

Optium

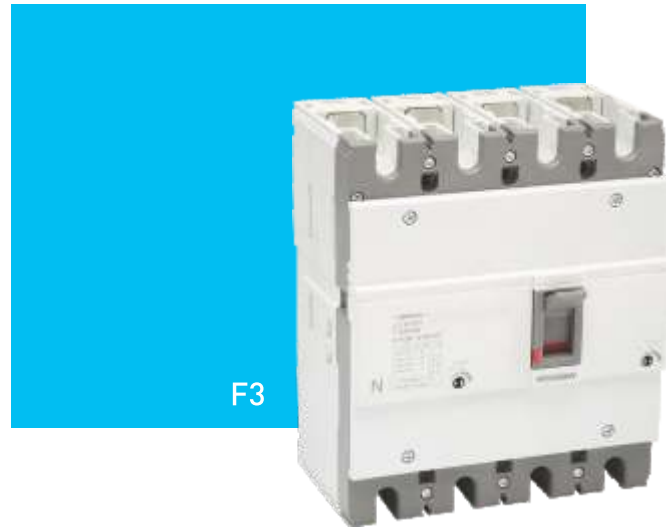
Adjustable, compact and ease of installation are just some of the features of our wide range of MCCBs.

F1



F2





F3



F4



F5

Variants



Fixed type T/M



Adjustable T/M



Electronic LSI



Electronic LSIg

Nomenclature

INDOASIAN		
- optium -		
1.0 F1 B		
830008		
In=100A Ta=40+50°C		
Ue [V]	Icu [kA]	Cat.A
220/240	35	IEC/EN 60947-2 50+60 Hz
380/415	16	
440/460	12	
480/500	5	
550	5	
Ics=50%Icu		
Uimp=6kV Ui=690V		



Example >>

Optium 1.0 F1 B 100A

Optium



Rating(In)

Form 16A to 1250A

Breaking Capacity (Icu@415V)

B=16kA, L=25kA, M=36kA & H=50kA

Frame Code

F1= 125, F2=250, F3=250HP, F4=630 & F5=1250

Release Code

1.0= TM Fixed, 2.0= TM Adj,
2.1= Elec. LSI & 2.2 = Elec. LSIG

Design Model of MCCB

Adjustable settings

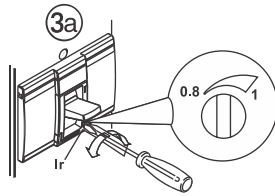
F2-F3

F1

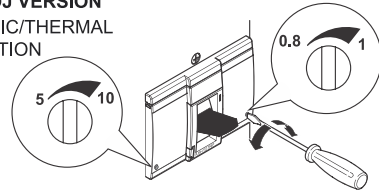


ONLY ADJ VERSION
THERMAL
REGULATION

$$I_r = (0,8 \pm 1) \times I_n$$



ONLY ADJ VERSION
MAGNETIC/THERMAL
REGULATION



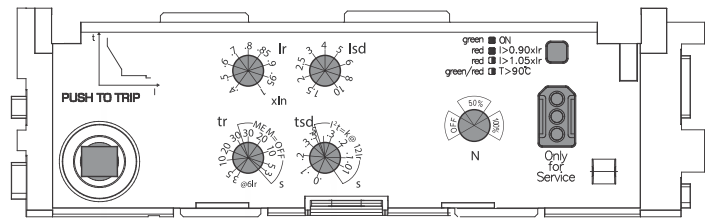
$$I_r = (0,8 \pm 1) \times I_n$$

$$I_{sd} = (5 \pm 10) \times I_n$$

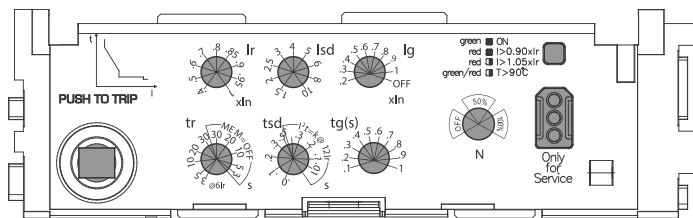
F4-F5



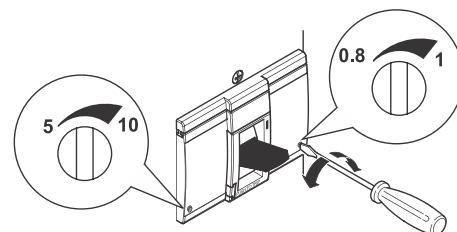
830510...830517



830520...830527



ONLY ADJ VERSION
MAGNETIC/THERMAL
REGULATION

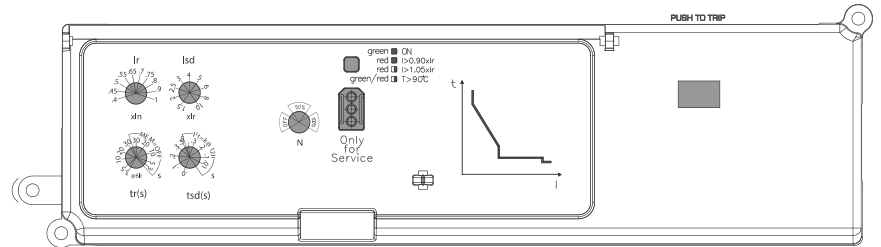


$$I_r = (0,8 \pm 1) \times I_n$$

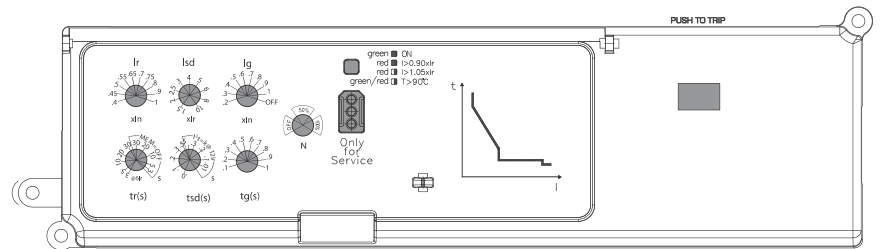
$$I_{sd} = (5 \pm 10) \times I_n$$

830540...830547

F4-F5



830550...830557



Adjustable range $I_{cs}=100\% I_{cu}$

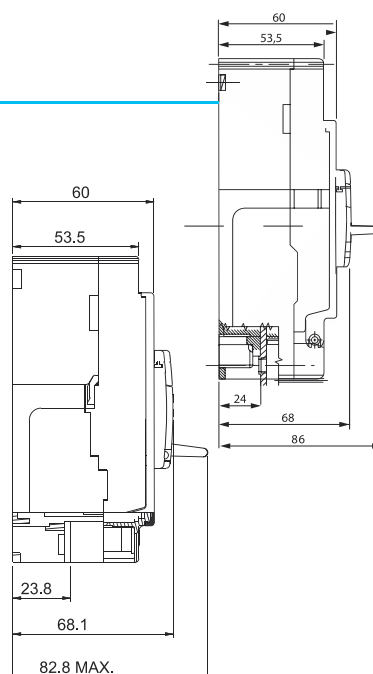
ICU		ICS
16 kA	=	16 kA
25 kA		25 kA
36 kA		36 kA
50 kA		50 kA

