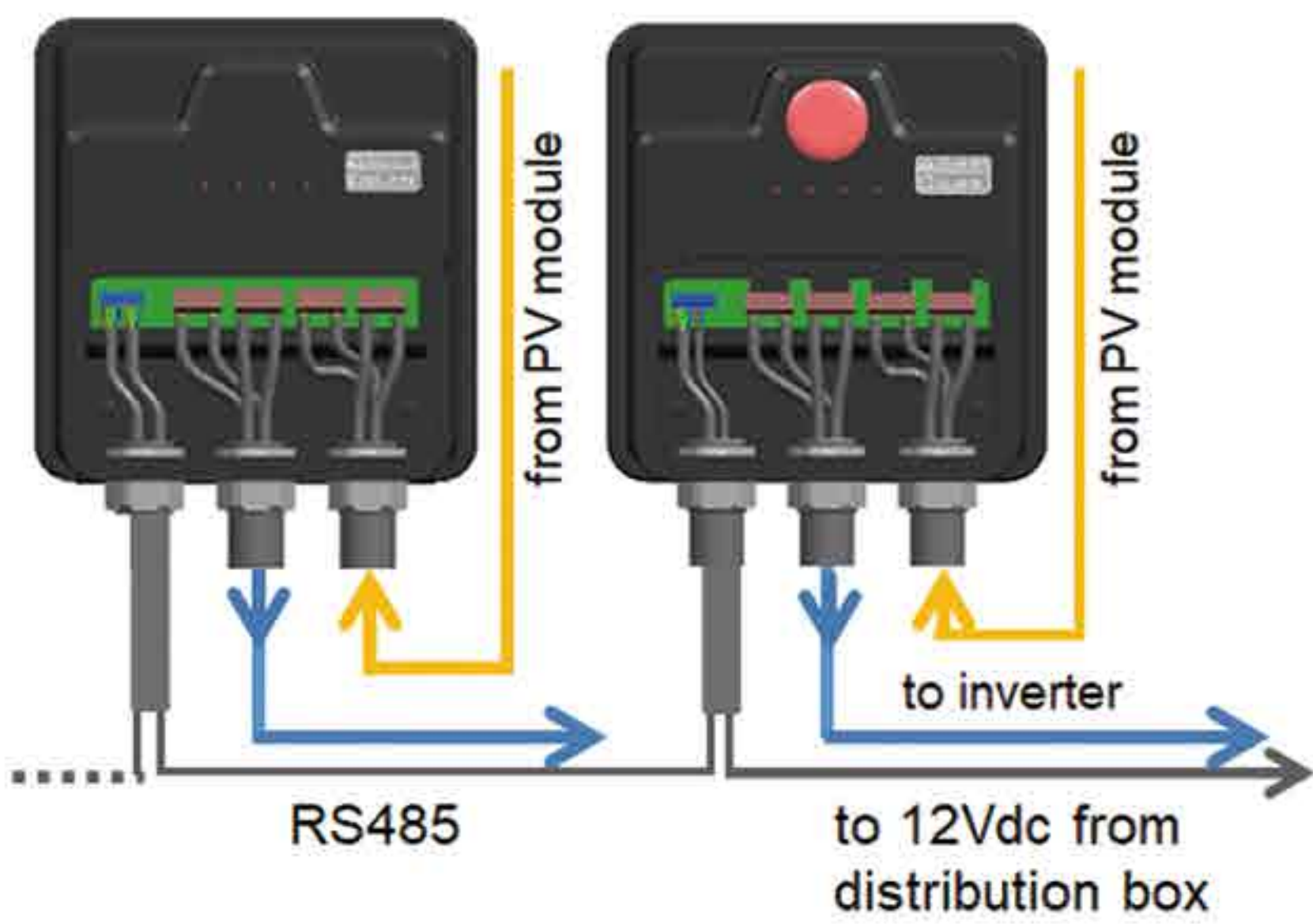## Product Picture

Beetrans - Master
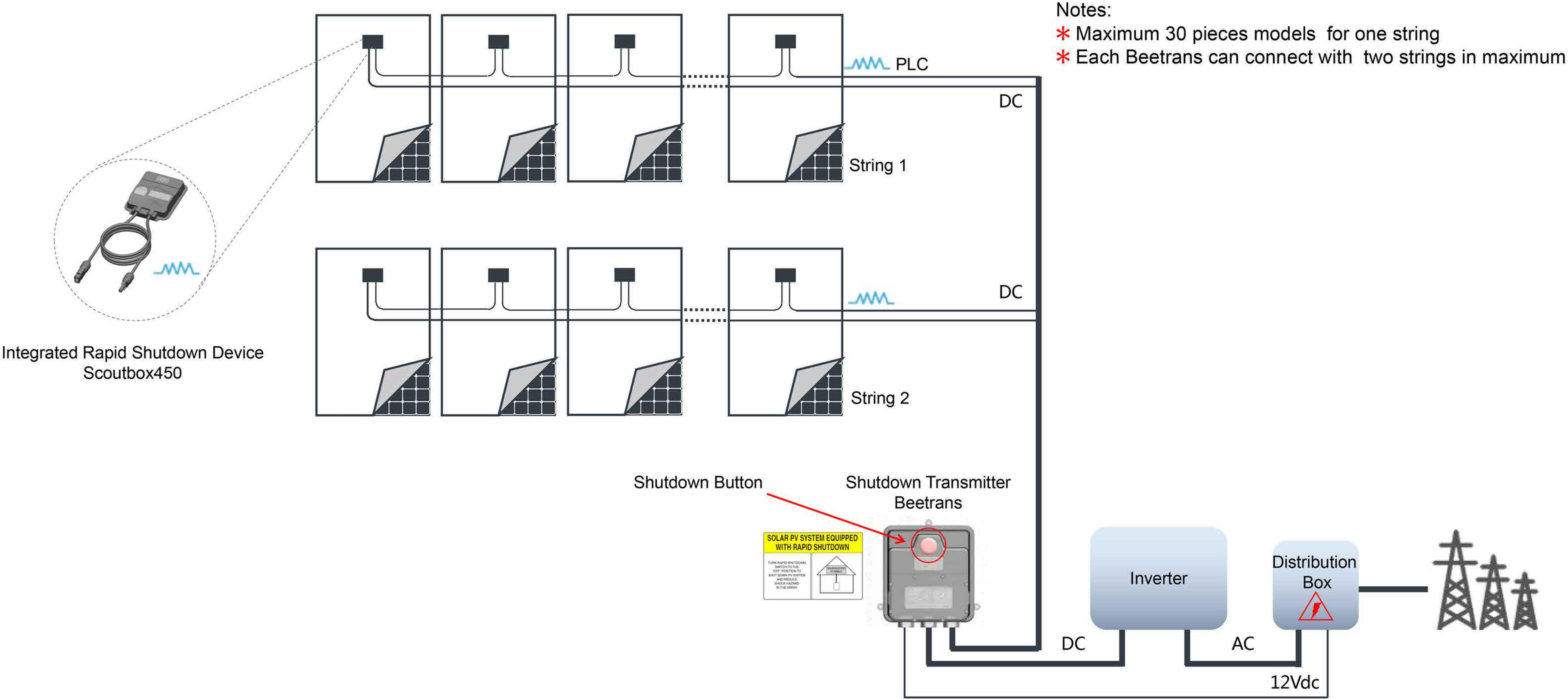

Beetrans - Slave

Product features

- Support two PV strings, suitable for most roof station.

- Cascade connection with Max. 10Pcs, suitable for large scale roof station.

- Communicate over Power Line Communications, no need additional communication cable, easy to install.

- String detect function to ensure shutdown system more secure and reliable.

