



Circuit Breaker type	FD160				FD63/160				FE160		
Denomination	N	H	C	E	S	N	H	L	N	H	L

EN 60947-2 standard

Poles	Number of	1	3,4			2 ⁽¹⁾ ,3,4			3,4		
Rated insulation voltage	Ui (Volts)	750	500	500	690	750			750		
Rated impulse withstand voltage	Uimp [Kilovolt]	3	6	6	8	8			8		
Rated operational voltage Ue	Volts AC	240	500	500	500	690			690		
	Volts DC	250	-	-	440	500			500		

Line protection device

Category of use		A		A			A			A		
Suitable for use as a isolator	Positive ON & OFF	yes		yes			yes			yes		
Rated current Ith = Ie	A at 40°C	63 or 160		63 or 160			63 or 160			160		
Ultimate breaking capacity Icu [kA]	230/240V AC	25	50	25	40	50	85	100	200	85	100	200
	400/415V AC	-	-	18	25	36	50	80	150	50	80	150
	440V AC	-	-	12	14	25	30	65	130 ⁽⁴⁾	42	65	130
	500V AC	-	-	10	12	18	22	36	50 ⁽⁴⁾	30	50	100
	690V AC	-	-	-	-	2	4.5	6	10	10	22	75
	250V DC Single pole	-	50	-	-	25	40	65	100	50	85	100
	440V DC Two pole	-	-	-	-	25	40	65	100 ⁽²⁾	50	85	100 ⁽²⁾
	500V DC Two pole	-	-	-	-	-	40	65 ⁽²⁾	100 ⁽²⁾	50	85 ⁽²⁾	100 ⁽²⁾
Service breaking capacity Ics (%Icu)	≤ 500V	100%	100%	100%	75%	100%	100%	100%	100%	100%	100%	100%
	690V AC	-	-	-	-	-	100%	75%	50%	100%	75%	25%
Single phase breaking capacity I _{TP} [kA]	230V AC	25	50	16	25	30	50	80	150	50	80	150
	400/415V AC	-	-	-	-	-	4.5	6	10	15	22	36
Endurance (CO operations)	Mechanical	10000		10000			25000			40000		
	Electrical at In	5000		5000			10000			20000		
	Electrical at In/2	10000		10000			20000			30000		
Endurance (On-Tripped operations)	Mechanical	4000		4000			10000			16000		
Trip Units	Interchangeable	no		no			no			yes		
	Thermal Magnetic line	LTM								LTM		
	Thermal Magnetic generator						GTM			GTM		
	Thermal Magnetic selective						LTMD			LTMD		
	Magnetic Only						Mag Break™			Mag Break™		
	Electronic selective									SMR1		
	Electronic Enhanced											

Circuit Breaker type and denomination	FD160Y	FD 63Y	FD160Y	FE160Y
---------------------------------------	--------	--------	--------	--------

EN 60947-3 standard

Non Automatic breaker (Switch)

Rated current In (class AC23)	220V AC to 690V AC	160	63	160	160
Rated making capacity	I _{cm} (kA peak)	2.8	1.7	2.8	4.9
Short-term withstand current I _{cs} [kA]	I _{cs} eff. 1 second	2	1.2	2	3
	I _{cs} eff. 3 seconds	2	1.2	2	3

Circuit Breaker type	FD63/160				FE160		
Denomination	N			H		L	

EN 60947-4 standard

Use in motor circuits

Rated current Ith	A at 65°C	FD50-50 FD160-100			150
Endurance (CO operations)	Mechanical	25000			40000
	Electrical at In class AC23	10000			20000
	Operations per hour	120			120
Protection	Short Circuit only (separate overload device)	Mag Break™			Mag Break™
	Overload class 10 and short-circuit				SMR1
	Max In (A) class 10	FD63-50 FD160-100			150
	Max In (A) class 30	FD63-50 FD160-80			150
	Earth fault unit (differential)	Optional FDQ type			Optional FEQ type

Circuit Breaker / Switch type	FD63/160 all types				FE160 all types		
-------------------------------	--------------------	--	--	--	-----------------	--	--

Installation

Mounting	On symmetrical DIN Rail	yes	yes	yes	no
	Fixed	yes	yes	yes	yes
	Plug in	no	yes	yes	yes
	Draw out	no	no	no	yes
Connection	Front	yes	yes	yes	yes
	Rear	no	no	yes	yes
Dimensions [w x h x d] mm	3 pole, fixed front connection	27 x 130 x 85	81 x 130 x 85	81 x 130 x 85	105 x 170 x 95
	4 pole, fixed front connection	for single pole	108 x 130 x 85	108 x 130 x 85	140 x 170 x 95
Weights [kg]	3 pole, fixed front connection	0.4	0.9	0.9	1.5
	4 pole, fixed front connection	for single pole	1.3	1.3	2.0

(1) N type only. (2) Use 3 poles. (3) Use 2 poles. (4) 160A rating only; derate to 65kA at 440V and 36kA at 500V.





