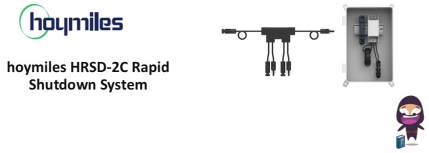
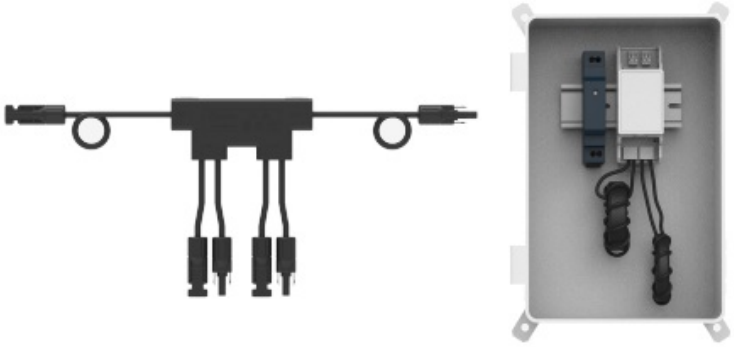


hoymiles HRSD-2C Rapid Shutdown System User Manual

Contents

hoymiles HRSD-2C Rapid Shutdown System



Legal Notice

Hoymiles has made every effort to ensure the accuracy and completeness of this manual. However, the content of this manual is continually reviewed and amended, due to product enhancements or feedback from real-world

usage. Hoymiles retains the right to modify this manual without prior notice at any time. Please refer to Hoymiles official website at **www.hoymiles.com** or scan the QR code for the latest version.

Warranty
To ensure reliability and warranty compliance, follow the installation instructions in this manual. You can access the current warranty conditions at **www.hoymiles.com**.

Contact Information
If you have technical queries or any questions concerning Hoymiles products, please contact us.
Floor 6, Building 5, Housheng 99 Road, Gongshu District, Hangzhou 310015 P. R. China
hoymiles.com

- Europe France **service.fr@hoymiles.com**
- Germany **service.de@hoymiles.com**
- Italy **service.it@hoymiles.com**
- Netherlands **service.nl@hoymiles.com**
- Spain **service.es@hoymiles.com**
- Other EU countries **service.eg@hoymiles.com**
- Latin America Brazil **service.br@hoymiles.com**
- Spanish-speaking countries **service.mx@hoymiles.com**
- North America USA **service.us@hoymiles.com**
- Cannada **service.ca@hoymiles.com**
- Asia Pacific Australia & New Zealand **service.au@hoymiles.com**
- Asia & Pacific **service.asia@hoymiles.com**

Before contact, make sure the following information at hand:

- Model of the product
- Brief description of the problem

Using This Manual

Symbols

Symbol	
•	List
Step 1 …	Installation steps in a defined order

Tool and Related Documents

To quickly select the HRSD or Transmitter, use Rapid Shutdown Compatibility Calculator. For more information or related documents, refer to the product page at **hoymiles.com**.

Revision History

Issues	
V202205	Original issue
V202310	• Added the rating in "1. Safety Information" • Added "4. Cable Length and Routing" • Updated illustrations in 5.1, 5.2, and 5.3 of "5. Installation" • Added "6. Troubleshooting" • Updated "7. Technical Specifications"
V202312	• Updated "7.1 HRSD-2C"
V202404	• Added "3. Hoymiles Rapid Shutdown System" • Updated "7.2 HT10"

Safety Information

Safety Symbols

This manual contains IMPORTANCE, NOTICE, WARNING, and DANGER notes. These instructions demand increasingly great attention as the severity levels rise. The instructions do not cover all the possible conditions and situations that may occur. It is important to perform wiring, installation, operation, commissioning, maintenance, and troubleshooting with common sense, caution, and care.

Symbols	Meaning
DANGER	This indicates a hazardous situation that can result in high level electric shocks and ot her serious physical injuries.
WARNING	This indicates a hazardous situation that may result in serious physical injuries.
NOTICE	This indicates a situation that can result in product damages.
IMPORTANCE	This indicates complementary information.

Safety Instructions

DANGER

- No flammable and combustible materials should be seen where the rapid shutdown system is installed.
- Do not touch any live parts in the system, including the PV array, when connecting the system to the electrical

grid.

- Do not connect or disconnect the HRSD under load. Turning off the Inverter or the HRSD may not reduce the risk. Internal capacitors in the inverter can remain charged for minutes after all power sources are disconnected. If service is required, verify that the capacitors have discharged by measuring the voltage across inverter terminals before disconnecting wiring. Wait 30 seconds after rapid shutdown activation before disconnecting DC cables or turning off DC disconnect.
- Do not remove the cover of the products in case of electric shock. Only professionals should carry out decommission and repair.

WARNING

- To reduce the risk of injury, carefully read all the instructions in this manual first.
- All the installation MUST comply with local regulations and technical rules.
- Do not attempt to install the products in inclement weather.
- Only professionals should install and replace the HRSD and the Transmitter. The professionals must be qualified, trained and skilled, and shall strictly adhere to this Manual during installation, operation and maintenance.
- Before installing or using an HRSD or a Transmitter, please read related technical notes (see Tool and Related Documents) and all the instructions and warnings on the inverter system itself as well as on the PV array.
- Do not operate the HRSD with damaged or substandard wiring or connectors. Check the remaining cables and connectors and ensure they are in good condition and appropriate in rating.
- To install the HRSD, connect the input cables to the PV module first, and then connect the HRSD output cables in series.
- For parallel string connections, connect the HRSD to the PV modules, serially connect the outputs of all the HRSD, pass one side (+ or -) of the string through the transmitter, and connect to the inverter to turn the system ON.
- Do not touch the body of the running HRSD because it can reach high temperatures during heat dissipation.
- To disconnect the HRSD, remove the output cables of the HRSD string first, and then disconnect the input cables from the PV modules.

NOTICE

- Do not mix DC connectors from different manufacturers. Damages caused by it will void the Hoymiles warranty.
- Improper installation may lead to HRSD damage, which is not covered under warranty.
- Human-made damages caused by improper handling or dismantling the product will void the warranty.
- Be sure to verify that the voltage and current specifications of the PV module match those of the HRSD.
- Cables of the HRSD inputs and the PV module outputs cannot be extended.
- Never apply an external voltage source to a module or string equipped with the HRSD.

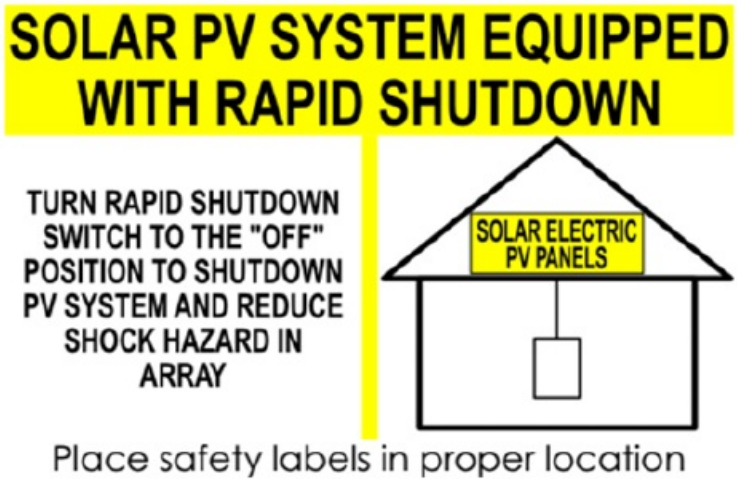
IMPORTANCE

- To reduce the system risk, it is recommended that string inverters be able to perform Arc Fault Protection and DC Insulation Resistance Detection during the operation.
- The HRSD is shipped in the OFF position and measures 0.9 V to 1.1 V when the “permission to operate” signal

is not present.

- Max. cable length from inverter (+) to inverter (-): 800 m (2625 ft.)
- Recommended Max. number of strings connected to the HRSD: 30 modules1
- Hoymiles recommends that the Transmitter power supply be on the same AC branch circuit as the inverter to meet rapid shutdown requirements.
- During the PV system operation, check that the Power LED 1 is lit and the Signal LED 2 is blinking.
- Max. current per Core of Transmitter: 75 A or 150 A
- Max. number of strings per Core2: 5 (75 A Core) or 15 (150 A Core)
- Place rapid shutdown system sticker no more than 1m (3 ft.) from the Transmitter or AC disconnect.

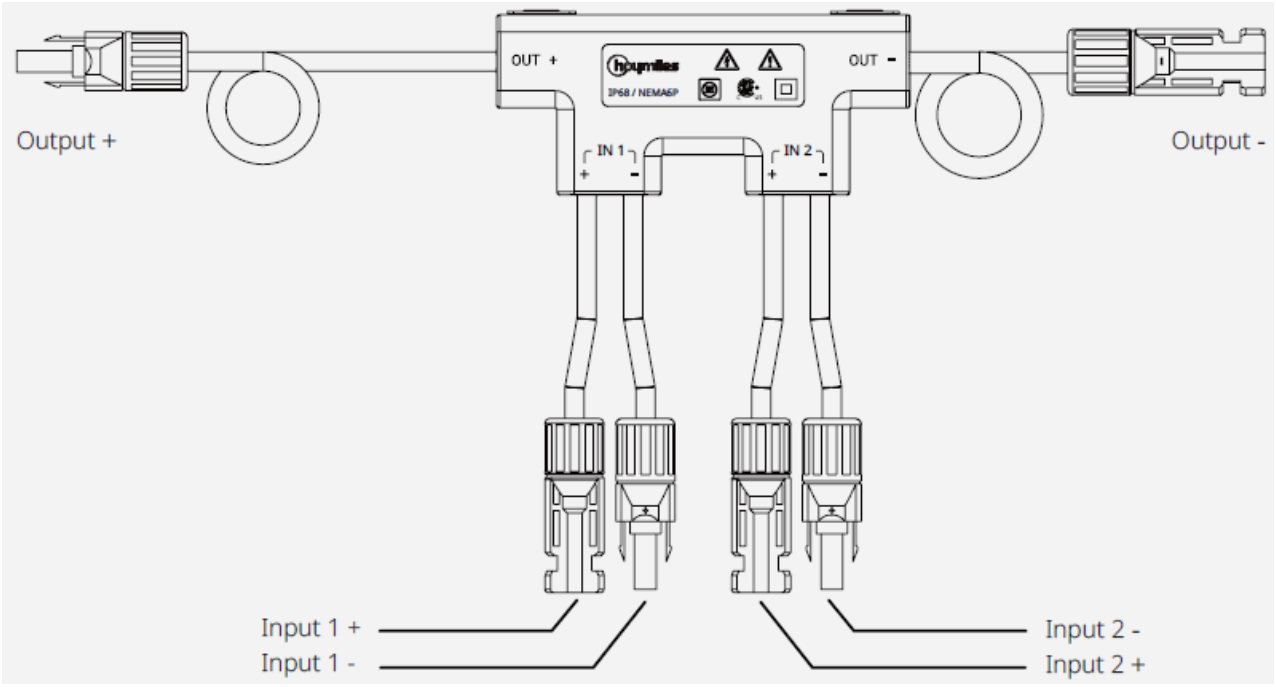
1. Source: SunSpec Rapid Shutdown Specification. Please refer to local regulations before installation.
2. With Φ 6 mm (0.24 in) DC cable diameter (without DC connector) (Refer to 7.2 or 7.3 for details.)

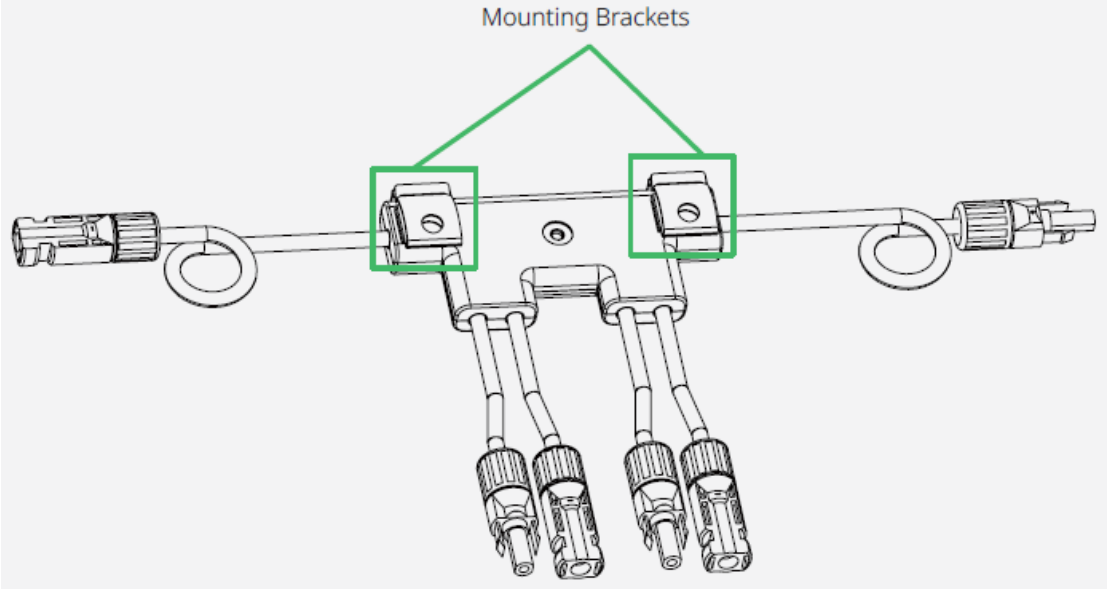


Products

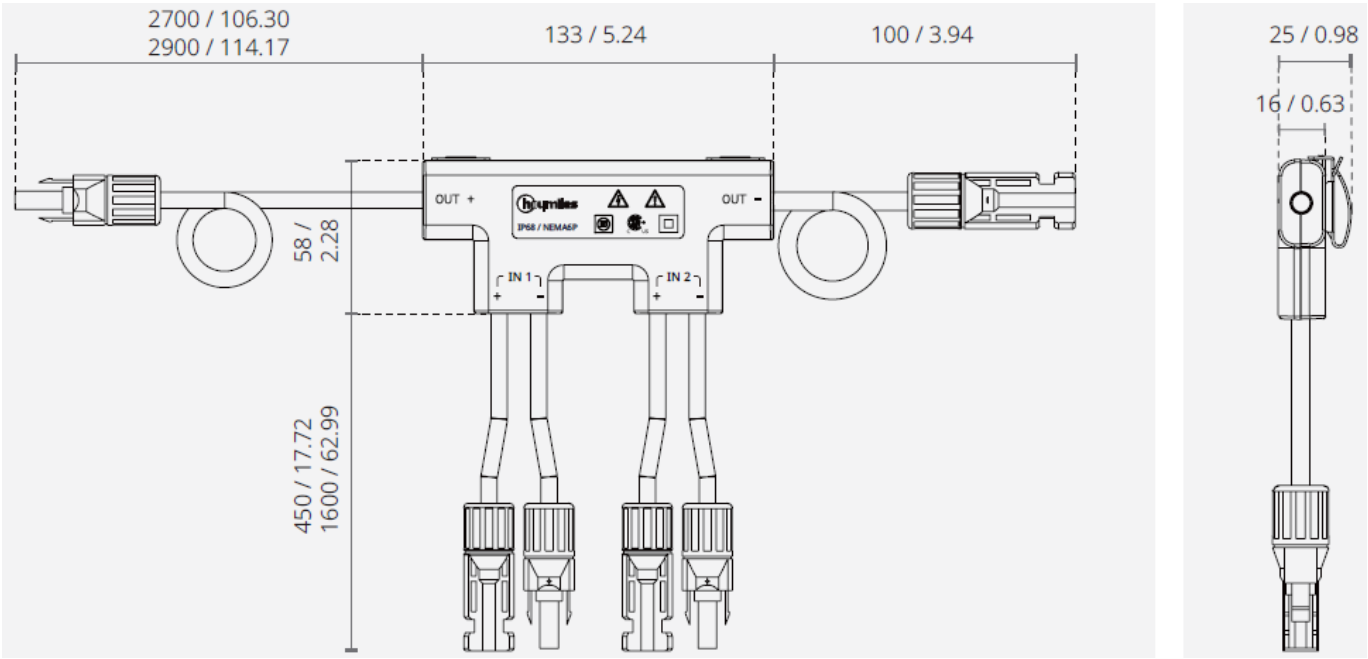
HRSD-2C

Appearance





Dimensions (mm / inch)



