

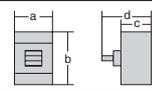
Moulded Case Circuit Breakers for DC350V-600V

Frame size (A)	160	160	250	250	400	800	1000
Type	\$160-SD	\$160-GD	\$250-SD	\$250-GD	\$400-ND	\$800-ND	\$1000-ND
Number of poles	3	3	3	3	3	3	2* 3
■ Ratings							
Rated current, A	25 (16-25)	25 (16-25)	100 (63-100)	100 (63-100)	250 (160-250)	630 (400-630)	1000
Calibrated at 45°C	32 (20-32)	32 (20-32)	125 (80-125)	125 (80-125)	400 (250-400)	800 (500-800)	
	40 (25-40)	40 (25-40)	160 (100-160)	160 (100-160)			
	63 (40-63)	63 (40-63)	200 (125-200)	200 (125-200)			
	80 (50-80)	80 (50-80)	250 (160-250)	250 (160-250)			
	100 (63-100)	100 (63-100)					
	125 (80-125)	125 (80-125)					
	160 (100-160)	160 (100-160)					
* 2 poles breaker is same outline dimensions as 3 poles breaker.							
Rated insulation voltage [U _i] V	690	690	800	800	800	800	800
Rated impulse withstand voltage [U _{imp}] kV	8	8	8	8	8	8	8
■ Rated breaking capacity, kA							
JIS C 8201-2-1 Ann.1 Ann.2 DC	5/5	10/5	5/5	10/5	15/15	20/10	— 20/10
IEC 60947-2	7.5/7.5	15/7.5	7.5/7.5	15/7.5	15/15	20/10	— 20/10
I _{cu} /I _{cs} (4) (5)	10/10	—	10/10	—	20/20	30/15	— 30/15
	—	—	—	—	—	—	50/20
	—	—	—	—	—	—	—
■ External dimensions, mm							
	a	a	105	105	140	210	210
	b	b	165+55 (17)	165+55 (17)	260	273	273
	c	c	68	68	103	103	103
	d	d	95	95	145	145	145
Weight (● marked standard type) kg	0.8	0.8	1.5	1.5	4.2	8.5	9.8 10.8
■ Connections and Mountings							
Front-connected (FC) Terminal screws	●	●	●	●	●	—	—
With extension bars	○ (BAR)	●	●				
Rear-connected (RC) Flat bar studs	○	○	○	○	○	○	○
Plug-in (PM) For switchboards	—	—	—	—	—	—	—
For distribution boards	—	—	—	—	—	—	—
Draw-out type (DR)	—	—	—	—	—	—	—
TemPlug70 (PG)	—	—	—	—	—	—	—
TemPlug45B (PG4)	—	—	—	—	—	—	—
DIN rail mount	○ (1)	○ (1)	—	—	—	—	—
Clip-in chassis mount	—	—	—	—	—	—	—
■ Accessories (optional) Symbol							
Interior							
Auxiliary switch	● A X	●	●	●	●	●	●
Alarm switch	● A L	●	●	●	●	●	●
Shunt trips	● S H	●	●	●	●	●	●
Undervoltage trips	● U V	●	●	●	●	●	●
Motor operator	— M C	—	●	●	●	●	●
External operating handle	● H B	●	●	●	●	●	●
Door-mounted (variable depth)	● H P	●	—	●	●	●	●
Toggle extension	— H A	—	—	—	—	●	●
Mechanical interlock	— M S	—	—	—	—	—	—
Slide type	—	—	—	—	—	—	—
Rear-connected type	— M B	—	—	—	—	—	—
Link type	— M L	—	—	—	—	—	—
Wire type	— M W	—	—	—	—	—	—
Exterior							
Toggle holder	● H H	●	●	●	●	●	●
Toggle lock	● H L	●	●	●	●	●	●
Terminal cover For front-connected	● (12) C F	● (12)	● (12)	● (12)	●	●	●
For rear-connected and plug-in	● (12) C R	● (12)	● (12)	● (12)	●	●	●
Interpole barrier	● (13) B A	● (13)	● (13)	● (13)	● (3)	● (3)	● (3)
Terminal block for lead	● T F	●	●	●	●	●	●
Door flange	● D F	●	●	●	●	●	●
■ Standard specifications							
Overcurrent trip mechanism	Adj. thermal, fixed magnetic	Fixed thermal, fixed magnetic					
Colour of cover	Grey						
Trip button (Colour)	Yes (Red)						
Handle position indication (ON: Red, OFF: Green)	Yes						
Suitability for isolation	Yes						
Reverse connection	Yes						

Notes:

- : Standard. This configuration used unless otherwise specified. ○ : Optional standard. Specify when ordering. ● : "yes" or "available". — : "no" or "not available".
- ③ : Line side interpole barriers are supplied as standard. (Front connection only)
- ④ : Connect 3pole or 4pole in series when over DC250V.
- ⑤ : The time constant (L/R) of the circuit should be, less than 2.0ms nearby rated current less than 5ms for short circuit ≤ 10KA less than 10ms for short circuit ≤ 20KA less than 15ms for short circuit > 20KA
- ① : Provided with DIN rail adaptor.
- ② : Be sure to install the terminal covers on Line side (ON side) that is supplied as standard.
- ③ : Possible to fit on load side (option).
- ⑦ : + means the dimension of the terminal cover. See outline dimensions for details.

