Owner's Manual

TRIPP LITE
SERIES

DisplayPort over Cat6 4K Extender Kits and Receiver with Repeater

Models:
B127A-1A1-BDBD
B127A-1A1-BDBH
B127A-110-BD
B127A-111-BDTD

Purchased product may differ from image.

Este manual está disponible en español en la página de Eaton:
Tripplite.Eaton.com/support

Ce manuel est disponible en français sur le site Web de Eaton :
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Dieses Handbuch ist in deutscher Sprache auf der Eaton-Website verfügbar:
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Package Contents

- Transmitter
- Receiver
- External Power Supply (Input: 100-240V, 50/60 Hz, 0.6A; Output: 24V 1A)
- (4x) International Plugs*
- Mounting Hardware
- Owner's Manual

*Includes NEMA 1-15P (North America), CEE 7/16 Schuko (Europe), BS 1363 (U.K.) and AS/NZS 3112 (Australia) plugs

Optional Accessories

- N202-Series Cat6 24 AWG Solid-Wire Patch Cables
- P569-XXX-CERT or P568-XXX-2A Series High-Speed HDMI Cables
- P580-Series DisplayPort Cables with Latches
- B127A-010-H Signal Booster

Product Features

B127A-1A1-BDBH

- DisplayPort 1.2a to HDMI over Cat6 Power over Cable (PoC) Extender Kit
- Extends a 4K x 2K (3840 x 2160) @ 60 Hz signal, as specified in HDMI 2.0, up to 230 ft. (70 m) from the source.
- Built-in local HDMI port supports 4K @ 60 Hz signal
- Real-time video compression and decompression technology
- Supports up to 7.1-channel surround sound audio
- Receiver features built-in Toslink port for audio extraction function

Product Features

- Compatible with B127A-010-H signal booster (sold separately) to increase transmission distance up to 400 ft. from the source
- HDCP 2.2 compatible
- Plug-and-play - no software or drivers required
- Supports bi-directional IR and USB 1.1 function by DIP switch selection
- Includes mounting hardware that enables both the local transmitter and remote receiver units to be wall-mounted, rack-mounted or pole-mounted

B127A-1A1-BDBD

- DisplayPort 1.2a over Cat6 extender and receiver kit with Power over Cable (PoC)
- Extends a 4K x 2K (3840 x 2160) @ 30 Hz signal up to 230 ft. (70 m) from the source
- Built-in local HDMI port supports 4K x 2K (3840 x 2160) @ 30 Hz resolutions
- Real-time video compression and decompression technology
- Supports up to 7.1-channel surround sound audio
- Compatible with B127A-010-H signal booster (sold separately) to increase transmission distance up to 400 ft. from the source
- Receiver features a Toslink port for audio extraction
- Supports DisplayPort 1.2a and is HDCP 2.2 compatible
- Plug-and-play - no software or drivers required
- Supports bi-directional IR and USB 1.1 function by DIP switch selection
- Includes mounting hardware that enables both the local transmitter and remote receiver units to be wall-mounted, rack-mounted or pole-mounted

Package Contents

B127A-110-BD

- DisplayPort 1.2a over Cat6 daisy-chainable receiver with repeater and Power over Cable (PoC)
- Extends and repeats a 4K x 2K (3840 x 2160) @ 30 Hz signal up to 230 ft. (70 m) from the source in daisy-chain installations
- Can be daisy-chained up to 4 times via additional B127A-110-BD units, each link capable of adding an additional 230 ft. of transmission distance for a total of 920 ft.
- Real-time video compression and decompression technology
- Features a Toslink port for audio extraction
- Supports DisplayPort 1.2a and HDCP 2.2
- Plug-and-play – no software or drivers required
- Supports up to 7.1-channel surround sound audio
- ncludes mounting hardware that enables the unit to be wall-mounted, rack-mounted or pole-mounted
- Increases the maximum transmission distance to 1,090 ft. with the addition of a B127A-010-H signal booster (sold separately) to the first link of a daisy-chain installation

  Note: *The signal booster will only work when used in the first link of the daisy-chain installation.*