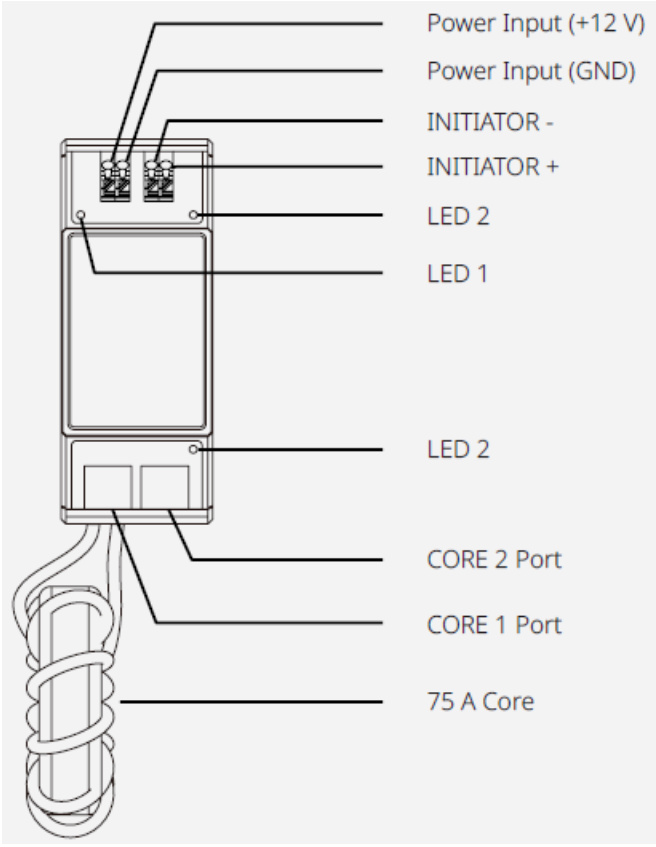
Features

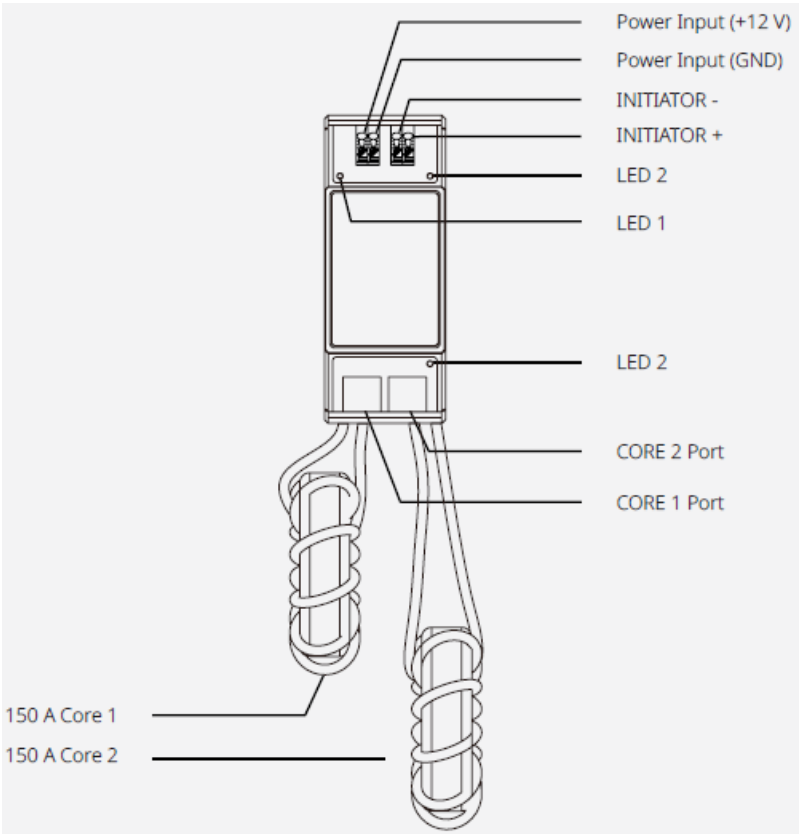
- Meets Sunspec RSD, NEC 2017 & NEC 2020 690.12 requirements
- Uses Active Bypass to reduce heat generation in shade and other situations
- Uses graphene heat spreader to improve heat dissipation
- Plug & play, no configuration required
- Lower power consumption and wider operating voltage range
- Able to avoid crosstalk with special communication modulation technique

As part of Hoymiles Rapid Shutdown Solution for the PV system, HRSD-2C is connected with two modules. It meets NEC 2017, NEC 2020, UL 1741 and SunSpec Rapid Shutdown requirements, guaranteeing PV system safety. The HRSD device enables proper operation of the PV system when it is installed and receives a “permission to operate’‘ signal from the Hoymiles Transmitter. In an emergency, the PV system would enter module-level rapid shutdown mode by simply disconnecting the AC power of the Transmitter or using an external initiator. (Please see 3.2 for details.)

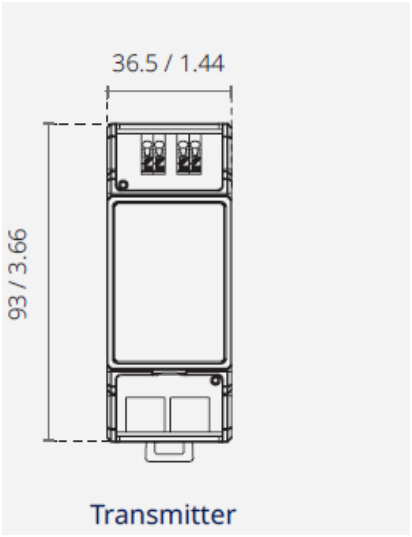
HT10

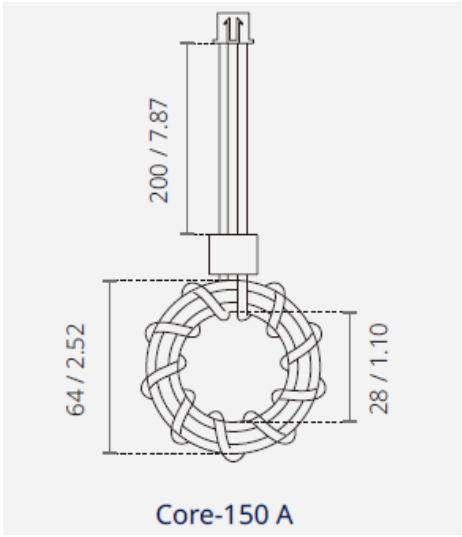
Appearance

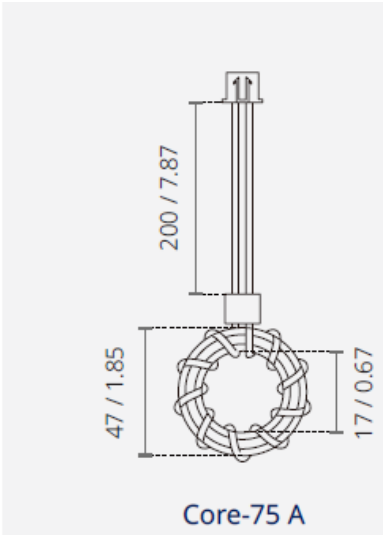




Dimensions (mm / inch)







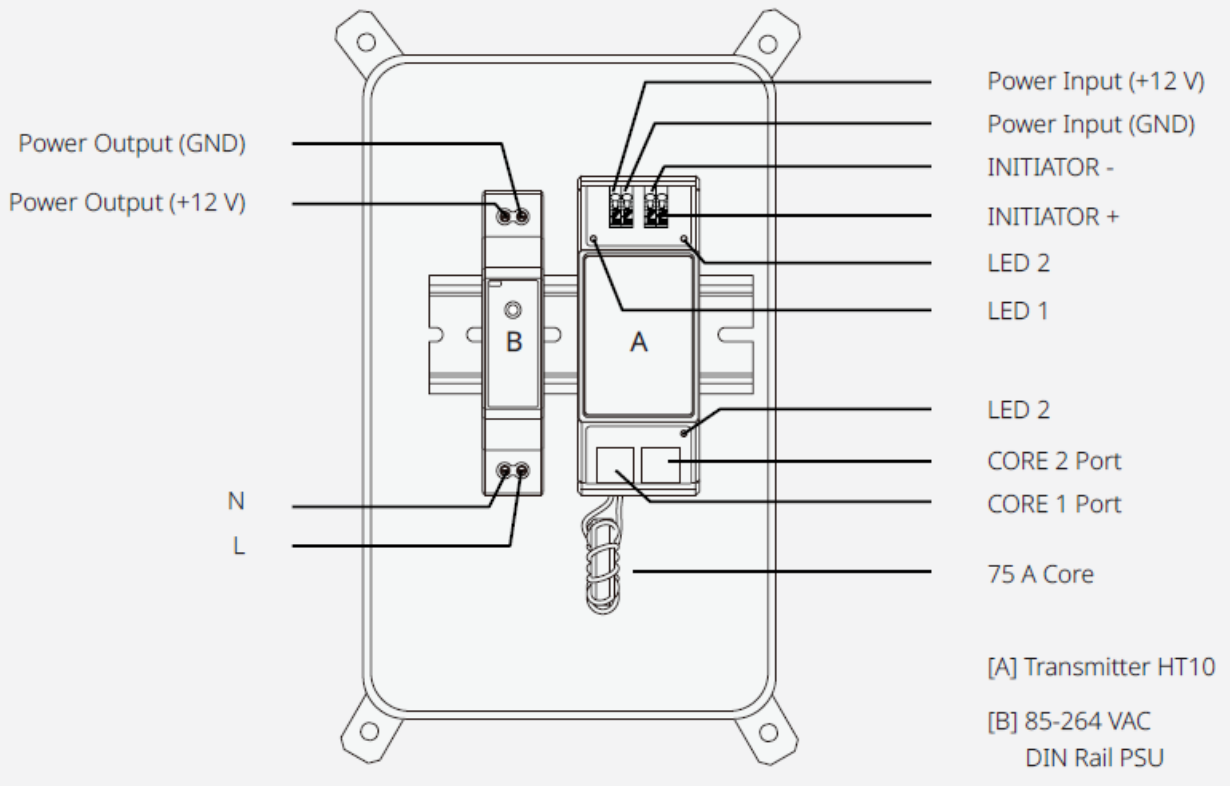
Features

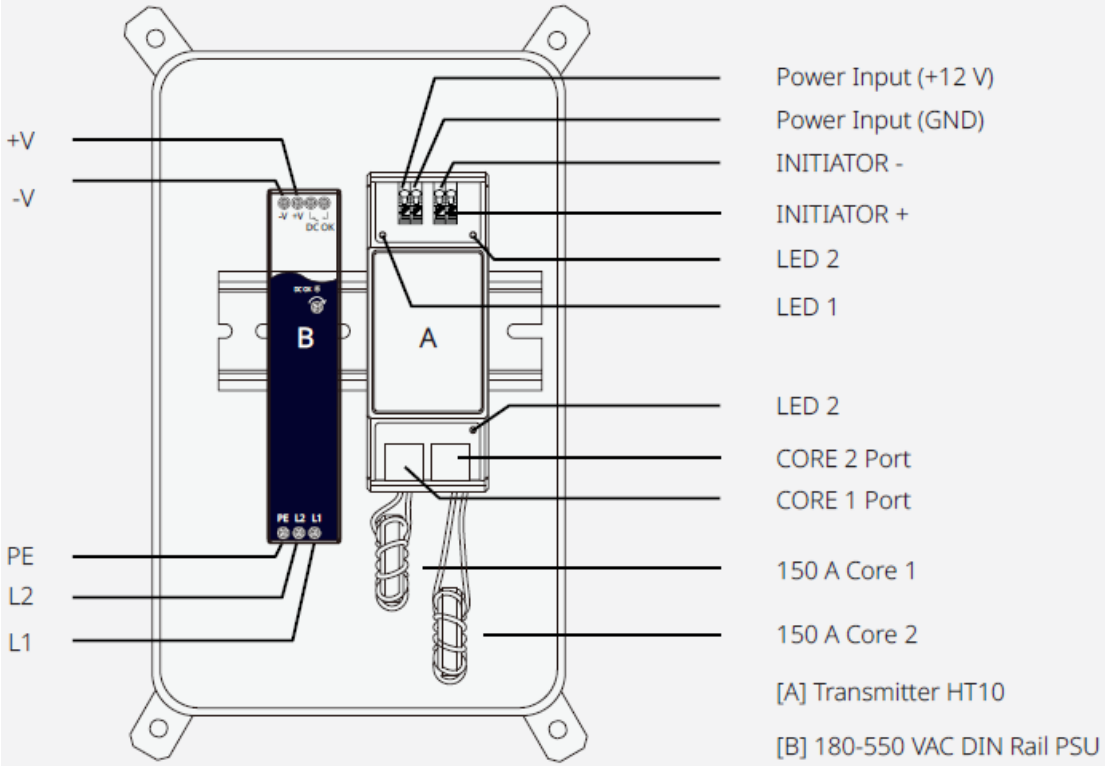
- Complied with NEC 2017&NEC 2020 690.12 requirements
- Complied with SunSpec RSD requirements
- Equipped with single/dual Core
- Achieves rapid shutdown through Transmitter power-off or external initiation

As part of Hoymiles Rapid Shutdown solution, Hoymiles Transmitter HT10 works with HRSD for module-level rapid shutdown. When powered on, the HT10 uses PLC technology to continuously send a “permission to operate” signal to HRSD, enabling the PV system to start producing power. In case of emergency, the PV system would enter module-level rapid shutdown mode by simply disconnecting the AC power of the Transmitter or using an external initiator. (Please see 3.2 for details.)