Moulded Case Circuit Breakers for DC350V-600V

Frame size (A)	1250		1600		2000		2500		3200			
Type	XS1250ND		XS1600ND		XS2000ND		XS2500ND		XS3200ND			
Number of poles	2*	3	2*	3	2*	3	2*	3	2*	3		
■ Ratings												
Rated current, A	1250 ①		1600 ①		2000 ①		2500 ①		3200 ①			
Calibrated at 45°C												
* 2 poles breaker is same outline dimensions as 3 poles breaker.												
Rated insulation voltage [U _i] V	690		690		690		690		690			
Rated impulse withstand voltage [U _{imp}] kV	8		8		8		8		8			
■ Rated breaking capacity, kA												
JIS C 8201-2-1 Ann.1 Ann.2 DC	600V	—	20/15	—	20/15	—	20/15	—	20/15	—	20/15	
IEC 60947-2	500V	—	50/25	—	50/25	—	50/25	—	50/25	—	50/25	
I _{cu} /I _{cs} ④⑤	350V	—	50/25	—	50/25	—	50/25	—	50/25	—	50/25	
	250V	50/30	—	50/30	—	50/30	—	50/30	—	50/30	—	
■ External dimensions, mm												
	a	210	210	320	320	320	320	320	320			
	b	370	370	450	450	450	450	450	450			
	c	140	140	185	185	185	185	185	185			
	d	191	191	245	245	245	245	245	245			
Weight (● marked standard type) kg	23.8	26.0	24.0	27.0	50.0	54.0	55.7	62.5	55.7	62.5		
■ Connections and Mountings												
Front-connected (FC)	Terminal screws	—	—	—	—	—	—	—	—	—	—	—
	With extension bars	●	○	○	○	○	○	○	○	○	○	○
Rear-connected (RC)	Flat bar studs	○	●	●	●	●	●	●	●	●	●	●
Plug-in (PM)	For switchboards	—	—	—	—	—	—	—	—	—	—	—
	For distribution boards	—	—	—	—	—	—	—	—	—	—	—
Draw-out type (DR)	—	—	○	○	○	○	○	○	○	○	○	○
TemPlug70 (PG)	—	—	—	—	—	—	—	—	—	—	—	—
TemPlug45B (PG4)	—	—	—	—	—	—	—	—	—	—	—	—
DIN rail mount	—	—	—	—	—	—	—	—	—	—	—	—
Clip-in chassis mount	—	—	—	—	—	—	—	—	—	—	—	—
■ Accessories (optional)	Symbol											
Interior	Auxiliary switch	A X	●	●	●	●	●	●	●	●	●	●
	Alarm switch	A L	●	●	●	●	●	●	●	●	●	●
	Shunt trips	S H	●	●	●	●	●	●	●	●	●	●
	Undervoltage trips	U V	—	—	—	—	—	—	—	—	—	—
	Motor operator	M C	●	●	●	●	●	●	●	●	●	●
	External operating handle	H B	●	●	—	—	—	—	—	—	—	—
	Door-mounted (variable depth)	H P	●	●	● ⑦	● ⑦	● ⑦	● ⑦	● ⑦	● ⑦	● ⑦	● ⑦
	Toggle extension	H A	● ⑥	● ⑥	● ②	● ②	● ②	● ②	● ②	● ②	● ②	● ②
	Mechanical interlock	Slide type	M S	—	—	—	—	—	—	—	—	—
	Rear-connected type	M B	—	—	—	—	—	—	—	—	—	—
	Link type	M L	—	—	—	—	—	—	—	—	—	—
	Wire type	M W	—	—	—	—	—	—	—	—	—	—
Exterior	Toggle holder	H H	●	●	●	●	●	●	●	●	●	●
	Toggle lock	H L	—	—	—	—	—	—	—	—	—	—
	Terminal cover	For front-connected	C F	—	—	—	—	—	—	—	—	—
	For rear-connected and plug-in	C R	—	—	—	—	—	—	—	—	—	—
	Interpole barrier	B A	● ③	● ③	—	—	—	—	—	—	—	—
	Terminal block for lead	T F	●	●	●	●	●	●	●	●	●	●
	Door flange	D F	●	●	●	●	●	●	●	●	●	●
■ Standard specifications												
Overcurrent trip mechanism	Magnetic(adjustable) ①		Magnetic(adjustable) ①		Magnetic(adjustable) ①		Magnetic(adjustable) ①		Magnetic(adjustable) ①			
Colour of cover	Grey		Grey		Grey		Grey		Grey			
Trip button (Colour)	Yes (Red)		Yes (Red)		Yes (Red)		Yes (Red)		Yes (Red)			
Handle position indication (ON: Red, OFF: Green)	Yes		Yes		Yes		Yes		Yes			
Suitability for isolation	Yes		Yes		Non		Non		Non			
Reverse connection	Non		Non		Non		Non		Non			

Notes:

● : Standard. This configuration used unless otherwise specified. ○ : Optional standard. Specify when ordering. ● : "yes" or "available". — : "no" or "not available".

① : Instantaneous trip only.

② : Supplied as standard.

③ : Line side interpole barriers are supplied as standard. (Front connection only)

④ : Connect 3pole in series when over DC250V.

⑤ : The time constant (L/R) of the circuit should be,
 less than 2.0ms nearby rated current
 less than 5ms for short circuit ≤ 10KA
 less than 10ms for short circuit ≤ 20KA
 less than 15ms for short circuit > 20KA

⑥ : One is supplied with every five breakers. Please specify if more are required.

⑦ : Fixed depth. (not adjustable)