Technical Data

Product Code	Beetrans-Master / ~Slave
TECHNICAL DATA	
Working Voltage	12 V
Average Power Consumption	1.2 W
Support Strings	2 strings
Max Single String Current	15 A
Cascade Control	Yes
Maximum of Cascade	10 pcs
System Voltage	1000 V / 1500 V
INSTALLATION SPECIFICATION	
Size	220 x 210 x 65 mm
Number of Bore	3
Bore Diameter	27.8 mm
EMT tube	3/4 inch
Weight	850 g
Type of Communication	PLC / RS485
Temperature Range	-20 ~ 60℃
Relative Humidity Range	0 ~ 100%
Ingress Protection	IP65 / NEMA Type3R
STANDARD COMPLIANCE	
Regulations	NEC 2017 (690.12)
Safety	UL1741 , CSA C22.2 No. 330 , UL 1703 , ULC1703-01
EMC	FCC Part15 ClassB IEC61000-6-2 / IEC61000-6-3 EN61000-6-2 / EN61000-6-3
Hardware and Software Safety Standards	UL 991 , UL 1998 , CSA C22.2 No. 0.8 -12

PV Rapid Shutdown Solution (Integrated Rapid Shutdown device, PLC Communication)

Case :
10KW PV Station: 26pcs 390W Panels, 2 Strings
26pcs Scoutbox450 + 1pcs Beetrans-Master

Integrated Rapid Shutdown Device
Scoutbox450

PLC

DC

String 1

DC

String 2

Notes:
* Maximum 30 pieces models for one string
* Each Beetrans can connect with two strings in maximum

Shutdown Button

Shutdown Transmitter
Beetrans

SOLAR PV SYSTEM EQUIPPED
WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN
SWITCH TO THE
"OFF" POSITION TO
SHUT DOWN PV SYSTEM
AND REDUCE
SHOCK HAZARD
IN THE ARRAY.

Inverter

Distribution
Box

DC

AC

12Vdc

PV Rapid Shutdown Solution (Integrated Rapid Shutdown device, PLC Communication)

Case :
100KW PV Station: 260pcs 390W Panels, 20 Panels per String, 13 Strings in total
260pcs Scoutbox450 + 1pcs Beetrans-Master + 6pcs Beetrans-Slave

Integrated Rapid Shutdown Device
Scoutbox450

PLC

DC

String 1

String 2

String 12

DC

String 13

Notes:
* Maximum 30 pieces models for one string
* Each controller can connect with two strings in maximum
* Maximum connect 9 pcs Beetrans-Slaves by one Beetrans-Master

