

Product News

New Product

Date of issue 01/Aug/2020

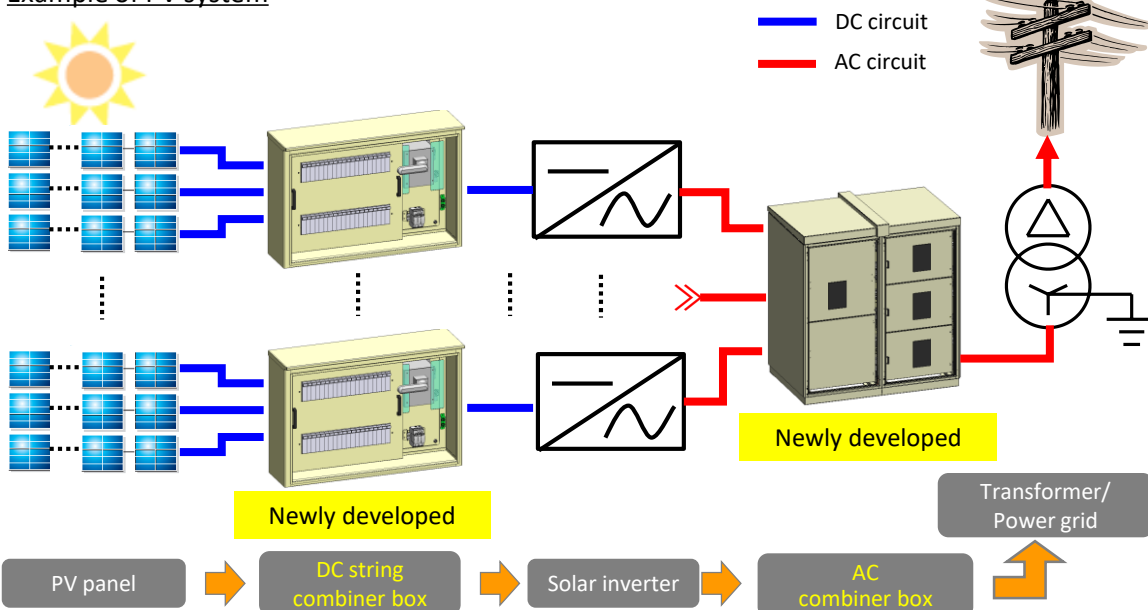
Combiner Box for PV Installation

1000V/1500VDC string combiner box & AC combiner box

Outline

Newly developed DC string combiner box and AC combiner box for PV installation were just launched toward global market. They have been co-developed with Nitto Kogyo Corporation, which is a market leader for PV string combiner boxes in Japan.

Example of PV system



Specification

<Use conditions for DC string combiner box & AC combiner box>

Ambient temperature	Within the range from -25 to +40°C; and 24h average temperature is less than 35°C
Dew condensation	Modest level without impacting on an internal device
Height above sea level	Not higher than 2000m

<DC string combiner box>

Maximum voltage	1000VDC	1500VDC
Number of input circuit	Max 20 circuit	
Input current *1	Max 10A/circuit	
Size of fuse	10x38gPV	10x85gPV
Capacity of fuse※2	15A	
Output current	Max 200A	
Enclosure	Material	Steel
	IP code	IP55
Conformable standard	IEC 61439-2	

<AC combiner box>

Model	L-type	H-type	M-type
Rated operating voltage (Ue)	Max 415V AC		
Rated insulation voltage (Ui)	690V AC		
Rated current	Max 800A	Max 6300A	
Main circuit	MCCB	ACB	
Branch circuit	MCCB	MCCB	ACB/MCCB
Enclosure	Material	Steel	
	IP code	IP44	Equivalent to IP43
Conformable standard	JIS C 8480	JIS C 8480 or IEC 61439-2	

*1Input current is the maximum output operating current per a string (i.e. a circuit), taking the climate conditions into account.

