



— optium™ —

ALL THAT YOU NEED

A stylized line drawing of industrial machinery, featuring a large blue machine with a control panel and a white machine with a conveyor belt. The background shows a factory setting with pipes and structural elements.

**TRUST.
SAFETY.
DURABILITY.**

As electrical control and safety has become a basic necessity these days, Indo Asian has always stressed on providing innovative and high quality products to meet customer demand. With breakthrough products backed by motivation and insight, Indo Asian has risen to be a lead player in the field of Low Voltage Switchgear products.

Indo Asian range of Optium Series, a new generation of MCCBs, stands out due to its state-of-the-art design, contemporary user friendly features, ergonomics, aesthetics and compactness.

The range is specially designed for tropical conditions, ensuring reliable performance at high ambient and humid environments. The range can satisfy the most demanding system requirements.

The Optium Series, having a wide range of accessories, ensures operational safety, reliability and versatility

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— optium™ —
ALL THAT YOU NEED

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



F1



F2



F4



F3



F5

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		IEC/EN 60947-2 50+60 Hz
Uimp=6kV Ui=690V		



Example >>

Optium 1.0 F1 B 100A

Optium ☐ ☐ ☐ ☐

Rating(In)

Form 16A to 1250A

Breaking Capacity (Icu@415V)

E=10kA, 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,
1.1= TM Fixed(Is=Iw)2.0= TMI adj,
2.1=Elec. LS & 2.2=Elec.LSG

Design Model of MCCB

Adjustable settings



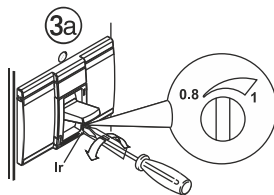
F1 & F2



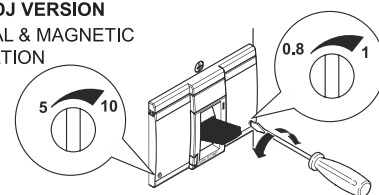
F3

ONLY ADJ VERSION
THERMAL
REGULATION

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



ONLY ADJ VERSION
THERMAL & MAGNETIC
REGULATION



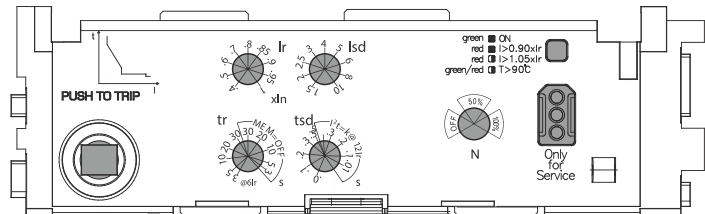
$$I_r = (0,8 \pm 1) \times I_n$$

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

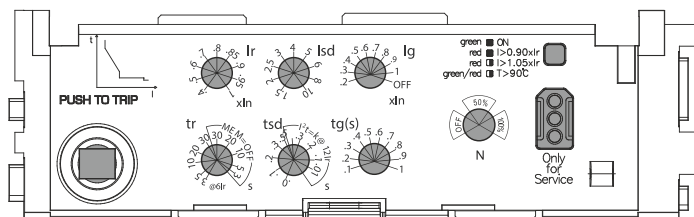
F4



Only Electronic Version (LS)-S2
830510...830517



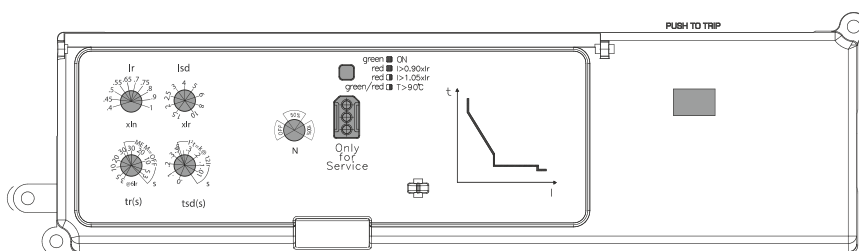
Only Electronic Version (LSG)-SG
830520...830527



