

Rapid Shutdown USER MANUAL

HRSD-2C
HT10
HT10-Kit

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.



hoymiles.com



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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	<ul style="list-style-type: none">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	<ul style="list-style-type: none">Updated "7.1 HRSD-2C"
V202404	<ul style="list-style-type: none">Added "3. Hoymiles Rapid Shutdown System"Updated "7.2 HT10"
V202411	Updated " 4.2 Routing Instruction "
V202505	Updated " 4.2 Routing Instruction "

CONTENTS





1. Safety Information	01
1.1 Safety Symbols	01
1.2 Safety Instructions	01
2. Products	03
2.1 HRSD-2C	03
2.2 HT10	05
2.3 HT10-Kit	07
3. Hoymiles Rapid Shutdown System	09
3.1 System Overview	09
3.2 Initiation Methods	10
4. Cable Length and Routing	12
4.1 Configuration of Cable Lengths	12
4.2 Routing Instruction	14
5. Installation	15
5.1 HRSD-2C	15
5.2 HT10	17
5.3 HT10-Kit	20
5.4 Recommended Conduit Drilling Guide	23
6. Troubleshooting	24
6.1 Terminology	24
6.2 Troubleshooting Guide	24
7. Technical Specifications	26
7.1 HRSD-2C	26
7.2 HT10	27
7.3 HT10-Kit	28

1. Safety Information



1.1 Safety Symbols



This manual contains **IMPORTANT**, **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 other 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.
 IMPORTANT	This indicates complementary information.

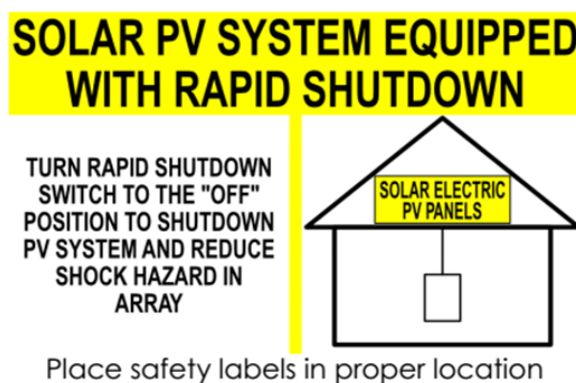
1.2 Safety Instructions

 DANGER
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> 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.

<ul style="list-style-type: none"> 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.
<ul style="list-style-type: none"> Do not touch the body of the running HRSD because it can reach high temperatures during heat dissipation.
<ul style="list-style-type: none"> To disconnect the HRSD, remove the output cables of the HRSD string first, and then disconnect the input cables from the PV modules.
 NOTICE
<ul style="list-style-type: none"> Do not mix DC connectors from different manufacturers. Damages caused by it will void the Hoymiles warranty.
<ul style="list-style-type: none"> Improper installation may lead to HRSD damage, which is not covered under warranty.
<ul style="list-style-type: none"> Human-made damages caused by improper handling or dismantling the product will void the warranty.
<ul style="list-style-type: none"> Be sure to verify that the voltage and current specifications of the PV module match those of the HRSD.
<ul style="list-style-type: none"> Cables of the HRSD inputs and the PV module outputs cannot be extended.
<ul style="list-style-type: none"> Never apply an external voltage source to a module or string equipped with the HRSD.
 IMPORTANCE
<ul style="list-style-type: none"> 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.
<ul style="list-style-type: none"> 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.
<ul style="list-style-type: none"> Max. cable length from inverter (+) to inverter (-): 800 m (2625 ft.)
<ul style="list-style-type: none"> Recommended Max. number of strings connected to the HRSD: 30 modules¹
<ul style="list-style-type: none"> Hoymiles recommends that the Transmitter power supply be on the same AC branch circuit as the inverter to meet rapid shutdown requirements.
<ul style="list-style-type: none"> During the PV system operation, check that the Power LED 1 is lit and the Signal LED 2 is blinking.
<ul style="list-style-type: none"> Max. current per Core of Transmitter: 75 A or 150 A
<ul style="list-style-type: none"> Max. number of strings per Core²: 5 (75 A Core) or 15 (150 A Core)
<ul style="list-style-type: none"> Place rapid shutdown system sticker no more than 1m (3 ft.) from the Transmitter or AC disconnect.

1. Source: SunSpec RapidShutdown Specification. Please refer to local regulations before installation.

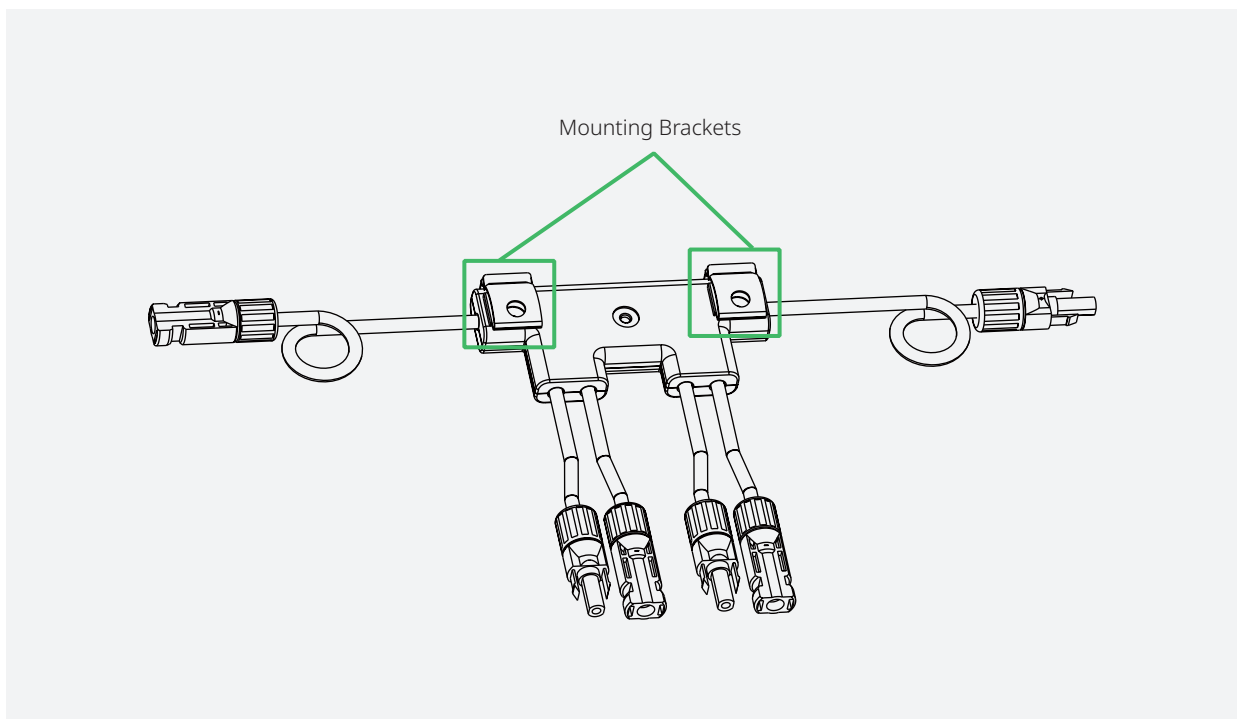
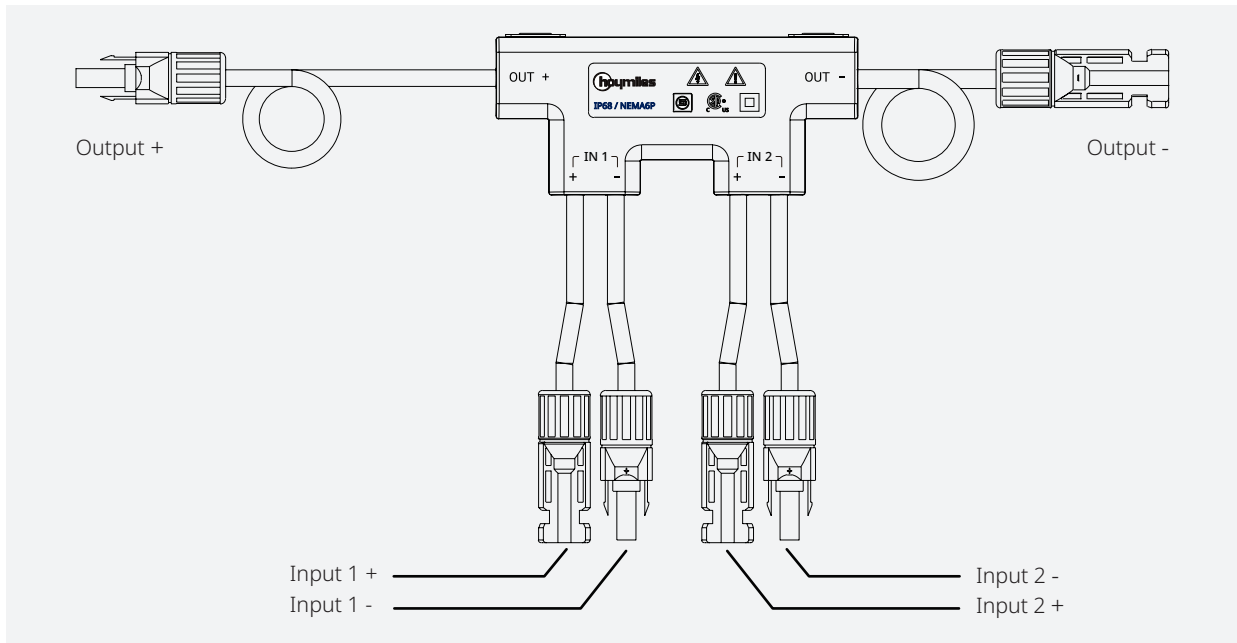
2. With Φ 6 mm (0.24 in) DC cable diameter (without DC connector) (Refer to [7.2](#) or [7.3](#) for details.)



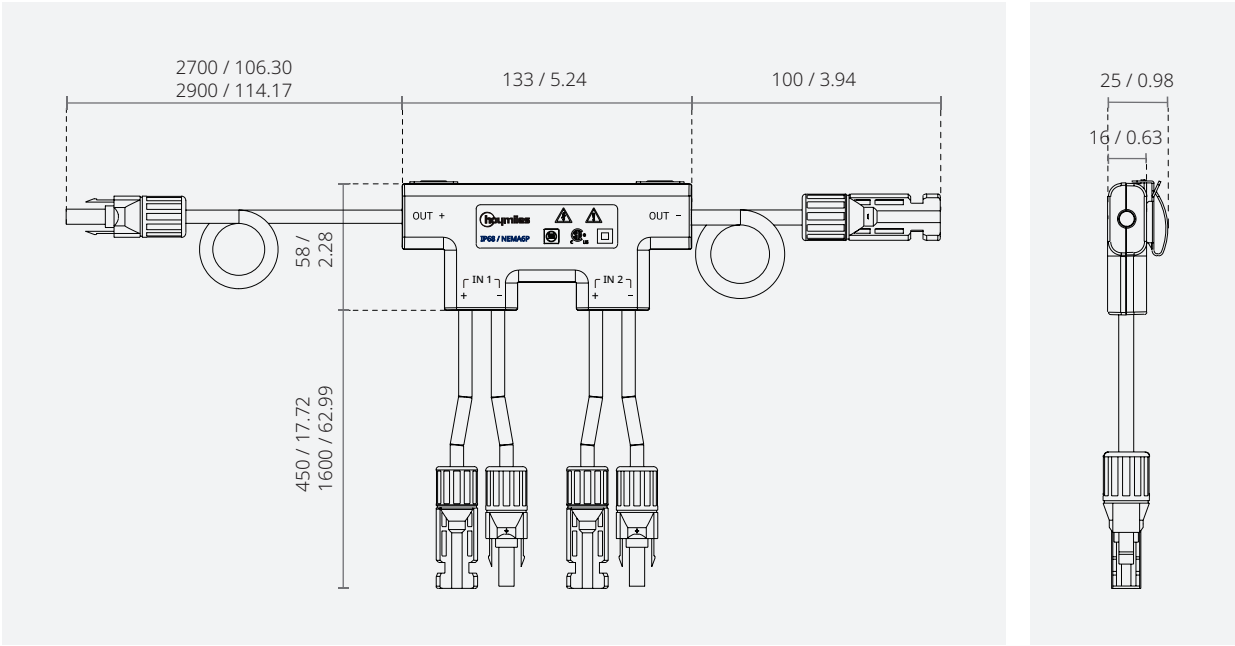
2. Products

2.1 HRSD-2C

Appearance



Dimensions (mm / inch)