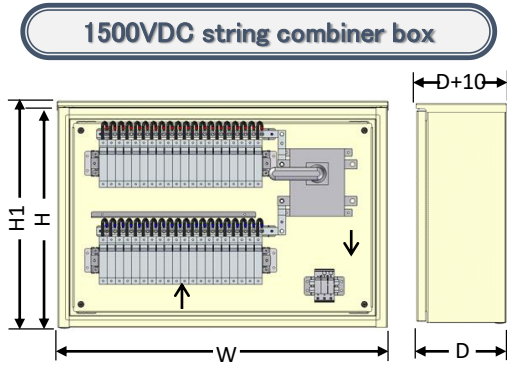
*2Please select capacity of gPV fuse according to the current characteristics of a string.

Model

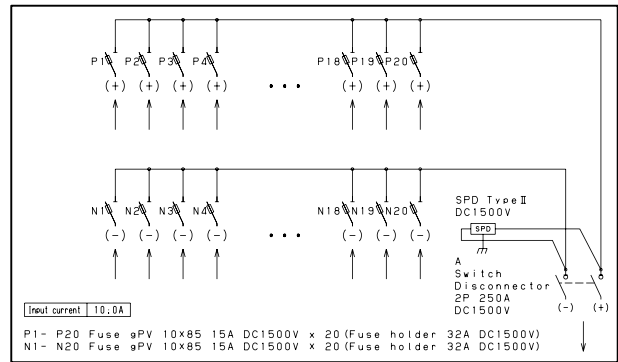
◆DC string combiner box

- SPD (Type II) is installed for protection from lightning surge.
- Protection plate is attached for safety.
- Even if fire breaks out inside the box, it can retard fire spreading, as the enclosure is made of steel.
- Various customization is available, e.g. stainless steel enclosure.

Note: For non-grounding system only



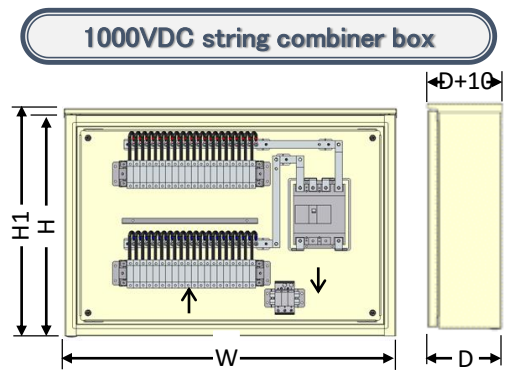
Internal view without protection plate



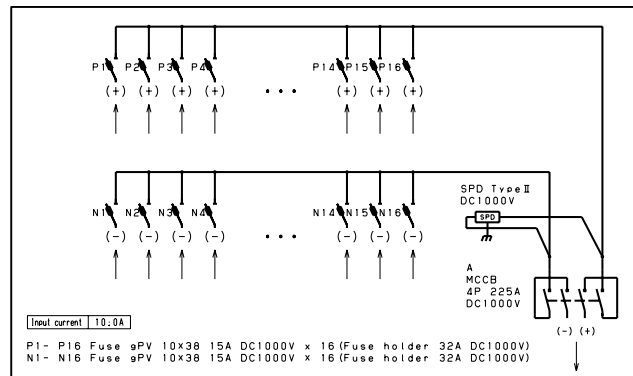
■Product example

Outdoor use
IP55, Category 2

Number of input circuit	Input current/circuit	Output current	Output device	Output capacity	Enclosure size (mm)			External (mm)
					W	H	D	H1
10	10A	100A	Switch disconnector	250A	700	600	250	617.5
20	10A	200A			900	600	250	617.5