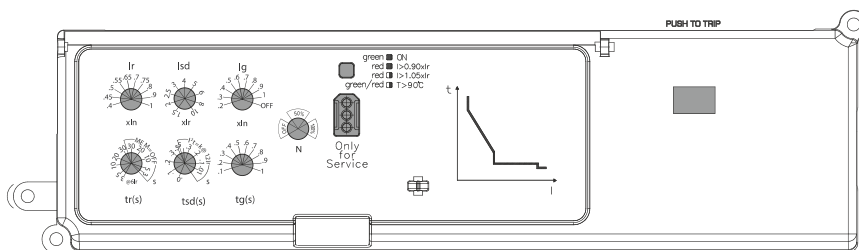
F5



Only Electronic Version (LS)-S2
830540...830547



Only Electronic Version (LSG)-Sg
830550...830557



Fixed range
Ics=50% Icu

ICS		ICU
10 kA		5 kA
16 kA	=	8 kA
25 kA		12.5 kA
36 kA		18 kA
50 kA		25 kA

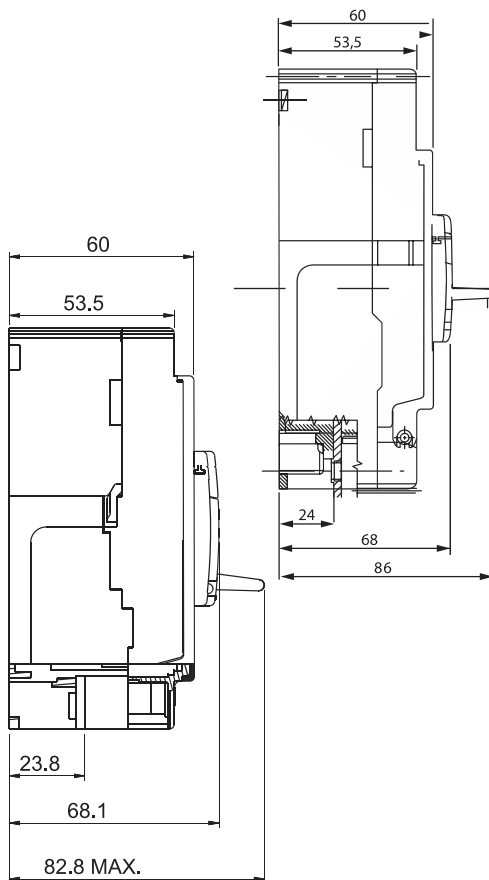
Fixed range
Ics=100% Icu

ICU		ICS
16 kA		16 kA
25 kA	=	25 kA

Adjustable range
Ics=100% Icu

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



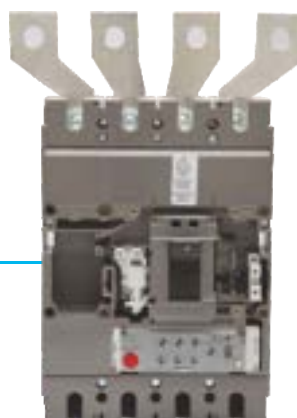
Shunt trip



Undervoltage

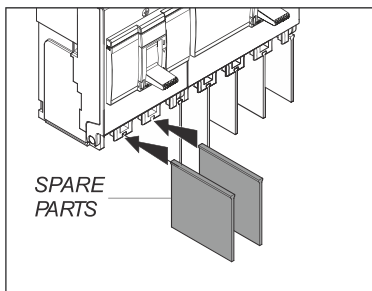


Easy-to-install accessories

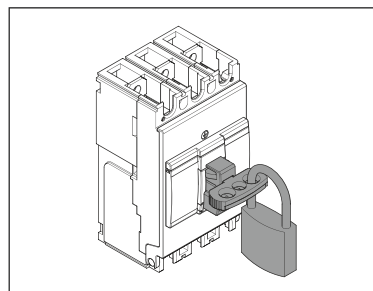


Accessories

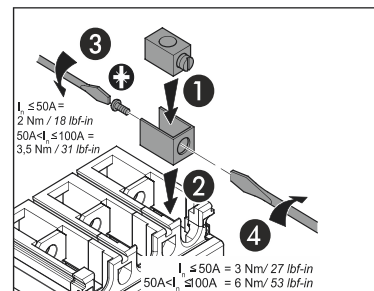
Phase Separator



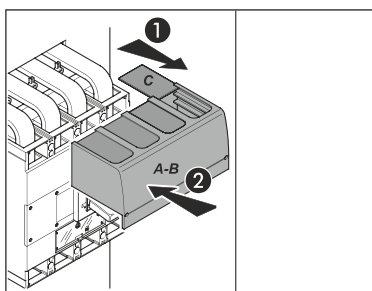
Padlock - Off Position



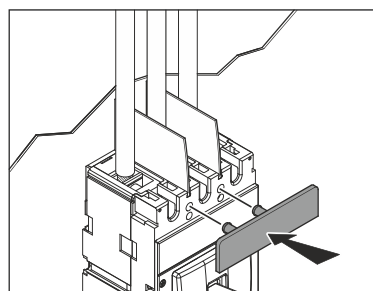
Cage Terminals



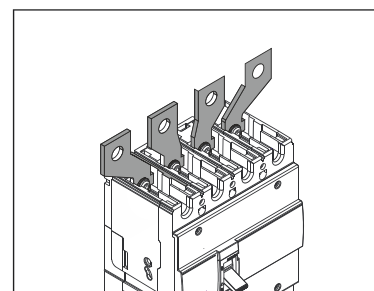
Terminal Shield



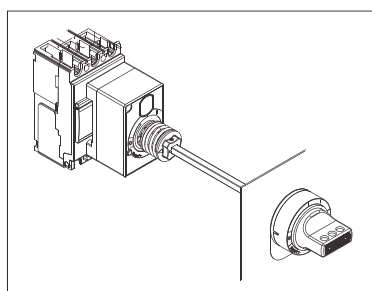
Terminal Cover



Spreader Link



Rotary Handle

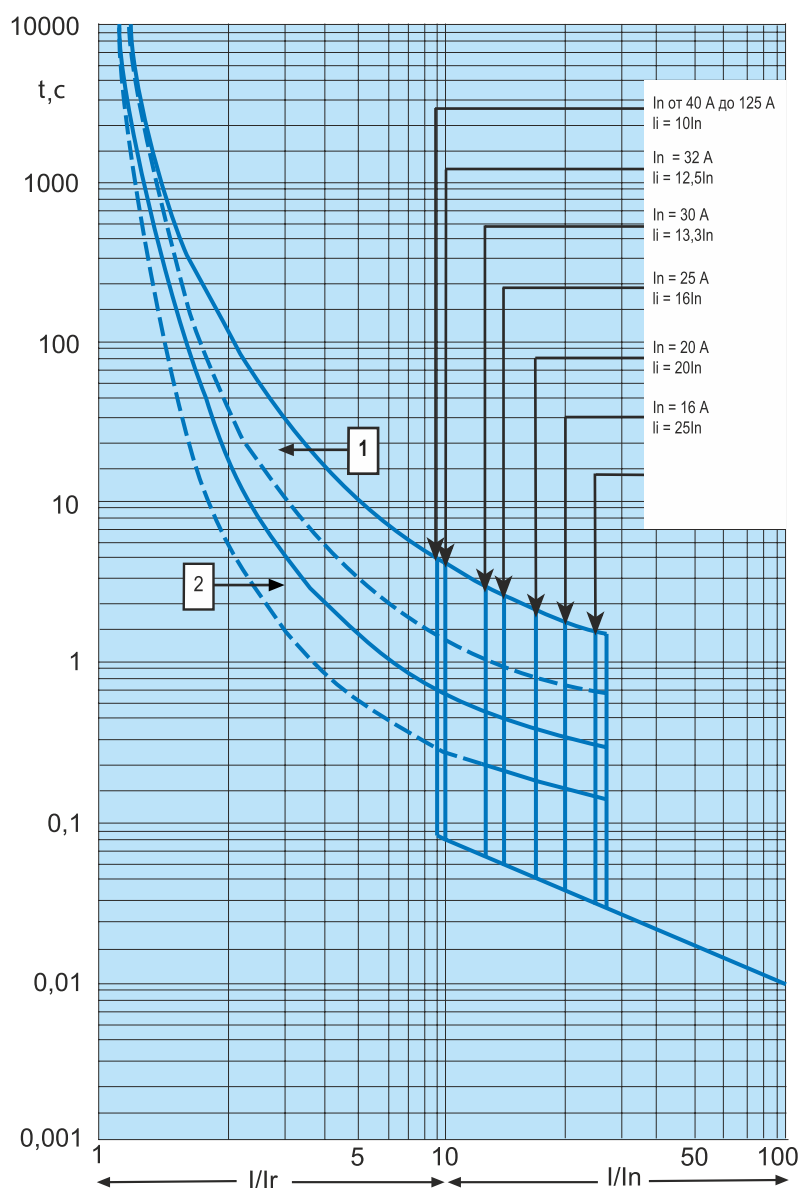


Technical Characteristics - MCCB

Time current characteristics

Time current tripping characteristics at ambient temperature 40° C

Frame 1 - In (16A - 125A)

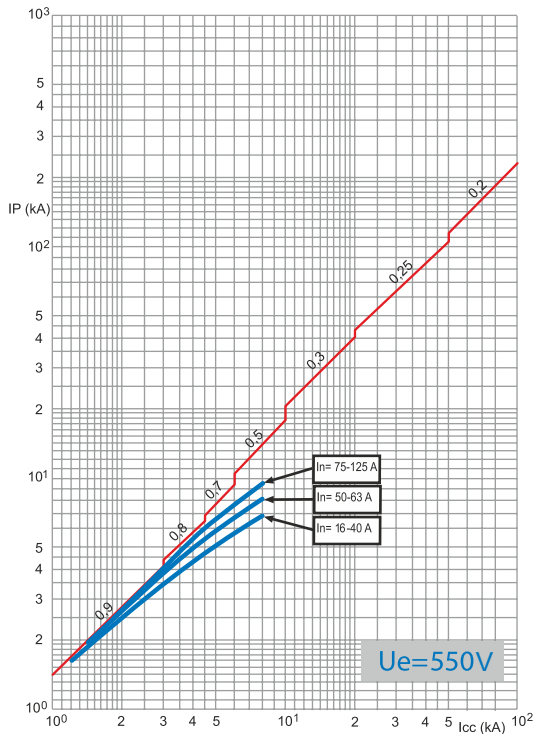
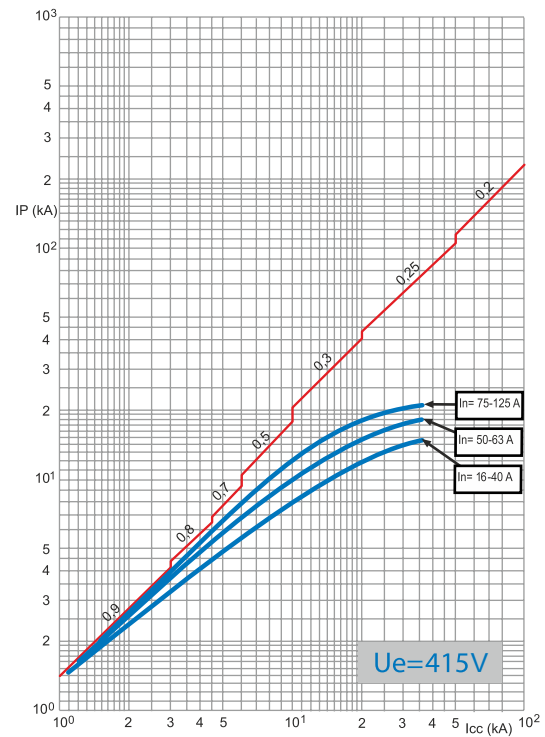
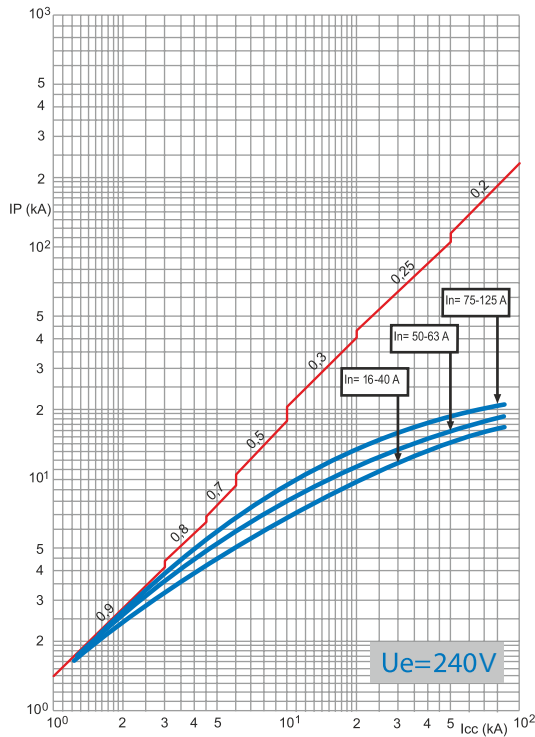


