LON Talk
Controller

H8920-2

NF500G3
POWERLINK G3
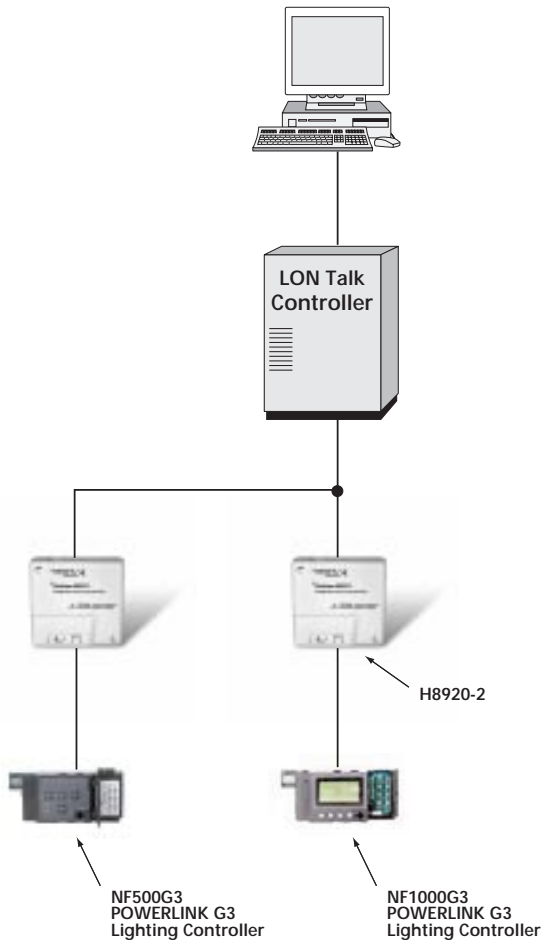Lighting Controller

NF1000G3
POWERLINK G3
Lighting Controller

H8920-2
POWERLINK™ G3 *to*
LON Talk® Integration Node

VERIS INDUSTRIES

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®

OPERATION

The POWERLINK™ G3 to LON Talk Integration Node allows for the integration of the Modbus output Square D Lighting Control product to a LON Works control/ monitoring system.

Groups of circuit breakers "zones" can be controlled by using LON Talk input variables which are translated to Modbus commands by the H8920-2.

- *This product is not intended for life or safety applications. This product is not intended for installation in hazardous or classified locations.*
- *Potential electrocution hazard exists. This is a Class 2 low voltage device. Install only in Class 2 environments.*
- *Read instructions thoroughly prior to installation.*

Applications

- Lighting Control
- Energy Management
- Demand Shedding

Easy Integration to LON Networks

- Easy cost-effective integration to LON Works® Systems...makes open connectivity possible.

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POWERLINK™ is a trademark of Square D Company/Schneider Electric.
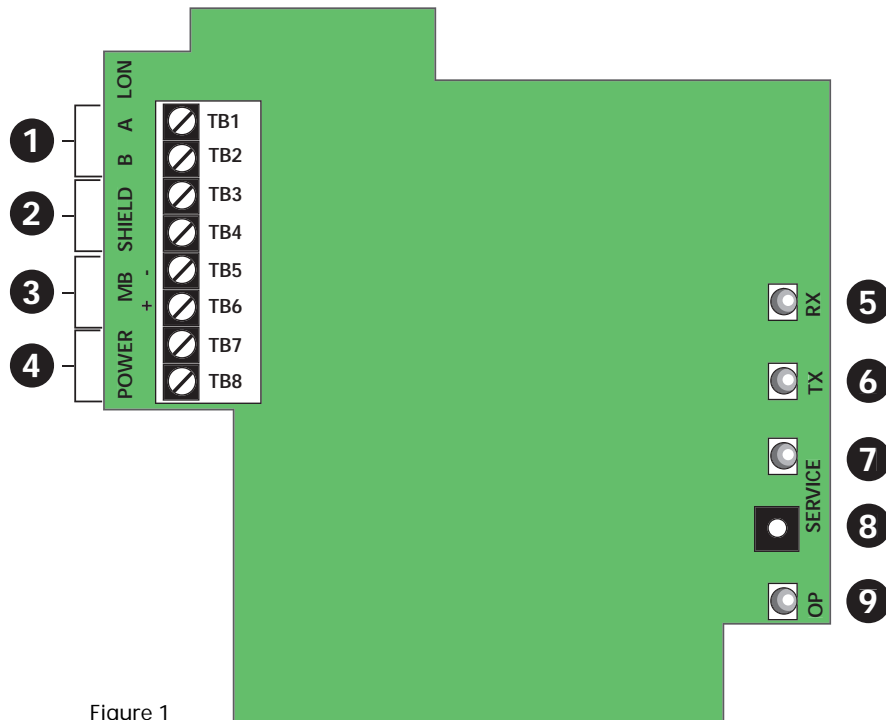
COMPONENT LOCATIONS

Figure 1

1. **LON Talk Terminal Block**
    Make connections to the LON Network at these terminals.