Features

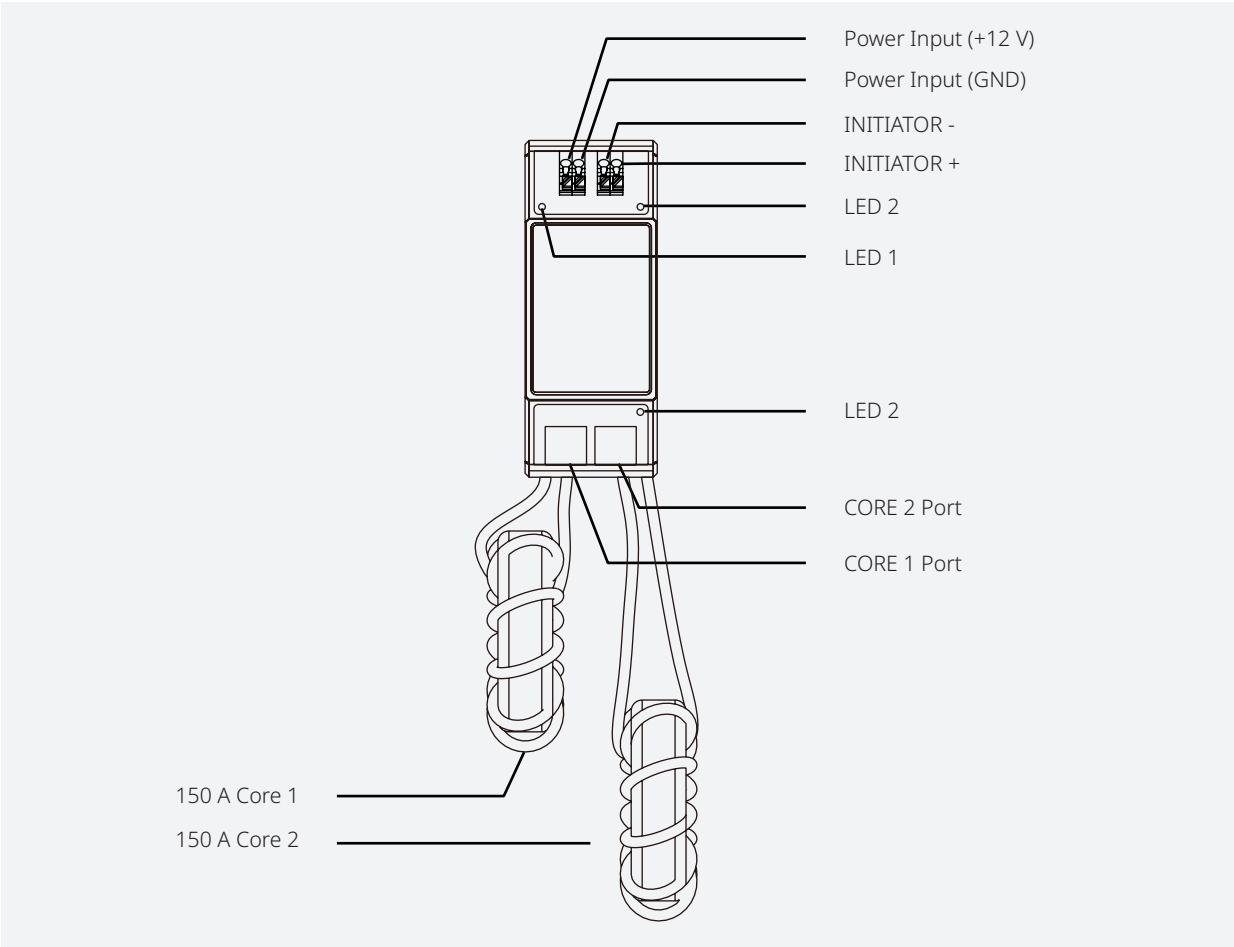
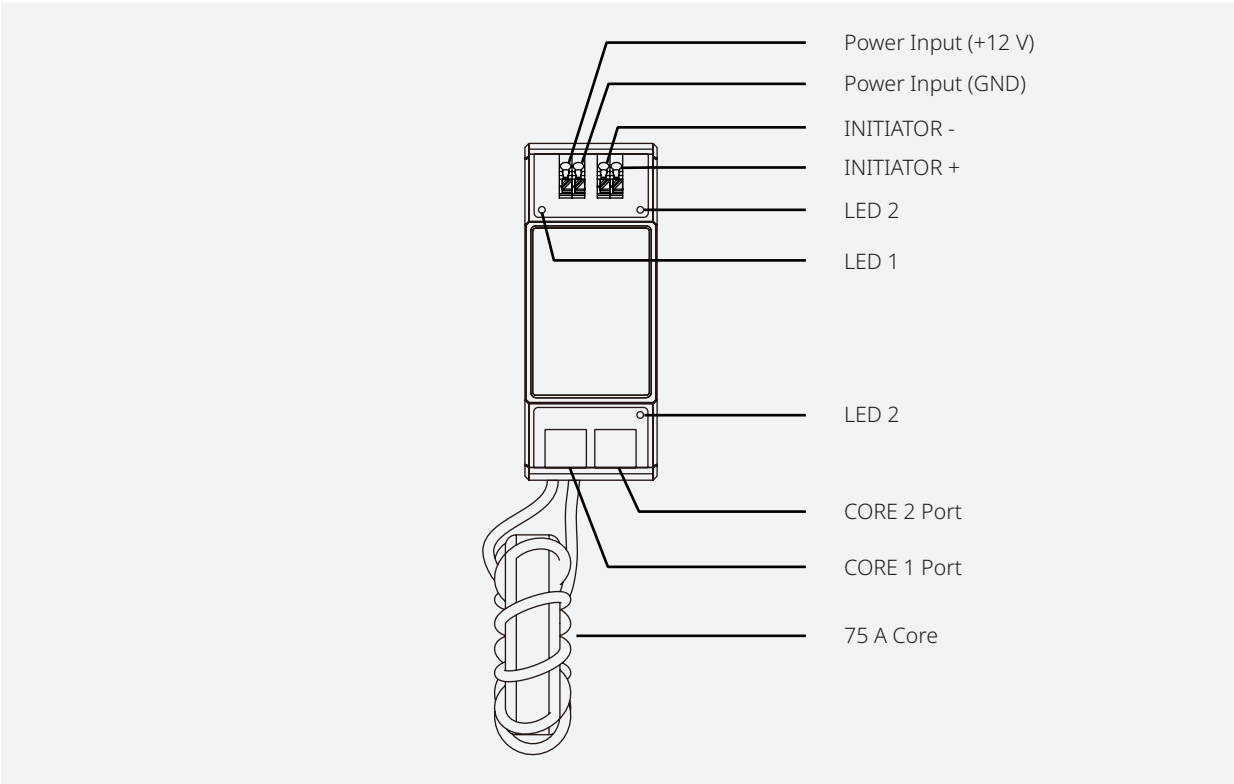
• Meets Sunspec RSD, NEC 2017 & NEC 2020 690.12 requirements
• Uses Active Bypass to reduce heat generation in shade and other situations
• Uses graphene heat spreader to improve heat dissipation
• Plug & play, no configuration required
• Lower power consumption and wider operating voltage range
• Able 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.

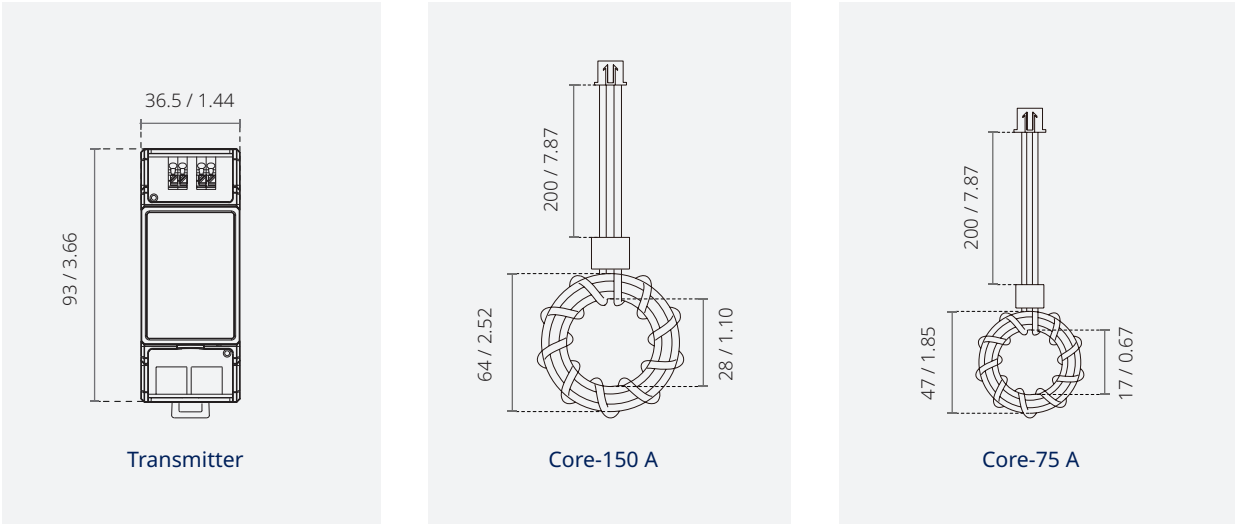
The HRSD device enables proper operation of the PV system when it is installed and receives a "permission to operate" signal from the Hoymiles Transmitter. In an emergency, the PV system would enter module-level rapid shutdown mode by simply disconnecting the AC power of the Transmitter or using an external initiator. (Please see [3.2](#) for details.)

2.2 HT10

Appearance



Dimensions (mm / inch)



Features

<ul style="list-style-type: none">Complied with NEC 2017&NEC 2020 690.12 requirements
<ul style="list-style-type: none">Complied with SunSpec RSD requirements
<ul style="list-style-type: none">Equipped with single/dual Core
<ul style="list-style-type: none">Achieves rapid shutdown through Transmitter power-off or external initiation