I - load current ;
 I_r - the maximum value of the current setpoint thermal release . Current Rating You are a breaker is determined by the rated current thermal release ;
1 - area of work from the "cold" state thermal release
2 - working area of the "hot" state TE Pilaf release (in working condition)

Technical Characteristics - MCCB

Data limitations of current

Frame 1 - In (16A - 125A)

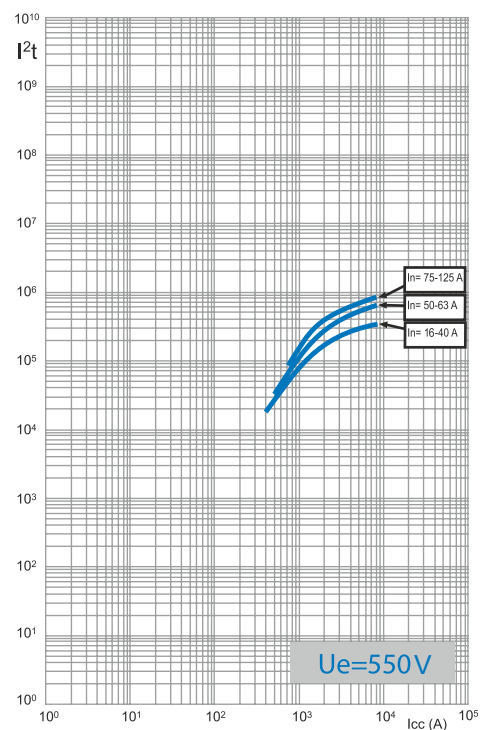
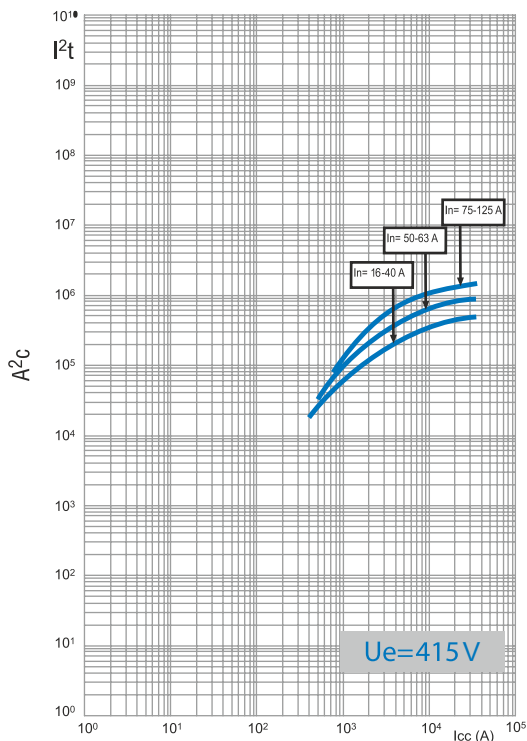
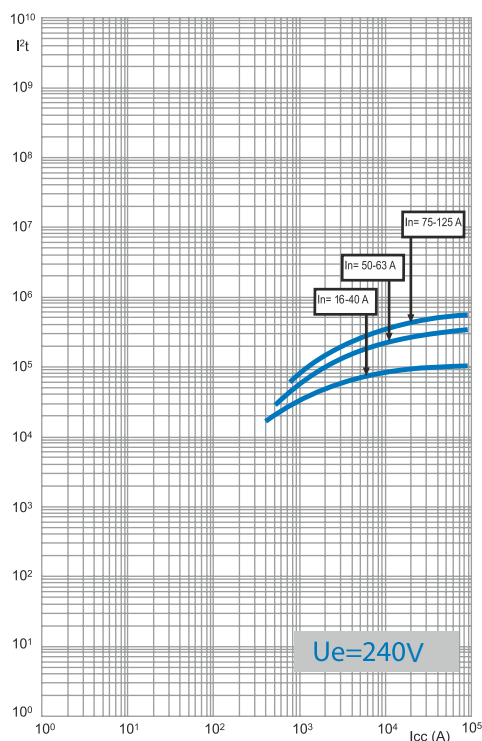


Limitation of shock value Short- current
contiguity (actual maximum value) in the
Depending on the current value of the expected
direct fault current

Technical Characteristics - MCCB

Limitations of energy curves

Frame 1 - In (16A - 125A)

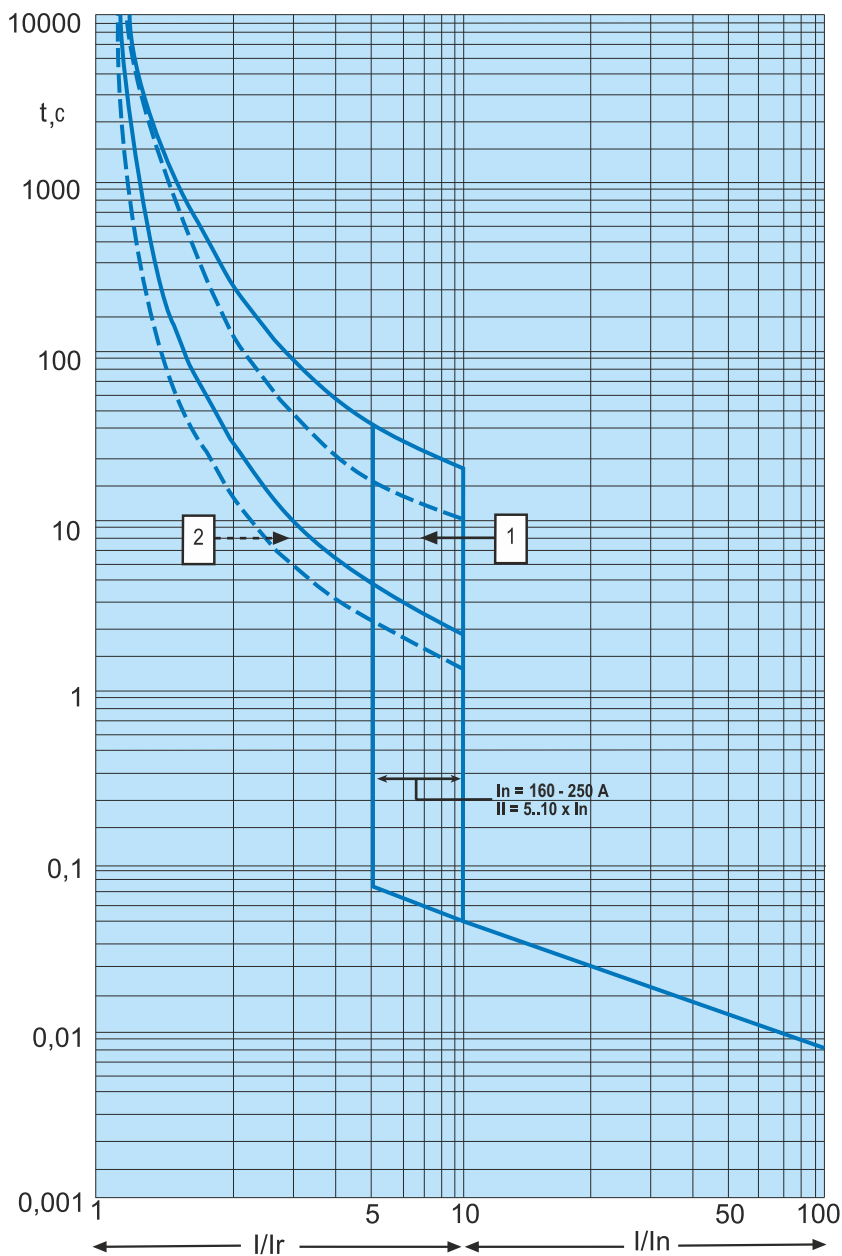


Specific heat (A^2s), ie energy, released during a short circuit in the conduction arrester 1-ohm , depending from the rms value of the prospective current short circuit

Technical Characteristics - MCCB

Time current characteristics

Frame 2 - In (160A - 250A)