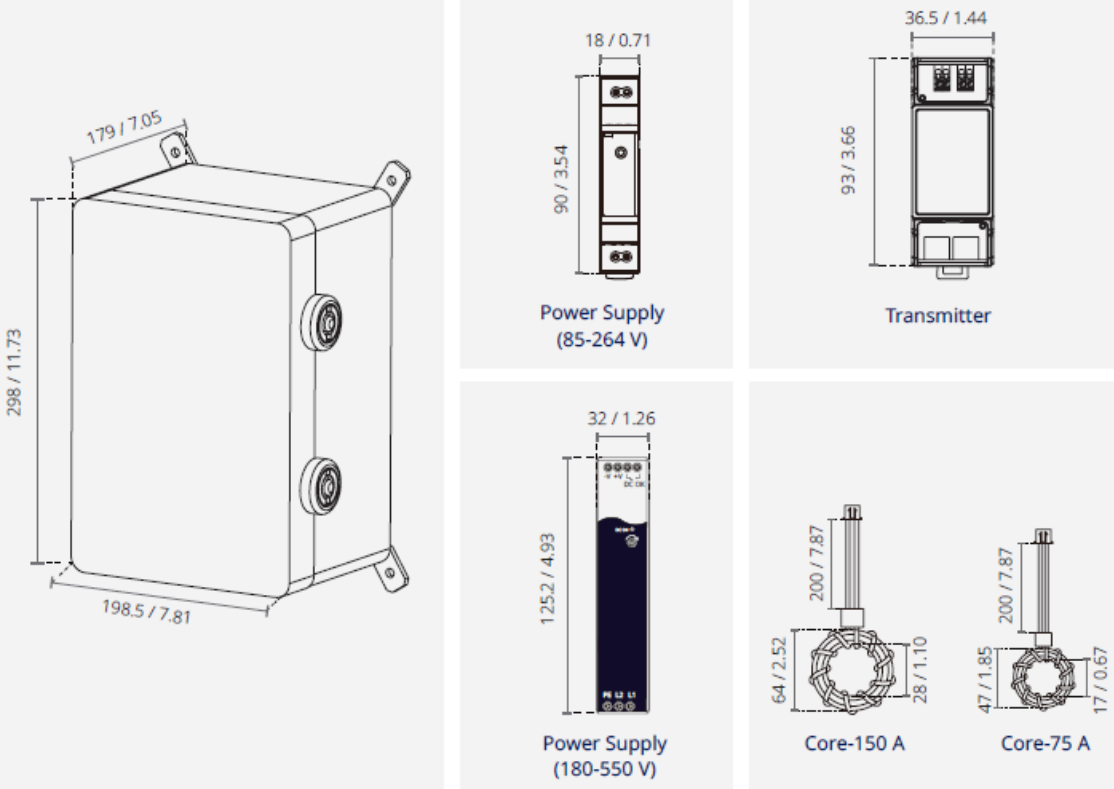
HT10-Kit

Appearance





Dimensions (mm / inch)



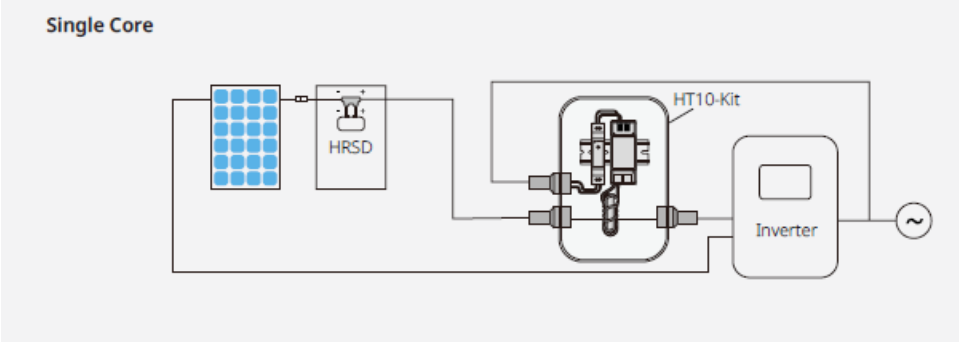
Features

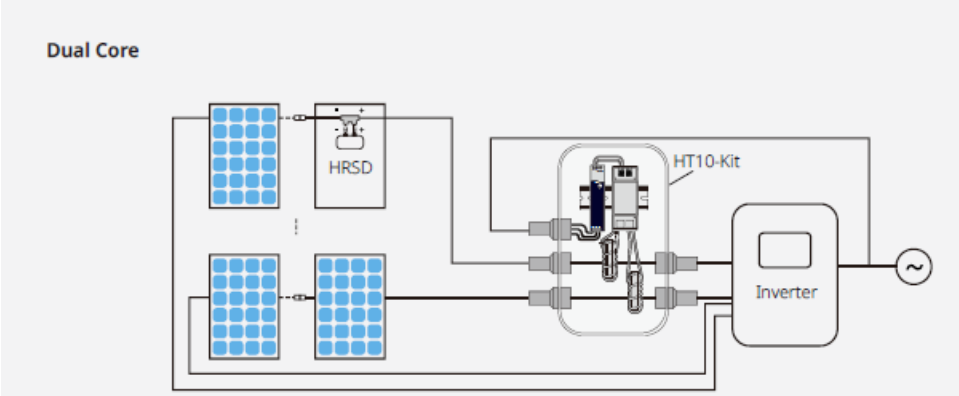
- Module-level rapid shutdown with Hoymiles HRSD
- Achieves rapid shutdown through Transmitter power-off or external initiation
- Equipped with single/dual Core
- Complied with NEC 2017&NEC 2020 690.12 and SunSpec RSD requirements
- Weatherproof outdoor enclosure
- Equipped with single- / three-phase power supply

As part of Hoymiles Rapid Shutdown solution, the HT10-Kit is designed to work with HRSD for rapid shutdown at the module level. The kit comprises one HT10 (available in single or dual Core), one single- or three-phase power supply, and an outdoor enclosure. When powered on, the HT10 uses PLC technology to continuously send a “permission to operate” signal to HRSD, enabling the PV system to start producing power. In case of emergency, the PV system would enter module-level rapid shutdown mode by simply disconnecting the AC power of the Transmitter or using an external initiator. (Please see 3.2 for details.)

Hoymiles Rapid Shutdown System

System Overview
Hoymiles Rapid Shutdown System consists of the HRSD and the Transmitter, as shown below.

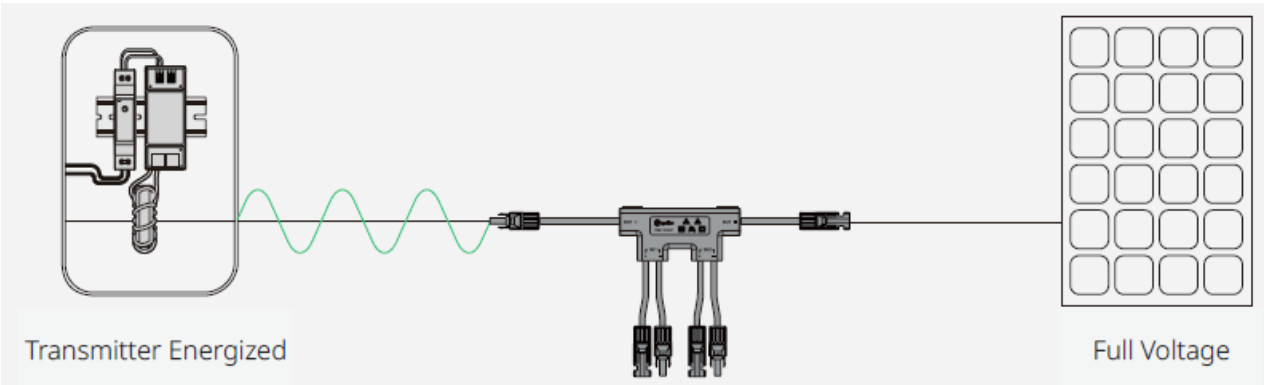


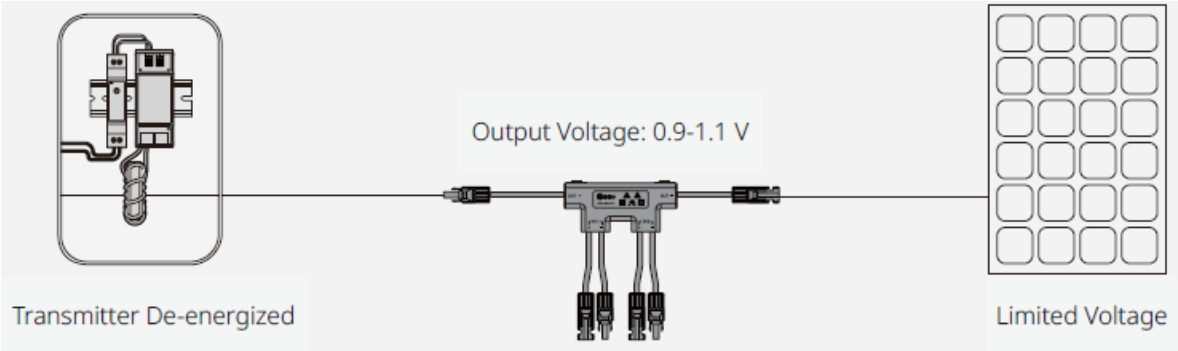


IMPORTANCE

- Hoymiles recommends that the Transmitter power supply be on the same AC branch circuit as the inverter to meet rapid shutdown requirements.

When energized, the Transmitter constantly sends a “permission to operate” signal to the HRSD-2C, which receives the signal and turns ON and allows full PV module voltage. When de-energized, the Transmitter stops the signal, making the HRSD-2C enter shutdown mode with output voltage reduced to 0.9-1.1 V. Thus, the PV array enters rapid shutdown mode in the event of AC grid loss.





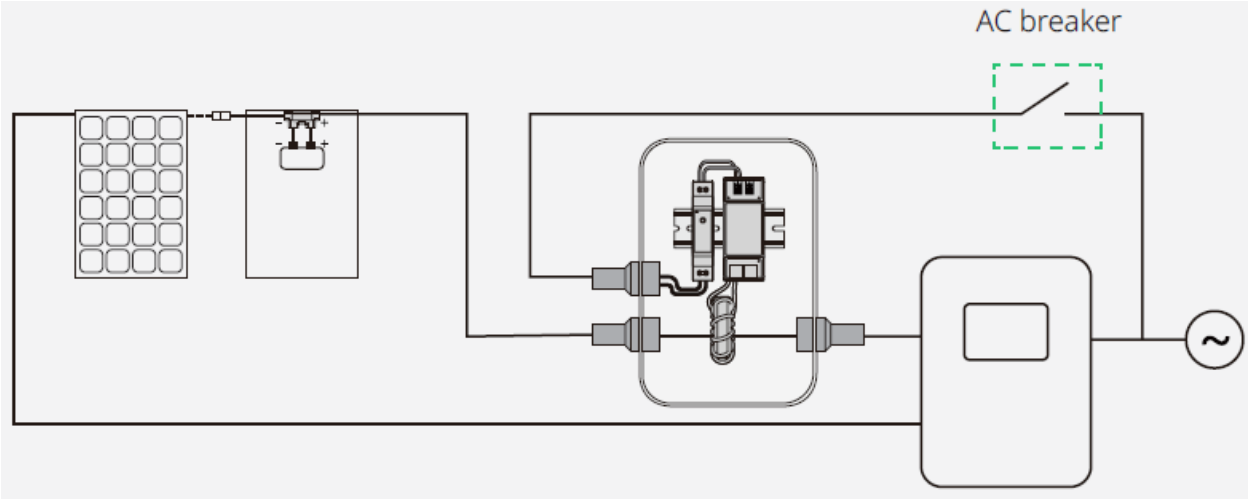
NOTICE

- The figures above are intended for working principle illustration only. They do not serve as wiring references.

Initiation Methods
Hoymiles Rapid Shutdown System can be initiated in two ways—1) turning off the AC breaker and 2) pressing the external emergency stop button.

Turning off AC Breaker

Working Principle
This method requires an upstream AC breaker. When the breaker is turned off, the DC 12V power to the Transmitter is disconnected, which interrupts the “permission to operate” signal transmission, making the HRSD enter shutdown mode.



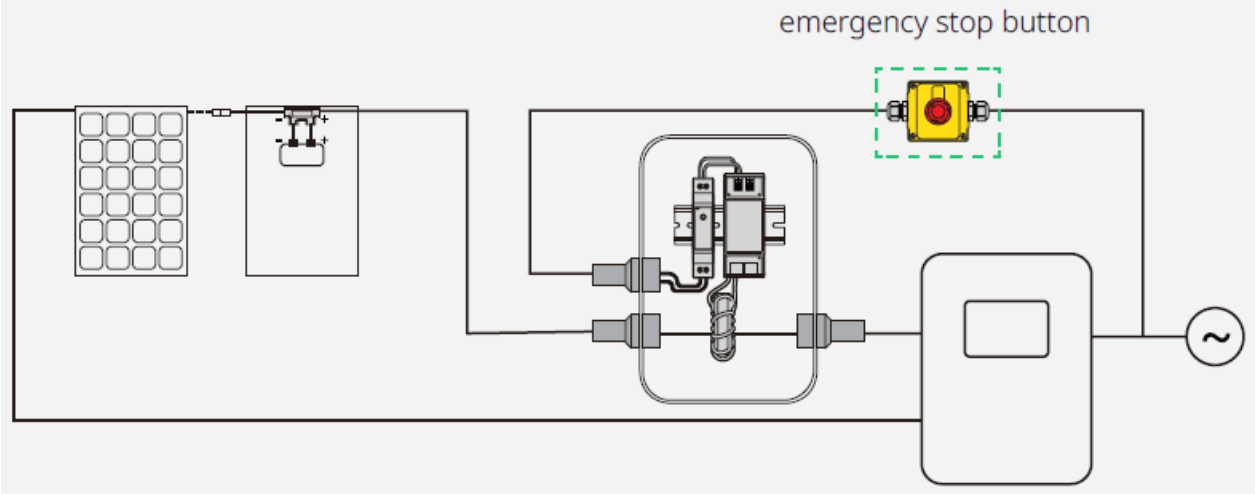
Wiring Method
Respectively connect the output L and N ports of the AC breaker to the L and N ports of the DIN rail PSU.

NOTICE

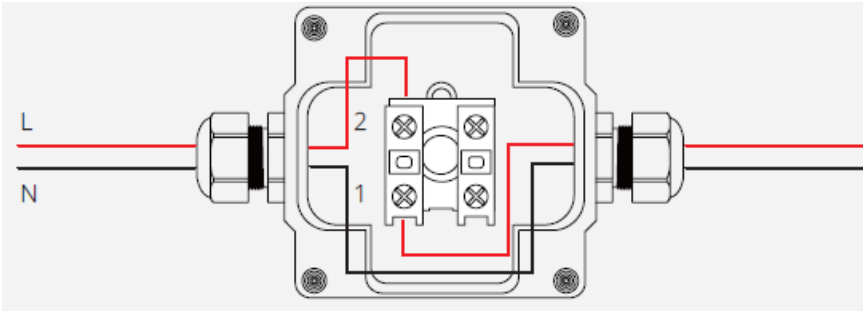
- The AC breaker should be installed at an accessible location

Pressing External Emergency Stop Button

Working Principle
This method requires an upstream external emergency stop button. When the button is pressed, the DC 12V power to the Transmitter is disconnected, which interrupts the “permission to operate” signal transmission, making the HRSD enter shutdown mode.



