

USER MANUAL

LPJ001A-T-R2

802.3AT POE GIGABIT INJECTOR, 1-PORT

24/7 TECHNICAL SUPPORT AT 1.877.877.2269 OR VISIT BLACKBOX.COM



TABLE OF CONTENTS

1. SPECIFICATIONS.....	3
2. OVERVIEW.....	4
2.1 Introduction.....	4
2.2 Features	4
2.3 Hardware Description	5
3. SETTING UP YOUR POWER INJECTOR	6
4. DESCRIPTION OF LED FUNCTIONS.....	7
APPENDIX A: REGULATORY INFORMATION	8
A.1 FCC Statement	8
A.2 NOM Statement	9
APPENDIX B: DISCLAIMER/TRADEMARKS	10
B.1 Disclaimer	10
B.2 Trademarks Used in this Manual	10



CHAPTER 1: SPECIFICATIONS**TABLE 1-1. SPECIFICATIONS**

SPECIFICATION	DESCRIPTION
Compliance	cUL/UL®; RoHS, CE
Load (Maximum)	0.60 A
Regulation	Line and load: 54–57 VDC under all conditions
Efficiency	Minimum 85% at max. load
Environmental	Operating Temperature: +14 to +104° F (-10 to +40° C); Storage Temperature: -4 to +158° F (-20 to +70° C); Relative Humidity: 5 to 90%
EMI	EN55032 Class B, FCC part 15 Class B
EMC	ESD: IEC61000-4-2 , Level 3 RS: IEC61000-4-3, Level 3 EFT/Burst: IEC61000-4-4, Level 2 Surge: IEC61000-4-5, Level 3 CS: IEC61000-4-6 , Level 3 Voltage Dips: IEC61000-4-11, Class 3 Harmonic: IEC61000-3-2, Class A
Isolation	42 VDC for one minute, 10 mA
Insulation Resistance	Primary to secondary: > 10 M-Ohm, 500 VDC
Overvoltage	Conforms to UL60950-1. Voltage between 2 SELV conductors shall not exceed 42.4 Vpk or 60 VDC for longer than 0.2 seconds. A limit of 71 VPK or 120 VDC shall not be exceeded. – Latching
Overcurrent	750 mA max
Short Circuit Protection	Non-Latching Auto recovery. Output can be shorted permanently without damage
Connectors	Data in: (1) RJ-45 (10/100/1000); Data/PoE out: (1) RJ-45 (10/100/1000); Power: (1) IEC 320 (3-pin); AC input: IEC320 C14 - three-wire
Indicators	(1) LED: Blue – Valid 802.3at load connected Blue and Red blink 3 times – Incorrect signature Red LED lights solid for 2 seconds – Overload indication
Power	AC input voltage: 100–240 VAC, 50–60 Hz; 0.8 A; Output: 56 V, 0.536 A; Pin 3, 6: +56 V; Pin 1, 2: Return
Size	1.18"H x 1.79"W x 5.52"D (3 x 4.5 x 14 cm)
Weight	7.04 oz. (200 g)

CHAPTER 2: OVERVIEW

2.1 INTRODUCTION

The LPJ001A-T-R2 is a high-powered Gigabit power injector that conforms to the IEEE 802.3at power standard.

As defined in 2009, this standard allows for a minimum of 25 W of power to operate with PoE equipment over a single Ethernet cable.

Use the LPJ001A-T with IP telephones, wireless access points, IP print servers, IP cameras, and Bluetooth access points.

2.2 FEATURES

- ◆ IEEE 802.3at Compliant
- ◆ DOE VI Efficiency
- ◆ EU CoC Version 5 Tier 2 Efficiency
- ◆ Compact Size
- ◆ Limited Power Source
- ◆ Three Wire Input Models
- ◆ Full Over-Voltage and Over-Current Protection
- ◆ Non-Vented Case



2.3 HARDWARE DESCRIPTION

Figure 2-1 shows the side panels of the injector. Table 2-1 describes its components.

