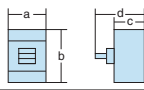


2

Ratings and Specifications

Moulded Case Circuit Breakers

5 Switch-disconnectors

Frame size (A)		\$160-SN		P160D		\$250-SN		P250D		P400D		P630D		\$800-NN		\$1000-NN		
Type		3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	
Number of poles																		
■ Ratings																		
Rated current, A		160		160 ³⁵		250		250 ⁴⁶		400		630		630		1000		
Rating at		50°C		50°C		50°C		50°C		50°C		50°C		800		50°C		
Rated insulation voltage [U _i] V AC		690		800		800		800		800		800		800		800		
Rated operational voltage [U _e] V		AC 690		690		690		690		690		690		690		690		
		DC 250		250		250		250		250		250		250		250		
Rated impulse withstand voltage [U _{imp}] kV		8		8		8		8		8		8		8		8		
Rated short circuit making capacity [I _{cm}] kA peak		2.8		2.8		6		5		7.6		13		17		17		
Rated short time withstand current [I _{cw}] kA		2 (0.3sec.)		2 (1sec.)		3 (0.3sec.)		3.6 (1sec.)		5 (1sec.)		7.6 (1sec.)		10 (0.3sec.)		10 (0.3sec.)		
■ Performance																		
Utilization category	AC	AC-23A		AC-23A		AC-23A		AC-23A		AC-23A		AC-23A		AC-23A ³⁷		AC-23A		
IEC 60947-3	DC	DC-22A		DC-22A		DC-22A		DC-22A		DC-22A		DC-22A		DC-22A		DC-22A		
Upstream breaker (OCPD) ²²		E160-SJ		P160F		E250-SJ		P250F		P400N		P630N		S800-NJ		S1000-NE		
■ External dimensions, mm																		
		a	75	100	90	120	105	140	105	140	140	185	140	185	210	280	210	280
	b	130	130	165	165	165	165	260	260	260	260	260	260	273	273	273	273	
	c	68	68	68	68	68	68	103	103	103	103	103	103	103	103	103	103	
	d	95	95.5	95	95.5	95.5	95.5	151	151	151	151	151	151	145	145	145	145	
Weight (● marked standard type) kg		0.7	0.9	1.0	1.3	1.5	1.9	1.5	2.0	5.4	7.2	5.7	7.7	8.5 ¹³	11.5 ¹⁴	10.4	14.0	
■ Connections and Mountings																		
Front-connected	Terminal screws (FC)	●		●		●		●		●		●		—		—		
	With extension bars (FB)	○ ⁵		○ ⁵		○ ⁵		○ ⁵		○		○		●		●		
	Cable clamp (FW)	○		○		○		○		○		○		—		—		
Rear-connected	Flat bar studs (RC)	○		○		○		○		○		○		○		○		
Plug-in (PM)	For switchboards (PMB)	—		○		—		○ ²³		○ ²³		—		○ ²⁴		—		
Draw-out type	(DR)	—		—		—		▲		▲		—		▲		—		
DIN rail mount	(DA)	○ ⁴		○ ⁴		—		—		—		—		—		—		
■ Accessories (optional)		Symbol																
Internally mounted	Auxiliary switch	A X		●		●		●		●		●		●		●		
	Alarm switch	A L		●		●		●		●		●		●		●		
	Shunt trips	S H		●		●		●		●		●		●		●		
	Undervoltage trips	U V		●		●		●		●		●		●		●		
Externally mounted	Motor operator	M C		—		●		●		●		●		●		●		
	External operating handle	Breaker-mounted	H B		●		●		●		●		●		●		●	
		Door-mounted (variable depth)	H P		●		●		●		●		●		●		●	
	Toggle extension	H A		—		—		—		—		—		—		—		
	Mechanical interlock ¹⁹	Slide type	M S		●		●		●		●		●		●		●	
		Link type	M L		—		●		●		●		●		●		●	
		Wire type	M W		—		●		●		●		●		●		●	
	Toggle holder	H H		●		●		●		●		●		●		●		
	Toggle lock	H L		●		●		●		●		●		●		●		
	Terminal cover	For front-connected	C F		●		●		●		●		●		●		●	
		For rear-connected and plug-in	C R		●		●		●		●		●		●		●	
		For cable clamps	C S		●		●		●		●		●		—		—	
Terminal block for lead		T F		●		●		●		●		●		●		●		
Door flange	D F		●		●		●		●		●		●		●			
CE marking		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		
Colour of cover		Grey Blue		Grey Blue		Grey Blue		Grey Blue		Grey Blue		Grey Blue		Grey Blue		Grey Blue		
Trip button (Colour)		Yes (Red)		Yes (Red)		Yes (Red)		Yes (Red)		Yes (Red)		Yes (Red)		Yes (Red)		Yes (Red)		
Suitability for isolation		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		
Reverse connection		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		
Endurance	Electrical	415V		10,000 ⁷		30,000		6,000		10,000		6,000		4,000		4,000		
	Mechanical			20,000		50,000		18,000		30,000		15,000		15,000		10,000		