Line load reversibility



Compact sizes

Frame 1 & 2 is compact and suitable for installation in DB



Wide choice of electrical accessories

Aux contact



Shunt trip

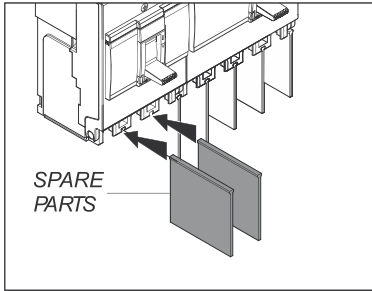


Undervoltage

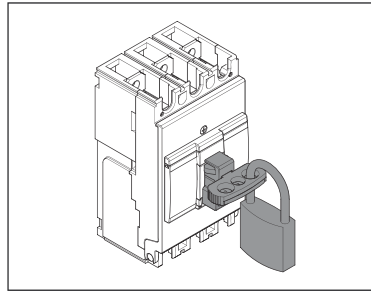


Accessories

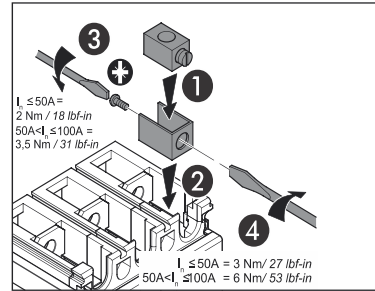
Phase Separator



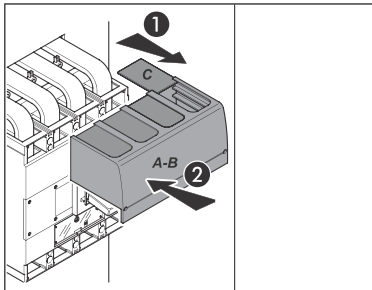
Padlock - Off Position



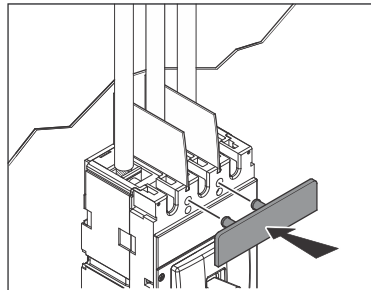
Cage Terminals



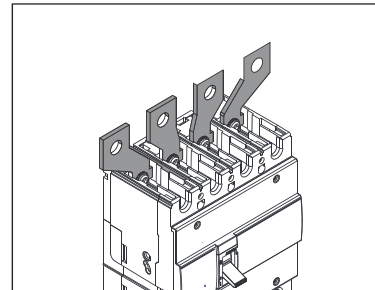
Terminal Shield



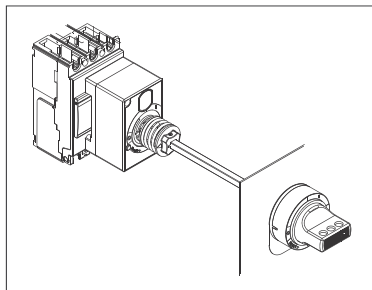
Terminal Cover



Spreader Link



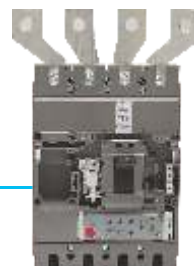
Rotary Handle



Spreaders



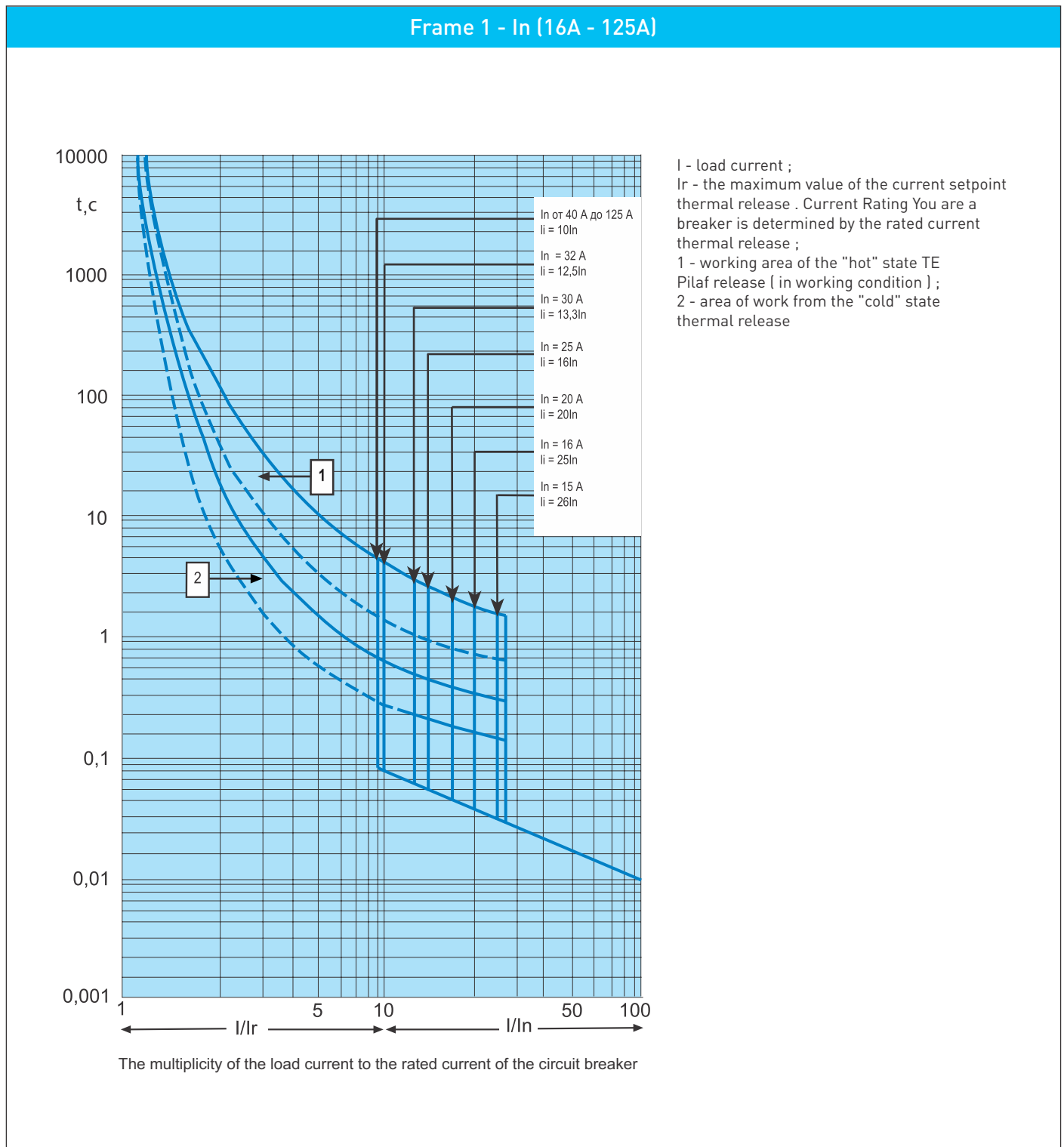
Easy-to-install accessories



Technical Characteristics - MCCB

Time current characteristics

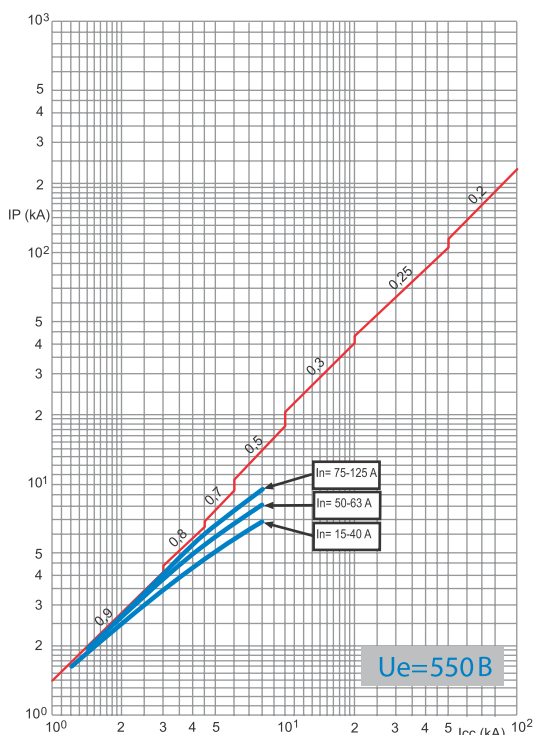
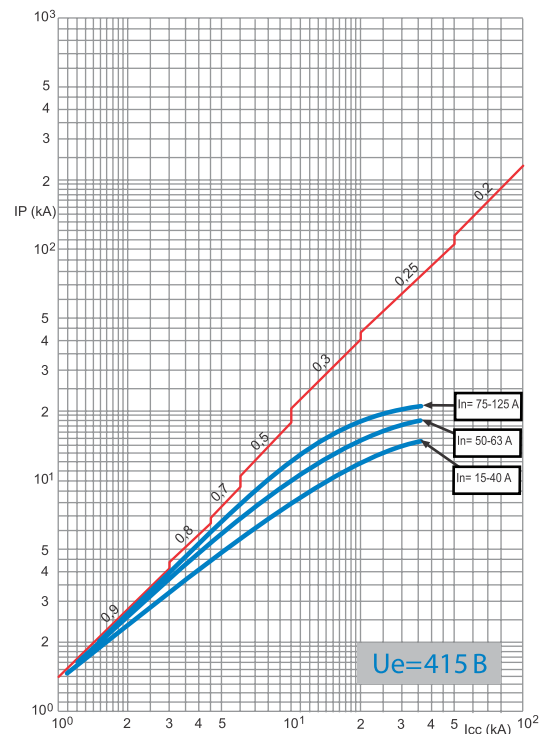
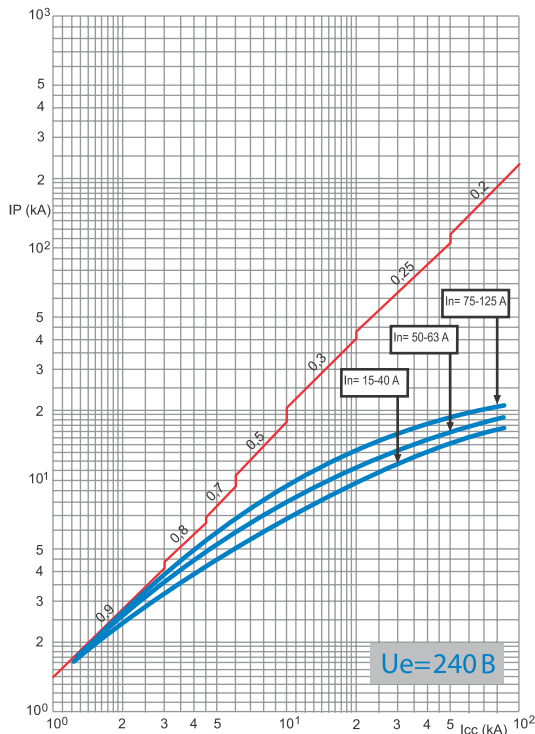
Time current tripping characteristics at ambient temperature 40° C



Technical Characteristics - MCCB

Data limitations of current

Frame 1 - In (16A - 125A)

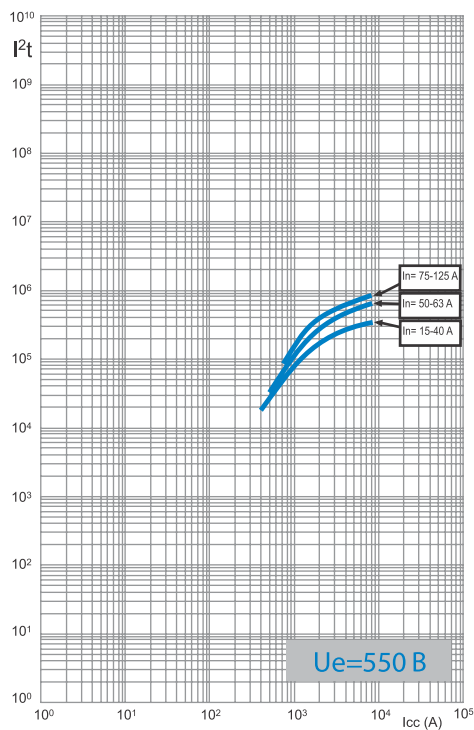
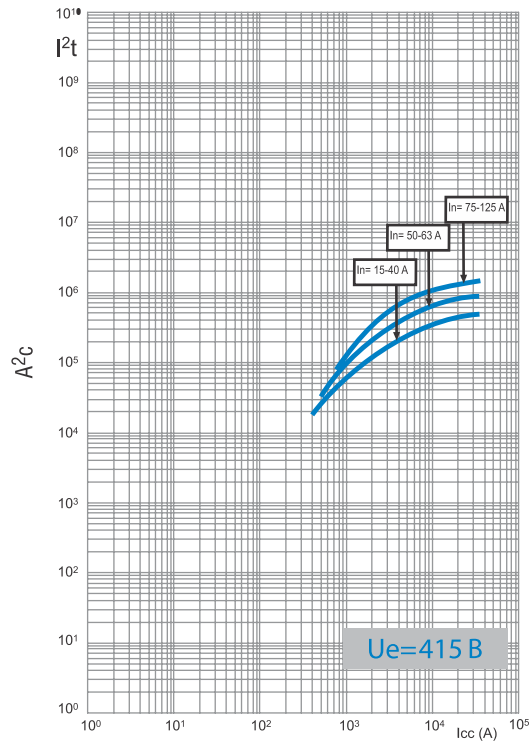
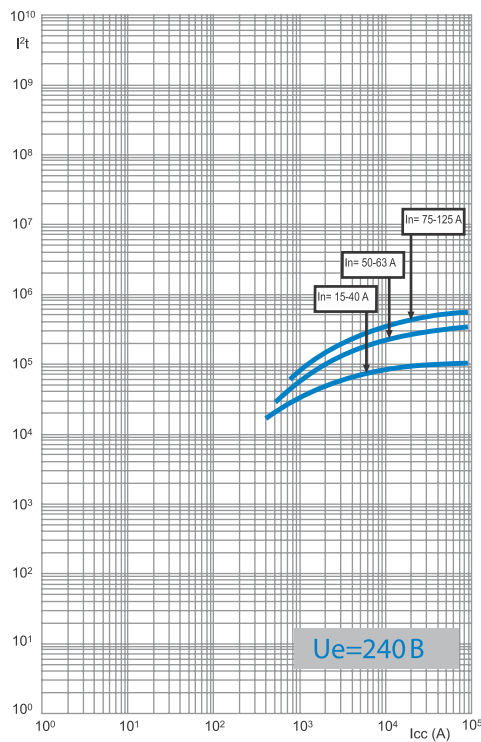


Limitation of shock value Short- current contiguity (actual maximum value) in the Depending on the current value of the expected direct fault current

Technical Characteristics - MCCB

Limitations of energy curves

Frame 1 - In (16A - 125A)

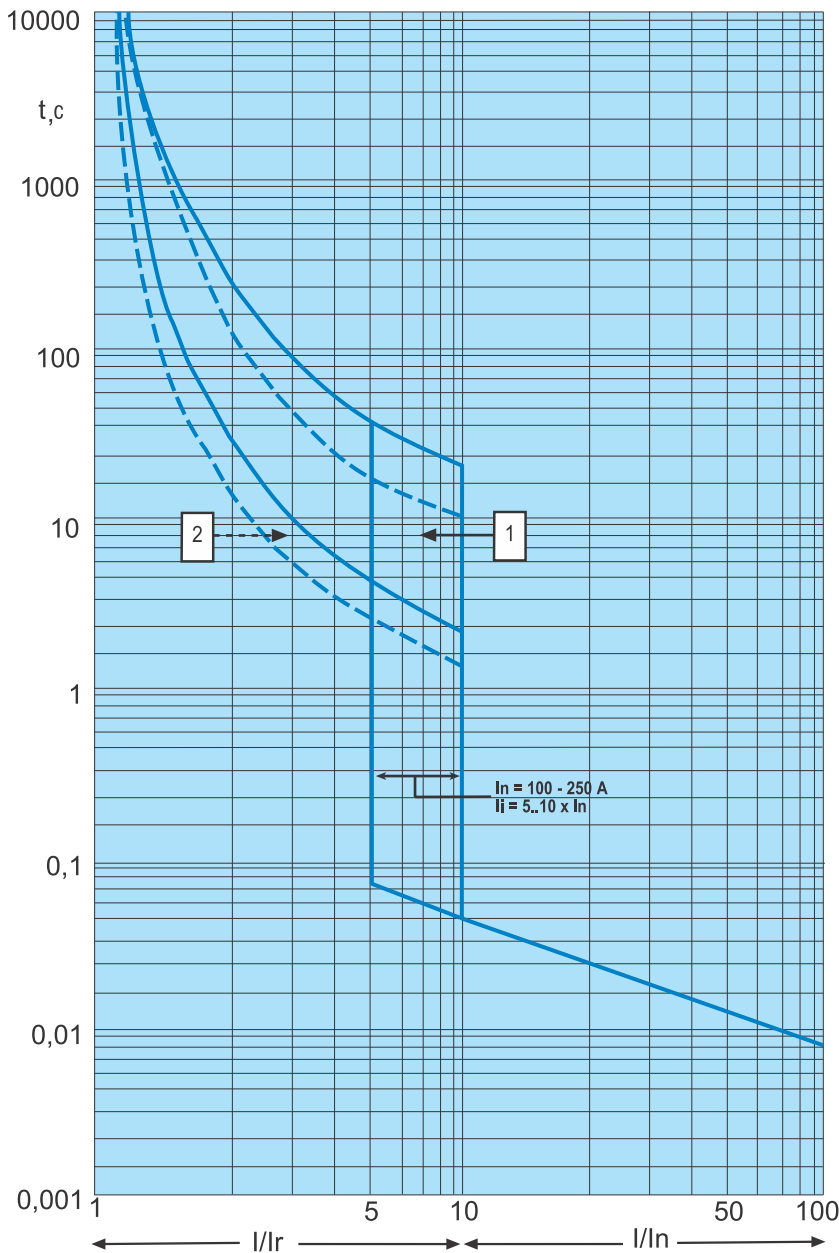


Specific heat (A2s) , ie energy, released during a short circuit in the conduction arrester 1-ohm , depending from the rms value of the prospective current short circuit

Technical Characteristics - MCCB

Time current characteristics

Frame 2 - In (160A - 250A)



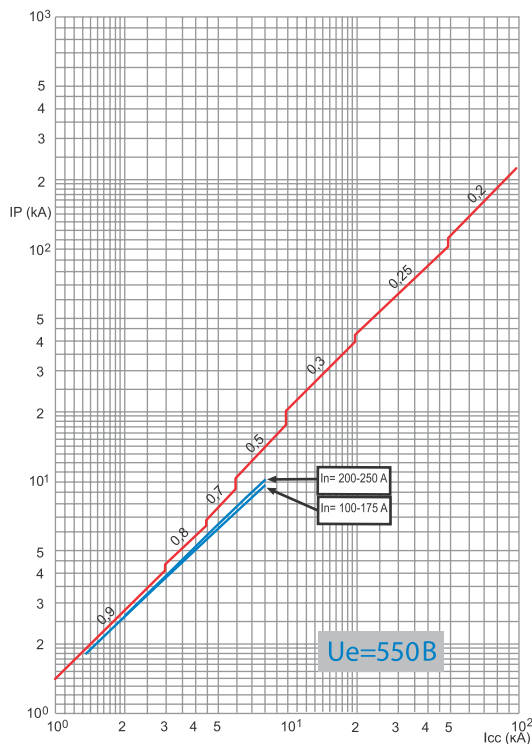
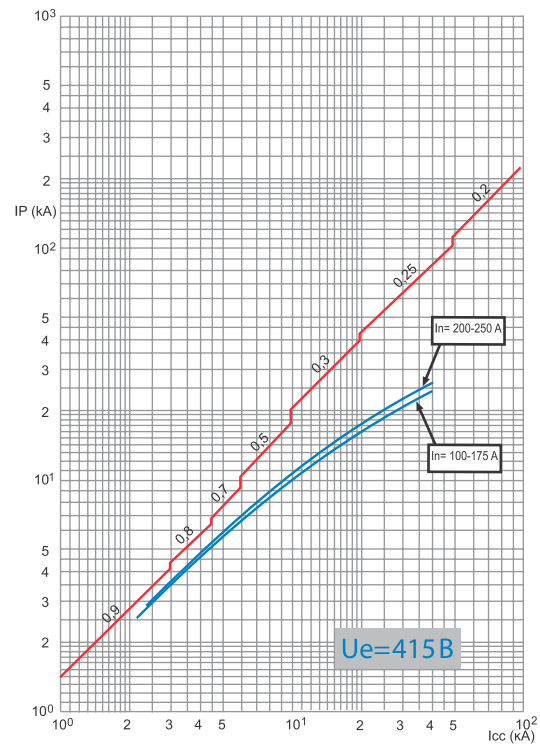
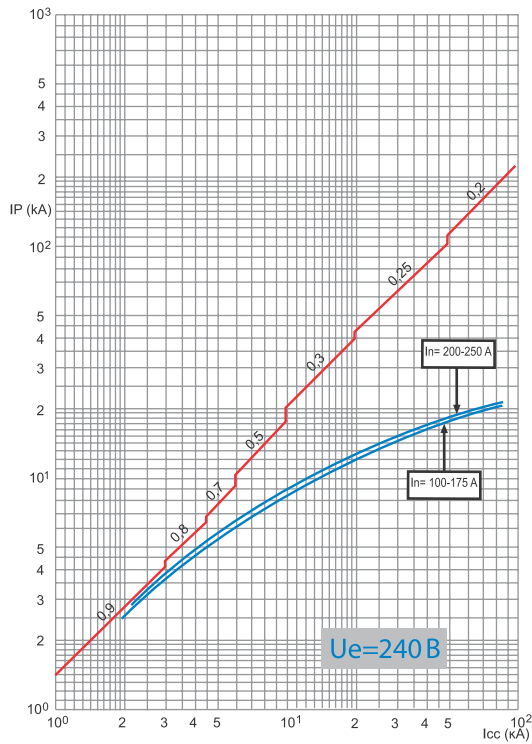
I - load current ;
I_r - the maximum value of the current setpoint thermal release . Rated current breaker depends on the bench current heat release ;
1 - working area of the "hot" state TE Pilaf release (in working condition) ;
2 - area of work from the "cold" state thermal release

