

Molded Case Circuit Breakers

Susol MCCB 100AF to 800AF Series

Frame			TE100	TE160	TD100	TD160							
Frame size	[AF]		100	160	100	160							
Rated current, In *	[A]		16~100	100, 125, 160	16, 20, 25, 32, 40, 60, 63, 80, 100	100, 125, 160, 1P: 16~160							
No. of poles			3,4	3,4	2*, 3, 4	1, 2*, 3, 4							
Rated operational voltage, Ue	AC	[V]	690	690	690	690, 1P: 240							
	DC	[V]	500	500	500	500, 1P:250							
Rated impulse withstand voltage, Uimp		[kV]	8	8	8	8							
Rated insulation voltage, Ui		[V]	750	750	1000	1000							
Rated ultimate short-circuit breaking capacity, Icu			S	N	S	N	N	H	L	N	H	L	
AC 50/60Hz	220/240V	[kA]	50	85	50	85	85	100	200	85 (1P:30)	100 (1P:50)	200	
	380/415V	[kA]	37	50	37	50	50	85	150	50	85	150	
	440/460V	[kA]	25	37	25	37	50	70	130	50	70	130	
	480/500V	[kA]	18	25	18	25	30	50	65	30	50	65	
	525V	[kA]	-	-	-	-	22	35	50	22	35	50	
	660/690V	[kA]	6	8	6	8	10	10	10	10	10	10	
DC	250V	[kA]	37	50	37	50	42	65	100	42 (1P:16)	65 (1P:25)	100	
	500V (2poles in series)	[kA]	37	50	37	50	42	65	100	42	65	100	
Rated service breaking capacity, Ics													
AC 50/60Hz	220~525V	[%Icu]	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	660/690V	[kA]	-	-	-	-	5	5	5	5	5	5	
DC		[%Icu]	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Rated short-circuit making capacity Icm													
AC 50/60Hz	220/240V	[kA]	105	187	105	187	187	220	440	187 (1P:105)	220 (1P:105)	440	
	380/415V	[kA]	77.7	105	77.7	105	105	187	330	105	187	330	
	440/460V	[kA]	52.5	77.7	52.5	77.7	105	154	286	105	154	286	
	480/500V	[kA]	36	52.5	36	52.5	63	105	143	63	105	143	
	525V	[kA]	-	-	-	-	46	74	105	46	74	105	
	660/690V	[kA]	9.2	13.6	9.2	13.6	17	17	17	17	17	17	
Category of utilization			A		A		A		A				
Isolation behavior			●		●		●		●				
Trip unit (release)													
Thermal-Magnetic													
● fixed-thermal, fixed-magnetic FTU			●		●		●		●				
● adjustable-thermal, fixed-magnetic FMU			●		●		●		●**				
● adjustable-thermal, adjustable-magnetic ATU			-		-		-		-				
● magnetic only MTU			-		-		-		-				
Electronic													
● LSI ETS			-		-		-		-				
● LSI ETM			-		-		-		-				
Option	Earth-fault protection, Ig	Zone selective interlocking, ZSI	-		-		-		-				
		Ammeter	-		-		-		-				
		Communication	-		-		-		-				
		Earth-leakage protection module	-		-		-		-				
		Connection	fixed	front-connection	●		●		●		●		
		rear-connection	●		●		●		●**				
plug-in	front-connection	-		-		●		●**					
	rear-connection	-		-		●		●**					
Mechanical life [operations]			25000		25000		25000		25000				
Electrical life @ 415 V AC [operations]			10000		10000		10000		10000				
Basic dimensions, W×H×D (front connection)	1-pole	[mm]	-		-		-		35×140×86				
	3-pole	[mm]	76×130×82		76×130×82		90×140×86		90×140×86				
	4-pole	[mm]	101×130×82		101×130×82		120×140×86		120×140×86				
Weight (front connection)	1-pole	[kg]	-		-		-		0.57				
	3-pole	[kg]	1.05		1.05		1.5		1.5				
	4-pole	[kg]	1.35		1.35		1.8		1.8				
Reference standard			IEC60947-2		IEC60947-2		IEC60947-2		IEC60947-2				

Note) ● applicable or available

* Applicable to MCCBs equipped with FTU, FMU, ATU ** Not applicable to 1pole
* 2 pole MCCB in 3pole frame size

