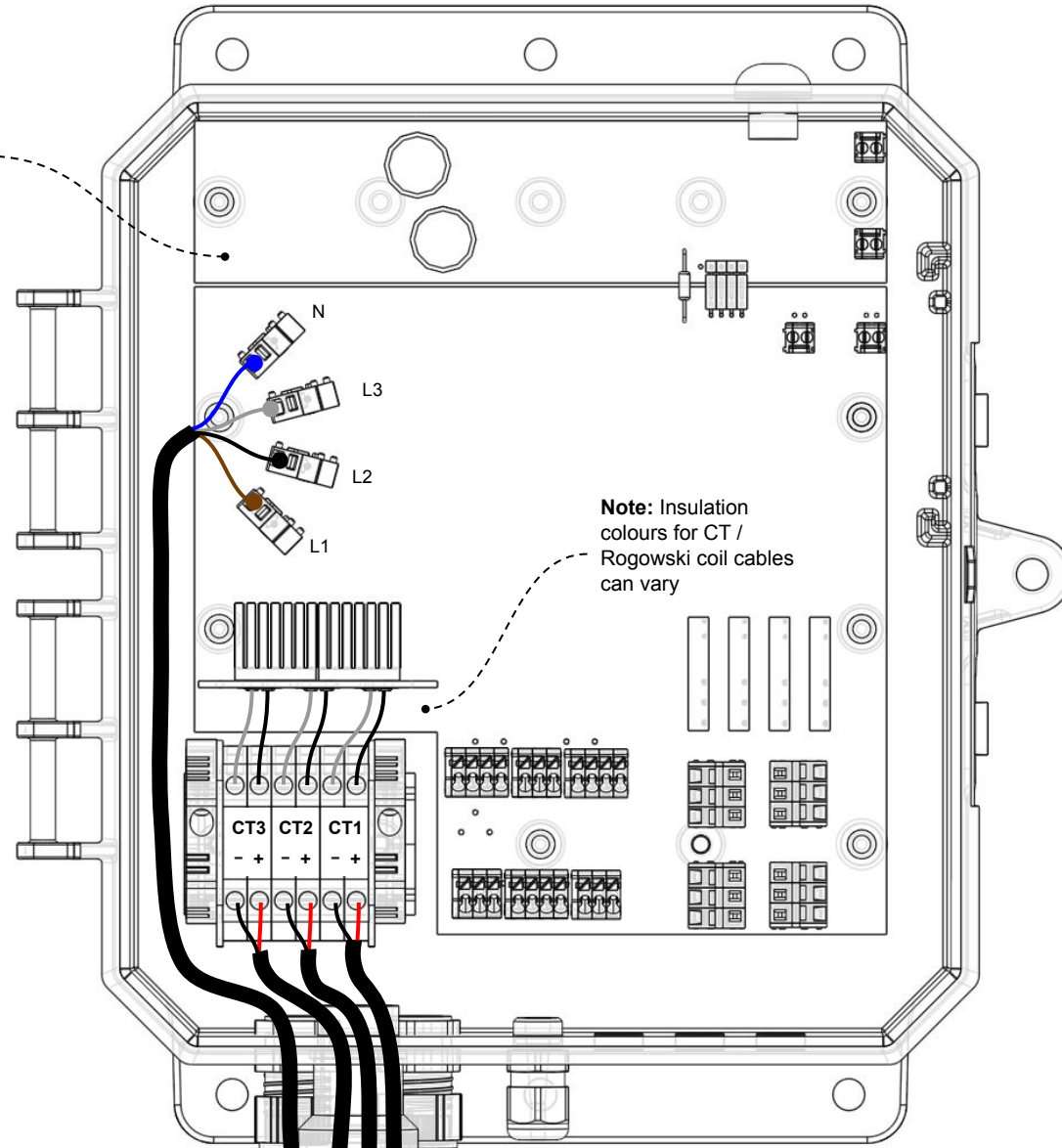


Voltage References & Current Transformer Wiring Diagram

Note: By default, a single phase supply is taken from L1 and N to power ZDR (not shown on this diagram). This can be replaced with a separate auxiliary supply if required.



