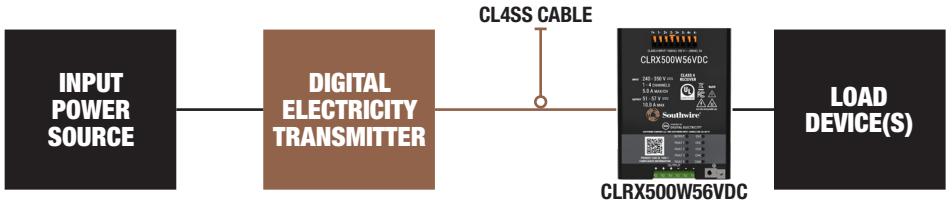
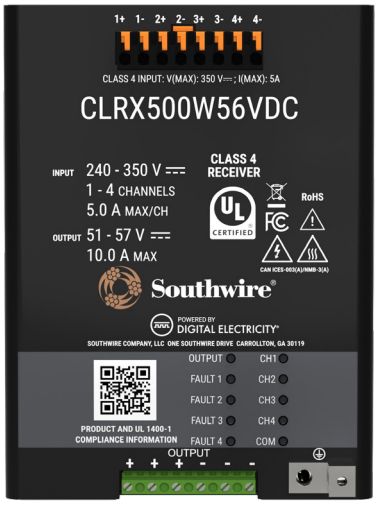
DIGITAL ELECTRICITY® RECEIVER, 500 W, 56 VDC OUTPUT

The CLRX500W56VDC Receiver is a component in a Digital Electricity® line powering system. When the receiver is powered by a compatible Southwire transmitter, a Digital Electricity® (DE) system is formed (see diagram). The circuit between the transmitter and receiver is a Fault Managed Power (FMP) circuit and is installed as a Class 4 circuit according to NFPA70 Article 726. If a fault occurs on the DEline between the transmitter and receiver (such as a person contacting the conductors) power is disconnected; reducing the risk of fire, equipment damage and personal injury. For compatible Transmitters see the QR code on page 3.