2. **Shield Terminal Block**
    Share this terminal block to provide communications shielding for both the LON Talk and Modbus communications networks.

3. **Modbus Terminal Block**
    Make connections to the POWERLINK G3 controller here.

4. **12-24 VDC, 24 VAC Power**
    Two wire system power terminal block. Connect to POWERLINK G3 accessory power terminals.

5. **RX LED**
    Indicates reception of Modbus network data.

6. **TX LED**
    Indicates transmission of Modbus network data.

7. **Service LED**
    Standard LON Works Service LED. Used in concert with the Service Switch to locally view the commissioning status of the device.

    LED status after the service switch is pushed:
    ON, then OFF solid = Device has been commissioned by a network tool.

    BLINK AT 1/2 Hz. rate = Device has not been commissioned by a network tool.

    ON, OFF, then solid ON = Device does not have an application.

8. **Identification Service Switch**
    Standard LonWorks Service Switch. Used in concert with the Service LED to locally view the commissioning status of the device.

9. **OP LED**
    Normally on. The OP LED will blink off whenever there is an incomplete data exchange between the POWERLINK G3 and the LON node. An always off indication means that the POWERLINK G3 is not responding to data requests. This will occur if the POWERLINK G3 is disconnected or unpowered.

PHYSICAL INSTALLATION

1. Remove screws from the lid of the H8920-2 housing. Lift lid and remove wire guide caps. Set to the side with the lid.

2. Bring the POWERLINK G3 network cable to the Modbus terminal block marked -MB+. Be sure to thread wires through wire guide before terminating. Connect the (+) to TB6. Connect the (-) wire to TB5. Connect the shield wire to TB4.

3. Bring the LON Works network cable to the terminal block marked BA LON. Be sure to thread wires through wire guide before terminating. Connect the A wire to TB1. Connect the B wire to TB2. Connect the LON network shield wire to TB3.

4. Connect the 24 VDC power wires from POWERLINK G3 to TB7 and TB8. The power terminal is not polarity sensitive.

5. Thread wires through the most convenient openings in the housing.

6. Re-attach the lid and snap wire guides into place. Replace screws to hold the housing together.
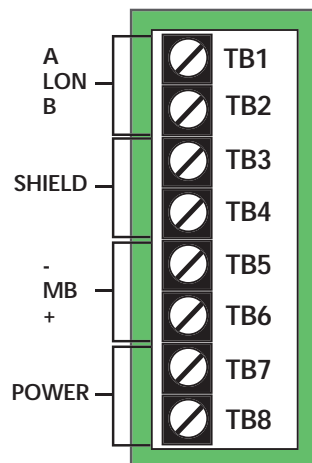

Figure 2

7. Mount the H8920-2. The device can be flush mounted to a wall, screw mounted to a 2 or 4s electrical encosure, or nipple mounted to an existing enclosure. The H8920-2 must be mounted in a class 2 environment.

8. Refer to POWERLINK G3 controller instruction bulletin for connection of the Modbus network and 24 VDC power wires to the POWERLINK G3 controller.

OPERATION AND CONFIGURATION

Operation
The node continuously polls the controller for zone status and breaker non-responding information. All output network variables are immediately updated with this received data. If a control network variable is updated with a change in state, it is sent to the controller to command the zone. All data exchanged between the node and POWERLINK G3 control module is fully check summed to ensure data integrity. If corrupt data is detected, or if no response is received, the output network variables are not updated and retain their previous value. The nvoModbus Status will be set to the ON state, indicating a ModBus failure when 5 consecutive communication errors occur. This status can be used to verify reliability of the output network variables.

POWERLINK G3 Controller
Circuit breakers need to be assigned to zones. This can be accomplished by using the controller front panel and the setup function. The controller must be set to Modbus address 1, 9600 baud, and no parity. See the POWERLINK G3 instruction bulletin for more information.

