Top 100 Global Innovator for 10 years

Susol super Solution DC COMPACT SWITCH-DISCONNECTORS

1200A Up to 1500Vdc





Change Low Voltage Switchgear!

Another evolution of size, cost and performance for low voltage power circuit breakers





Susol DC Compact Switch-disconnectors 1200A Up to 1500Vdc

UL 489B for Photovoltaic (PV) Systems UL 489F for Battery Power Supplies

Contents

Compact Size

Performance DOWN Size

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DC Compact Switch-disconnectors 1200A



Features

- Rated current 800 ~ 1200A
- Maximum voltage (3P: 1000Vdc, 4P: 1500Vdc)
- Rated short-time current (Icw): 50kA/1s
- Operation durability without maintenance: 12,500 times
- Various control power sources
- Various accessories
- UL File No.

File E491572 (UL489F : Battery Power Supply Molded-case Switches)

File E493630 (UL489B : Photovoltaic molded-case switches)

File E494756 (Adapters, Molded-case Switches)

File E223241 (Accessory Devices)

UL 489 B : Molded-Case Switches for Use with Photovoltaic(PV) Systems

UL 489 F: Molded-Case Switches for Use with Battery Power Supplies

Compact type











Fixed type

Commonness					Characteristics			
Rated operational voltage (Ue) (V)			DC 1000V (3P) , DC 1500V (4P)					
Rated insulation vo	oltage (Ui)			(V)	1500			
Rated impulse with	nstand volt	age (Uimp)	(kV)		12		
Poles				(P)		3,4		
Installation type						Fixed type / Draw-out type		
Related standards					UL 48	9B (PV system), UL489F (ESS sy	stem)	
Tupo						UDA		
туре					UDA-08C	UDA-10C	UDA-12C	
Ampere frame		(AF)			800AF	1000AF	1200AF	
Rated making capa	icity	(kA peak)	DC		50		
Rated short-time w current (Icw)	ithstand	(kA/1s)		DC		50		
Interrupting Rating (kA)		(kA)	DC 1500V (4 DC 1000V (3 (L/R=8ms)	P) P)	8	10	12	
o		(ms)	Openning time		max. 40			
Operation time			Closing time		max. 80			
	Eived tw	20	Horizontal		0			
Busbar	Draw-ou	it	Vertical		● (Default)			
method	type		Mixed		0			
	Flat		Flat		0			
Durability								
Opening and closir	ng		Mechanical			12,500		
(Unpaid)			Electrical (L	/R=3ms)	800	500	400	
Common Dimensi	on and We	eight						
			Durant	Without cradle		19.5(3P)/24.5(4P)		
Weight (3P/4P)		(kg)	Draw-out	With cradle		35.5(3P)/43(4P)		
			Fixed			16(3P)/19.5(4P)		
Demension		(mm)	Draw-out		361.3	3X267X255.4(3P), 361.3X267X32	6(4P)	
$(W \times H \times D)$		(mn)	Fixed		283X2	283X219.5X272.4(3P), 283X219.5X342.4(4P)		









DC Switch-Disconnectors accessories



Code	Description	Option description
С	С	Counter
В	В	On/Off button lock
М	MI	Mechanical interlock
D	DI or MOC	Door Interlock or MOC (Mechanism operated cell switch)
К	K1	Key lock
K2	K2	Key Interlock Set
R	RCS	Ready to close switch
H1		AC/DC 100~130V, Double shunt coil
H2		AC/DC 200~250V, Double shunt coil
H3	SHT2 Note 2)	DC 125V, Double shunt coil
H4		DC 24~30V, Double shunt coil
H5		DC 48~60V, Double shunt coil

Note 1) * If mixed option is more than 5, it is separated by mixed option code. 2) UVT & SHT2 can be not applicable together.



