



## Features

- LONWORKS™ communication
- Flexible, configurable control strategies
- Standalone operation
- 16 universal inputs  
12 universal outputs
- Two-piece construction -  
Direct field connection possible
- Fast connection with spring cage terminals
- High resolution analog-to-digital conversion
- Protected inputs&outputs

The ION1612 for LONWORKS™ networks is a universal configurable controller that can be used to interface with a variety of building systems including heating, ventilation, air-conditioning (HVAC) systems.

Universal inputs are used to convert sensor readings. All inputs are freely configurable for connection to PT1000 type temperature sensing elements, 0-10 Vdc voltage signals, or potential free contacts. 4-20 mA current signals can be connected by means of an external fixed resistor (500 Ohms).

Universal outputs provide signals for operating actuators and relays. All outputs are configurable for 0-10 V or 2-10 V signals, direct or reverse acting. A relay board can be used to drive on/off loads.

All inputs and outputs are protected against short circuits to ground and against direct connection up to 24 Vac.

The module utilizes a Neuron® chip and an FTT-10A free topology transceiver for communication on a LONWORKS™ bus.

Configuration of the individual inputs and outputs, as well as control strategies, are affected through configuration parameters (CPTs) accessible through the LON bus.

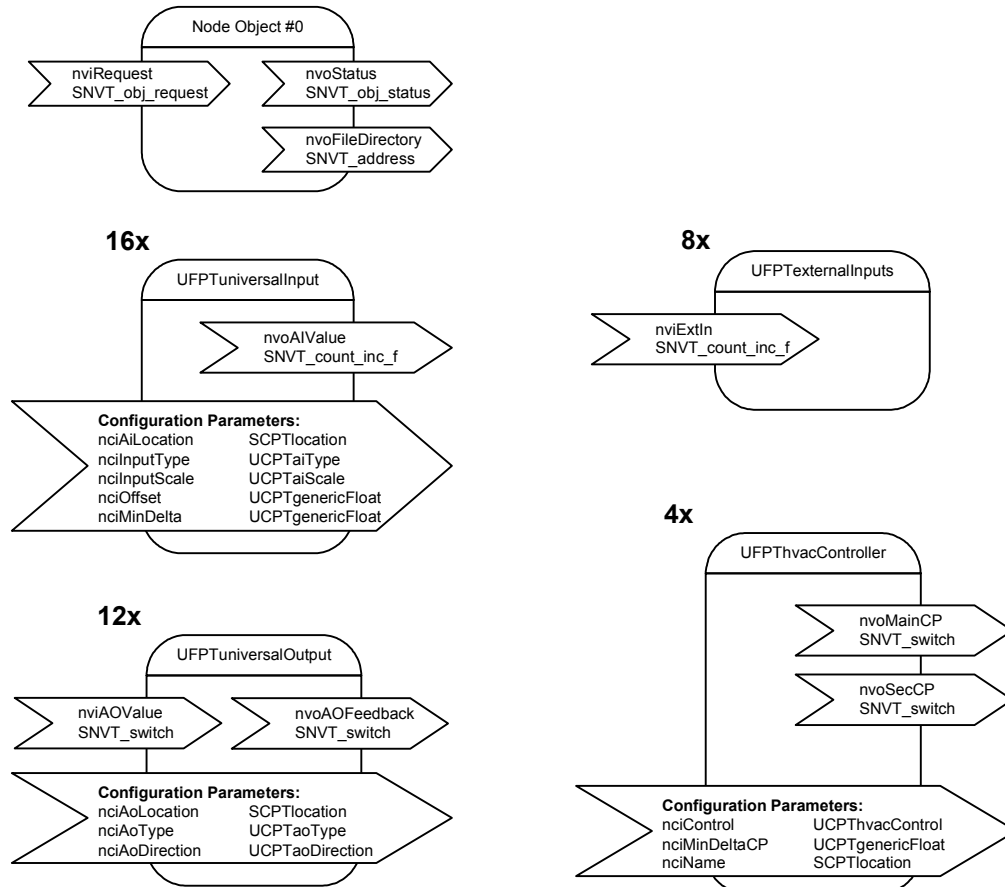
Multiple control strategies include basic PI control, outdoor air reset, cascade control, high/low limiting, output sequencing, frost protection and overrides. Inputs and outputs can be freely assigned to any control strategy. External network variable inputs are provided, allowing values from other devices to be included in control strategies (e.g. shared outdoor air sensor).

The quick snap-in housing allows fast locking onto standard 35 mm DIN rails. Spring terminals on a separate terminal block, connected via a flat ribbon cable, allow fast and secure connections.

## Specifications

Neuron Chip	Neuron 3150
Transceiver type	FTT-10A, LPT-10 compatible
Data rate	78 Kbps
Supply	24 V AC +%10 -%15, 50/60Hz
Power	5 VA
Universal inputs	- 0(2)-10 Vdc - 0(4)-20 mA (with external 500-ohm resistor) - PT1000 temperature (0.05 degree resolution) - Voltage-free contact  Update frequency : < 1 sec NV type : SNVT_count_inc_f
Universal Outputs	0(2)-10 Vdc, 2 mA max  NV type : SNVT_switch, 0-100% Direction : direct/reverse configurable
Housing	PPO/Polycarbonate (UL 94 V-0) For 35 mm DIN rail mounting  Connections Network : plug-in, 2-way Power : plug-in, 3-way I/O : flat ribbon cable to terminal block
Terminal Block	Phoenix Contact part no. UM45-FLK34/ZFKDS Spring cage connection, for cables up to 1.5mm <sup>2</sup>
Dimensions (mm)	Module : 157 x 86 x 60 Terminal block : 110 x 45 x 50 Ribbon cable : length = 300 mm
Ambient Temperature	0...50 °C
Storage Temperature	-25...+75 °C
Relative Humidity	5...95% RH, non-condensing

## Functional Profile



## ACCESSORIES



### Power Distribution Block

Allows convenient distribution of 24 vac power and ground to actuators and active sensors.

Used in combination with the standard I/O terminal block, all field cables can be directly connected, without requiring intermediary terminals.

- Phoenix Contact part no FLK-PVB 2/24
- Screw connection terminals for connections up to 2.5 mm<sup>2</sup>.
- Two potentials distributed to 12 terminals each.

### 4-channel Relay Board RK4

Allows connecting on/off loads, such as fans and pumps, to universal outputs.

- 4 relay outputs
- Contacts 5A @ 250VAC / 30VDC
- Supply 24 Vac/dc, 4 VA
- Plug-in terminals