CLRX500W56VDC RECEIVER

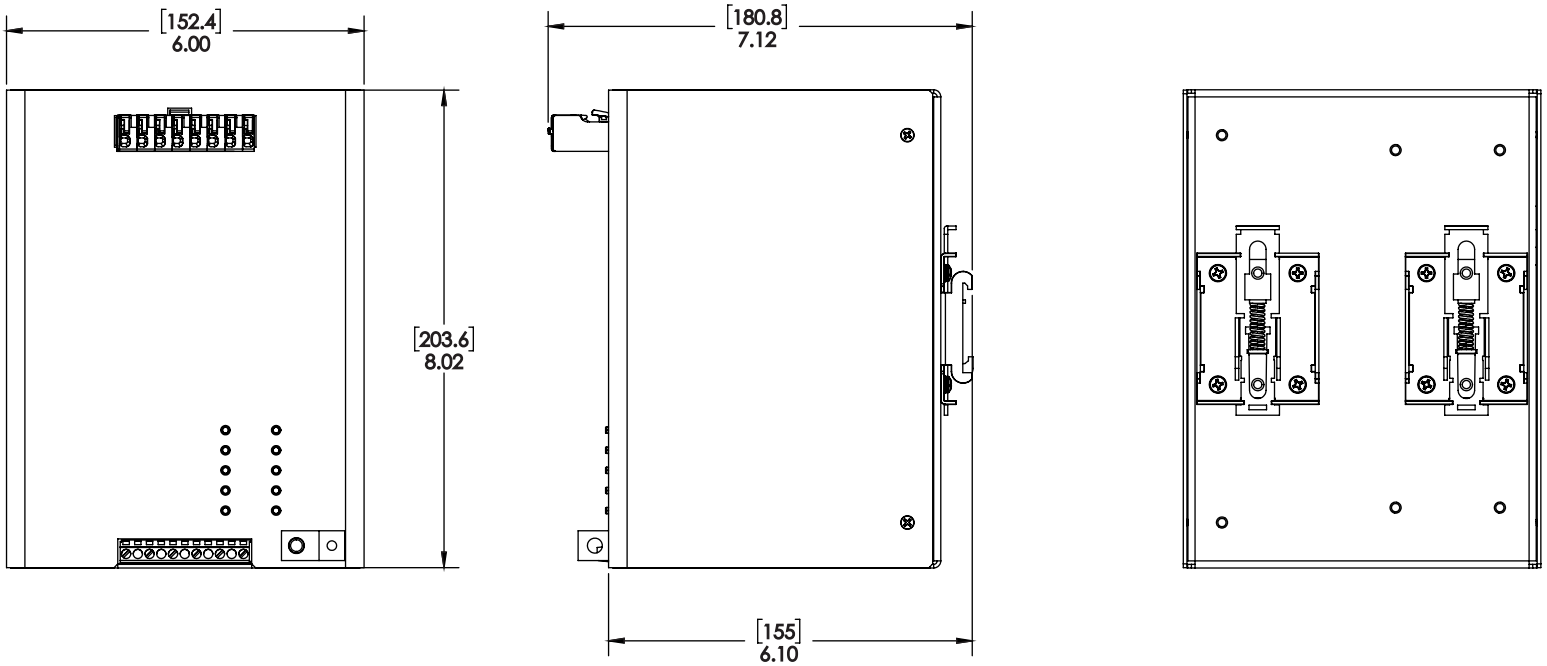
SPECIFICATIONS

TYPE	PARAMETER	SPECIFICATIONS	NOTES
INPUT	Voltage	240-350 Vdc (Nominal 350 Vdc)	Must be supplied by a UL Recognized or Listed Southwire transmitter shelf.
	Number of Channels	4	
	Current Per Input Channel	5.0 A Max	
	Current, Total	12.0 A Max	
	Input Wiring Size	12-18 AWG	
OUTPUT	Voltage	51-57 Vdc (Nominal 56 Vdc)	
	Number of Ports	3	Each port has 2 connections (+ / -).
	Current Per Output Port	10.0 A Max	
	Current, Total	10.0 A Max	
	Output Wiring Size	12-18 AWG	16 AWG minimum if running full load on a single pair
	Ripple and Noise	200 mV pk-pk Max	Measured at 20 MHz of bandwidth by using a 12" twisted pair wire terminated with 0.1 uF and 47 uF capacitors in parallel.
ENVIRONMENT	Operating Temperature	-40 °C (-40 °F) to 65 °C (149 °F)	Cold Start limited to -20 °C (-4 °F). (See page 3 for temperature derating curve)
	Altitude	Up to 2000 m	
MECHANICAL	Dimensions	"8.02" x 6.00" x 5.58" 203.6 mm x 152.4 mm x 141.7 mm"	(See page 2)
	Weight	5.55 lbs with DIN clips installed. 5.78 lbs with wall mount bracket installed.	
PROTECTION	Common Mode Surge	6 kV Max	Up to 5 surges.
	Differential Mode Surge	1 kV Max	Up to 5 surges.
	Over Voltage	59.4-70.2 Vdc, output voltage shuts down	
	Over Temperature	Output voltage shuts down	Automatically recovers once temperatures go down.
APPROVALS	Safety	UL 1400-1 UL 62368-1 EN IEC 62368-1 CAN/CSA-C22.2 No. 62368-1	*Evaluated as part of a FMP system by Underwriters Laboratories.
	EMC	FCC Part 15 Subpart B Class A ICES-003 Class A EN 55032 Class A EN 55035 (multimedia equipment) EN 50121-4 (rail immunity) EN 300 386 (telecom immunity)	
	Other	CE, RoHS, WEEE, UKCA, REACH	
ACCESSORIES	Hardware Kit (Included)	(1) 8 Position Terminal Block Plug, P/N: 8000078359	
	Sold Separately	CLRX500W56VDC Wall Mount Bracket	