DC Switch-disconnectors cradle

External configuration

Draw-out (Main body)

Fixed type

External configuration

- ON button
- OFF button
- Series name
- 4 Rated name plate
- Charge/Discharge indicator
- ON/OFF indicator
- Arc chute
- Charge handle
- Oraw-out handle
- Handle inserting hole
- Pad lock button
- Position indicator
- (B) Arc cover
- Mechanical interlock





• Draw-out type





Terminal Configuration

There are many possible terminal configurations when connecting bus-bar of distribution panel, vertical, horizontal, plane type, etc



1. Internal structure and components

Internal configuration

- Control terminal block
- 2 Control terminal
- Closing, Tripping, UVT coil
- 4 Front cover
- 6 Mechanism
- Tripping spring
- Closing spring
- Oraw-out device
- Arc extinguishing part
- Moving contact
- Fixed contact
- ① Current carrying part on line
- 13 Finger
- 🚯 Cradle
- (b) Current carrying part in circuit breaker
- (b) Current carrying part on load





- Control terminal block
- Auxiliary switch
- 3 Arc chute
- 4 Tripping coil
- 🖯 UVT coil
- 6 Mechanism
- Main body
- Counter
- IFront cover
- Motor assembly
- Button ON
- Button OFF
- Closing coil



Main body







Shunt Coil [SHT1]





- SHT1 is a control device which trips a circuit breaker from remote place, when applying voltage continuously or instantaneously over 200ms to coil terminals (C1, C2).
- When UVT coil is installed, its location is changed.

1. Rated voltage and characteristics of trip coil

Rated vo	ltage (Vn)	Operating valtage range (1)	Power consumption (VA or W)		Trip time (mc)
DC (V)	AC (V)	Operating voltage range (V)	Inrush	Steady-state	mp ume (ms)
24~30	-	0.7~1.1 Vn			
48~60	48	0.7~1.1 Vn	200	5	40
100~130	100~130	0.7~1.1 Vn	200		
200~250	200~250	0.7~1.1 Vn			

Note) Operating voltage range is the min. rated voltage standard for each rated voltage (Vn).

2. Specification of the wire

• Refer to the below table regarding the length and specification of wire when using trip coil with DC 24~30V or DC / AC 48~60V of rated voltage.

The maximum wire length

Туре		Rated voltage (Vn)					
		DC 24	1~30V	DC/AC 48V			
Wire type		#14 AWG (2.08mm ²)	#16 AWG (1.31mm ²)	#14 AWG (2.08mm ²)	#16 AWG (1.31mm ²)		
Operating voltage	100%	95.7m	61m	457.8m	287.7m		
	85%	62.5m	38.4m	291.7m	183.2m		



Double Shunt Coil [SHT2]





- SHT2 is a control device which trips a circuit breaker doubly from the outside. When SHT1 doesn't operate normally, it can trip a circuit breaker safely.
- Shunt coil 1: Install it at existing location.
- Shunt coil 2: Install it on the right side of the Shunt coil 1
- It is not available with UVT coil when installing double shunt coil.

1. Rated voltage and characteristics of trip coil

Rated vo	ltage (Vn)	Operating voltage range (14)	Power consum	Trip time (ms)	
DC (V)	AC (V)	Operating voltage range (v)	Inrush	Steady-state	mp ume (ms)
24~30	-	0.7~1.1 Vn			40
48~60	48	0.7~1.1 Vn	200	5	
100~130	100~130	0.7~1.1 Vn	200		
200~250	200~250	0.7~1.1 Vn			

Note) Operating voltage range is the min. rated voltage standard for each rated voltage (Vn).

2. Specification of the wire

• Refer to the below table regarding the length and specification of wire when using trip coil with DC 24~30V or DC / AC 48~60V of rated voltage.

The maximum wire length

Туре		Rated voltage (Vn)					
		DC 24	1~30V	DC/AC 48V			
Operating voltage	100%	95.7m	61m	457.8m	287.7m		
	85%	62.5m	38.4m	291.7m	183.2m		



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Closing Coil [CC]





• It is a control device which closes a circuit breaker, when the voltage is applied continuously or instantaneously over 200ms to the coil terminals (A1, A2).