Note: Insulation colours for CT / Rogowski coil cables can vary

Important: Fused disconnect or circuit breakers (not supplied) to protect 0.75mm² conductor according to local electrical regulations (min. 500mA)

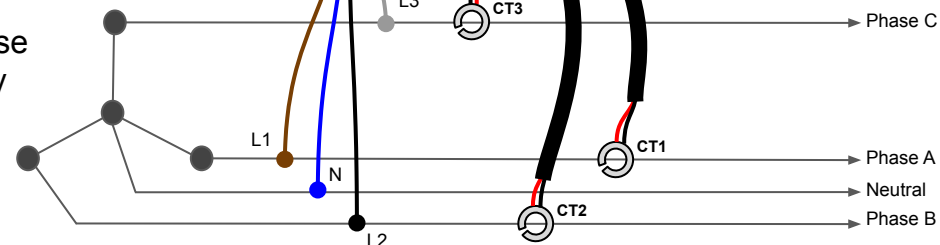
Configuration: 4 WIRE WYE

ANSI Meter Form: 9S/16S

Inputs: 3 x Vref, 3 x CT

Note: configure ZDR on Gateway for 9S/16S

3-Phase Supply



Install Sheet

ZDR-16, ZDR-17 // Wireless Demand Response Controller

Document Ref. EPI-065-02



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- Only qualified electrical workers should install this equipment. Such work should be performed only after reading the entire set of installation instructions.
- If the equipment is not used in a manner specified by EpiSensor, the protection provided by the equipment may be impaired.
- Before performing visual inspections, tests, or maintenance on this equipment, disconnect all sources of electric power. Assume that all circuits are live until they have been completely de-energized, tested, and tagged. Pay particular attention to the design of the power system. Consider all sources of power, including the possibility of backfeeding.
- Turn off all power supplying the meter and the equipment in which it is installed before working on it.
- Always use a properly rated voltage sensing device to confirm that all power is off.
- Before closing all covers and doors, inspect the work area for tools and objects that may have been left inside the equipment or panel.
- When removing or installing metering or other equipment, do not allow it to extend into the energised bus.
- The successful operation of this equipment depends upon proper handling,
- Neglecting fundamental installation requirements may lead to personal injury as well as damage to electrical equipment or other property.
- Before performing Dielectric (Hi-Pot) or Megger testing on any equipment in which the energy meter is installed, disconnect all input and output wires to the energy meter.
- High voltage testing may damage electronic components contained in the meter.
- Failure to follow these instructions will result in death or serious injury.

Installation & Safety Notes

- EpiSensor equipment should be installed, operated, serviced and maintained only by qualified personnel. EpiSensor does not assume any responsibility for any consequences arising out of the use of this equipment.
- The ZDR voltage measurement inputs are rated for up to 277 V L-N or 480 V L-L. For any voltage exceeding 277 V L-N, an auxiliary power source must be used. Consult the ZDR-16 datasheet for more information on available product variants. For voltages exceeding 480 V L-L, a voltage transformer must be used.
- Fuse for neutral terminal is required if the source neutral connection is not grounded.
- Clearly label the device's disconnect circuit mechanism and install it within easy reach of the operator.
- The fuses / circuit breakers must be rated for the installation voltage and sized for the available fault current.
- Depending on the type of current transformers used with the EpiSensor ZDR, shorting links may be required. Please consult the user guide for more information.
- If Voltage Transformers are used, the VT ratio setting should be adjusted on the ZDR settings page on the Gateway.
- By default, there will not be a cable included for mains reference voltages
- ZDR's using Rogowski coil or milliamp Current Transformers are individually calibrated and the current transformer cables should not be extended or interchanged.