Internal view without protection plate



■Product example

Paint: light beige color, powder paint without e-coat

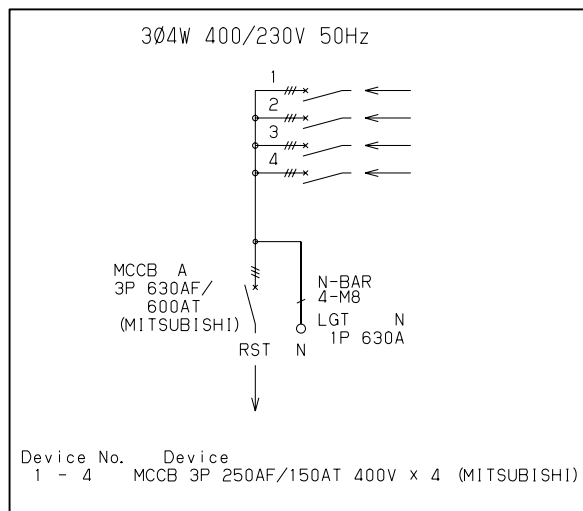
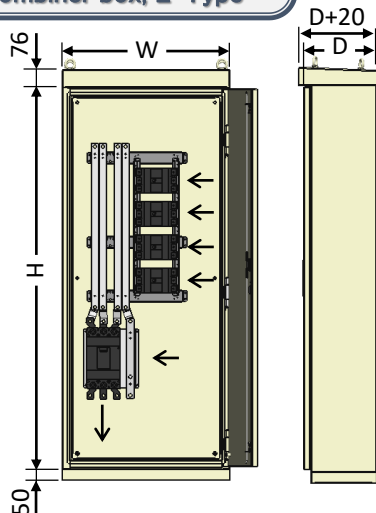
Outdoor use
IP55, Category 2

Number of input circuit	Input current/circuit	Output current	Output device	Output capacity	Enclosure size (mm)			External (mm)
					W	H	D	H1
12	10A	120A	Circuit breaker	225AT	700	600	200	617.5
16	10A	160A			800	600	200	617.5

◆AC combiner box

- We offer 3 different types; L, H and M to meet customers' needs.
- Efficient layout of busbars and breakers brings the large gutter for cable entrance.
- Customization fitting the specifications of Solar inverter connected is available.
- Various customization is available upon request, e.g. installing SPD (TYPE II) for surge protection and watt-hour meter for power selling/buying.

AC combiner box, L-Type



Internal view without protection plate

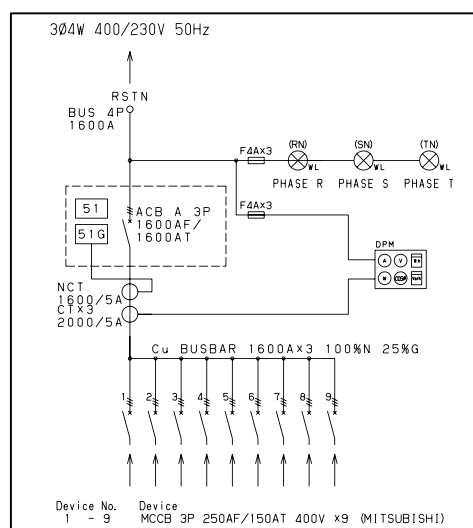
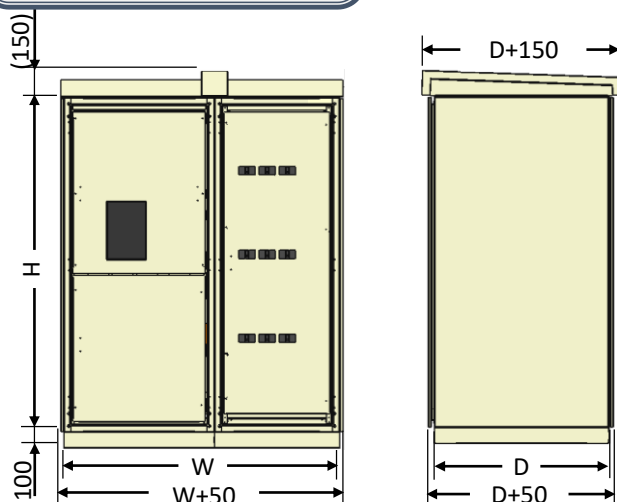
■Product example

Paint: light beige color, powder paint without e-coat

Outdoor use
IP44

INV manufacturer/ model	Input MCCB	Number of input circuit (Total AC output capacity)	Output MCCB	Enclosure size (mm)		
				W	H	D
HUAWEI/ SUN2000-60KTL-M0	MCCB 3P 250AF/150AT	4 circuits (0.24MW)	MCCB 3P 630AF/630AT	700	1600	300