The multiplicity of the load current to the rated current of the circuit breaker

Technical Characteristics - MCCB

Data limitations of current

Frame 2 - In (160A - 250A)

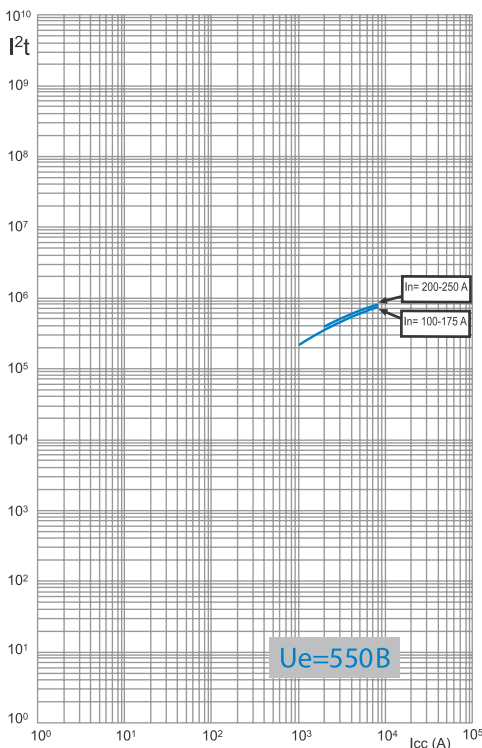
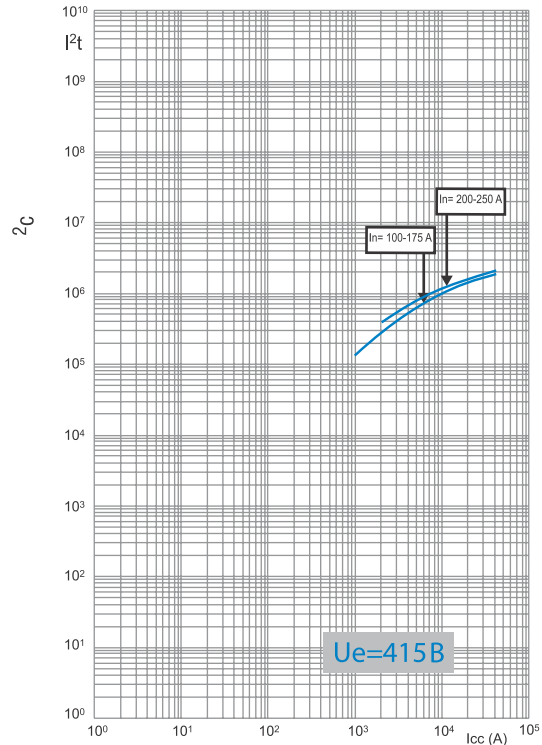
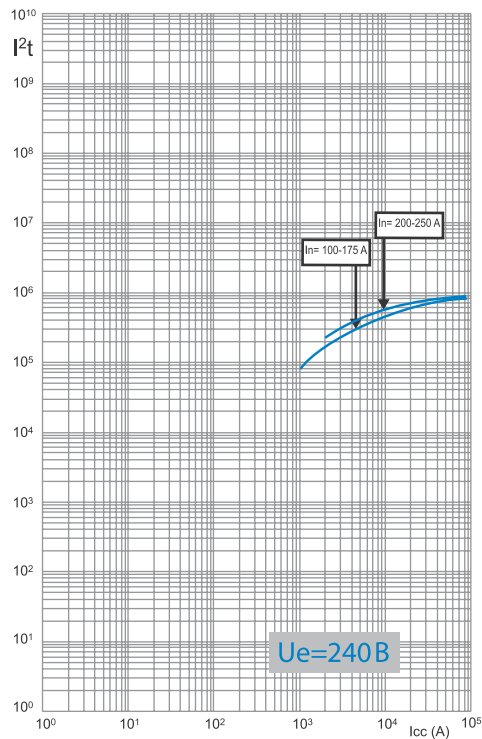


Limited impact the value of a short current circuit (the actual maximum value of) depending on the current values of expected short-circuit current

Technical Characteristics - MCCB

Limitations of energy curves

Frame 2 - In (160A - 250A)

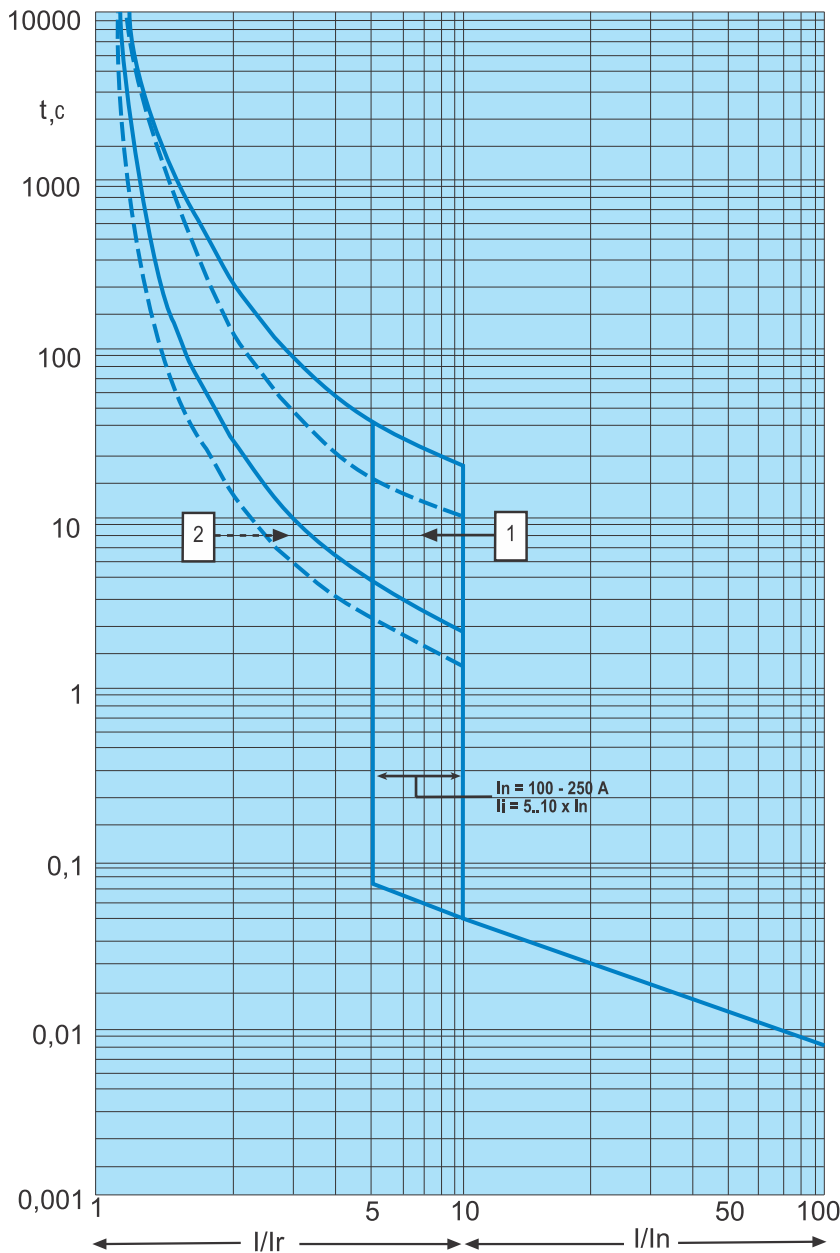


Specific heat (A2s), ie energy, released during a short circuit in the conduction arrester 1-ohm , depending from the rms value of the prospective current short circuit

Technical Characteristics - MCCB

Time current characteristics

Frame 3 - In (160A - 250A)



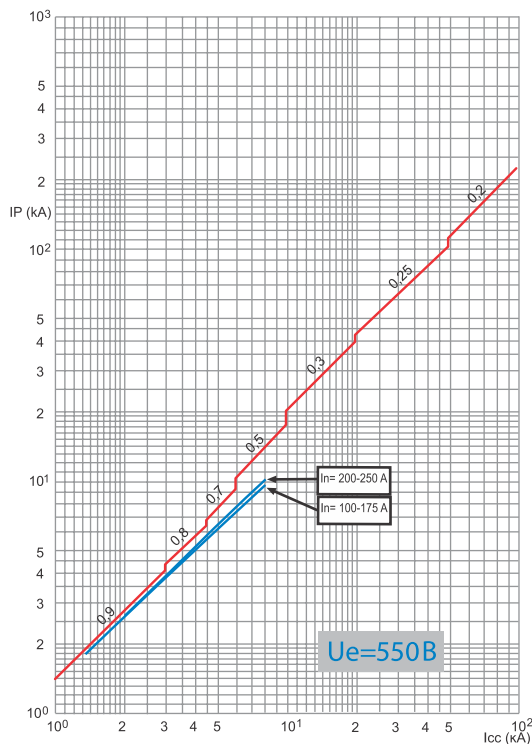
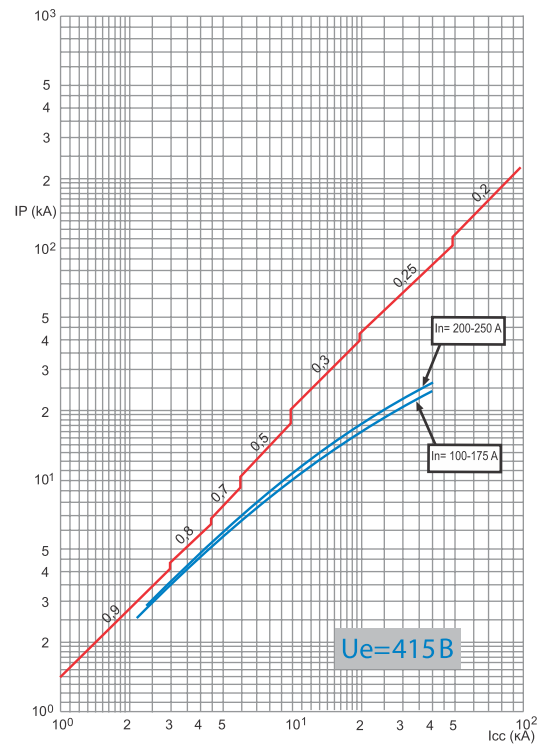
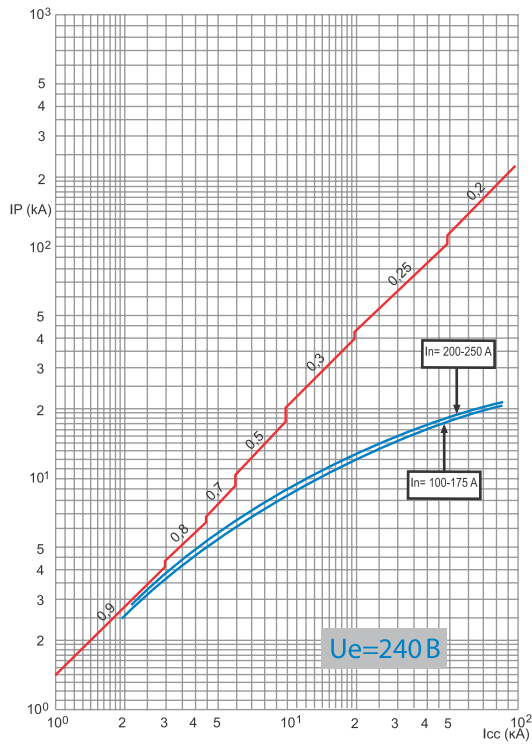
I - load current ;
I_r - the maximum value of the current setpoint thermal release . Rated current breaker depends on the bench current heat release ;
1 - working area of the "hot" state TE Pilaf release (in working condition) ;
2 - area of work from the "cold" state thermal release

The multiplicity of the load current to the rated current of the circuit breaker

Technical Characteristics - MCCB

Data limitations of current

Frame 3 - In (160A - 250A)

