenance must be performed in accordance with all applicable standards. Clean the [detector](#) externally using a soft damp cloth. For full cleaning and recalibration detectors should be returned to Apollo Fire Detectors.

BATTERIES

REACH Wireless devices are supplied with two CR123 batteries, battery A and B. The device switches periodically between the two batteries on a controlled sequence. For correct operation of the device, both batteries are required with adequate capacity reserves.

When battery A reaches a low power threshold, it will trigger a fault. This fault requires both batteries to be replaced in every instance as both batteries should be discharging equally.

When one (or both) batteries lack power, the Loop-Interface receives a low battery message and will signal this event on its in-built display, as well as relay the low battery message to the fire control panel. The battery fault will also be signalled by the device itself through its LED indicators if programmed (see table 1).

TAMPER DETECTION

REACH Wireless devices contain an anti-tamper mechanism. In the event of removal from its base, it sends a tamper detection message to the Loop-Interface. Tampering detection is not signalled visually by the device LED.

EMC DIRECTIVE 2014/30/EU

REACH Wireless Open-Area Wall Sounder complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described in this specification. A copy of the Declaration of Conformity is available from Apollo on request.

REACH WIRELESS

Open-Area Wall Sounder



CONSTRUCTION PRODUCTS REGULATION (EU) 305/2011

The REACH Wireless Open-Area Wall Sounder complies with the essential requirements of the Construction Products Regulation (EU) 305/2011

A copy of the Declaration of Performance is available from Apollo on request.

TABLE 6: Tone table

Apollo tone pair no.	Dip switch value	Primary tone (Evacuation)			Secondary tone (Alert)		
		Temporal pattern icon	Temporal pattern description	Frequencies	Temporal pattern icon	Temporal pattern description	Frequencies
1*	0000		Apollo fire systems evacuate tone	660Hz for 0.5s, 925Hz for 0.5s		Apollo Fire Systems alert tone	1s off, 925Hz for 1s
2*	00001		Alternating warble (Hochiki & Fullleon)	925Hz for 0.25s, 626Hz for 0.25s		Continuous (Hochiki & Fullleon)	925Hz
3*	00010		Sweep (med) @ 1Hz	800Hz - 970Hz @ 1Hz		Continuous	970Hz continuous (BS5839-1:2002)
4*	00011		Sweep (fast) @ 9 Hz	2500Hz-2850Hz @ 9Hz		Continuous	2850Hz continuous
5*	00100		Netherlands - NEN 2575: 2000 (Dutch slow whoop)	500 - 1200Hz for 3.5s, 0.5s OFF		Continuous	825Hz continuous
6*	00101		German DIN 33 404	1200Hz - 500Hz Sweep 1s (1Hz)		Continuous	825Hz continuous
7*	00110		Swedish fire signal	660Hz 0.15s ON, 0.15s OFF		Swedish all clear	660Hz continuous
8*	00111		Australia fast-rise sweep (AS1670:4-2004 evacuation tone)	3x (500Hz - 1200Hz for 0.5s, 0.5s off), 1s OFF		Australia AS1670: 4-2004 alert tone	420Hz 0.625s ON, 0.625s OFF
9*	01000		New Zealand slow-rise sweep evacuation tone (NZS 4512)	500Hz - 1200Hz, 3.75s Sweep, 0.25s OFF		New Zealand alert tone (NZS 4512)	420Hz 0.625s ON, 0.625s OFF
10*	01001		US temporal LF (ISO 8201 low tone)	3x(970Hz 0.5s ON, 0.5s OFF), 1s OFF		Continuous	970Hz continuous
11*	01010		US temporal HF (ISO 8201 high tone)	3x(2850Hz 0.5s ON, 0.5s OFF), 1s OFF		Continuous	2850Hz continuous
12*	01011		Simulated bell - continuous	827Hz for 16ms followed by 990Hz for 16ms.		Simulated bell - intermittent	827Hz for 16ms followed by 990Hz for 16ms for 1s then 1s off.
13*	01100		Emergency warning siren	600Hz - 1200Hz 4s followed by 1200-600Hz 4s		Emergency warning siren all clear	1200Hz continuous
14*	01101		France - AFNOR NF S 32 001	554Hz, 0.1s, 440Hz, 0.4s		Continuous	970Hz continuous
15*	01110		Australia evacuation (AS7240-3)	520Hz, 0.5s ON, 0.5s OFF x 3, 1s OFF		Australia alert (AS7240-3)	520Hz +/-5%, 0.5s ON, 3.5s OFF
16*	10000		Silent tone (REACH Wireless ONLY)	0Hz Continuous		Silent tone (Reach Wireless ONLY)	0Hz continuous

* Apollo approved tone



REACH Wireless for
school outbuildings

TECHNICAL SPECIFICATION

REACH WIRELESS

Open-Area Wall Sounder VAD



PRODUCT OVERVIEW

Part number	RW1500-210APO (White Body) RW1500-220APO (Red Body)
Digital communication	Apollo protocol compatibility is handled via the Loop-Interface device, RW1700-030APO. See product for more detail.

PRODUCT INFORMATION

The RW1500-210APO / RW1500-220APO is a wireless analogue addressable interface and a conventional open-area wall sounder VAD that can be used as a stand-alone notification device.

- Compatible only with REACH Wireless
- 16 number of tone settings (primary and secondary for alert and evacuation), selectable via on-board DIL Switches
- Four volume settings
- Bi-directional wireless communication
- Dual channel redundancy
- Five-year battery life
- Five-year product warranty

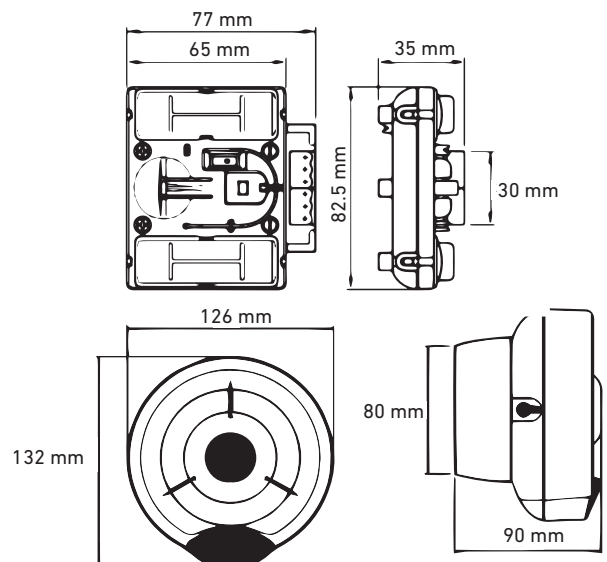
APPROVALS



TECHNICAL DATA

All data is supplied subject to change without notice. Specifications are typical at 24 V, 25°C and 50% RH unless otherwise stated.

Number of tone pairs	16 (see table 4)
Volume levels	Four volume settings
Sound output (typical)	88 - 91 dBA (tone dependant)
Communication range between loop-interface and devices	100 m (in open space)
VAD coverage rating (EN54-25)	Configurable - see table 4
Flash rate	0.5 Hz
Field device radio frequency channel pairs	22 pairs
Radiated power	14 dBm (25 mW)
Battery type	2x VARTA CR123A Lithium 3V, 1250mAh typical
Battery lifespan	Five years in normal operation with good signal strength (no dropped messages)
Operating temperature	-10°C to +55°C
Maximum relative humidity (non-condensing)	95%
IP rating	IP 35 (type B indoor use)
Standards and approvals	EN54-3, EN54-23, EN54-25
Dimensions	126 mm diameter x 132 mm height x 125 mm depth
Weight (including base and batteries)	350 g



REACH WIRELESS

Open-Area Wall Sounder VAD



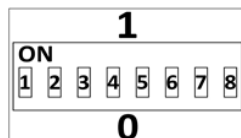
STATUS LED

The REACH Wireless Open-Area Wall Sounder VAD includes a 360° LED indicator to indicate status conditions. See table 1.

TABLE 1: REACH Wireless device status & LED indication

Device status	LED indication	
Power up	Blinks green four times	
Power up (dip switch ON)	Blinks red four times	
Entering wake-up	Blinks alternatively green/red four times	
Link success	Blinks green four times then repeats	
Link failure	Enters wake-up mode and signals 'Entering wake-up mode' following this failure	
	Tamper not activated	Tamper activated
Normal condition	LED off	LED off
Activation	LED off	Red on
Battery faults	LED off	Amber blinking every 5s
Tamper fault	LED off	
Replaced	Blinks amber twice	

TONE & VOLUME SELECTION DIP SWITCH SETTINGS



DEVICE ADDRESSING

Device addressing is handled by the REACH Wireless Loop-Interface device (RW1700-030APO).

Devices are soft-addressed automatically when pairing with the Loop Interface and can be changed manually. Hard-addressing using Apollo XPERT cards are not supported.