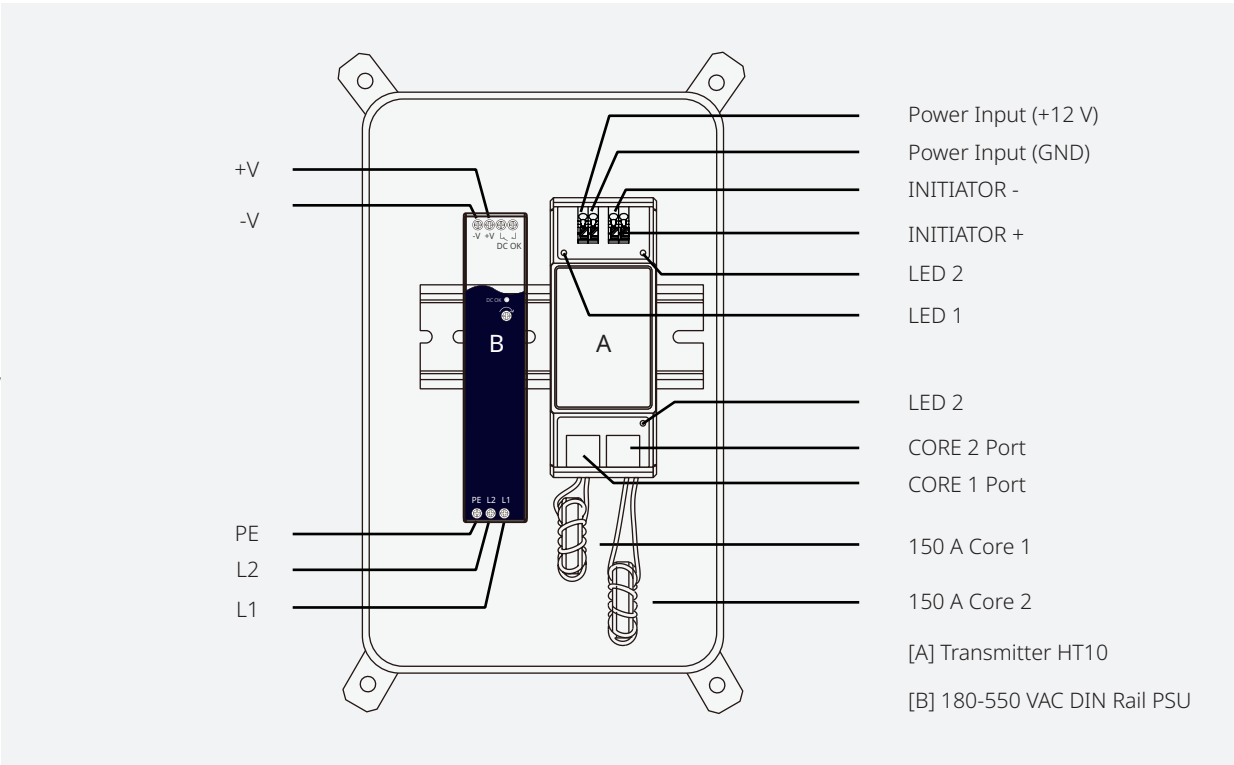
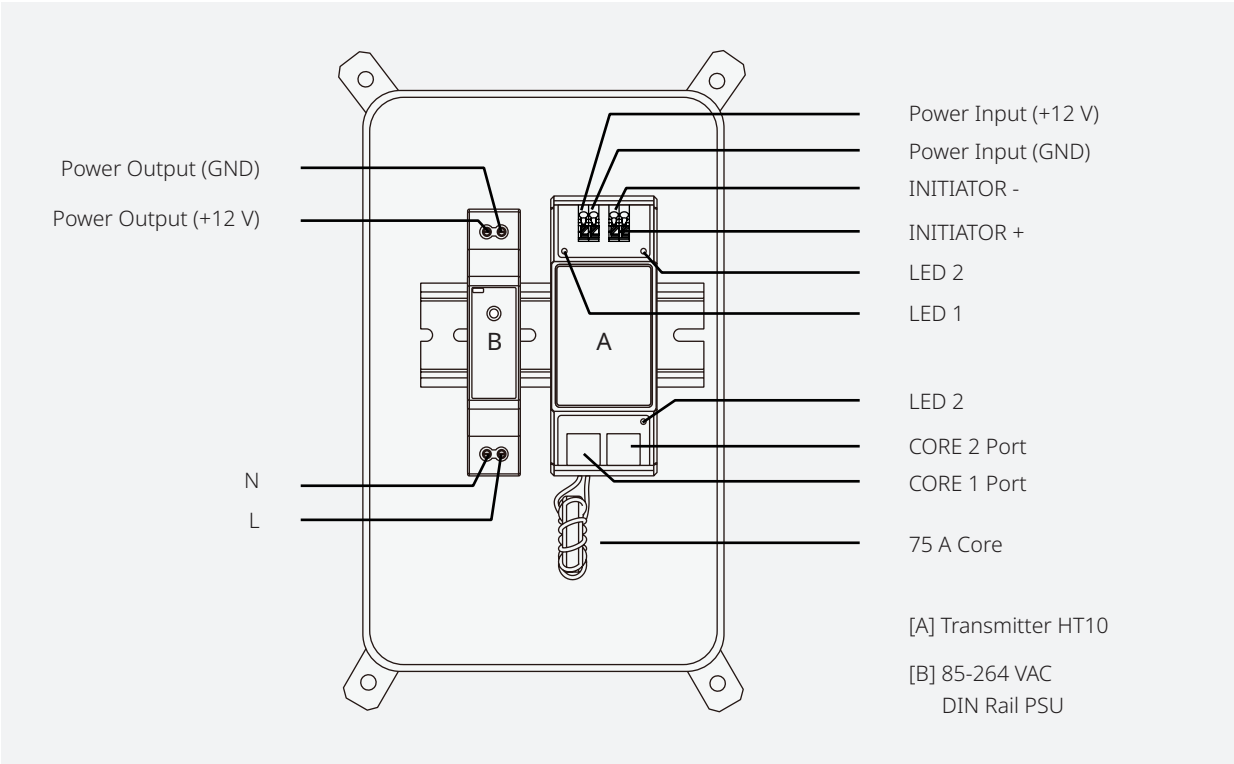
As part of Hoymiles Rapid Shutdown solution, Hoymiles Transmitter HT10 works with HRSD for module-level rapid shutdown.

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.

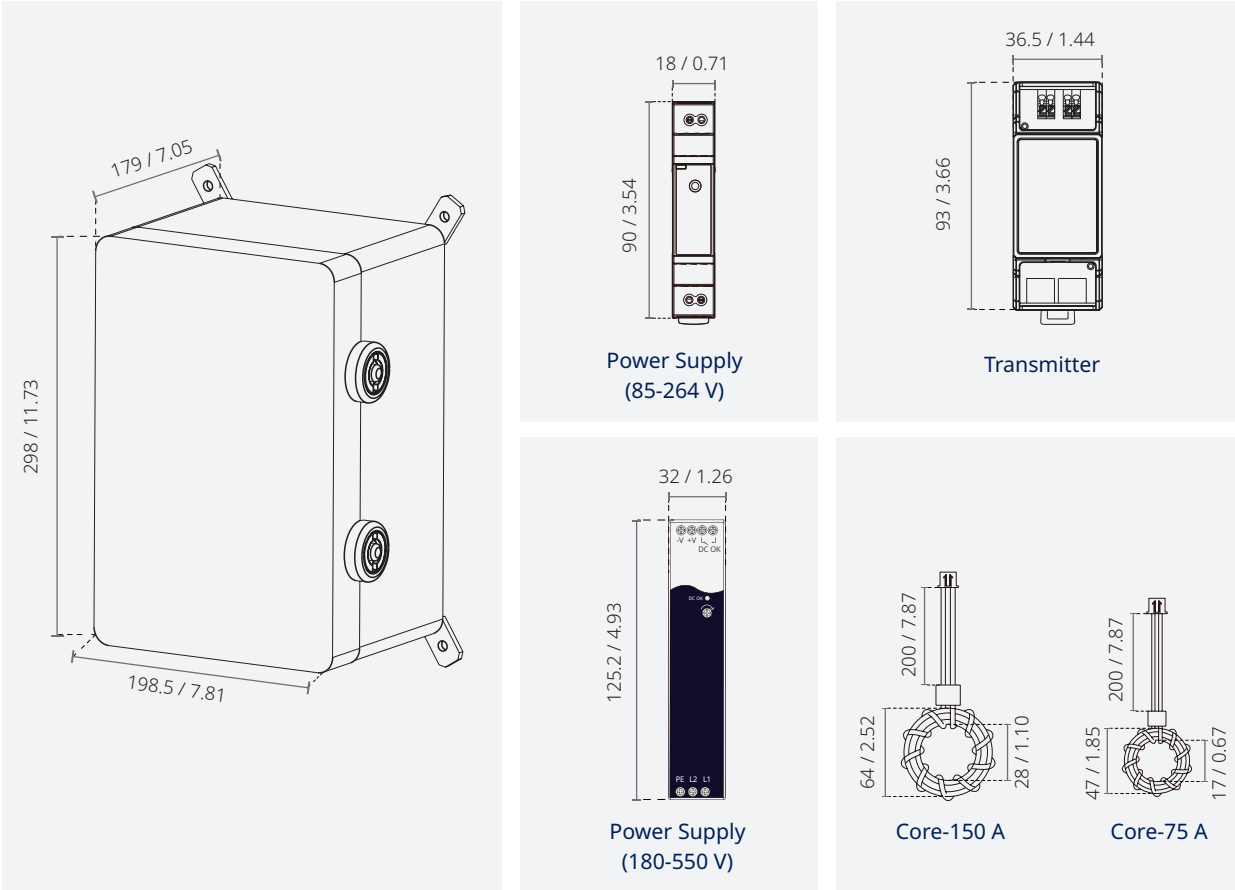
In case of emergency, the PV system would enter module-level rapid shutdown mode by simply disconnecting the AC power of the Transmitter or using an external initiator. (Please see [3.2](#) for details.)

2.3 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.

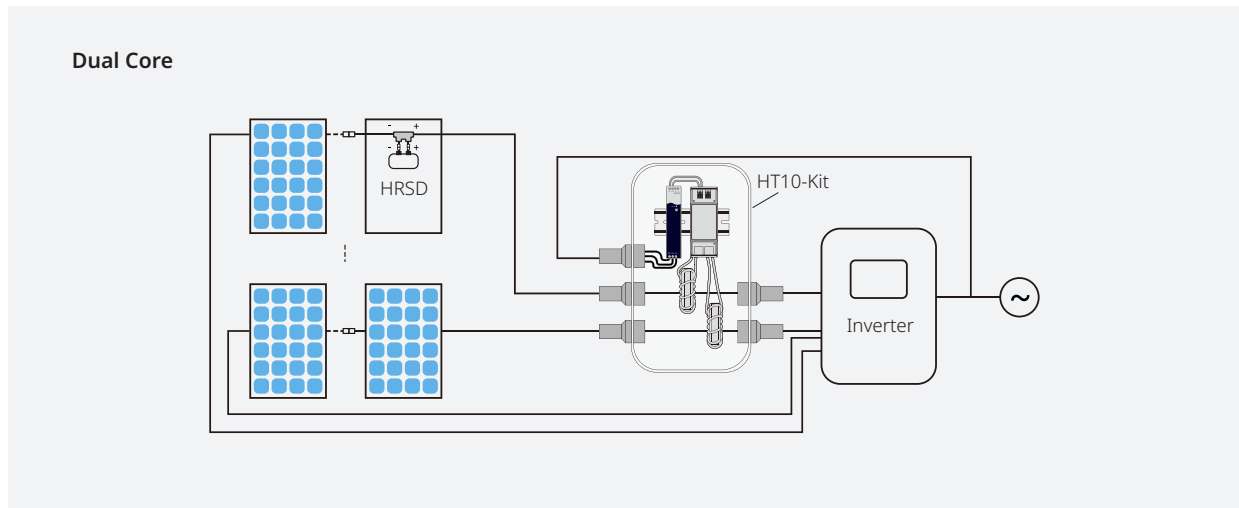
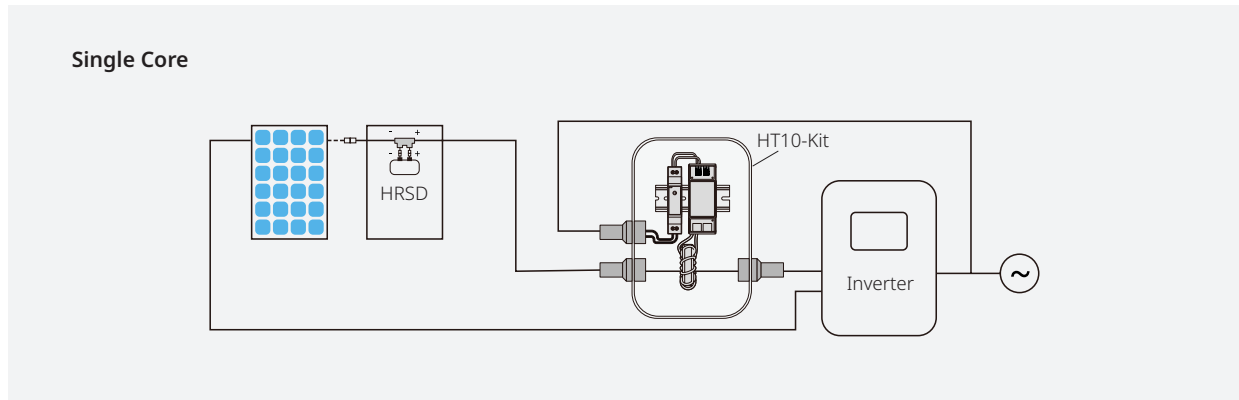
When powered on, the HT10 uses PLC technology to continuously send a “permission to operate” signal to HRSD, enabling the PV system to start producing power.

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.)