※ The trip unit ATU is available from 125A

Molded Case Circuit Breakers

Susol MCCB 100AF to 800AF Series

MCCB

Type			TE100		TE160		TD100			TD160		
Frame size		[AF]	100		160		100			160		
Rated current, In *		[A]	16~100		100, 125, 160		16, 20, 25, 32, 40, 60, 63, 80, 100			100, 125, 160, 1P: 16~160		
No. of poles			3,4		3,4		2*, 3, 4			1, 2*, 3, 4		
Rated operational voltage, Ue	AC	[V]	690		690		690			690, 1P: 240		
	DC	[V]	500		500		500			500, 1P:250		
Rated impulse withstand voltage, Uimp		[kV]	8		8		8			8		
Rated insulation voltage, Ui		[V]	750		750		1000			1000		
Rated ultimate short-circuit breaking capacity, Icu			S	N	S	N	N	H	L	N	H	L
AC 50/60Hz	220/240V	[kA]	50	85	50	85	85	100	200	85 (1P:30)	100 (1P:50)	200
	380/415V	[kA]	37	50	37	50	50	85	150	50	85	150
	440/460V	[kA]	25	37	25	37	50	70	130	50	70	130
	480/500V	[kA]	18	25	18	25	30	50	65	30	50	65
	525V	[kA]	-	-	-	-	22	35	50	22	35	50
	660/690V	[kA]	6	8	6	8	10	10	10	10	10	10
DC	250V	[kA]	37	50	37	50	42	65	100	42 (1P:16)	65 (1P:25)	100
	500V (2poles in series)	[kA]	37	50	37	50	42	65	100	42	65	100
Rated service breaking capacity, Ics												
AC 50/60Hz	220~525V	[%Icu]	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	660/690V	[kA]	-	-	-	-	5	5	5	5	5	5
DC		[%Icu]	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Rated short-circuit making capacity Icm												
AC 50/60Hz	220/240V	[kA]	105	187	105	187	187	220	440	187 (1P:105)	220 (1P:105)	440
	380/415V	[kA]	77.7	105	77.7	105	105	187	330	105	187	330
	440/460V	[kA]	52.5	77.7	52.5	77.7	105	154	286	105	154	286
	480/500V	[kA]	36	52.5	36	52.5	63	105	143	63	105	143
	525V	[kA]	-	-	-	-	46	74	105	46	74	105
	660/690V	[kA]	9.2	13.6	9.2	13.6	17	17	17	17	17	17
Category of utilization			A		A		A			A		
Isolation behavior			●		●		●			●		
Trip unit (release)												
Thermal-Magnetic												
● fixed-thermal, fixed-magnetic	FTU		●		●		●			●		
● adjustable-thermal, fixed-magnetic	FMU		●		●		●			●**		
● adjustable-thermal, adjustable-magnetic	ATU		-		-		-			-		
● magnetic only	MTU		-		-		-			-		
Electronic												
● LSI	ETS		-		-		-			-		
● LSI	ETM		-		-		-			-		
Option	Earth-fault protection, Ig		-		-		-			-		
	Zone selective interlocking, ZSI		-		-		-			-		
	Ammeter		-		-		-			-		
	Communication		-		-		-			-		
	Earth-leakage protection module		-		-		-			-		
Connection	fixed	front-connection	●		●		●			●		
		rear-connection	●		●		●			●**		
	plug-in	front-connection	-		-		●			●**		
		rear-connection	-		-		●			●**		
Mechanical life		[operations]	25000		25000		25000			25000		
Electrical life @ 415 V AC		[operations]	10000		10000		10000			10000		
Basic dimensions, WxHxD	1-pole	[mm]	-		-		-			35x140x86		
(front connection)	3-pole	[mm]	76x130x82		76x130x82		90x140x86			90x140x86		
	4-pole	[mm]	101x130x82		101x130x82		120x140x86			120x140x86		
Weight	1-pole	[kg]	-		-		-			0.57		
(front connection)	3-pole	[kg]	1.05		1.05		1.5			1.5		
	4-pole	[kg]	1.35		1.35		1.8			1.8		
Reference standard			IEC60947-2		IEC60947-2		IEC60947-2			IEC60947-2		

Note) ● applicable or available

◆ Applicable to MCCBs equipped with FTU, FMU, ATU ** Not applicable to 1pole
* 2 pole MCCB in 3pole frame size