TABLE 2: REACH Wireless DIP switch functionality

Dip switch number	Dip switch group function	Notes
1	Tone selection	Check tone table (table 4)
2		
3		
4		
5		
6	Volume selection	Check volume table (table 3)
7		
8	High/low power LED output	N/A

TABLE 3: REACH Wireless volume table

Volume	Dip configuration
High*	11
Medium high	01
Medium low	10
Low	00

*EN54-3 certified, for Tone Table (table 4), see appendix

COMMUNICATION

REACH Wireless Devices use 'radio-frequency' wireless communication to connect to the Loop-Interface.

The Loop-Interface (RW1700-030APO) translates the wireless communication into wired Apollo protocol communication, with each device addressable individually by the fire panel. See the technical specification for the Loop-Interface for more information.

MAINTENANCE AND SERVICE

Maintenance must be performed in accordance with all applicable standards. Clean the detector externally using a soft damp cloth. For full cleaning and recalibration detectors should be returned to Apollo Fire Detectors.

BATTERIES

REACH Wireless devices are supplied with two CR123 batteries, battery A and B. The device switches periodically between the two batteries on a controlled sequence. For correct operation of the device, both batteries are required with adequate capacity reserves.

When battery A reaches a low power threshold, it will trigger a fault. This fault requires both batteries to be replaced in every instance as both batteries should be discharging equally.

When one (or both) batteries lack power, the Loop-Interface receives a low battery message and will signal this event on its in-built display, as well as relay the low battery message to the fire control panel. The battery fault will also be signalled by the device itself through its LED indicators if programmed (see table 1).

TAMPER DETECTION

REACH Wireless devices contain an anti-tamper mechanism. In the event of removal from its base, it sends a tamper detection message to the Loop-Interface. Tampering detection is not signalled visually by the device LED.

EMC DIRECTIVE 2014/30/EU

REACH Wireless Open-Area Wall Sounder VAD complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described in this specification. A copy of the Declaration of Conformity is available from Apollo on request.

REACH WIRELESS

Open-Area Wall Sounder VAD



CONSTRUCTION PRODUCTS REGULATION (EU) 305/2011

The REACH Wireless Open-Area Wall Sounder VAD complies with the essential requirements of the Construction Products Regulation (EU) 305/2011

A copy of the Declaration of Performance is available from Apollo on request.

TABLE 6: Tone table

Apollo tone pair no.	Dip switch value	Primary tone (Evacuation)			Secondary tone (Alert)		
		Temporal pattern icon	Temporal pattern description	Frequencies	Temporal pattern icon	Temporal pattern description	Frequencies
1*	0000		Apollo fire systems evacuate tone	660Hz for 0.5s, 925Hz for 0.5s		Apollo Fire Systems alert tone	1s off, 925Hz for 1s
2*	00001		Alternating warble (Hochiki & Fullleon)	925Hz for 0.25s, 626Hz for 0.25s		Continuous (Hochiki & Fullleon)	925Hz
3*	00010		Sweep (med) @ 1Hz	800Hz - 970Hz @ 1Hz		Continuous	970Hz continuous (BS5839-1:2002)
4*	00011		Sweep (fast) @ 9 Hz	2500Hz-2850Hz @ 9Hz		Continuous	2850Hz continuous
5*	00100		Netherlands - NEN 2575: 2000 (Dutch slow whoop)	500 - 1200Hz for 3.5s, 0.5s OFF		Continuous	825Hz continuous
6*	00101		German DIN 33 404	1200Hz - 500Hz Sweep 1s (1Hz)		Continuous	825Hz continuous
7*	00110		Swedish fire signal	660Hz 0.15s ON, 0.15s OFF		Swedish all clear	660Hz continuous
8*	00111		Australia fast-rise sweep (AS1670:4-2004 evacuation tone)	3x (500Hz - 1200Hz for 0.5s, 0.5s off), 1s OFF		Australia AS1670: 4-2004 alert tone	420Hz 0.625s ON, 0.625s OFF
9*	01000		New Zealand slow-rise sweep evacuation tone (NZS 4512)	500Hz - 1200Hz, 3.75s Sweep, 0.25s OFF		New Zealand alert tone (NZS 4512)	420Hz 0.625s ON, 0.625s OFF
10*	01001		US temporal LF (ISO 8201) low tone	3x(970Hz 0.5s ON, 0.5s OFF), 1s OFF		Continuous	970Hz continuous
11*	01010		US temporal HF (ISO 8201) high tone	3x(2850Hz 0.5s ON, 0.5s OFF), 1s OFF		Continuous	2850Hz continuous
12*	01011		Simulated bell - continuous	827Hz for 16ms followed by 990Hz for 16ms.		Simulated bell - intermittent	827Hz for 16ms followed by 990Hz for 16ms for 1s then 1s off.
13*	01100		Emergency warning siren	600Hz - 1200Hz 4s followed by 1200-600Hz 4s		Emergency warning siren all clear	1200Hz continuous
14*	01101		France - AFNOR NF S 32 001	554Hz, 0.1s, 440Hz, 0.4s		Continuous	970Hz continuous
15*	01110		Australia evacuation (AS7240-3)	520Hz, 0.5s ON, 0.5s OFF x 3, 1s OFF		Australia alert (AS7240-3)	520Hz +/-5%, 0.5s ON, 3.5s OFF
16*	10000		Silent tone (REACH Wireless ONLY)	0Hz Continuous		Silent tone (Reach Wireless ONLY)	0Hz continuous

* Apollo approved tone

TECHNICAL SPECIFICATION

REACH WIRELESS

Loop Interface



PRODUCT OVERVIEW

Part number	RW1700-030APO
Digital communication	XP95 native (mimics XPander). Device will present as a zone monitor to the fire panel

PRODUCT INFORMATION

The RW1700-030APO is a wired loop interface that bridges REACH Wireless radio-frequency products to an Apollo wired loop. Communication between the wireless products are translated to Apollo wired protocol for operation via the wired fire panel.

- Built-in LCD display
- Physical navigation buttons
- 3x status LEDs: fault, configuration and power
- Loop-powered
- Built-in isolator
- Bi-directional wireless communication
- Dual channel redundancy
- Five-year product warranty

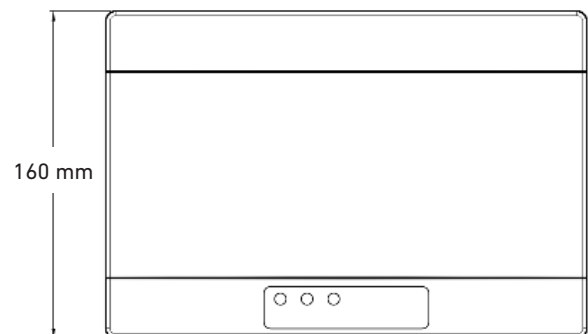
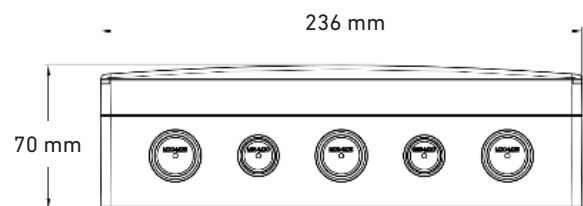
APPROVALS



TECHNICAL DATA

All data is supplied subject to change without notice. Specifications are typical at 24 V, 25°C and 50% RH unless otherwise stated.

Communication range between loop-interface and devices	100 m (in open space)
Maximum number of connected devices	32
Flash rate	0.5 Hz
Field device radio frequency channel pairs	22 pairs
Available protocol addresses	126 (XP95) Loop Interface requires a loop address. Configured during setup.
Radiated power	14 dBm (25 mW)
Line voltage	17 V - 35 V (typical 24 V)
Current consumption	40 mA peak @24 V
Operating temperature	-20°C to +70°C
Maximum relative humidity (non-condensing)	95%
IP rating	IP 65
Standards and approvals	EN54-17, EN54-18, EN54-25
Dimensions	236 mm diameter x 160 mm height x 70 mm depth
Weight (including base and batteries)	700 g



REACH WIRELESS

Loop Interface



STATUS LED

When one or more faults are present in the system they are shown on the LCD and the fault LED is switched on yellow. LCD is ON only when the tamper switch is not activated (cover open) regardless of the configuration of the translator tamper fault.

For a table of fault codes & LED meanings, see table 1.

NO. OF LOOP-INTERFACES

No. of loop-interfaces per loop is determined by the following limits:

- Available RF channel pairs. There are 22 available for 868Mhz region usage. 1 RF channel pair is required per loop-interface (for communicating to devices). 100m spacing between loop-interfaces is required before repeating RF channel usage (we recommend contacting Apollo Customer Support before attempting this).
- Available loop current. 40mA is required per loop-interface (@24V). Apollo recommends only loading a wired loop to 80% of theoretical max e.g. 80% of 500mA = 400mA/40mA = 10 loop-interfaces maximum per loop (assumes no other wired devices or voltage droop).
- Available protocol addresses. XP95 protocol supports up-to 126 addresses. Although the loop-interface does not use an address, the REACH Wireless devices do so this may limit how many loop-interfaces can be installed with the maximum number of wireless devices connected (32 devices per loop-interface). Every REACH part number takes one address, including AV bases.

