

**LTM**

Line thermal magnetic protection

LTMD

Selective thermal magnetic protection

GTM

Generator thermal magnetic protection

Mag Break™

Magnetic Only protection

Y

Non Automatic or switch (not mentioned in tables)

FD frame**Breaking capacities***2, 3 and 4 pole types*Icu 400/415V AC
in kA eff.

Type	C	E	S	N	H	L
FD160	18	25	36	50	80	150

*Single pole types*Icu 230/240V AC
in kA eff.

N	H
25	50

Protection

Trip Unit	Rated Current (A)	LTM	LTMD	GTM	Mag Break™	Trip Unit	Rated Current (A)	LTM
FD160 (2,3 & 4 pole)	3	-	-	-	N,H	FD160 (1 pole)	-	-
	7	-	-	-	N,H		-	-
	12.5	-	-	-	N,H		-	-
	16	C,E	S,N,H	-	-		16	N,H
	20	C,E	S,N,H	-	N,H,L		20	N,H
	25	C,E	S,N,H,L	N,H	-		25	N,H
	30	-	-	-	N,H,L		-	-
	32	C,E	S,N,H,L	N,H	-		32	N,H
	40	C,E	S,N,H,L	N,H	-		40	N,H
	50	C,E	S,N,H,L	N,H	N,H,L		50	N,H
	63	C,E	S,N,H,L	N,H	-		63	N,H
	80	C,E	S,N,H,L	N,H	N,H,L		80	N,H
	100	C,E	S,N,H,L	N,H	N,H,L		100	N,H
	125	C,E	S,N,H,L	N,H	-		125	N,H
	160	C,E	S,N,H,L	N,H	-		160	N,H

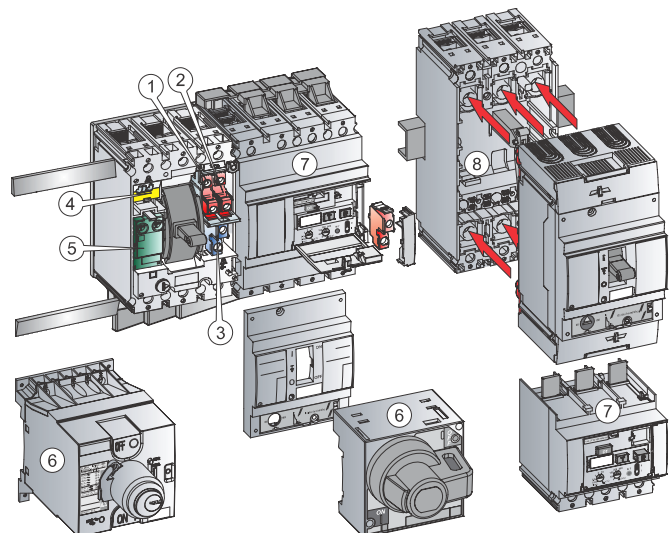
Number of poles/ protected poles (trips)				
2 pole 2 trips	-	N	-	-
3 pole 3 trips	C,E	S,N,H,L	N,H	N,H,L
4 pole 3 trips	-	N,H,L	N,H	N,H,L
4 pole 4 trips	C,E	S,N,H,L	N,H	-
	-	-	-	-
4 pole 3.5 trips (N=50%) ⁽²⁾	-	N,H,L	N,H	-

Number of poles/ protected poles (trips)	
1 pole 1 trip	N,H

Accessories

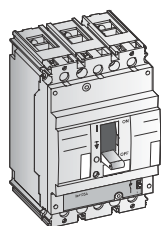
- ① Auxiliary contact left mounted (NO or NC)
- ② Auxiliary contact right mounted (NO or NC)
- ③ Bell Alarm trip unit (NO or NC)
- ④ Bell Alarm mechanism (CO)⁽¹⁾
- ⑤ Shunt or Undervoltage release
- ⑥ Operators
Rotary Handle
Electrical Operator
- ⑦ RCD, side or bottom mounted⁽¹⁾
(Insert indicates Bell alarm contact mounting)
- ⑧ Plug-in system

(1) Not applicable for some FDC and FDE types.

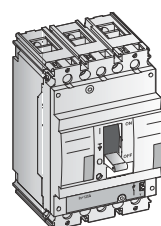


FD160 - Complete circuit breaker

Line Thermal Magnetic LTM (fixed settings calibrated at 40°C)

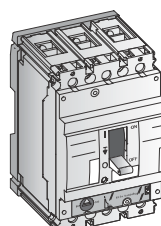


In (A)	3 pole 3 trips		4 pole 4 trips ⁽¹⁾	
	Cat. no.	Ref. no.	Cat. no.	Ref. no.
16	FDC35TF016EF	433532	FDC45TF016EF	433926
20	FDC35TF020EF	433553	FDC45TF020EF	433928
25	FDC35TF025EF	433864	FDC45TF025EF	433930
32	FDC35TF032EF	433867	FDC45TF032EF	433932
40	FDC35TF040EF	433870	FDC45TF040EF	433934
50	FDC35TF050EF	433873	FDC45TF050EF	433936
63	FDC35TF063EF	433876	FDC45TF063EF	433938
80	FDC35TF080GF	433879	FDC45TF080GF	433940
100	FDC35TF100GF	433882	FDC45TF100GF	433942
125	FDC35TF125GF	433885	FDC45TF125GF	433944
160	FDC35TF160GF	433899	FDC45TF160GF	433946
One code covers: A standard, fixed front connection breaker with fixation hardware. RCD device and bell alarm mechanism cannot be fitted.				

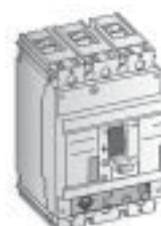


16	FDE36TF016EF	435127	FDE46TF016EF	435207
20	FDE36TF020EF	435129	FDE46TF020EF	435229
25	FDE36TF025EF	435130	FDE46TF025EF	435231
32	FDE36TF032EF	435132	FDE46TF032EF	435238
40	FDE36TF040EF	435135	FDE46TF040EF	435240
50	FDE36TF050EF	435138	FDE46TF050EF	435242
63	FDE36TF063EF	435145	FDE46TF063EF	435244
80	FDE36TF080GF	435147	FDE46TF080GF	435246
100	FDE36TF100GF	435193	FDE46TF100GF	435248
125	FDE36TF125GF	435195	FDE46TF125GF	435256
160	FDE36TF160GF	435205	FDE46TF160GF	435258
One code covers: A standard, fixed front connection breaker with fixation hardware. RCD device and bell alarm mechanism cannot be fitted.				