Voltage References & Current Transformer Wiring Diagram

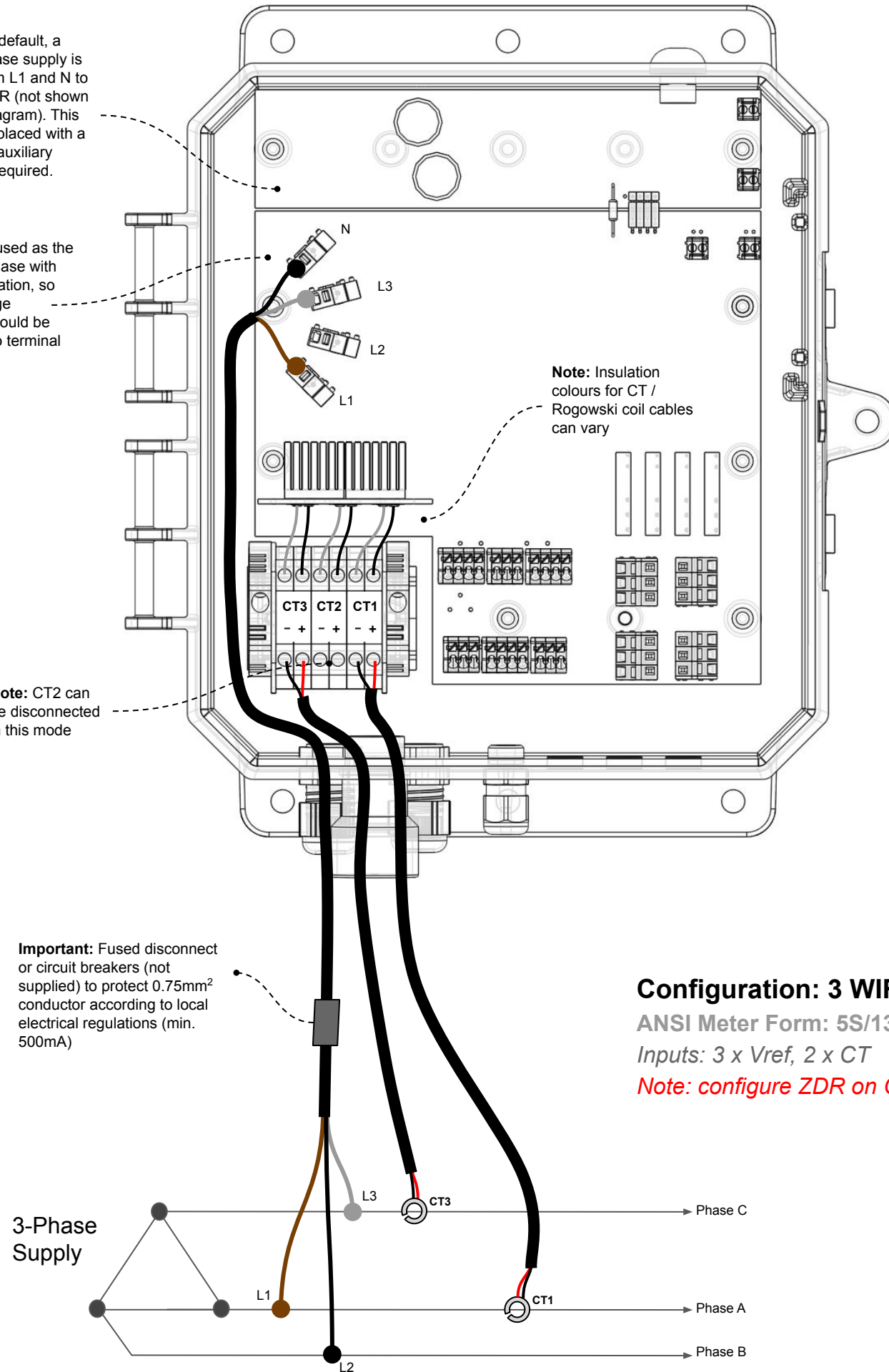
Note: By default, a single phase supply is taken from L1 and N to power ZDR (not shown on this diagram). This can be replaced with a separate auxiliary supply if required.