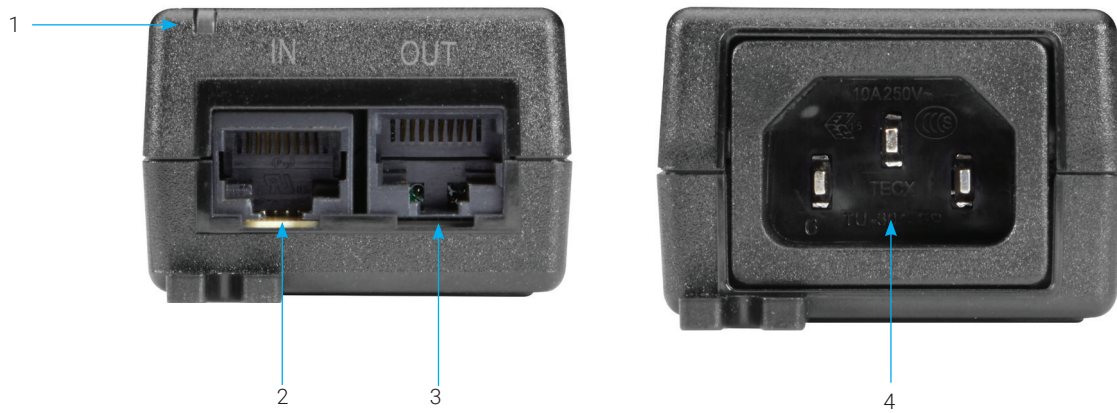


FIGURE 2-1. SIDE PANELS OF THE INJECTOR

TABLE 2-1. LPJ001A-T-R2 COMPONENTS

NUMBER IN FIGURE 2-1	COMPONENT	DESCRIPTION
1	(1) Connect LED	Indicates load connected or overload
2	(1) RJ-45 connector	Data in: (1) RJ-45 (10/100/1000)
3	(1) RJ-45 connector	Data/PoE out: (1) RJ-45 (10/100/1000)
4	(1) IEC-320 C14 - three-pin connector	AC input for power

CHAPTER 3: SETTING UP YOUR POWER INJECTOR

NOTE: Use CAT5e or higher Ethernet cables (not included).

1. Using screws, affix the metal feet on the front and/or rear to a flat surface such as a table or wall. See Figure 3-1.

NOTE: The power injector should not use the weight of the Ethernet cables for support.

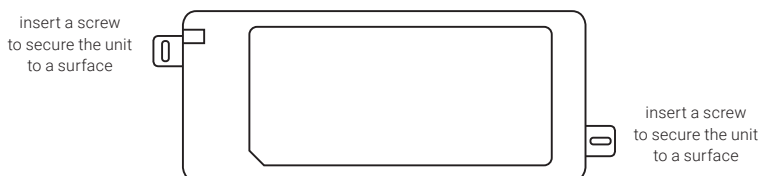


FIGURE 3-1. LOCATION OF METAL FEET ON THE POWER INJECTOR

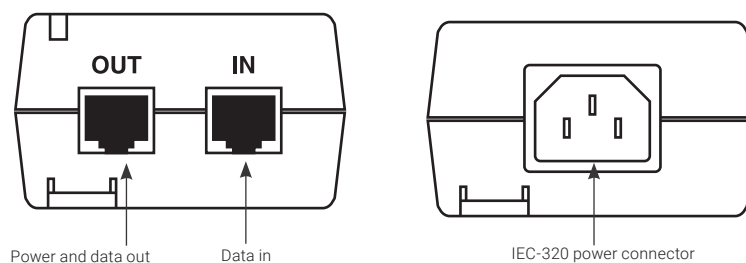


FIGURE 3-2. PORTS ON THE POWER INJECTOR

2. Connect the 3-pin IEC-320 AC input connector to a power source. Power on the injector.

3. Using CAT5e or higher cable, connect the RJ-45 port on the injector labeled "IN" to your network switch. See Figures 3-2 and 3-3.

4. Connect the RJ-45 port labeled "OUT" on the injector over Ethernet cable to the powered device. See Figures 3-2 and 3-3.