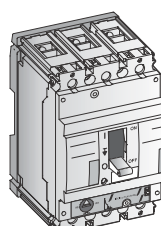
Line Thermal Magnetic LTM (adjustable thermals calibrated at 40°C)



In (A)	3 pole 3 trips		4 pole 4 trips ⁽¹⁾	
	Cat. no.	Ref. no.	Cat. no.	Ref. no.
16	FDC35TE016ED	433907	FDC45TE016ED	433948
20	FDC35TE020ED	433911	FDC45TE020ED	433949
25	FDC35TE025ED	433914	FDC45TE025ED	433950
32	FDC35TE032ED	433918	FDC45TE032ED	433951
40	FDC35TE040ED	436117	FDC45TE040ED	433952
50	FDC35TE050ED	436118	FDC45TE050ED	433953
63	FDC35TE063ED	436133	FDC45TE063ED	433954
80	FDC35TE080GD	436143	FDC45TE080GD	436145
100	FDC35TE100GD	436144	FDC45TE100GD	436146
125	FDC35TE125GD	433924	FDC45TE125GD	436147
160	FDC35TE160GD	433925	FDC45TE160GD	436148
One code covers: A standard, fixed front connection breaker with: DIN-Rail mounting kit + Breaker finishing covers + Fixation hardware.				



16	FDE36TC016EF	430001	FDE46TC016EF	430008
20	FDE36TC020EF	430002	FDE46TC020EF	430009
25	FDE36TC025EF	430003	FDE46TC025EF	430010
32	FDE36TC032EF	430004	FDE46TC032EF	430011
40	FDE36TC040EF	430005	FDE46TC040EF	430012
50	FDE36TC050EF	430006	FDE46TC050EF	430013
63	FDE36TC063EF	430007	FDE46TC063EF	430014
80	FDE36TC080GF	430276	FDE46TC080GF	430299
100	FDE36TC100GF	430279	FDE46TC100GF	430302
125	FDE36TC125GF	430282	FDE46TC125GF	430305
160	FDE36TC160GF	433566	FDE46TC160GF	433569
One code covers: A standard, fixed front connection breaker with fixation hardware.				

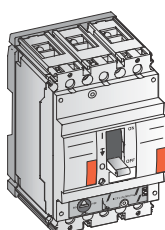
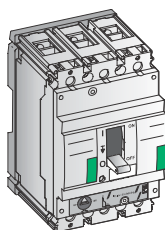
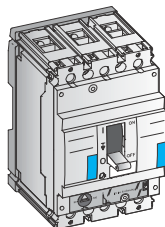
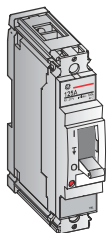
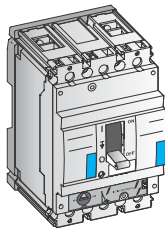
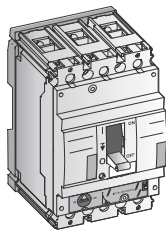


16	FDE36TE016ED	433649	FDE46TE016ED	433697
20	FDE36TE020ED	433651	FDE46TE020ED	433699
25	FDE36TE025ED	433653	FDE46TE025ED	433701
32	FDE36TE032ED	433655	FDE46TE032ED	433703
40	FDE36TE040ED	433657	FDE46TE040ED	433705
50	FDE36TE050ED	433659	FDE46TE050ED	433707
63	FDE36TE063ED	433661	FDE46TE063ED	433709
80	FDE36TE080GD	433663	FDE46TE080GD	433711
100	FDE36TE100GD	433665	FDE46TE100GD	433713
125	FDE36TE125GD	433667	FDE46TE125GD	433715
160	FDE36TE160GD	433669	FDE46TE160GD	433717
One code covers: A standard, fixed front connection breaker with: DIN-Rail mounting kit + Breaker finishing covers + Fixation hardware.				

(1) Neutral on the left. If neutral on the right is needed, please contact us.

FD160 - Complete circuit breaker

Selective Thermal Magnetic LTMD (Settable thermals calibrated at 40°C)



In (A)	3 pole 3 trips		4 pole 4 trips ⁽¹⁾		Cat. no.	Ref. no.	Cat. no.	Ref. no.
	Cat. no.	Ref. no.	Cat. no.	Ref. no.				
16	FDS36TD016ED	430161	FDS46TD016ED	430224				
20	FDS36TD020ED	430163	FDS46TD020ED	430226				
25	FDS36TD025ED	430165	FDS46TD025ED	430228				
32	FDS36TD032ED	430167	FDS46TD032ED	430230				
40	FDS36TD040ED	430169	FDS46TD040ED	430232				
50	FDS36TD050ED	430178	FDS46TD050ED	430241				
63	FDS36TD063ED	432952	FDS46TD063ED	432964				
80	FDS36TD080GD	432955	FDS46TD080GD	432967				
100	FDS36TD100GD	432958	FDS46TD100GD	432970				
125	FDS36TD125GD	432961	FDS46TD125GD	432973				
160	FDS36TD160GD	433602	FDS46TD160GD	433604				

In (A)	2 pole 2 trips		Cat. no.	Ref. no.	Cat. no.	Ref. no.
	Cat. no.	Ref. no.				
16	FDN66TD016ED	430143				
20	FDN66TD020ED	430144				
25	FDN66TD025ED	430145				
32	FDN66TD032ED	430146				
40	FDN66TD040ED	430147				
50	FDN66TD050ED	430148				
63	FDN66TD063ED	430149				
80	FDN66TD080GD	430794				
100	FDN66TD100GD	430797				
125	FDN66TD125GD	430800				
160	FDN66TD160GD	433599				

One code covers: A standard fixed front connection breaker + DIN-Rail mounting kit + Toggle elongator + Breaker finishing covers + Fixation hardware

Line Thermal Magnetic LTM (fixed settings calibrated at 40°C)

In (A)	1 pole 1 trip ⁽²⁾		Cat. no.	Ref. no.	Cat. no.	Ref. no.
	Cat. no.	Ref. no.				
16	FDN13TF016EF	433316	FDH13TF016EF	433246		
20	FDN13TF020EF	433322	FDH13TF020EF	433255		
25	FDN13TF025EF	433328	FDH13TF025EF	433262		
32	FDN13TF032EF	433334	FDH13TF032EF	433268		
40	FDN13TF040EF	433340	FDH13TF040EF	433274		
50	FDN13TF050EF	433346	FDH13TF050EF	433280		
63	FDN13TF063EF	433352	FDH13TF063EF	433286		
80	FDN13TF080GF	433519	FDH13TF080GF	433292		
100	FDN13TF100GF	433522	FDH13TF100GF	433298		
125	FDN13TF125GF	433525	FDH13TF125GF	433304		
160	FDN13TF160GF	433527	FDH13TF160GF	433310		

Selective Thermal Magnetic LTMD (Settable thermals calibrated at 40°C)