Note: L2 is used as the reference phase with this configuration, so the L2 voltage reference should be connected to terminal marked 'N'

Note: CT2 can be disconnected in this mode

Note: Insulation colours for CT / Rogowski coil cables can vary

Important: Fused disconnect or circuit breakers (not supplied) to protect 0.75mm² conductor according to local electrical regulations (min. 500mA)



Configuration: 3 WIRE DELTA

ANSI Meter Form: 5S/13S

Inputs: 3 x Vref, 2 x CT

Note: configure ZDR on Gateway for 5S/13S

Install Sheet

ZDR-16, ZDR-17 // Wireless Demand Response Controller

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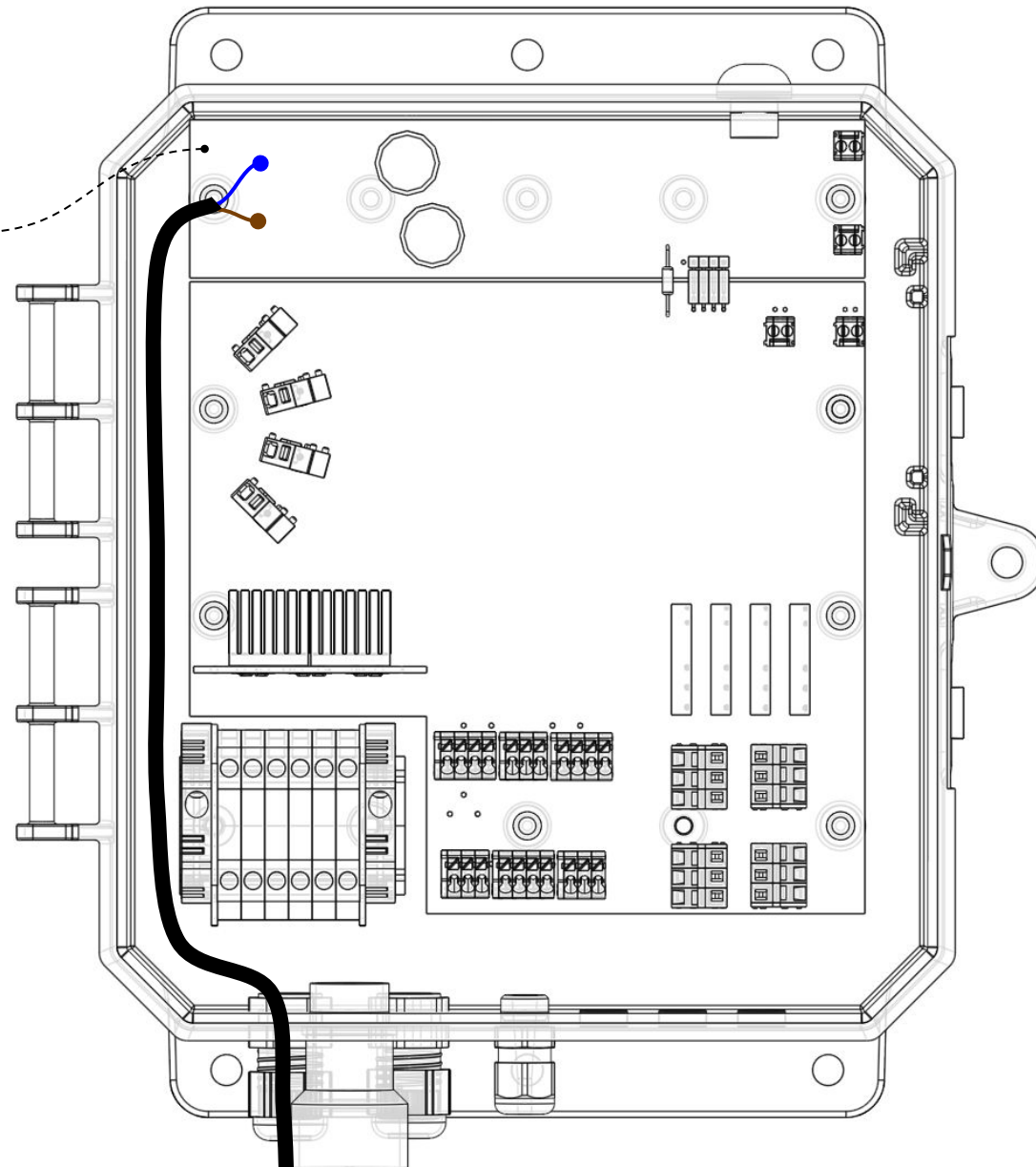
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Installation & Safety Notes