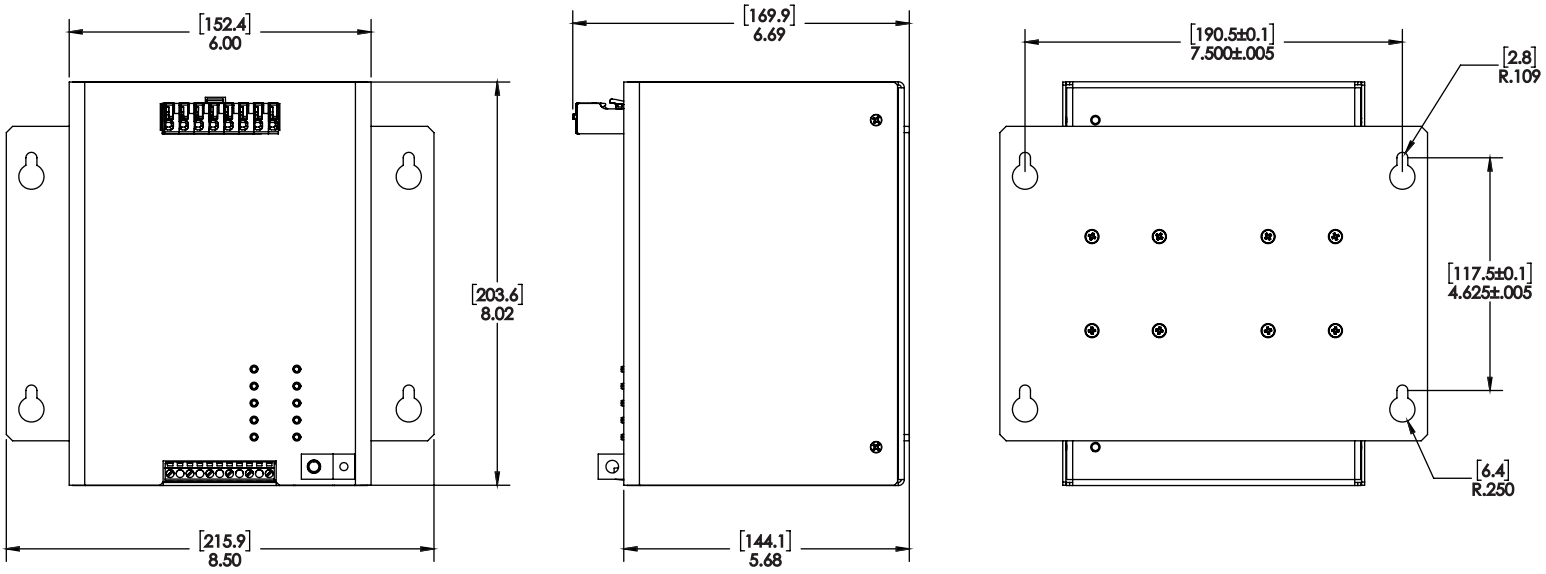
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DETAILED DIMENSIONS - INCHES (MM)