Package Contents

B127A-111-BDTH

- DisplayPort 1.2a over Cat6 daisy-chainable extender kit with Power over Cable (PoC)
- Extends and repeats a 4K x 2K (3840 x 2160) @ 30 Hz signal up to 230 ft. (70 m) from the source in daisy-chain installations
- Can be daisy-chained up to 4 times via additional B127A-110-BD units, each link capable of adding an additional 230 ft. of transmission distance for a total of 920 ft.
- Built-in local HDMI port supports 4K x 2K (3840 x 2160) @ 30 Hz resolutions
- Bi-directional PoC technology allows the external power supply to be plugged in at either the transmitter or receiver end to power the whole installation
- Real-time video compression and decompression technology
- Features a Toslink port for audio extraction
- Supports up to 7.1-channel surround sound audio
- Supports DisplayPort 1.2a and HDCP 2.2
- Plug-and-play – no software or drivers required
- Includes mounting hardware that enables the receiver unit to be wall-mounted, rack-mounted or pole-mounted
- Increases the maximum transmission distance to 1,090 ft. with the addition of a B127A-010-H signal booster (sold separately) to the first link of a daisy-chain installation

  Note: *The signal booster will only work when used in the first link of the daisy-chain installation.*

Disclaimer

Before installation, check the following settings of your source(s) and TV/monitor(s):

1. Set to display 60 Hz. Double-check factory settings, in case the default is set to a lower frequency (Hz) than advertised.
2. Ensure the input setting of your monitor is set at HDMI 2.0 or DisplayPort 1.2a. Some displays may have default setting at HDMI 1.4.

   Note: *This is only important for the B127A-1A1-BDBH model; the B127A-1A1-BDBD, B127A-110-BD and B127A-111-BDTD will need DP 1.2a settings.*
3. Check if the Ultra HD (UHD) Deep Color setting is enabled on your TV/monitor. Confirm with your TV/monitor manufacturer which HDMI ports support UHD Deep Color.

   Note: *Only for the B127A-1A1-BDBH model.*
4. Check the USB/IR DIP switch, as the default setting is set to "IR".

   Notes: *Only for the B127A-1A1-BDBH and B127A-1A1-BDBD models. The B127A-111-BDTD and B127A-110-BD units do not have IR/USB ports or a DIP switch.To connect a local monitor to your installation, the UHD Deep Color setting may need to be disabled on your local TV/monitor (depending on the make/model) to achieve 4K/60 Hz resolution.*

Mounting Instructions

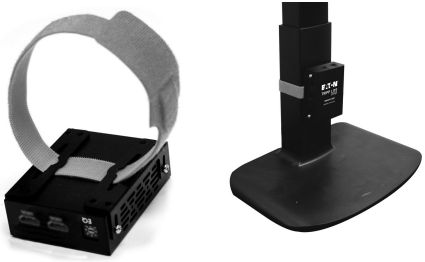
The B127A-1A1-BDBH, B127A-1A1-BDBD, B127A-110-BD and B127A-111-BDTD include mounting hardware that allows for a variety of mounting methods. The following images illustrate how the included mounting brackets can be attached for different installations.

Note: *The model shown in the below images is for illustrative purposes only. Your product may vary by model number, size or port orientation. The mounting options for all over IP units are the same.*

Wall-Mount

19” Rack-Mount

Pole-Mount

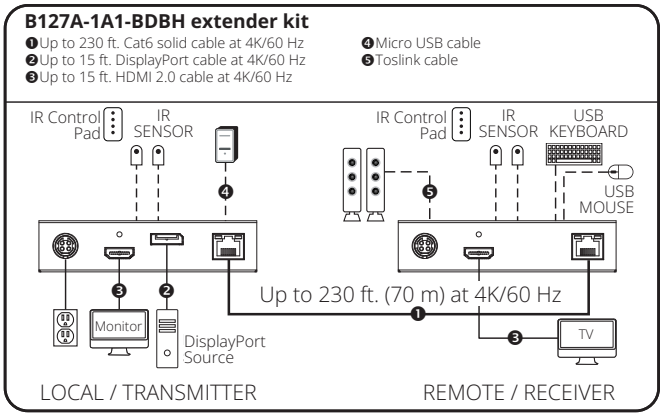


Standard Extender Kit Installation

Model B127A-1A1-BDBH

Notes:

1) *Test to ensure the entire installation works properly before pulling cables through ceilings/walls.*
2) *To achieve maximum distance and performance, use 24 AWG solid wire Cat6 cable. Using stranded-wire Cat6 cable or cable with a gauge (AWG) size higher than 24 AWG will result in shorter extension distance. Higher gauge cabling, such as 26 AWG, has a more limited transmission capability than lower gauge cabling. N202-Series Cat6 cables are made with 24 AWG solid-wire cabling.*
3) *The installation diagram shows a B127A-1A1-BDBH unit.*
4) *External power is not required for remote receiver units due to Power over Cable (PoC) technology incorporated in the transmitter units.*
5) *If there are issues with a flickering video signal after installation, remove the Cat6 cable and try another one, either the same length or shorter. If the flicker persists, change the host computer's resolution to 1920 x 1080 to see if the image itself is stable.*