In (A)	3 pole 3 trips		4 pole 3 trips ⁽¹⁾		4 pole 4 trips ⁽¹⁾		4 pole 3.5 trips (N=50%) ⁽¹⁾	
	Cat. no.	Ref. no.	Cat. no.	Ref. no.	Cat. no.	Ref. no.	Cat. no.	Ref. no.
16	FDN36TD016ED	430100	FDN436TD016ED	430117	FDN46TD016ED	430131	-	-
20	FDN36TD020ED	430101	FDN436TD020ED	430118	FDN46TD020ED	430132	-	-
25	FDN36TD025ED	430102	FDN436TD025ED	430119	FDN46TD025ED	430133	-	-
32	FDN36TD032ED	430103	FDN436TD032ED	430120	FDN46TD032ED	430134	-	-
40	FDN36TD040ED	430104	FDN436TD040ED	430121	FDN46TD040ED	430135	-	-
50	FDN36TD050ED	430105	FDN436TD050ED	430122	FDN46TD050ED	430136	-	-
63	FDN36TD063ED	430106	FDN436TD063ED	430123	FDN46TD063ED	430137	FDN456TD063ED	430129
80	FDN36TD080GD	430630	FDN436TD080GD	430688	FDN46TD080GD	430752	FDN456TD080GD	430718
100	FDN36TD100GD	430633	FDN436TD100GD	430691	FDN46TD100GD	430755	FDN456TD100GD	430721
125	FDN36TD125GD	430636	FDN436TD125GD	430694	FDN46TD125GD	430758	FDN456TD125GD	430724
160	FDN36TD160GD	433572	FDN436TD160GD	433578	FDN46TD160GD	433590	FDN456TD160GD	433584
16	FDH36TD016ED	430020	FDH436TD016ED	430037	FDH46TD016ED	430051	-	-
20	FDH36TD020ED	430021	FDH436TD020ED	430038	FDH46TD020ED	430052	-	-
25	FDH36TD025ED	430022	FDH436TD025ED	430039	FDH46TD025ED	430053	-	-
32	FDH36TD032ED	430023	FDH436TD032ED	430040	FDH46TD032ED	430054	-	-
40	FDH36TD040ED	430024	FDH436TD040ED	430041	FDH46TD040ED	430055	-	-
50	FDH36TD050ED	430025	FDH436TD050ED	430042	FDH46TD050ED	430056	-	-
63	FDH36TD063ED	430026	FDH436TD063ED	430043	FDH46TD063ED	430057	FDH456TD063ED	430049
80	FDH36TD080GD	430338	FDH436TD080GD	430396	FDH46TD080GD	430460	FDH456TD080GD	430426
100	FDH36TD100GD	430341	FDH436TD100GD	430399	FDH46TD100GD	430463	FDH456TD100GD	430429
125	FDH36TD125GD	430344	FDH436TD125GD	430402	FDH46TD125GD	430466	FDH456TD125GD	430432
160	FDH36TD160GD	435821	FDH436TD160GD	435827	FDH46TD160GD	435839	FDH456TD160GD	435833
25	FDL36TD025ED	430070	FDL436TD025ED	430082	FDL46TD025ED	430090	-	-
32	FDL36TD032ED	430071	FDL436TD032ED	430083	FDL46TD032ED	430091	-	-
40	FDL36TD040ED	430072	FDL436TD040ED	430084	FDL46TD040ED	430092	-	-
50	FDL36TD050ED	430073	FDL436TD050ED	430085	FDL46TD050ED	430093	-	-
63	FDL36TD063ED	430074	FDL436TD063ED	430086	FDL46TD063ED	430094	FDL456TD063ED	430087
80	FDL36TD080GD	430518	FDL436TD080GD	430557	FDL46TD080GD	430591	FDL456TD080GD	430568
100	FDL36TD100GD	430521	FDL436TD100GD	430560	FDL46TD100GD	430594	FDL456TD100GD	430571
125	FDL36TD125GD	430524	FDL436TD125GD	430563	FDL46TD125GD	430597	FDL456TD125GD	430574
160	FDL36TD160GD	435845	FDL436TD160GD	435848	FDL46TD160GD	435854	FDL456TD160GD	435851

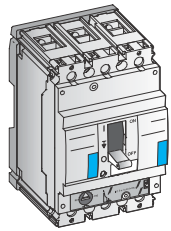
One code covers: A standard fixed front connection breaker + DIN-Rail mounting kit + Toggle elongator + Breaker finishing covers + Fixation hardware

(1) Neutral on the left. If neutral on the right is needed, please contact us.

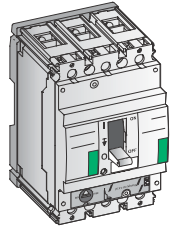
(2) Fixation hardware not suitable for mounting of one individual single pole breaker (see page A.10)

FD160 - Complete circuit breaker

Generator Thermal Magnetic LTMD (Settable thermals calibrated at 40°C)



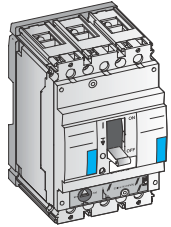
In (A)	3 pole 3 trips		4 pole 3 trips ⁽¹⁾		4 pole 4 trips ⁽¹⁾		4 pole 3.5 trips (N=50%) ⁽¹⁾	
	Cat. no.	Ref. no.	Cat. no.	Ref. no.	Cat. no.	Ref. no.	Cat. no.	Ref. no.
50 kA FDN	25	FDN36TG025ED	430107	FDN436TG025ED	430124	FDN46TG025ED	430138	-
	32	FDN36TG032ED	430108	FDN436TG032ED	430125	FDN46TG032ED	430139	-
	40	FDN36TG040ED	430109	FDN436TG040ED	430126	FDN46TG040ED	430140	-
	50	FDN36TG050ED	430110	FDN436TG050ED	430127	FDN46TG050ED	430141	-
	63	FDN36TG063ED	430111	FDN436TG063ED	430128	FDN46TG063ED	430142	FDN456TG063ED
	80	FDN36TG080GD	430649	FDN436TG080GD	430707	FDN46TG080GD	430771	FDN456TG080GD
	100	FDN36TG100GD	430652	FDN436TG100GD	430710	FDN46TG100GD	430774	FDN456TG100GD
	125	FDN36TG125GD	430655	FDN436TG125GD	430713	FDN46TG125GD	430777	FDN456TG125GD
	160	FDN36TG160GD	433575	FDN436TG160GD	433581	FDN46TG160GD	433593	FDN456TG160GD



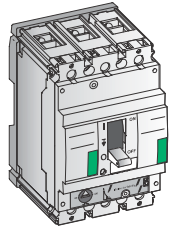
80 kA FDH	25	FDH36TG025ED	430027	FDH436TG025ED	430044	FDH46TG025ED	430058	-
	32	FDH36TG032ED	430028	FDH436TG032ED	430045	FDH46TG032ED	430059	-
	40	FDH36TG040ED	430029	FDH436TG040ED	430046	FDH46TG040ED	430060	-
	50	FDH36TG050ED	430030	FDH436TG050ED	430047	FDH46TG050ED	430061	-
	63	FDH36TG063ED	430031	FDH436TG063ED	430048	FDH46TG063ED	430062	FDH456TG063ED
	80	FDH36TG080GD	430357	FDH436TG080GD	430415	FDH46TG080GD	430479	FDH456TG080GD
	100	FDH36TG100GD	430360	FDH436TG100GD	430418	FDH46TG100GD	430482	FDH456TG100GD
	125	FDH36TG125GD	430363	FDH436TG125GD	430421	FDH46TG125GD	430485	FDH456TG125GD
	160	FDH36TG160GD	435824	FDH436TG160GD	435830	FDH46TG160GD	435842	FDH456TG160GD

One code covers: A standard fixed front connection breaker + DIN-Rail mounting kit + Toggle elongator + Breaker finishing covers + Fixation hardware

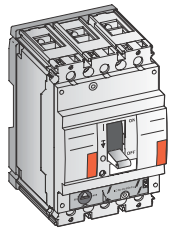
Motor Protection (Mag Break™ Magnetic Only Breakers (Rated at 40°C))