3. Hoymiles Rapid Shutdown System

3.1 System Overview

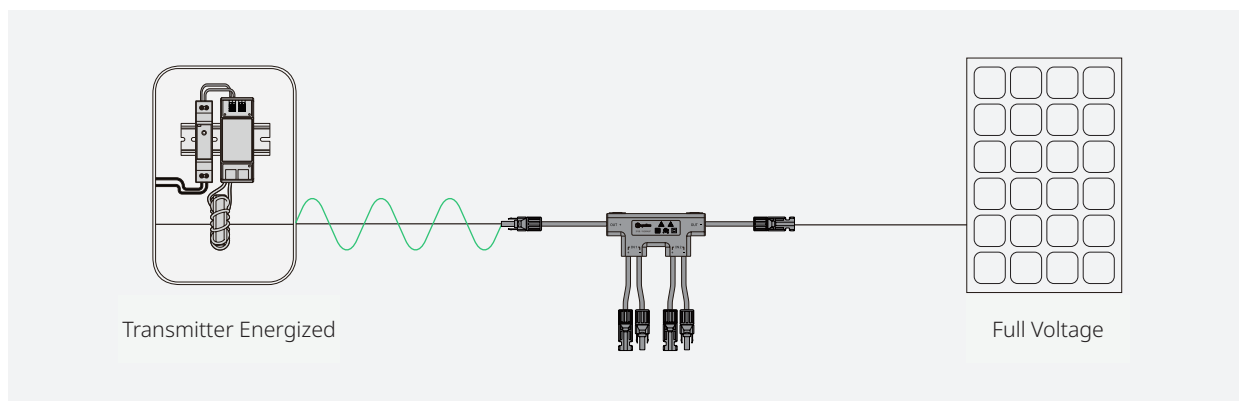
Hoymiles Rapid Shutdown System consists of the HRSD and the Transmitter, as shown below.

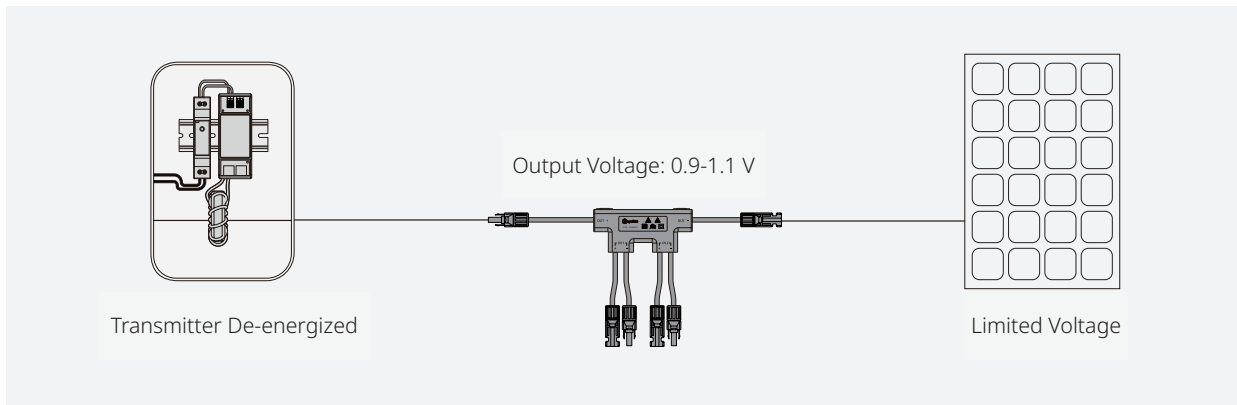


IMPORTANCE

- 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.

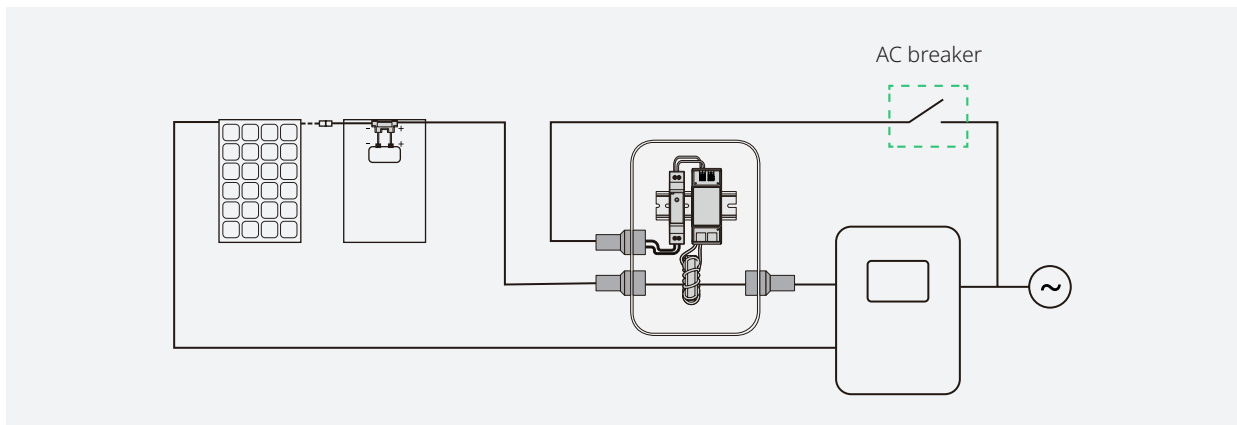
3.2 Initiation Methods

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

3.2.1 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.



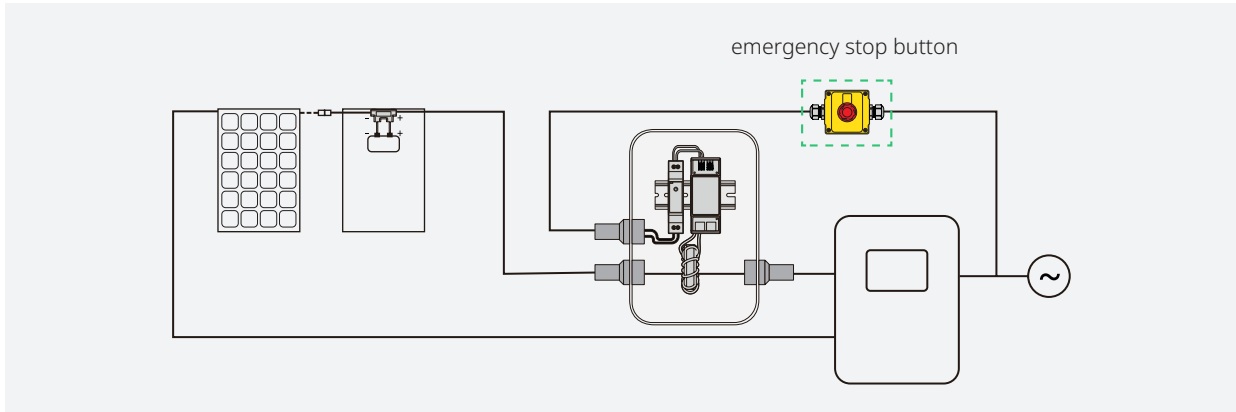
NOTICE

- The AC breaker should be installed at an accessible location.

3.2.2 Pressing External Emergency Stop Button

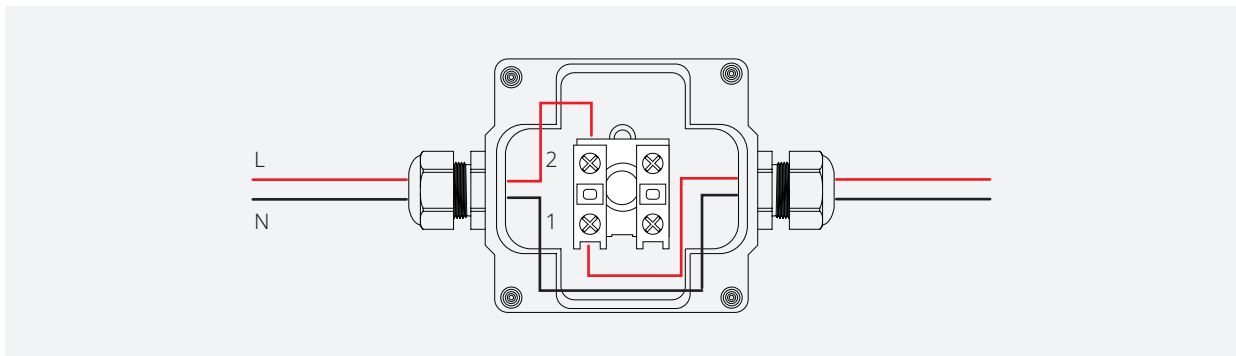
Working Principle

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.

4. Cable Length and Routing

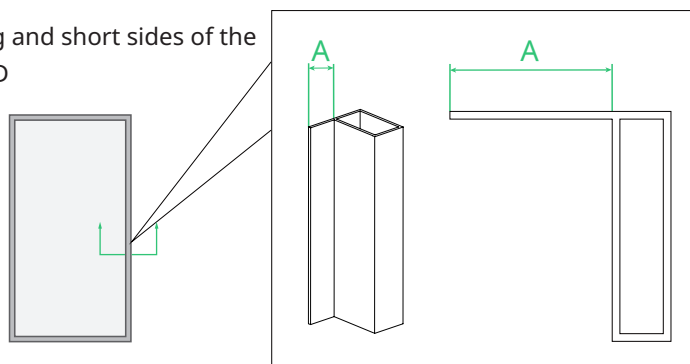
4.1 Configuration of Cable Lengths

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.



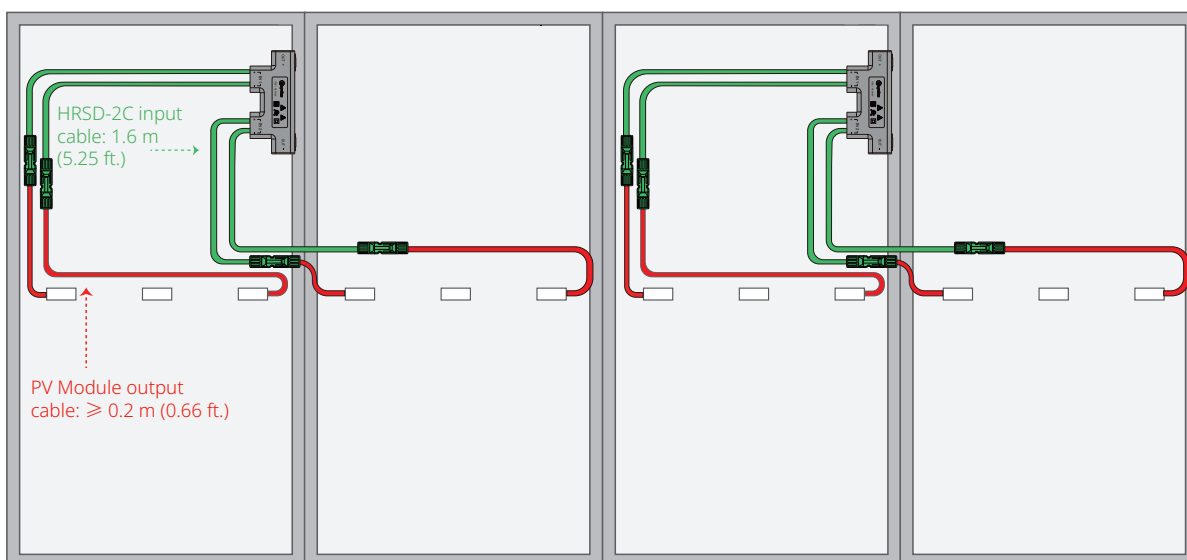
NOTICE

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



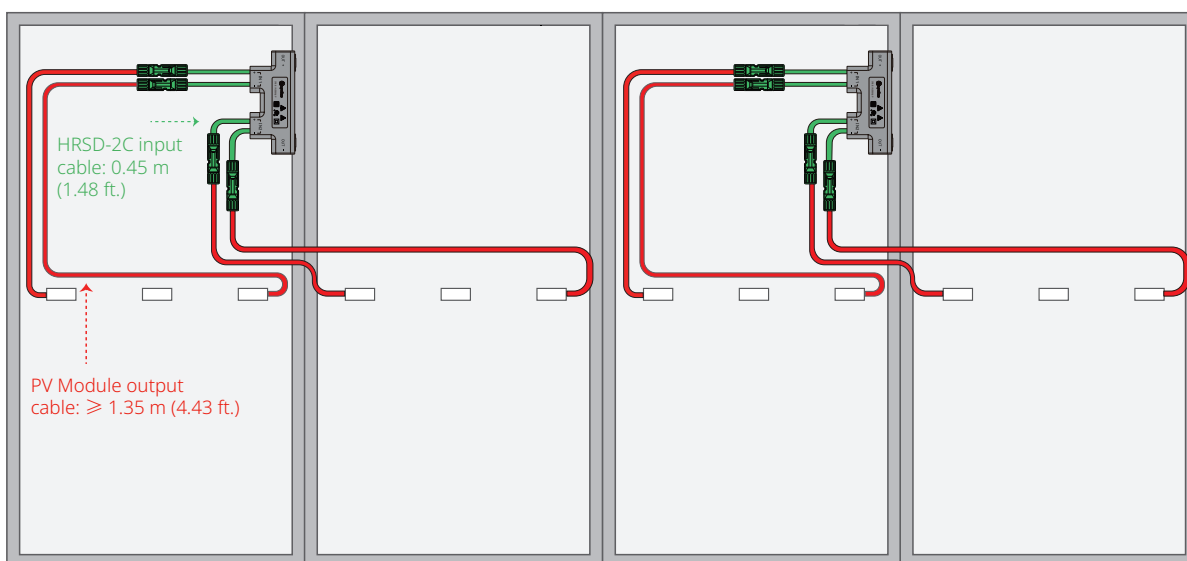
Scenario One: Long-side Installation

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.

