ZP3AB-NLM3

ZP3 Series, Class-A Network Loop Module

General

The ZP3AB-NLM network loop module enables individual ZP3 control panels to be connected in a peer to peer, secure loop network. If there is an open or short circuit present on the network wiring, the NLMs determine where the fault lies, isolate the faulty section of wiring and maintain full loop integrity.

Total cable length throughout the network can be up to a maximum of two kilometres and may be extended by setting designated NLM modules as booster units (contact Ziton technical support department for full details). Communication between loop modules operates by RS485 protocol over screened, twisted pair wiring.

Unique address on the network loop

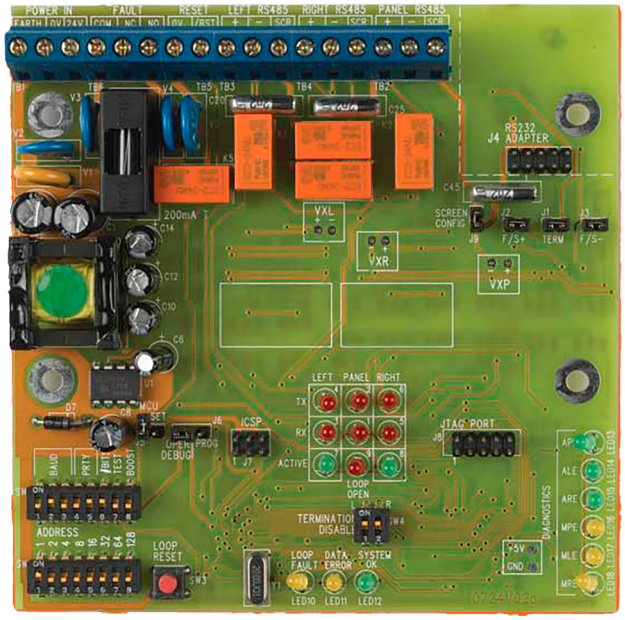
ZP3AB-NLM3 modules connect to ZP3 control panels via a ZP3AB-NET1 card and are designed to fit onto an auxiliary chassis inside each control panel or auxiliary equipment cabinet. Each ZP3 control panel is connected to the loop network through an ZP3AB-NLM3 module. All modules incorporate switch settings enabling them to be assigned a unique loop address. An output fault signal is provided by a volt free, changeover relay with contacts rated at 1A at 230VDC/30VAC.

Diagnostic and system indication

In each network loop, one module must be set to address 1 and designated as the master. This device manages the healing sequence and monitors loop integrity. All other modules are connected to the network loop in slave mode.

In slave mode modules can operate in multiple modes:
* Boost - serving as an interconnection between panels at distances over 1000 metres
* Healing – establishing the condition of the loop and isolating sections if necessary
* Recovered – normal condition after a section isolation
* Diagnostic – system interrogation to establish the location of a break in the loop wiring

In addition to indications of data being transmitted and received from each port, LED indicators are also provided for System OK, Loop Fault, Loop Open and Data Error.



Details

- Provides a secure loop network
- Enhanced LED diagnostics
- Boost mode for long cable runs
- Propagation time periods for third party equipment operation
- Communications' screen isolation between input and output channels

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Technical specifications

General

Status indicaton	LED: Tx and Rx per port (Red x6) LED: Left port active (Green) LED: Right port active (Green) LED: System OK (Green) LED: Loop open (Red) LED: Loop fault (Amber) LED: Data error (Amber)
Compatibility	ZP3 control panels
Connectivity	RS485

Electrical

Current consumption	100 mA max. (from ZP3, 24 VDC panel supply) 40 mA (Quiescent)

Output

Fault signalling	Fault relay: voltage free changeover 1 A at 30 VDC / 30 VAC

Physical

Form factor	PCB
Physical dimensions	120 x 120 x 23 mm (W x H x D)
Net weight	120 g
Mounting type	I kabinettet

Environmental

Operating temperature	-10 to +45ºC (mounted in panel enclosure)
IP rating	IP00 - EN60529 rating

Mounting

	ZP3-AC1 auxiliary chassis, within ZP3 panel enclosure or auxiliary box

Wiring

	Two cores twisted screened pair - 0.5 mm^2 minimum. Recommended 0.6 mm^2, 60 pF/m

Cable length

	Max. cable length across network 2 km. Networks greater than 2 km via NLMs configured as boosters

Max number of modules

	64 (per unboosted cable segment)

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