Wiring Method
Serially connect the NC contacts (1 and 2) of the emergency stop button to the live wire (L) of the upstream AC cable.

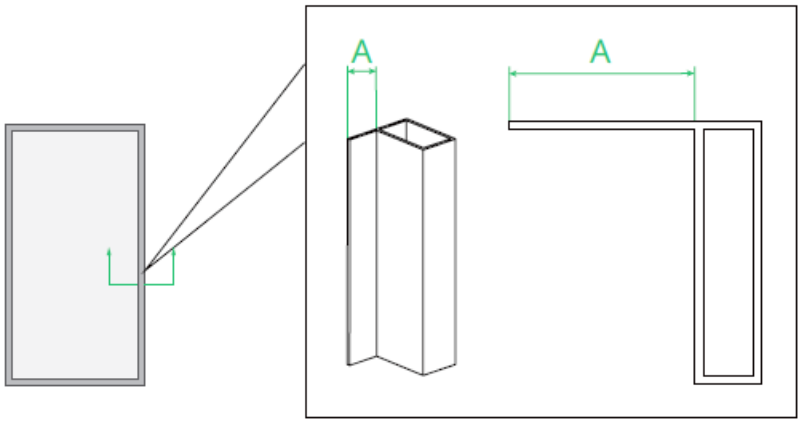


NOTICE

- The AC circuit should be 220V 6A or 380V 4A.
- The emergency stop button should be installed at an accessible location.

Cable Length and Routing

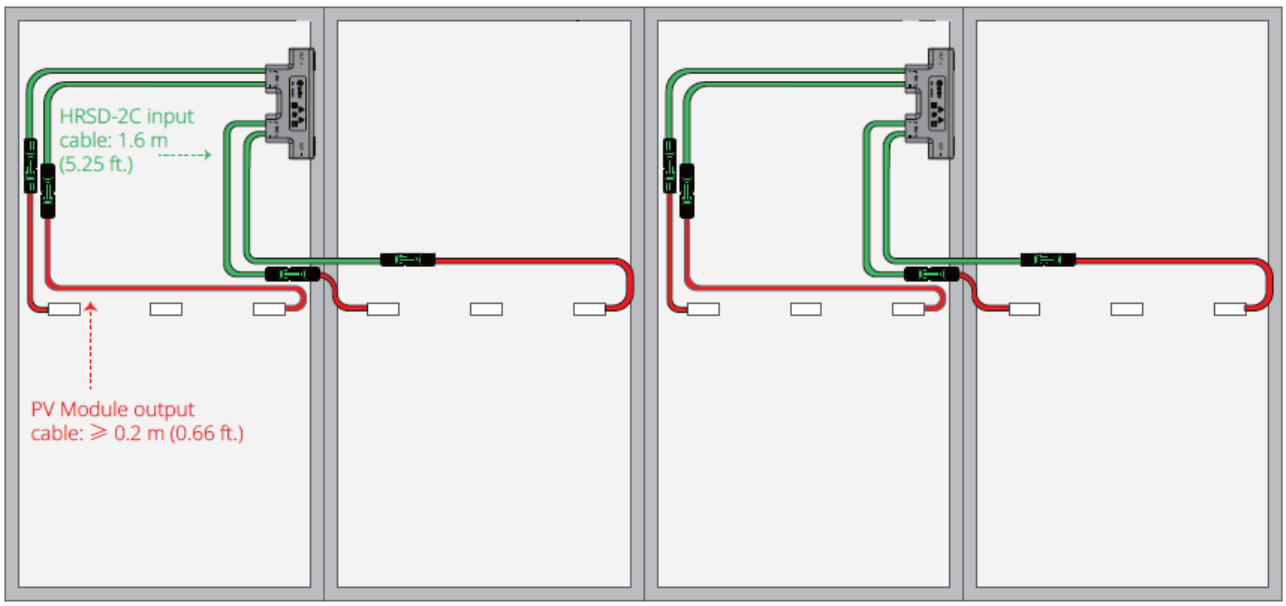
Configuration of Cable Lengths
The HRSD can be mounted on both the long and short sides of the PV module frame. Choose the suitable HRSD based on the installation scenario.



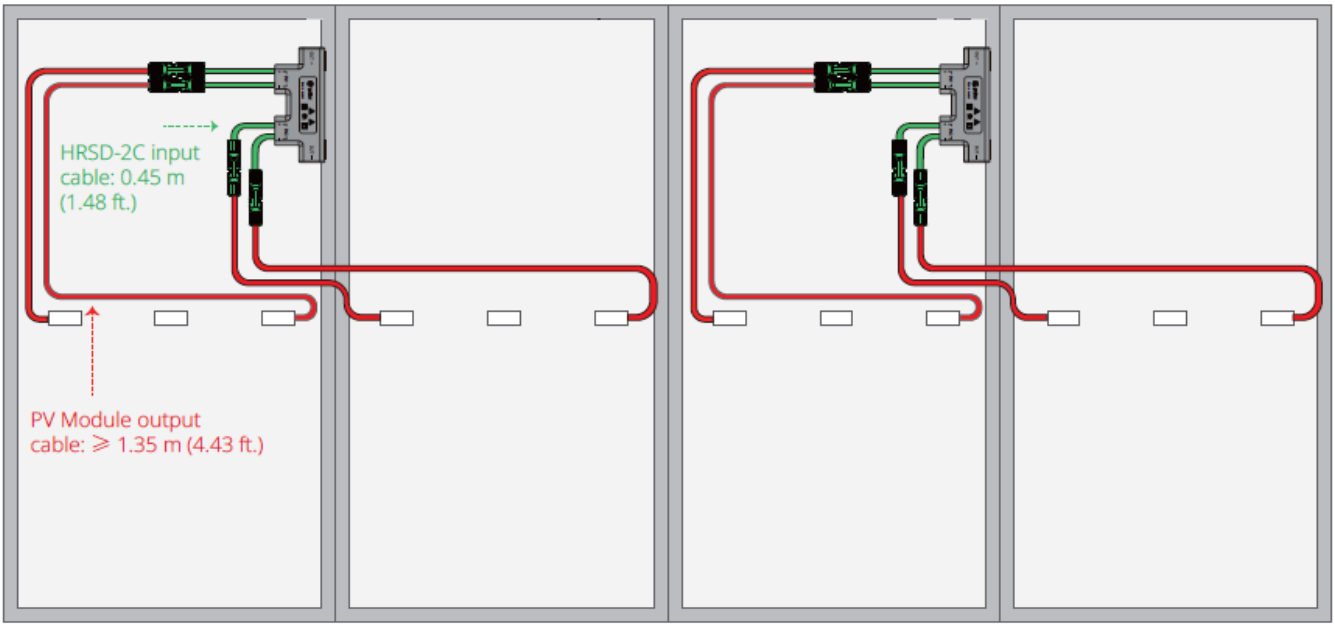
NOTICE

- To securely fasten the HRSD to the PV module frame, ensure A is 15 mm at minimum for clipping.

Scenario One: Long-side Installation
For PV modules with short output cables, choose HRSDs with input cables of the suitable length shown below.

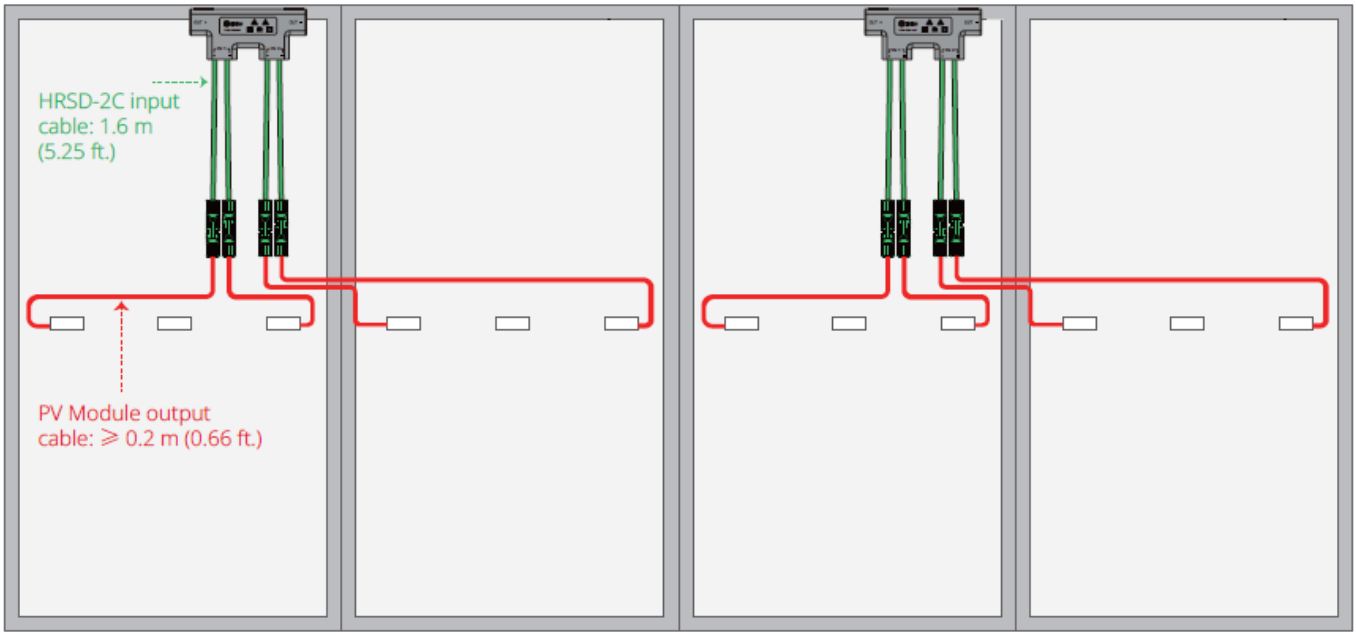


* The proportions of the HRSDs have been modified to improve the depiction of the structure.
For PV modules with long output cables, choose HRSDs with input cables of the suitable length shown below.

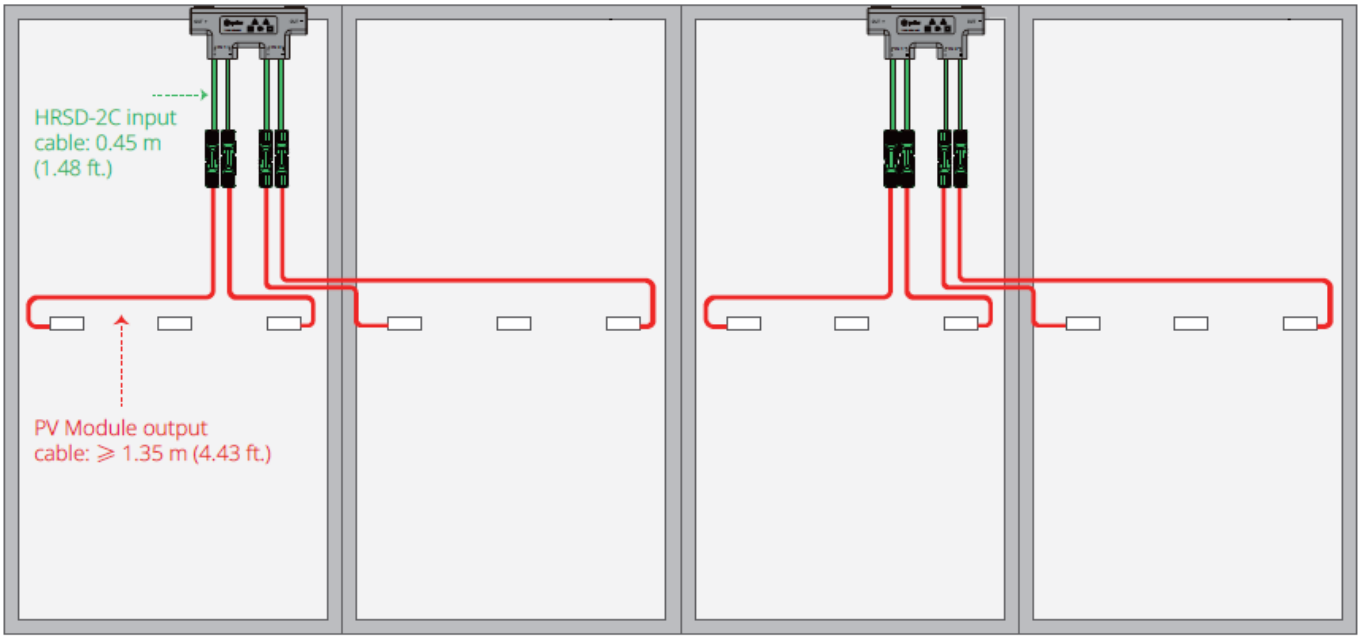


* The proportions of the HRSDs have been modified to improve the depiction of the structure.

Scenario Two: Short-side Installation
For PV modules with short output cables, choose HRSDs with input cables of the suitable length shown below.



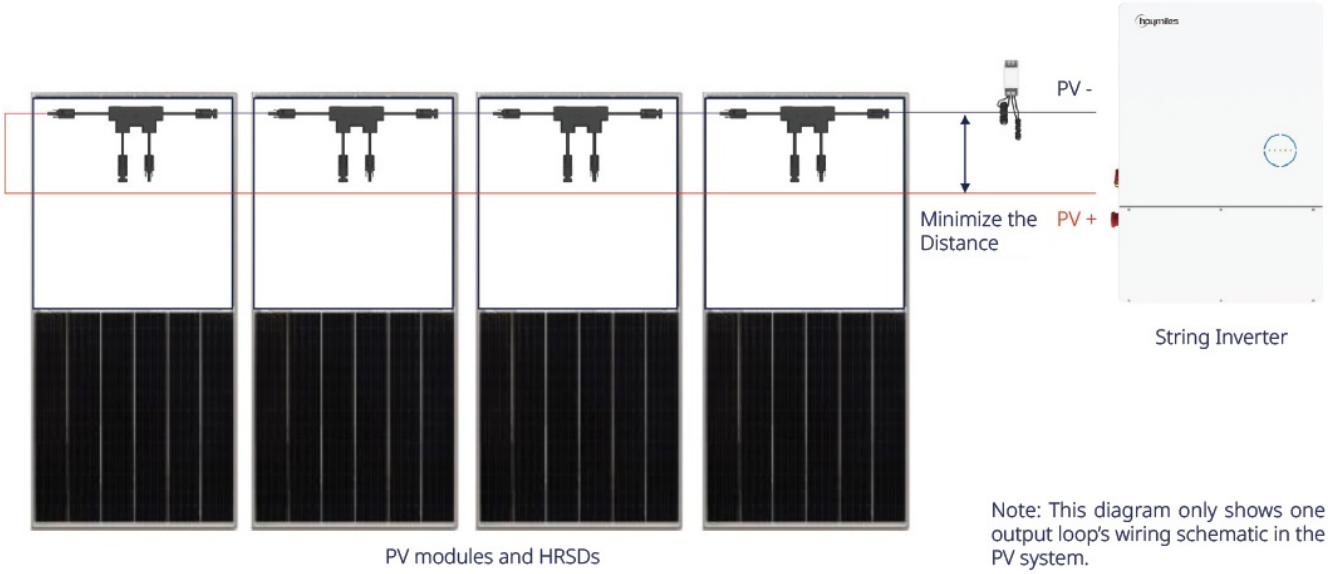
* The proportions of the HRSDs have been modified to improve the depiction of the structure.
For PV modules with long output cables, choose HRSDs with input cables of the suitable length shown below.