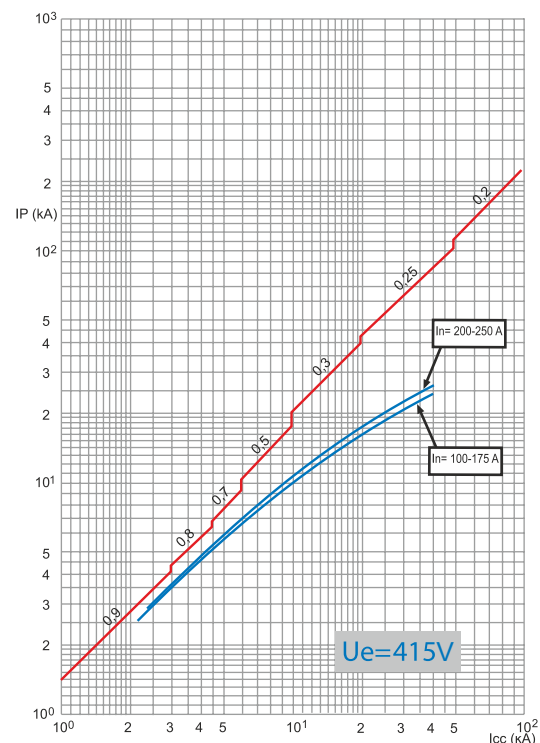
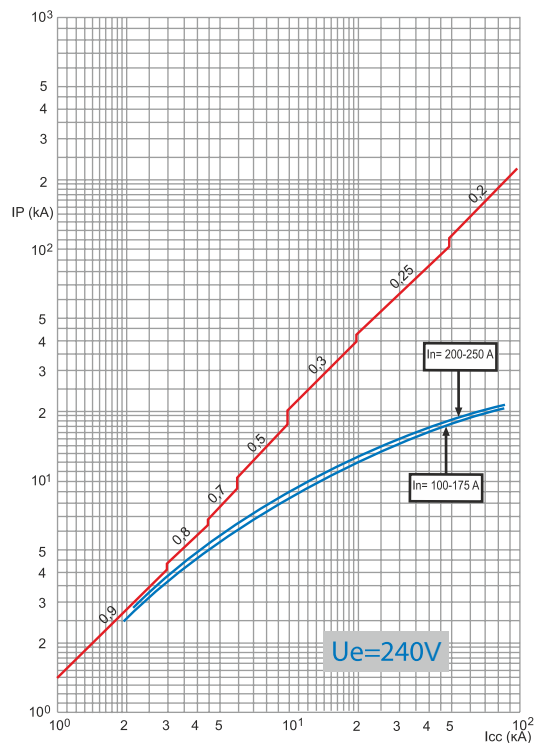
I - load current ;
 I_r - the maximum value of the current setpoint thermal release . Rated current breaker depends on the bench current heat release ;
 1 - area of work from the "cold" state thermal release
 2 - working area of the "hot" state TE Pilaf release (in working condition)

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

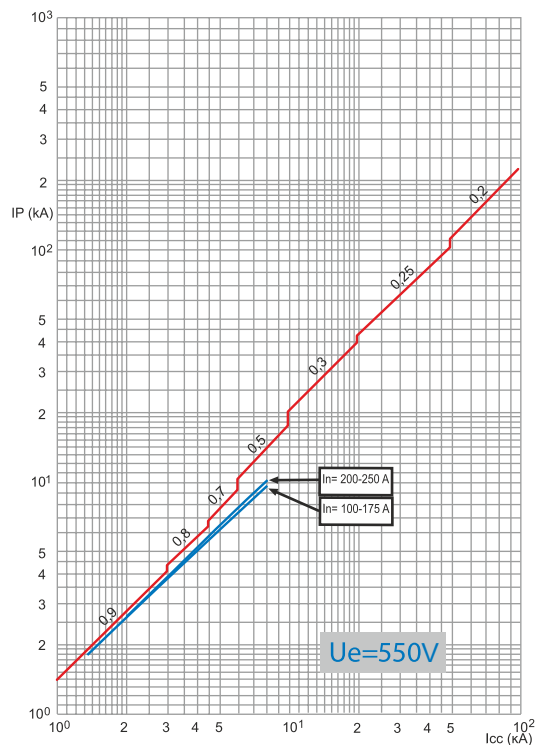
Technical Characteristics - MCCB

Data limitations of current

Frame 2 - In (160A - 250A)



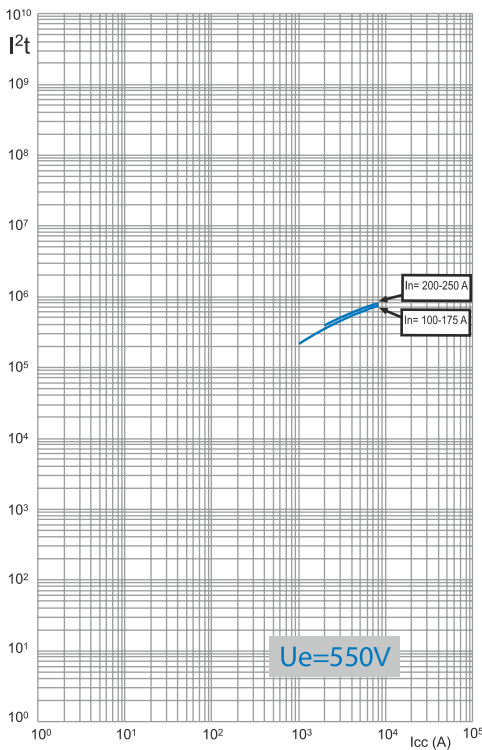
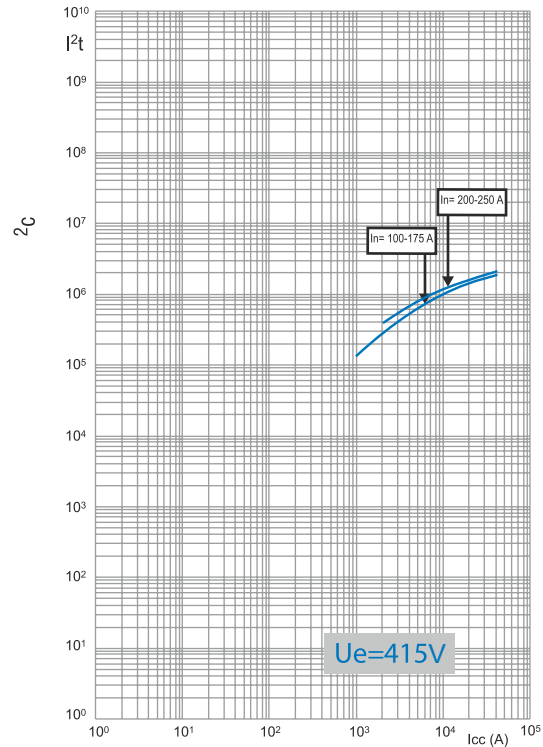
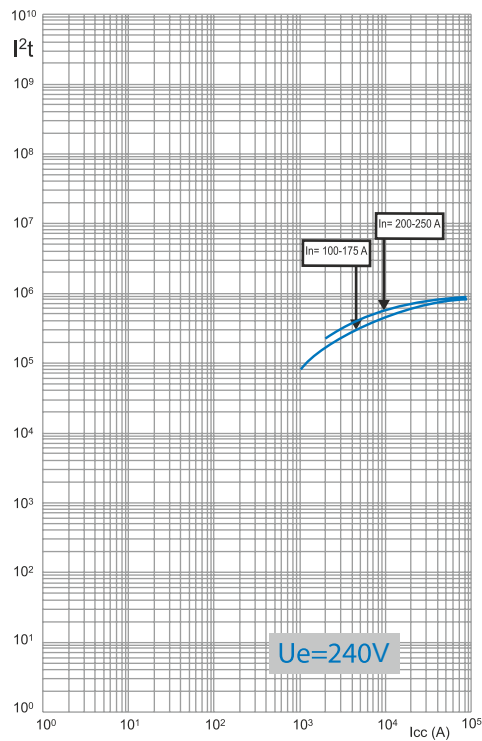
Limited impact the value of a short current
(the actual maximum value
of) depending on the current values of
expected short-circuit current



Technical Characteristics - MCCB

Limitations of energy curves

Frame 2 - In (160A - 250A)