V	FE250				FG400			FG630			FK800			FK1250			FK1600	
	N	H	L		N	H	L	N	H	L	N	H	L	N	H	L	N	H
	3,4				3,4			3,4			3,4			3,4			3,4	
690	750				750			750			1000			1000			1000	
8	8				8			8			8			8			8	
500	690				690			690			690			690			690	
440	500				-			-			500			500			500	
	A				B ⁽⁵⁾			B ⁽⁵⁾			B			B			B	
	yes				yes			yes			yes			yes			yes	
	250				400			630			800			1250			1600	
65	85	100	200	85	100	200	85	100	200	85	100	170	85	100	170	85	100	
36	50	80	150	50	80	150	50	80	150	50	80	100	50	80	100	50	80	
25	42	65	130	42	65	130	42	65	130	42	65	80	42	65	80	42	65	
18	30	50	100	30	50	100	30	50	100	36	42	50	36	42	50	36	42	
-	10	15	22	10 ⁽⁷⁾	22 ⁽⁷⁾	75 ⁽⁷⁾	10	22	40 ⁽⁷⁾	20	25	30	20	25	30	20	25	
25	50	85	100							50 ⁽³⁾	60 ⁽³⁾	80 ⁽³⁾	50 ⁽³⁾	60 ⁽³⁾	80 ⁽³⁾	-	-	
25	50	85	100 ⁽²⁾							36 ⁽²⁾	50 ⁽²⁾	60 ⁽²⁾	36 ⁽²⁾	50 ⁽²⁾	60 ⁽²⁾	-	-	
-	50	85 ⁽²⁾	100 ⁽²⁾							36 ⁽²⁾	50 ⁽²⁾	60 ⁽²⁾	36 ⁽²⁾	50 ⁽²⁾	60 ⁽²⁾	-	-	
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	75%	50%	100%	75%	50%	100%	75%	
-	100%	75%	50%	100%	45%	25%	100%	45%	25%	100%	75%	50%	100%	75%	50%	100%	75%	
36	50	80	150	50	80	150	50	80	150	50	80	100	50	80	100	50	80	
-	10	15	22	10	(6)	(6)	10	(6)	(6)	20	25	30	20	25	30	20	25	
10000	25000			20000			20000			10000			10000			10000		
5000	10000			7500			5000			4000			3000			2000		
10000	20000			15000			10000			8000			6000			4000		
4000	10000			8000			8000			4000			3000			2000		
	yes				yes			yes			no			no			no	
LTM											LTM			LTM				
	GTM																	
	LTMD																	
	Mag Break™							Mag Break™										
	SMR1							SMR1						SMR1e				
								SMR2						SMR 1s & q				
	FE250Y				FG400Y			FG630Y			FK800Y			FK1250Y			FK1600Y	
	250				400			630			800			1250			1600	
	6.4				8.5			11.3			14.1			21.2			28.3	
	4				5			6.5			10			15			20	
	4				5			6.5			10			15			20	
	FE250				FG400			FG630			FK800			FK1250			FK1600	
	N	H	L	N	H	L	N	H	L	N	H	L	N	H	L	N	H	
	225				350			500			720			1000				
	25000				20000			20000			10000			10000				
	10000				7500			5000			4000			3000				
	120				120			60			60			60				
	Mag Break™				Mag Break™			Mag Break™			Mag Break™			Mag Break™				
	SMR1				SMR1 or SMR2			SMR1 or SMR2										
	225				350			500			720			1000				
	225				350			500			720			1000				
	Optional FEQ type				Optional FGQ type			Optional FGQ type			FK800 all types			FK1250 all types			FK1600 all types	
	FE250 all types				FG400 all types			FG630 all types			FK800 all types			FK1250 all types			FK1600 all types	
	no				no			no			no			no			no	
	yes				yes			yes			yes			yes			yes	
	yes				yes			yes			no			no			no	
	yes				yes			yes			yes			yes			yes	
	yes				yes			yes			yes			yes			yes	
	yes				yes			yes			yes			yes			yes	
	105 x 170 x 95				140 x 265 x 115			140 x 265 x 115			210 x 320 x 160			210 x 320 x 160			210 x 320 x 160	
	140 x 170 x 95				185 x 265 x 115			185 x 265 x 115			280 x 320 x 160			280 x 320 x 160			280 x 320 x 160	
	1.6				4.5			4.5			12.2			18.0			18.0	
	2.1				6.0			6.0			15.1			23.4			23.4	

(5) 350 and 500A executions only
 (6) Please contact us.

(7) On use of FG400 and FG630L type at 690V, one long and widened terminal shield is required.

