



## LNK-XT

# Network Extender Peripheral Device Operation Manual

Rev B | 2018.09

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Humidity 15 to 90% non-condensing

### CERTIFICATION

Model: LNK-XT  
S/N: LNKXT1603B00001  
Rating: 24 VDC, 1W, Class 2  
Max Temp: -20°C to 40°C (-4°F to 104°F)



CERTIFIED FOR ELECTRIC SHOCK & ELECTRICAL FIRE HAZARD ONLY. LA CERTIFICATION ACNOR COUVRE UNIQUEMENT LES RISQUES DE CHOC ELECTRIQUE ET D'INCENDIE D'ORIGINE ELECTRIQUE.

Conforms to: CSA-C22.2 No. 205-12, CSA-C22.2 No. 61010-1-12  
UL508 (Edition 17):2007, UL 61010-1 (Edition 3)

Conforms to: EMC Directive 2004/108/EC  
EN 61010-1:2010

Conforms to: FCC. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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### INTRODUCTION

The LNK-XT Network Extender Peripheral Device works as a signal booster, allowing transmission and receipt of gas readings over a larger total area. It extends the range of the Modbus® communication network allowing a longer distance between the Controller and the gas detectors. The micro controller quickly passes Modbus® information packets from the master side of the LNK-XT to the extension side, seamlessly without interruption.

Multiple LNK-XT peripheral devices may be required depending on the size of the application. An LNK-XT is recommended every 2000 ft, approximately after every 32 transmitters.

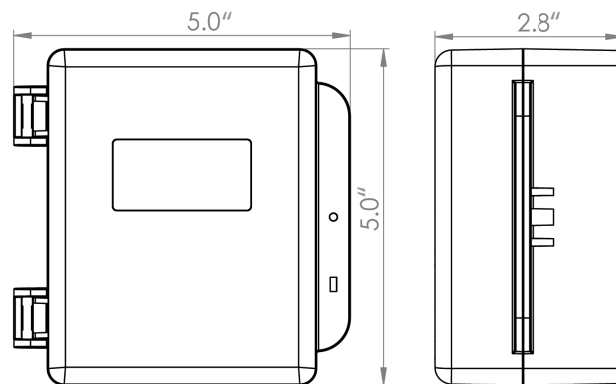
Ideal for large applications to create an efficient distribution network of specialized gas detection devices that can communicate over a large distance.

### Key Features

- » Extends transmission range of the Modbus® network
- » Boosts communication signal strength
- » Power LED indicator
- » Standard Modbus® RS-485 RTU
- » Standard water / dust tight, corrosion resistant enclosure (drip proof)

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### Standard Enclosure Dimensions



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If after reading through this manual, you have any questions, please do not hesitate to contact our service department for technical support.

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This product must be installed and inspected by a qualified electrician or factory trained technician. This instrument has not been designed to be intrinsically safe. For your safety, **do not** use it in classified hazardous areas (explosion-rated environments).

### INSTRUMENT SPECIFICATIONS

#### Technical Specifications

#### MECHANICAL

Enclosure	ABS / Polycarbonate, corrosion resistant, drip proof; Copper coated interior to reduce RF interference.
Weight	400 g (14 oz)

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### Exterior Enclosure - Front



NUMBER	FEATURE	FUNCTION
1	Door Hinge	Secures door
2	Window for LED	Indicates device is powered on.
3	Door Screw	Secures door
4	Padlock Opening	For security padlock

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Size	5.0" x 5.0" x 2.8" (127 mm x 127 mm x 71 mm)
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### USER INTERFACE

Indicator	LED green indicator for power
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### ELECTRICAL

Power Requirements	24 VDC, 1W, Class 2 (from daisy-chain wire run from controller or RPS-24VDC)
Power Consumption	0.7 Watts (power consumption of LNK-XT only)
Circuit	Programmable microprocessor
Fuse	Automatic resetting thermal