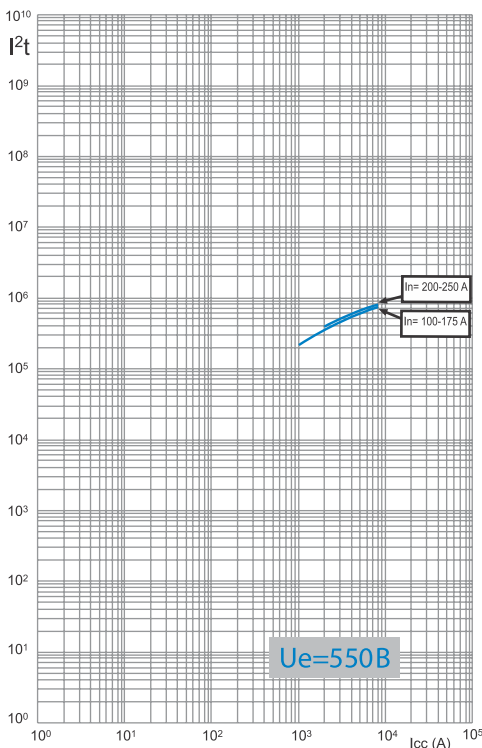
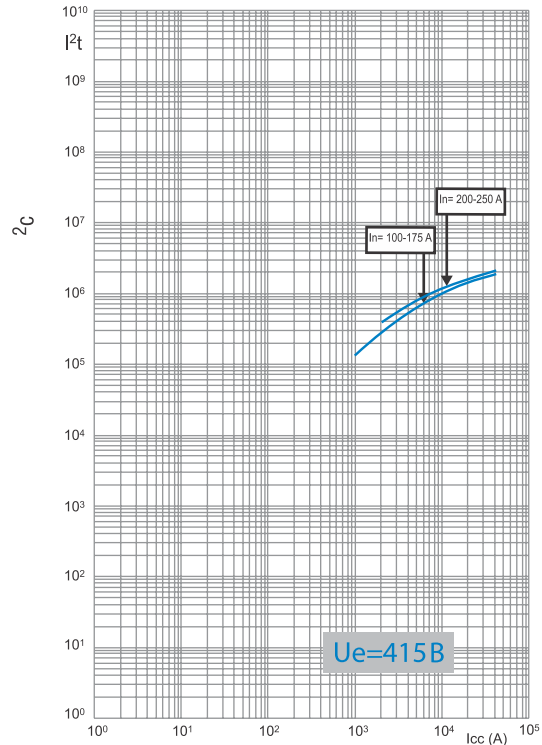
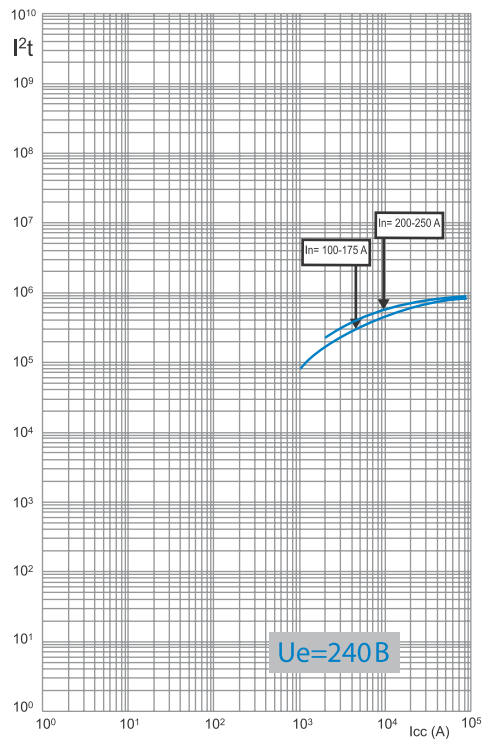


Limited impact the value of a short current circuit (the actual maximum value of) depending on the current values of expected short-circuit current

Technical Characteristics - MCCB

Limitations of energy curves

Frame 3 - In (160A - 250A)

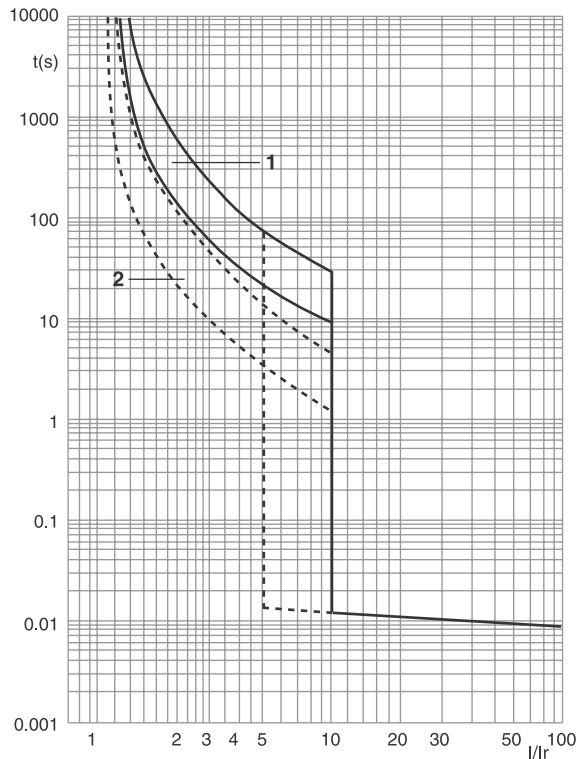


Specific heat (A2s), ie energy, released during a short circuit in the conduction arrester 1-ohm , depending from the rms value of the prospective current short circuit

Technical Characteristics - MCCB

Frame 4 - In (315A - 630A)

Performance data for Frame F4



at ambient $\theta = 40^{\circ}\text{C}$

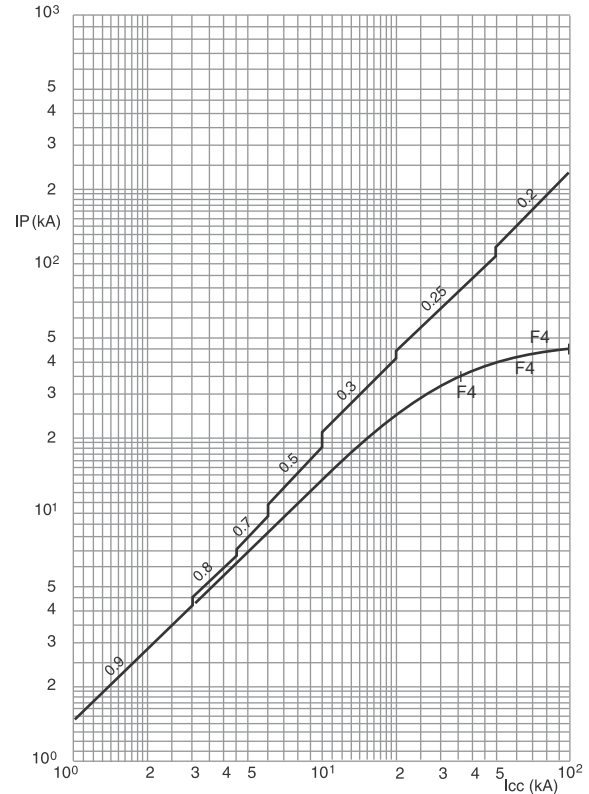
I = actual current

I_r = max. adjustment current of thermal release

1 = thermal release zone when cold

2 = thermal release zone when hot (in steady state)

Current limitation curves



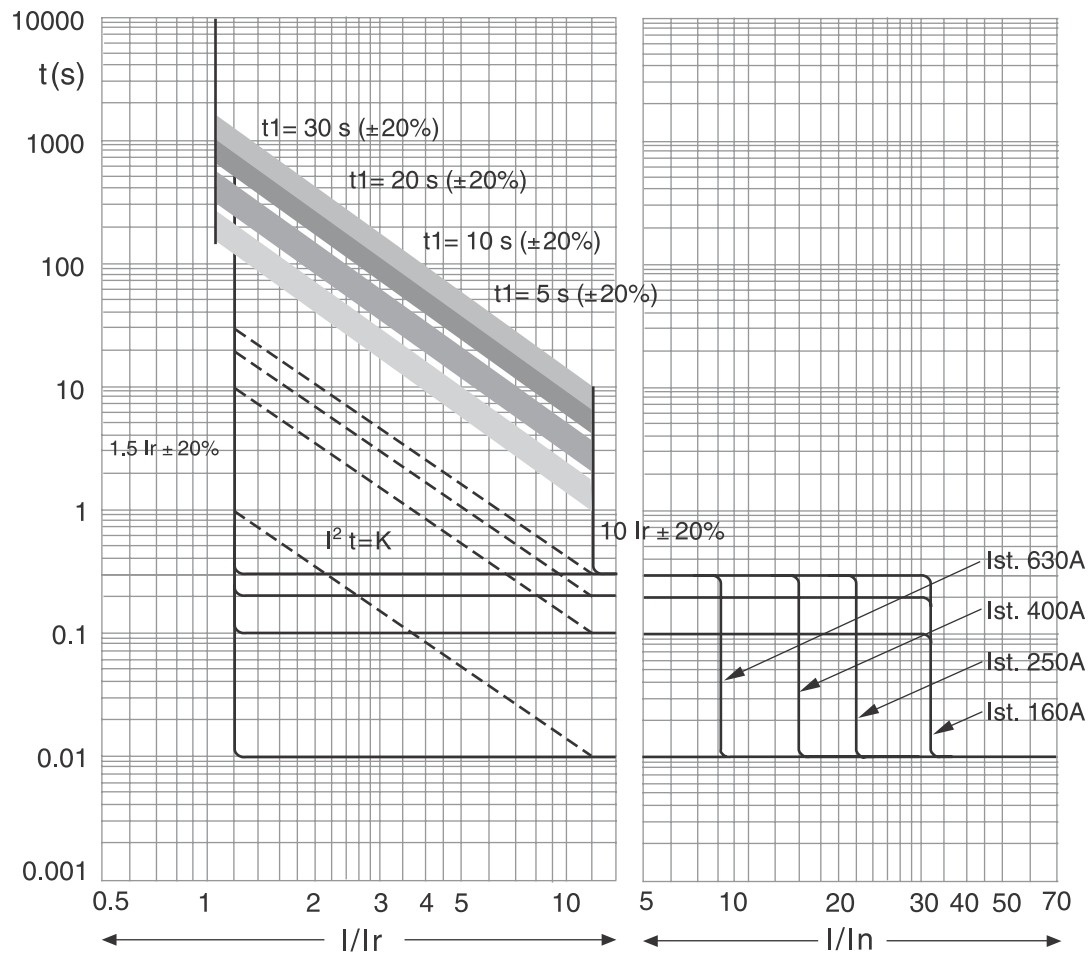
I_{cc} = prospective short-circuit symmetrical current
(rms value in kA)

IP = maximum peak value (in kA)

Technical Characteristics - MCCB

Frame 4 - In (315A - 630A)

Performance data for Frame F4 (S₂ - S_g)

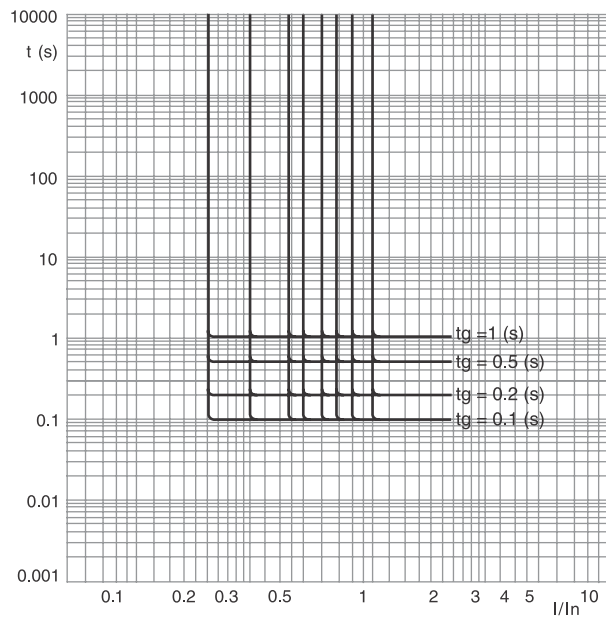


I_n = nominal current
 I = actual current
 I_r = max. adjustment current of thermal release

Technical Characteristics - MCCB

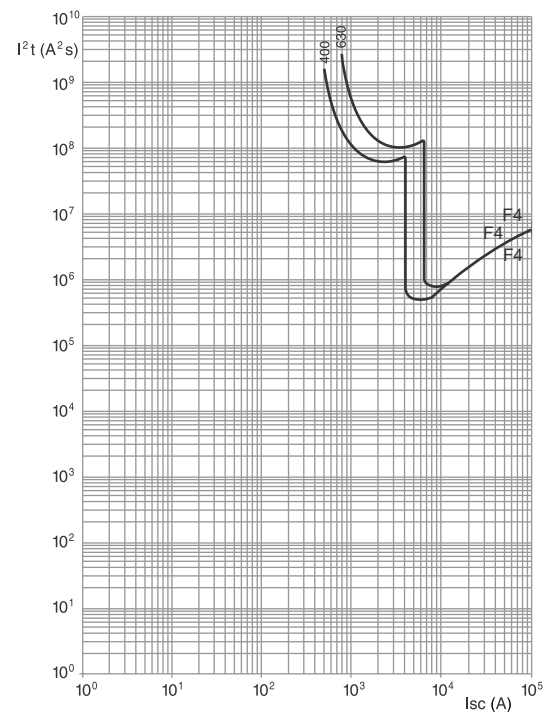
Frame 4 - In (315A - 630A)