1. Rated voltage and characteristics of closing coil

Rated vo	ltage (Vn)	Operating voltage range (V)	Power consum	Trip time (mc)	
DC (V)	AC (V)	Operating voltage range (V)	Inrush	Steady-state	mp time (ms)
24~30	-	0.85~1.1 Vn			
48~60	48	0.85~1.1 Vn	200	5	40
100~130	100~130	0.85~1.1 Vn	200		
200~250	200~250	0.85~1.1 Vn			

Note) Operating voltage range is the min. rated voltage standard for each rated voltage (Vn).

2. Specification of the wire

- Refer to the below table regarding the length and specification of wire when using trip coil with DC 24~30V or DC / AC 48~60V of rated voltage.

The maximum wire length

Туре		Rated voltage (Vn)					
		DC 24	1~30V	DC/AC 48V			
Wire type		#14 AWG (2.08mm ²)	#16 AWG (1.31mm ²)	#14 AWG (2.08mm ²)	#16 AWG (1.31mm ²)		
Operating	100%	95.7m	61m	457.8m	287.7m		
voltage	85%	62.5m	38.4m	291.7m	183.2m		



Motor [M]





- Charge the closing spring of a circuit breaker by the external power source. Without the external power source, charge manually.
- Operating voltage range (IEC 60947) 85%~110%Vn

Input voltage (V)	DC 24~30V	AC/DC 48~60V	AC/DC 100~130V	AC/DC 200~250V				
Load current (max.)	5A	3A	1A	0.5A				
Starting current (Max.)		5 times of le	oad current					
Load rpm (Motor)		15000~19	9000 rpm					
Charge time	Less than 3sec.							
Dielectric strength	2kV/min							
Using temperature range		-20°~ 60°						
Using humidity range	Max. RH 80% (No dew condensation)							
Endurance	15,000 cycle (Load connection, 2 times/min)							
Charge switch	10A at 250VAC							

Charge Switch [CS1]

- It is a built-in contact which sends the signal to the outside, when motor charging is completed. (1a)
- It has a "1a" contact built-in for complete charging.
- 10A at 250VAC

Under Voltage Trip Device [UVT]





 If the voltage of the main or the control power is under voltage, UVT which is installed inside of the breaker breaks the circuit automatically.
 Please connect with UVT time-delay device in order to present the time-delay function because UVT is technically instantaneous type.

- The closing of a circuit breaker is impossible mechanically or electrically if control power not supplied to UVT. To close the circuit breaker, 65~85% of rated voltage should be applied to both terminals of UVT coil (D1, D2).
- When using UVT coil, the double trip coil can not be used, and the location of trip coil is changed.

1. Rated voltage and characteristics of UVT coil

Rated voltage (Vn)		Operating voltage range (V)		Power consumption (VA or W)		Trip time (ms)
DC (V)	AC (V)	Pick up	Drop out	Inrush	Steady-state	mp time (ms)
24~30	-			200	5	40
48~60	48		0.4.0.01/m			
100~130	100~130	0.65~0.85 Vn	0.4~0.6 VN			
200~250	200~250					

Note) Operating voltage range is the min. rated voltage standard for each rated voltage (Vn).

2. Specification of the wire

• Refer to the below table regarding the length and specification of wire when using trip coil with DC 24~30V or DC / AC 48~60V of rated voltage.

The maximum wire length

Туре		Rated voltage (Vn)					
		DC 24	1~30V	DC/AC 48V			
Wire type		#14 AWG (2.08mm ²)	#16 AWG (1.31mm ²)	#14 AWG (2.08mm ²)	#16 AWG (1.31mm ²)		
Operating voltage	100%	95.7m	61m	457.8m	287.7m		
	85%	62.5m	38.4m	291.7m	183.2m		



- It interlocks with mechanism of circuit breaker.
- It indicates the status that the circuit breaker is ready to do closing operation.
- When mechanism is in OFF position or in Charge, contact is output with "ON" and it indicates that mechanism can be closed.