WITH DIN CLIPS



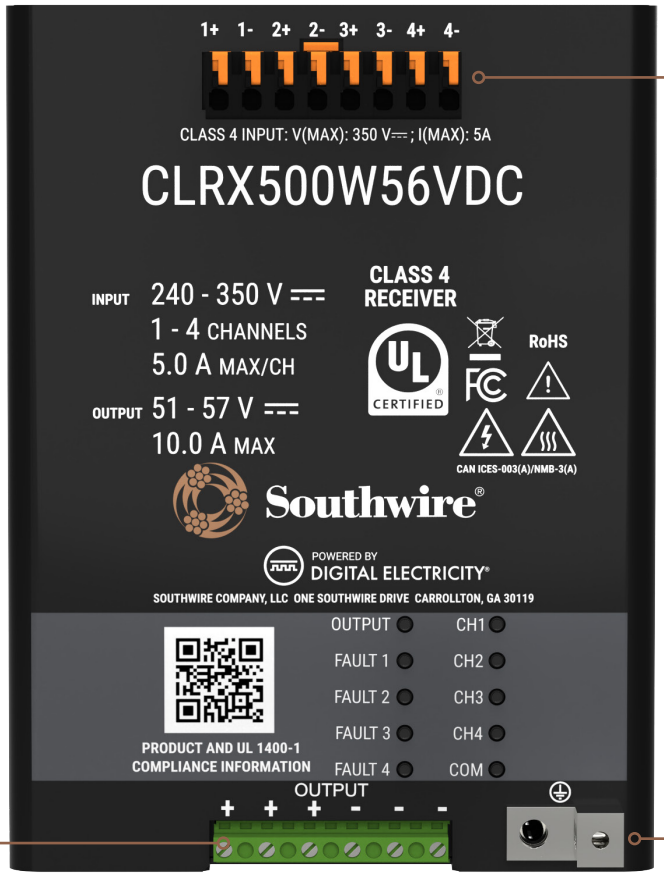
WITH WALL MOUNT BRACKET



NOTE: Wall mount locations shown above. #10 screw size is recommended to mount the unit.

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CONNECTION DIAGRAM

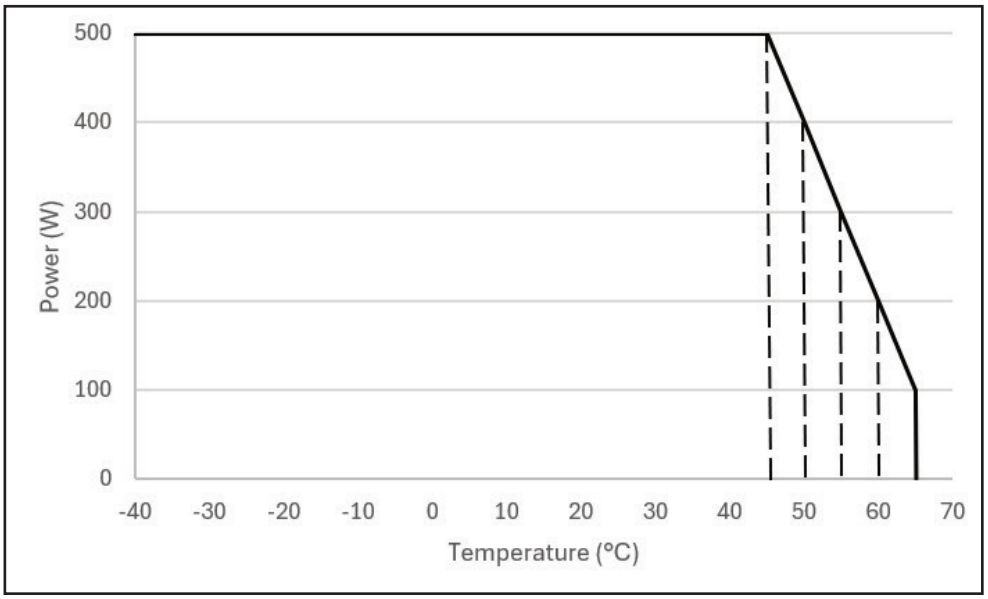


1 DIGITAL ELECTRICITY INPUT PORT
Four (4) channels, eight (8) conductors, 18 AWG minimum (16 AWG recommended)

2 LOW VOLTAGE DC OUTPUT PORT
Three (3) connections, two (2) conductors per connection, 16 AWG minimum if running full load

3 PROTECTIVE EARTH GROUND TERMINAL
Ground connection for receiver, 1/4-inch screw terminal, 14 AWG minimum (6 AWG recommended if surge protection is required)

TEMPERATURE DERATING CURVE



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WARNING!