Examples:

- 3 loop-interfaces with 32 wireless devices each (XP95 protocol address limit reached)
- 10 loop-interfaces with 12 wireless devices each (available loop-current limit REACHed)

DEVICE ADDRESSING

RW1700-030APO allow REACH Wireless devices to be soft-addressed via the LCD display, during commissioning.

Devices are soft-addressed automatically when pairing with the Loop Interface and can be changed manually. Hard-addressing using Apollo XPert cards are not supported.

COMMUNICATION

REACH Wireless devices use 'radio-frequency' wireless communication to connect to the Loop-Interface.

The Loop-Interface (RW1700-030APO) translates the wireless communication into wired Apollo protocol communication, with each device addressable individually by the fire panel. See the technical specification for the Loop-Interface for more information.

TAMPER DETECTION

REACH Wireless devices contain an anti-tamper mechanism. In the event of removal from its base, it sends a tamper detection message to the Loop-Interface. Tampering detection is not signalled visually by the device LED.

EMC DIRECTIVE 2014/30/EU

REACH Wireless Loop Interface complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described in this specification.

A copy of the Declaration of Conformity is available from Apollo on request.

Conformity of the REACH Wireless Loop Interface with the EMC Directive does not confer compliance with the directive on any apparatus or systems connected to it.

CONSTRUCTION PRODUCTS REGULATION (EU) 305/2011

The REACH Wireless Loop Interface complies with the essential requirements of the Construction Products Regulation (EU) 305/2011.

A copy of the Declaration of Performance is available from Apollo on request.

TABLE 1: REACH Wireless fault table

Type of fault	Fault description	Note
LINK	No valid supervision is received from the device by the link fault timeout	Fault LED blinking. Link fault timeout is configured with the keyboard/LCD interface.
TAMP	Device is in tamper fault	Fault LED blinking
FAULT	Generic device fault (transceiver error, FW incoherence, etc)	Fault LED blinking
JAMMING	Noise on field communication channels	Fault LED blinking
START UP	During low current consumption start-up phase	Fault LED blinking 1s ON / 2s OFF
ISOLATORS	Isolators open	Fault LED steady on
BRIDGE FAULT	Communications error between internal micros	Fault LED steady on

TECHNICAL SPECIFICATION

REACH WIRELESS

Input Module



PRODUCT OVERVIEW

Part number	RW1700-051APO
Digital communication	Apollo protocol compatibility is handled via the Loop-Interface device, RW1700-030APO. See product for more detail.

PRODUCT INFORMATION

The RW1700-051APO REACH Wireless Input Module is a wireless analogue addressable interface with single fully monitored input circuit which allows simple integration of third-party equipment with the fire system.

- Input circuits are fully supervised for alarm and fault conditions (utilising eol resistors)
- Bi-directional wireless communication
- Dual channel redundancy
- Five-year product warranty

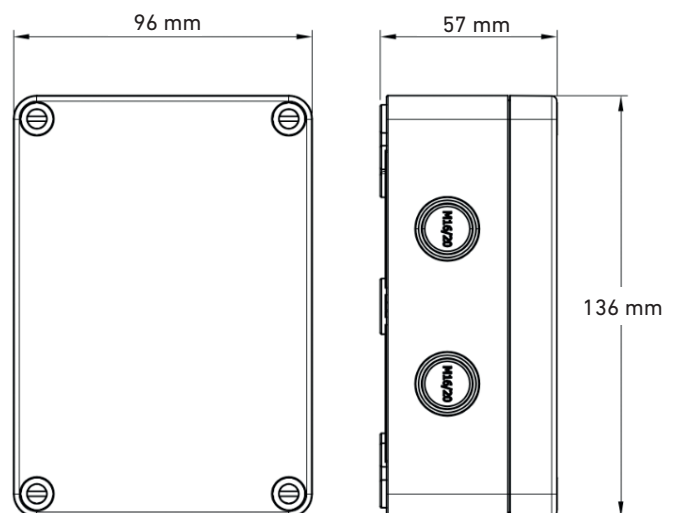
APPROVALS



TECHNICAL DATA

All data is supplied subject to change without notice. Specifications are typical at 24 V, 25°C and 50% RH unless otherwise stated.

Communication range between loop-interface and devices	100 m (in open space)
Field device radio frequency channel pairs	22 pairs
Radiated power	14 dBm (25 mW)
Battery type	2x VARTA CR123A Lithium 3 V, 1250mAh typical
Battery lifespan	10 years in normal operation with good signal strength (no dropped messages)
Operating temperature	-10°C to +55°C
Maximum relative humidity (non-condensing)	95%
IP rating	IP 65
Standards and approvals	EN54-18, EN54-25
Dimensions	136 mm diameter x 96 mm height x 57mm depth
Weight (including batteries)	270 g



REACH WIRELESS

Input Module



OPERATING PRINCIPLES

The RW1700-051APO REACH Wireless Input module works on an ON/OFF logic and does not rely on any special and/or intelligent communication protocol for its operation (i.e conventional call-points). See table 2 for connection requirements.

STATUS LED

When one or more faults are present in the system they are shown on the LCD and the fault LED is switched on yellow. LCD is ON only when the tamper switch is not activated (cover open) regardless of the configuration of the translator tamper fault.

TABLE 1: REACH Wireless device status & LED indication

Device status	LED indication	
Power up	Blinks green four times	
Power up (dip switch ON)	Blinks red four times	
Entering wake-up	Blinks alternatively green/red four times	
Link success	Blinks green four times then repeats	
Link failure	Enters wake-up mode and signals 'Entering wake-up mode' following this failure	
	Tamper not activated	Tamper activated
Normal condition	LED off	LED off
Activation	LED off	Red on
Battery faults	LED off	Amber blinking every 5s
Tamper fault	LED off	
Replaced	Blinks amber twice	

DEVICE ADDRESSING

Device addressing is handled by the REACH Wireless Loop-Interface device (RW1700-030APO).

Devices are soft-addressed automatically when pairing with the Loop Interface and can be changed manually. Hard-addressing using Apollo XPERT cards are not supported.

COMMUNICATION

REACH Wireless Devices use 'radio-frequency' wireless communication to connect to the Loop-Interface.

The Loop-Interface (RW1700-030APO) translates the wireless communication into wired Apollo protocol communication, with each device addressable individually by the fire panel. See the technical specification for the Loop-Interface for more information.

TAMPER DETECTION

REACH Wireless devices contain an anti-tamper mechanism. In the event of removal from its base, it sends a tamper detection message to the Loop-Interface. Tampering detection is not signalled visually by the device LED.

EMC DIRECTIVE 2014/30/EU

REACH Wireless Input Module complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described in this specification.

A copy of the Declaration of Conformity is available from Apollo on request.

CONSTRUCTION PRODUCTS REGULATION (EU) 305/2011

The REACH Wireless Input Module complies with the essential requirements of the Construction Products Regulation (EU) 305/2011. A copy of the Declaration of Performance is available from Apollo on request.

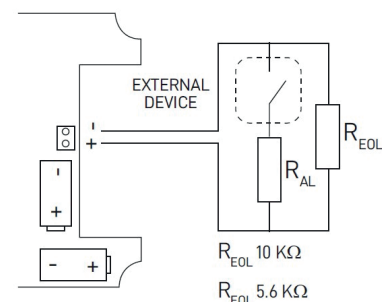
TABLE 2: REACH Wireless connection requirements

Port B	End of line impedance limits				Module status	Notes
	Min	Typ	Max	Units		
Input	6.5	10	14	kQ	Normal	-
	0	-	2.4	kQ	Fault	Short circuit
	2.5	5	6.4	kQ	Alarm	Triggered by wired device
	14.2	-	+∞	kQ	Fault	Open circuit
R _{EOL}	8	10	12	kQ	-	
R _{AL}	5	5.6	6	kQ	-	

The 10KΩ R resistor monitors whether the cable has been damaged or the connection is no longer available.

- The 5.6KΩ R resistor comes in and out of circuit depending on the state of the 3rd party device (alarm resistor).
- If you fail to install these resistors correctly the device will not operate as intended.
- Ensure the 3rd party device offers a voltage free relay switch.

Note: install a properly fire rated cable (according to national code of practice) between the third-party device and the input module.



TECHNICAL SPECIFICATION

REACH WIRELESS

Remote Indicator



PRODUCT OVERVIEW

Part number	RW1500-800APO
Digital communication	Apollo protocol compatibility is handled via the Loop-Interface device, RW1700-030APO. See product for more detail.

PRODUCT INFORMATION

The RW1500-800APO is a wireless addressable remote indicator that can be used to indicate the activation of an individual device or zone.