### INPUT / OUTPUT

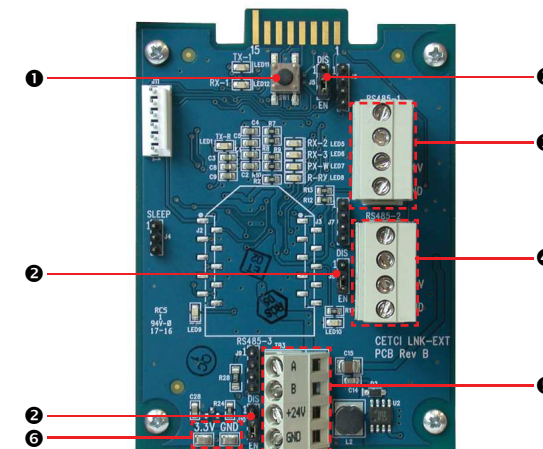
Communication	Modbus® RS-485 Baud Rate: 19,200
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### ENVIRONMENTAL

Operating Temperature	-20°C to 40°C (-4°F to 104°F)
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### Interior System Layout



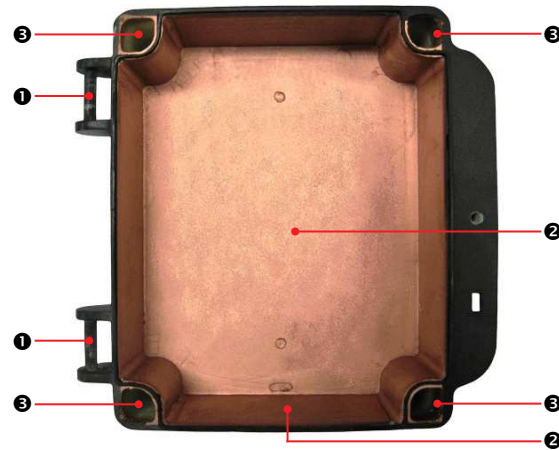
NUMBER	FEATURE	FUNCTION
1	Push Button	No function at this time

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2	Jumper Bank (J5, J8 & J10)	Termination resistors set by the factory (EN)
3	Modbus® Connector (TB1)	Terminal used to connect the devices on Modbus® Network A
4	Modbus® Connector (TB2)	Terminal used to connect the devices on Modbus® Network B
5	Modbus® Connector (TB3)	Terminal used to connect RPS-24VDC
6	Test Points TP1 GND TP2 3.3V	For testing the voltage supplied by the LNK-XT

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### Interior Enclosure - Base



NUMBER	FEATURE
1	Door Hinge
2	1/2" Conduit Entry Knockout
3	Mounting Holes

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### INSTALLATION

The LNK-XT should be installed on a flat vertical surface using the four 4.4 mm (0.175") diameter mounting holes provided to maintain water tight status. Two 12.7 mm (1/2 in) conduit entry points are provided in the enclosure. Both are located in the enclosure base. One in the rear of the base and one on the bottom edge of the base. The clearance from the PCA to the base enclosure is 12.7 mm (1/2 in). **Do not use a conduit connector that has more than 12.7 mm (1/2 in) of thread length.**

**NOTE:** When mounting the enclosure, allow enough room to allow the end user to open the door fully to access the wiring terminal.

The LNK-XT is intended for indoor use and should be protected from extreme weather conditions. The LNK-XT requires no assembly and virtually no maintenance other than ensuring that excess water or dust is not somehow entering the enclosure and physically damaging the circuit board or internal components. There are no serviceable or replaceable elements or components in this device.

### WIRING CONNECTIONS

All wiring should be run within properly grounded (earth or safety) conduit. Signal output and supply should be in shielded cable. The cable shield should

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be connected to earth ground at the controller/power supply that is providing power for the LNK-XT.

### Wiring Power Connections

The LNK-XT is a low voltage powered device. Any application of operating voltages higher than indicated in the specification may result in damage.