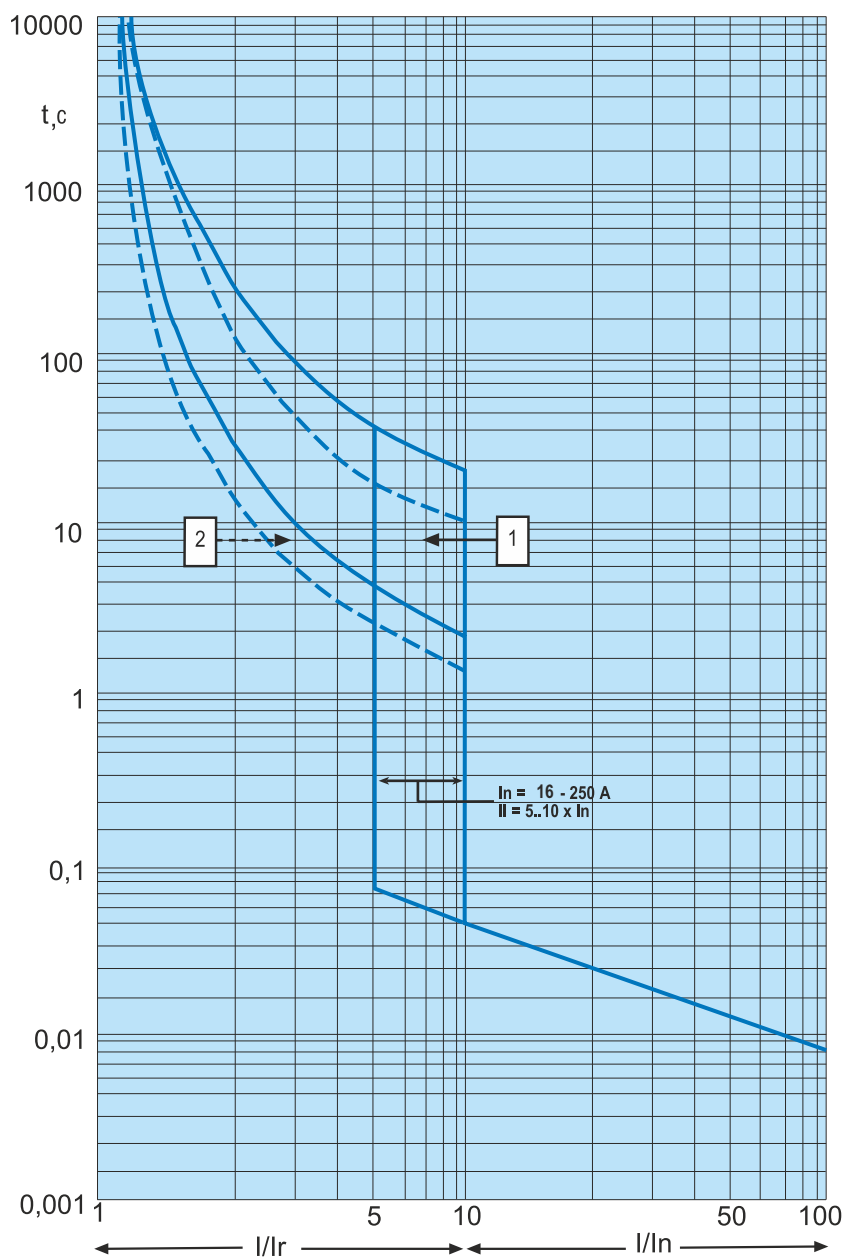


Specific heat (A²s), ie energy, released during a short circuit in the conduction arrestor 1-ohm , depending from the rms value of the prospective current short circuit

Technical Characteristics - MCCB

Time current characteristics

Frame 3 - In (16A to 250A)



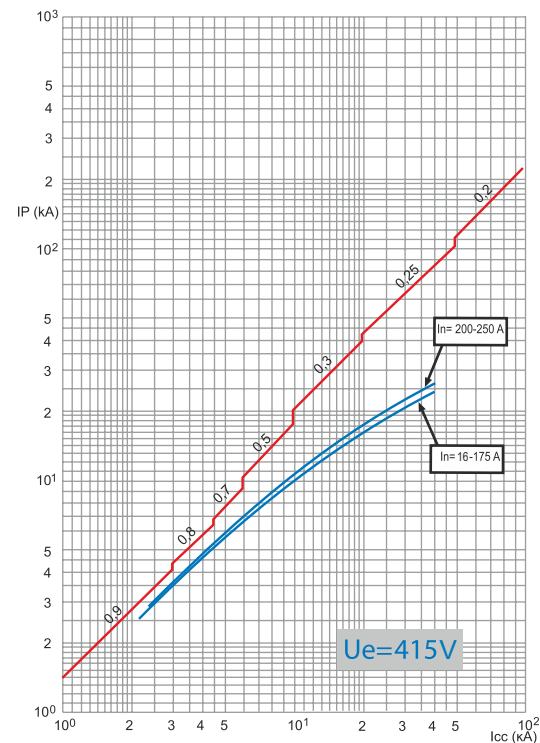
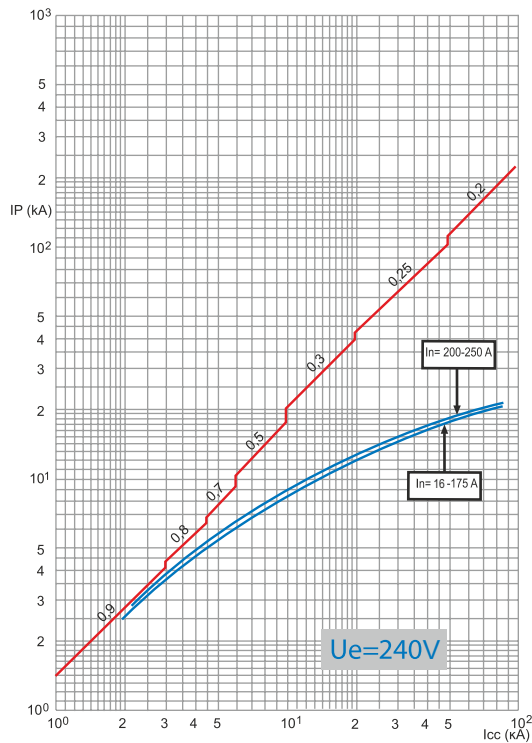
I - load current ;
 I_r - the maximum value of the current setpoint thermal release . Rated current breaker depends on the bench current heat release ;
 1 - area of work from the "cold" state thermal release
 2 - working area of the "hot" state TE Pilaf release (in working condition)

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

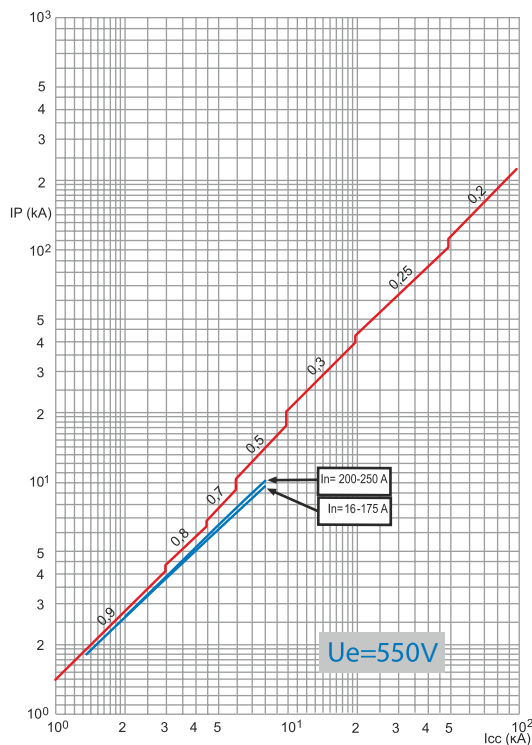
Technical Characteristics - MCCB

Data limitations of current

Frame 3 - In (16A to 250A)