- Compatible only with REACH Wireless
- Red LED with large diffuser for greater visibility
- Bi-directional wireless communication
- Dual channel redundancy
- Five-year product warranty

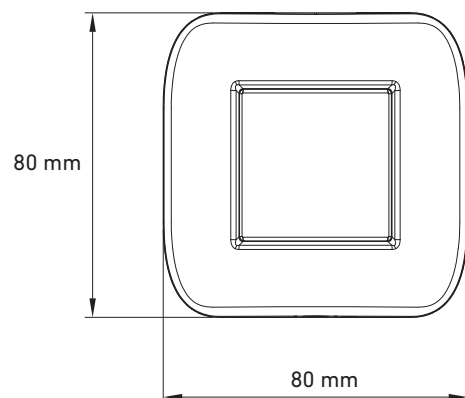
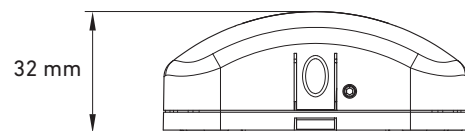
APPROVALS



TECHNICAL DATA

All data is supplied subject to change without notice. Specifications are typical at 24 V, 25°C and 50% RH unless otherwise stated.

Communication range between loop-interface and devices	100 m (in open space)
Field device radio frequency channel pairs	22 pairs
Radiated power	14 dBm (25 mW)
Battery type	2x VARTA CR123A Lithium 3V, 1250mAh typical
Battery lifespan	Five years in normal operation with good signal strength (no dropped messages)
Operating temperature	-10°C to +55°C
Maximum relative humidity (non-condensing)	95%
IP Rating	IP42
Standards and approvals	EN54-25
Dimensions	80 mm diameter x 80 mm height x 32 mm depth
Weight (including base and batteries)	60 g



REACH WIRELESS

Remote Indicator



STATUS LED

The REACH Wireless Remote Indicator is equipped with a visual LED Indicator; LED signals indicate functional status of the device as per Table 1.

TABLE 1: REACH Wireless device status & LED indication

Device status	LED indication
Power up	Blinks green four times
Power up (dip switch ON)	Blinks red four times
Entering wake-up	Blinks alternatively green/red four times
Link success	Blinks green four times then repeats
Link failure	Enters wake-up mode and signals 'Entering wake-up mode' following this failure
Normal condition	LED off
Activation	LED on
Battery faults	LED off
Tamper fault	LED off
Replaced	Blinks green twice

DEVICE ADDRESSING

Device addressing is handled by the REACH Wireless Loop-Interface device (RW1700-030APO).

Devices are soft-addressed automatically when pairing with the Loop Interface and can be changed manually. Hard-addressing using Apollo XPERT cards are not supported.

COMMUNICATION

REACH Wireless devices use 'radio-frequency' wireless communication to connect to the Loop-Interface.

The Loop-Interface (RW1700-030APO) translates the wireless communication into wired Apollo protocol communication, with each device addressable individually by the fire panel. See the technical specification for the Loop-Interface for more information.

MAINTENANCE AND SERVICE

Maintenance must be performed in accordance with all applicable standards.

TAMPER DETECTION

REACH Wireless devices contain an anti-tamper mechanism. In the event of removal from its base, it sends a tamper detection message to the Loop-Interface. Tampering detection is not signalled visually by the device LED.

EMC DIRECTIVE 2014/30/EU

REACH Wireless Remote Indicator complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described in this specification.

A copy of the Declaration of Conformity is available from Apollo on request.

CONSTRUCTION PRODUCTS REGULATION (EU) 305/2011

The REACH Wireless Remote Indicator complies with the essential requirements of the Construction Products Regulation (EU) 305/2011

A copy of the Declaration of Performance is available from Apollo on request.

TECHNICAL SPECIFICATION

REACH WIRELESS

Manual Call Point



PRODUCT OVERVIEW

Part number	RW1900-901APO
Digital communication	Apollo protocol compatibility is handled via the Loop-Interface device, RW1700-030APO. See product for more detail.

PRODUCT INFORMATION

The RW1900-901APO is a wireless analogue addressable manual call point. The unit has a resettable plastic element, which displays a drop-down warning indicator when operated. A key is supplied with the MCP for reset and case opening. A transparent cover protects against accidental operation and is included with the device.

- Resettable Element
- Bi-directional wireless communication
- Dual channel redundancy
- Ten-year battery life
- Five-year product warranty

APPROVALS



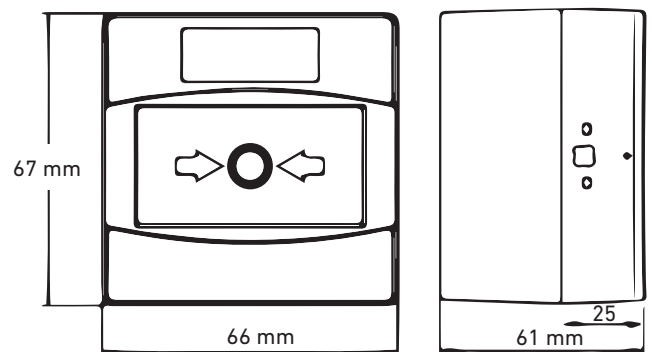
TECHNICAL DATA

All data is supplied subject to change without notice. Specifications are typical at 24 V, 25°C and 50% RH unless otherwise stated.

Communication range between loop-interface and devices	100 m (in open space)
Field device radio frequency channel pairs	22 pairs
Radiated power	14 dBm (25 mW)
Battery type	2x VARTA CR123A Lithium 3V, 1250mAh typical
Battery lifespan	10 years in normal operation with good signal strength (no dropped messages)
Operating temperature	-10°C to +55°C
Maximum relative humidity (non-condensing)	95%
IP Rating	IP 30
Standards and approvals	EN54-11, EN54-25
Dimensions	88 mm diameter x 87 mm height x 61 mm depth
Weight (including batteries)	160 g

OPERATING PRINCIPLES

The RW1900-901APO REACH Wireless Manual Call Point is a wall-mounted device that, when activated, initiates an alarm on the fire security system. After its use the call point unit can be simply reset with its proper key, making it immediately ready for reactivation.



REACH WIRELESS

Manual Call Point



STATUS LED

When one or more faults are present in the system they are shown on the LCD and the fault LED is switched on yellow. LCD is ON only when the tamper switch is not activated (cover open) regardless of the configuration of the translator tamper fault. See table 1 for LED status meanings.

TABLE 1: REACH Wireless device status & LED indication

Device status	LED indication
Power up	Blinks green four times
Power up (dip switch ON)	Blinks red four times
Entering wake-up	Blinks alternatively green/red four times
Link success	Blinks green four times then repeats
Link failure	Enters wake-up mode and signals 'Entering wake-up mode' following this failure
Normal condition	LED off
Alarm	Red 1s, period 2s
Battery faults	LED off
Tamper fault	LED off
Replaced	Blinks amber twice

DEVICE ADDRESSING

Device addressing is handled by the REACH Wireless Loop-Interface device (RW1700-030APO).

Devices are soft-addressed automatically when pairing with the Loop Interface and can be changed manually. Hard-addressing using Apollo XPERT cards are not supported.

COMMUNICATION

REACH Wireless Devices use 'radio-frequency' wireless communication to connect to the Loop-Interface.

The Loop-Interface (RW1700-030APO / RW1700-031APO) translates the wireless communication into wired Apollo protocol communication, with each device addressable individually by the fire panel. See the technical specification for the Loop-Interface for more information.

TAMPER DETECTION

REACH Wireless devices contain an anti-tamper mechanism. In the event of removal from its base, it sends a tamper detection message to the Loop-Interface. Tampering detection is not signalled visually by the device LED.

EMC DIRECTIVE 2014/30/EU

REACH Wireless Manual Call Point complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described in this specification.

A copy of the Declaration of Conformity is available from Apollo on request.

CONSTRUCTION PRODUCTS REGULATION (EU) 305/2011

The REACH Wireless Manual Call Point complies with the essential requirements of the Construction Products Regulation (EU) 305/2011

A copy of the Declaration of Performance is available from Apollo on request.

TECHNICAL SPECIFICATION

REACH WIRELESS

Survey Kit Lite



PRODUCT OVERVIEW

Part number	RW1800-060APO
Digital communication	N/A

PRODUCT INFORMATION

The RW1800-060APO is a portable, battery-powered toolkit for surveying signal strength of the REACH Wireless system, ahead of installation into a building.

The field-device can be held in position to test the signal strength of a potential installation location between it and the network host device. The field-device will indicate signal strength by flashing its on-board LED.

- Includes 1x network host device, 1x field-device, 1x extendable detector mounting pole
- Field-device includes an RGB LED for signal strength indication
- Bi-directional wireless communication
- Dual channel redundancy

APPROVALS



TECHNICAL DATA

All data is supplied subject to change without notice. Specifications are typical at 24 V, 25°C and 50% RH unless otherwise stated.