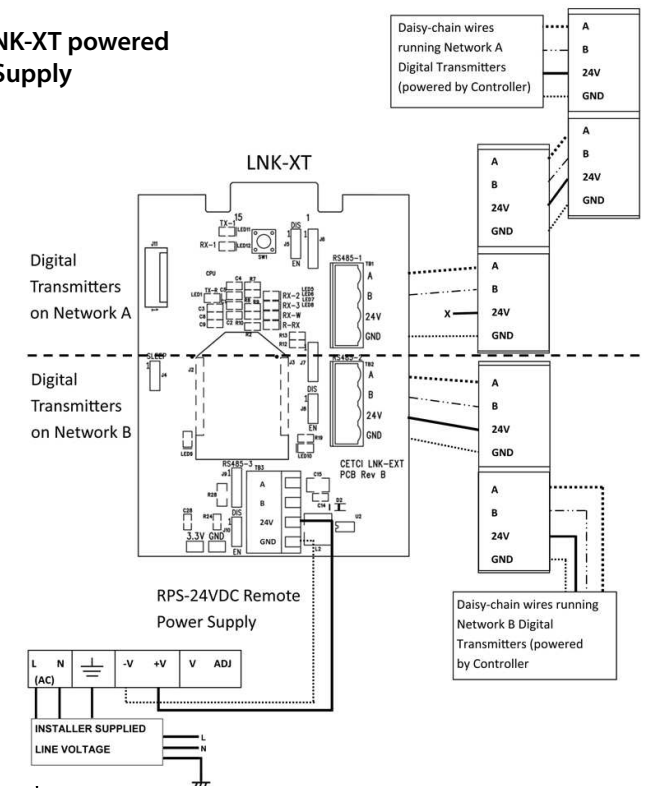
Double check wiring connections prior to powering the transmitter. Damage from incorrect wiring connections or from too much voltage applied is not covered under warranty.

External power to the LNK-XT must be supplied by a 24 VDC power supply or a Class 2 (or better) transformer and connected to the Modbus wiring terminal. The wiring should be 4-conductor shielded 16 awg stranded within conduit in a network wiring (daisy-chain) configuration.

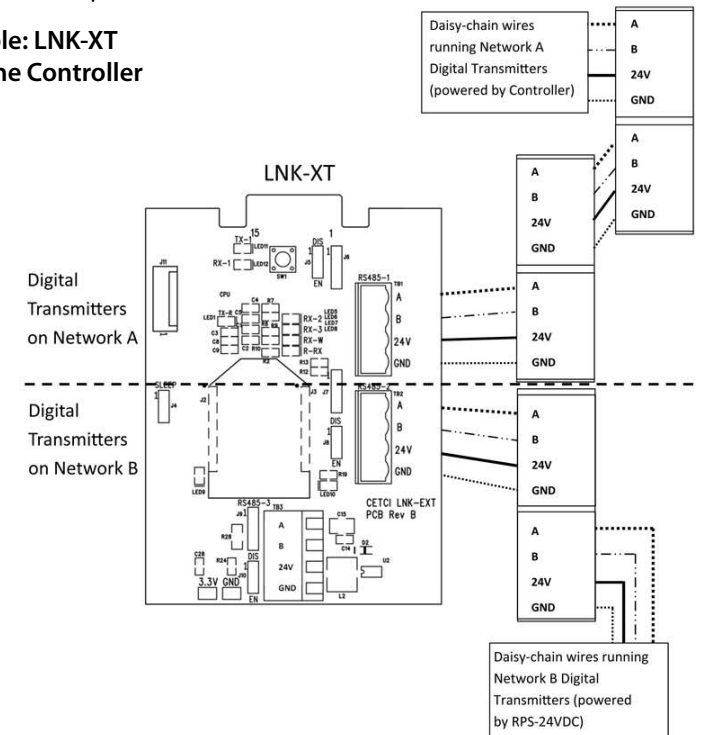
**NOTE: WARRANTY VOID IF SOLID-CORE WIRE IS USED AT THE WIRING TERMINAL STRIP.** When using solid core wiring for distribution (in the conduit), use stranded wire pigtailed 18 AWG within the enclosure to connect to the circuit board. The rigidity of solid-core wire can pull a soldered terminal strip completely off a circuit board and this will not be covered under warranty.

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### Wiring Example: LNK-XT powered by Remote Power Supply



### Wiring Example: LNK-XT powered by the Controller



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