

Susol MCCB for DC Application

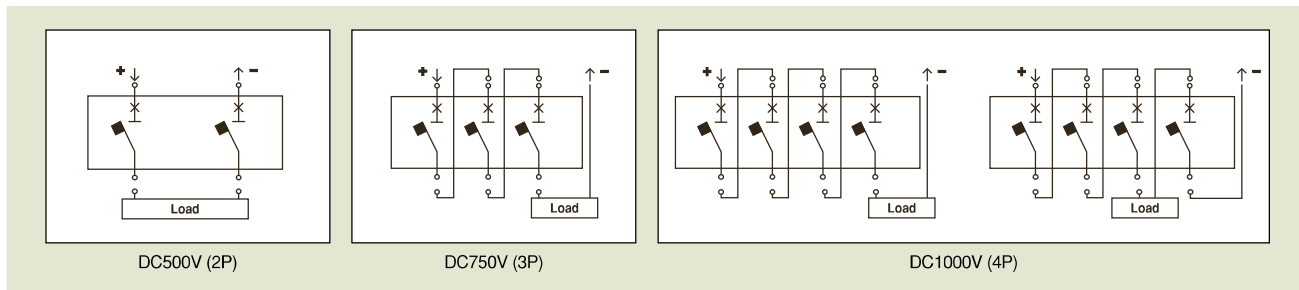
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- Susol MCCB is suitable for DC application such as Photovoltaic Circuit Breaker, UPS and datacenter
- DC short circuit test tested by VDE
- Higher nominal voltage range up to 1000 VDC
- Rated Current : 16A~800A
- No of Pole: 2/3/4Pole
- Available for AC/DC application



		TD100	TD160	TS100	TS160	TS250	TS400	TS630	TS800																
Frame size	(AF)	100	160	100	160	250	400	630	800																
Rated current, In (A)		16, 20, 25, 32, 40, 50, 63, 80, 100	100, 125, 160	40, 50, 63, 80, 100	100, 125, 160	125, 160 200, 250	300, 400	500, 630	700, 800																
No. of Poles	(Pole)	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4																
Rating (DC)	1000V	4P		4P		4P		4P		4P															
	750V	3P		3P		3P		3P		3P															
	500V	2P		2P		2P		2P		2P															
Rated service breaking (DC)	Type	N	H	L	N	H	L	N	H	L	N	H	L	N	H	L	N	H	L	N	H	L			
	1000V (4P)	42	65	100	42	65	100	50	85	100	50	85	100	50	85	100	50	85	100	50	85	100	50	85	100
	750V (3P)	42	65	100	42	65	100	50	85	100	50	85	100	50	85	100	50	85	100	50	85	100	50	85	100
	500V (2P)	42	65	100	42	65	100	50	85	100	50	85	100	50	85	100	50	85	100	50	85	100	50	85	100
Trip unit																									
	FTU (fixed-thermal, fixed-magnetic)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	FMU (adjustable-thermal, fixed-magnetic)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	ATU (adjustable-thermal, adjustable-magnetic)	-	-	-	-	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Exemplary circuit diagrams



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Susol MCCB PV up to 800A

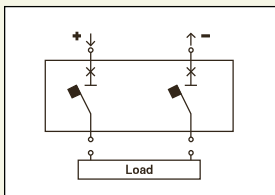
Warnings when using Susol MCCB on PV system

The following warning must be kept when using Susol MCCB on PV system
If not, it can result damages on any related products or injuries.

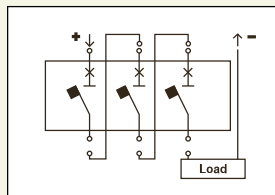


1. Please, follow the wiring as shown below.

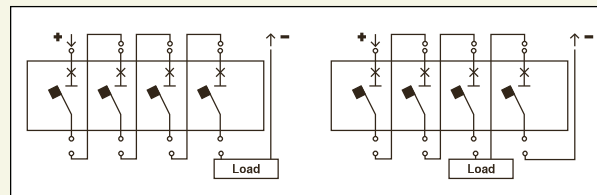
When wired differently, usable voltage can be limited.