Classification	Standa	Remark	
Contactor Capacity	250Vac	3A	
	250Vdc	5A	
	125Vdc	0.6 A	

Counter [C]





• It displays the total number of ON / OFF operation of ACB.

Key Lock [K1]





 It is a device for locking which prevents a certain circuit breaker from being operated by user's discretion when two or more circuit breakers are used at the same time.

• K1: Preventing mechanical closing

Key Interlock Set [K2]



Wiring

• 3 circuit breakers can be arranged for the continuous power supply to the load side and be interlocked mutually by using Key Lock embedded in each circuit breaker. Two same keys will be provided.

How to order: 3 breakers must be ordered as a set, and K2 description must be added to the additional breakers. (2 keys are provided per 3 breakers.)

ACP 1			Sta	tus
ACB-1	ACB-2	ACB-3	LOAD1	LOAD2
٠	•	•	OFF	OFF
٠	0	0	OFF	ON
0	•	0	ON	OFF
0	0	•	ON	ON
•	•	0	OFF	OFF
•	0	•	OFF	ON
0	•	•	ON	OFF

○: Release ●: Lock

Auxiliary Switch [FX]





• It is a contact used to monitor ON/OFF position of ACB from remote place.

Classification

Switch classification	Description	Resistive load				
Switch classification	Description	MAX.	MIN.			
Standard	FC, FX, LC, PC, PX	AC250V 3A AC125V 5A	DC5V 160mA			
Micro load	Oder No. 8301176209	AC125V 0.1A DC30V 0.1A	DC5V 1mA			

On/Off Button Lock[B]



N/OFF button lock

- It is to prevent manual operation of ACB's closing / tripping button due to user's wrong handling.
 It is not possible to handle ON / OFF operation under the "Button lock" status.
- (Electrical ON/OFF operation is possible) Note) Padlocks(Ø5 ~ Ø6) are not supplied.

Key Lock [K1]





- It is a device to make an ACB easy to shift.
- Please hang it to both handles of the cradle.

Condenser Trip Device [CTD]



External dimension

• It gets a circuit breaker tripped electrically within regular time when control power supply is broken down and is used with Shunt coil, SHT. In case there is no DC power, It can be used as the rectifier which supplies DC power to a circuit breaker by rectifying AC power.

Ratings

Туре	Sta	tus
Model	CTD-100	CTD-200
Rated input voltage (V)	AC 100/110	AC 200/220
Frequency (Hz)	50/60	50/60
Rated charge voltage (V)	140/155	280/310
Charging time	Within 5s	Within 5s
Trip possible time	Over 3 min	Over 2 min
Range of Input voltage (%)	85~110	85~110
Condenser capacity	1000µF	560µF

Circuit diagram





Dust Cover [DC]





- Attached to the door frame.
- It protects the product from dust and moisture that may affect the operation of the instrument at the same time (IP54) which may cause fault operation and enhances the sealing degree by being mounted to protrude type of panel.
- It is transparent so that the front side of ACB is visible and the Cover can be opened / closed even if ACB is drawn out to until TEST position.

Mechanical Interlock [MI]





- \bullet It is used to interlock closing and trip between two or three breakers mechanically
- so as to prevent unintended operation at the same time.
- Wire type interlock can be applied upto 3 breakers

Mechanical Operated Cell Switch [MOC]





- It is the contact (10a10b) which displays the ON / OFF condition of ACB. It mechanically operates only when the breaker is "CONNECTED" position. A standard type and a high capacity type is available.
- When MOC link is installed to cradle, MOC can be equipped with the inside of panel.



Safety Shutter [ST]







- It is the automatic safety device to protect the connectors of main circuit by cutting off dangerous contact from outside while the breaker is drawn out.
 When the ACB is drawn in, the shutter is automatically opened.
- Plate Shutter is a total of 2 models



Mechanical Interlock [MI]



Draw-out type



• When structuring the embedded type of ACB panel, it protects the protrude front of ACB and the cutting side of panel door by attaching it to the panel door.