Performance data (earth fault) Sg



I = actual current / I_n = nominal current

Thermal stress limitation curves

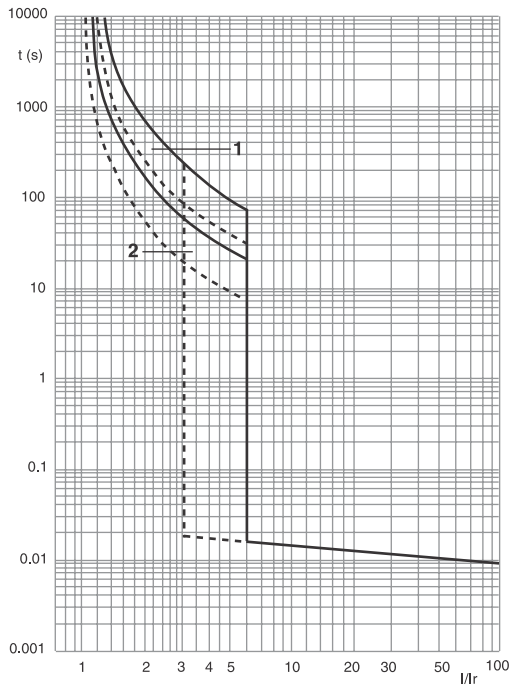


I_{sc} = prospective short-circuit symmetrical current (rms value in A)
 I^2t = limited thermal stress (in A²s)

Technical Characteristics - MCCB

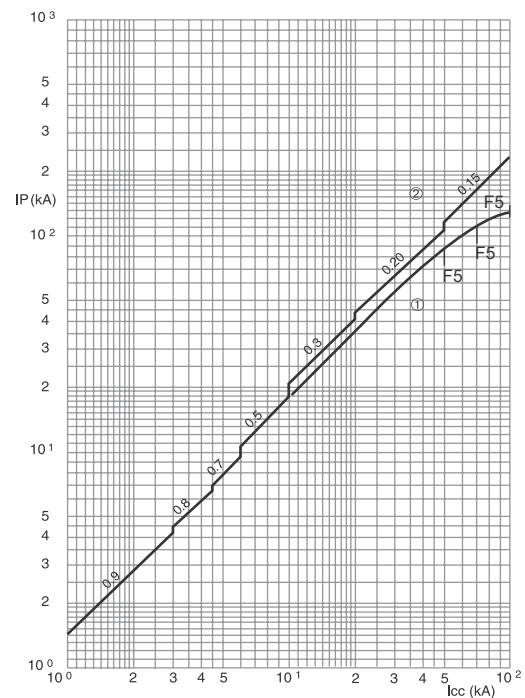
Frame 5 - In (800A - 1250A)

Performance data for Frame F5



at ambient $\theta = 40^{\circ}\text{C}$
 I = actual current / I_r = max. adjustment current of thermal release
 1 = thermal release zone when cold
 2 = thermal release zone when hot (in steady state)

Current limitation curves

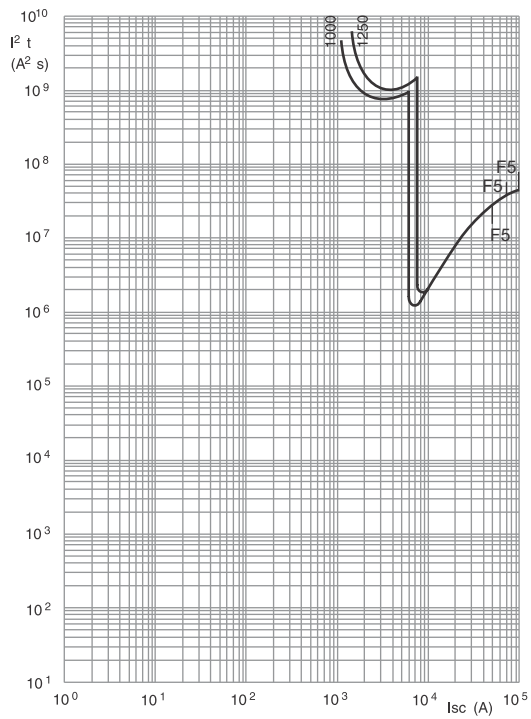


at ambient $\theta = 40^{\circ}\text{C}$
 I = actual current
 I_r = max. adjustment current of thermal release
 1 = thermal release zone when cold
 2 = thermal release zone when hot (in steady state)

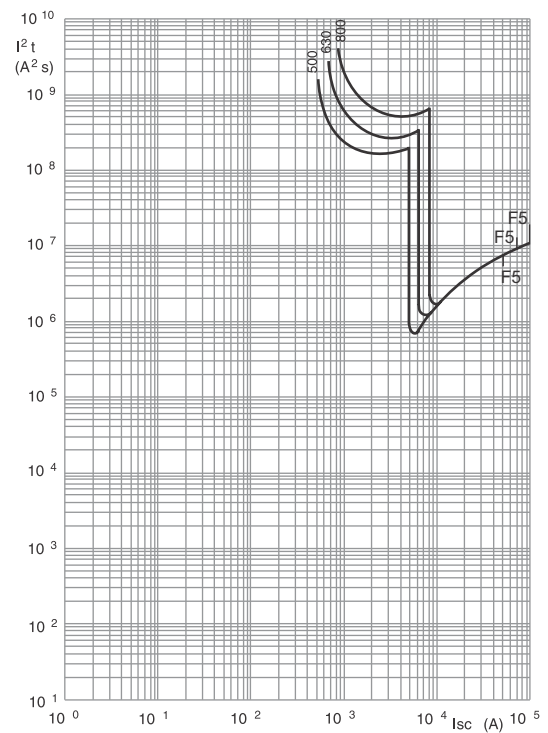
Technical Characteristics - MCCB

Frame 5 - In (800A - 1250A)

Thermal stress limitation curves



I_{sc} = prospective short-circuit symmetrical current (rms value in A)
 I^2t = limited thermal stress (in A^2s)



Technical Table

Devices	Optium 1.0 F1								Optium 1.0 F2			
Mounting	On plate											
Breaking capacity 380/415V 220/240V Breaking capacity %Icu	16kA		25kA		25kA				16kA	25kA	36kA	
	50%		50%		50%				50%	50%	50%	
Characteristics of use Nominal frequency Maximum rated operating voltage Category of use	50Hz 690 V A											
Thermal magnetic adjustment Thermal Magnetic	FIXED FIXED											
Electronic protection adjustment	—											
Maximum cable cross-section Rigid cable Flexible cable Copper bar and lug width Tightening torque	2.5 to 16 mm ²		10 to 50 mm ²		35 to 50 mm ²				35 to 150 mm ²			
	2.5 to 10 mm ²		10 to 50 mm ²		35 to 50 mm ²				35 to 120 mm ²			
	17mm		17mm		17mm				25mm			
	3 Nm		6 Nm		6 Nm				13 Nm			
Nominal current at 40 degree In (A) Phase N	16	25	32	40	50	63	80	100	125	160	200	250
	16	25	32	40	50	63	80	100	125	160	200	250
	16	25	32	40	50	63	80	100	125	160	200	250
Magnetic threshold In (A) Phase N	Fixed											
	16	25	32	40	50	63	80	100	125	160	200	250
	400	400	400	400	500	630	800	1000	1250	1600	2000	2500
	400	400	400	400	500	630	800	1000	1250	1600	2000	2500
Endurance Electrical Mechanical	8000								8000			
	25000								25000			

Technical Table

Devices	Optium 1.0 F3										Optium 1.0 F4			
Mounting	On plate													
Breaking capacity 380/415V 220/240V Breaking capacity %Icu	50kA 50%										36kA 50%	50kA 50%		
Characteristics of use Nominal frequency Maximum rated operating voltage Category of use	50Hz 690 V A													
Thermal magnetic adjustment Thermal Magnetic	FIXED FIXED													
Electronic protection adjustment	—													
Maximum cable cross-section Rigid cable Flexible cable Copper bar and lug width Tightening torque	2.5 to 150 mm ² 2.5 to 120 mm ² 7 Nm10 Nm										300 mm ² or 2 x 240 mm ² 240 mm ² or 2 x 185 mm ² 25 mm 15 Nm			
Nominal current at 40 degree In (A) Phase N	16	20	25	32	40	50	63	80	100	125	315 to 630 A			
	400	400	400	400	400	500	630	800	1000	1250	320	400	500	630
	400	400	400	400	400	500	630	800	1000	1250	320	400	500	630
Magnetic threshold In (A) Phase N	Fixed													
	16	20	25	32	40	50	63	80	100	125	320	400	500	630
	400	400	400	400	400	500	630	800	1000	1250	320	400	500	630
	400	400	400	400	400	500	630	800	1000	1250	320	400	500	630
Endurance Electrical Mechanical	8000 25000										8000 25000			

Technical Table

Devices	Optium 1.0 F5				Optium 2.0 F1											
Mounting	On plate															
Breaking capacity 380/415V 220/240V Breaking capacity %Icu	50kA				16kA				25kA							
	50%				100%				100%							
Characteristics of use Nominal frequency Maximum rated operating voltage Category of use	50Hz 690 V A															
Thermal magnetic adjustment Thermal Magnetic	FIXED				0.8 to 1 In 5 to 10 In											
Electronic protection adjustment	—															
Maximum cable cross-section Rigid cable Flexible cable Copper bar and lug width Tightening torque	2 or 4 x 240 mm ² 2 or 4 x 185 mm ² 50 mm 20 Nm				2.5 to 16 mm ² 2.5 to 10 mm ² 17mm 3 Nm				10 to 50 mm ² 10 to 35 mm ² 17 mm 6 Nm				35 to 50 mm ² 35 to 50 mm ² 17 mm 6 Nm			
Nominal current at 40 degree In (A) Phase N	800 A				16 to 125A											
	500	630	800	16	25	32	40	50	63	80	100	125				
	500	630	800	16	25	32	40	50	63	80	100	125				
Magnetic threshold In (A) Phase N	Fixed			Adjustable												
	500	630	800													
	500	630	800													
	500	630	800													
Endurance Electrical Mechanical	8000				8000											
	10000				25000											

Technical Table

Devices	Optium 2.0 F2			Optium 2.0 F3		Optium 2.0 F4			Optium 2.0 F5			
Mounting	On plate											
Breaking capacity												
380/415V	16kA	25kA	36kA	50kA	25kA	36kA	50kA	36kA	50kA			
220/240V												
Breaking capacity %Icu	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Characteristics of use												
Nominal frequency	50Hz											
Maximum rated operating voltage	690 V											
Category of use	A											
Thermal magnetic adjustment												
Thermal	0.8 to 1 In											
Magnetic	5 to 10 In											
Electronic protection adjustment	—											
Maximum cable cross-section												
Rigid cable	35 to 150 mm ²			2.5 to 150 mm ²		300 mm ² or 2 x 240 mm ²			2 or 4 x 240 mm ²			
Flexible cable	35 to 120 mm ²			2.5 to 120 mm ²		240 mm ² or 2 x 185 mm ²			2 or 4 x 185 mm ²			
Copper bar and lug width	25 mm			25 mm		32 mm			50 mm			
Tightening torque	13 Nm			7 nm / 10 nm		15 Nm			20 Nm			
Nominal current at 40 degree												
In (A)	160 to 250 A			Refer same as		315 to 630 A			800 to 1250A			
Phase	160	200	250	Optium 1.0 F3		320	400	500	630	800	1000	1250
N	160	200	250			320	400	500	630	800	1000	1250
Magnetic threshold	Adjustable											
In (A)	160	200	250			320	400	500	630	800	1000	1250
Phase	200-400	315-630	500-1000			1600-3200	2000-4000	2500-5000	3150-6300	4000-8000	5000-10000	6250-12500
N	200-400	315-630	500-1000			1600-3200	2000-4000	2500-5000	3150-6300	4000-8000	5000-10000	6250-12500
Endurance												
Electrical	8000			8000		8000			4000			
Mechanical	25000			25000		25000			10000			