In (A)	3 pole		4 pole ⁽¹⁾	
50 kA FDN	3	FDN36MC003ED	436409	FDN436MC003ED
	7	FDN36MC007ED	430095	FDN436MC007ED
	12.5	FDN36MC012ED	430096	FDN436MC012ED
	20	FDN36MC020ED	430097	FDN436MC020ED
	30	FDN36MC030ED	430098	FDN436MC030ED
	50	FDN36MC050ED	430099	FDN436MC050ED
	80	FDN36MC080GD	430610	FDN436MC080GD
	100	FDN36MC100GD	430613	FDN436MC100GD



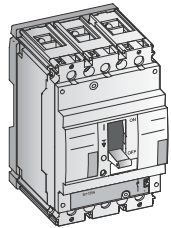
80 kA FDH	3	FDH36MC003ED	436396	FDH436MC003ED
	7	FDH36MC007ED	430015	FDH436MC007ED
	12.5	FDH36MC012ED	430016	FDH436MC012ED
	20	FDH36MC020ED	430017	FDH436MC020ED
	30	FDH36MC030ED	430018	FDH436MC030ED
	50	FDH36MC050ED	430019	FDH436MC050ED
	80	FDH36MC080GD	430318	FDH436MC080GD
	100	FDH36MC100GD	430321	FDH436MC100GD



150 kA FDL	20	FDL36MC020ED	430065	FDL436MC020ED
	30	FDL36MC030ED	430066	FDL436MC030ED
	50	FDL36MC050ED	430067	FDL436MC050ED
	80	FDL36MC080GD	430498	FDL436MC080GD
	100	FDL36MC100GD	430501	FDL436MC100GD

One code covers: A standard fixed front connection breaker + DIN-Rail mounting kit + Toggle elongator + Breaker finishing covers + Fixation hardware + IPXXB covers (Finger protection on connection clamps)

Complete Non-Automatic Circuit Breaker (Switch rated at 40°C)



In (A)	3 pole		4 pole ⁽¹⁾	
FDY	63	FDY306D063ED	430150	FDY406D063ED
	160	FDY306D160GD	430805	FDY406D160GD

One code covers: A standard fixed front connection breaker + DIN-Rail mounting kit + Toggle elongator + Breaker finishing covers + Fixation hardware

(1) Neutral on the left. If neutral on the right is needed, please contact us.

FD frame

Intro

A

B

C

D

E

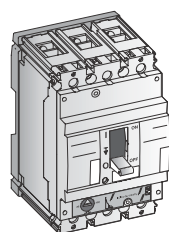
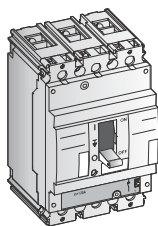
F

G

X

FD160 - Complete Circuit Breaker

Line Thermal Magnetic LTM or LTMD (Settable Thermals calibrated at 55°C)



	In (A)	3 pole 3 trips				3 pole 3 trips			
		Cat. no.	Ref. no.			Cat. no.	Ref. no.		
25 kA FDE	16	FDE36T5C016EF	436582			FDS36T5D016ED	430546		
	20	FDE36T5C020EF	436583			FDS36T5D020ED	430577		
	25	FDE36T5C025EF	436584			FDS36T5D025ED	430578		
	32	FDE36T5C032EF	436588			FDS36T5D032ED	430579		
	40	FDE36T5C040EF	436589			FDS36T5D040ED	430580		
	50	FDE36T5C050EF	436591			FDS36T5D050ED	430814		
	63	FDE36T5C063EF	436593			FDS36T5D063ED	430816		
	80	FDE36T5C080GF	436594			FDS36T5D080GD	430817		
	100	FDE36T5C100GF	436595			FDS36T5D100GD	430819		
	125	FDE36T5C125GF	436596			FDS36T5D125GD	430820		
	160	FDE36T5C155GF	436600			FDS36T5D160GD	430822		
50 kA FDN	16	FDN36T5D016ED	430833			FDH36T5D016ED	430850		
	20	FDN36T5D020ED	430835			FDH36T5D020ED	430851		
	25	FDN36T5D025ED	430836			FDH36T5D025ED	430853		
	32	FDN36T5D032ED	430838			FDH36T5D032ED	430854		
	40	FDN36T5D040ED	430839			FDH36T5D040ED	430857		
	50	FDN36T5D050ED	430841			FDH36T5D050ED	430862		
	63	FDN36T5D063ED	430842			FDH36T5D063ED	430866		
	80	FDN36T5D080GD	430844			FDH36T5D080GD	430871		
	100	FDN36T5D100GD	430845			FDH36T5D100GD	430874		
	125	FDN36T5D125GD	430847			FDH36T5D125GD	430875		
	160	FDN36T5D160GD	430848			FDH36T5D160GD	430881		
One code covers: A standard fixed front connection breaker + Fixation hardware + DIN rail mounting kit (Except 25kA variant)									

Order Codes

Intro

A

B

C

D

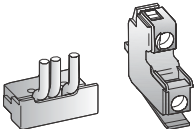
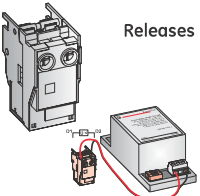
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F

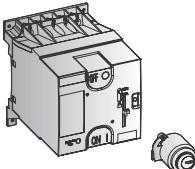
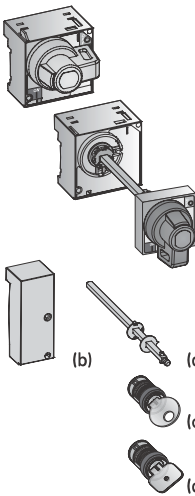
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X

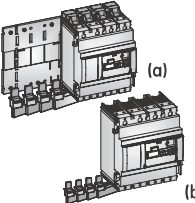
FD - Internal accessories

Contacts		Normally open		Normally closed		Changeover	
		Cat. no.	Ref. no.	Cat. no.	Ref. no.	Cat. no.	Ref. no.
	Aux. switch right mounted	FAS10R	430837	FAS01R	430831	-	-
	Aux. switch left mounted	FAS10L	430834	FAS01L	430828	-	-
	Bell alarm trip unit	FABAT10	430818	FABAT01	430815	-	-
	Bell alarm RCD device	FABAT10	430818	FABAT01	430815	-	-
	Bell alarm mechanism ⁽¹⁾	-	-	-	-	FDBAM11	430880
Releases		Shunt		Undervoltage		Delayed undervoltage	
		Cat. no.	Ref. no.	Cat. no.	Ref. no.	Cat. no.	Ref. no.
	12V AC/DC	FASHTB	430840	FAUVRB	431960	-	-
	24V AC/DC	FASHTD	430843	FAUVRD	430861	-	-
	48V AC/DC	FASHTF	430846	FAUVRF	430864	-	-
	60V AC/DC	FASHTH	435118	FAUVRH	435120	-	-
	110V AC/DC	FASHTJ	430849	FAUVRJ	430867	-	-
	220/240V AC/DC	FASHTN	430852	FAUVRN	430870	FAUVDN	430858
	400/415V AC	FASHTU	430855	FAUVRU	436472	-	-
	440/480V AC	-	-	FAUVRU	430873	-	-