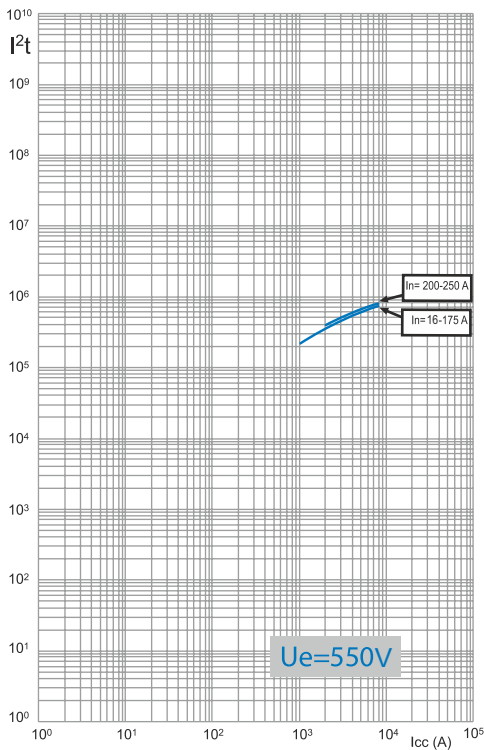
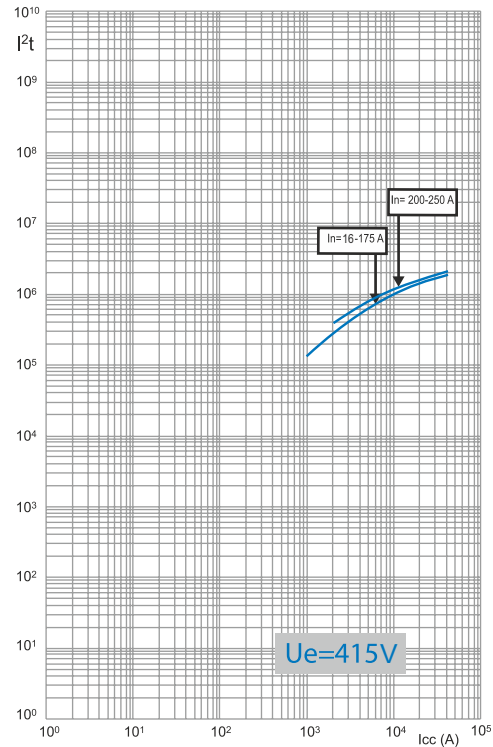
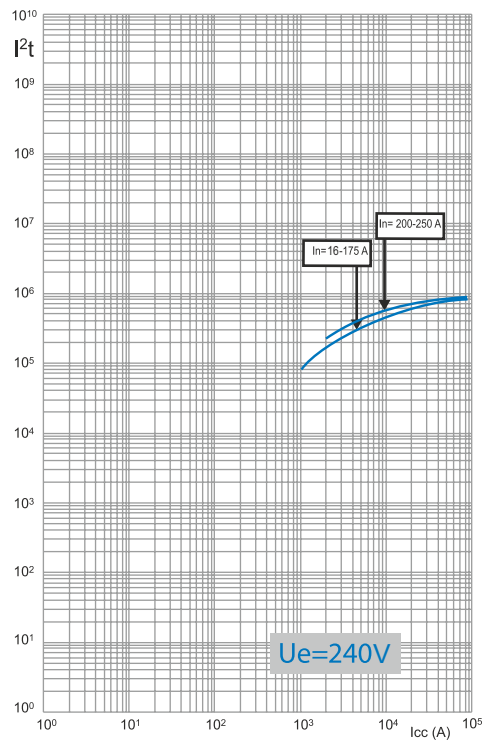
Limited impact the value of a short current circuit (the actual maximum value of) depending on the current values of expected short-circuit current



Technical Characteristics - MCCB

Limitations of energy curves

Frame 3 - In (16A to 250A)

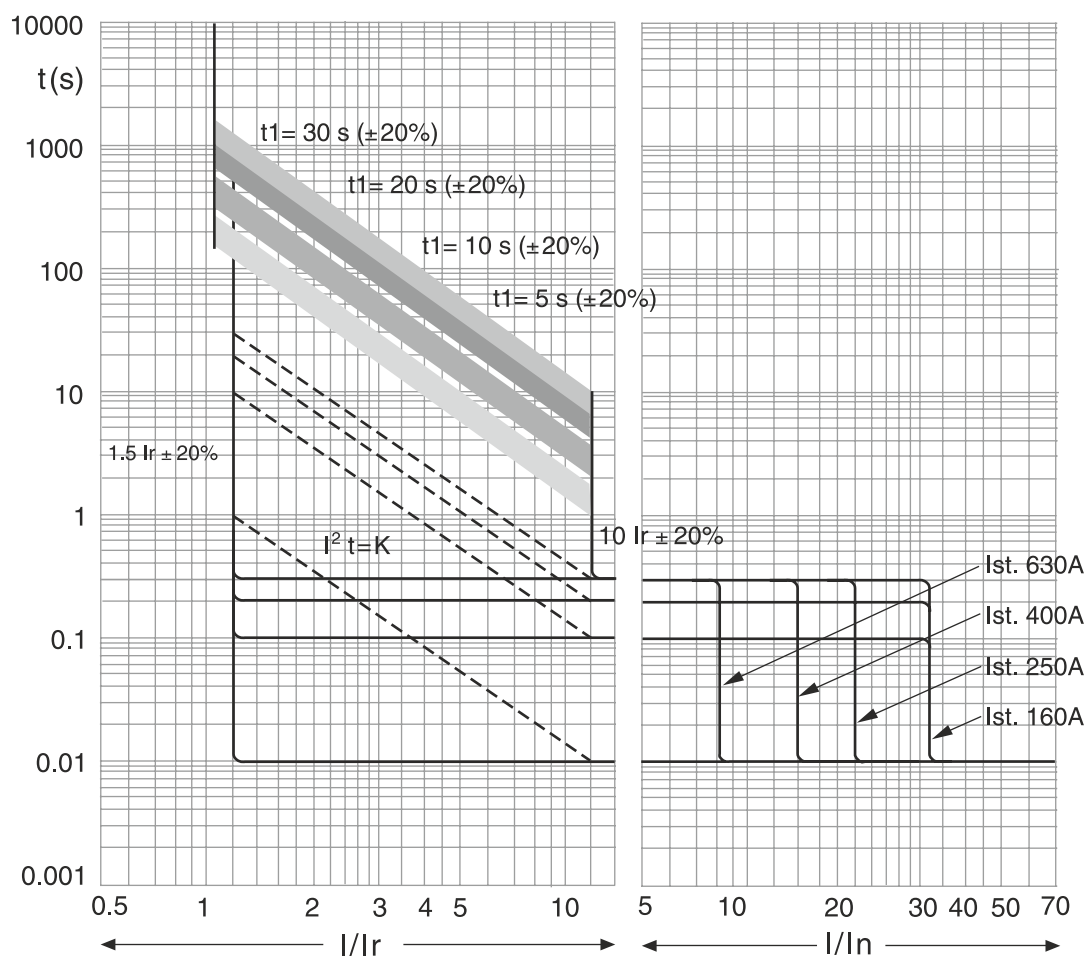


Specific heat (A²s), ie energy, released during a short circuit in the conduction arrestor 1-ohm , depending from the rms value of the prospective current short circuit

Technical Characteristics - MCCB

Frame 4 - In (315A - 630A)

Performance data for Frame F4 (S₂)

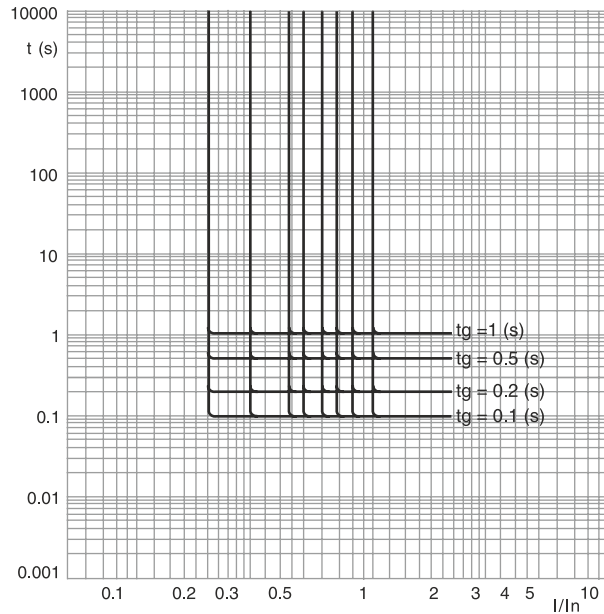


I_n = nominal current
 I = actual current
 I_r = max. adjustment current of thermal release

Technical Characteristics - MCCB

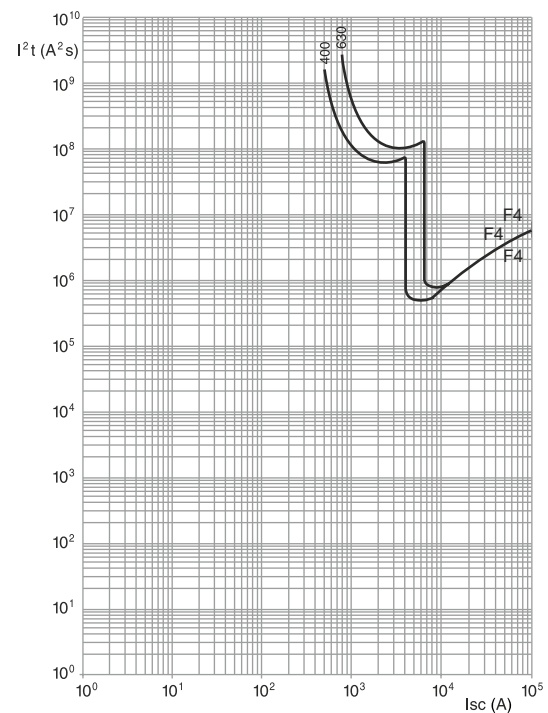
Frame 4 - In (315A - 630A)