Field device radio frequency channel pairs	22 pairs
Radiated power	14 dBm (25 mW)
Battery type (field device)	2x VARTA CR123A Lithium 3 V, 1250mAh typical
Battery type (network host device)	4x VARTA CR123A Lithium 3 V, 1250mAh typical
Operating temperature	-10°C to +55°C
Maximum relative humidity (non-condensing)	95%
Standards and approvals	EN54-25
Dimensions	136 mm diameter x 96 mm height x 57mm depth
Weight (including batteries)	270 g

REACH WIRELESS

Survey Kit Lite



COMMUNICATION

REACH Wireless Devices use 'radio-frequency' wireless communication to connect to the Loop-Interface.

The Loop-Interface (RW1700-030APO) translates the wireless communication into wired Apollo protocol communication, with each device addressable individually by the fire panel. See the technical specification for the Loop-Interface.

EMC DIRECTIVE 2014/30/EU

REACH Wireless Survey Kit Lite complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described here. A copy of the Declaration of Conformity is available from Apollo on request.

CONSTRUCTION PRODUCTS REGULATION (EU) 305/2011

The REACH Wireless Survey Kit Lite complies with the essential requirements of the Construction Products Regulation (EU) 305/2011. A copy of the Declaration of Performance is available from Apollo on request.

TABLE 1: Signal quality LED table

Rssi (dBm)		LED activity + colour	Signal quality	OK to install
Min	Max			
0	-65	●●●	Excellent	
-66	-75	●●●	Good	Yes
-76	-80	●●●	Sufficient	
-81	-85	---	Marginal	
-86	-90	----	Bad	
-91	-95	-----	Very bad	No
-96	-100	-----	Extremely bad	
101	-105		Range limit	

WARNINGS & LIMITATIONS

Our devices use high quality electronic components and plastic materials that are highly resistant to environmental deterioration. However, after 10 years of continuous operation, it is advisable to replace the devices in order to minimize the risk of reduced performance caused by external factors.

Ensure that this device is only used with compatible control panels.

Detection systems must be checked, serviced and maintained on a regular basis to confirm correct operation.

Smoke sensors may respond differently to various kinds of smoke particles, thus application advice should be sought for special risks.

Sensors cannot respond correctly if barriers exist between them and the fire location and may be affected by special environmental conditions.

Refer to and follow national codes of practice and other internationally recognized fire engineering standards.

Appropriate risk assessment should be carried out initially to determine correct design criteria and updated periodically.

Use only in REACH Wireless fire detection and alarm systems.

SUITABILITY

Building considerations

The following should be considered when considering REACH Wireless for a building. Each of the below items will negatively impact signal strength or consistency. This does not necessarily prevent REACH from being a viable solution, but should be considered during the up-front site survey to help plan the system layout:

- Thick, solid walls e.g. historic buildings
- Large amounts of metal in the structure such as steel girders, metal wire mesh, HVAC systems etc.
- Cabling – especially heavy gauge or high current.

Wireless considerations

Be aware of other wireless equipment in the installation area that operates within the same 868Mhz band. If possible, avoid using the same 868Mhz channels as these devices to avoid communication issues.

If installing near an Apollo XPander system, please also be aware that RF channel frequencies are not aligned across these systems, so selecting different channel numbers may still result in clashes. Please refer to the RF channel loop-up sheet (appendix 1) to compare.

A 2m minimum distance must be kept between all REACH Wireless products to prevent signal loss.

Wiring considerations

Apply mandatory codes of practice and standards of your country.

- Don't install wireless devices in the vicinity of large electrical equipment, fluorescent light fixtures, computers or their power and network cabling.
- Don't install wireless devices in the vicinity of large metal objects, structures or metal ceiling structures.

- Do ensure that all REACH products adhere to a minimum installation distance of 2 meters between each other.
- Do install the RW1700-030APO Loop Interface at a height of at least 2 - 2.5 meters from the floor, fixed flat on the wall.

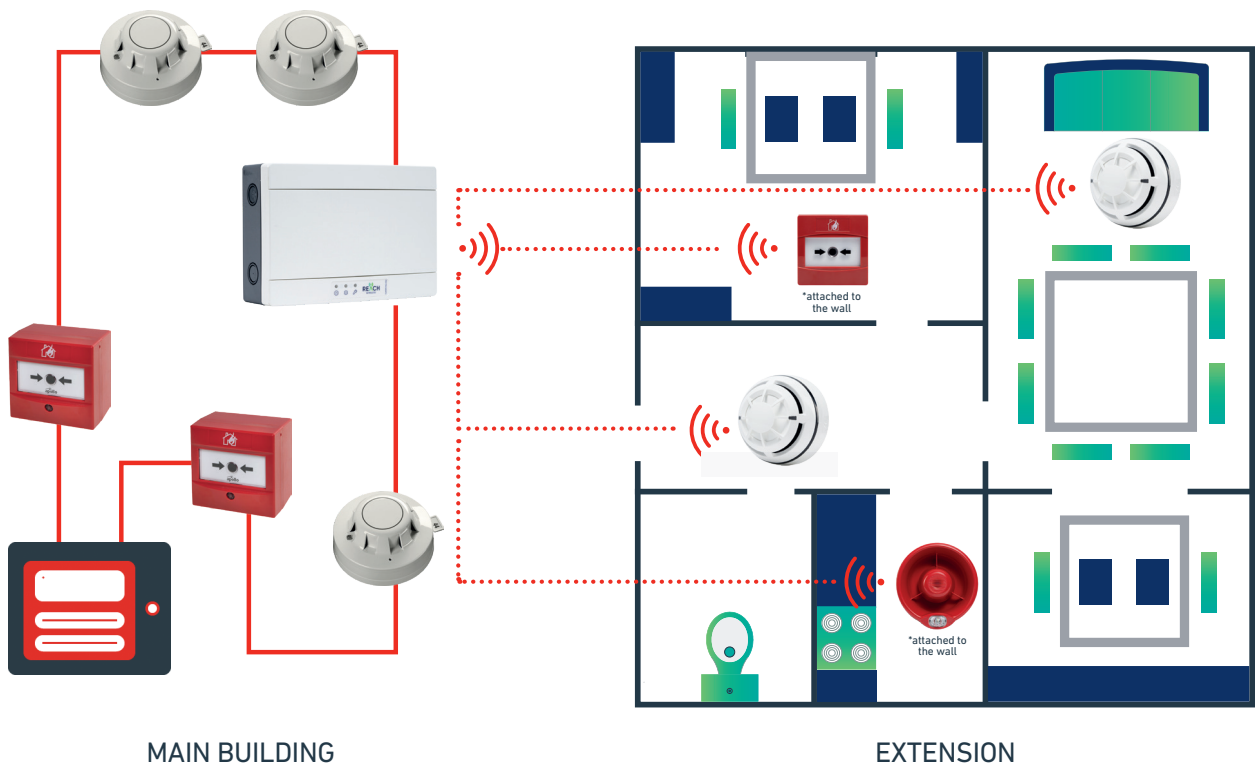
Apollo Protocol support & panel compatibility

REACH Wireless is a hybrid wireless solution, meaning it must be connected to a wired loop to function and cannot operate as a standalone solution.

The RW1700-030APO loop interface acts as the wireless panel for the Reach Wireless products. It is the primary device in the system and acts as the parent or host of the wireless network. The RW1700-030APO loop-interface must be connected to the wired addressable loop in order to communicate with the wired loop's control panel and in order to power on. It will act as the bridge between the wired and wireless network, translating communications between the wired panel and wireless devices and vice versa.

REACH communicates using the Apollo XP95 protocol natively, meaning it is compatible with Discovery and CoreProtocol loops as a legacy device. Its XP95 communication is designed to mimic Apollo's legacy wireless solution, XPander, for maximum compatibility with panels. Fire panel features and technical specifications vary, so please refer to the panel's compatibility list to check for REACH Wireless support.

SURVEYING



As REACH is a wireless solution, it is imperative that potential installations sites are surveyed for suitability ahead of system installation. This protects against additional installation costs or failure due to unforeseen issues with the environment or building structure.

REACH Wireless products interface with an Apollo XP95 wired loop, via the RW1700-030APO Loop Interface, so it is important to identify up-front potential locations to either break into an existing wired loop or where to run a new loop to.

Ideal locations for the RW1700-030APO Loop Interface should be as central as possible to where the other REACH Wireless devices will be located, in order to maximize the circumference of available wireless range. This is not always possible, for example in a building extension, where the existing wired loop will only run to the boundary of where the products will be installed (such as in the graphic above).

Performing a survey requires use of RW1800-060APO Reach Survey Kit. This survey kit contains a battery-powered hub and mock detector, that can be used to test the signal strength of each product install location, for each potential install location of the RW1700-030APO Loop Interface.

Instructions of how to perform the survey are available in the Survey Kit's manual PP5098.

While surveying, consider that a 2m minimum distance must be kept between all REACH Wireless devices to prevent signal loss.

The results of the survey should be recorded in the official REACH Survey Sheet available from apollo-fire.co.uk. This is critical as it will inform key decisions such as RF Channel when it comes to installation and will be requested by Apollo if support is required during or after installation.

tone period

The tone period setting is a value in seconds (s) that is used to 'count in' a sounder to allow it to synchronize with sounders already activated.