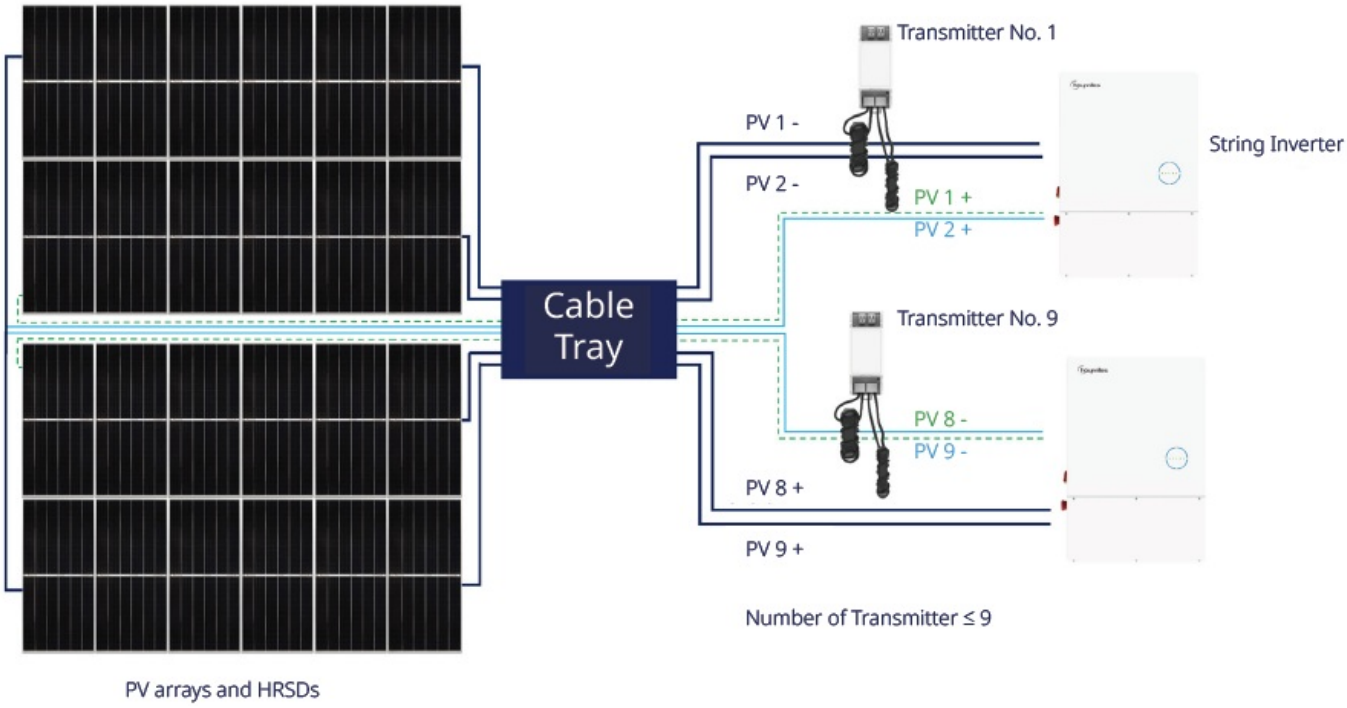


* The proportions of the HRSDs have been modified to improve the depiction of the structure.

Routing Instruction
To ensure effective communication,

- minimize the distance between positive and negative cables within the same string.
- up to nine Transmitters' DC cables can pass through a single cable tray.





Installation

* The installation instructions in this chapter are in accordance with the National Electrical Code (NEC), NFPA 70, and Canadian Electrical Code (CEC Code).

HRSD-2C

WARNING

- To disconnect the HRSD-2C, remove the output cables of the HRSD string first, and then disconnect the input cables from the PV modules.

NOTICE

- The HRSD-2C has two inputs. If you are connecting it to one PV module, connect HRSD-2C Input 1 first, and

then short jump the HRSD-2C Input 2 – and Input 2 + together.

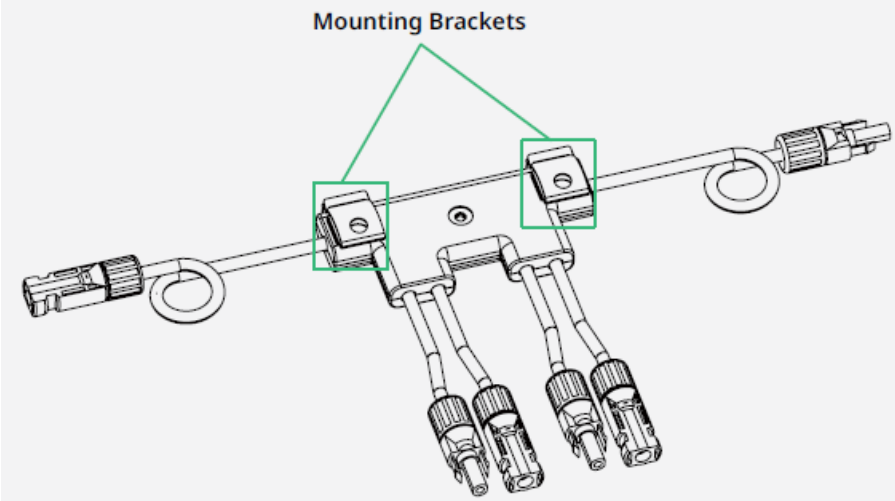
- Cables of the HRSD inputs and the PV module outputs cannot be extended.

IMPORTANCE

- HRSD-2C output voltage is 0.9 V to 1.1 V when the Transmitter “permission to operate” signal is not present.
- Max. cable length from inverter (+) to inverter (-): 800 m (2625 ft.)
- Max. number of strings recommended: 30 modules*

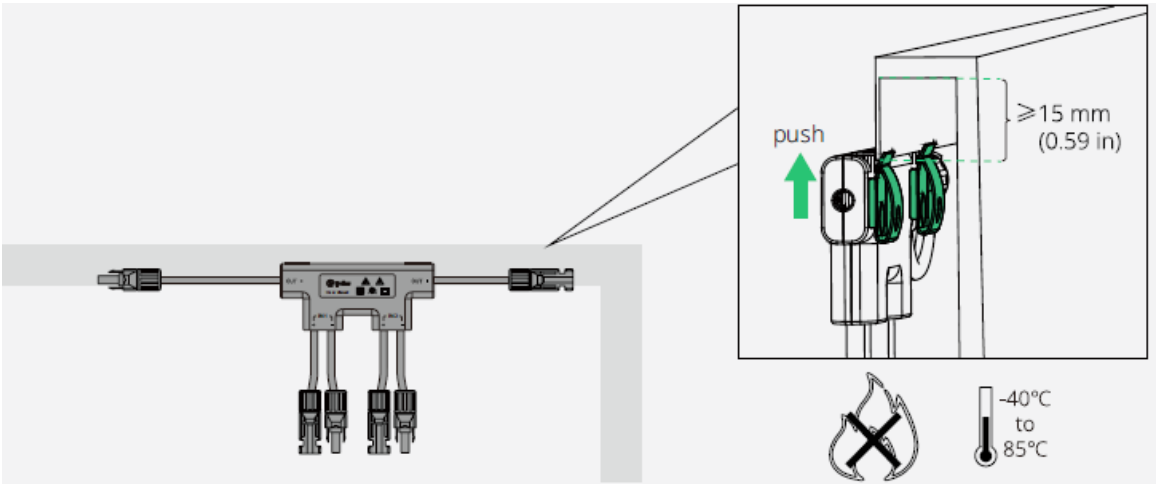
*Source: SunSpec Rapid Shutdown Specification. Please refer to local regulations before installation.

Step 1 Buckle HRSD-2C on the PV module frame.

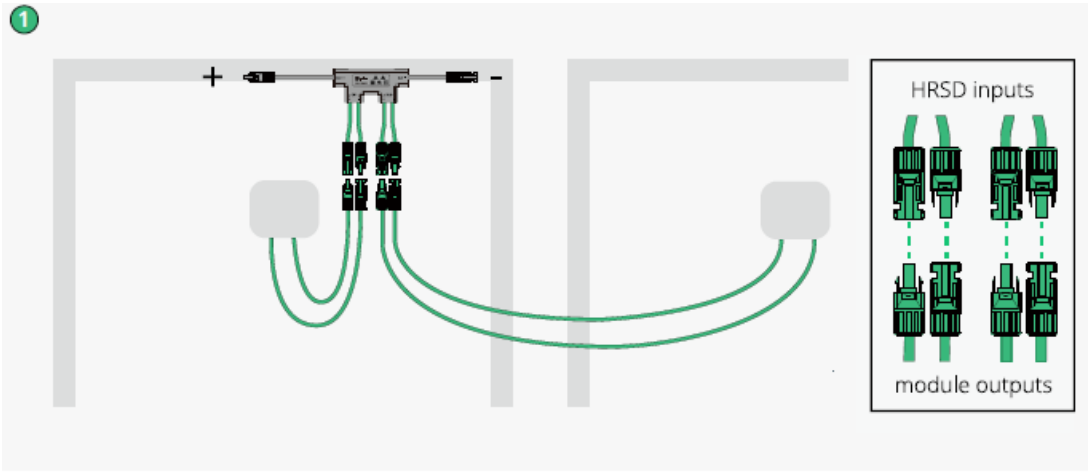


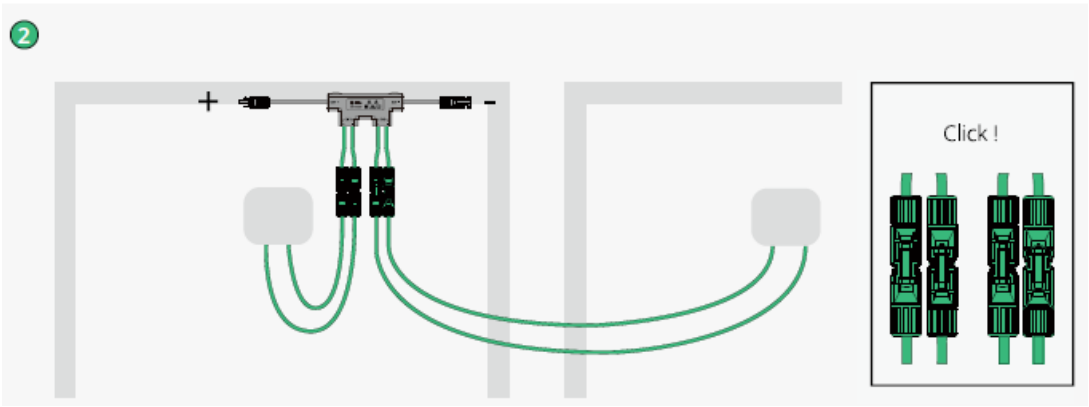
NOTICE

- Maintain a minimum of 1.5 cm (0.59 inches) clearance distance between the roof and the HRSD-2C enclosure to ensure ventilation and heat dissipation.
- Avoid exposing the HRSD-2C and its DC connectors to sunlight, rain, or snow. Don’t place them between PV modules due to potential gaps.



Step 2 Connect the PV modules to the HRSD-2C.





NOTICE

- To prevent accidental damages, Hoymiles recommends securing the DC cables to the PV module frames with cable ties.

Step 3 Connect the HRSD-2C outputs in series.

HT10

WARNING

- Before installation, ensure that the whole system is disconnected from the power source and the HRSD has been installed.

NOTICE

- Improper installation may lead to HT10 damage, which is not covered under warranty.

IMPORTANCE

- Hoymiles recommends that Transmitter power supply be on the same AC branch circuit as the inverter to meet rapid shutdown requirements.
- Place rapid shutdown system sticker no more than 1m (3 ft.) from the Transmitter or AC disconnect.
- During the PV system operation, check that the Power LED 1 is lit and the Signal LED 2 is blinking.
- Max. current per Core: 75 A or 150 A
- Max. cable length from inverter (+) to inverter (-): 800 m (2625 ft.)
- Max. number of strings per Core*: 5 (75 A Core) or 15 (150 A Core)

* With Φ 6 mm (0.24 in) DC cable diameter (without DC connector) (Refer to 7.2 for details.)

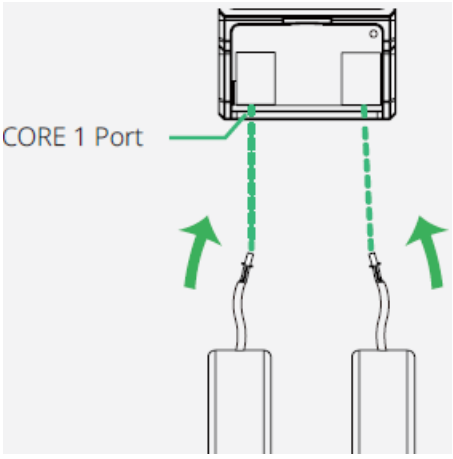
Preparation
Please prepare the following items before installation.

- Personal protective equipment (PPE)
- 35 mm DIN rail
- 12 V DC DIN rail power supply

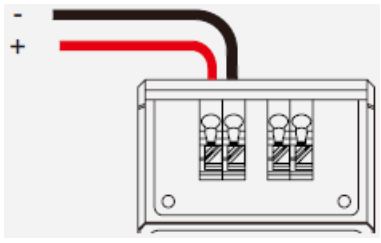
Steps

- Step 1 Mount the Transmitter and the power supply on the DIN rail.
- Step 2 Connect the Core to the Transmitter.