Ensure that the unit is de-energized before contacting any exposed conductors. The output circuit is not a protected FMP / Class 4 circuit.

Do not open the unit. There are no serviceable parts within the unit.

The minimum wire gauge for use with Southwire Transmitters is 18 AWG copper conductors.

Southwire RX Receiver inputs are intended to be powered by Southwire TX Transmitter products only. Ensure that only Southwire TX Transmitter products are used as sources of power for this receiver unit.

The voltage rating of the transmission wiring between Southwire Transmitter and Receiver(s) must be a minimum of 450 Vrms.

Equipment is intended for installation in a Restricted Access Area. Per IEC 62368-1, a Restricted Access Area is defined as an area accessible only to skilled persons and to instructed persons with the proper authorization.

WARRANTY STATEMENT

There are no serviceable parts within the CLRX500W56VDC. Opening or modifying the unit and/or factory attached cables will void the warranty.

FCC CAUTION

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
Note: This equipment has been tested and 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 at their own expense.
CAN ICES-003(A) / NMB-003(A)

SYMBOLS

Caution: Hazardous Voltages present when energized. Do not open the unit.

Caution: Hot Surface when energized. Do not touch the unit.

This symbol indicates the protective earth ground terminal for the device. See "Grounding" section below for more information.

NOTE

For Class 4 compliance, the CLRX500W56VDC receiver unit must be used with a compatible Southwire transmitter. For a full list of compatible transmitters scan the QR code. Any UL 1400-2 listed Class 4 cable may be used.

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INSTALLATION INSTRUCTIONS

CAUTION

Input and Output wiring and overcurrent protection must be installed in accordance with all local and national electrical codes and requirements.

GROUNDING

The CLRX500W56VDC receiver must be properly grounded to the user's facility earth connection for safe operation. The ground for the receiver and the user's end load must be the same ground as the transmitter chassis it is being fed from. To ground the receiver, secure a green/yellow wire to the ground lug on the receiver (P/N: Southwire KA6U). Torque the screw to 45 in-lb. Minimum of 14 AWG is required for the ground wire, 6 AWG is recommended if surge protection is required.

GENERAL PHYSICAL INSTALLATION

The CLRX500W56VDC is intended to mount vertically with the input connector positioned at the top and the output connector positioned at the bottom. The CLRX500W56VDC should have free air space around the top and bottom of the unit.

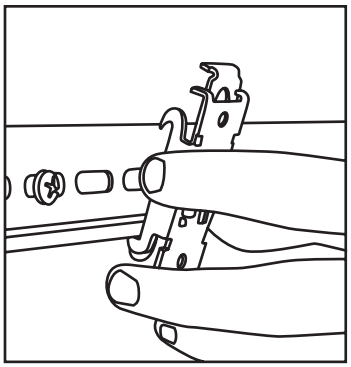
IMPORTANT: Unit must be oriented with the vents at the top and bottom.

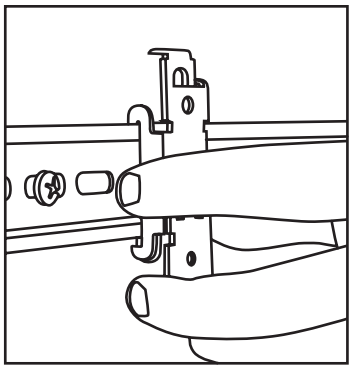
DIN MOUNT INSTALLATION

The CLRX500W56VDC is intended to mount on a 35 mm DIN rail with the DIN rail mounting clips located on the back of the enclosure.

To mount the unit on a DIN rail, hook the bottom of the DIN clips onto the bottom of the DIN rail and then snap on the top of the DIN clips onto the top of the DIN rail. Ensure the DIN clips are fully secure on the DIN rail.