Standard Extender Kit Installation

1. Make sure all equipment in the installation—such as monitors, the DisplayPort source and the transmitter—is powered OFF.
2. Using a DisplayPort cable, connect the DisplayPort source to the INPUT port on the local transmitter unit.
3. **Optional for B127A-1A1-BDBH:** Using an HDMI cable (such as P569-XXX-CERT or P568-XXX-2A Series cables), connect a local monitor to the LOCALOUT port on the B127A-1A1-BDBH local transmitter unit.
4. Using Cat6 cable, connect the RJ45 port on the local transmitter unit to the RJ45 port on the remote receiver unit.
5. **Optional:** To extend the transmission distance up to 400 ft., connect a B127A-010-H signal booster (sold separately) between the transmitter and receiver using Cat6 cable.
6. Using an HDMI cable (such as P569-XXX-CERT or P568-XXX-2A Series cables), connect the remote receiver unit's HDMI port to a monitor.
7. Turn the power on to your connected TVs/monitors.
8. Connect the external power supply to the local transmitter unit and plug it into an available wall outlet or (optional) Surge Protector, Power Distribution Unit (PDU) or Uninterruptible Power Supply (UPS). The POWER (green) LED on the local transmitter unit will illuminate to indicate the unit is receiving power from the external power supply. The POWER (green) LED on the remote receiver unit will illuminate to indicate the unit is receiving power from the local transmitter unit through PoC technology.

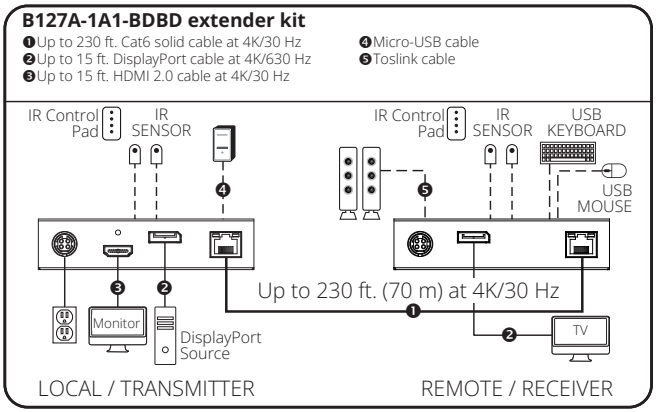
   Note: *The external power adapter can be plugged into either the transmitter or receiver unit.*
9. Turn on the power to the DisplayPort source.
10. The (orange) RJ45 LED will illuminate on both the local transmitter and remote receiver units to indicate a signal is being received from the source to display. The screen should now display on the connected monitor.

Standard Extender Kit Installation

Model B127A-1A1-BDBD

Notes:

1) *Test to ensure the entire installation works properly before pulling cables through ceilings/walls.*
2) *To achieve maximum distance and performance, use 24 AWG solid wire Cat6 cable. Using stranded-wire Cat6 cable, or cable with a gauge (AWG) size higher than 24 AWG, will result in shorter extension distance. Higher gauge cabling, such as 26 AWG, has a more limited transmission capability than lower gauge cabling. N202-Series Cat6 cables are made with 24 AWG solid-wire cabling.*
3) *The installation diagram shows a B127A-1A1-BDBD unit.*
4) *External power is not required for remote receiver units due to Power over Cable (PoC) technology incorporated in the transmitter units.*
5) *If there are issues with a flickering video signal after installation, remove the Cat6 cable and try another one, either the same length or shorter. If the flicker persists, change the host computer's resolution to 1920 x 1080 to see if the image itself is stable.*