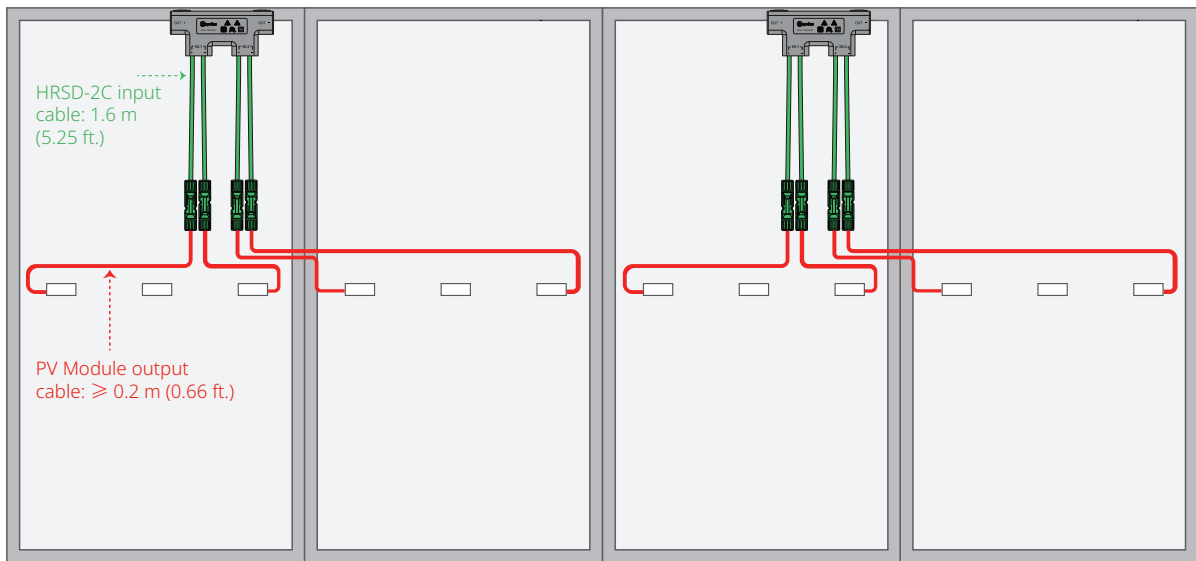
For PV modules with long output cables, choose HRSDs with input cables of the suitable length shown below.



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

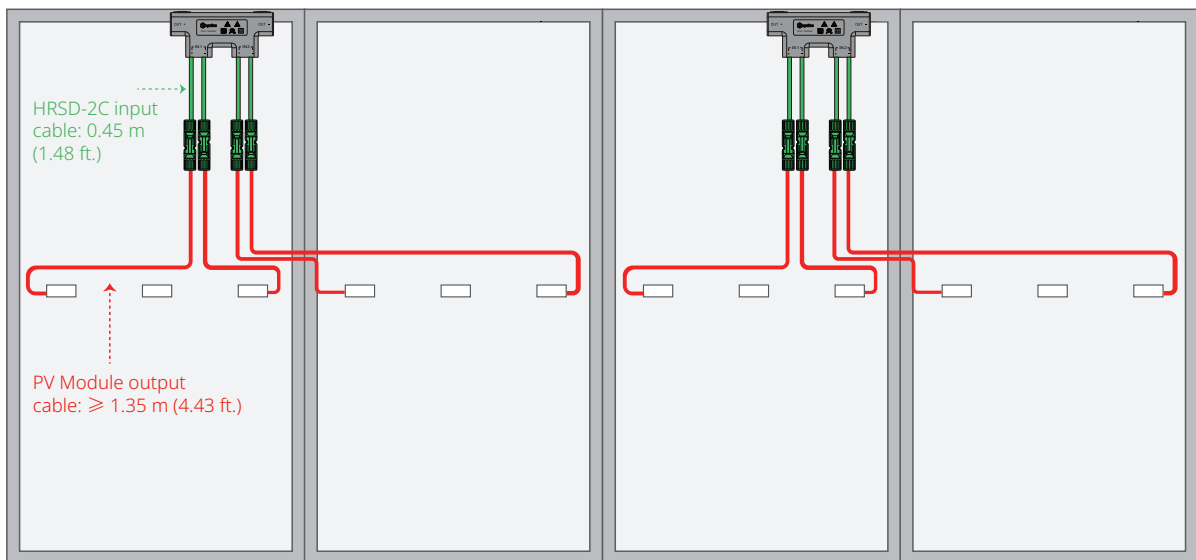
Scenario Two: Short-side Installation

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.

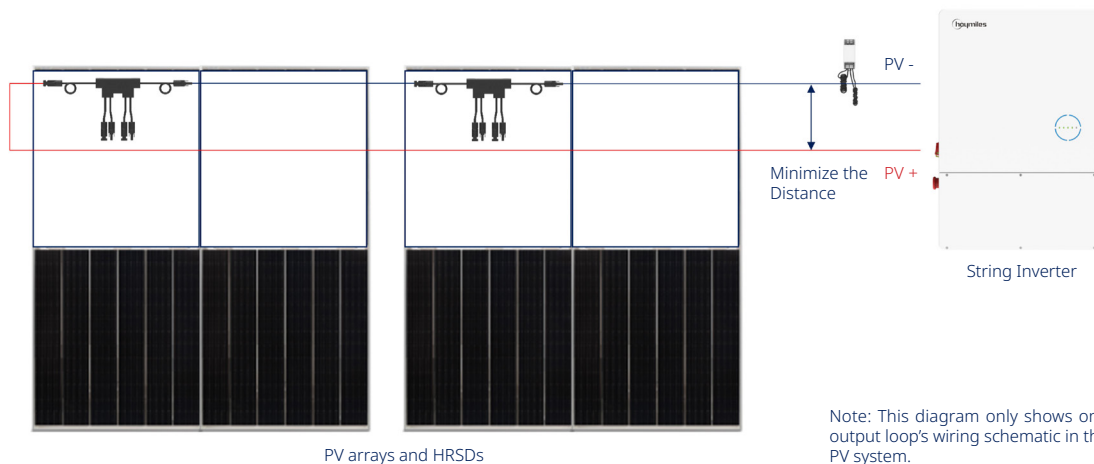
For PV modules with long output cables, choose HRSDs with input cables of the suitable length shown below.



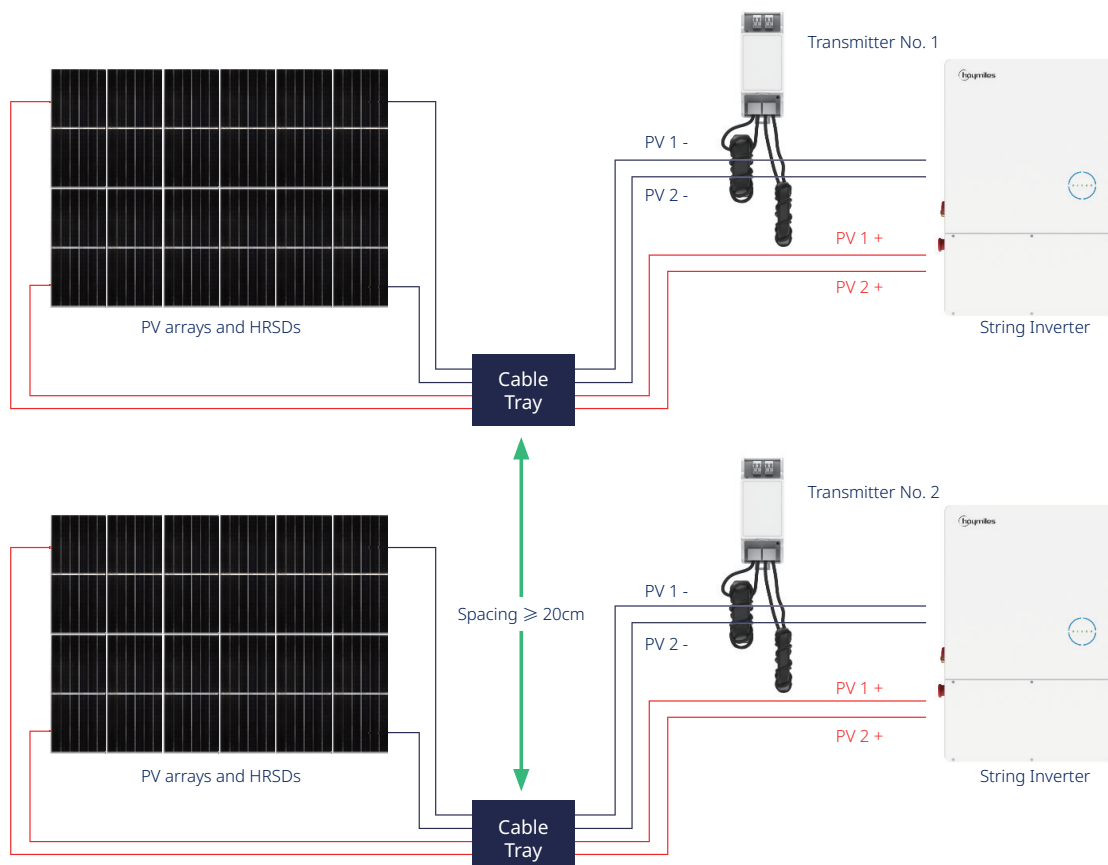
* The proportions of the HRSDs have been modified to improve the depiction of the structure.

4.2 Routing Instruction

To ensure effective communication, minimize the distance between positive and negative cables of the same string, as shown below.






To prevent communication interference, Hoymiles recommends that output loops use separate cable trays with minimum spacing of 20 cm (7.87"). If communication interference occurs due to multiple output loops in one cable tray, contact Hoymiles technical support team.



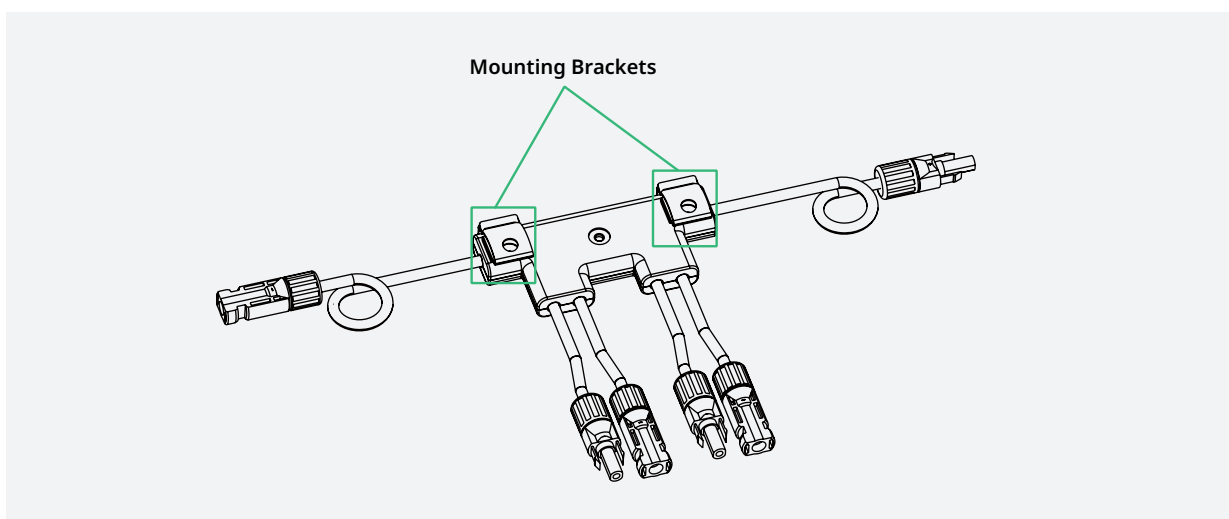
5. Installation

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

5.1 HRSD-2C

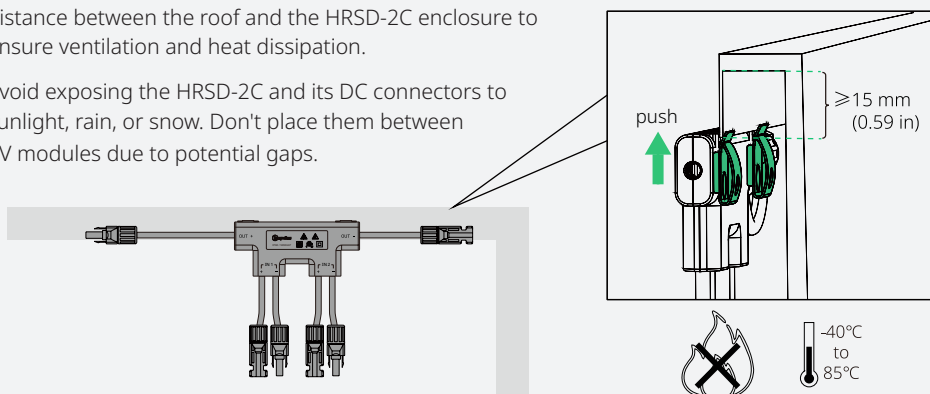
 WARNING	<ul style="list-style-type: none"> To disconnect the HRSD-2C, remove the output cables of the HRSD string first, and then disconnect the input cables from the PV modules.
 NOTICE	<ul style="list-style-type: none"> The HRSD-2C has two inputs. If you are connecting it to one PV module, connect 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	<ul style="list-style-type: none"> 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* <p>*Source: SunSpec RapidShutdown Specification. Please refer to local regulations before installation.</p>

