

(+) ———
 (-) ———
 LonWorks Network
 LonWorks Network

5 VDC Output
 (20mA Maximum)
 (+) Analog Input
 (-) Analog Common

INSTALLATION

READ THESE INSTRUCTIONS BEFORE YOU BEGIN INSTALLATION.

Ground yourself before touching board. The Neuron microprocessor on the bottom of this product and the FTT-10A transceiver on the top are very sensitive to electrostatic discharge. Keep product in the snap-track at all times, especially when powered.

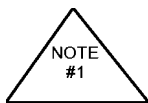
MOUNTING:

If circuit board slides out of snap track, a nonconductive “stop” may be required. Use only fingers to remove board from snap track. Slide out of snap track or push against side of snap track and lift that side of the circuit board to remove. Do not flex board. Use no tools.

POWER CONNECTIONS - THIS PRODUCT ACCEPTS 24 VOLTS AC OR DC POWER.

Be sure to follow all local and electrical codes. Refer to wiring diagram for connection information.

- 1) The power supply output voltage should be measured at the interface terminals and isolated from earth ground, chassis ground, and neutral leg of the primary winding. Any field device connected to this transformer must use the same common. If you are not sure of other field device configuration, use separate transformers. Failure to follow these procedures can result in improper operation.
- 2) If the 24 volt AC power is shared with devices that have coils such as relays, solenoids, or other inductors, each coil must have an MOV, AC Transorb, or other spike snubbing device across each of the shared coils. Without these snubbers, coils produce very large voltage spikes when de-energizing that can cause malfunction or destruction of electronic circuits.
- 3) If the 24 volt DC power is shared with devices that have coils such as relays, solenoids, or other inductors, each coil must have an MOV, DC Transorb, or a diode placed across the coil or inductor. The cathode or banded side of the diode (or DC Transorb) connects to the positive side of the power supply.
- 4) You should measure the actual voltage output of the secondary. If the output is not fully loaded you may read a higher voltage than the circuit board can handle.



SETUP AND CHECKOUT

Use only with LonWorks FTT-10A free topology networks.

Jumper Shunt Selections: Select analog feedback range by correctly placing jumper shunts on jumper shunt block J1 as shown in diagram above.

Connect DC analog feedback input signal to terminals "IN" and "COM". Connection of a potentiometer feedback from an actuator motor is as follows: Connect the wiper to the "IN" terminal, connections from either end of the potentiometer to the "COM" (common) and "EXC" (excitation 5 VDC @ 20 mA maximum). See detail on page 1.

Connect Up and Down output signal wires to "C" and "NO" or "C" and "NC" on the UP and the DN terminal strip (on the end of the LMP) depending on action required to drive the motor in one direction or the other. Connect 24 VAC or 24 VDC to "24V" and "C". Connect LonWorks network to NET and NET (not polarity sensitive).

Supply power to terminals "24V" and "C" and the red LED power indicator will light and the green LED will blink once rapidly and turn off. This indicates the LMP is functioning properly. Any other LED action indicates a malfunction.

The green LED will illuminate when the service switch is pressed to identify the node to the network, and anytime a WINK command is received.

Board programmed software includes Standard Network Variable Types (SNVT's) containing values for the analog input.

INPUT NETWORK VARIABLES

Name	nviRequest (nv index 0)
Description	This input allows the user to poll and/or control the node, or any object within it.
Self Documentation String	sd_string("@0 1.Request Node Status")
Type	SNVT_obj_request
Valid Range	object_id: 0=node, 1=Analog Sensor, 2=Relay1, 3=Relay2 Commands: RQ_NORMAL, RQ_DISABLED RQ_UPDATE_STATUS, RQ_REPORT_MASK
Default Value When Programmed	0 NORMAL
Default Value When Reset	0 NORMAL
Non-Volatile Memory?	No
Name	nviRelay1 (nv index 5)
Description	This object allows the user to directly control the output of Relay #1 of the node.
Self Documentation String	sd_string("@2 1.Relay1 Output")
Type	SNVT_switch
Valid Range	Open: {state = 0, value = 0%} Closed: {state = 1, value = 100%}
Default Value When Programmed	Open: {state = 0, value = 0%}
Default Value When Reset	Open: {state = 0, value = 0%}
Non-Volatile Memory?	No
Name	nviRelay2 (nv index 7)
Description	This object allows the user to directly control the output of Relay #2 of the node.
Self Documentation String	sd_string("@3 1.Relay2 Output")
Type	SNVT_switch
Valid Range	Open: {state = 0, value = 0%} Closed: {state = 1, value = 100%}
Default Value When Programmed	Open: {state = 0, value = 0%}
Default Value When Reset	Open: {state = 0, value = 0%}
Non-Volatile Memory?	No

Name nvoRelay1FB (nv index 6)
Description Reports the status of the output of Relay #1.
Self Documentation String sd_string("@2|2.Relay1 Feedback")
Type SNVT_switch
Valid Range Open: {state = 0, value = 0%}
 Closed: {state = 1, value = 100%}
Default Value When Programmed Open: {state = 0, value = 0%}
Default Value When Reset Open: {state = 0, value = 0%}
Non-Volatile Memory? No

Name nvoRelay2FB (nv index 8)
Description Reports the status of the output of Relay #2.
Self Documentation String sd_string("@3|2.Relay2 Feedback")
Type SNVT_switch
Valid Range Open: {state = 0, value = 0%}
 Closed: {state = 1, value = 100%}
Default Value When Programmed Open: {state = 0, value = 0%}
Default Value When Reset Open: {state = 0, value = 0%}
Non-Volatile Memory? No

Power Consumption:	100 mA maximum at 24 VDC and 180 mA maximum 24 VAC
5 Selectable Input Signal Ranges/Impedance:	0-5 VDC/1,500,000 ohms 0-10 VDC/200,000 ohms 0-20 mA/249 ohms 10K ohm thermistor (20K ohm "pull up" resistor installed on LMP) Resistance (3-wire) input for motor position feedback All inputs have over and under voltage protection.
Accuracy	All ranges +/- 1% of full scale output
Output Signal Ranges:	Two Form C Relays independently controlled by LonWorks network "EXC" - 5 VDC with current limited to 20mA
Field Programmable using:	VisualControl™ Software (see www.visualcontrol.com)