

### ADVANCED POINT STATUS MONITORING FOR ACS/BAS

Neural Net is an integrated Access Control and Building Automation concept based on LonWorks® Technology, and with the power and functionality of a PLC. Neural Net is an intelligent and fully distributed system, where each panel is a stand-alone unit. All I/O's on the panel are programmable with ordinary PLC programming.

### LONWORKS

Network Topology is free of choice. Star, Loop, and Buss Topology can be used and mixed freely. A panel or a group of panels can be connected to the Intra/Internet via a LonWorks to Ethernet Router.

With an open standard LonTalk® SNVT communication, the system is inter-operable with a broad range of other LonWorks based products and systems. Switch contact monitoring, Control of Lighting, Heating, Ventilation, Energy Consumption, and CCTV are just some of the integration options.

### FLEXIBILITY

Neural Net supports a distributed Peer-to-Peer functionality between I/O Points across panels on a network: An I/O Point on one panel can directly control functions on another panel.

Think BIG, start small. One panel may be enough, but when more I/O's are needed, the system is expandable with more Access Control and Smart PLC panels. 64 panels are possible on the same net segment. Segments connect via Repeaters, and the total number of panels can run into the thousands.

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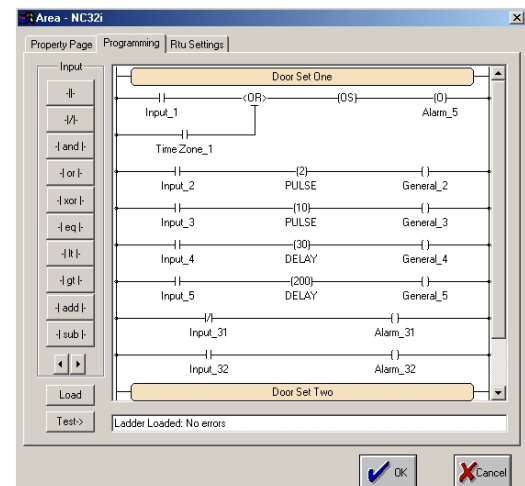
## NEURAL NET 32-IN-12V

### SPECIFICATIONS

- 32 Non-Supervised or Supervised Inputs which are software configurable as Digital or Analog.
- All Inputs are over voltage clamp protected and series current limited.
- 32 LED indicators, one for each Input.
- Additional onboard indicators for diagnostics. Power, Processor Health, Transmit, and Service.
- 725 Transactions in battery backed database FIFO storage. Oldest transactions are overwritten by newest after buffer is full.
- Transaction buffer can maintain stored transactions for at least a year.
- Supply of 12VDC power for monitored point source power. Inputs are source driven.
- All I/Os are programmable through the Ladder Logic such as AND, OR, and IF operators. Also, across panels through peer-to-peer operation.
- 32-IN-12V plugs into Neural standard 3 and 7-slot rack style back planes (BP-3 or BP-7).
- Field termination is through plug in connectors.
- LonTalk Communication Port TP/FT-10 78Kbit.
- Supports Star, Loop, and Buss Network Topology.
- Ethernet connection via LonWorks – TCP/IP Gateway.

### GLOBAL FACILITY MANAGER

With Neural Net GFM software (Global Facility Manager), all functions and I/O in the entire system are under control from a fully configurable graphical interface. GFM is a WinNT/2000 based multi-user system with facilities such as a Cardholder database with integrated Badging, CCTV Camera and animated Real Time Point Status on Dynamic Graphic Screens.



Example of Ladder Logic Screen in GFM

# Technical Data

## General

- 32 Point switch-contact monitoring device.
- Multiplexes point status data into LonTalk messages.
- Database holds 725 transactions.
- On-Board Real Time Clock.
- P32-IN-S or P32-IN-SNVT Neuron Chip communication I/O processor required. Processor is sold separate and plug onto main board.
- Programmable I/O's with Smart PLC programming through GFM Host Software Package.
- Requires Neural 3 or 7 slot back plane for mounting. Sold separately (BP-3 or BP-7).

## Power Supply

- 12-15VDC @ 1.35Amps maximum (100mA-400mA typical).

## Inputs

- 32 Non-Supervised or Supervised Inputs which are software configurable.
- 1 Panel Tamper Input (point 33 through back plane).
- 32 software General Points internal.
- Total of 32 inputs configurable as digital input or as analog input detectors for 0-12V @ 10 samples per second with 12mV resolution. Typical current is 10mA @ 12VDC for each input. Supervised and analog are typically less.

## Outputs

- No physical outputs.

## Communication

- 78 KBPS TP/FT-10 transceiver port for LON bus host interface and Peer-to-Peer functionality.
- 1250 KBPS Twisted Pair Direct Connect transceiver port for back plane interface communication.

## Termination

- Programming Port RJ45 connector via separate back plane.
- Inputs are removable screw terminals for up to 12 AWG wire.

## Dimensions

- PC board with connectors, 1.125 inches wide x 11 inches high x 4.5 inches deep.

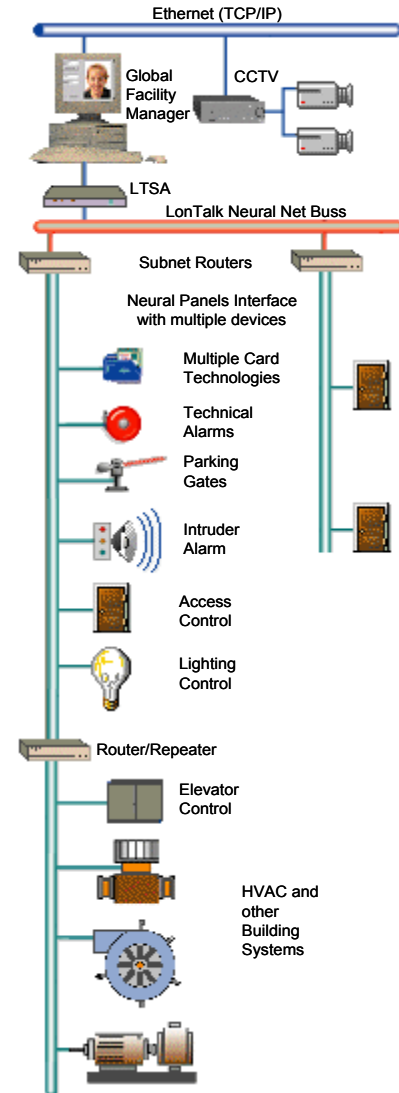
## Ordering Information

- Order part number **32-IN-12V** for each Point Status Monitoring board.
- Order part number **P32-IN-S** for Processor board.
- Order part number **P32-IN-SNVT** for Processor board with LonTalk SNVT communications.

# NEURAL NET 32-IN-12V

## Typical Neural Net Configuration

GFM connects to the Neural Net Buss via a LTSA (LonTalk Serial Adapter). Larger installations are often divided into subnets on a Neural Net Backbone. Up to 253 subnets with up to 127 nodes per subnet are possible in one domain. Subnets are divided into segments of up to 64 node per segment via a Neural Net Buss Repeater.



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