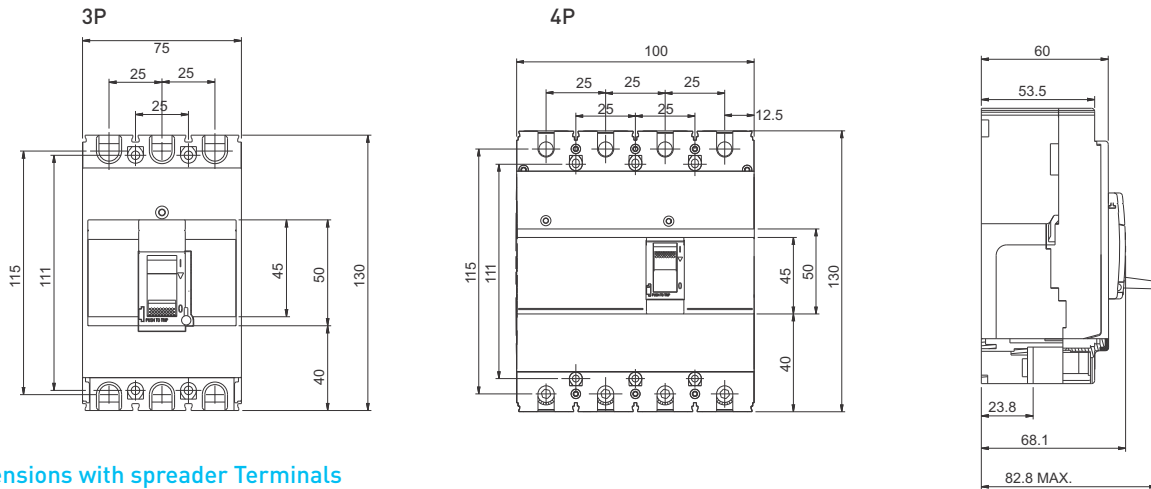
Technical Table

Devices	Optium 2.1 F3	Optium 2.1 F4	Optium 2.1 F5	Optium 2.2 F3	Optium 2.2 F4	Optium 2.2 F5
Mounting	On plate					
Breaking capacity	36kA 50kA		36kA 50kA		36kA 50kA	
380/415V	36kA	50kA	36kA	50kA	36kA	50kA
220/240V	36kA	50kA	36kA	50kA	36kA	50kA
Breaking capacity %Icu	100%	100%	100%	100%	100%	100%
Characteristics of use	50Hz					
Nominal frequency	690 V					
Maximum rated operating voltage	A	A:In 630A-B:In 200 to 400A	B	A	A:In 630A-B:In 200 to 400A	B
Category of use						
Thermal magnetic adjustment						
Thermal						
Magnetic						
Electronic protection adjustment	I _r : 0,4 to 1 I _n I _{sd} : 1,5 to 10 I _r	I _r = 0.4 - 1 x I _n t _r = 3-30 s I _{sd} = 1.5 - 10 I _r t _{sd} (I=K) = 0-500 ms t _{sd} (I2t=K) = 0-500 ms	I _r = 0.4 - 1 x I _n t _r = 3-30 s I _{sd} = 1.5 - 10 I _r t _{sd} (I=K) = 0-500 ms t _{sd} (I2t=K) = 0-500 ms	I _r : 0,4 to 1 I _n I _{sd} : 1,5 to 10 I _r	I _r = 0.4 - 1 x I _n t _r = 3-30 s I _{sd} = 1.5 - 10 I _r t _{sd} (I=K) = 0-500 ms t _{sd} (I2t=K) = 0-500 ms I _g = 0.2 - 1 x I _n t _g = 0.1 - 1 s	I _r = 0.4 - 1 x I _n t _r = 3-30 s I _{sd} = 1.5 - 10 I _r t _{sd} (I=K) = 0-500 ms t _{sd} (I2t=K) = 0-500 ms I _g = 0.2 - 1 x I _n t _g = 0.1 - 1 s
Maximum cable cross-section	2.5 to 150 mm ²		300 mm ² or 2 x 240 mm ²		2 or 4 x 240 mm ²	
Rigid cable	2.5 to 150 mm ²	300 mm ² or 2 x 240 mm ²	2 or 4 x 240 mm ²	2.5 to 150 mm ²	300 mm ² or 2 x 240 mm ²	2 or 4 x 240 mm ²
Flexible cable	2.5 to 120 mm ²	240 mm ² or 2 x 185 mm ²	2 or 4 x 185 mm ²	2.5 to 120 mm ²	240 mm ² or 2 x 185 mm ²	2 or 4 x 185 mm ²
Copper bar and lug width	25 mm	32 mm	50 mm	25 mm	32 mm	50 mm
Tightening torque	7Nm /10 Nm	15 Nm	20 Nm	7Nm /10 Nm	15 Nm	20 Nm
Nominal current at 40 degree	Please refer same as Optium 1.0 F3		400 to 630 A	800 to 1250 A	Please refer same as Optium 1.0 F3	400 to 630 A
In (A)	Please refer same as Optium 1.0 F3		400 to 630 A	800 to 1250 A	Please refer same as Optium 1.0 F3	400 to 630 A
Phase	Please refer same as Optium 1.0 F3		400 to 630 A	800 to 1250 A	Please refer same as Optium 1.0 F3	400 to 630 A
N	Please refer same as Optium 1.0 F3		0-50-100% of phase value	0-50-100% of phase value	Please refer same as Optium 1.0 F3	0-50-100% of phase value
Magnetic threshold	Adjustable					
In (A)	Adjustable					
Phase	Adjustable					
N	Adjustable					
Endurance	8000		5000		4000	
Electrical	8000	5000	4000	8000	5000	4000
Mechanical	25000	20000	10000	25000	20000	10000

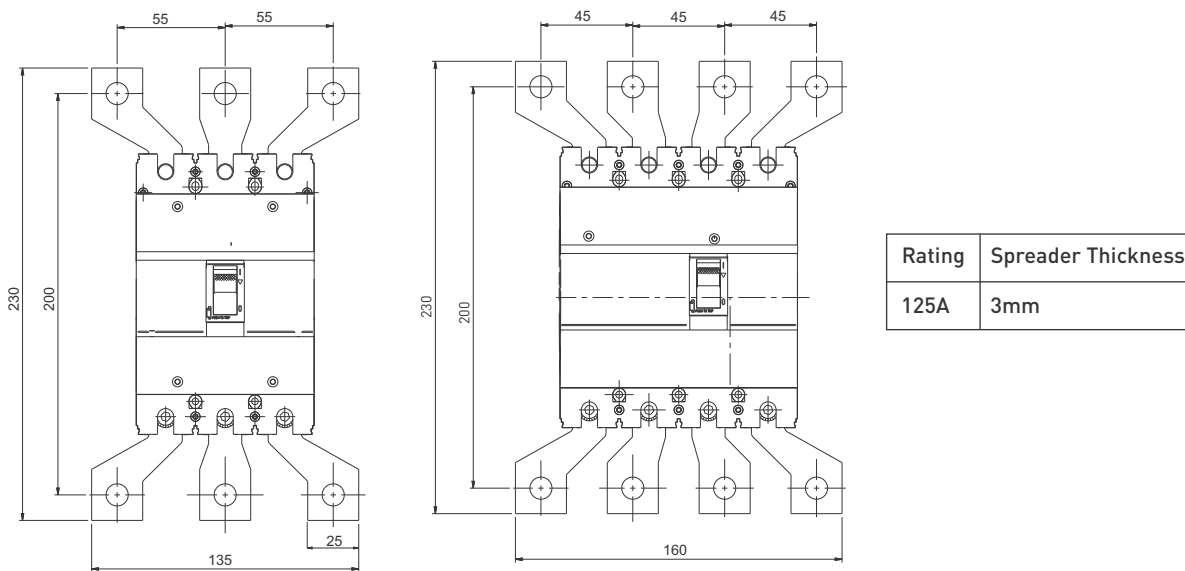
Dimensional Drawings

Optium F1

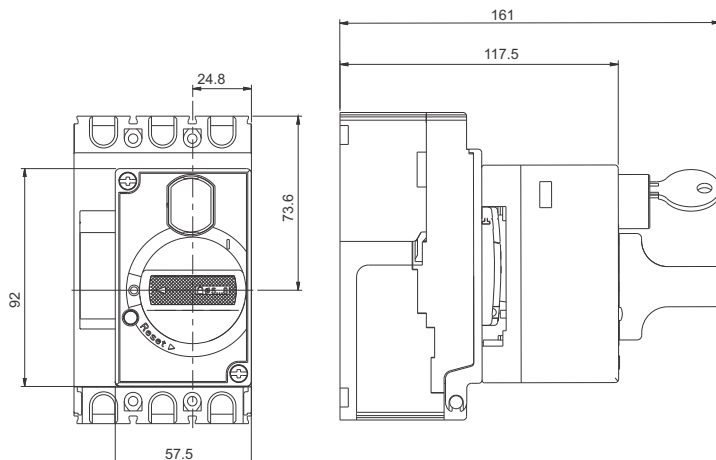
Overall and Mounting Dimensions



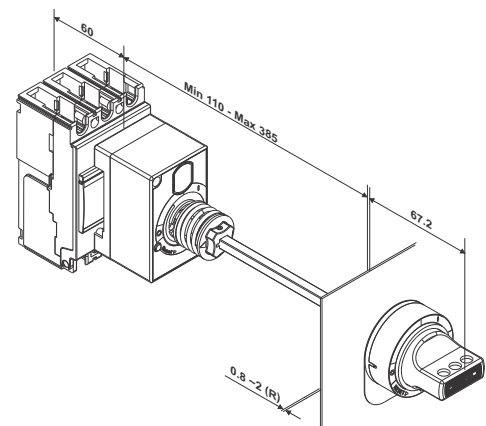
Dimensions with spreader Terminals



Dimensions with Rotary Handle-Direct



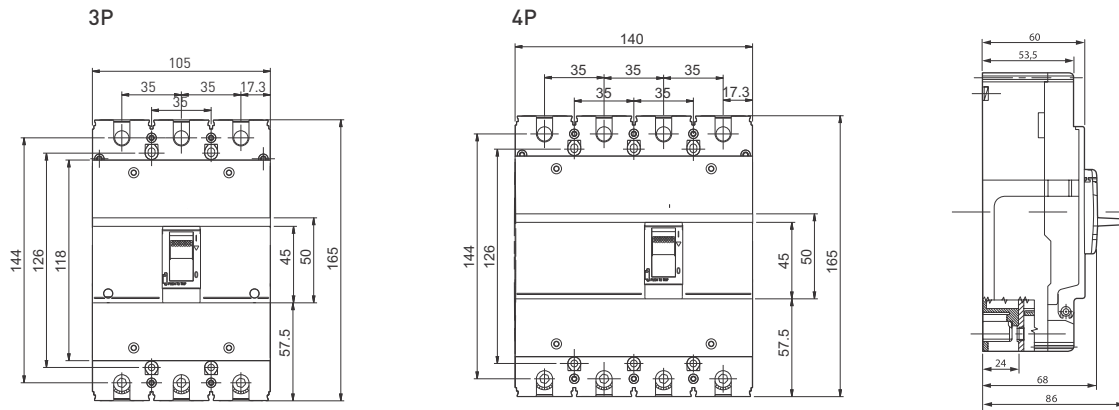
Dimensions with Rotary Handle-Vari-Depth



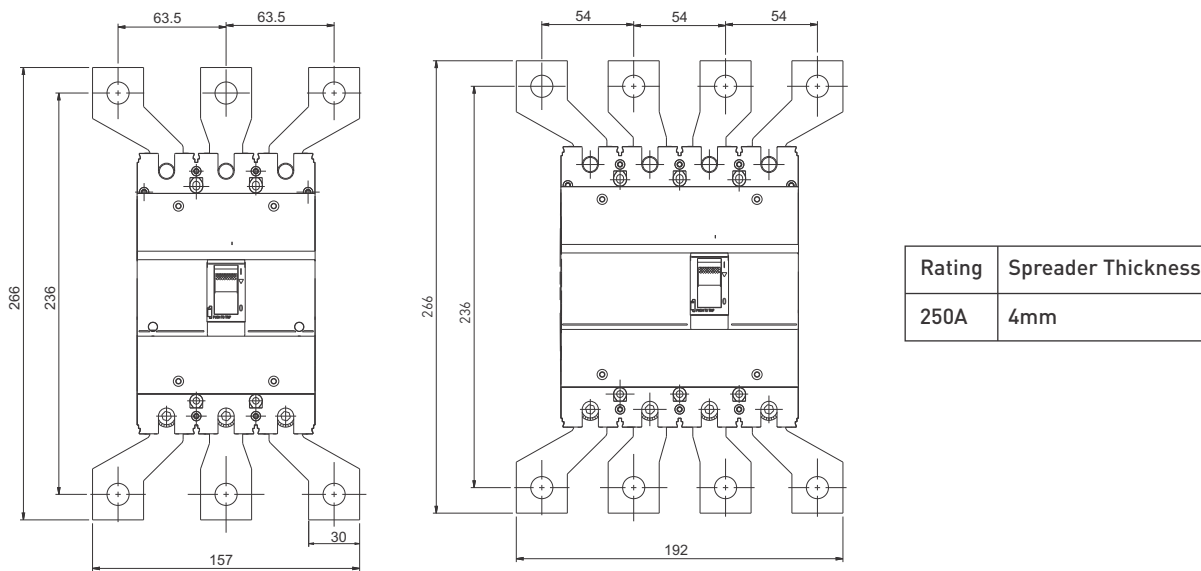
Dimensional Drawings

Optium F2

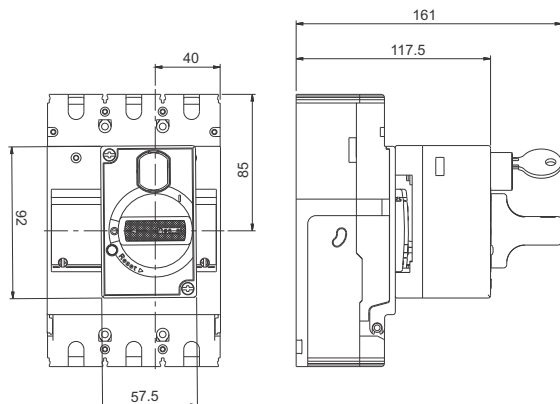
Overall and Mounting Dimensions



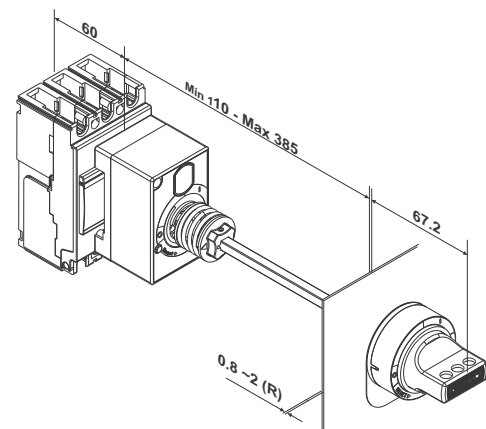
Dimensions with spreader Terminals



Dimensions with Rotary Handle-Direct



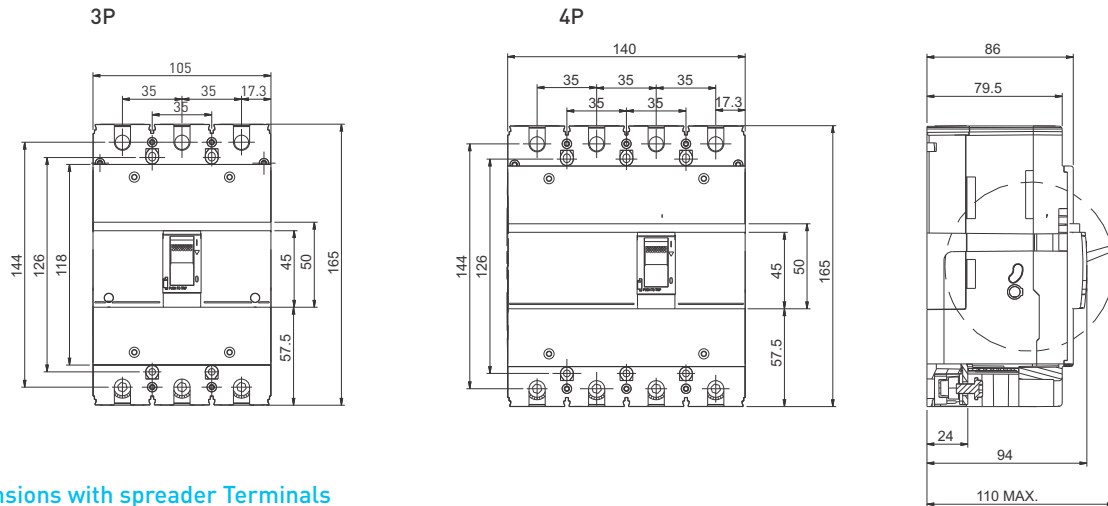
Dimensions with Rotary Handle-Vari-Depth