In order to properly sync sounders, the length (s) of the selected sounder tone must be divisible by the tone period.

Note: As REACH tones are selected in pairs, the length of both the primary and secondary tone must be considered.

Note: Longer tone periods increase delay in 'counting in' a sounder before activating.

For sites using the same tone pair throughout, the below table shows the optimal sync period value.

A tone period of 4s is set by default. This can be used for all tones other than tone 7 (Swedish Fire Signal), however, many tones will have improved activation performance if a shorter 2s tone period can be used.

tone	DIP SWITCH	PRIMARY TONE DESIGNATION	PRIMARY TONE PATTERN DESCRIPTION	SECONDARY TONE DESIGNATION	SECONDARY TONE PATTERN DESCRIPTION	SYNC PERIOD
1	00000	Apollo Fire Systems Evacuate Tone	660Hz for 0.5s, 925Hz for 0.5s	Apollo Fire Systems Alert Tone	1s off, 925Hz for 1s	2
2	00001	Alternaternating warble (Hochiki & Fullleon)	925Hz for 0.25s, 626Hz for 0.25s	Continuous (Hochiki & Fullleon)	925Hz	2
3	00010	Sweep (med) @ 1Hz	800Hz - 970Hz @ 1Hz	Continuous	970Hz Continuous (BS5839-1:2002)	2
4	00011	Sweep (fast) @ 9Hz	2500Hz-2850Hz @ 9Hz	Continuous	2850Hz continuous	2
5	00100	Netherlands – NEN 2575:2000 (Dutch Slow Whoop)	500 – 1200Hz for 3.5s, 0.5s OFF	Continuous	825Hz continuous	4
6	00101	German DIN 33 404	1200Hz – 500Hz Sweep 1s (1Hz)	Continuous	825Hz Continuous	2
7	00110	Swedish Fire Signal	660Hz 0.15s ON, 0.15s OFF	Swedish All Clear	660Hz Continuous	6
8	00111	Australia Fast-rise Sweep (AS1670:4-2004 Evacuation tone)	3x (500Hz - 1200Hz for 0.5s, 0.5s off), 1s off	Australia AS1670:4 2004 Alert tone	420Hz 0.625s ON, 0.625s OFF	4(2)
9	01000	New Zealand Slow-rise Sweep Evacuation Tone (NZS 4512)	500Hz – 1200Hz, 3.75s Sweep, 0.25s OFF	New Zealand Alert Tone (NZS 4512)	420Hz 0.625s ON, 0.625s OFF	4(2)
10	01001	US Temporal LF (ISO 8201) Low tone	3x(970Hz 0.5s ON, 0.5s OFF), 1s OFF	Continuous	970Hz Continuous	4
11	01010	US Temporal HF ISO 8201 High tone	3x(2850Hz 0.5s ON, 0.5s OFF), 1s OFF	Continuous	2850Hz continuous	4
12	01011	Simulated Bell – Continuous	827Hz for 16ms followed by 990Hz for 16ms.	Simulated Bell – Intermittent	827Hz for 16ms followed by 990Hz for 16ms for 1s then 1s off	2
13	01100	Emergency Warning Siren	600Hz – 1200Hz 4s followed by 1200 – 600Hz 4s	Emergency Warning Siren All Clear	1200Hz Continuous	2(1)
14	01101	France – AFNOR NF S 32 001	554Hz, 0.1s, 440Hz, 0.4s	Continuous	970Hz Continuous	2

WIRELESS FIRE ALARM CONSULTANT SPECIFICATION



WIRELESS FIRE ALARM CONSULTANT SPECIFICATION

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WIRELESS FIRE ALARM CONSULTANT SPECIFICATION

1: Scope of work

2: Standards and specifications

1: Scope of work

To design, supply and install a Wireless Fire Alarm Detection and Alarm System in accordance with the details specified herein and in accordance with the supplied drawings.

2: Standards and specifications

2.1 Manufacturer requirements

The manufacturer of the system equipment shall be regularly monitored under a quality assurance program that meets the current ISO 9001 requirements.

2.2 Fire alarm contractor requirements

The fire alarm contractor shall be responsible for the design, installation, commissioning and maintenance of the wireless fire detection and alarm system. The use of subcontractors for any of these duties must be agreed at the time of submitting the proposal.

The fire alarm contractor shall be BAFE certificated (or similar), alternatively a minimum of 5 years' experience in designing, installing, commissioning and the maintenance of wireless fire detection and alarm systems is acceptable.

The fire alarm contractor shall have available a complete set of technical manuals for all the equipment installed. This must cover the technical specification, system design recommendations and guidelines for installation, commissioning, operating, and maintaining the wireless equipment.

2.3 Product requirements

The equipment proposed for the wireless fire detection and alarm system shall be approved by an accredited organisation to the following standards:

- **BS EN 54-2:1997+A1:2006** – Control and Indicating Equipment
- **BS EN 54-3:2001** – Fire alarm devices: sounders
- **BS EN 54-4:1998** – Power supply equipment
- **BS EN 54-5:2001** – Heat detectors: Point detectors
- **BS EN 54-7:2001** – Smoke detectors: point detectors using scattered light, transmitted light or ionization
- **BS EN 54-11:2001** – Manual call points
- **BS EN 54-17:2005** – Short-circuit isolators
- **BS EN 54-18:2005** – Input/output devices
- **BS EN 54-23:2010** – Fire alarm devices. Visual alarm devices
- **BS EN 54-25:2008** – Components using radio links

2.4 System requirements

The fire detection and alarm system shall be designed, installed, and maintained to the relevant British and European standards (typically BS5839-1) or relevant code of practice.

3: Specification for wireless fire alarm system

3.1 General

The system shall have the capability to be used either as a standalone wireless solution or allow wired field devices to be combined on the same loop wiring as the wireless loop-interface modules to form a seamless hybrid system. This will be controlled by an analogue addressable fire alarm control panel.

The wireless fire alarm system shall be analogue addressable, and devices are to be installed throughout the areas nominated as part of the system design. The system shall consist of analogue addressable fire detection, wireless smoke and heat detectors, manual call points, sounders and visual alarm devices which use an 868MHz frequency to communicate with the wireless infrastructure devices, through to the fire alarm control panel.

The wireless translator shall sit on the loop and communicate with the wireless devices. The communications are interpreted by the fire alarm control panel and information is sent back to the devices.

The site shall have a full radio survey ensuring the required

signal headroom is adhered to as stated in EN54-25.

The fire alarm panel shall meet the requirements of the relevant EN and British standards including EN54-2 and EN54-4. Each loop of the fire alarm control panel shall have the capacity to allow the installation of up to 126 devices.

The wireless elements of the system shall have the capacity to be programmed and commissioned on site or pre-programmed off site from drawings and/or survey results.

3.2 Wireless system configuration

The loop-interface module will be loop powered by the fire alarm control panel. The fire alarm control panel shall be capable of supporting multiple loop-interfaces per loop, maximum of ten.

Each loop-interface shall be capable of communicating with 32 devices in total.

The field devices shall operate across 22 pairs of radio channels (primary and secondary, redundant channels).

The system shall utilise the licence free 868MHz range.

The system shall incorporate redundant channel technology between all field devices and loop-interfaces.

The system shall incorporate fully synchronised outputs. All field devices shall utilise automatic and independent amplitude control and will optimise its wireless output to fit the device location and site conditions.

Each loop-interface shall have a unique site code preventing any interference with other systems on the site or nearby.

All wireless field devices shall be powered by an internal power source consisting of easily replaceable lithium batteries of standard manufacture. Each power source shall be monitored and capable of reporting is condition to the loop-interface. When the battery capacity is low, a low battery condition shall be indicated at the loop-interface as well as a fault code at the CIE, allowing 30 days of normal use for the batteries to be replaced.

4: System infrastructure devices

4.1 Loop-interface module specification

General

The system shall utilise loop-interface modules to integrate the wired and wireless elements of the fire alarm system. The loop-interface module shall translate all of the analogue and digital messages from radio devices into protocol messages to be handled via the fire alarm control panel.

The loop-interface module shall be powered by the loop and not require a dedicated power supply. Loop-interface modules shall include loop isolation in each unit. An EN54-4 PSU may be used in parallel to support the translator radio functions in the event of a loop failure.

The loop-interface module may be used with any fire alarm control panel supporting the Apollo XP95 open protocol and the control panel will fully monitor the status of the loop-interface module and associated wireless devices.

The loop-interface module shall be wall mounted and include an anti-tamper switch which is monitored by the fire alarm control panel.

The loop-interface module shall provide an embedded LCD display and physical buttons for configuration of the wireless system and associated field devices. Additional hardware and software shall not be required.

Functionality

Each loop-interface shall be capable of communicating with 32 field devices.

It shall be possible to connect to a maximum of 10 loop-interface modules to a CIE with a 500mA loop driver.

Each loop-interface shall support a maximum of 22 radio channel pairs within a 200m radius. It shall be possible to repeat use of radio channels when a minimum of 100m spacing is maintained between loop-interfaces utilising the same radio channel.

