REACH Wireless®

Output Module

Product overview

Product	**REACH Wireless Output Module**
Part No.	**RW1700-052APO**
Digital Communication	**Apollo protocol compatibility is handled via the Loop-Interface device, RW1700-030APO.** *See product for more detail.*

Approvals

CE UKCA

Technical data

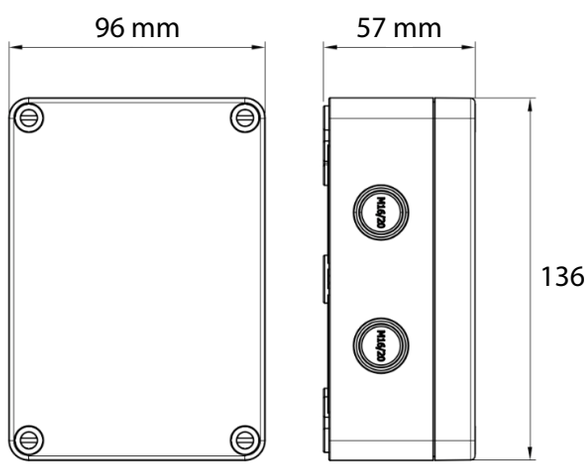
All data is supplied subject to change without notice. Specifications are typical at 24 V, 25°C and 50% RH unless otherwise stated.

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	*4 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*

Product information

The RW1700-052APO REACH Wireless Output Module is a wireless analogue addressable interface which allows simple integration of third-party equipment with the fire system. The unit is powered entirely from its internal battery supply and is fitted as standard with both a set of change over relay contacts and a 12/24V dc output. The output is capable of supplying power for operating low current third party equipment directly from the internal batteries.

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



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Operating Principles

The RW1700-052APO REACH Wireless Output 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	
	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 1s
Battery Faults	LED off	Amber blinking every 5s
Tamper Fault	LED off	
Replaced	Blinks amber two times	

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 datasheets 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 Output Module 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

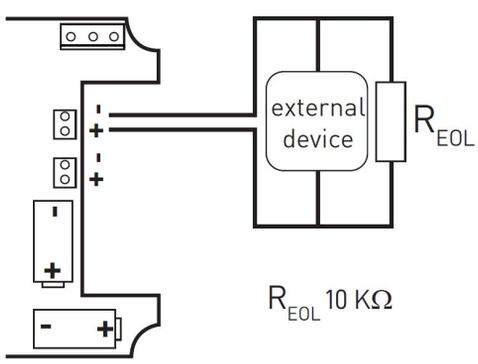
The REACH Wireless Output Module complies with the essential requirements of the Construction Products Regulation (EU) 305/2011

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

Table 2: REACH Wireless Connection Requirements

Port A	Voltage Setting				Max Load Current	
Output	12V				100 mA	
	24V				50 mA	
Output Supervision	End of Line Impedance Limits				Module Status	Notes
	Min	Typ	Max	Units		
	6.5	10	14	kΩ	Normal	-
	0	-	2.4	kΩ	Fault	Short Circuit
	14.2	-	+∞	kΩ	Fault	Open Circuit
R_{EOL}	8	10	12	kΩ	-	-
Port B	End of Line Impedance Limits				Module Status	Notes
	Min	Typ	Max	Units		
Relay Supervision	6.5	10	14	kΩ	Normal	-
	0	-	2.4	kΩ	Fault	Short Circuit
	14.2	-	+∞	kΩ	Fault	Open Circuit
R_{EOL}	8	10	12	kΩ	-	-
Port A	Voltage Setting				Max Load Current	
Output	30 V				2 A	

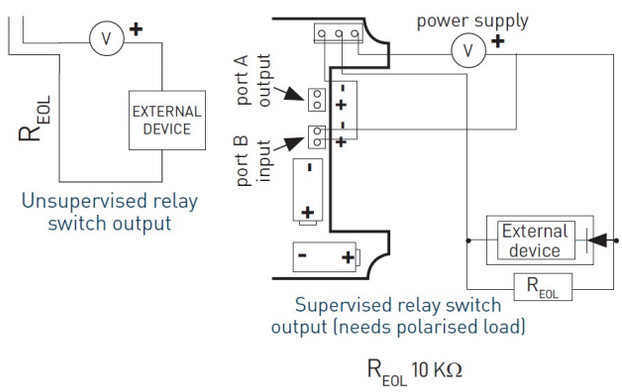
Wiring Example 1: 100 mA / 12 Vdc or 50 mA / 24 Vdc External Device Driving Capability



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

If you fail to install these resistors correctly the device will not operate as intended.

Wiring Example 2: Relay Switch Output



Ensure the device connected to the unit is not drawing more than 2 A at 30V (no 220 VAC). Drawing too much current through the output relay or connecting mains voltage could possibly damage the unit and void warranty.

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