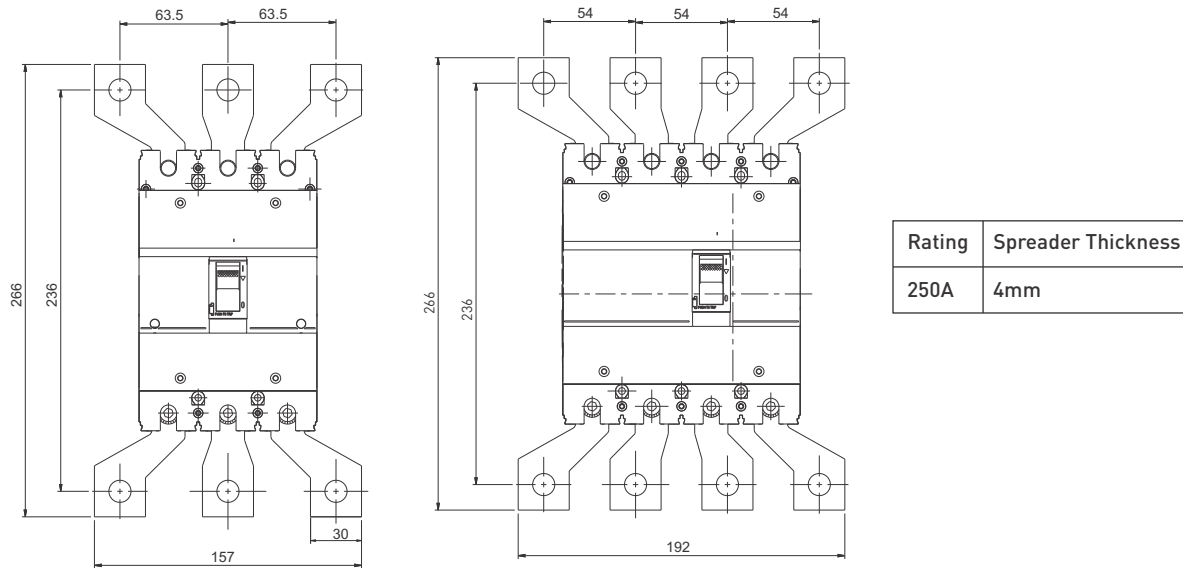
Dimensional Drawings

Optium F3

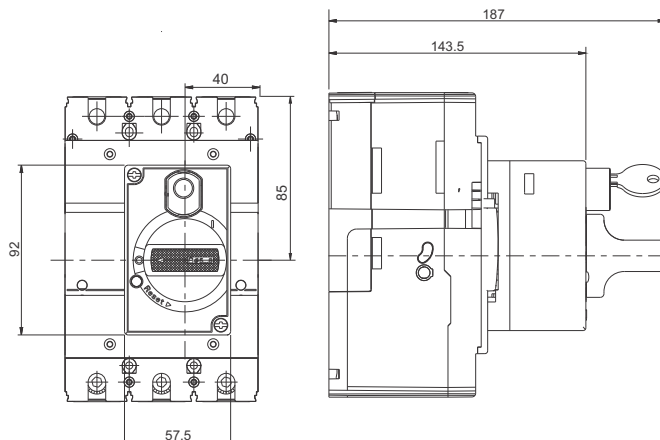
Overall and Mounting Dimensions



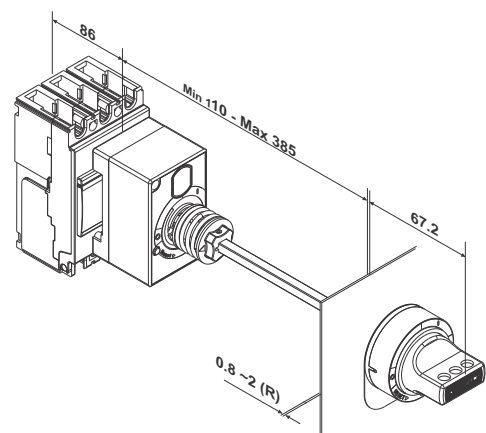
Dimensions with spreader Terminals



Dimensions with Rotary Handle-Direct



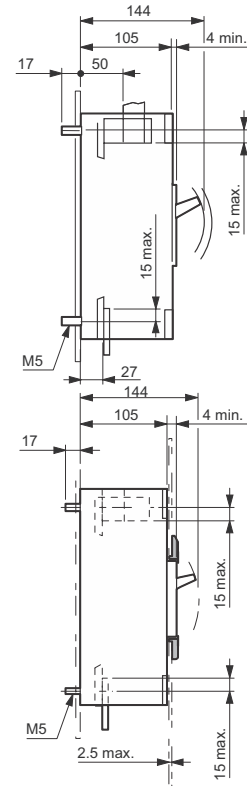
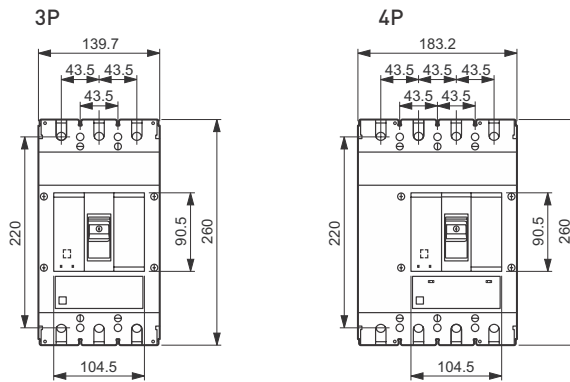
Dimensions with Rotary Handle-Vari-Depth



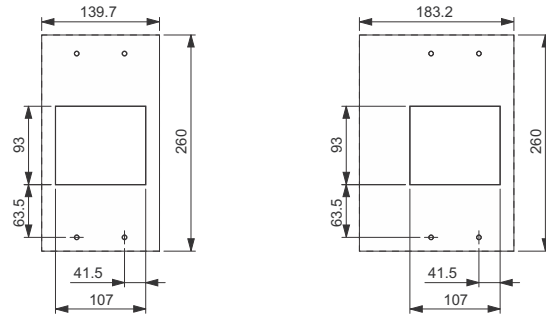
Dimensional Drawings

Optium F4

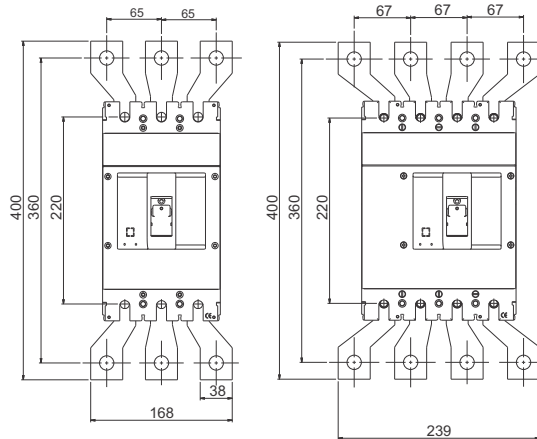
Overall and Mounting Dimensions



Door Cut

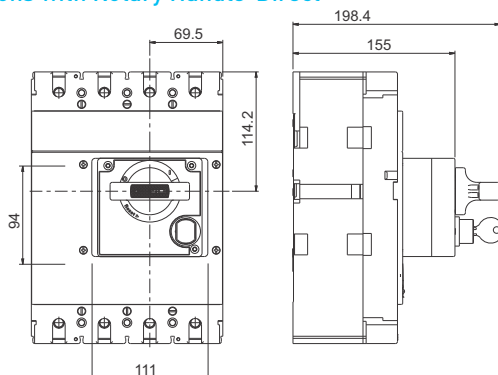


Dimensions with spreader Terminals

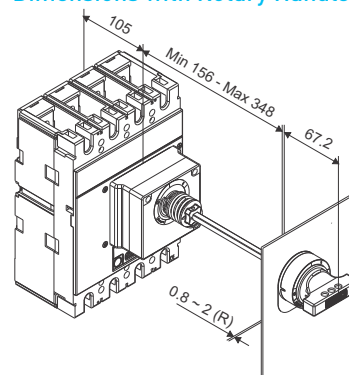


Rating	Spreader Thickness
630A	10mm

Dimensions with Rotary Handle-Direct



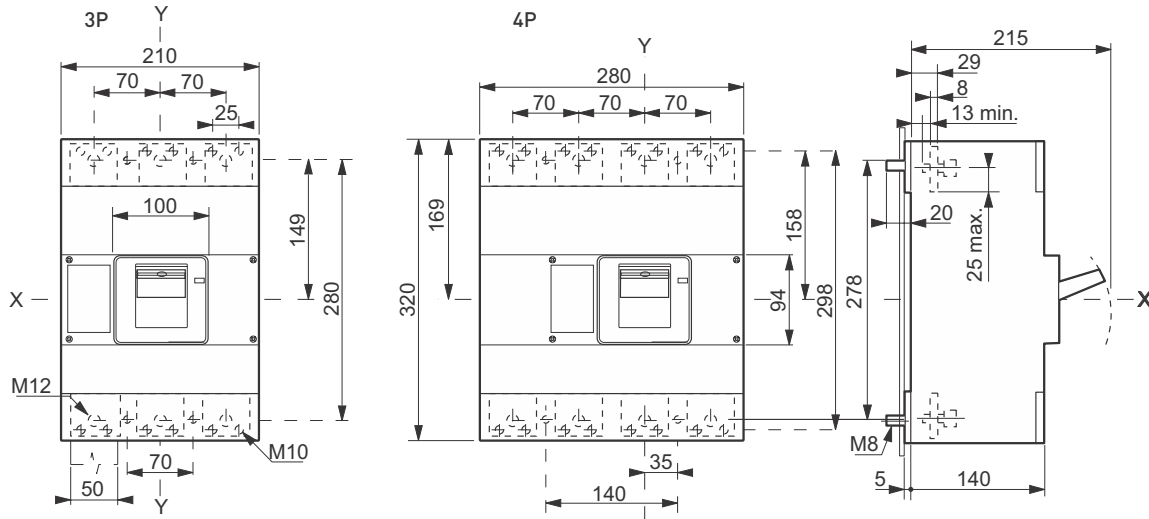
Dimensions with Rotary Handle-Vari-Depth



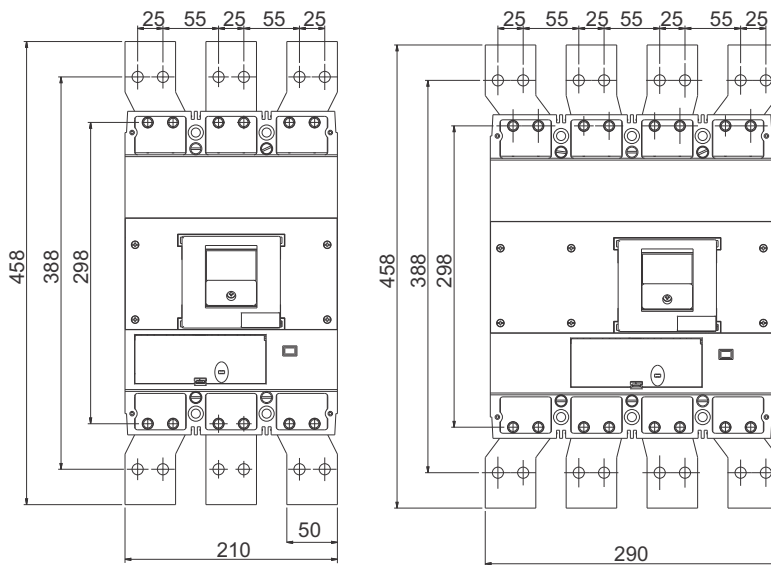
Dimensional Drawings

Optium F5

Overall and Mounting Dimensions

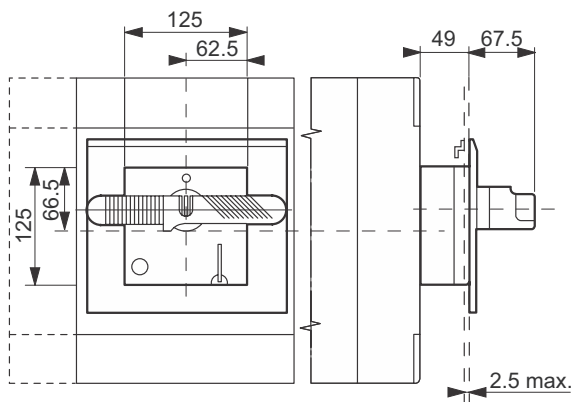


Dimensions with spreader Terminals



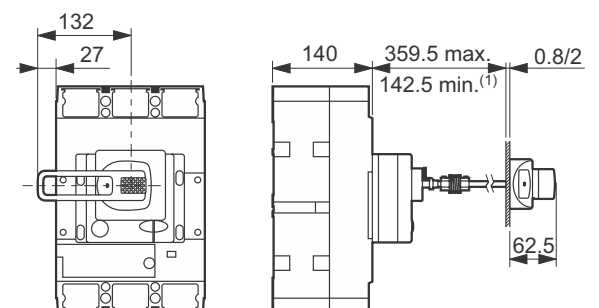
Rating	Spreader Thickness
800/10000A	10mm
1250A	12mm

Dimensions with Rotary Handle-Direct




Dimensions with Rotary Handle-Vari-Depth


Mounting with flexible seal





Optium 1.0 (Fixed TM Range)