DC500V (2P)



DC750V (3P)



DC1000V (4P)

2. Use minimum of 60cm wire when wiring. Shot wires can result increasing temperature.

3. When designing circuit by using busbar as picture on right, de-rated use is recommended.

It can cause temperature increase, wrongly trip, damage or fire due to shortage of heat release(Refer to De-rating table)



4. Please, maintain given thickness and length of busbar on the specification drawing.

Additional de-rating is required in order to release the heat when busbar specification is different than instructed.

5. It is recommended to use tin or silver plated busbar.

6. Install sun screens or fans to maintain KS or IEC standard 40 °C inside of connection and low voltage panels.

When inside temperature of panel exceeds 40 °C, it can cause temperature increase, wrongly trip, damage or fire.

Additional de-rating is required when panel temperature exceeds 40 °C.

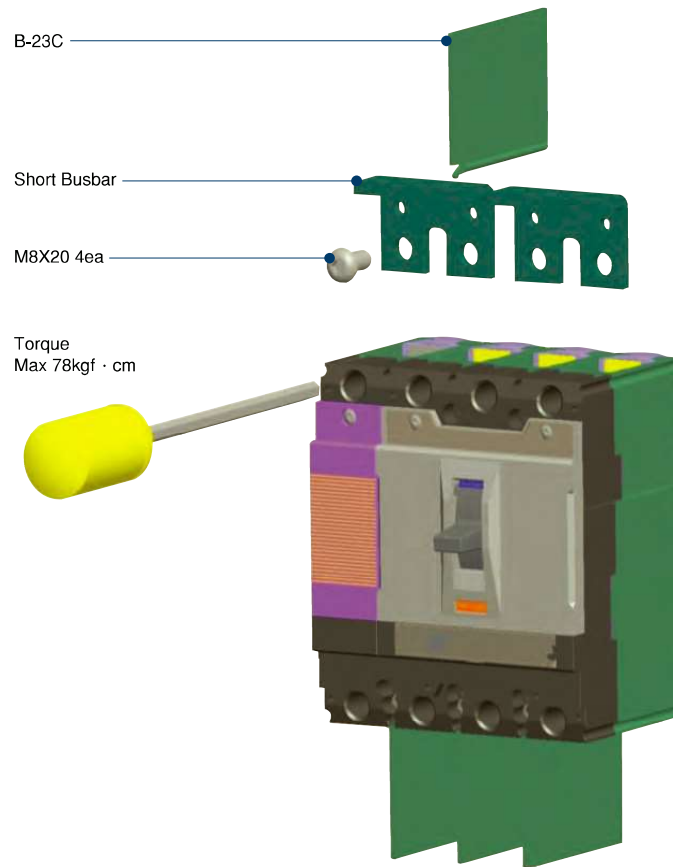
7. Please, ask any other further questions before applying.

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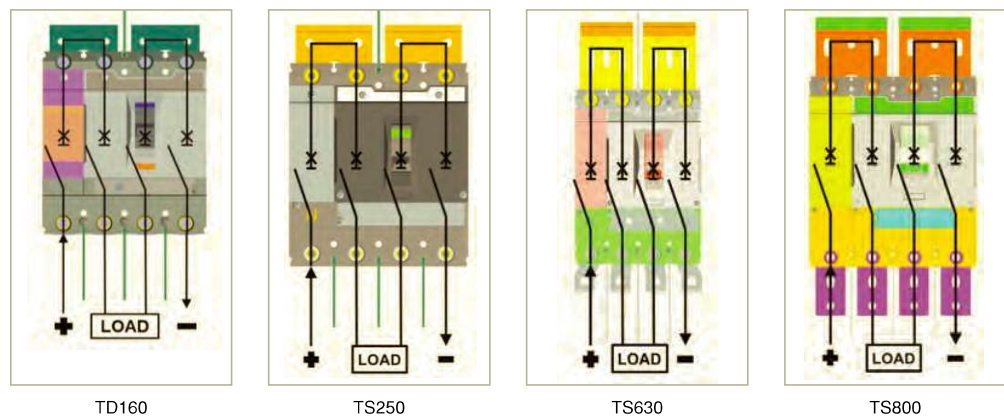
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Short Busbar Installation