Beetrans-Slave

Beetrans-Slave

Beetrans-Master

Shutdown Button

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN
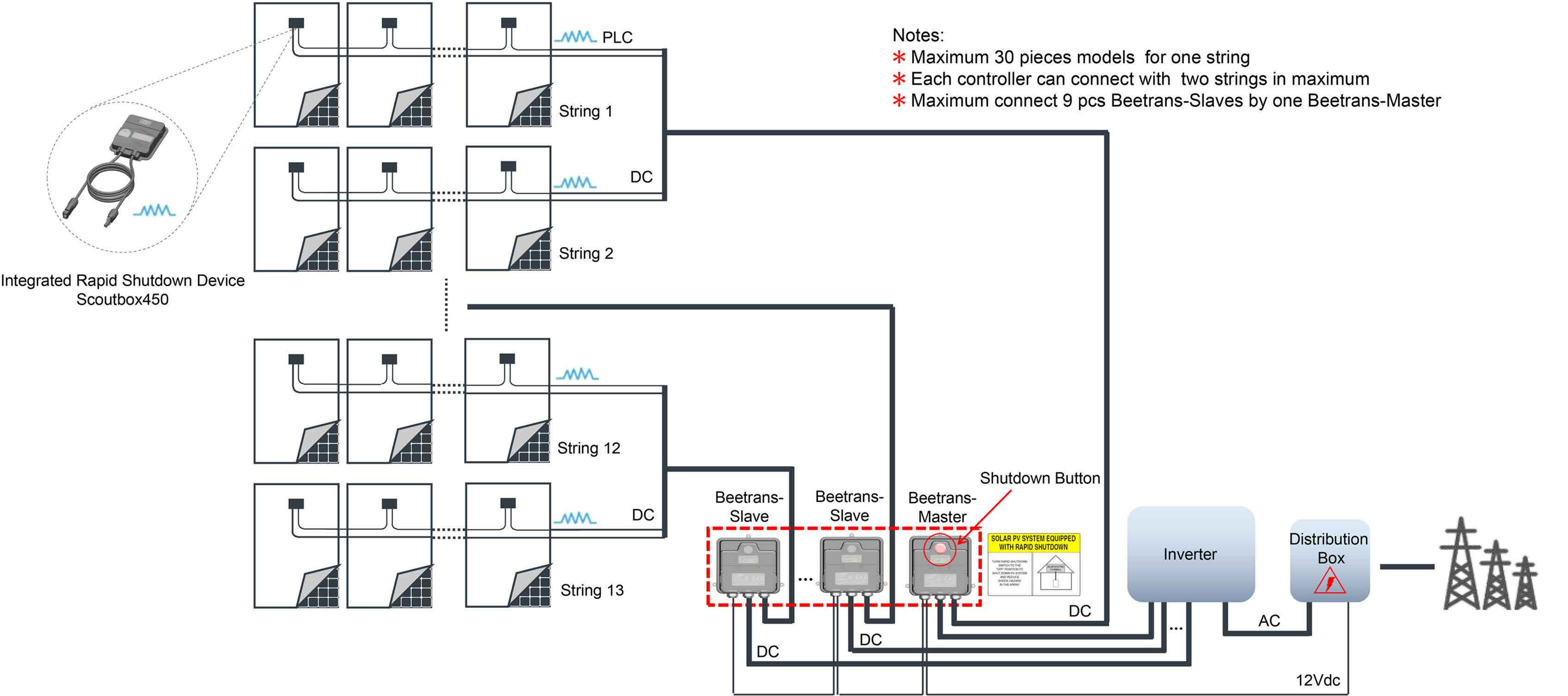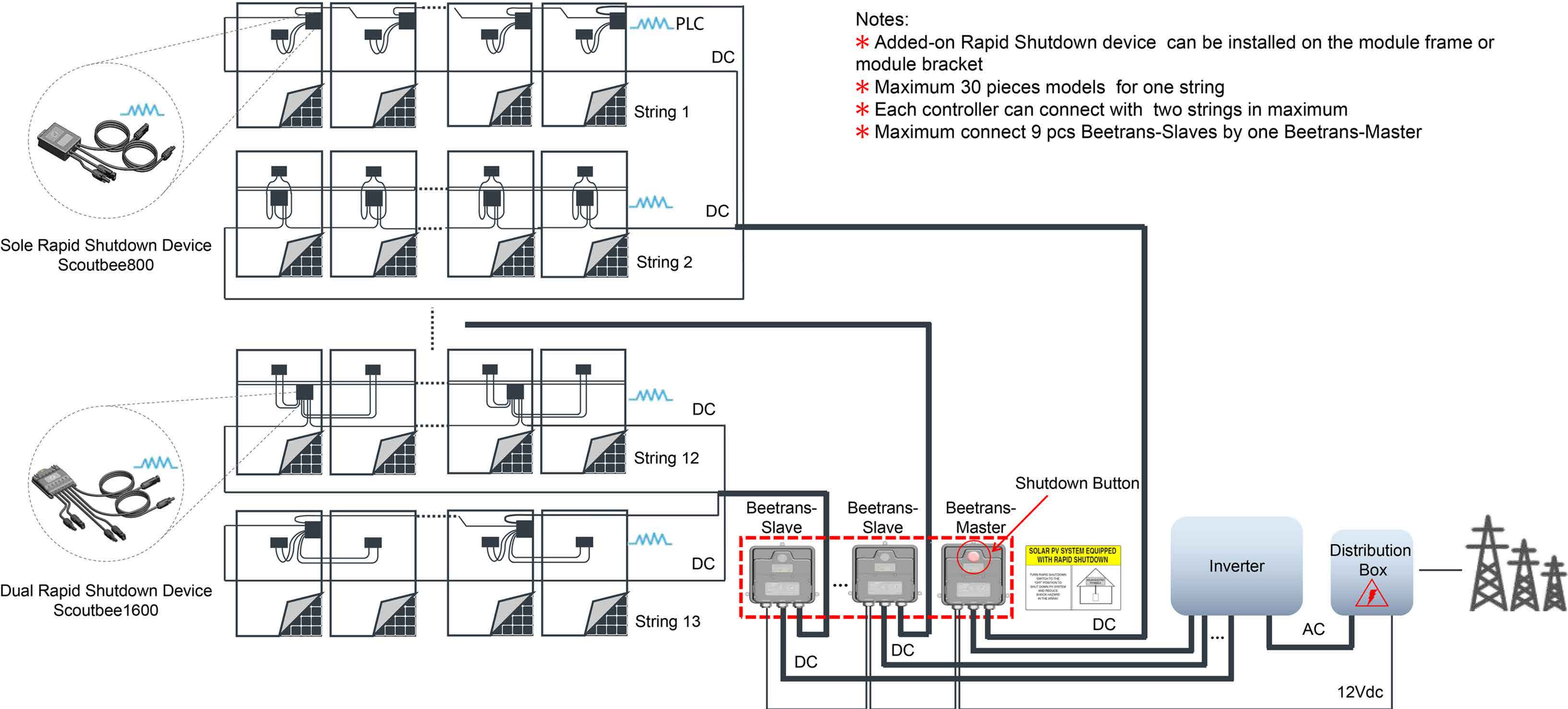
DC