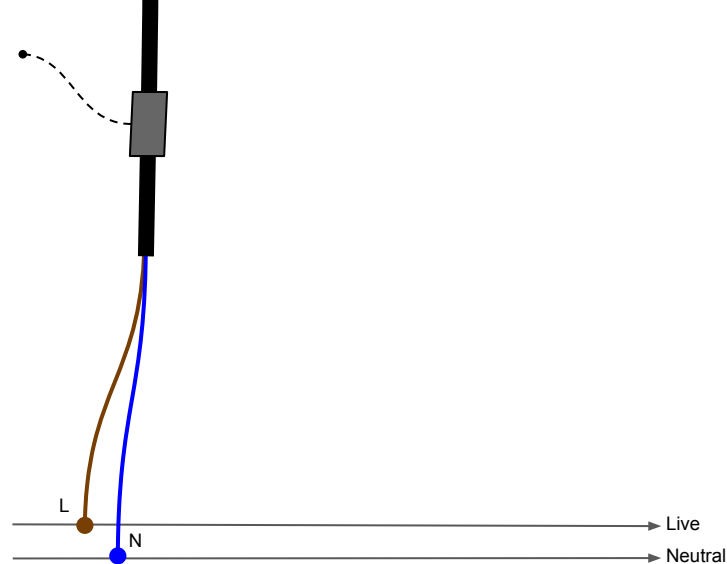
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Connecting an auxiliary supply to the ZDR mains power supply

Note: By default, a single phase supply is taken from L1 and N to power ZDR. To power ZDR from an auxiliary supply, remove these links and connect as shown in this diagram.



Important: Fused disconnect or circuit breakers (not supplied) to protect 0.75mm² conductor according to local electrical regulations (min. 500mA)