Configuration and Series Connection



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Derating Table for AF

The following tables are based on the following assumptions;

- Maximum permissible temperature of busbars are 100°C
- T : Temperature around the circuit breaker and its connections

Note) 1. The values presented in the tables are the result of trials and theoretical calculations on the basis of the assumption mentioned above.
2. These tables are intended as an aid in designing connection, however, the actual values must be confirmed by tests on the installation.

AF	Rated current(A)	Derating(A)	Short Busbar
TD100	16	16	TD160 3t Short Busbar
	20	20	
	25	25	
	32	32	
	40	40	TD160 4t Short Busbar
	50	50	
	63	63	
	80	80	
TD160	100	100	TD160 5t Short Busbar
	125	125	
	160	135	
TS100	40	40	TS250 4t Short Busbar
	50	50	
	63	63	
	80	80	
	100	100	
TS160	100	100	TS250 5t Short Busbar
	125	125	
	160	135	
TS250	125	125	TS630 Lower & Upper Short Busbar
	160	160	
	200	180	
	250	180	
TS400	300	300	TS800 Lower & Upper Short Busbar
	400	400	
TS630	500	500	
	630	500	
TS800	700 *	700	
	800	700	

Note) 1. * Only available for TS800FTU
2. Dimension on the short busbar refer to A-6-47~52.
3. Short busbar for PV application is not provided by LSIS.

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Temperature Derating

Item	Rated current	Derating Current	Compensated rated current in accordance with ambient temperature (A)								Short Busbar
			10 °C	20 °C	30 °C	40 °C	45 °C	50 °C	60 °C	70 °C	
TD100	16	16	16	16	16	16	16	15	14	13	TD160 3t Short Busbar
	20	20	20	20	20	20	19	19	18	18	
	25	25	25	25	25	25	24	23	22	21	
	32	32	32	32	32	32	31	30	28	26	
	40	40	40	40	40	40	39	38	35	33	
	50	50	50	50	50	50	48	47	44	41	
	63	63	63	63	63	63	61	59	56	52	
	80	80	80	80	80	80	78	75	71	66	
	100	100	100	100	100	100	97	94	88	82	
TD160	100	100	100	100	100	100	97	94	88	82	TD160 4t Short Busbar
	125	125	125	125	125	125	121	117	110	103	TD160 5t Short Busbar
	160	135	135	135	135	135	130	125	117	108	
TS100	40	40	40	40	40	40	39	38	35	33	TS250 4t Short Busbar
	50	50	50	50	50	50	48	47	44	41	
	63	63	63	63	63	63	61	59	56	52	
	80	80	80	80	80	80	78	75	71	66	
	100	100	100	100	100	100	97	94	88	82	
TS160	100	100	100	100	100	100	97	94	88	82	TS250 5t Short Busbar
	125	125	125	125	125	125	121	117	110	103	
	160	160	160	160	160	160	155	150	141	131	
TS250	125	125	125	125	125	125	121	117	110	103	TS630 Lower & Upper Short Busbar
	160	160	160	160	160	160	155	150	141	131	
	200	180	180	180	180	180	174	168	157	146	
	250	180	180	180	180	180	174	168	157	146	
TS400	300	300	300	300	300	300	291	281	264	246	TS800 Lower & Upper Short Busbar
	400	400	400	400	400	400	388	375	353	323	
TS630	500	500	500	500	500	500	484	468	439	408	TS800 Lower & Upper Short Busbar
	630	500	500	500	500	500	484	468	439	408	
TS800	700 *	700	700	700	700	700	678	656	616	573	TS800 Lower & Upper Short Busbar
	800	700	700	700	700	700	678	656	616	573	

Note) * Only available for TS800FTU