It shall be possible to install and operate a maximum of 22 loop-interfaces with unique radio channel pairs.

Each loop-interface module shall be capable of switching to a secondary redundant radio channel to communicate with unresponsive field devices.

It shall be possible to view the background noise via the on-board loop-interface screen. Loop-interface modules shall be fully monitored by the fire alarm control equipment.

Loop-interface modules shall be programmed without the need of special tools or software. Loop-interface modules shall be rated to at least IP65.

The loop-interface module shall indicate power, fault and alarm events via three independent LEDs on the front of the module.

It shall be possible to add/remove/replace devices to the systems configuration using the on-board loop-interface LCD display and physical buttons, without the need for additional hardware or software not included.

Compliance

Translator modules shall be approved by an independent accredited approval body to EN54-17, -18, -25 and the Radio Equipment Directive (RED).

5: System field devices

5.1 Wireless Dual-Optical Smoke Detector Specification

General

The wireless dual-optical smoke detector shall be low profile in appearance and shall use the light scattering principle to measure smoke density. The detector will send digital communication through the system to the fire alarm control panel.

The wireless dual-optical smoke detector shall be powered by two commercially available CR123A 3v lithium batteries in the detector head.

The wireless dual-optical smoke detector shall be ceiling mounted and include an anti-tamper switch which is monitored by the fire alarm control panel.

The wireless dual optical smoke detector shall be available in white and black plastic colour.

Functionality

Wireless dual optical smoke detectors shall provide the following features: dual channel optics, automatic drift compensation and adjustable sensitivity settings.

It shall be possible to activate remote detector functions from the CIE.

Each wireless dual-optical smoke detector shall be capable of switching to a secondary redundant channel.

The wireless dual optical smoke detectors can operate across 22 pairs of field channels. Wireless dual optical smoke detectors shall be fully monitored by the fire alarm control equipment.

The wireless dual optical smoke detector shall include bi-coloured LEDs for visual status indication.

The wireless dual optical smoke detectors shall have a manufacturer's recommended battery life of up to 10 years.

The wireless dual optical smoke detectors shall have a facility to lock the detector to the base via means of a grub screw.

Wireless dual optical smoke detectors shall be rated to at least IP40.

The wireless dual optical detector shall contain a device identification tab within the base.

It shall be possible to add/remove /replace devices to the systems configuration using the on-board

loop-interface LCD display and physical buttons, without the need for additional hardware or software not included.

Compliance

Wireless dual optical smoke detectors shall be approved by an independent accredited approval body to EN54-7, -25 and the Radio Equipment Directive (RED).

The detector shall operate on the 868MHz frequency band.

5: System field devices continued

5.2 Wireless heat detector specification

General

The wireless heat detector shall be low profile in appearance and shall use a thermistor to measure the thermal conditions caused by fire. The detector will send digital communication through the system to the fire alarm control panel.

The wireless heat detector shall be powered by two commercially available CR123A 3v lithium batteries in the detector head.

The wireless heat detector shall be ceiling mounted and include an anti-tamper switch which is monitored by the fire alarm control panel.

The wireless heat detector shall be available in white and black plastic colour.

Functionality

Wireless heat detectors shall have two modes of operation, either BS static profile or A1R rate of rise profile. It shall be possible to select the desired mode of operation via the loop-interface module.

It shall be possible to activate remote detector functions from the CIE.

Each wireless heat detector shall be capable of switching to a secondary redundant channel.

The wireless heat detectors can operate across 22 pairs of field channels.

Wireless heat detectors shall be fully monitored by the fire alarm control equipment.

The wireless heat detector shall include bi-coloured LEDs for visual status indication.

The wireless heat detectors shall have a manufacturer's recommended battery life of up to 10 years.

The wireless heat detectors shall have a facility to lock the detector to the base via means of a grub screw.

Wireless heat detectors shall be rated to at least IP40.

The wireless heat detector shall contain a device identification tab within the base.

It shall be possible to add/remove/replace devices to the systems configuration using the on-board loop-interface LCD display and physical buttons, without the need for additional hardware or software not included.

Compliance

Wireless heat detectors shall be approved by an independent accredited approval body to EN54-5, -25 and the Radio Equipment Directive (RED).

The detector shall operate on the 868MHz frequency band.

5: System field devices continued

5.3 Wireless multi-sensor detector specification

General

The wireless multi-sensor detector shall be low profile in appearance and shall use the light scattering principle to measure smoke density and a thermistor to measure the thermal conditions caused by fire. The detector will send digital communication through the system to the fire alarm control panel.

The wireless multi-sensor detector shall be powered by two commercially available CR123A 3v lithium batteries in the detector head.

The wireless multi-sensor detector shall be ceiling mounted and include an anti-tamper switch which is monitored by the fire alarm control panel.

The wireless multi-sensor detector shall be available in white and black plastic colour.

Functionality

Wireless multi-sensor detectors shall combine both dual optical smoke and heat detection technologies for improved performance.

It shall be possible to activate remote detector functions from the CIE.

Each wireless multi-sensor detector shall be capable of switching to a secondary redundant channel. The wireless multi-sensor detectors can operate across 22 pairs of field channels.

Wireless multi-sensor detectors shall be fully monitored by the fire alarm control equipment. The wireless multi-sensor detector shall include bi-coloured LEDs for visual status indication.

The wireless multi-sensor detectors shall have a manufacturer's recommended battery life of up to 10 years.

The wireless multi-sensor detectors shall have a facility to lock the detector to the base via means of a grub screw.

Wireless multi-sensor detectors shall be rated to at least IP40.

The wireless multi-sensor detector shall contain a device identification tab within the base.

It shall be possible to add/

remove/replace devices to the systems configuration using the on-board loop-interface LCD display and physical buttons, without the need for additional hardware or software not included.

Compliance

Wireless multi-sensor detectors shall be approved by an independent accredited approval body to EN54-5, -7, -25 and the Radio Equipment Directive (RED).

The detector shall operate on the 868MHz frequency band.

5: System field devices continued

5.4 Wireless manual call point specification

General

The wireless manual call point shall be of a resettable type using a push-button with an included transparent hinged cover to protect the device from accidental activation. Use of the transparent hinged cover is optional.

The wireless manual call point shall be powered by two commercially available CR123A 3v lithium batteries.

The wireless manual call point shall be wall mounted and include an anti-tamper switch which is monitored by the fire alarm control panel.

Functionality

Wireless manual call points shall have a clear visual indication that they have been activated with a special tool required to reset them.

It shall be possible to activate remote functions from the CIE.

Each wireless manual call point shall be capable of switching to a secondary redundant channel.

The wireless manual call point can operate across 22 pairs of field channels.

Wireless manual call point shall be fully monitored by the fire alarm control equipment.

The wireless manual call point shall include bi-coloured LEDs for visual status indication.

The wireless manual call point shall have a manufacturer's recommended battery life of up to 10 years.

The wireless manual call points shall be secured to their mounting box with a special tool required to remove the front cover.

Wireless manual call points shall be rated to at least IP30. It shall be possible to add/remove/replace devices to the systems configuration using the on-board loop-interface LCD display and physical buttons, without the need for additional hardware or software not included.

Compliance

Wireless manual call points shall be approved by an independent accredited approval body to EN54-11,

-25 and the Radio Equipment Directive (RED).

The call point shall operate on the 868MHz frequency band.

5: System field devices continued

5.5 Wireless output module specification

General

The wireless output module shall provide the facility to control third party equipment by interfacing and using wireless communication back to the infrastructure devices and fire alarm control panel.

The wireless output module shall be powered by two commercially available CR123A 3v lithium batteries.

The wireless output module shall include an anti-tamper switch which is monitored by the fire alarm control panel.

It shall be possible to add/remove /replace devices to the systems configuration using the on-board loop-interface LCD display and physical buttons, without the need for additional hardware or software not included.

Functionality

Wireless output modules shall provide a 24V DC switched output with the 24V DC being supplied by an external EN54-4 approved PSU.

The relay internal to the output module will be rated at 30V DC

with a max switch rating of 2 Amp.

The relay internal to the output module shall have options for a normally open and normally closed which will switch when activated.

Cause and effect to control the activation of the input will be configured within fire alarm control panel. The wireless output module must also be capable of providing a fault monitored output.

It shall be possible to activate remote functions from the CIE.

Each wireless output module shall be capable of switching to a secondary redundant channel. The wireless output module can operate across 22 pairs of field channels.

Wireless output module shall be fully monitored by the fire alarm control equipment.

The wireless output module shall have a manufacturer's recommended battery life of up to 5 years.

Wireless output module shall be rated to at least IP65. It shall be possible to add/

remove/replace devices to the systems configuration using the on-board loop-interface LCD display and physical buttons, without the need for additional hardware or software not included.

Compliance

Wireless output modules shall be approved by an independent accredited approval body to EN54-18, -25 and the Radio Equipment Directive (RED).

The module shall operate on the 868MHz frequency band.