Install Sheet

ZDR-16, ZDR-17 // Wireless Demand Response Controller

Document Ref. EPI-065-02



**HAZARD OF ELECTRIC SHOCK,
EXPLOSION, OR ARC FLASH**



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Installation & Safety Notes

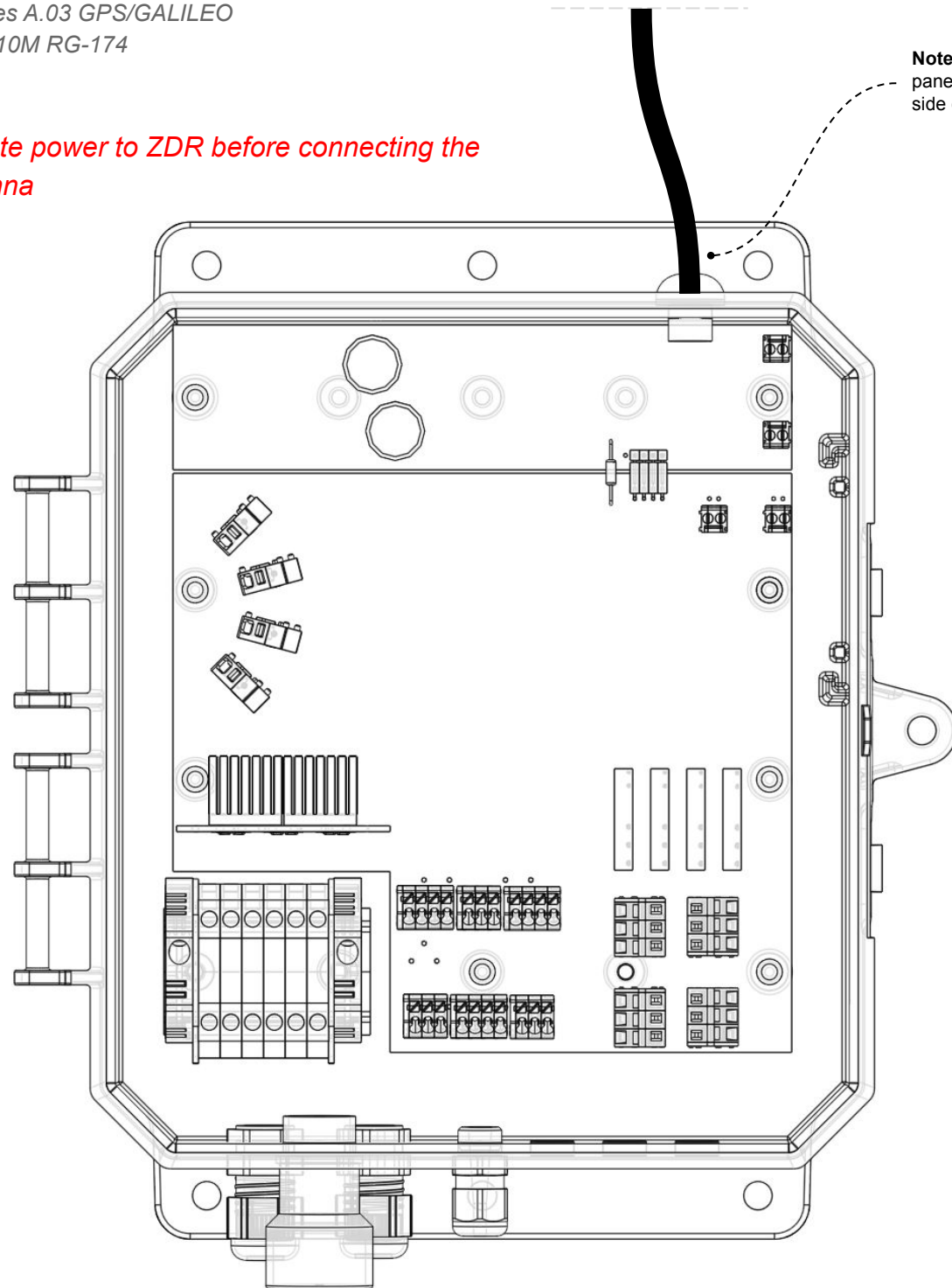
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Recommended Antenna:

Manufacturer: Taoglas
 Part No.: A.03.C.1001111
 Description: Hercules A.03 GPS/GALILEO
 Permanent Mount, 10M RG-174

Note: Isolate power to ZDR before connecting the GPS antenna

to active GPS Antenna



Note: SMF (F) connector panel mounted on top side of ZDR enclosure

Install Sheet




ZDR-16, ZDR-17 // Wireless Demand Response Controller
 Document Ref. EPI-065-02



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- 1 Input Voltage**
If the mains power supply of the ZDR is powered directly from the 3-phase voltage reference, ensure that the voltage does not exceed 480V AV L-L 
- 2 High Speed Data Module Connection**
Check that the high speed data module (if present) has been aligned with its terminals correctly, and it mating properly with the female terminals on the main PCB 
- 3 Enclosure Contamination & Integrity**
Ensure that there is no swarf or other dirt inside the ZDR enclosure, and that the enclosure has not been drilled or modified (other than to add IP68 glands in standard positions) 
- 4 GPS Signal**
If a high-speed data module has been installed, confirm (using a mobile app, or other handheld test device) that there is a good GPS signal available at the GPS antenna of ZDR. Line-of-sight view to the sky is needed for ZDR to synchronise time with GPS satellites. 