AC combiner box, H-Type



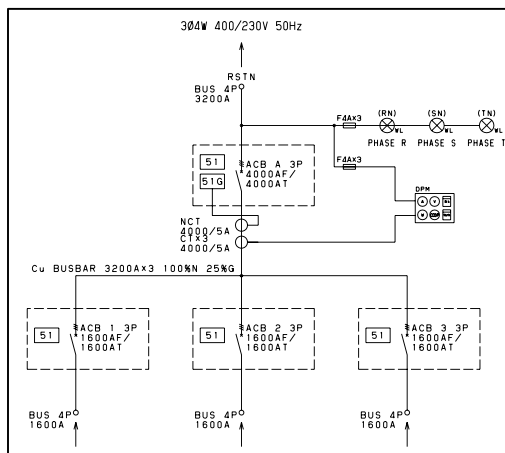
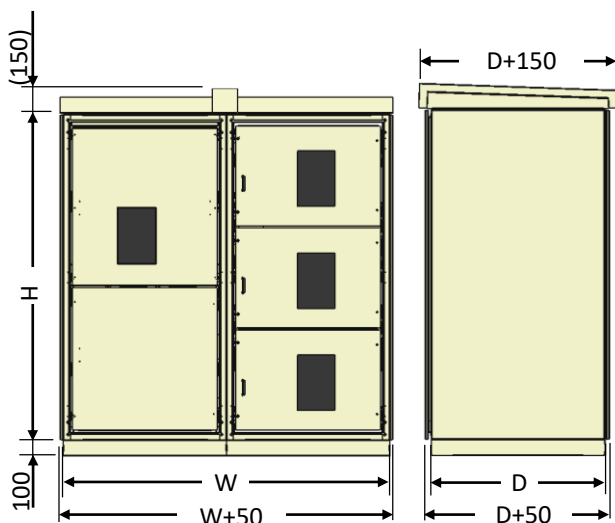
■Product example

Paint: light beige color, powder paint without e-coat

Outdoor use
Equivalent to IP43

INV manufacturer/ model	Input MCCB	Number of input circuit (Total AC output capacity)	Output MCCB	Enclosure size (mm)		
				W	H	D
HUAWEI SUN2000-60KTL-M0	MCCB 3P 250AF/150AT	9 circuits (0.5MW)	ACB 3P 1600AF/1600AT	1600	2000	950

AC combiner box, M-Type



Product example

Paint: light beige color, powder paint without e-coat

Outdoor use
Equivalent to IP43

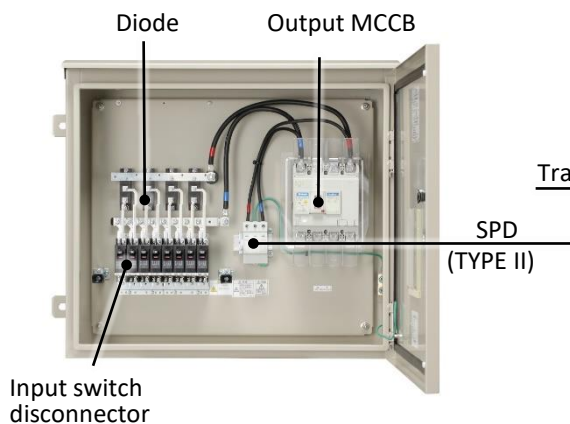
INV manufacturer/ model	Input ACB	Number of input electric system (Total AC output capacity)	Output ACB	Enclosure size (mm)		
				W	H	D
HUAWEI SUN2000-60KTL-M0	ACB 3P 1600AF/1600AT	3 systems (1.5MW)	ACB 3P 4000AF/4000AT	2000	2000	1250

Others

We offer a variety of PV-related items.

◆DC string combiner box; Made in Japan

- Applicable to PV system whose open-circuit voltage is 1000VDC or less.
- It adopts reverse-current protection diode.
- It can switch by each input circuit while being energized, as it has switch disconnectors on input side.



◆Transducer box; Made in Japan

It encloses transducers which convert the signals from pyranometer and thermometer to DC4-20mA.

Signal from pyranometer	0-10mV
Signal from thermometer	-50 to +50°C Platinum resistance thermometer sensor, 3-wire system, Pt100Ω
Rated voltage	AC230V 50Hz