- Ics =50% Icu as per IEC 60947-II
- Class II front face
- Suitable for isolation
- Fixed Overload & fixed short circuit setting


	Frame	Breaking capacity	Rating	3P	4P
		F1	16kA	16	830001
	F1	16kA	25	830002	830016
	F1	16kA	32	830003	830017
	F1	16kA	40	830004	830018
	F1	16kA	50	830005	830019
	F1	16kA	63	830006	830020
	F1	16kA	80	830007	830021
	F1	16kA	100	830008	830022
	F1	16kA	125	830009	830023


	Frame	Breaking capacity	Rating	3P	4P
		F1	25kA	16	830031
	F1	25kA	25	830032	830046
	F1	25kA	32	830033	830047
	F1	25kA	40	830034	830048
	F1	25kA	50	830035	830049
	F1	25kA	63	830036	830050
	F1	25kA	80	830037	830051
	F1	25kA	100	830038	830052
	F1	25kA	125	830039	830053

	Frame	Breaking capacity	Rating	3P	4P
		F1	36kA	16	830061
	F1	36kA	25	830062	830076
	F1	36kA	32	830063	830077
	F1	36kA	40	830064	830078
	F1	36kA	50	830065	830079
	F1	36kA	63	830066	830080
	F1	36kA	80	830067	830081
	F1	36kA	100	830068	830082
	F1	36kA	125	830069	830083

	Frame	Breaking capacity	Rating	3P	4P
	F3	50kA	16	830125	830145
	F3	50kA	25	830126	830146
	F3	50kA	32	830127	830147
	F3	50kA	40	830128	830148
	F3	50kA	50	830129	830149
	F3	50kA	63	830130	830150
	F3	50kA	80	830131	830151
	F3	50kA	100	830132	830152
	F3	50kA	125	830133	830153

	Frame	Breaking capacity	Rating	3P	4P
	F2	16kA	160	830090	830095
	F2	16kA	200	830091	830096
	F2	16kA	250	830092	830097
	F2	25kA	160	830100	830105
	F2	25kA	200	830101	830106
	F2	25kA	250	830102	830107
	F2	36kA	160	830110	830115
	F2	36kA	200	830111	830116
	F2	36kA	250	830112	830117

	Frame	Breaking capacity	Rating	3P	4P
	F3	50kA	160	830134	830154
	F3	50kA	200	830135	830155
	F3	50kA	250	830136	830156

	Frame	Breaking capacity	Rating	3P	4P
	F4	36kA	315	830165	830175
	F4	36kA	400	830166	830176
	F4	36kA	500	830167	830177
F4	36kA	630	830168	830178	

Frame	Breaking capacity	Rating	3P	4P
F4	50kA	315	830185	830195
F4	50kA	400	830186	830196
F4	50kA	500	830187	830197
F4	50kA	630	830188	830198


Frame	Breaking capacity	Rating	3P	4P
F5	50kA	800	830200	830201


Optium 2.0 (Adjustable TM Range)


- Ics =100% Icu as per IEC 60947-II
- Suitable for isolation
- Adjustable Short Circuit Setting I_{sd} =(5 - 10)xI_n
- Class II front face
- Adjustable Overload Setting I_r =(0.8 to 1.0)xI_n


Frame	Breaking capacity	Rating	3P	4P
F1	16kA	25	830222	830236
F1	16kA	32	830223	830237
F1	16kA	40	830224	830238
F1	16kA	50	830225	830239
F1	16kA	63	830226	830240
F1	16kA	80	830227	830241
F1	16kA	100	830228	830242
F1	16kA	125	830229	830243

Frame	Breaking capacity	Rating	3P	4P
F1	25kA	25	830252	830266
F1	25kA	32	830253	830267
F1	25kA	40	830254	830268
F1	25kA	50	830255	830269
F1	25kA	63	830256	830270
F1	25kA	80	830257	830271
F1	25kA	100	830258	830272
F1	25kA	125	830259	830273


	Frame	Breaking capacity	Rating	3P	4P
	F3	36kA	16	830305	830325
	F3	36kA	25	830306	830326
	F3	36kA	32	830307	830327
	F3	36kA	40	830308	830328
	F3	36kA	50	830309	830329
	F3	36kA	63	830310	830330
	F3	36kA	80	830311	830331
	F3	36kA	100	830312	830332
	F3	36kA	125	830313	830333

	Frame	Breaking capacity	Rating	3P	4P
	F3	50kA	16	830345	830365
	F3	50kA	25	830346	830366
	F3	50kA	32	830347	830367
	F3	50kA	40	830348	830368
	F3	50kA	50	830349	830369
	F3	50kA	63	830350	830370
	F3	50kA	80	830351	830371
	F3	50kA	100	830352	830372
	F3	50kA	125	830353	830373

	Frame	Breaking capacity	Rating	3P	4P
	F2	16kA	160	830280	830285
	F2	16kA	200	830281	830286
	F2	16kA	250	830282	830287
	F2	25kA	160	830290	830295
	F2	25kA	200	830291	830296
	F2	25kA	250	830292	830297
	F3	36kA	160	830314	830334
	F3	36kA	200	830315	830335
	F3	36kA	250	830316	830336

	Frame	Breaking capacity	Rating	3P	4P
	F3	50kA	160	830354	830374
	F3	50kA	200	830355	830375
	F3	50kA	250	830356	830376

	Frame	Breaking capacity	Rating	3P	4P
	F4	25kA	315	830385	830387
	F4	25kA	400	830386	830388
	F4	36kA	315	830390	830395
	F4	36kA	400	830391	830396
	F4	36kA	500	830392	830397
	F4	36kA	630	830393	830398
	F4	50kA	315	830400	830405
	F4	50kA	400	830401	830406
	F4	50kA	500	830402	830407
	F4	50kA	630	830403	830408

	Frame	Breaking capacity	Rating	3P	4P
	F5	36kA	800	830410	830413
	F5	36kA	1000	830411	830414
	F5	36kA	1250	830412	830415
	F5	50kA	800	830416	830419
	F5	50kA	1000	830417	830420
	F5	50kA	1250	830418	830421


Optium 2.1 (Electronic Range)


- Ics =100% Icu as per IEC 60947-II
- Suitable for isolation
- Adjustable Overload Setting $I_r = 0.4 - 1 \times I_n$
- Class II front face
- Transparent cover for trip unit as standard
- Adjustable Short circuit Current Setting $I_{sd} = 1.5 - 10 \times I_r$

	Frame	Breaking capacity	Rating	3P	4P
	F3	36kA	40	830430	830440
	F3	36kA	100	830431	830441
	F3	36kA	160	830432	830442
	F3	36kA	250	830433	830443
	F3	50kA	40	830450	830460
	F3	50kA	100	830451	830461
	F3	50kA	160	830452	830462
	F3	50kA	250	830453	830463

Optium 2.1 (Electronic Range)

- Ics =100% Icu as per IEC 60947-II
- Suitable for isolation
- Adjustable Neutral pole protection -N,N/2 & Off for 4 pole MCCB
- Adjustable Overload Setting $I_r = 0.4 - 1 \times I_n$; $T_r = 3-30 \text{ sec}$
- Class II front face
- Transparent cover for trip unit as standard
- Innovative front indication LED's(Ready, Overload pre-alarm & Overload)
- Adjustable Short circuit Current Setting $I_{sd} = 1.5 - 10 I_r$; $T_{sd} (I=K) = 0-500 \text{ ms}$; $T_{sd} (I2t=K) = 0-500 \text{ ms}$

	Frame	Breaking capacity	Rating	3P	4P
	F4	36kA	400	830510	830512
	F4	36kA	630	830511	830513
	F4	50kA	400	830514	830516
	F4	50kA	630	830515	830517

	Frame	Breaking capacity	Rating	3P	4P
	F5	36kA	800	830540	830542
	F5	36kA	1250	830541	830543
	F5	50kA	800	830544	830546
	F5	50kA	1250	830545	830547

Optium 2.2 (Electronic Range)

- Ics =100% Icu as per IEC 60947-II
- Suitable for isolation
- Adjustable Overload Setting $I_r = 0.4 - 1 \times I_n$
- Ground fault Setting:- $I_g = 0.2 - 1 \times I_n$
- Class II front face
- Transparent cover for trip unit as standard
- Adjustable Short circuit Current Setting $I_{sd} = 1.5 - 10 \times I_r$

	Frame	Breaking capacity	Rating	3P	4P
	F3	36kA	40	830470	830480
	F3	36kA	100	830471	830481
	F3	36kA	160	830472	830482
	F3	36kA	250	830473	830483
	F3	50kA	40	830490	830500
	F3	50kA	100	830491	830501
	F3	50kA	160	830492	830502
	F3	50kA	250	830493	830503


Optium 2.2


- Ics =100% Icu as per IEC 60947-II
- Suitable for isolation
- Adjustable Neutral pole protection -N,N/2 & Off for 4 pole MCCB
- Adjustable Overload Setting $I_r = 0.4 - 1 \times I_n$; $T_r = 3-30$ sec
- Ground fault Setting:- $I_g = 0.2 - 1 \times I_n$; $T_g = 0.1 - 1$ s
- Class II front face
- Transparent cover for trip unit as standard
- Innovative front indication LED's(Ready, Overload pre-alarm & Overload)
- Adjustable Short circuit Current Setting $I_{sd} = 1.5 - 10 I_r$; $T_{sd} (I=K) = 0-500$ ms ; $T_{sd} (I2t=K) = 0-500$ ms


	Frame	Breaking capacity	Rating	3P	4P
	F4	36kA	400	830520	830522
	F4	36kA	630	830521	830523
	F4	50kA	400	830524	830526
	F4	50kA	630	830525	830527

	Frame	Breaking capacity	Rating	3P	4P
	F5	36kA	800	830550	830552
	F5	36kA	1250	830551	830553
	F5	50kA	800	830554	830556
	F5	50kA	1250	830555	830557


Optium Accessories


	Product	Frame	Cat Ref.
	Auxiliary contact	F1 F2 F3	830691
	Auxiliary contact	F4-F5	830693
	Alarm Contact	F1 F2 F3	830692
	Alarm Contact	F4-F5	830693


	Product	Frame	Cat Ref.
	"Shunt trip 24 V AC/DC"	F1 F2 F3	830602
	"Shunt trip 110 V AC/DC"	F1 F2 F3	830603
	"Shunt trip 230 V AC/DC"	F1 F2 F3	830604
	"Shunt trip 415 V AC/DC"	F1 F2 F3	830605
	"Shunt trip 24 V AC/DC"	F4 F5	830642
	"Shunt trip 110 V AC/DC"	F4 F5	830643
	"Shunt trip 230 V AC/DC"	F4 F5	830644
"Shunt trip 415 V AC/DC"	F4 F5	830645	


	Product	Frame	Cat Ref.
	"Undervoltage 24 V DC"	F1 F2 F3	830606
	"Undervoltage 110V AC"	F1 F2 F3	830607
	"Undervoltage 230V AC"	F1 F2 F3	830608
	"Undervoltage 415V AC"	F1 F2 F3	830609
	"Undervoltage 24 V DC"	F4 F5	830646
	"Undervoltage 110V AC"	F4 F5	830647
	"Undervoltage 230V AC"	F4 F5	830648
"Undervoltage 415V AC"	F4 F5	830649	

Optium Accessories

	Product	Frame	Cat Ref.
	Rotary Handle Direct	F1	830611
	Rotary Handle vary-Depth	F1	830612
	Rotary Handle Direct	F2 F3	830626
	Rotary Handle vary-Depth	F2 F3	830627
	Rotary Handle Direct	F4	830651
	Rotary Handle vary-Depth	F4	830652
	Rotary Handle Direct	F5	830671
Rotary Handle vary-Depth	F5	830672	


	Product	Frame	Cat Ref.
	Ronis lock Direct RH	F1 F2 F3	830613
	Ronis lock Vary-Depth RH	F1 F2 F3	830614
	Ronis lock Vary-Depth RH	F4	830653
Ronis lock Vary-Depth RH	F5	830673	

	Product	Frame	Cat Ref.
	Padlock Off position	F1 F2 F3	830615
	Padlock Off position	F4	830654
Padlock Off position	F5	830674	

	Product	Frame	Cat Ref.
	Phase insulators 3P	F1 F2	830616
	Phase insulators 3P	F3	830628
	Phase insulators 3P	F4	830655
	Phase insulators 3P	F5	830675
	Phase insulators 4P	F1 F2	830617
	Phase insulators 4P	F3	830629
	Phase insulators 4P	F4	830656
Phase insulators 4P	F5	830676	

Optium Accessories

	Product	Frame	Cat Ref.
	Terminal cover 3P	F4	830657
	Terminal cover 3P	F5	830677
	Terminal cover 4P	F4	830658
	Terminal cover 4P	F5	830678
	Terminal shield 3P	F5	830679
	Terminal shield 4P	F5	830680

	Product	Frame	Cat Ref.
	Spreaders 3P	F1	830618
	Spreaders 4P	F1	830619
	Spreaders 3P	F2 F3	830632
	Spreaders 4P	F2 F3	830633
	Spreaders 3P	F4	830659
	Spreaders 4P	F4	830660
	Spreaders 3P 800/1000A	F5	830681
	Spreaders 4P 800/1000A	F5	830682
	Spreaders 3P 1250A	F5	830685
	Spreaders 4P 1250A	F5	830686

	Product	Frame	Cat Ref.
	Cages 3P upto 50A	F1	830620
	Cages 4P upto 50A	F1	830621
	Cages 3P 63 to 100A	F1	830622
	Cages 4P 63 to 100A	F1	830623
	Cages 3P 125A	F1	830624
	Cages 4P 125A	F1	830625
	Cages 3P	F2	830630
	Cages 4P	F2	830631
	Cages 3P	F3	830634
	Cages 4P	F3	830635
	Cages 3P	F4	830661
	Cages 4P	F4	830662
	Cages 3P	F5	830683
	Cages 4P	F5	830684