FD - Operators

	24V AC/DC	FDEMF	430926				
	48V AC/DC	FDEMFF	430929				
	60V AC/DC	FDEMFH	430932				
	110V AC/DC	FDEMFJ	430935				
	220/250V AC/DC	FDEMFN	430938				
	400/440V AC	FDEMF8	430920				
	Keylock for operator Ronis ⁽²⁾	FD1BRE	430877				
	Keylock for operator Profalux ⁽²⁾	FD1BPE	430876				
		Direct on device	Rotary handle for use through door or cover plate ⁽³⁾		Panel or door mounted		
	Grey	FDNRF/5	436478	FDNRC/5	436474	-	-
	Red	FDNRFV/5	436479	FDNRCV/5	436475	-	-
	Grey + Early closing Aux. Switches 2xNO ⁽⁴⁾	-	-	FDNRY/5	436487	-	-
	Red + Early closing Aux. Switches 2xNO ⁽⁴⁾	-	-	FDNRV/5	436488	-	-
	Grey	-	-	-	-	FDNRD/5	436476
	Red	-	-	-	-	FDNRDV/5	436477
	Grey + Early closing Aux. Switches 2xNO ⁽⁴⁾	-	-	-	-	FDNRZ/5	436489
	Red + Early closing Aux. Switches 2xNO ⁽⁴⁾	-	-	-	-	FDNRZV/5	436490
		Accessories					
	Extension shaft kit (max. 600 mm) (a)	FDNRE	430986	Only for use with panel or door mounted type			
	Side-by-side installation adapter kit (b)	FDNR4	430971	Not for use with panel or door mounted type			
	Ronis keylock 1104B nr. BC 1027 ⁽²⁾ (c)	FA1BR1	430088				
Ronis keylock 1104B nr. BC 1053 ⁽²⁾ (c)	FA1BR2	430089					
Ronis keylock 1104B nr. BC 2932 ⁽²⁾ (c)	FA1BR3	430504					
Ronis keylock 1104B nr. BC 2911 ⁽²⁾ (c)	FA1BR4	430505					
Ronis keylock 1104B nr. BC 2936 ⁽²⁾ (c)	FA1BR5	430506					
Ronis keylock 1104B nr. BC 2940 ⁽²⁾ (c)	FA1BR6	430507					
Ronis lock with random key ⁽²⁾ (c)	FA1BRH	430068					
Profalux lock with random key ⁽²⁾ (d)	FA1BPH	430813					

FD - Residual current devices

RCD side mounted ⁽⁵⁾		Standard		3 pole		4 pole	
		Cat. no.	Ref. no.	Cat. no.	Ref. no.	Cat. no.	Ref. no.
	Voltage 220/440V AC (a)	FDQDS3M/6	431095	FDQDS4M/6	431103		
	Voltage 400/690V AC (a)	FDQDS3H/6	431090	FDQDS4H/6	431101		
	One code covers an RCD with: DIN-Rail mounting kit & multidirectional supply kit						
	Side connected only						
	Voltage 220/440V AC (b)	FDQDI3M/6	431086	FDQDI4M/6	431088		
RCD bottom mounted ⁽⁵⁾ (below trip unit area)	Voltage 220/440V AC	FDQDB3M/6	431078	FDQDB4M/6	431084		
	Voltage 400/690V AC	FDQDB3H/6	431076	FDQDB4H/6	431080		
			Normally open		Normally closed		
	Bell Alarm RCD device	FABAT10	430818	FABAT 01	430815		
	One code covers an RCD with: Sealable connection cover (cut-out adaptor FDUF)						

(1) Not for all FDC and FDE types

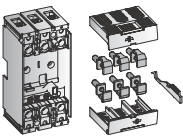
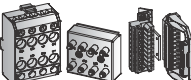
(2) Key included

(3) Add door flange FDFH to allow use of the door interlock options

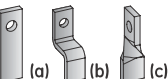
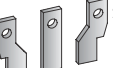
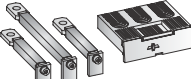
(4) On request 1xNO/1xNC is available.

(5) Not possible on FDC and FDE types with TF and TC trip unit.
100/200V AC rating available on request

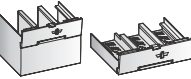
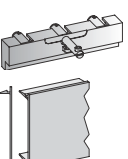
FD - Plug-in system⁽¹⁾

		3 pole		4 pole	
		Cat. no.	Ref. no.	Cat. no.	Ref. no.
 Main system complete Fixed Mobile	Complete set for breaker	FDDDF3	430893	FDDDF4	430896
	Fixed part for breaker	FDDFF3	430899	FDDFF4	430902
	Mobile part for breaker	FDDMP3	430905	FDDMP4	430908
	Fixed part for breaker & RCD	FDDFQ3	433489	FDDFQ4	433492
	Mobile part for breaker & RCD	FDDMP3	430905	FDDMP4	430908
	Complete set: Fixed and mobile part with connection and fixation hardware				
	Fixed part: Fixed base with connection and fixation hardware				
	Mobile part: Mechanism trip device, terminal shields and set of 3 or 4 pole plugs				
 Auxiliary disconnects secondary wiring ⁽²⁾	Complete set 8 pole	FAPFM	430824		
	Fixed part 8 pole	FAPF8	430823		
	Mobile part 8 pole	FAPM8	430826		
	10 pole wired Plug & Socket for Plug-in Device	FAPPS	430827		
 Insertion prevention kit (of ...wrong A rating)	Insertion prevention kit (of ...wrong A rating)	FAPIP	430825		

FD - Connections: Optional⁽⁴⁾

			3 pole		4 pole	
 Extenders (a) (b) (c)	Standard flat type	(a)	FDBES3	430887	FDBES4	430888
	Heightened type	(b)	FDBEH3	430885	FDBEH4	430886
	Twisted 90°	(c)	FDBEA3	430883	FDBEA4	430884
 Spreader flat	Pole spacing 35 mm		FDBSS3	430891	FDBSS4	430892
 External box clamps	Cable Cu/Al 95 mm ² ⁽³⁾		FDTCA1316	433400	FDTCA1416	433401
 Rear connections	Set 3 pole (2 short, 1 long)		FDBRC3	430889	-	-
	Set 4 pole (2 short, 2 long)		-	-	FDBRC4	430890
	Spares, set of 2 short types		FDBRCS2	433358	-	-
	Spares, set of 2 long types		FDBRCL2	433357	-	-

FD - Installation accessories

			3 pole		4 pole	
 Terminal shields (with finishing covers)	Long, set of 2 pcs.		FDJL3	430951	FDJL4	430954
	Short, set of 2 pcs.		FDJS3	430960	FDJS4	430963
 Specific to connection area	Phase separators, set of 12 pcs.		FDJP	430957		
	Backplate set of 2 pcs. (3 or 4 pole)		FDJB	430945		
	Finger protection IPXXB (set of 12 pcs.) ⁽⁵⁾		FDJK	430069		
 Covers	Cutout adaptor, Breaker + Trip unit		FDFU3	430830	FDFU4	430832
	Cutout filler for cover plate (64 mm), length of 1.2 m		FBF6	883970	-	-

(1) Plug-in system max. 125A.