Interphase Barrier [IB]



• Interphase barrier prevents the arc which may arise and result in short-circuit between phases in advance

Cell Switch [CEL]







• It is a contact which indicates the present position of ACB. (CONNECTED, TEST, DISCONNECTED)

<Contact configuration> 4C: 1Disconnected +1Test +2Connected 8C: 2Disconnected +2Test +4Connected *Contact configuration can be changeable if necessary.

Operating characteristic

ACB position			CONNECTED					
Draw-in and draw-out position		DISCON	NECTED	Test	CONNECTED			
	CL-C (CONNECTED)		OFF	OFF				
Contact Operation CL-T (TEST) CL-D (DISCONNEC	-T ST)	OFF	ON					
	CL-D (DISCONNECTED)				OFF			
Voltage(ge(V)	Resistive load		Ind	uctive load			
		460	5		2.5			
C I I	AC	250		10		10		
Contact capacity		125	10		10			
		250		3	1.5			
	DC	125		10	10			
		30	10					
C	ontact Numbe	er	4C					



4C attached to the right side of cradle

4C attached to the left side of cradle

Door Interlock [DI]



Catch type

• It is a safety device which does not allow the panel door to open when a circuit breaker is in the "ON" position.

Zero Arc Space [ZAS]



• Arc which may arise while breaking fault current is extinguished first by Arc chute in main body of circuit breaker and then completely extinguished by Arc cover.

By preventing arc from exposing to the outside, it protects itself from all kinds of accidents.



• When panel door is opened, Draw in / out handle doesn't be inserted. Thus, panel handle can be inserted only when panel door is closed.



ACB is subject to restriction regarding moving in connected, test, disconnected when drawing in or out. If main body of ACB is placed in 3 positions, it is locked and stopped when drawing in or out. • As shown in the figure, if draw-in / out button pops out, it means locking is operating.

- To continue draw-in / out operation, release lock by pushing draw-in / out button
- In case it is locked as shown in the figure above, main body of ACB can not be drawn in or out into the cradle.
- For the lock device, user has to purchase it. (Ø5 ~ Ø6)

Miss Insertion Prevent Device [MIP]





- When the main body of ACB is inserted to the cradle, if the ratings of ACB does not match with cradle, it mechanically prevents ACB from being inserted into cradle of ACB.
- The installation method is variable according to ratings.

Туре	Rating	Cradle	ACB	Туре	Rating	Cradle	ACB
	800	ABCD	567		800	ABDF	357
DDH	1000	ABCE	467		1000	ABDG	356
	1200	ABCF	457	DDV	1200	ABEF	347
	1250	ABCG	456		1250	ABEG	346
	1600	ABDE	367		1600	ABFG	345

UVT Time Delay Controller [UDC]



Attached to din-rail or switchboard

• UVT is a device which makes ACB tripped automatically to prevent the accident on load side due to under voltage or power breakdown. There are two types, Instantaneous type and time delay type.

- Instantaneous type: only available with UVT coil.
- Time delay type: available by connecting UVT coil and UVT time delay controller.
- Common use for the all types.

1. The rated voltage and characteristic of UVT time delay controller	Rated voltage (Vn)		Operating voltage range (V)		Power consum	Trip time (ms)	
	DC (V)	AC (V)	Pick up	Drop out	Inrush	Steady-state	F (.)
	48~60	48	0.65~0.85 Vn	0.4~0.6 Vn	200	5	0.5,
	100~130	100~130					1,
	200~250	200~250					1.5

Note) Operating voltage range is the min. rated standard for each rated voltage (Vn).

2. Wiring



* The wiring presented with red color should be set by uesers.