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

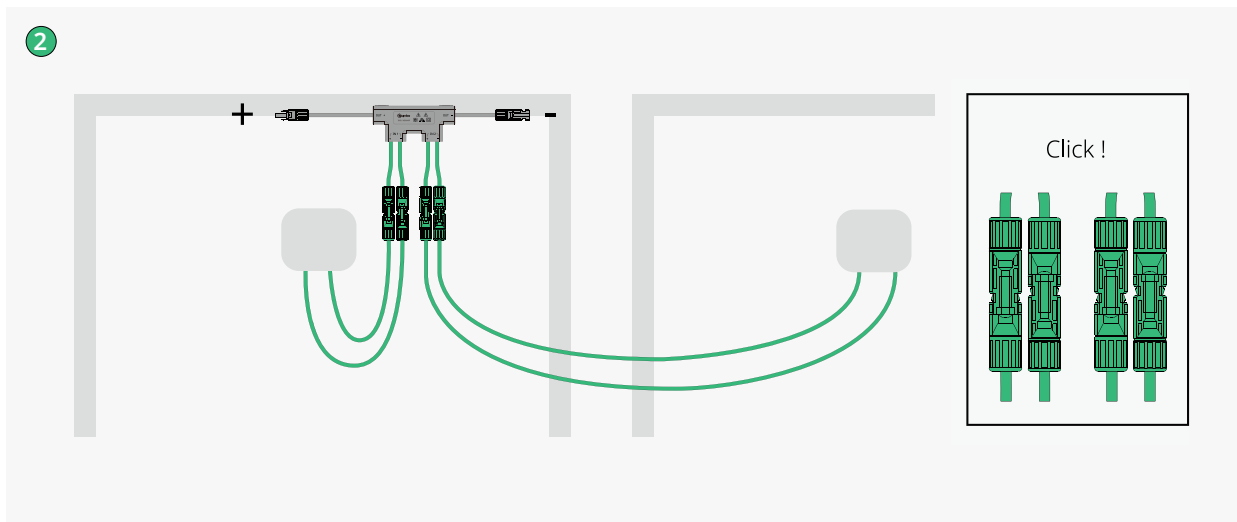
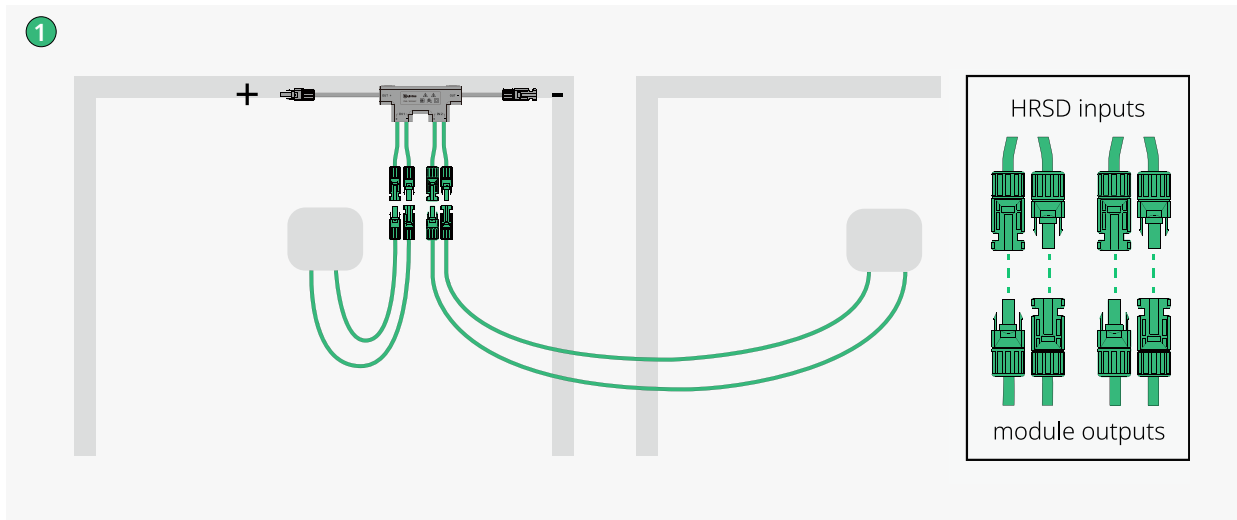


NOTICE

- 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.



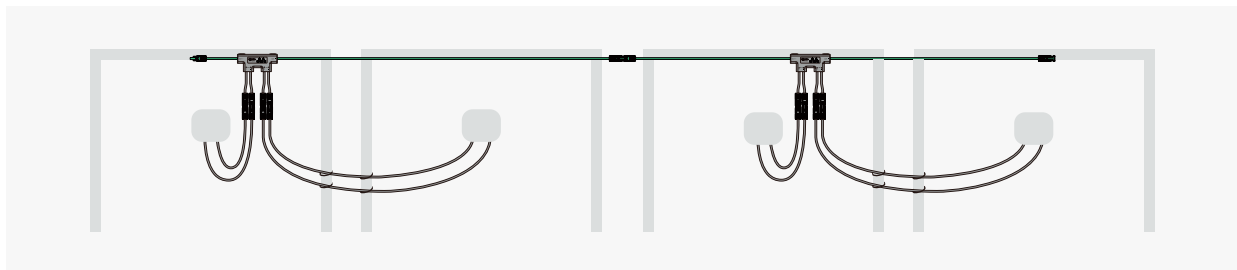
Step 2 Connect the PV modules to the HRSD-2C.



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.



5.2 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.

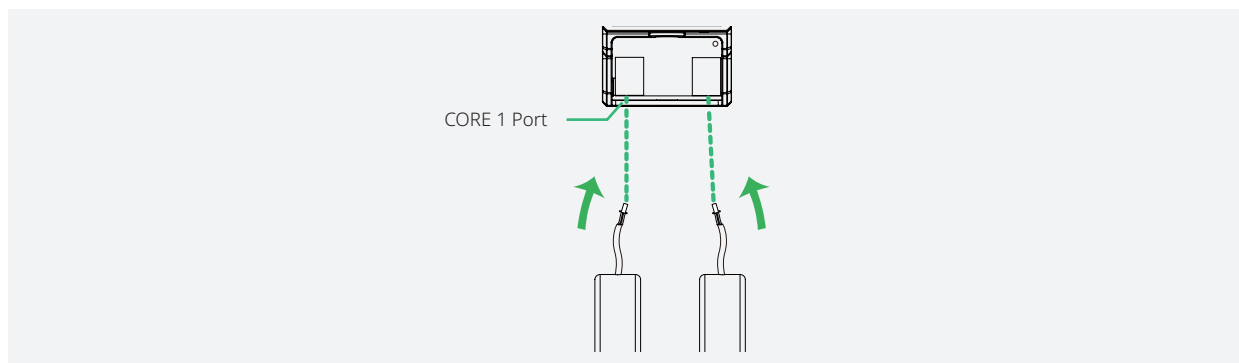
- Personal protective equipment (PPE)
- 35 mm DIN rail
- 12 V DC DIN rail power supply

Steps

Step 1 Mount the Transmitter and the power supply on the DIN rail.

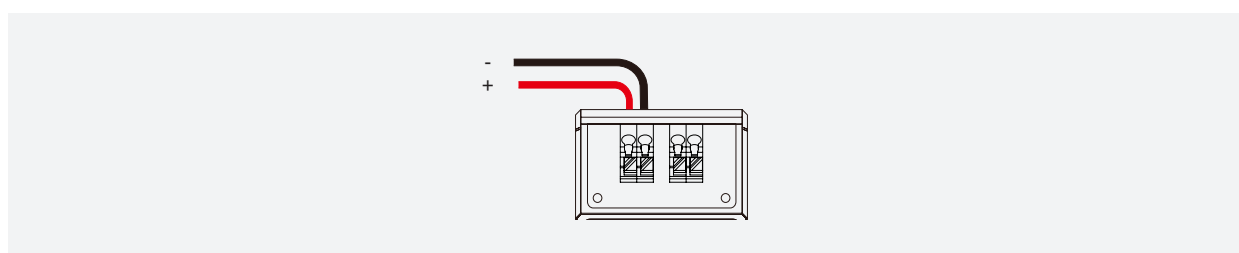
Step 2 Connect the Core to the Transmitter.

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

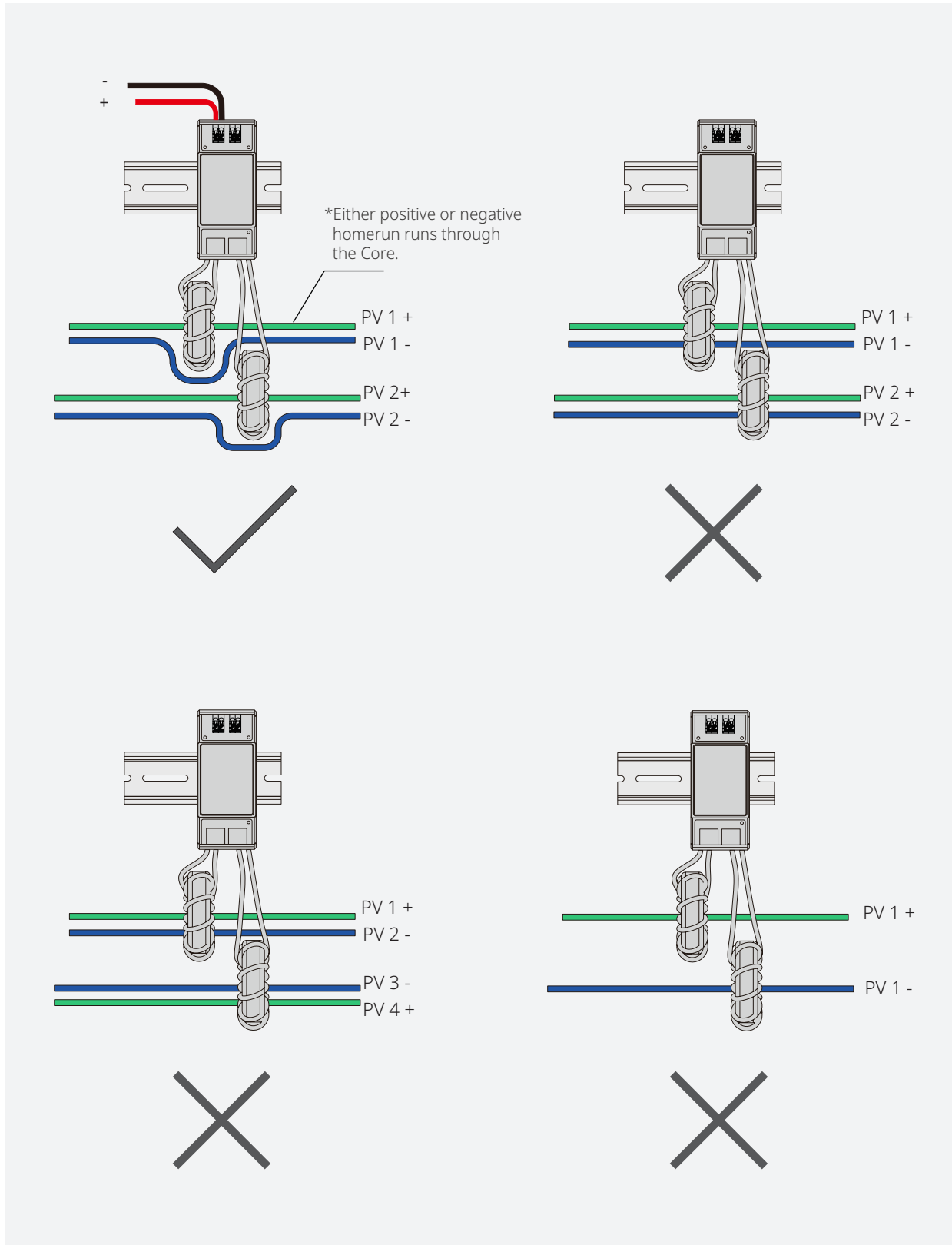


Step 3 Connect the power supply and the Transmitter.