Performance data (earth fault) Sg



I = actual current / I_n = nominal current

Thermal stress limitation curves

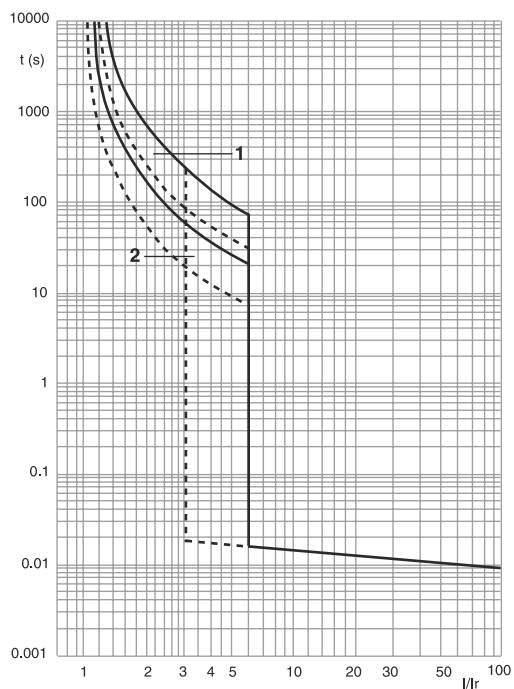


I_{sc} = prospective short-circuit symmetrical current (rms value in A)
 $I^2 t$ = limited thermal stress (in A²s)

Technical Characteristics - MCCB

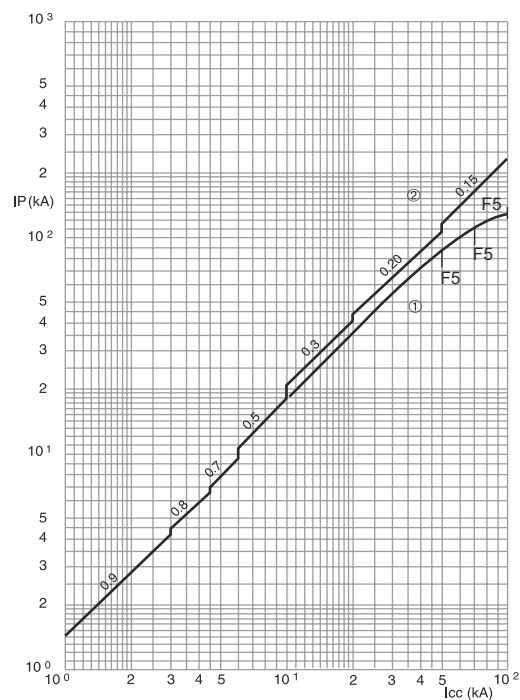
Frame 5 - In (800A - 1250A)

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

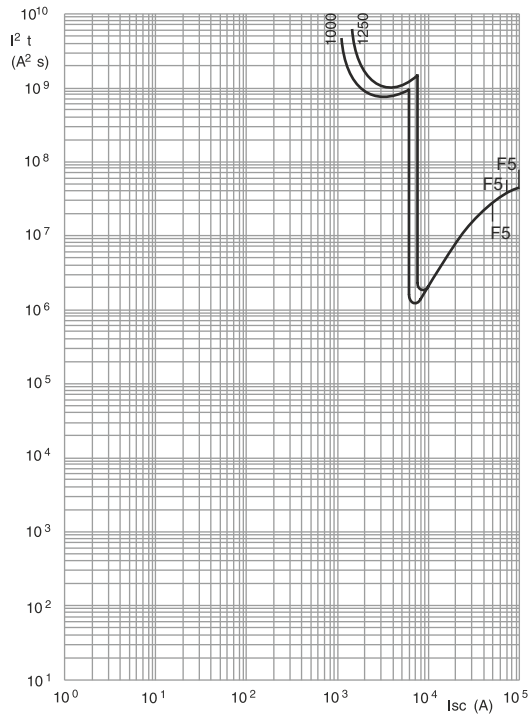


at ambient $\theta = 40^{\circ}\text{C}$
 I = actual current
 I_r = max. adjustment current of thermal release
 1 = thermal release zone when cold
 2 = thermal release zone when hot (in steady state)

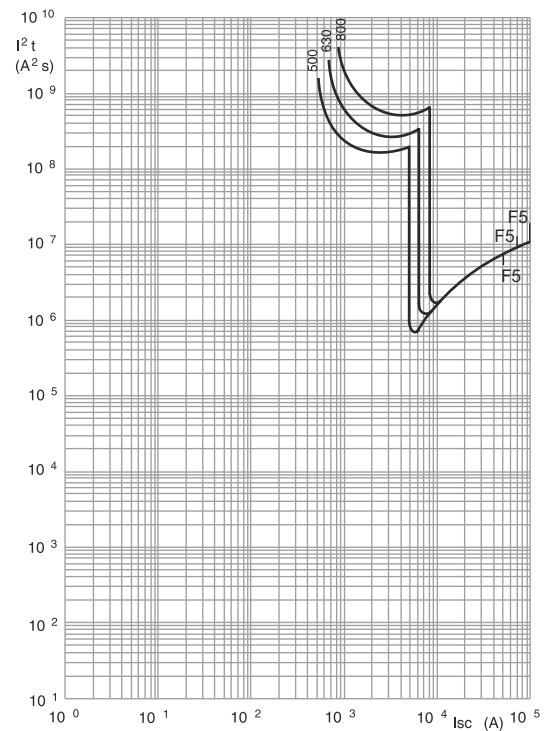
Technical Characteristics - MCCB

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 A²s)



Technical Table

Devices	Optium 1.0 F1								Optium 1.0 F2			
Mounting	On plate											
Breaking capacity (ICU) 380/415V 220/240V Service Breaking Capacity (Ics)	10kA	16kA	25kA		36kA			16kA	25kA	36kA		
	50%	50%	50%		50%			50%	50%	50%		
Characteristics of use Nominal frequency Maximum rated operating voltage Category of use	50Hz Upto 550 V A								50Hz Upto 550 V A			
Thermal magnetic adjustment Thermal Magnetic	FIXED (1xIn) FIXED (Inx10)								FIXED (1xIn) FIXED (Inx10)			
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 16 160 160								Fixed 160 1600 1600			
	16	25	32	40	50	63	80	100	125	160	200	250
	160	250	320	400	500	630	800	1000	1250	1600	2000	2500
	160	250	320	400	500	630	800	1000	1250	1600	2000	2500
Endurance Electrical Mechanical	1500	8000						1000		8000		
	8000	25000						7000		25000		

Technical Table

Devices	Optium 1.0 F3													Optium 1.0 F4				Optium 1.0 F5
Mounting	On plate													On plate				On plate
Breaking capacity 380/415V 220/240V Breaking capacity %Icu	50kA 50%													36kA 50%	50kA 50%	50kA 50%		
Characteristics of use Nominal frequency Maximum rated operating voltage Category of use	50Hz Upto 550 V A													50Hz Upto 550 V A				50Hz Upto 550 V A
Thermal magnetic adjustment Thermal Magnetic	FIXED FIXED (10 In)													FIXED FIXED (10 In)				FIXED FIXED (10 In)
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				2 or 4 x 240 mm ² 2 or 4 x 185 mm ² 50 mm 20Nm
Nominal current at 40 degree In (A) Phase N	16 16 16	20 20 20	25 25 25	32 32 32	40 40 40	50 50 50	63 63 63	80 80 80	100 100 100	125 125 125	160 160 160	200 200 200	250 250 250	315 to 630 A 315 400 500 630 315 400 500 630				800 A 800 800
Magnetic threshold In (A) Phase N	Fixed (10 In) 16 20 25 32 40 50 63 80 100 125 160 200 250 160 200 250 320 400 500 630 800 1000 1250 1600 2000 2500 160 200 250 320 400 500 630 800 1000 1250 1600 2000 2500													Fixed (10 In) 315 400 500 630 3150 4000 5000 6300 3150 4000 5000 6300				Fixed (10 In) 800 8000 8000
Endurance Electrical Mechanical	8000 25000													8000 25000				8000 10000