5: System field devices continued

5.6 Wireless input module specification

General

The wireless input module shall provide the facility to monitor and interface with third party equipment by interfacing via wireless with the fire alarm control panel.

The wireless input module shall be powered by two commercially available CR123A 3v lithium batteries.

The wireless input module shall include an anti-tamper switch which is monitored by the fire alarm control panel.

Functionality

Wireless input modules shall provide a single monitored input for the monitoring of third-party equipment.

Cause and effect to control the activation of the input will be configured within fire alarm control panel.

The wireless input module must also be capable of providing a fault monitored fire active input.

Each wireless input module shall be capable of switching to a secondary redundant channel.

The wireless input module can operate across 22 pairs of field channels.

Wireless input module shall be fully monitored by the fire alarm control equipment.

The wireless input module shall have a manufacturer's recommended battery life of up to 10 years.

Wireless input module shall be rated to at least IP65. It shall be possible to add/remove/replace devices to the systems configuration using the on-board loop-interface LCD display and physical buttons, without the need for additional hardware or software not included.

Compliance

Wireless input modules shall be approved by an independent accredited approval body to EN54-18, -25 and the Radio Equipment Directive (RED).

The module shall operate on the 868MHz frequency band.

5: System field devices continued

5.7 Wireless base sounder specification

General

The wireless base sounder shall be capable of being used alongside a wireless detector or standalone with a cap, providing audible warning of fire events.

The wireless base sounder shall be powered by two commercially available CR123A 3v lithium batteries.

The wireless base sounder shall include an anti-tamper switch which is monitored by the fire alarm control panel.

It shall be possible to add/remove/replace devices to the systems configuration using the on-board loop-interface LCD display and physical buttons, without the need for additional hardware or software not included.

The wireless sounder base shall be available in white and black plastic colour.

Functionality

Wireless base sounders shall provide a choice of 16 tone pairs, for a total of 32 tones within the device.

Wireless base sounders shall have a typical sound output of 88 to 91dB(A).

The wireless base sounders shall have 4 volume levels as standard.

The wireless base sounder shall have a primary and secondary tone option which can be controlled via the fire alarm system dependent on the evacuation or alert message which requires to be communicated.

Each wireless base sounder shall be capable of switching to a secondary redundant channel.

The wireless base sounder can operate across 22 pairs of field channels.

Wireless base sounders shall be fully monitored by the fire alarm control equipment.

The wireless base sounder shall have a manufacturer's recommended battery life of up to 5 years. Wireless base sounders shall be rated to at least IP21C.

The wireless base sounder shall be synchronised with all other output on the wireless system. It shall be possible to add/

remove/replace devices to the systems configuration using the on-board loop-interface LCD display and physical buttons, without the need for additional hardware or software not included.

Compliance

Wireless base sounders shall be approved by an independent accredited approval body to EN54-3, -25 and the Radio Equipment Directive (RED). The base shall operate on the 868MHz frequency band.

5: System field devices continued

5.8 Wireless base sounder VAD specification

General

The wireless base sounder VAD shall be capable of being used alongside a wireless detector or standalone with a cap, providing visual and audible warning of fire events.

The wireless base sounder VAD shall be powered by two commercially available CR123A 3v lithium batteries.

The wireless base sounder VAD shall include an anti-tamper switch which is monitored by the fire alarm control panel.

The wireless base sounder VAD shall be available in white and black plastic colour.

Functionality

Wireless base sounder VAD shall provide a choice of 16 tone pairs, for a total of 32 tones within the device.

Wireless wall sounder VADs should include a silent tone for VAD-only operation.

Wireless base sounders VAD shall have a typical sound output of 88 to 91dB(A).

The wireless base sounder VADs shall have 4 volume levels as standard.

The wireless base sounder VADs shall have a primary and secondary tone option which can be controlled via the fire alarm system dependent on the evacuation or alert message which requires to be communicated.

The wireless base sounder VAD should offer red or white-flash options.

The wireless base sounder VAD shall have two visual alarm settings which are high or low.

The wireless base sounder VAD shall have a C-3-15 setting in high power mode.

The wireless base sounder VAD shall have a C-3-10 setting in low power mode.

Each wireless base sounder VADs shall be capable of switching to a secondary redundant channel.

The wireless base sounder VAD can operate across 22 pairs of field channels.

Wireless base sounder VADs shall be fully monitored by the fire alarm control equipment.

The wireless base sounder VAD shall have a manufacturer's recommended battery life of up to 5 years.

Wireless base sounder VADs shall be rated to at least IP21C.

The wireless base sounder VADs shall be synchronised with all other output on the wireless system. It shall be possible to add/remove/replace devices to the systems configuration using the on-board loop-interface LCD display and physical buttons, without the need for additional hardware or software not included.

Compliance

Wireless base sounder VADs shall be approved by an independent accredited approval body to EN54-3, -23, -25 and the Radio Equipment Directive (RED).

The base shall operate on the 868MHz frequency band.

5: System field devices continued

5.9 Wireless wall sounder specification

General

The wireless wall sounder shall provide audible warning of fire events.

The wireless wall sounder shall be powered by two commercially available CR123A 3v lithium batteries.

The wireless wall sounder shall include an anti-tamper switch which is monitored by the fire alarm control panel.

Functionality

Wireless wall sounders shall provide a choice of 16 tone pairs, for a total of 32 tones within the device.

Wireless wall sounders shall have a typical sound output of 88 to 91dB(A).

The wireless wall sounders shall have 3 volume levels as standard.

The wireless wall sounders shall be in red or white plastics.

The wireless wall sounders shall have a primary and secondary tone option which can be controlled via the fire

alarm system dependent on the evacuation or alert message which requires to be communicated.

Each wireless wall sounder shall be capable of switching to a secondary redundant channel.

The wireless wall sounder can operate across 22 pairs of field channels.

Wireless wall sounder shall be fully monitored by the fire alarm control equipment.

The wireless wall sounder shall have a manufacturer's recommended battery life of up to 5 years.

Wireless wall sounders shall be IP rated to IPX5.

The wireless wall sounder shall be synchronised with all other output on the wireless system.

It shall be possible to add/remove/replace devices to the systems configuration using the on-board loop-interface LCD display and physical buttons, without the need for additional hardware or software not included.

Compliance

Wireless wall sounders shall

be approved by an independent accredited approval body to EN54-3, -25 and the Radio Equipment Directive (RED).

The sounder shall operate on the 868MHz frequency band.

5: System field devices continued

5.10 Wireless wall sounder VAD specification

General

The wireless wall sounder VADs shall provide visual and audible warning of fire events.

The wireless wall sounder VAD shall be powered by two commercially available CR123A 3v lithium batteries.

The wireless wall sounder VAD shall include an anti-tamper switch which is monitored by the fire alarm control panel.

Functionality

Wireless wall sounder VADs shall provide a choice of 16 tone pairs, for a total of 32 tones within the device.

Wireless wall sounder VADs should include a silent tone for VAD-only operation.

Wireless wall sounder VADs shall have a typical sound output of 88 to 91dB(A).

The wireless wall sounder VADs shall have 3 volume levels as standard.

The wireless wall sounder VADs shall be red or white in body colour.

The wireless wall sounder VADs shall have a primary and secondary tone option which can be controlled via the fire alarm system dependent on the evacuation or alert message which requires to be communicated.

The wireless wall sounder VAD shall have a W-2.5-7 rating.

Each wireless wall sounder VAD shall be capable of switching to a secondary redundant channel.

The wireless wall sounder VAD can operate across 22 pairs of field channels.

Wireless wall sounder VAD shall be fully monitored by the fire alarm control equipment.

The wireless wall sounder VAD shall have a manufacturer's recommended battery life of up to 5 years.

Wireless wall sounder VADs shall be IP rated to IPX5. The wireless wall sounder VAD shall be synchronised with all other output on the wireless system.

It shall be possible to add/remove/replace devices to the systems configuration using the

on-board loop-interface LCD display and physical buttons, without the need for additional hardware or software not included.

Compliance

Wireless wall sounder VADs shall be approved by an independent accredited approval body to EN54-3, -25 and the Radio Equipment Directive (RED).

The sounder shall operate on the 868MHz frequency band.

6: Software and diagnostic tools

6.1 Wireless survey kit specification

General

The wireless survey kit shall enable signal strength to be tested between infrastructure devices and field devices to provide the fire alarm contractor with a report on how the system shall be configured.

Functionality

The wireless survey kit shall provide information on signal strength, background noise, ideal channel for installation and packet loss %.

The wireless survey kit shall provide information via the on-board/embedded LCD Display.

The wireless survey kit shall provide information via the portable survey device on-board dual-colour LED. The wireless survey kit shall provide signal strength information via a continuous scan.

The wireless survey kit shall provide signal strength information within 8 seconds.

Per device, the wireless survey kit shall provide a good, marginal, or bad signal strength value.

The wireless survey kit should not require any additional hardware or software not included.

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For survey and installation support and 'how-to' videos, visit: youtube.com/c/ApolloFireDetectorsHowTo

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