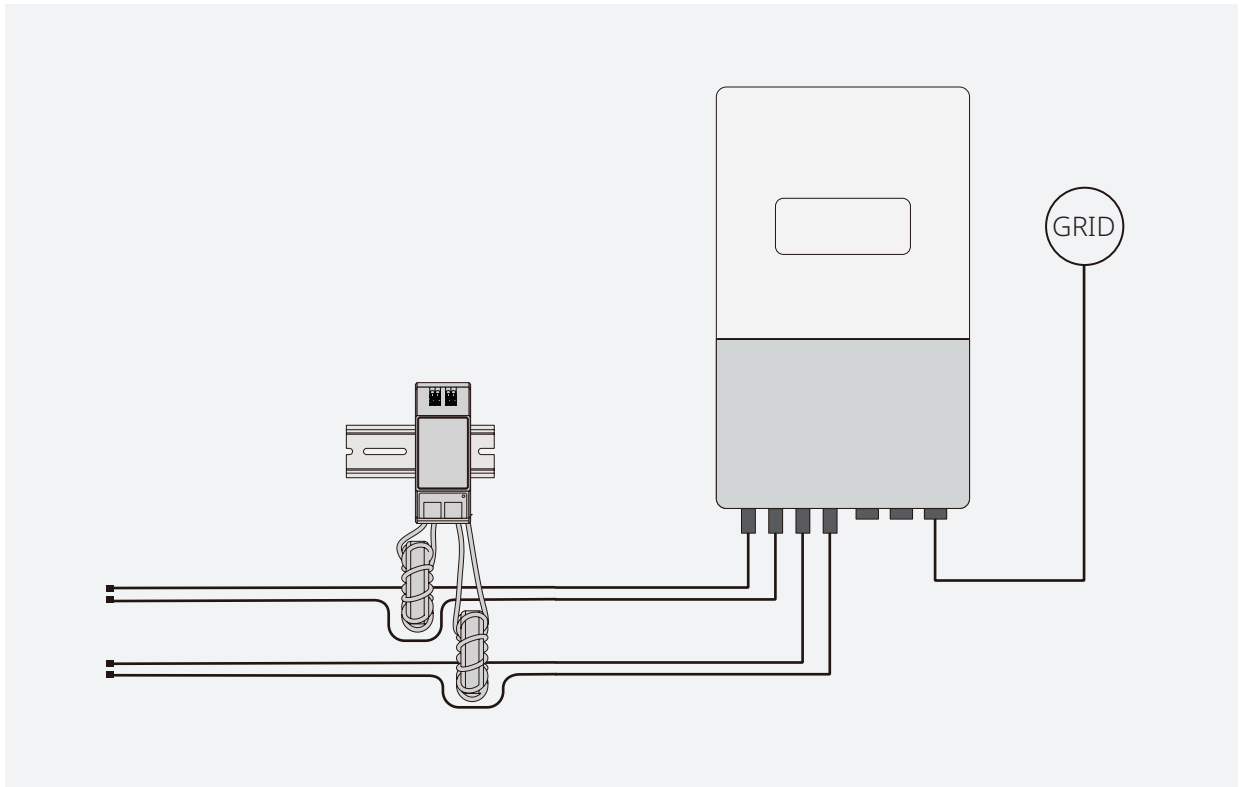
Connect wires to the DC side of the power supply.



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.

5.3 HT10-Kit

 WARNING	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Improper installation may lead to HT10-Kit damage, which is not covered under warranty.
 IMPORTANCE	<ul style="list-style-type: none"> 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

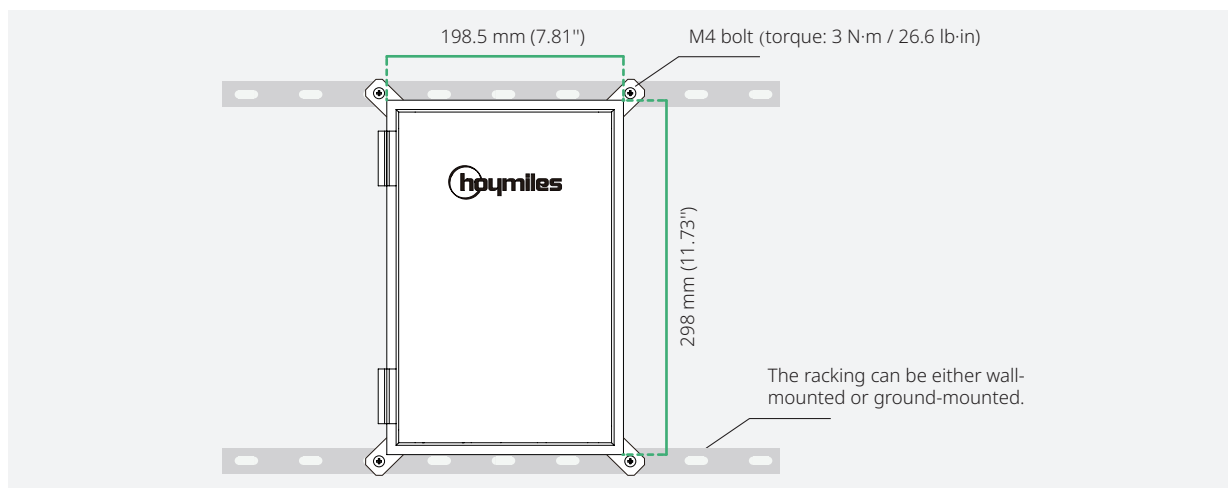
Please prepare the following items before installation.

- 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.

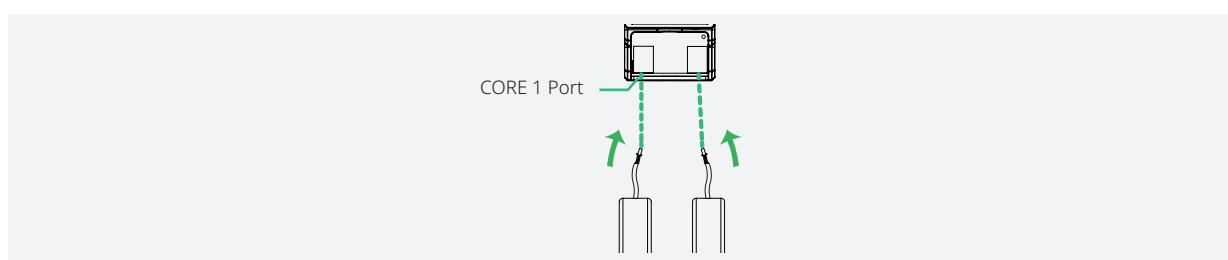


Electrical Installation

Step 1 Mount the Transmitter and the power supply on the DIN rail.

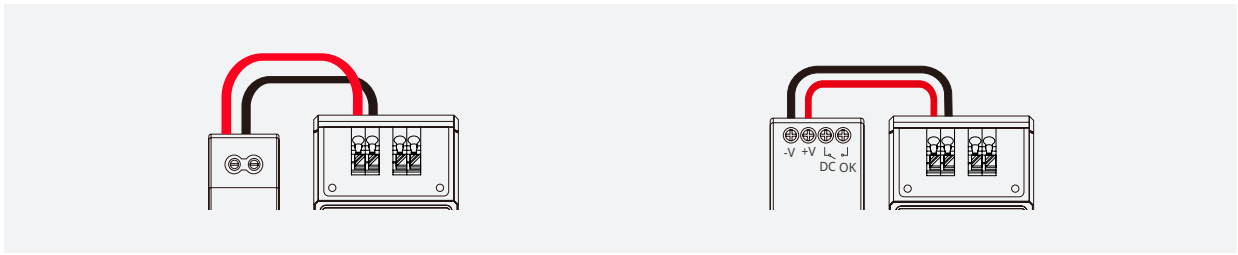
Step 2 Connect the Core to the Transmitter.

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



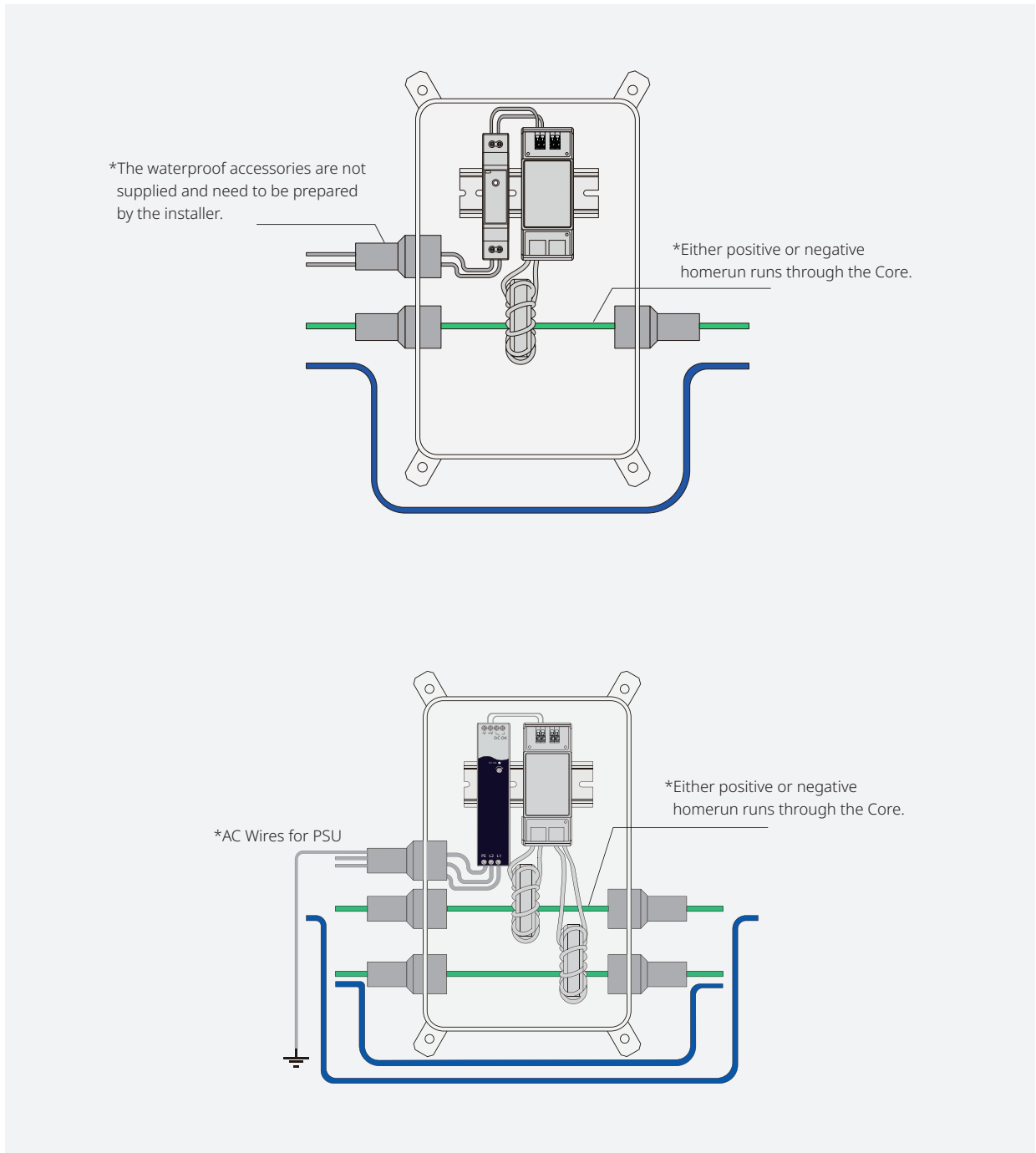
Step 3 Connect the power supply and the Transmitter.