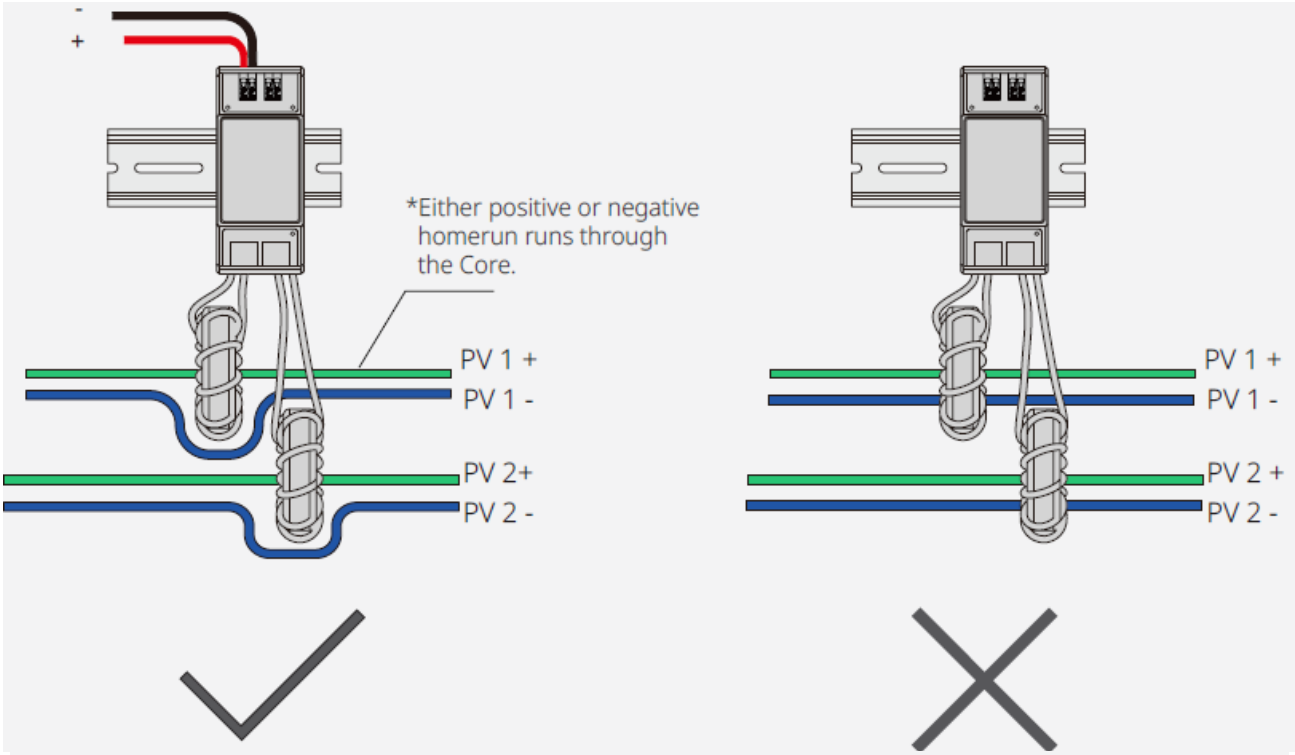
For a single-Core Transmitter, connect the cable to the CORE 1 port.

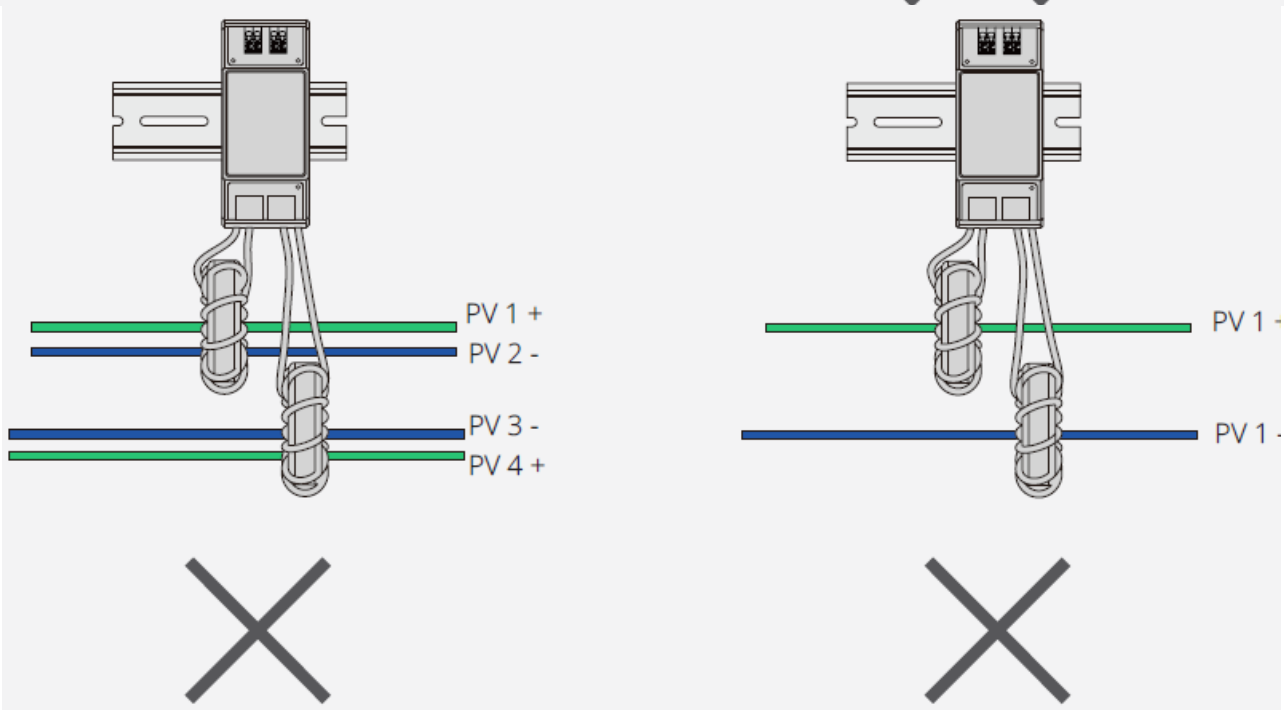


- Step 3 Connect the power supply and the Transmitter.
  Connect wires to the DC side of the power supply.

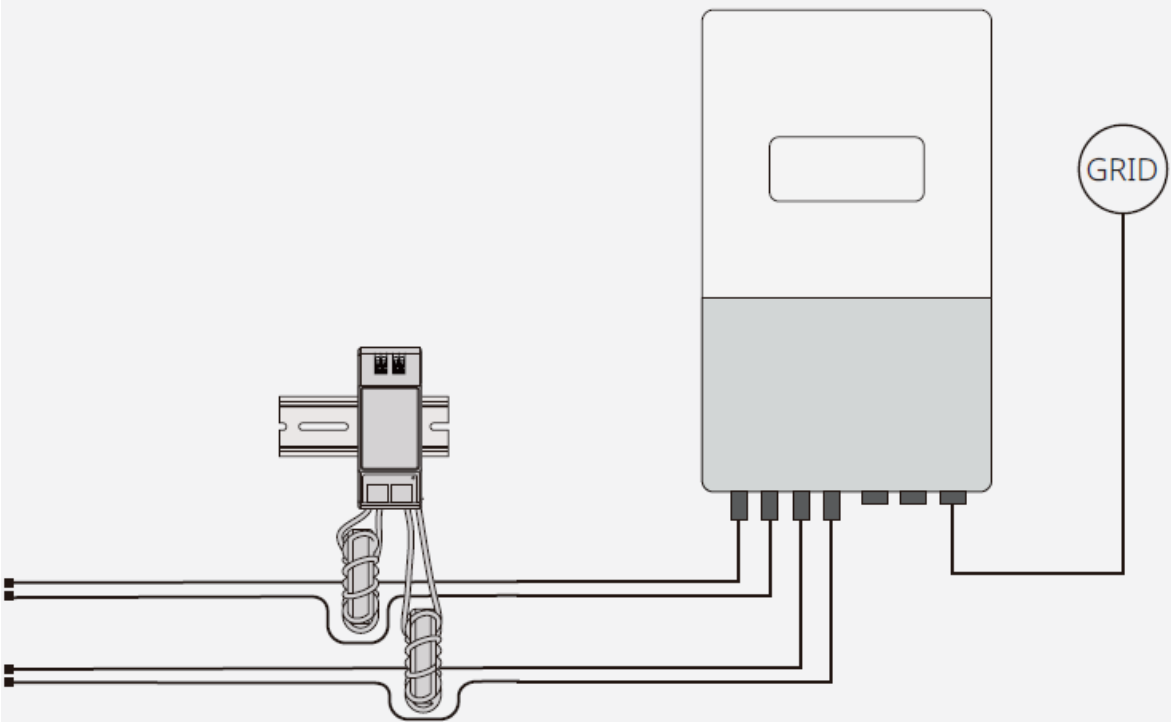


- Step 4 Pass either positive or negative homerun through the Core.





- Step 5 Connect the serially connected outputs of the HRSDs to the inverter with a DC cable.



- Step 6 Power on the Transmitter to activate the “permission to operate” signal.

HT10-Kit

WARNING

- Before installation, ensure that the whole system is disconnected from the power source and the HRSD has been installed.
- If you use an 85-264 VAC PSU with isolation class II, grounding is not necessary.
- Ground 180-550 VAC PSU with isolation class I.

NOTICE

- Improper installation may lead to HT10-Kit damage, which is not covered under warranty.

IMPORTANCE

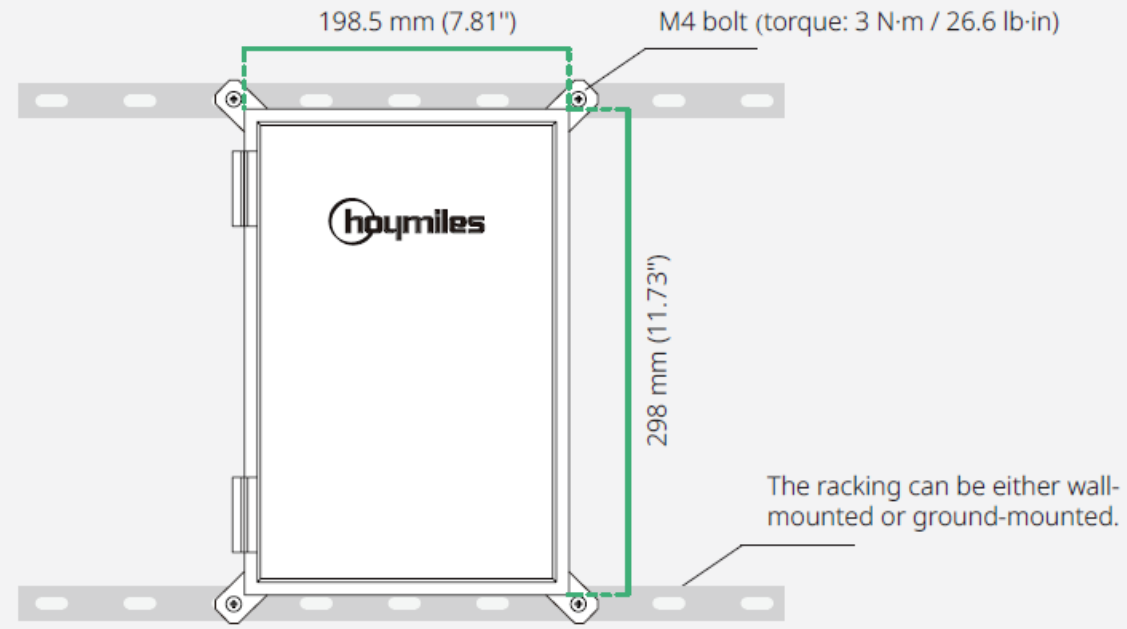
- Hoymiles recommends that the Transmitter power supply be on the same AC branch circuit as the inverter to meet rapid shutdown requirements.
- Place rapid shutdown system sticker no more than 1m (3 ft.) from the Transmitter or AC disconnect.
- During the PV system operation, check that the Power LED 1 is lit and the Signal LED 2 is blinking.
- Max. current per Core: 75 A or 150 A
- Max. cable length from inverter (+) to inverter (-): 800 m (2625 ft.)
- Max. number of strings per Core*: 5 (75 A Core) or 15 (150 A Core)
- With Φ 6 mm (0.24 in) DC cable diameter (without DC connector) (Refer to 7.3 for details.)

Preparation
Please prepare the following items before installation.

- Personal protective equipment (PPE)
- Screwdriver (M4)
- Waterproof accessories for the enclosure

Steps

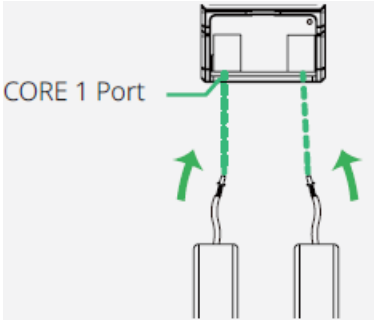
Mechanical Installation
Select a suitable installation location for the enclosure based on its dimensions.



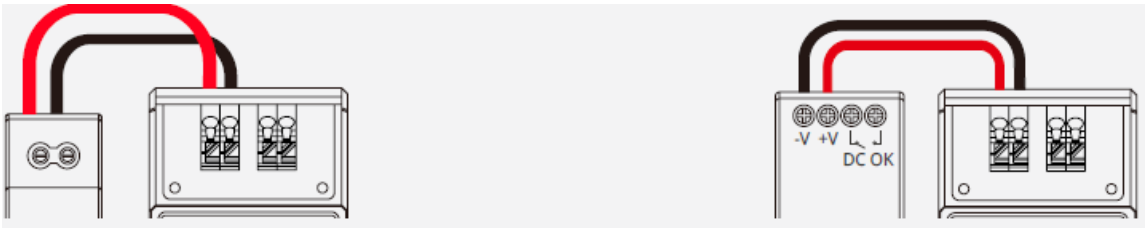
Electrical Installation

- Step 1 Mount the Transmitter and the power supply on the DIN rail.
- Step 2 Connect the Core to the Transmitter.

For a single-Core Transmitter, connect the cable to the CORE 1 port.