Remote I/O Unit [RCO]



Remote I/O Unit





Classification		Applied range	Remarks	
CB control	Contact switching capacity	AC230V 16A / DC30V 16A		
CB control	Max. switching capacity	3680VA, 480W		
Alarma	Contact switching capacity	AC230V 6A / DC25V 6A	Induction load (cosØ=0.4, L/R=7ms)	
Alarm	Max. switching capacity	1880VA, 150W		



- Baud rate settingComm. address setting
- Temperature setting

- Remote I / O unit has the I / O contact which can trip or close the ACB from the remote site by communication.
- For the general DO, the output of DI1 or DI2 is selectable.
- Remote I / O Unit communicates with Modbus / RS-485 communication basically, Profibus-DP need to be purchased separately.
- It supports SBO (Select Before Operation) function and guarantees the control reliability.
- Remote I / O unit can be installed on the cradle of ACB or the inside of panel.

	LED	Status
1	DI1	Indicates digital Input #1condition
2	DI2	Indicates digital Input #2condition
3	DO ON	Indicates temperature alarm output is ON
4	DO OFF	Indicates temperature alarm output is OFF
5	CB ON	Indicates circuit break close condition
6	CB OFF	Indicates circuit break open condition
7	RUN LED	Indicates unit run condition
8	CB ERROR	Indicates circuit break terminal Disconnection / control Err condition

DC Short Busbar	Туре	Busbar connection	Rated current	Order code	Components	Order quantity	Weight (kg/set)
	Fixed	Flat	800A	70223472603	Short busbar: 1ea/unit, M10 Nut Set: 4ea/unit	3P : 1 unit 4P : 2 unit	0.7kg/unit
	type		1000 ~1200A	70223472605	Short busbar: 1ea/unit, Heatsink: 1ea/unit M10 Nut Set: 4ea/unit, M6 Bolt: 4ea/unit Barrier Pad: 1ea/unit	3P : 1 unit 4P : 2 unit	5kg/unit
	Fixed Draw- out type	Vertical / Horizontal	800 ~1200A	70223472604	Short busbar: 1ea/unit, M10 Nut Set: 1ea/unit	3P : 1 unit 4P : 2 unit	1.5kg/unit

Control circuit diagram





Terminal symbol

311 ~ 344	Cell switch
111 ~ 254	MOC

Dimensions

Fixed type

• 3P [Fixed H: Horizontal type / V: Vertical type]



• 3P [Fixed M: Upper-horizontal type, Lower-vertical type / N: Upper-vertical type, Lower-horizontal type]









(Unit : mm)



• 3P [Fixed P: Flat type]







(Unit : mm)

Dimensions

Fixed type

• 4P [Fixed H: Horizontal type / V: Vertical type]

(Unit : mm)



• 4P [Fixed M: Upper-horizontal type, Lower-vertical type / N: Upper-vertical type, Lower-horizontal type]











(Unit : mm)



• 4P [Fixed P: Flat type / R: Spread type]

Draw-out type

• 3P [Draw-out H: Horizontal type / V: Vertical type]

(Unit : mm)



• 3P [Draw-out M: Upper-horizontal type, Lower-vertical type / N: Upper-vertical type, Lower-horizontal type]







• 4P [Draw-out H: Horizontal type / V: Vertical type]

• 4P [Draw-out M: Upper-horizontal type, Lower-vertical type / N: Upper-vertical type, Lower-horizontal type]





With short busbar

• 3P H, V, M, N Type *Draw-out type (Up to 1200A)

(Unit : mm)













(Unit : mm)

• 4P H, V, M, N Type *Draw-out type (Up to 1200A)





With short busbar

• 3P H, V, M, N Type *Draw-out type (Up to 1200A)

(Unit : mm)















• 3P P Type *Fixed type (Up to 1200A)



Dimensions

With short busbar

• 4P H, V, M, N Type *Fixed type (Up to 1200A)

(Unit : mm)















• 4P P Type *Fixed type (Up to 800A)

• 4P P Type *Fixed type (Up to 1200A)

<u>22.1</u> |40 20 120 40 203 ľ à 0 0 00 ₽ 0 bo bo ÓØ 00 L

(Unit : mm)

Technical information

Normal / Special service condition

Normal service conditions

If following normal working conditions are all satisfied, Compact ACB should be used under this condition unless otherwise specified.