Standard Extender Kit Installation

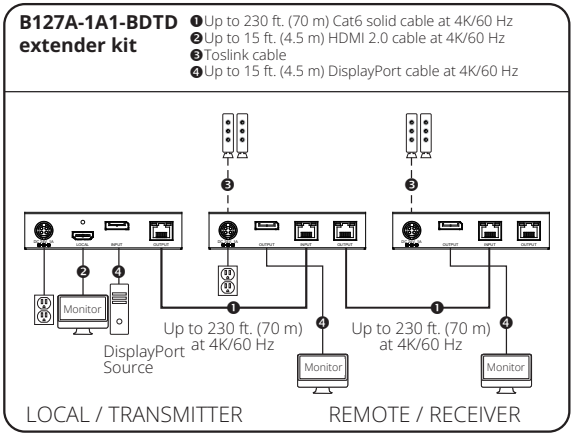
1. Make sure all equipment in the installation—such as monitors, the DisplayPort source and the transmitter—is powered OFF.
2. Using a DisplayPort cable, connect the DisplayPort source to the INPUT port on the local transmitter unit.
3. Using an HDMI cable (such as P569-XXX-CERT or P568-XXX-2A Series cables), connect a local monitor to the LOCALOUT port on the B127A-1A1-BDBD local transmitter unit.
4. Using Cat6 cable, connect the RJ45 port on the local transmitter unit to the RJ45 port on the remote receiver unit.
5. **Optional:** To extend the transmission distance up to 400 ft., connect a B127A-010-H signal booster (sold separately) between the transmitter and receiver using Cat6 cable.
6. Using a DisplayPort cable, connect the remote receiver unit's DisplayPort port to a monitor.
7. Turn the power on to your connected TVs/monitors.
8. Connect the external power supply to the local transmitter unit and plug it into an available wall outlet or (optional) Surge Protector, Power Distribution Unit (PDU) or Uninterruptible Power Supply (UPS). The POWER (green) LED on the local transmitter unit will illuminate to indicate the unit is receiving power from the external power supply. The POWER (green) LED on the remote receiver unit will illuminate to indicate the unit is receiving power from the local transmitter unit through PoC technology.
9. Turn on the power to the DisplayPort source.
10. The (orange) RJ45 LED will illuminate on both the local transmitter and remote receiver units to indicate a signal is being received from the source to display. The screen should now display on the connected monitor.

Standard Extender Kit Installation

Model B127A-111-BDTD

Notes:

1) *Test to ensure the entire installation works properly before pulling cables through ceilings/walls.*
2) *To achieve maximum distance and performance, use 24 AWG solid wire Cat6 cable. Using stranded-wire Cat6 cable or cable with a gauge (AWG) size higher than 24 AWG will result in shorter extension distance. Higher gauge cabling, such as 26 AWG, has a more limited transmission capability than lower gauge cabling. N202-Series Cat6 cables are made with 24 AWG solid-wire cabling.*
3) *The installation diagram shows a B127A-111-BDTD kit.*
4) *External power is not required for remote receiver units due to Power over Cable (PoC) technology incorporated in the transmitter units.*
5) *If there are issues with a flickering video signal after installation, remove the Cat6 cable and try another one, either the same length or shorter. If the flicker persists, change the host computer's resolution to 1920 x 1080 to see if the image itself is stable.*



Standard Extender Kit Installation

1. Make sure all equipment in the installation—such as monitors, the DisplayPort source and the transmitter—is powered OFF.
2. Using a DisplayPort cable, connect the DisplayPort source to the INPUT port on the local transmitter unit.
3. **Optional:** Using an HDMI cable (such as P569-XXX-CERT or P568-XXX-2A Series cables), connect a local monitor to the LOCALOUT port on the B127A-1A1-BDBD local transmitter unit.
4. Using Cat6 cable, connect the RJ45 port on the local transmitter unit to the RJ45 port on the remote receiver unit.
5. **Optional:** To extend the transmission distance up to 400 ft., connect a B127A-010-H signal booster (sold separately) between the transmitter and receiver using Cat6 cable.

   Note: *In a daisy-chain installation, the B127A-010-H signal booster unit must be placed between the transmitter and first receiver in the chain or else the signal booster will not function.*
6. Using a DisplayPort cable (such as P580-Series cables), connect the remote receiver unit's DisplayPort output to a monitor.
7. Turn the power on to your connected TVs/monitors.
8. Connect the external power supply to the local transmitter unit and plug it into an available wall outlet or (optional) Surge Protector, Power Distribution Unit (PDU) or Uninterruptible Power Supply (UPS). The POWER (green) LED on the local transmitter unit will illuminate to indicate the unit is receiving power from the external power supply. The POWER (green) LED on the remote receiver unit will illuminate to indicate the unit is receiving power from the local transmitter unit through PoC technology.

   Note: *The external power adapter can be plugged into either the transmitter or the receiver.*
9. Turn on the power to the DisplayPort source.