※ The trip unit ATU is available from 125A



TS100			TS160			TS250			TS400			TS630			TS800		
100			160			250			400			630			800		
40, 50, 63, 80, 100			(100)*, 125, 160			125, 160, 200, 250			300, 400			500, 630			700, 630		
2*, 3, 4			2*, 3, 4			2*, 3, 4			2*, 3, 4			2*, 3, 4			2*, 3, 4		
690			690			690			690			690			690		
500			500			500			500			500			500		
8			8			8			8			8			8		
1000			1000			1000			1000			1000			1000		
N	H	L	N	H	L	N	H	L	N	H	L	N	H	L	N	H	L
100	120	200	100	120	200	100	120	200	100	120	200	100	120	200	100	120	200
50	85	150	50	85	150	50	85	150	65	85	150	65	85	150	65	100	150
50	70	130	50	70	130	50	70	130	65	85	130	65	85	130	65	100	130
42	65	85	42	65	85	42	65	85	42	65	85	42	65	85	42	85	100
22	35	50	22	35	50	22	35	50	22	35	50	22	35	50	22	35	50
10	10	10	10	10	10	10	10	10	10	20	35	10	20	35	10	20	35
50	85	100	50	85	100	50	85	100	50	85	100	50	85	100	50	85	100
50	85	100	50	85	100	50	85	100	50	85	100	50	85	100	50	85	100
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
5	5	5	5	5	5	5	5	5	10	12	12	10	12	12	10	20	20
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
220	264	440	220	264	440	220	264	440	220	264	440	220	264	440	220	264	440
105	187	330	105	187	330	105	187	330	143	187	330	143	187	330	143	220	330
105	154	286	105	154	286	105	154	286	143	187	286	143	187	286	143	220	286
88	143	187	88	143	187	88	143	187	88	143	187	88	143	187	88	187	220
46	74	105	46	74	105	46	74	105	46	74	105	46	74	105	46	74	105
17	17	17	17	17	17	17	17	17	17	40	74	17	40	74	17	40	74
A			A			A			A			A			A		
●			●			●			●			●			●		
●			●			●			●			●			●		
●			●			●			●			●			●		
-			●			●			●			●			●		
●			●			●			●			●			●		
-			-			-			●			●			●		
-			-			-			●			●			●		
-			-			-			●			●			●		
-			-			-			●			●			●		
-			-			-			●			●			●		
●			●			●			●			●			●		
●			●			●			●			●			●		
●			●			●			●			●			●		
●			●			●			●			●			●		
25000			25000			25000			20000			20000			10000		
10000			10000			10000			10000			6000			3000		
-			-			-			-			-			-		
105×160×86			105×160×86			105×160×86			140×260×110			140×260×110			210×320×135		
140×160×86			140×160×86			140×160×86			186.5×260×110			186.5×260×110			280×320×135		
-			-			-			-			-			-		
2			2			2			5.4			5.4			15.1		
2.6			2.6			2.6			7.2			7.2			19.6		
IEC60947-2			IEC60947-2			IEC60947-2			IEC60947-2			IEC60947-2			IEC60947-2		

	Amb. Temp.	-5°C	0°C	10°C	20°C	25°C	30°C	35°C	40°C	45°C	50°C
Calibrated for 40°C	TD160	122.5%	120.0%	115.0%	110.0%	107.5%	105.0%	102.5%	100.0%	97.5%	95.0%
	TS250	122.5%	120.0%	115.0%	110.0%	107.5%	105.0%	102.5%	100.0%	97.5%	95.0%
	TS630	110.0%	109.0%	107.0%	105.0%	104.0%	103.0%	101.5%	100.0%	98.5%	97.0%
	TS800	110.0%	109.0%	107.0%	105.0%	104.0%	103.0%	101.5%	100.0%	98.5%	97.0%
Calibrated for 50°C	TD160	122.0%	120.0%	116.0%	112.0%	110.0%	108.0%	106.0%	104.0%	102.0%	100.0%
	TS250	122.0%	120.0%	116.0%	112.0%	110.0%	108.0%	106.0%	104.0%	102.0%	100.0%
	TS630	122.2%	112.0%	110.0%	108.0%	107.0%	106.0%	104.5%	103.0%	101.5%	100.0%
	TS800	112.2%	112.0%	110.0%	108.0%	107.0%	106.0%	104.5%	103.0%	101.5%	100.0%

Molded Case Circuit Breakers

Susol MCCB 1600AF Series

Electrical characteristics



Frame		TS1000	TS1250	TS1600				
Type		TS1000	TS1250	TS1600				
Ampere frame		1000	1250	1600				
Pole		3, 4	3, 4	3, 4				
Rated current, I _n (A)	-5~40°C	800, 1000	1250	1600				
	50°C	800, 1000	1250	1560				
	65°C	800, 1000	1240	1420				
Rated insulation voltage, U _i	(V)	1000	1000	1000				
Rated impulse withstand voltage, U _{imp}	(kV)	8	8	8				
Rated operational voltage, U _e	(V) AC50/60Hz	690	690	690				
	DC	-	-	-				
Rated short-circuit breaking capacity IEC60947-2 AC50/60Hz (sym)		N	H	L	N	H	N	H
Rated ultimate short-circuit breaking capacity, (kA) (I _{cu})	220/240V	55	75	200	55	75	55	75
	380/415V	50	70	150	50	70	50	70
	440/460V	50	65	130	50	65	50	65
	480/500V	40	50	100	40	50	40	50
	660/690V	35	45	-	35	45	35	45
DC	250V 2P	-	-	-	-	-	-	-
	500V 2P	-	-	-	-	-	-	-
	750V 3P	-	-	-	-	-	-	-
Rated service breaking capacity (%I _{cu})		100%	75%	100%	100%	75%	100%	75%
Rated short-circuit making capacity (kA) (I _{cw})	AC50/60Hz 1s	25		12	25		25	
	3s	-		-	-		-	
Overriding instantaneous protection	kA peak	50		30	50		50	
Isolation		○		-	○		○	
Category		B		A	B		B	
(Life cycle)	Mechanical life (operations)	10000		4000	10000		10000	
	Electrical life (operations)	440V	In/2	6000	4000	5000	5000	
			In	5000	3000	4000	2000	
		690V	In/2	4000	3000	3000	2000	
In			2000	2000	2000	1000		
Pollution degree		3		-	3		3	
Dimension (mm)	3-pole	210×327×152.5						
(H×W×D)	4-pole	280×327×152.5						
Weight (kg)	3-pole	13						
	4-pole	16.8						