1) Ambient temperature

A range of max. +40°C to min. -5°C is recommended. However, the average temperature of 24 hours does not exceed +35°C.

- 2) Altitude 2,000m or less.
- 3) Environmental conditions The air must be clean, and the relative humidity does not exceed 85% at a max. of +40°C and 90% at 20°C. Do not use and store in presence of corrosive or ammonia gas. (H2S ≤ 0.01ppm, SO2 ≤ 0.01ppm, NH3 ≤ a few ppm)
- 4) Installation conditions
 - When installing Compact ACB, refer to catalogue or the installation instructions in the instruction manual.
- 5) Storage temperature

A range of max. +60°C to min. -20°C is recommended.

6) Replacement

Approx. 15 years (depends on number of breaking of over current or service condition). Please see maintenance and inspection for further detail.

Special service conditions

If In the case of special service condition, modified air circuit breakers are available. Please specify when ordering. Service life may be shorter, it depends on service conditions.

1) Special environmental conditions

If it is used at high temperature and/or high humidity, the insulation durability and other electrical or mechanical features may deteriorate. Therefore, the breaker should be specially treated. Moisture fungus treatment with increased corrosion-resistance is recommended. When using products under this condition, please contact LS service team or nearest sales representatives.

2) Special ambient temperature

If the ambient temperature exceeds +40, reduce the continuous conducting current for a use referring to Table. A.

3) Special altitude

If it is used at the 2,000m or higher the heat radiation rate is reduced and the operating voltage, continuous current capacity and breaking capacity are decreased. Moreover the durability of the insulation is also decreased owing to the atmospheric pressure. Contact us for further detail.

Table A. Ratedcurrent correctiontable according toambienttemperature





UL489B Rated		Apply	Horizontal				Vertical					
Product model	current	BUS-BAR	40°C	45°C	50°C	55°C	60°C	40°C	45°C	50°C	55°C	60°C
UDA-08C	800A	5T x 50 x 2ea	800A	800A	800A	800A	800A	800A	800A	800A	800A	800A
UDA-10C 1	10004	6T x 50 x 2ea	1000A	1000A	1000A	0044	0204	1000A	1000A	1000A	1000A	1000A
	1000A	6.4T x 50.8 x 2ea				994A	320A					
UDA-12C 12	12004	8T x 50 x 2ea	12004	12004	12004	11224	1039A	1200A	1200A	1200A	1101A	10044
	1200A	6.4T x 57.2 x 2ea	1200A	1200A	IZUUA	1122A					11014	1094A

Altitude and Isolation Voltage

Altitude

Compact ACB is designed for operation at altitudes under 2000m. At altitudes higher than 2000m, change the ratings upon a service condition.

	2000	3000	4000	5000
Altitude [m]	1500	1350	1200	1050
Item	1200	1080	960	840
Max. operational voltage (voc)	1000	900	800	700
	750	675	600	525
Current compensation constant	1×In	0.98×In	0.96×In	0.94×In

Dimensions enclosure



Frame Rating	Pole	E	nclosure Dimensior mm (in.)	Ventilation opening mm (in.)		
		Н	W	D	Тор	Bottom
1200 AF	3	450 (17.72)	275 (10.83)	250 (9.84)	290×20 (11.42 × 0.78)	290 × 20 (11.42 × 0.78)
	4	450 (17.72)	350 (13.78)	250 (9.84)	290 × 20 (11.42 × 0.78)	290 × 20 (11.42 × 0.78)

Minimum clearances distance

For the safety, all the electric charging parts need to be installed over minimum clearances distance.



