Ampac

Fire detection and evacuation solutions that save lives.

Reach Wireless Loop Interface Module

Features

- 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

Description

The Reach 916 Wireless Loop Interface Module provides a bi-directional communications link between the wired XP95 addressable detection loop and the remote Reach wireless detection & alarm devices. The Loop Interface is powered by the wired detection loop and incorporates a short circuit isolator. The Loop Interface allows fully intelligent and seamless integration of the wireless devices with the addressable fire detection and alarm system. The Loop Interface uses cutting edge wireless technology and a proprietary orthogonal antenna design to ensure the highest levels of life safety and system reliability is maintained.

System Limit

The number of Loop Interfaces per loop is determined by the following limits:

- Available RF channel Pairs.

There are 22 available for 916Mhz 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.

- Available loop current.

40mA is required per Loop Interface. Best practice 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 drop).

- Available Protocol Addresses.

XP95 protocol supports up to 126 addresses per loop. All Reach wireless devices take a loop address, including AV bases, I/Os and the Loop Interface. Each Loop Interface can pair with up to 32 devices, for a maximum of 33 loop addresses per Loop Interface. This may limit the number of Reach products that can be paired with the Loop Interface if not enough addresses are available on the wired addressable loop.

Specifications

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	95% (non condensing)
IP Rating	IP 65
Standards and approvals	AS7240.17, AS7240.18,AS7240.25
Dimensions	236mm W x 160mm H x 70 mm D
Weight	700 g

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

Item Numbers

Reach Loop Interface Module	4110-2101
Reach Loop Interface Module (black)	4110-2121

Ampac

Fire detection and evacuation solutions that save lives.

Reach Wireless Loop Interface Module

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.

Device Addressing

The Loop Interface allows 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 XPERT cards are not required.

Communication

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

The Loop Interface translates the wireless communication into wired XP95 protocol communication, with each device addressable individually by the fire panel.

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.

Tamper detection is not signaled visually by the device LED.

Table 1 - Reach 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
BRIGDE FAULT	Communications error between internal micros	Fault LED steady on

Dimensions