5. The LEDs will light to diagnose the connection. See Tables 4-1 and 4-2.

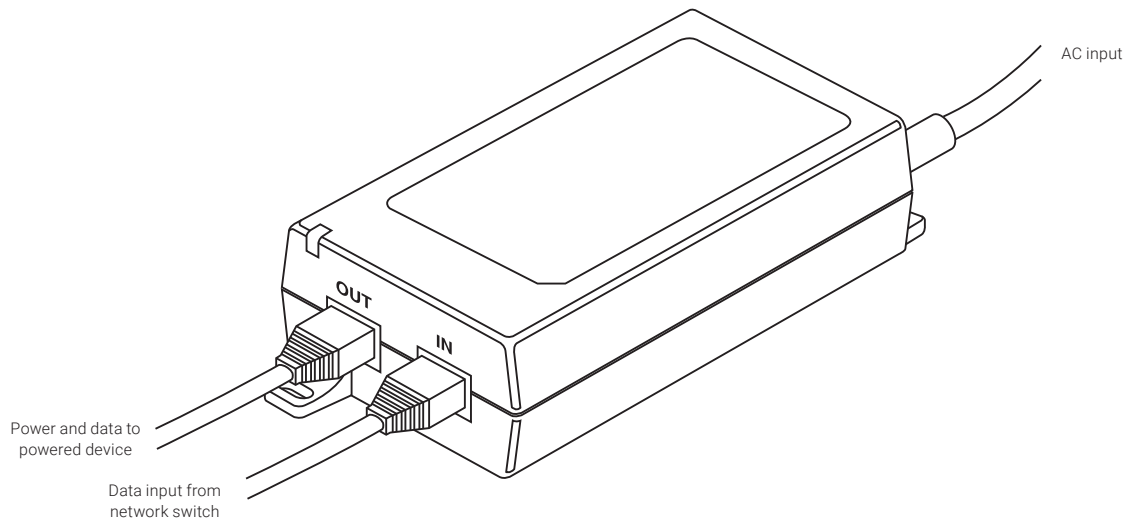


FIGURE 3-3. CABLE CONNECTIONS TO THE POWER INJECTOR

CHAPTER 4: DESCRIPTION OF LED FUNCTIONS

TABLE 4-1. LEDS AND THEIR FUNCTIONS

LED	STATE	FUNCTION	DESCRIPTION
LED	Lights blue	Valid 802.3at load connected	This blue LED lights when a 802.3at compliant load is attached to the output RJ-45 connector.
	Blue and Red LED blink 3 times	Incorrect signature	After the LED blinks three times, the power injector will continue to try to detect a valid load. Until the correct load is applied, the LEDs will continue to blink.
	Lights red for 2 seconds	Overload Indication	LED will light red for two seconds, and then go off as the power supply tries to re-detect a valid load.

APPENDIX A: REGULATORY INFORMATION

A.1 FCC STATEMENT

This equipment has been found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Shielded cables must be used with this equipment to maintain compliance with radio frequency energy emission regulations and ensure a suitably high level of immunity to electromagnetic disturbances.

All power supplies are certified to the relevant major international safety standards.



APPENDIX A: REGULATORY INFORMATION

A.2 NOM STATEMENT

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
4. Todas las instrucciones de operación y uso deben ser seguidas.
5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc.
6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.
10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
11. El aparato eléctrico deberá ser conectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.
12. Precaución debe ser tomada de tal manera que la tierra física y la polarización del equipo no sea eliminada.
13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
15. En caso de existir, una antena externa deberá ser localizada lejos de las líneas de energía.
16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
17. Cuidado debe ser tomado de tal manera que objetos líquidos no sean derramados sobre la cubierta u orificios de ventilación.
18. Servicio por personal calificado deberá ser provisto cuando:
 - A: El cable de poder o el contacto ha sido dañado; u
 - B: Objetos han caído o líquido ha sido derramado dentro del aparato; o
 - C: El aparato ha sido expuesto a la lluvia; o
 - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
 - E: El aparato ha sido tirado o su cubierta ha sido dañada.

APPENDIX B: DISCLAIMER/TRADEMARKS

B.1 DISCLAIMER

Black Box Corporation shall not be liable for damages of any kind, including, but not limited to, punitive, consequential or cost of cover damages, resulting from any errors in the product information or specifications set forth in this document and Black Box Corporation may revise this document at any time without notice.

B.2 TRADEMARKS USED IN THIS MANUAL

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NOTES

Lined area for notes, consisting of approximately 25 horizontal dashed lines.



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