Node Identification
Wink: The LON Node will light its service LED for 5 seconds in response to a WINK command.
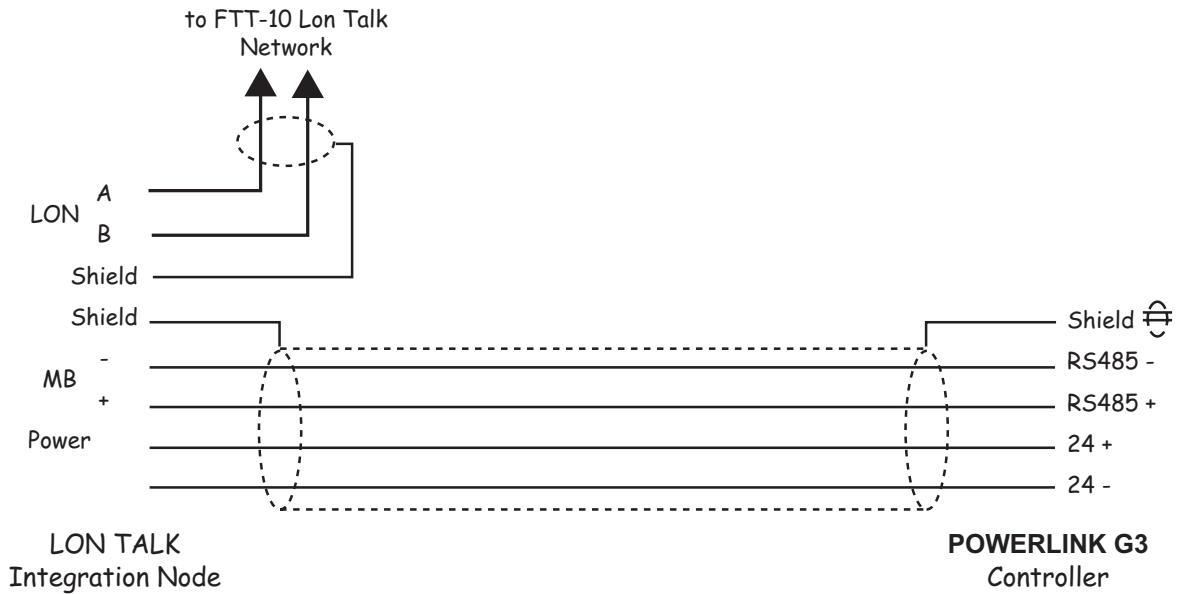
Service Pin: A service pushbutton is provided for this method of identification. (See figure 1).

Neuron ID: The Neuron ID is located on a label on the back of the device. It can be written down or peeled off as a removable sticker with bar code for easy insertion to your network.
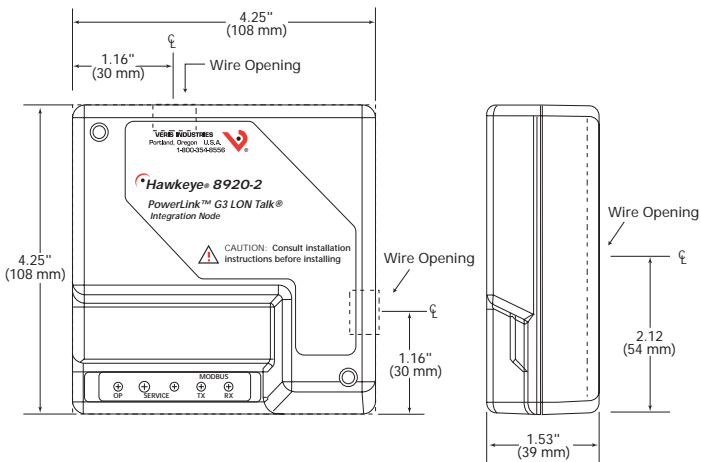
Program ID
The standard program ID for this product is 9Ø: ØØ:14:8A:ØD;Ø2:Ø4:Ø1.

