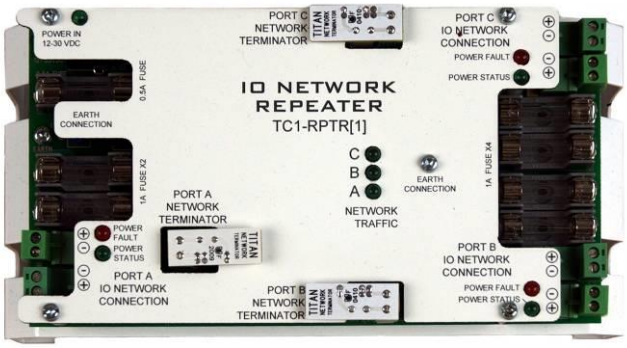
# I/O Network Repeater Board RCP

The I/O Network Repeater provides power and signal regeneration for I/O network communications. It also facilitates network branching and provides isolation for each independently powered segment of the I/O network.

The I/O Network Repeater for RCP consists of an I/O Network Repeater board on a relay control panel mount for installation in Titan combination panels.

## Applications




The I/O Network Repeater is used to regenerate the digital communications signal on I/O Network wire runs more than 300 meters and whenever a branch in the network wiring is required.

I/O Network Repeaters are also used to segregate the I/O Network into powered segments, with the devices in each segment powered by a separate Titan I/O Network Power Supply. The I/O Network Repeater provides power isolation between the powered segments (see the illustration on the next page).

The I/O Network Repeater is also available in a complete module (TC-IORE/C) consisting of an I/O Network Power Supply board, an I/O Network Repeater board, and a 24-volt AC power transformer mounted in a white powder-coated aluminum enclosure.

## Alternatives

Passive Couplers (**TC-PASC**) may be used where branching is not required and total I/O network lengths are short (less than 300 meters).

## Features

- 3-Port design accommodates free topology network branching for ease of wiring.
- Modules are powered by Network power on Port A. No requirement for supplementary power.
- EMI Choke – reduces interference generated by devices emitting high frequency ‘noise’.
- Led Status lights indicate proper wiring and network operation.
- Complete digital re-construction of degraded signals, allowing very long networks with many in-line repeaters with no loss of performance.
- Up to nine repeaters may be connected in series, creating I/O network lengths of many kilometers.

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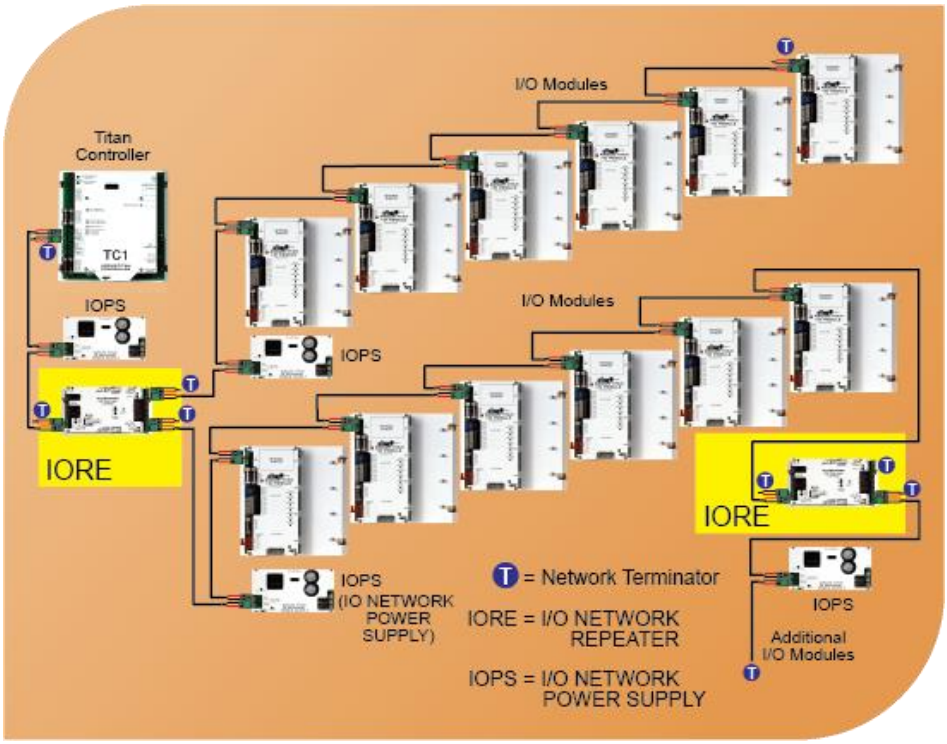
## *S p e c i f i c a t i o n s*

| | |
|---|---|
| **Dimensions** | 4.5”H x 9”W x 3”D |
| **Power Requirement** | Power is normally provided via an I/O Network Power Supply on the powered segment that is connected to Port A. An alternative local power source (12-30 VDC >100mA) must be supplied if Port A is not used. |
| **Maximum Network Segment Distance** | Limited by I²R power losses (voltage drop) and signal degradation (up to 1500 meters per segment). |
| **I/O Device Network Cable** | Argus part number: CAB- 2C18G/TITAN, West Penn Wire - Aquaseal AQ224, 2-conductor, 18-gauge cable, suitable for outdoor use (direct burial), indoor trays, moisture & UV resistant. NO SUBSTITUTIONS – USE OF THIS EXACT WIRE IS CRITICAL FOR PROPER NETWORK COMMUNICATION |

## *W i r i n g D e t a i l s*




IOREs are highlighted in yellow.

In the example, one IORE is being used as an I/O Network Branch point and the other is used to extend the network length.

**Example I/O Network Configuration**: Each I/O Network is custom engineered to suit the physical layout of the controlled applications and the distances spanned.

For installation, refer to the custom drawings supplied with the control system.

## *A d d i t i o n a l I n f o r m a t i o n*

For more information, please contact Argus.

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