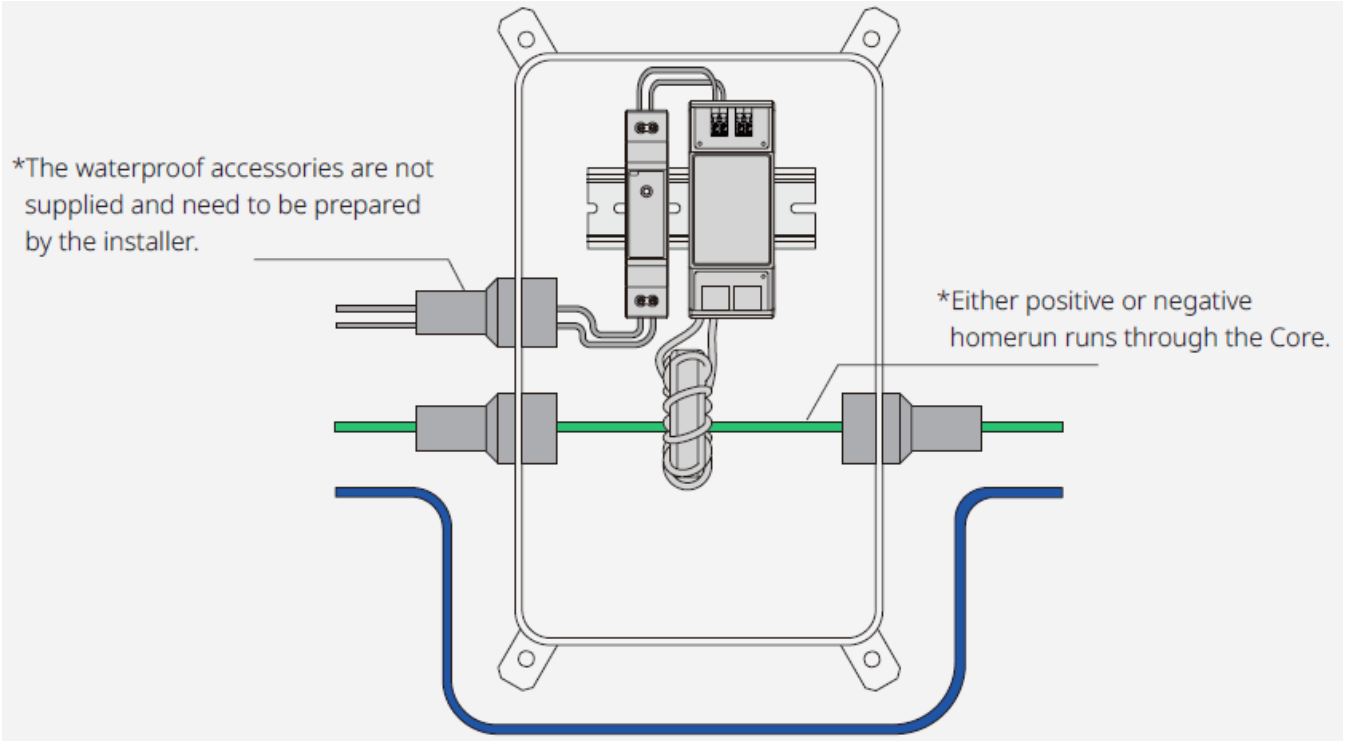


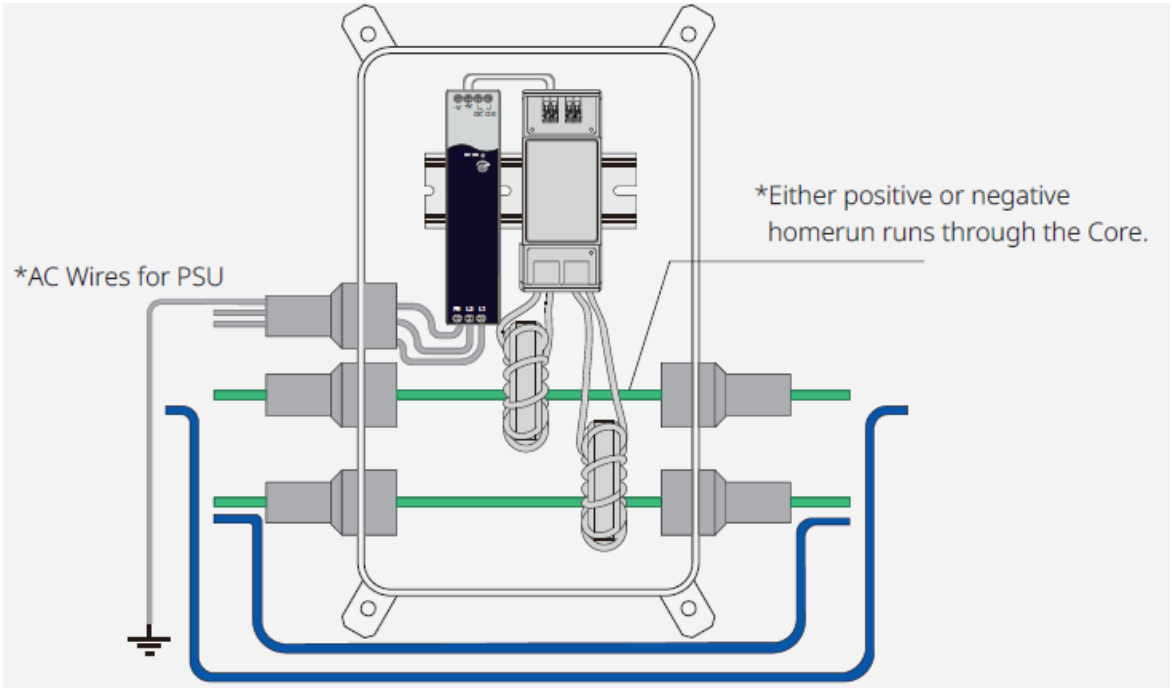
- Step 3 Connect the power supply and the Transmitter.
  Connect wires to the DC side of the power supply



- Step 4 Pass either positive homerun or negative homerun through the Core.

  * For common mistakes, refer to 5.2 on page 18.



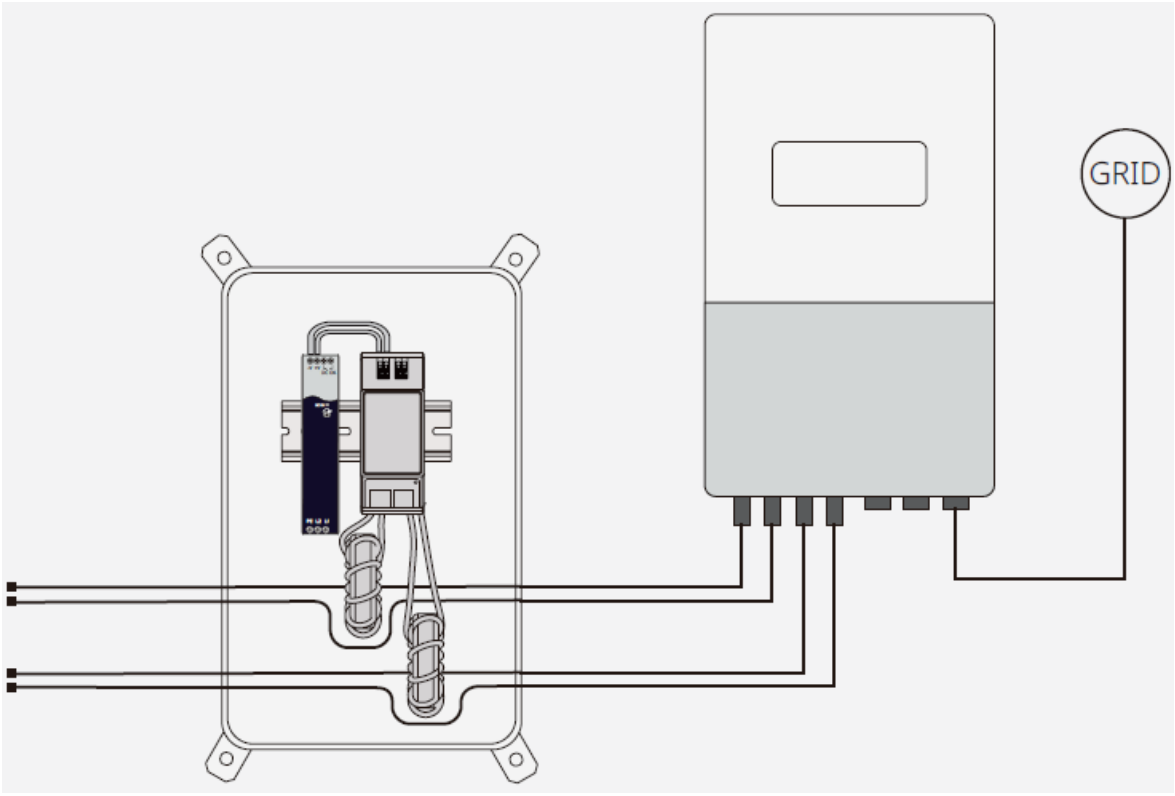


- Step 5 Connect ground wires.

  Ground all conduit connections.

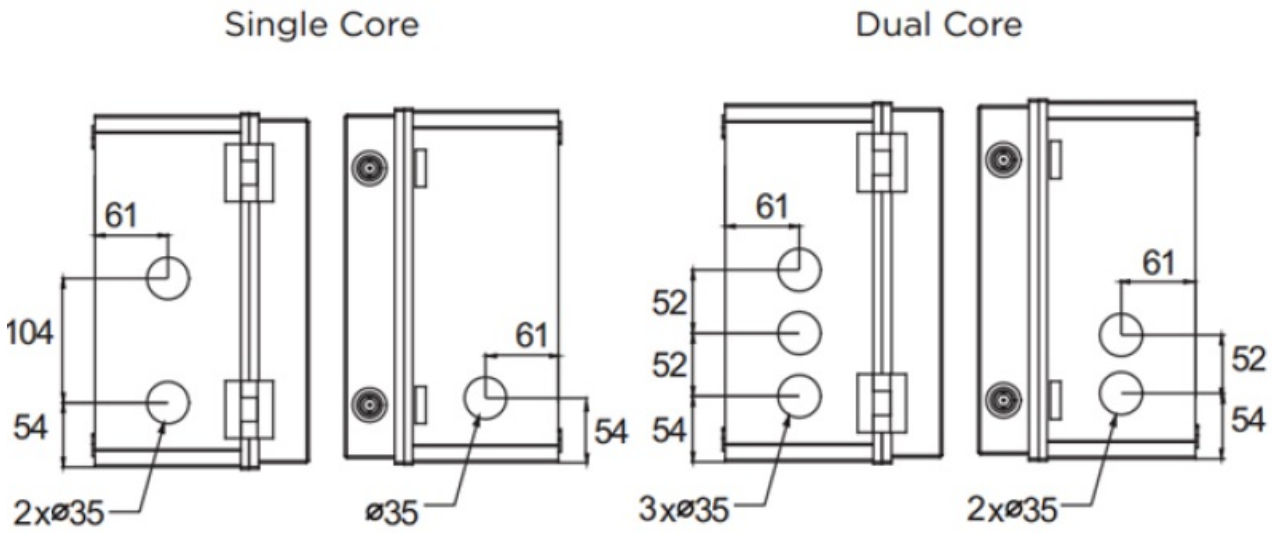
NOTICE

- The non-metallic enclosure does not provide grounding between conduit connections. Use grounding-type bushings and jumper wires.
- Step 6 Connect the serially connected outputs of the HRSDs to the inverter with a DC cable.



- Step 7 Power on the Transmitter to activate the “permission to operate” signal.

Recommended Conduit Drilling Guide



Troubleshooting

Terminology

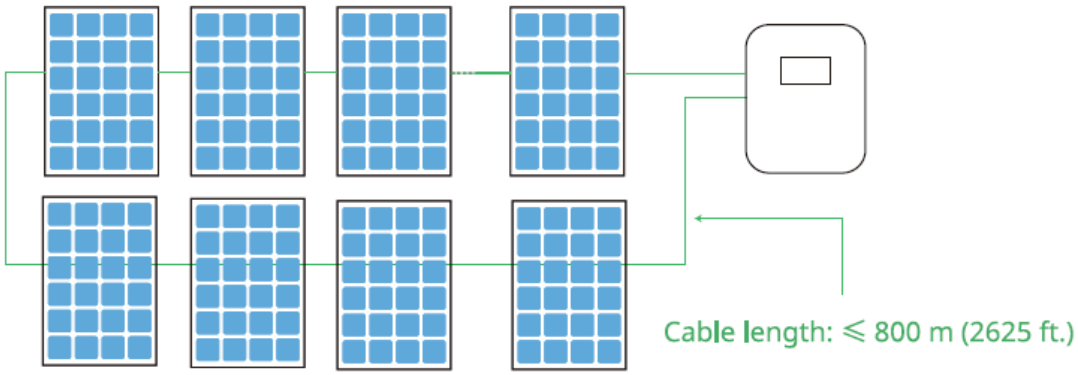
- PV module string: a group of panels wired into a single input on your inverter.
- Voc: Stands for open-circuit voltage, which is the maximum voltage the PV module can produce when it is not connected to a load.

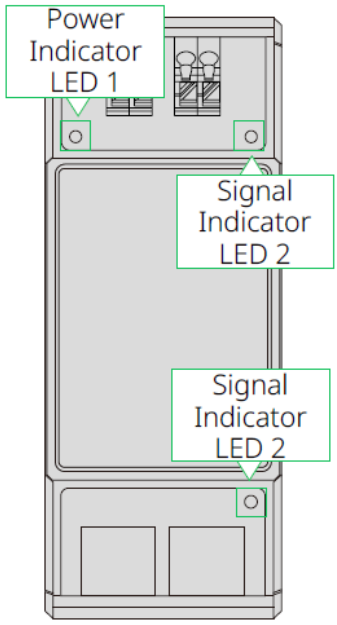
Troubleshooting Guide

PV module string has no DC voltage (0 V)

Problem	The output voltage of one or more PV module strings is displayed as 0.0 V on the inverter monitoring platform.
Possible cause	There is an open circuit condition within the PV module string due to the wiring issues in the connectors, or there is an operation abnormal of the HRSD.
Troubleshooting Procedure	
Step 1	Find the failed PV module string and disconnect the inverter from it. Check each connector in the faulty string for accidental disconnections or loose connections. If any looseness or disconnection issues are found, replug the connectors and check whether the string voltage displayed on the inverter monitoring platform has returned to a normal value. If the voltage has not returned to a normal one, move on to Step 2.
Step 2	Visually check the HRSD for a bulging cover or any visible damage. If there are visible signs of damage around the HRSD, contact the distributor for a replacement. Otherwise, reconnect the inverters to the PV module strings and observe the voltage changes of the PV module string.
Step 3	If the string output is still 0 V, refer to 6.2.3 HRSD has no output voltage (0 V).

PV module string has less output voltage than expected

Problem	The voltage displayed on the inverter monitoring platform is significantly lower than the expe cted Voc× n*.*n: Here, n refers to the number of PV modules in each string.
Possible Cause	This issue may be related to various factors, such as power supply failure in the Transmitter, signal interference between the Transmitter and the HRSD, internal malfunction or power su pply failure in the HRSD, wiring issues in the PV module string, or damage to the PV modul es.
Troubleshooting Procedure	
Step 1	Confirm the following installation are correct. • The current passing through the Core aligns with the data specified in the Transmitter's user manual. • The cable length (the PV+ to PV- loop of each PV string) does not exceed 800 m (2625 ft .). • The homeruns passing through the Core are of the same polarity, either all positive or all negative. 