Standard Extender Kit Installation

10. The (orange) RJ45 LED will illuminate on both the local transmitter and remote receiver units to indicate a signal is being received from the source to display. The screen should now display on the connected monitor.

Receiver with Repeater Daisy-Chain Installation

Model B127A-111-BTBD and B127A-110-BD

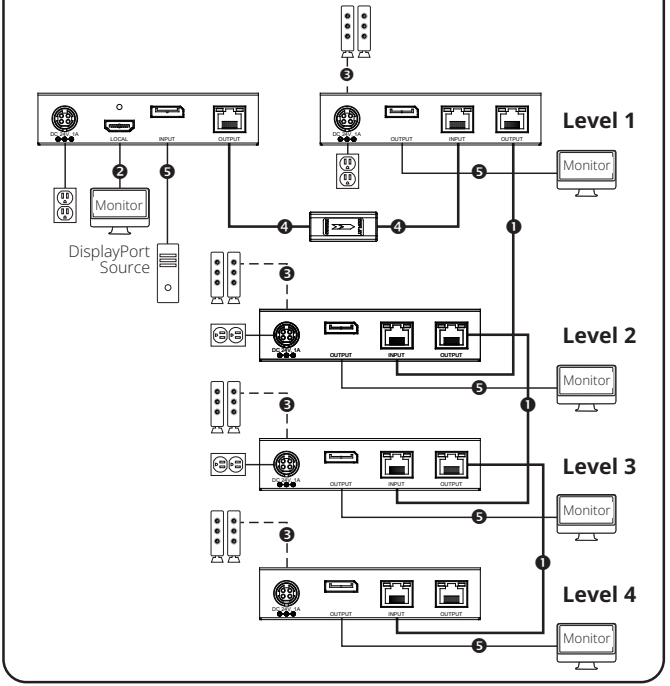
Notes:

1) *Test to ensure the entire installation works properly before pulling cables through ceilings/walls*
2) *To achieve maximum distance and performance, use 24 AWG solid wire Cat6 cable. Using stranded wire Cat6 cable or cable with a gauge (AWG) size higher than 24 AWG will result in shorter extension distance. Higher gauge cabling, such as 26 AWG, has a more limited transmission capability than lower gauge cabling. N202-Series Cat6 cables are made with 24 AWG solid wire cabling.*
3) *The installation diagram shows the B127A-111-BDTD and B127A-110-BD installation.*
4) *The B127A-111-BDTD and B127A-110-BD can be daisy-chained up to 4 levels, each link extending 230 ft. (70 m) for a total of 920 ft. (280 m). This distance can be extended a total of 1,090 ft. (330 m) by adding a B127A-010-H signal booster between the transmitter and first receiver in the daisy-chain installation.*
5) *If there are issues with a flickering video signal after installation, remove the Cat6 cable and try another one, either the same length or shorter. If the flicker persists, change the host computer's resolution to 1920 x 1080 to see if the image itself is stable.*

Receiver with Repeater Daisy-Chain Installation

B127A-110-BD extender kit

❶ Up to 230 ft. (70 m) Cat6 solid cable at 4K/60 Hz
❷ Up to 15 ft. (4.5 m) HDMI 2.0 cable at 4K/60 Hz
❸ Toslink cable
❹ Up to 200 ft. (60.9 m) Cat6 solid cable at 4K/60 Hz
❺ Up to 15 ft. (4.5 m) DisplayPort cable at 4K/60 Hz



Receiver with Repeater Daisy-Chain Installation

1. Make sure all equipment in the installation – such as TVs, Blu-ray players and the transmitter – is powered OFF.
2. Connect the DisplayPort source to the INPUT port on the B127A-111-BDTD local transmitter unit using a DisplayPort cable (such as P580-Series cables).
3. Connect a local monitor to the local HDMI port using an HDMI cable (such as P569-XXX-CERT or P568-XXX-2A High-Speed HDMI cables)
4. **Optional:** To increase the maximum transmission distance, connect a B127A-010-H signal booster (sold separately) between the transmitter and receiver using Cat6 cable.