Notes:

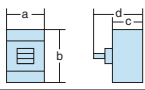
- : Standard. This configuration used unless otherwise specified.
- : Optional standard. Specify when ordering. ▲ : Semi-standard.
- : "yes" or "available". — : "no" or "not available".
- ⁴ : Please order the DIN rail adapter separately.
- ⁵ : For the extension bars, please place the order separately in parts.
- ⁷ : 14,000 for less than 125A
- ¹³ : 8.0kg/630A, 8.5kg/800A
- ¹⁴ : 11.0kg/630A, 11.5kg/800A
- ¹⁹ : Mechanical interlocks cannot be applied to draw-out type (DR).
- ²² : Please use upstream breaker for overcurrent protection. Rated conditional short-circuit current [I_{cc}] will be the same as Rated short-circuit breaking capacity of upstream breaker.
- ²³ : A safety trip function is provided.
- ²⁴ : A safety lock function is provided.
- ³⁵ : Max. rating 125A at 50°C for Plug-in.
- ³⁷ : AC-23A/up to 500A, AC-22A/up to 630A
- ⁴⁶ : Max. rating 227A at 50°C for Plug-in.

2

Ratings and Specifications

Moulded Case Circuit Breakers

5 Switch-disconnectors

Frame size (A)			S1250-NN		S1600-NN							
Type			3	4	3	4						
Number of poles												
■ Ratings												
Rated current, A			1250		1600							
Rating at			50°C		50°C							
Rated insulation voltage [U_i] V AC			800		800							
Rated operational voltage [U_e] V			AC 690		AC 690							
			DC 250		DC 250							
Rated impulse withstand voltage [U_{imp}] kV			8		8							
Rated short circuit making capacity [I_{cm}] kA peak			32		45							
Rated short time withstand current [I_{cw}] kA			15 (0.3sec.)		20 (0.3sec.)							
■ Performance												
Utilization category			AC AC-23A		AC-23A							
IEC 60947-3			DC DC-22A		DC-22A							
Upstream breaker (OCPD) ②			S1250-NE		S1600-NE							
■ External dimensions, mm												
			a	210 280	210 280							
			b	370	370							
			c	120	140							
			d	171	191							
Weight (● marked standard type) kg			18.2	23.4	24.9	32.9						
■ Connections and Mountings												
Front-connected	Terminal screws	(FC)	—		—							
	With extension bars	(FB)	●		○							
	Cable clamp	(FW)	—		—							
Rear-connected	Flat bar studs	(RC)	○		●							
Plug-in (PM)	For switchboards	(PMC)	○		—							
Draw-out type		(DR)	▲		○							
DIN rail mount		(DA)	—		—							
■ Accessories (optional)												
			Symbol									
Internally mounted	Auxiliary switch	A X	●		●							
	Alarm switch	A L	●		●							
	Shunt trips	S H	●		●							
	Undervoltage trips	U V	●		●							
Externally mounted	Motor operator	M C	●		●							
	External operating handle	Breaker-mounted H B	▲		▲							
	Door-mounted (variable depth)	H P	●		●							
	Toggle extension	H A	● ②		● ②							
	Mechanical interlock ⑱	Slide type M S	●		●							
	Link type M L	—			—							
	Wire type M W	●			●							
	Toggle holder	H H	●		●							
	Toggle lock	H L	●		●							
	Terminal cover	For front-connected C F	●		—							
	For rear-connected and plug-in C R	—		—								
	For cable clamps C S	—		—								
	Terminal block for lead T F	●		●								
	Door flange D F	●		●								
CE marking			Yes		Yes							
Colour of cover			Grey Blue		Grey Blue							
Trip button (Colour)			Yes (Red)		Yes (Red)							
Suitability for isolation			Yes		Yes							
Reverse connection			Yes		Yes							
Endurance	Electrical	415V	4,000		2,000							
	Mechanical		5,000		5,000							

Notes:

● : Standard. This configuration used unless otherwise specified.

○ : Optional standard. Specify when ordering. ▲ : Semi-standard.

● : "yes" or "available". — : "no" or "not available".

② : One is supplied with every five breakers. Please specify if more are required.

⑱ : Mechanical interlocks cannot be applied to draw-out type (DR).

② : Please use upstream breaker for overcurrent protection. Rated conditional short-circuit current [I_{cc}] will be the same as Rated short-circuit breaking capacity of upstream breaker.