Maximum Voltage	Minimum clearances distance (X min)				
~ 1500Vdc	25.4 mm				

Ordering sheet

			placed is different inc		eet listed below, p		ner ordernig snee	upon your speci	Distributor		
Receipt	LSIS Co., Ltd		Order day				name				
Project					Contractor			1	_		
Delivery place				Delivery date		PNL maker					
ACB Main	Type of	ACB	DC Switch-disconr	nectors							
body			UDA								
	Frame size 800 AF 1000 AF 1200 AF										
	Ratings		А								
	No.of p	oles	□3-pole		□4-pole						
	Rated v	oltage	🗌 ~ 1000 V DC		□ ~ 1500 V DC						
	Installat	ion type	Draw-out type		☐ Fixed type						
	Closing type										
			Charge method			Stanuard type (UFF-charging method) Rapid auto-reclosing type (ON Charging method)					
						130V				<i></i>	
			 Motor operati 	ng voltage	$\Box AC/DC 200V ~ 250V$						
	Closing	voltage	AC/DC100V~130V	□ DC 125V	AC/DC 200V~2	250V	DC 24V~30V	DC 48V~60V	□ AC 48V		
	Trip vol	tage	AC/DC100V~130V	DC 125V	AC/DC 200V~2	250V	DC 24V~30V	DC 48V~60V	AC 48V		
Cradla	Cradlet		Cofet / Chutter Attack ment / Coloco)				Automatic connection (Connector type)				
Ciaule	Cradle type Safety Shutter Attachment (F class)		·		Automatic connection (Screw Joint type)						
Bus-bar connection	Bus-bar	type	□ Vertical	□Horizontal	□Flat	□Top: Horizont Vertical	al, Bottom:	□ Top: Vertical, Horizontal	Bottom:	□Customer mounting	
ACB Accessory	Main body	Standard	Aux. contact	□ Standard typ	e (4c, standard installation)		☐ Micro Load type (4C, installation)				
	Ac		Key Lock GN-Lock								
						AC/DC 100V~.	30V DC 125V AC/DC 200V~250V		250V		
			Undervoltage trip device (UVT, Insta		antaneous type)		DC 48V~60V		□AC 48V		
			Mechanical operation contact (MOC), Door Interlock (DI)				□Non-attachment type		Attachment type		
	Mechanical Interlock (MI)					□Non-attachment type		□ Attachment type			
		Counter Miss insertion preventive device (MIP)			Def		Default				
							□Non-attachment type		☐ Attachment type		
			• Double trip devic	e (Same with Shu	nt voltage)		Non-attachment type				
			Ready-to-close contact			□Non-attachment type □Attachment type		/pe			
			Key Interlock(K2, ON-Lock)			ON/OFF Button Lock					
	Separate r purchase	Cradle mounting	• Cell switch (CL)		□4c	□8c					
			Door Interlock			□Wire type □Catch type					
			Mechanical operation contact (MOC)			Standard type (10a10b)					
			Mechanical Interlock (MI)			Wire type (2 terminals)		□Wire type (3 te	erminals)		
			Miss insertion preventive device (MIP)			□Non-attachment type					
			□ Racking Interloo	acking Interlock							
		External mounting	• UVT time delay controller		□ AC/DC 100V~1 □ DC 48V~60V		130V	□ DC 125V	AC/DC 200V~2	250V	
							AC 48V				
			Door frame(DF)	r frame(DF)			Remote closing & trip				
			□ Dust Cover	- <u> </u>							

If rated current or the order you placed is different from the ordering sheet listed below, please fill out another ordering sheet upon your specification.





Safety Instructions

- For your safety, please read user's manual thoroughly before operating.
- · Contact the nearest authorized service facility for examination, repair, or adjustment.
- Please contact qualified service technician when you need maintenance.
 Do not disassemble or repair by yourself!
- Any maintenance and inspection shall be performed by the personnel having expertise concerned.



· According to The WEEE Directive, please do not discard the device with your household waste.



Headquaters

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