Inverter

Distribution Box

DC

DC

AC

12Vdc

PV Rapid Shutdown Solution (Added-on Rapid Shutdown device, PLC Communication)

Case :
100KW PV Station: 260pcs 390W Panels, 20 Panels per String, 13 Strings in total
260pcs Scoutbee800 or 130pcs Scoutbee1600 + 1pcs Beetrans-Master + 6pcs Beetrans-Slave

PLC

DC

String 1

Sole Rapid Shutdown Device
Scoutbee800

DC

String 2

Dual Rapid Shutdown Device
Scoutbee1600

DC

String 12

DC

String 13

Notes:
* Added-on Rapid Shutdown device can be installed on the module frame or module bracket
* Maximum 30 pieces models for one string
* Each controller can connect with two strings in maximum
* Maximum connect 9 pcs Beetrans-Slaves by one Beetrans-Master

Shutdown Button

Beetrans-Slave

Beetrans-Slave

Beetrans-Master

SOLAR PV SYSTEM EQUIPPED
WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN
SWITCH TO THE
"OFF" POSITION TO
SHUT DOWN PV SYSTEM
AND REDUCE
SHOCK HAZARD
IN THE ARRAY

DC

DC

DC

Inverter

Distribution Box

AC

12Vdc

PV Rapid Shutdown & Monitoring Solution (Added-on Rapid Shutdown device, RF+PLC Communication)

PLC

Sole Rapid Shutdown Device
Scoutbee800M

Data Acquisition Unit
Swarm

Dual Rapid Shutdown Device
Scoutbee1600M

String 1

String 2

String 127

String 128

Beetrans-Slave

Beetrans-Slave

Beetrans-Master

Shutdown Button

SOLAR PV SYSTEM EQUIPPED
WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN
SWITCH TO THE
'OFF' POSITION TO
SHUT DOWN PV SYSTEM
AND REDUCE
SHOCK HAZARD
IN THE ARRAY

DC

DC

DC

DC

12Vdc

Inverter

Distribution Box

AC

RS485

Cloud Server

LAN/ WiFi

Monitor Terminal

Data Aggregation Device
Beehive

Case :
1MW PV Station: 2560pcs 390W Panels, 20 Panels per String, 128 Strings in total
2560pcs Scoutbee800M or 1280pcs Scoutbee1600M + 7pcs Beetrans-Master + 56pcs Beetrans-Slave + 13pcs Swarm + 3pcs Beehive

Notes:
∗ Added-on Rapid Shutdown device can be installed on the module frame or module bracket
∗ Maximum 30 pieces models for one string
∗ Maximum connect 9 pcs Beetrans-Slaves by one Beetrans-Master
∗The schematic diagram of this solution takes an inverter and a main controller system as examples