Note: Images below are solely meant to illustrate how the DIN clip is installed onto a DIN rail. Do not remove the DIN clips from the unit.





WALL MOUNT INSTALLATION

The CLRX500W56VDC can be mounted on a wall using the optional wall mount bracket accessory.

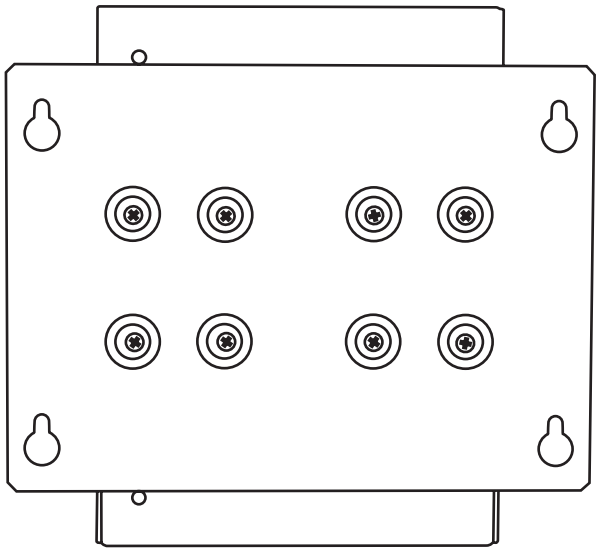
To mount the CLRX500W56VDC on a wall, you must provide the screws that can be used with the wall material in the installation environment. For safe and secure wall mounting, use a minimum #10 screws suitable for the application.

The wall mount bracket holes are designed in a keyhole pattern for ease of installation (see page 2 for keyhole locations). To wall mount the unit it is recommended that the top two screws be partially installed into the wall before mounting the receiver. Once the unit is mounted on the top screws, torque them down completely. Install the remaining two bottom screws torquing them down completely.

IMPORTANT: The wall material and hardware that are used to mount the unit must be able to support the weight of the unit. See page 1 for the product weight.

To install the wall mount bracket accessory on the unit, follow the steps below:

1. Unscrew the 8x 6-32, 1/4", pan head screws (P/N: Southwire 95345A043) rom the 2x DIN clips on the back of the product.
2. Remove those screws and the DIN clips from the product.
3. Place the wall mount bracket on the back of unit, aligning the 8x mounting holes.
4. Install the 8x 6-32, 1/4", black, flat head screws (P/N: Southwire 96640A267) from the wall mount bracket accessory kit into the mounting holes (locations are circled in green below). Ensure the screws are torqued to 5 in-lb.



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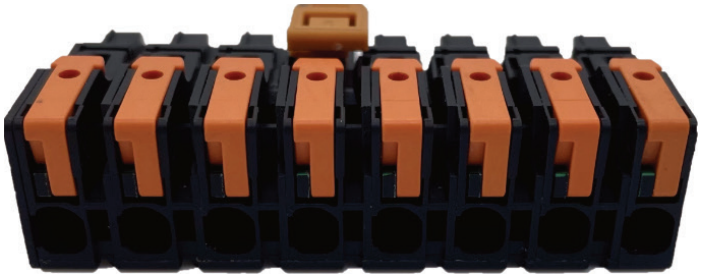
INSTALLATION INSTRUCTIONS

INPUT WIRING

NOTE: Units ship with a plug-able input connector mate. The wiring must be terminated appropriately at the installation site with a strip length of 0.35 in.