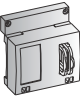
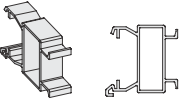
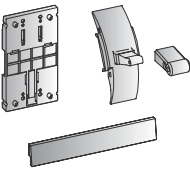
(2) Only necessary when internal accessories or an electrical operator are used.

(3) External box clamps are always delivered with standard extender

(4) Set for equipping the line OR load side of breaker.

(5) Supplied with mag. break types.

FD - Installation accessories (continued)

	Cat. no.		Ref. no.	
Padlocking devices for toggle operator⁽¹⁾  	Padlocking removable		FD1PR	430879
	Padlocking fixed		FD1PF	430878
Circuit indication/coding 	Set of 20 blank labels		FAC	430821
Heightning set for Redline/ElfaPlus MCB's 	Length = (18 mod. of 18 mm) 354 mm		FDKE	617947
Mounting kit for individual single pole breaker	Set of 50 pcs.		FDKM1	436720
Door Flanges 			3 pole	4 pole
	Breaker front face and RCD		FDF3	430941
	Rotary handle (through cover plate model)		FDFH	430829
	Electrical operator		FDFE	432010
Spare parts 	DIN-rail adaptor kit ⁽²⁾		FDKD3	430966
	Finishing covers, set of 2 pcs. ⁽²⁾		FDUA3	431025
	Spare toggle (set of 5 pieces)		FDUT	433539

(1) Padlocks not included

(2) Supplied with breakers, not with all FDC and FDE types

Thermal Magnetic Trip Units

FD frame

Record Plus™ circuit breakers are designed to isolate and switch low voltage distribution circuits and to protect the conductors, equipment and devices included in these circuits.

The FD frame size is designed to use electro-mechanical trip units. These are typical thermal magnetic devices which offer an overload (thermal) and short-circuit protection (magnetic).

The breaker can also be equipped with a Mag Break™ magnetic-only trip unit that offers short-circuit protection.

The trip units have been designed with the user in mind. The trip unit ratings are always indicated in amperes. To prevent unauthorized manipulation of the breaker settings each trip unit comes with a transparent, tamper-free (sealable) cover.

The units come as 1, 2, 3 and 4 pole devices and are available in a number of application-defined subvariants. Thermal protection devices are normally calibrated at an ambient temperature of 40 degrees centigrade. Some executions are also available in a version calibrated at 55 degrees. The time current curves published here are valid for both executions.

The trip unit is an integrated part of the breaker and is not interchangeable. The following versions are available:

LTM (line protection thermal magnetic)

(FD...TF sub type)

A trip unit designed for the protection of generic loads, the device is available as 3 and 4p model for the Concise (FD160C) and Effective (FD160E) breaker types. The same trip unit is also used in the single pole variants of the standard (FD160N) and Hi-Breaker (FD160H) types.

This sub type has a fixed thermal device ($=I_n$) and a fixed magnetic relay set at $10 \times I_n$ ($8 \times I_n$ for the 160A rating) .

LTM (line protection thermal magnetic)

(FD..TC & TE sub type)

A trip unit designed for the protection of generic loads, the device is available as 3 and 4p model for the Concise (FD160C) and Effective (FD160E) breaker types.

This sub type has an adjustable thermal setting of 0.8 to $1 \times I_n$ and a fixed magnetic relay set at $10 \times I_n$ ($8 \times I_n$ for the 160A rating).

LTMD (line thermal magnetic, selective)

(FD..TD sub type)

A trip unit designed for the selective protection of generic loads, it is available as 2p model for the FD160N and as 3 and 4p model for the FD160S, N, H & L breaker types. Making full use of the FD frames unique properties this device offers both full and enhanced selectivity with downstream devices as the ElfaPlus, Red Line MCB's and the Surion Motor Starter.

It has an adjustable thermal setting of 0.8 to $1 \times I_n$ and a fixed magnetic relay set at $10 \times I_n$ ($8 \times I_n$ for the 160A rating).

GTM (generator thermal magnetic)

(FD..TG sub type)

Suitable for the protection of generator circuits and or long cable runs, the device is available as 3 and 4p model for the Standard (FD160N) and Hi-Break (FD160H) breaker types.

This sub type has an adjustable thermal setting of 0.8 to $1 \times I_n$ and a reduced fixed magnetic relay setting of 4 or $5 \times I_n$.

Mag Break™ (magnetic only)

(FD..MO sub type)

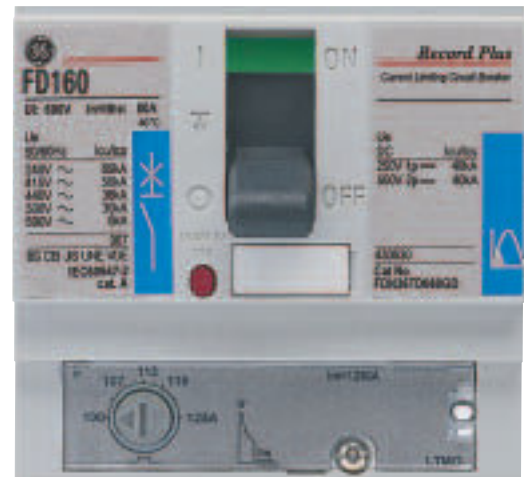
A trip unit designed to offer short circuit protection for, use in motor protection circuits in coordination with a contactor and thermal overload relay in accordance with the EN 60 947-4 standard. The device is available as 3 and 4p model for the FD160N, H & L breaker types. This sub type has NO thermal protection and an magnetic relay that is adjustable from 10 to $15 \times I_n$.

Y (non automatic - switch disconnecter)

A device available in a 63A and 160A variant.

Has no protection elements.

