REACH Wireless®

Sounder VAD Base

Manufacturer's Specification

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 3 V, 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)
Dimensions	129 mm diameter x 54 mm height
Weight (including batteries)	190 g

Product overview

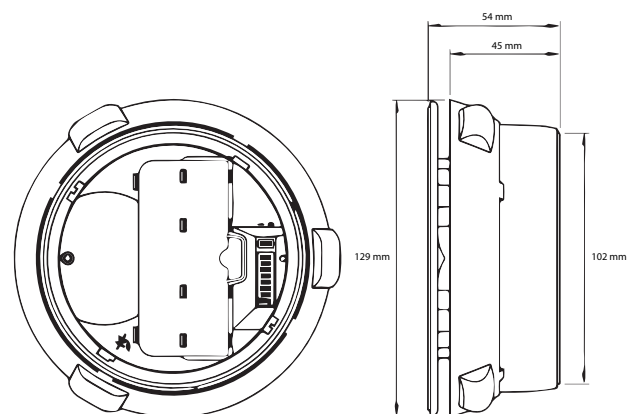|	
Product	REACH Wireless Sounder VAD Base
Part No.	RW1300-210APO (White Flash) RW1300-211APO (Red Flash)
Product	REACH Wireless Sounder VAD Base – Black Body
Part No.	RW1300-260APO (White Flash)
Digital Communication	Apollo protocol compatibility is handled via the Loop-Interface device, RW1700-030APO. *See product for more detail.*

Product information

The RW1300-210APO, RW1300-211APO and RW1300-260APO 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

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Status LED

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

Table 1: REACH Wireless Device Status & LED Indication		
Device Status	LED Indication	
	Tamper Not Activated	Tamper Activated
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	LED off
Activation	LED off	Red on
Battery Faults	LED off	Amber blinking every 5s
Tamper Fault	LED off	
Replaced	Blinks amber two times	

Tone & Volume Selection DIP Switch Settings
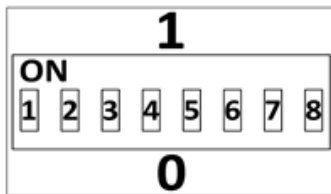
Device Addressing

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

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	REACH Wireless Heat Detector
RW1000-460APO	REACH Wireless Heat Detector - Black Body
RW1000-600APO	REACH Wireless Optical Smoke Detector
RW1000-660APO	REACH Wireless Optical Smoke Detector - Black Body
RW1000-700APO	REACH Wireless Multisensor Optical/Heat Detector
RW1000-760APO	REACH Wireless Multi-Sensor Detector (Optical/Heat) - Black Body

Table 6: 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

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 datasheets 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 Sounder VAD Base complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described in this datasheet.

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

Construction Products Regulation (EU) 305/2011

The REACH Wireless Sounder VAD 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 Number *Apollo Approved Tone*	DIP Switch Value	Primary Tone (Evacuation) Temporal Pattern Icon	Temporal Pattern Description	Frequencies	Secondary Tone (Alert) Temporal Pattern Icon	Temporal Pattern Descriptions	Frequencies
1*	0000	(icon)	Apollo Fire Systems Evacuate Tone	660Hz for 0.5s, 925Hz for 0.5s	(icon)	Apollo Fire Systems Alert Tone	1s off, 925Hz for 1s
2*	00001	(icon)	Alternating Warble (Hochiki & Fulleon)	925Hz for 0.25s, 626Hz for 0.25s	(icon)	Continuous (Hochiki & Fulleon)	925Hz
3*	00010	(icon)	Sweep (med) @ 1Hz	800Hz - 970Hz @ 1Hz	(icon)	Continuous	970Hz Continuous (BS5839-1:2002)
4*	00011	(icon)	Sweep (fast) @ 9 Hz	2500Hz-2850Hz @ 9Hz	(icon)	Continuous	2850Hz continuous
5*	00100	(icon)	Netherlands -NEN 2575:2000 (Dutch Slow Whoop)	500 – 1200Hz for 3.5s, 0.5s OFF	(icon)	Continuous	825Hz continuous
6*	00101	(icon)	German DIN 33 404	1200Hz – 500Hz Sweep 1s (1Hz)	(icon)	Continuous	825Hz continuous
7*	00110	(icon)	Swedish Fire Signal	660Hz 0.15s ON, 0.15s OFF	(icon)	Swedish All Clear	660Hz Continuous
8	00111	(icon)	Australia Fast-rise Sweep (AS1670:4-2004 Evacuation tone)	3x (500Hz - 1200Hz for 0.5s, 0.5s off), 1s OFF	(icon)	Australia AS1670:4-2004 Alert tone	420Hz 0.625s ON, 0.625s OFF
9	01000	(icon)	New Zealand Slow-rise Sweep Evacuation Tone (NZS 4512)	500Hz – 1200Hz, 3.75s Sweep, 0.25s OFF	(icon)	New Zealand Alert Tone (NZS 4512)	420Hz 0.625s ON, 0.625s OFF
10	01001	(icon)	US Temporal LF (ISO 8201 Low Tone)	3x(970Hz 0.5s ON, 0.5s OFF), 1s OFF	(icon)	Continuous	970Hz Continuous
11	01010	(icon)	US Temporal HF (ISO 8201) High Tone	3x(2850Hz 0.5s ON, 0.5s OFF), 1s OFF	(icon)	Continuous	2850Hz continuous
12	01011	(icon)	Simulated Bell - Continuous	827Hz for 16ms followed by 990Hz for 16ms.	(icon)	Simulated Bell - Intermittent	827Hz for 16ms followed by 990Hz for 16ms for 1s then 1s off.
13	01100	(icon)	Emergency Warning Siren	600Hz – 1200Hz 4s followed by 1200 – 600Hz 4s	(icon)	Emergency Warning Siren All Clear	1200Hz Continuous
14	01101	(icon)	France - AFNOR NF S 32 001	554Hz, 0.1s, 440Hz, 0.4s	(icon)	Continuous	970Hz Continuous
15	01110	(icon)	Australia Evacuation (AS7240-3)	520Hz, 0.5s ON, 0.5s OFF x 3, 1s OFF	(icon)	Australia Alert (AS7240-3)	520Hz +/-5%, 0.5s ON, 3.5s OFF
16	10000	(icon)	Silent Tone (REACH Wireless ONLY)	0Hz Continuous	(icon)	Silent Tone (Reach Wireless ONLY)	0Hz Continuous