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.

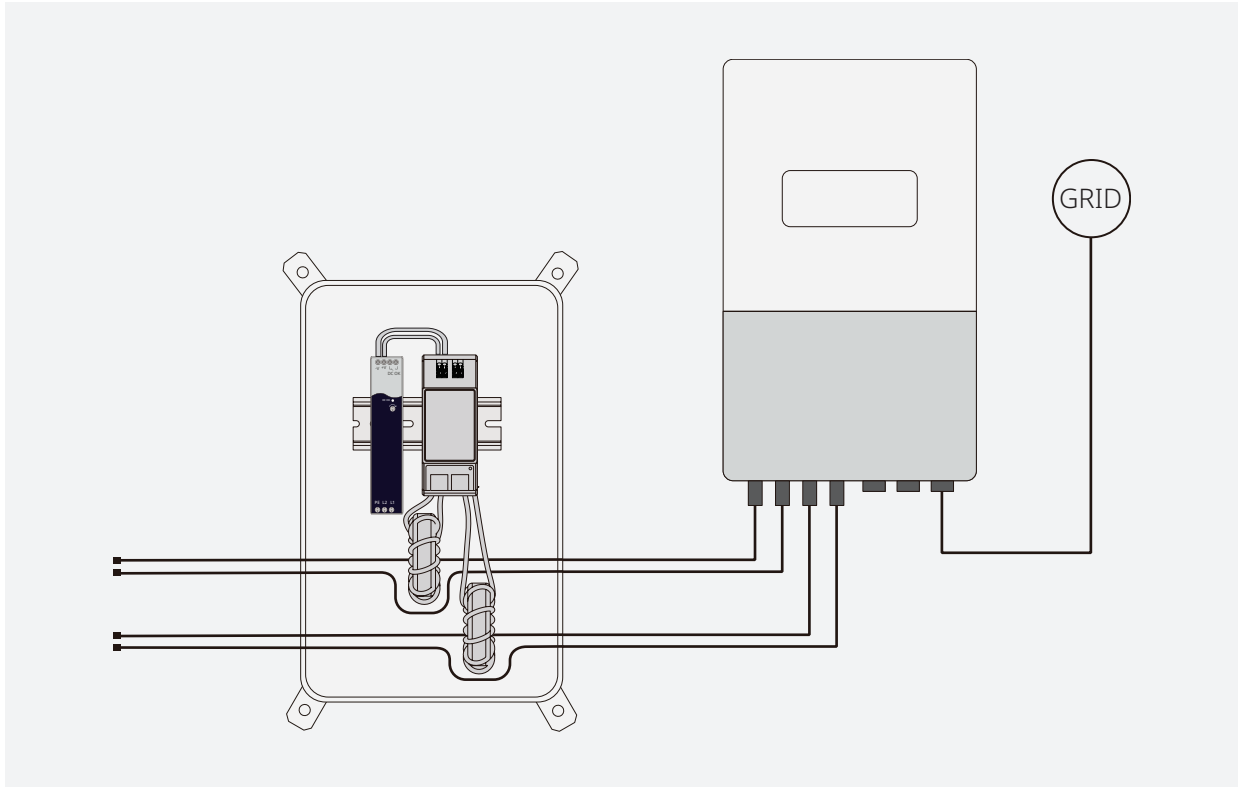
Ground all conduit connections.



NOTICE

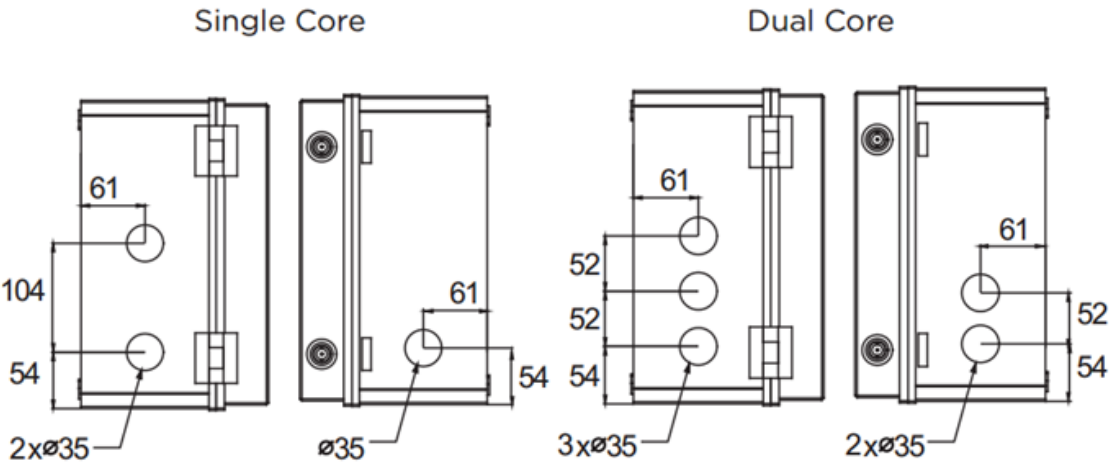
- *The non-metallic enclosure does not provide grounding between conduit connections. Use grounding-type bushings and jumper wires.*

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.

5.4 Recommended Conduit Drilling Guide



6. Troubleshooting

6.1 Terminology

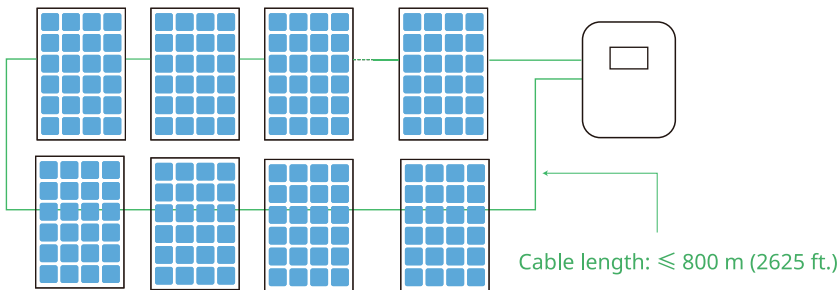
- **PV module string:** a group of panels wired into a single input on your inverter.
- **Voc:** Stands for open-circuit voltage, which is the maximum voltage the PV module can produce when it is not connected to a load.

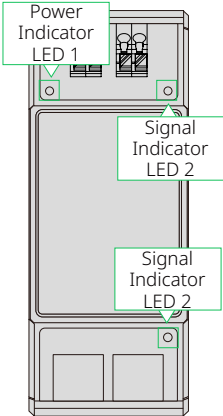
6.2 Troubleshooting Guide

6.2.1 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) .

6.2.2 PV module string has less output voltage than expected

Problem	The voltage displayed on the inverter monitoring platform is significantly lower than the expected $V_{oc} \times n^*$. *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 supply failure in the HRSD, wiring issues in the PV module string, or damage to the PV modules.
Troubleshooting Procedure	
Step 1	<p>Confirm the following installation are correct.</p> <ul style="list-style-type: none"> • 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.  <p>Cable length: $\leq 800 \text{ m (2625 ft.)}$</p>

Step 2	<p>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 power supply with a multimeter to check whether the voltage is 12 V. If the voltage is 12 V, move on to Step 3. If not, replace the power supply.</p>	 <p>The diagram shows a vertical rectangular unit. At the top, there is a 'Power Indicator LED 1'. Below it, on the right side, is a 'Signal Indicator LED 2'. At the bottom, on the right side, is another 'Signal Indicator LED 2'.</p>
Step 3	<p>Check and ensure the signal indicator LED2 is functioning properly. Observe whether the signal indicator LED2 is flashing. If the LED2 is flashing, proceed to Step 4. If the LED2 is solid, it means that the Transmitter has not sent a "permission to operate" signal. Restart the transmitter and observe whether the LED2 is flashing. If it does, proceed to Step 4. If it is still solid, contact Hoymiles technical support team.</p>	
Step 4	<p>Check whether there are loose connections between PV modules and the HRSD. If there are loose connections, reconnect the connectors. Otherwise, proceed to Step 5.</p>	
Step 5	<p>Check if the PV modules and the HRSD are functioning properly. If the Transmitter is functioning and generating a "permission to operate" signal, follow the steps below to check the PV modules and the HRSD. (If you don't have the necessary equipment, skip the following steps.)</p> <ol style="list-style-type: none"> 1. Use an infrared camera or a handheld temperature gun to check if there is a module with an abnormally low-temperature reading. 2. Use a multimeter to sequentially test the voltage on OUT+ and OUT- of each HRSD. <ul style="list-style-type: none"> • If an HRSD's OUT+ and OUT- give the same voltage, this HRSD has no output voltage and should be replaced. • If there is a certain voltage difference between the OUT+ and OUT- of the HRSD, this HRSD is working normally. Disconnect this HRSD and measure the PV module's output voltage. If the PV module has no output voltage, the PV module may be the problem and needs to be replaced. 	

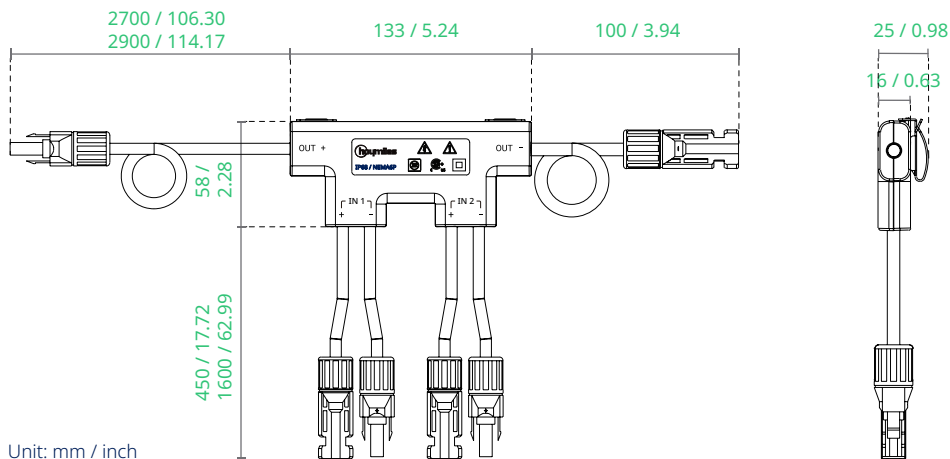
6.2.3 HRSD has no output voltage (0 V)

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	<p>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.</p>
Step 3	<p>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.</p>

7. Technical Specifications

7.1 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	SunSpec 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.

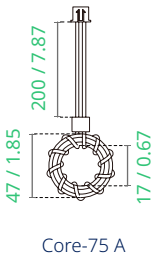
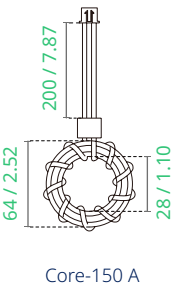
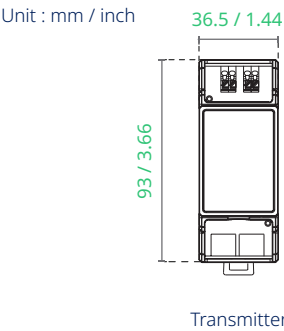
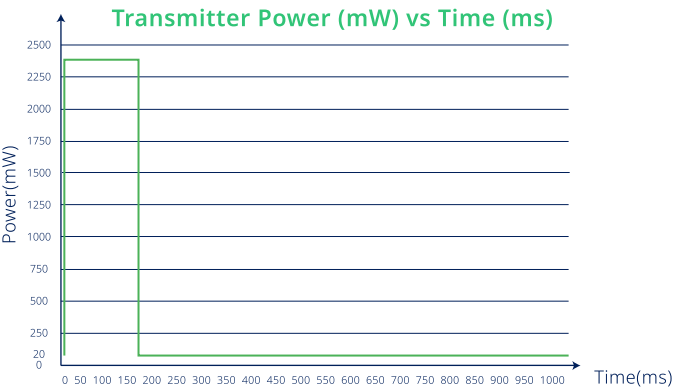


7.2 HT10

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



7.3 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.

Unit : mm / inch