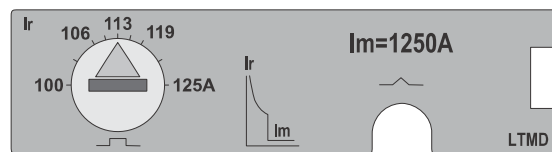
Designed as switch disconnecter



FD160 Trip Unit options

FD frame				Trip unit overview									
Type	Sub-type	Applicable for breaker types		In	Thermal setting Ir		Magnetic setting Im		Neutral protection				
				(A)	pick-up band 1.05 ÷ 1.3 Ir min (A) max (A)		pick-up band ± 20% Im fix (A)		4P4T	4P 3.5T	4P3T		
LTM	TF	C	E	16	Ir = In	16	10 x In	160	=Ir				
				20		20		200	=Ir				
				25		25		250	=Ir				
				32		32		320	=Ir				
				40		40		400	=Ir				
				50		50		500	=Ir				
				63		63		630	=Ir				
				80		80		800	=Ir				
				100		100		1000	=Ir				
				125		125		1250	=Ir				
				160		160		1280	=Ir				
LTM	TC TE	C	E	16	Ir = 0.8÷1In	12.8 16	10 x In	160	=Ir				
				20		16 20		200	=Ir				
				25		20 25		250	=Ir				
				32		25.6 32		320	=Ir				
				40		32 40		400	=Ir				
				50		40 50		500	=Ir				
				63		50.4 63		630	=Ir				
				80		64 80		800	=Ir				
				100		80 100		1000	=Ir				
				125		100 125		1250	=Ir				
				160		128 160		1280	=Ir				
LTMD	TD	S	N	H	L	Ir = 0.8÷1In	10 x In	160	=Ir		not protected ⁽¹⁾		
								20	16 20			200	=Ir
								25	20 25			250	=Ir
								32	25.6 32			320	=Ir
								40	32 40			400	=Ir
								50	40 50			500	=Ir
								63	50.4 63			630	=Ir
								80	64 80			800	=Ir
								100	80 100			1000	=Ir
								125	100 125			1250	=Ir
								160	128 160			1280	=Ir
GTM	TG		N	H	Ir = 0.8÷1In	5 x In	125	=Ir		not protected			
							32	25.6 32			160	=Ir	
							40	32 40			160	=Ir	
							50	40 50			200	=Ir	
							63	50.4 63			252	=Ir	
							80	64 80			320	=Ir	
							100	80 100			400	=Ir	
							125	100 125			500	=Ir	
							160	128 160			640	=Ir	
Mag. Break™	MO	N	H	L	No protection	Adjust- able 10÷15In	35 52.5			not protected			
							70 105						
							125 187.5						
							200 300						
							300 450						
							500 750						
							800 1200						
							1000 1500						
Y		Y		63	No protection								
				160									

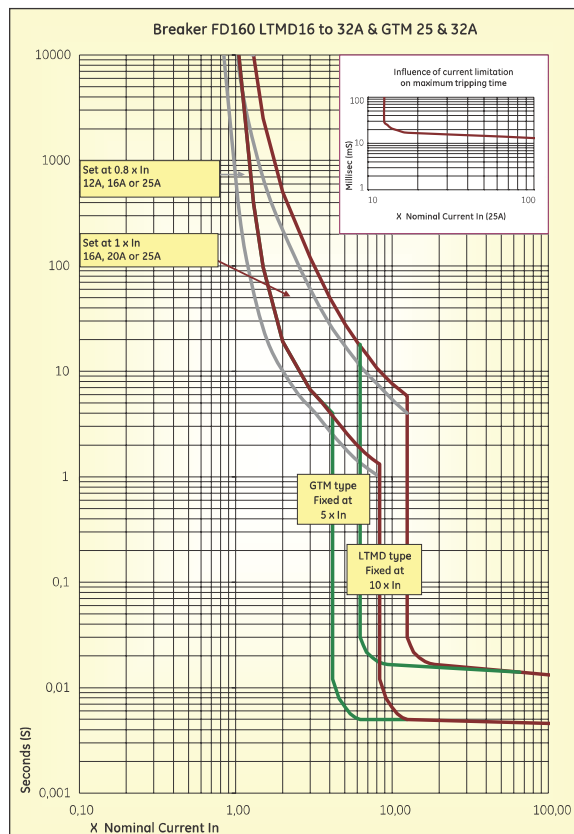
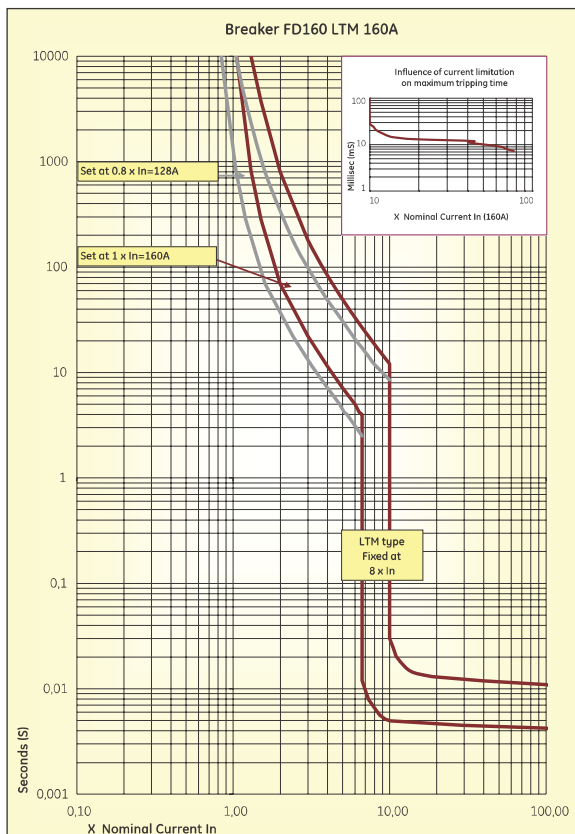
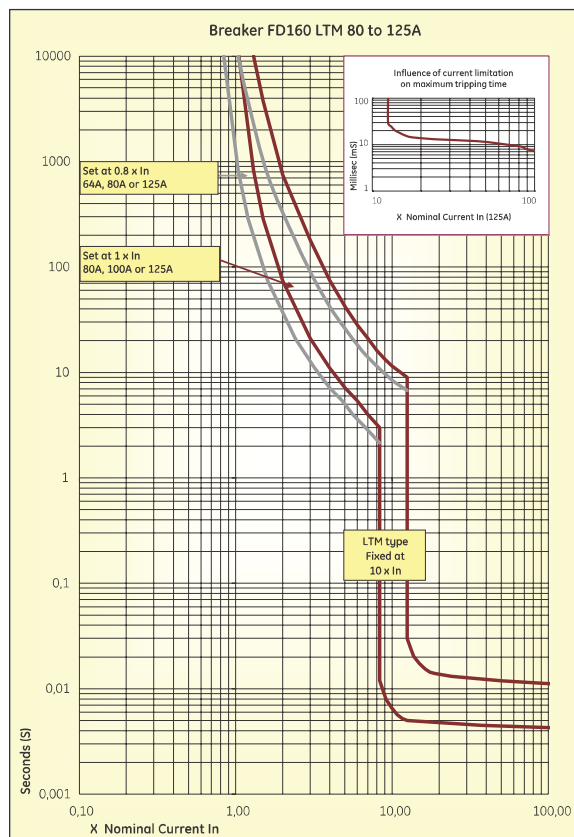
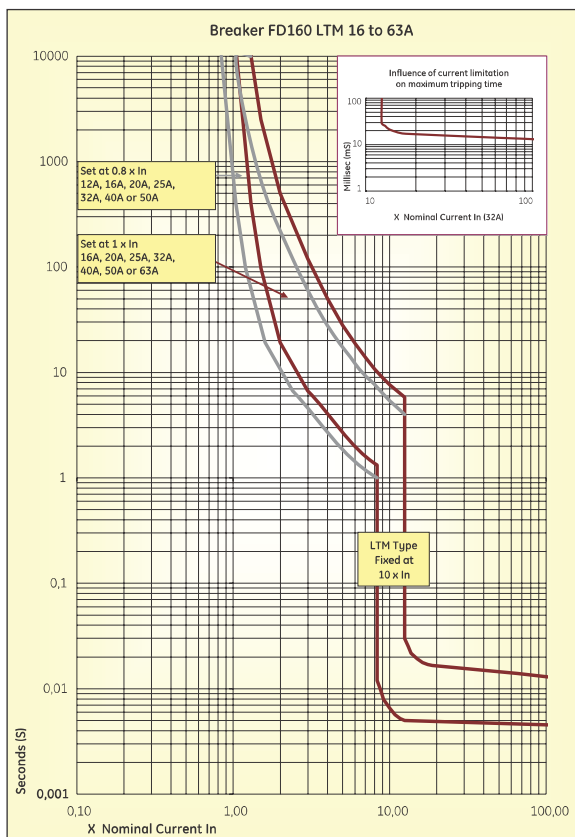
(1) Not available in S type