WIRING/NETWORK EXAMPLE

to FTT-10 Lon Talk Network

LON A
B
Shield

Shield ·· Shield

MB -
+

RS485 -
RS485 +

Power

24 +
24 -

LON TALK
Integration Node

POWERLINK G3
Controller

DIMENSIONS

4.25"
(108 mm)

1.16"
(30 mm)

Wire Opening

Veris Industries
Portland, Oregon   U.S.A.
1-800-354-8556

Hawkeye® 8920-2

*PowerLink™ G3 LON Talk®
Integration Node*

⚠ **CAUTION:** Consult installation
instructions before installing

4.25"
(108 mm)

Wire Opening

1.16"
(30 mm)

MODBUS
OP SERVICE TX RX

Wire Opening

2.12
(54 mm)

1.53"
(39 mm)

SPECIFICATIONS

LON Works Network .... Free topology transceiver, 78 kbps
Modbus Network .... RTU 9600 BAUD, 8N1 format
Power .... 16-24 VAC/DC
Temperature Range .... 0 to 60º C
Humidity Range .... 0 - 95% non-condensing

POWERLINK™ G3 CONTROLLER

CLOSED-LOOP ACTUATOR OBJECTS

NAME	TYPE	DESCRIPTION
nviValue[0]	SNVT_switch	Zone 1 Control
nviValue[1]	SNVT_switch	Zone 2 Control
nviValue[2]	SNVT_switch	Zone 3 Control
nviValue[3]	SNVT_switch	Zone 4 Control
nviValue[4]	SNVT_switch	Zone 5 Control
nviValue[5]	SNVT_switch	Zone 6 Control
nviValue[6]	SNVT_switch	Zone 7 Control
nviValue[7]	SNVT_switch	Zone 8 Control
nviValue[8]	SNVT_switch	Zone 9 Control
nviValue[9]	SNVT_switch	Zone 10 Control
nviValue[10]	SNVT_switch	Zone 11 Control
nviValue[11]	SNVT_switch	Zone 12 Control
nviValue[12]	SNVT_switch	Zone 13 Control
nviValue[13]	SNVT_switch	Zone 14 Control
nviValue[14]	SNVT_switch	Zone 15 Control
nviValue[15]	SNVT_switch	Zone 16 Control
nvoValueFb[0]	SNVT_switch	Zone 1 State
nvoValueFb[1]	SNVT_switch	Zone 2 State
nvoValueFb[2]	SNVT_switch	Zone 3 State
nvoValueFb[3]	SNVT_switch	Zone 4 State
nvoValueFb[4]	SNVT_switch	Zone 5 State
nvoValueFb[5]	SNVT_switch	Zone 6 State
nvoValueFb[6]	SNVT_switch	Zone 7 State
nvoValueFb[7]	SNVT_switch	Zone 8 State
nvoValueFb[8]	SNVT_switch	Zone 9 State
nvoValueFb[9]	SNVT_switch	Zone 10 State
nvoValueFb[10]	SNVT_switch	Zone 11 State
nvoValueFb[11]	SNVT_switch	Zone 12 State
nvoValueFb[12]	SNVT_switch	Zone 13 State
nvoValueFb[13]	SNVT_switch	Zone 14 State
nvoValueFb[14]	SNVT_switch	Zone 15 State
nvoValueFb[15]	SNVT_switch	Zone 16 State

OPEN-LOOP SENSOR OBJECTS

NAME	TYPE	DESCRIPTION
nvoModbusStatus	SNVT_switch	ON indicates comms loss with controller
nvoNonRespPanel[0]	SNVT_switch	Breaker Non-Responding in Panel 1
nvoNonRespPanel[1]	SNVT_switch	Breaker Non-Responding in Panel 2
nvoNonRespPanel[2]	SNVT_switch	Breaker Non-Responding in Panel 3
nvoNonRespPanel[3]	SNVT_switch	Breaker Non-Responding in Panel 4
nvoNonRespPanel[4]	SNVT_switch	Breaker Non-Responding in Panel 5
nvoNonRespPanel[5]	SNVT_switch	Breaker Non-Responding in Panel 6
nvoNonRespPanel[6]	SNVT_switch	Breaker Non-Responding in Panel 7
nvoNonRespPanel[7]	SNVT_switch	Breaker Non-Responding in Panel 8

CONFIGURATION PROPERTIES

NAME	TYPE	RANGE	DESCRIPTION
nciMaxReceiveT (MaxReceiveTime)	SNVT_time_sec	0.0 .. 6553.4 sec (0.1 sec)	If no LonWorks network variable update occurs for a duration exceeding the maximum receive time, all zones will be turned ON. Default value is set to 15 minutes. (900.0 sec)