<table>
<tr><td>Step 2</td><td>Check and ensure the power supply is functioning properly. Observe whether the power indicator LED1 is solid. If LED1 is solid, proceed to Step 3. Otherwise, manually test the po wer supply with a multimeter to check whether the voltage i s 12 V. If the voltage is 12 V, move on to Step 3. If not, repla ce the power supply.</td><td rowspan="2"> 
</td></tr>
<tr><td>Step 3</td><td>Check and ensure the signal indicator LED2 is functioning properly. Observe whether the signal indicator LED2 is flas hing. If the LED2 is flashing, proceed to Step 4. If the LED2 is solid,it means that the Transmitter has not sent a “permis sion to operate” signal. Restart the transmitter and observe whether the LED2 is flashing. If it does, proceed to Step 4. I f it is still solid, contact Hoymiles technical support team.</td></tr>
<tr><td>Step 4</td><td colspan="2">Check whether there are loose connections between PV modules and the HRSD. If there ar e loose connections, reconnect the connectors. Otherwise, proceed to Step 5.</td></tr>
<tr><td>Step 5</td><td colspan="2">Check if the PV modules and the HRSD are functioning properly. If the Transmitter is functio ning and generating a “permission to operate” signal, follow the steps below to check the P V modules and the HRSD. (If you don’t have the necessary equipment, skip the following st eps.)1. Use an infrared camera or a handheld temperature gun to check if there is a modul e with an abnormally low-temperature reading.2. Use a multimeter to sequentially test the v oltage on OUT+ and OUT- of each HRSD.
If an HRSD’s OUT+ and OUT- give the same voltage, this HRSD has no output voltage a nd should be replaced.
If there is a certain voltage difference between the OUT+ and OUT- of the HRSD, this H RSD is working normally. Disconnect this HRSD and measure the PV module’s output vo ltage. If the PV module has no output voltage, the PV module may be the problem and ne eds to be replaced.</td></tr>
</table>

HRSD has no output voltage (0 V)

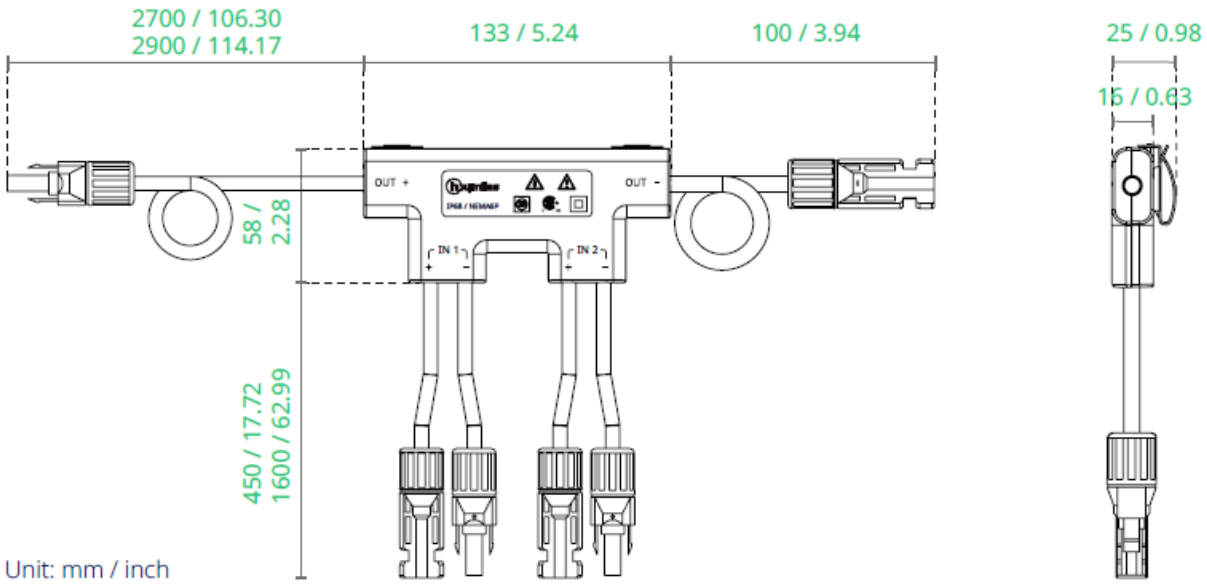
Problem	The output voltage of a certain HRSD is measured at 0 V.
Possible Cause	There is an internal malfunction in this equipment.
Troubleshooting Procedure	
Step 1	Check and ensure the rapid shutdown system is connected properly.
Step 2	Check if the PV modules are functioning properly. Disconnect the HRSD from the PV module and use a multimeter to measure the output voltage of the PV module. If the output voltage is normal (depending on the specification of your PV plant, the standard of 'normal' might be different), the HRSD may be the problem. Proceed to measure the output voltage of the HRSD with a multimeter. Otherwise, replace the PV module.
Step 3	Check if the HRSD is functioning properly. Check and ensure that the PV modules are functioning properly and the PV modules and HRSDs are correctly connected. Once these have been confirmed, measure the output voltage of the HRSD with a multimeter. If the output voltage is still 0 V, there is an internal malfunction in the HRSD. Contact Hoymiles technical support team to replace the HRSD.

Technical Specifications

HRSD-2C

Model	HRSD-2C	HRSD-2C-B
Electrical Data		
Output voltage range	16-160 V	16-130 V
Input voltage range	8-80 V	8-65 V
Maximum current	15 A	20 A
Maximum short circuit current	25 A	
Maximum system voltage	1000 V / 1100 V (1500 V optional)	
Communication type	Sun Spec PLC	
Shutdown output voltage	1 V	
Power consumption	200 mW	
Mechanical Data		
Input connectors	MC4 / MC4 EVO2, optional	
Input cable length[1]	0.45 m (1.48 ft.) / 1.6 m (5.23 ft.), optional	
Output connectors	MC4 / MC4 EVO2, optional	
Output cable length[2]	2.7 m (+) / 0.1 m (-) 8.86 ft. (+) / 0.33 ft. (-)	2.9 m (+) / 0.1 m (-) 9.51 ft. (+) / 0.33 ft. (-)
Dimensions	133 x 58 x 16 mm (5.24 x 2.28 x 0.63 inch)	
Environmental		
Operating temperature range	-40°C to +85°C (-40°F to +185°F)	
Outdoor rating	IP68 / NEMA6P	
Compliance		
Safety	UL1741, CSA C22.2 No. 330-17, IEC/EN 62109-1	
EMC	FCC Part15 Class B, ICES-003, IEC/EN 61000-6-1/-2/-3/-4	

1. The former matches PV module output cables of 1.35 m (4.43 ft.) at minimum, and the latter matches those of 0.2 m (0.66 ft.) at minimum.
2. Fits PV module in portrait installation. Contact Hoymiles if horizontal installation is needed.



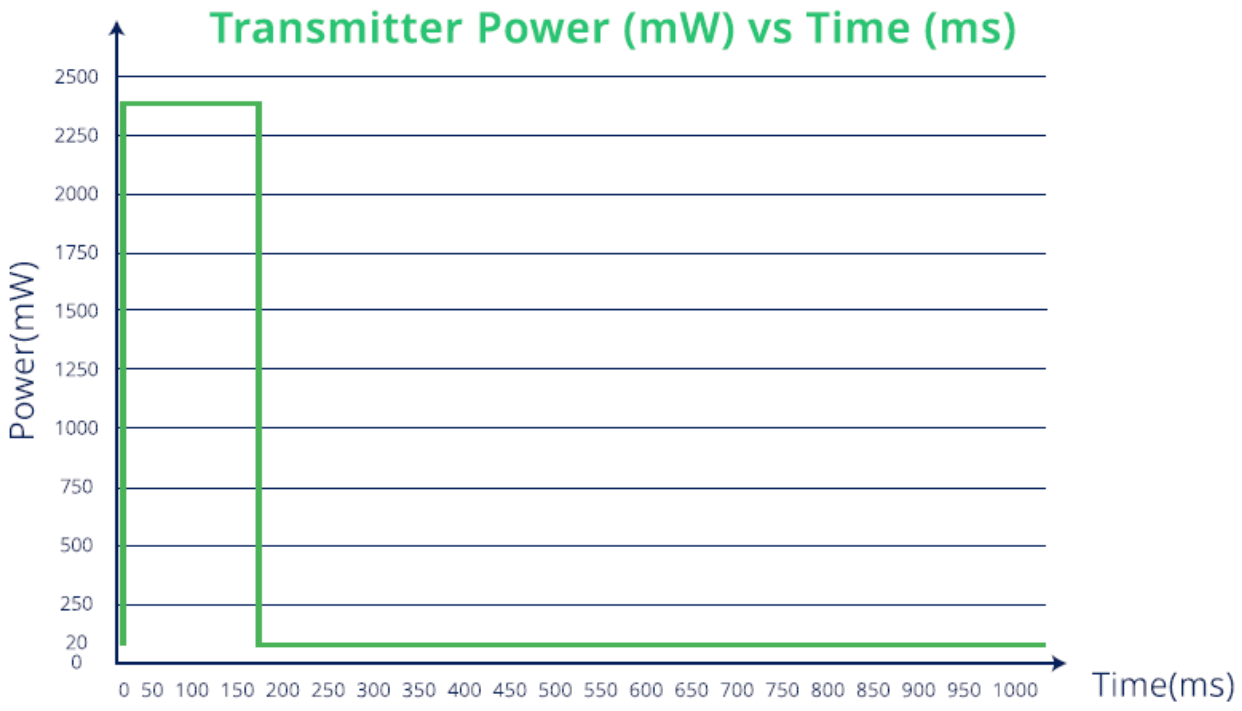
HT10

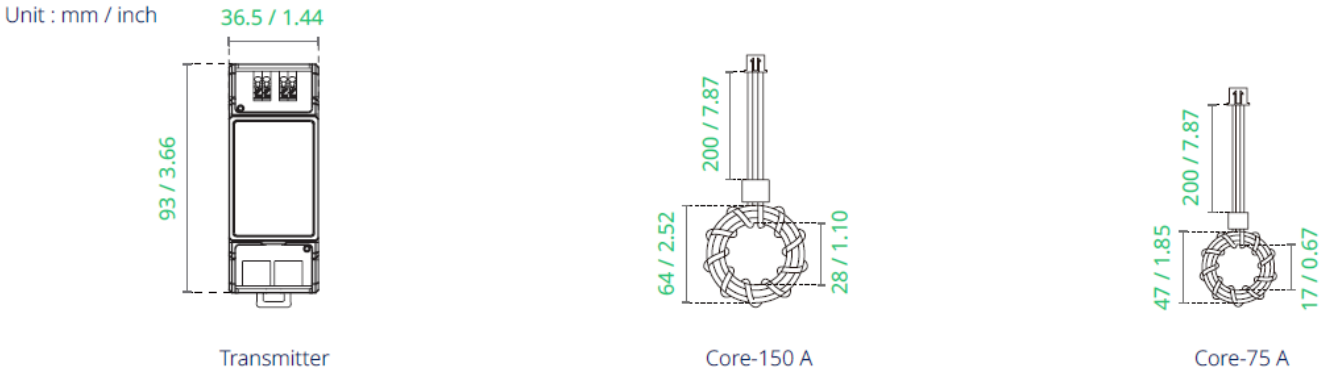
Electrical									
Transmitter input voltage	12 VDC (+/-2%)								
Transmitter input current	0.06 A								
Communication type	SunSpec PLC								
Core									
Number of configure Core	1			1			2		
Max. current per Core	75 A			150 A			150 A		
DC cable diameter	Φ 6 mm (0.24")	Φ 6.45 mm (0.25")	Φ 7 mm (0.28")	Φ 6 mm (0.24")	Φ 6.45 mm (0.25")	Φ 7 mm (0.28")	Φ 6 mm (0.24")	Φ 6.45 mm (0.25")	Φ 7 mm (0.28")
Max. number of strings per Core*	5	4	3	15	12	10	15	12	10
Mechanical									
Dimensions	93 x 36.5 x 53 mm (3.66 x 1.44 x 2.09 in)								
Mounting type	DIN35 Rail								
Environmental									
Operating temperature range	-40°C to +85°C (-40°F to +185°F)								
Outdoor rating	IP10 / NEMA1								
Compliance									
Safety	UL1741, CSA C22.2 No. 330-17								
EMC	FCC Part15 Class B, ICES-003								

* The maximum number of strings per Core is determined by the DC cable current and diameter. The total cable current should not exceed the Core's maximum allowable current, and the total cable diameter should not exceed the Core's diameter.
When installed inside an inverter, HT10 needs to be powered with the following power curve at least.

- Voltage: 12 VDC (+/-2%)
- Power Standby: 0.2 W
- Duty Cycle: 16%

- Max. Power: 3W

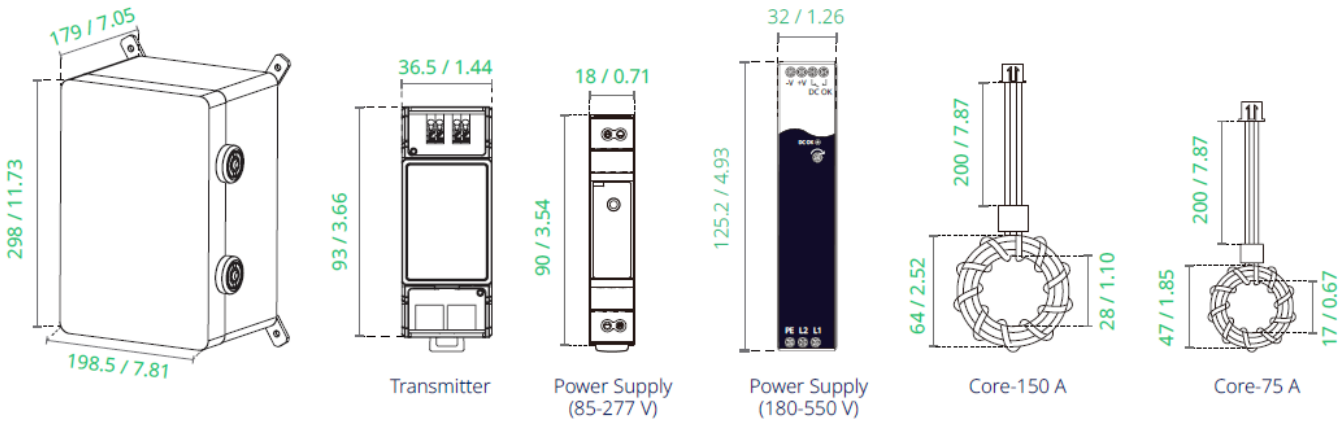




HT10-Kit

Electrical									
Transmitter input voltage	12 VDC (+/-2%)								
Transmitter input current	1 A								
Input voltage range	85-264 VAC			180-550 VAC			180-550 VAC		
Communication type	SunSpec PLC								
Core									
Number of configure Core	1			1			2		
Max. current per Core	75 A			150 A			150 A		
DC cable diameter	Φ 6 mm (0.24")	Φ 6.45 mm (0.25")	Φ 7 mm (0.28")	Φ 6 mm (0.24")	Φ 6.45 mm (0.25")	Φ 7 mm (0.28")	Φ 6 mm (0.24")	Φ 6.45 mm (0.25")	Φ 7 mm (0.28")
Max. number of strings per Core*	5	4	3	15	12	10	15	12	10
Mechanical									
Dimensions	93 x 36.5 x 53 mm (3.66 x 1.44 x 2.09 inch)								
Mounting type	DIN35 Rail								
Environmental									
Operating temperature range	-40°C to +85°C (-40°F to +185°F)								
Outdoor rating	IP65								
Compliance									
Safety	UL1741, CSA C22.2 No. 330-17								
EMC	FCC Part15 Class B, ICES-003								

* The maximum number of strings per Core is determined by the DC cable current and diameter. The total cable current should not exceed the Core's maximum allowable current, and the total cable diameter should not exceed the Core's diameter.



Documents / Resources

	**hoymiles HRSD-2C Rapid Shutdown System** [pdf] User Manual HRSD-2C, HT10, HT10-Kit, HRSD-2C Rapid Shutdown System, HRSD-2C, Rapid Shutdown System, Shutdown System, System

References

- **User Manual**