Depicted is the LTMD type

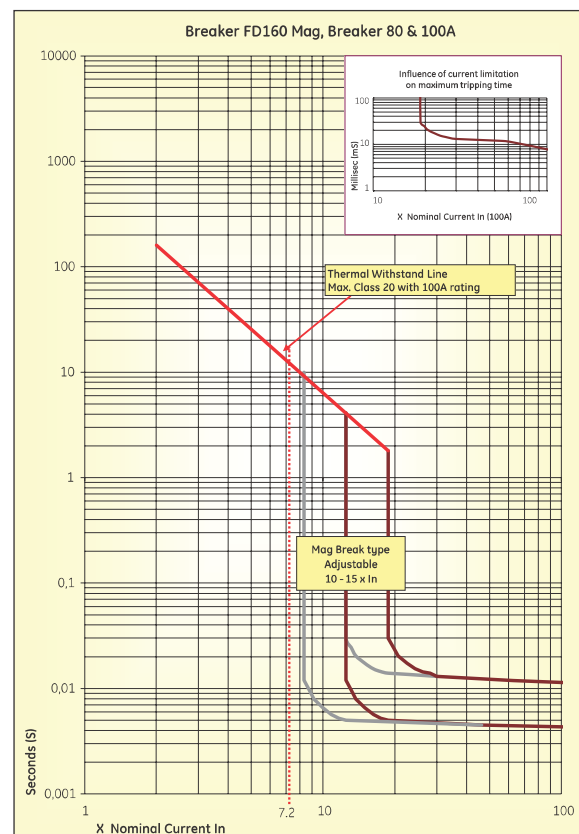
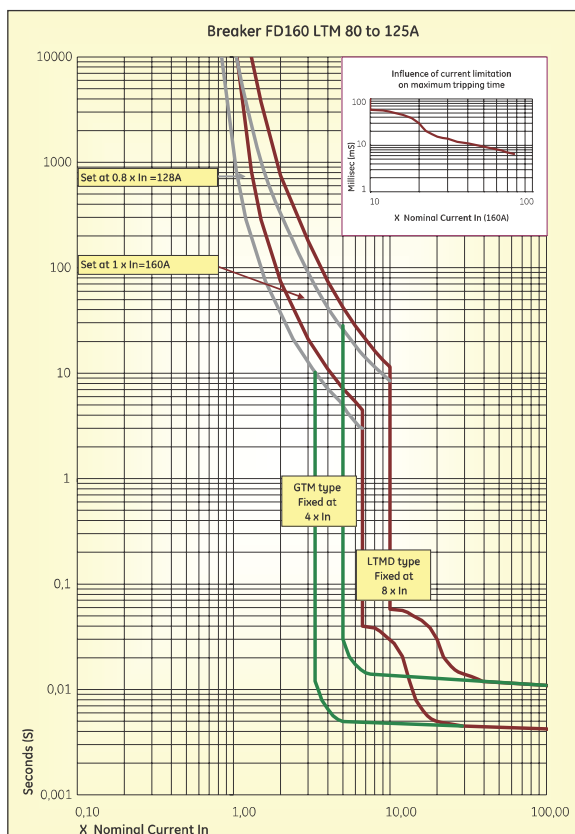
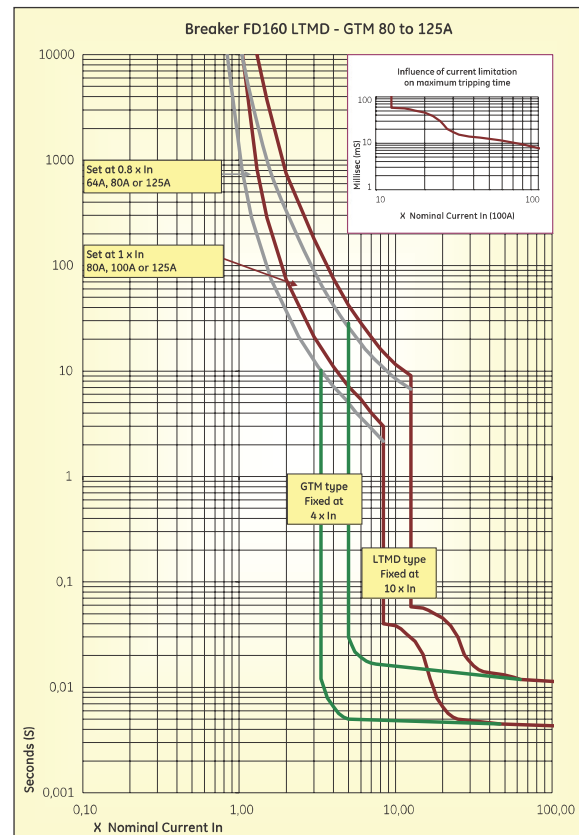
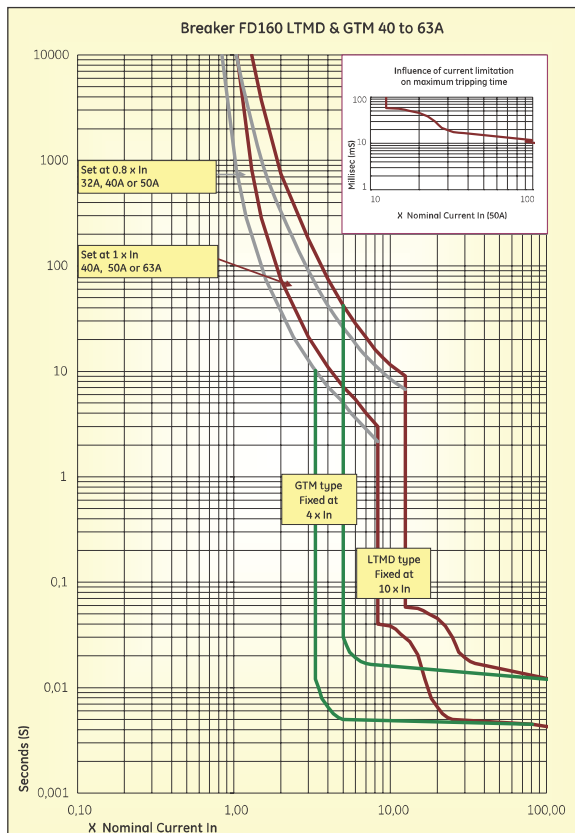
Time Current Curves

FD frame



Time current curves are depicted in cold state.
For the types with fixed thermal settings (FD..TF) the 'set at 1x in' curves apply

Time Current Curves



Time current curves are depicted in cold state.
For the types with fixed thermal settings (FD..TF) the 'set at 1x in' curves apply



FD frame

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