   Note: *In a daisy-chain installation, the B127A-010-H signal booster unit must be placed between the transmitter and first receiver in the chain or the signal booster will not function.*
5. Using Cat6 cable, connect one of the RJ45 output ports on the local unit to the RJ45 input port on the B127A-111-BDTD transceiver unit.
6. Connect a monitor to the DisplayPort output port on the transceiver unit using a DisplayPort cable (such as P580-Series DisplayPort Cables).
7. Connect the external power supply to the local transmitter unit and plug it into a surge protector, power distribution unit (PDU) or uninterruptible power supply (UPS). The green RJ45 LED on the receiver will illuminate to indicate the unit is receiving power. Up to four units can be daisy-chained (one transmitter and three transceivers). To connect additional transceiver units, proceed to step 8. To finish your installation with a B127A-110-BD unit, proceed to step 12.
8. Using Cat6 cable, connect the RJ45 output port on the B127A-111-BDTD unit receiver unit to the RJ45 input port on a B127A-110-BD transceiver unit.

Receiver with Repeater Daisy-Chain Installation

9. Connect a monitor to the DisplayPort output port on the B127A-110-BD that you just added using a DisplayPort cable (such as P580-Series DisplayPort cables).

10. Connect the external power supply to the B127A-110-BD and plug it into a surge protector, power distribution unit (PDU or uninterruptible power supply (UPS). The green power LED and the green RJ45 LED's will illuminate to indicate the unit is receiving power.

11. To add a second B127A-110-BH, repeat steps 8 through 10. To finish your installation with a B127A-110-BH, proceed to step 12.

12. Using Cat6 cable, connect the RJ45 OUTPUT port on the last B127A-110-BD to the RJ45 INPUT port.

13. Connect a monitor to the DisplayPort INPUT port on the last B127A-110-BD using a DisplayPort cable.

14. The green LED on the B127A-110-BD will illuminate to indicate the unit is receiving power from the previous transceiver. The orange LED will illuminate to indicate the unit is connected to a powered ON remote/repeater unit.

15. Turn on the power to the DisplayPort source. The orange RJ45 LED's on the local unit will illuminate to indicate a signal is being received from the source.

16. The maximum number of daisy-chain layers is four for a total distance of 920 ft., but the distance can be extended to 1,090 ft. when a B127A-010-H signal booster is used. See the B127A-010-H product features on Tripplite.Eaton.com for details.

USB/IR Controls (B127A-1A1-BDBD and B127A-1A1-BDBH only)

The B127A-1A1-BDBD and B127A-1A1-BDBH extender kits provide the following functional controls:

- USB 1.1 – One USB Micro-B input at transmitter, dual USB-A outputs at receiver
- Bi-Directional IR – Dual 3.5 mm jacks at both the transmitter and receiver

(Optional) Connect the included IR-OUT cable to the transmitter unit's IR-OUT port. Place the sensor on the IR-OUT cable in an unobstructed area within clear view of the device being controlled. Then connect the included IR-IN cable to the receiver unit's IR-IN port. The IR-IN cable will communicate the desired command via the transmitter's IR-OUT cable.

Note: *The IR-OUT cable receives the signal from the remote control and sends it to the device being controlled (e.g. Blu-ray player, etc.).*

(Optional) With a user-supplied USB Micro-B cable (such as U050-XXX Series USB cable), connect to the transmitter's Micro-B port. Then connect a keyboard and mouse to the available USB-A ports on the receiver unit.

Warranty

1-Year Limited Warranty

We warrant our products to be free from defects in materials and workmanship for a period of one (1) year from the date of initial purchase. Our obligation under this warranty is limited to repairing or replacing (at its sole option) any such defective products. Visit Tripplite.Eaton.com/support/product-returns before sending any equipment back for repair. This warranty does not apply to equipment which has been damaged by accident, negligence or misapplication or has been altered or modified in any way.

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EXCEPT AS PROVIDED ABOVE, IN NO EVENT WILL WE BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF THIS PRODUCT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. Specifically, we are not liable for any costs, such as lost profits or revenue, loss of equipment, loss of use of equipment, loss of software, loss of data, costs of substitutes, claims by third parties, or otherwise.

WEEE Compliance Information for Customers and Recyclers (European Union)

Under the Waste Electrical and Electronic Equipment (WEEE) Directive and implementing regulations, when customers buy new electrical and electronic equipment from Eaton, they are entitled to:

- Send old equipment for recycling on a one-for-one, like-for-like basis (this varies depending on the country)
- Send the new equipment back for recycling when this ultimately becomes waste

WARNING

Use of this equipment in life support applications where failure of this equipment can reasonably be expected to cause the failure of the life support equipment or to significantly affect its safety or effectiveness is not recommended.

Eaton has a policy of continuous improvement. Specifications are subject to change without notice. Photos and illustrations may differ slightly from actual products.

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