INPUT MATING CONNECTOR PIN-OUT

P/N: Southwire 8000078359



1 2 3 4 5 6 7 8

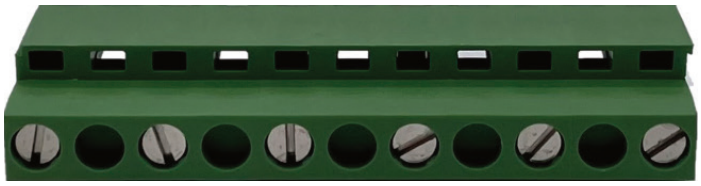
PIN	DESCRIPTION
1	DEInput Channel 1 Pos(+)
2	DEInput Channel 1 Neg(-)
3	DEInput Channel 2 Pos(+)
4	DEInput Channel 2 Neg(-)
5	DEInput Channel 3 Pos(+)
6	DEInput Channel 3 Neg(-)
7	DEInput Channel 4 Pos(+)
8	DEInput Channel 4 Neg(-)

OUTPUT WIRING

NOTE: Output is a screw-type terminal block connector. The wiring must be terminated appropriately at the installation site with a strip length of 0.25 in. Ensure screws are fully torqued down to 5 lb-in after wire installation.

OUTPUT CONNECTOR PIN-OUT

Front View:



Bottom View:



1 2 3 4 5 6

PIN	DESCRIPTION
1	LVDC Out POS (+)
2	LVDC Out POS (+)
3	LVDC Out POS (+)
4	LVDC Out NEG (-)
5	LVDC Out NEG (-)
6	LVDC Out NEG (-)

GENERAL

DO NOT connect a load while the CLRX500W56VDC Receiver is running. The CLRX500W56VDC must be de-energized prior to wiring the load device.

METHOD OF DISCONNECT FROM POWER

To disconnect the CLRX500W56VDC Digital Electricity Receiver unit from power, unplug ALL corresponding channels from the DE Transmitter Chass is either at the transmitter location or at the receiver by separating the input quick connector.

LED CODES AND TROUBLESHOOTING

OUTPUT	●	●	CH 1
FAULT 1	●	●	CH 2
FAULT 2	●	●	CH 3
FAULT 3	●	●	CH 4
FAULT 4	●	●	COM

FAULT CODE	TROUBLESHOOTING
FAULT 1 - INTERNAL LOAD	Issue delivering power from receiver to power supplies internal to the unit. • Reduce load • Contact Southwire
FAULT 2 - ENVIRONMENTAL	Receiver over temperature • Reduce ambient temp surrounding receiver • Reduce Load
FAULT 3 - INTERNAL	Internal Failure • Contact Southwire
FAULT 4 - INPUT/ OTHER	Issue delivering power from transmitter to receiver. • Check wiring between TX and RX • Consider adding more transmitter pairs to RX input

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AVERTISSEMENT!

Assurez-vous que l'appareil est mis hors tension avant de faire du contact avec des conducteurs nus. Le circuit de sortie n'est pas protégé par un circuit FMP/Classe 4.

N'ouvrez pas l'appareil. Il n'y a aucune pièce réparable dans l'unité.

Le calibre de fil minimum à utiliser avec les émetteurs Southwire GEN2 est constitué de conducteurs en cuivre de 18 AWG.

Les entrées du récepteur Southwire RX sont destinées à être alimentées uniquement par les produits émetteurs Southwire TX. Assurez-vous que seuls les produits émetteurs Southwire TX sont utilisés comme sources d'alimentation pour ce récepteur.

La tension nominale du câblage de transmission entre l'émetteur Southwire et le(s) récepteur(s) doit être 450 Vrms au minimum.

Équipement destiné à être installé dans une zone à accès restreint. Selon la norme IEC 62368-1, une zone d'accès restreint est définie comme une zone accessible uniquement aux personnes qualifiées disposant de l'autorisation appropriée.

SYMBOLES

Attention: Des tensions dangereuses sont présentes lorsque l'appareil est sous tension. N'ouvrez pas l'appareil.

Attention: Surface chaude lorsqu'elle est sous tension. Ne pas toucher l'appareil.

ATTENTION

Le câblage d'entrée et de sortie et la protection contre les surintensités doivent être installés conformément à tous les codes et exigences électriques locaux et nationaux.

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