Technical Table

Devices	Optium 1.1 F1							Optium 1.1 F2		
Mounting	On plate							On plate		
Breaking capacity 380/415V 220/240V Breaking capacity %Icu	16kA	25kA					16kA	25kA		
	100%	100%					100%	100%		
Characteristics of use Nominal frequency Maximum rated operating voltage Category of use	50Hz Upto 550 V A	50Hz Upto 550 V A					50Hz Upto 550 V A			
Thermal magnetic adjustment Thermal Magnetic	FIXED (1xIn) FIXED (10XIn)	FIXED (1xIn) FIXED (10XIn)					FIXED (1xIn) FIXED (10XIn)			
Electronic protection adjustment	—	—					—			
Maximum cable cross-section Rigid cable Flexible cable Copper bar and lug width Tightening torque	2.5 to 16 mm ² 2.5 to 10 mm ² 17mm 3 Nm	2.5 to 16 mm ² 2.5 to 10 mm ² 17mm 3 Nm	10 to 50 mm ² 10 to 50 mm ² 17mm 6 Nm	35 to 50 mm ² 35 to 50 mm ² 17mm 6 Nm	35 to 150 mm ² 35 to 120 mm ² 25mm 13 Nm					
Nominal current at 40 degree In (A) Phase N	32 32 32	40 40 40	50 50 50	63 63 63	80 80 80	100 100 100	125 125 125	160 160 160	200 200 200	250 250 250
Magnetic threshold In (A) Phase N	Fixed 32 320 320	40 400 400	50 500 500	63 630 630	80 800 800	100 1000 1000	125 1250 1250	160 1600 1600	200 2000 2000	250 2500 2500
Endurance Electrical Mechanical	8000 25000	8000 25000			1000 7000		8000 25000			

Technical Table

Devices	Optium 2.0 F1								Optium 2.0 F2		
Mounting	On plate								On plate		
Breaking capacity 380/415V 220/240V Breaking capacity %Icu	16kA 100%		25kA 100%						16kA 100%	25kA 100%	
Characteristics of use Nominal frequency Maximum rated operating voltage Category of use	50Hz Upto 550 V A								50Hz Upto 550 V A		
Thermal magnetic adjustment Thermal Magnetic	0.8 to 1 In FIXED (10 In)								0.8 to 1 In FIXED (10 In)		
Electronic protection adjustment	—								—		
Maximum cable cross-section Rigid cable Flexible cable Copper bar and lug width Tightening torque	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		35 to 150 mm ² 35 to 120 mm ² 25 mm 13 Nm				
Nominal current at 40 degree In (A) Phase N	25 to 125A 25 32 40 50 63 80 100 125								160 to 250 A 160 200 250		
Magnetic threshold In (A) Phase N	Fixed (10 In) 25 32 40 50 63 80 100 125								Fixed (10 In) 160 200 250		
Endurance Electrical Mechanical	8000 25000								8000 25000		

Technical Table

Devices	Optium 2.0 F3		Optium 2.0 F4			Optium 2.0 F5			
Mounting	On plate		On plate			On plate			
Breaking capacity 380/415V 220/240V Breaking capacity %Icu	36kA 100%	50kA 100%	25kA 100%	36kA 100%	50kA 100%	36kA 100%	50kA 100%		
Characteristics of use Nominal frequency Maximum rated operating voltage Category of use	50Hz Upto 550 V A		50Hz Upto 550 V A			50Hz Upto 550 V A			
Thermal magnetic adjustment Thermal Magnetic	0.8 to 1 In 5 to 10 In		0.8 to 1 In 5 to 10 In			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	2.5 to 150 mm ² 2.5 to 120 mm ² 25 mm 7 nm / 10 nm		300 mm ² or 2 x 240 mm ² 240 mm ² or 2 x 185 mm ² 32 mm 15 Nm			2 or 4 x 240 mm ² 2 or 4 x 185 mm ² 50 mm 20 Nm			
Nominal current at 40 degree In (A) Phase N	Refer same as Optium 1.0 F3		315 to 630 A			800 to 1250A			
			315	400	500	630	800	1000	1250
			315	400	500	630	800	1000	1250
Magnetic threshold In (A) Phase N	Adjustable As Per Rating	Adjustable As Per Rating			Adjustable As Per Rating				
Endurance Electrical Mechanical	8000 25000		8000 25000			4000 10000			

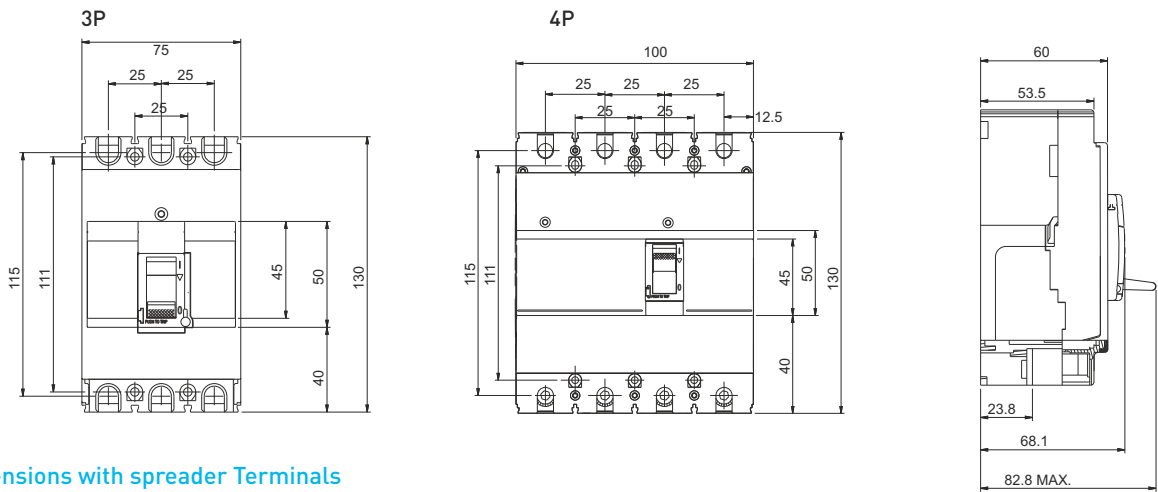
Technical Table

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		On plate		On plate		On plate		On plate		On plate	
Breaking capacity	36kA 50kA		36kA 50kA		36kA 50kA		36kA 50kA		36kA 50kA		36kA 50kA	
380/415V	36kA 50kA		36kA 50kA		36kA 50kA		36kA 50kA		36kA 50kA		36kA 50kA	
220/240V	100% 100%		100% 100%		100% 100%		100% 100%		100% 100%		100% 100%	
Breaking capacity %Icu	100% 100%		100% 100%		100% 100%		100% 100%		100% 100%		100% 100%	
Characteristics of use	50Hz		50Hz		50Hz		50Hz		50Hz		50Hz	
Nominal frequency	Upto 550 V		Upto 550 V		Upto 550 V		Upto 550 V		Upto 550 V		Upto 550 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 tr = 3-30 s I _{sd} = 1.5 - 10 I _r tsd (I=K) = 0-500 ms tsd (I2t=K) = 0-500 ms		I _r = 0.4 - 1 x I _n tr = 3-30 s I _{sd} = 1.5 - 10 I _r tsd (I=K) = 0-500 ms tsd (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 tr = 3-30 s I _{sd} = 1.5 - 10 I _r tsd (I=K) = 0-500 ms tsd (I2t=K) = 0-500 ms I _g = 0.2 - 1 x I _n tg = 0.1 - 1 s		I _r = 0.4 - 1 x I _n tr = 3-30 s I _{sd} = 1.5 - 10 I _r tsd (I=K) = 0-500 ms tsd (I2t=K) = 0-500 ms I _g = 0.2 - 1 x I _n tg = 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		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 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	
Flexible cable	25 mm		32 mm		50 mm		25 mm		32 mm		50 mm	
Copper bar and lug width	7Nm /10 Nm		15 Nm		20 Nm		7Nm /10 Nm		15 Nm		20 Nm	
Tightening torque	40A,100A, 160A, 250A		400 to 630 A 400 to 630 A		800 to 1250 A 800 to 1250 A		40A,100A, 160A, 250A		400 to 630 A 400 to 630 A		800 to 1250 A 800 to 1250 A	
Nominal current at 40 degree	0-50-100% of phase value		0-50-100% of phase value		0-50-100% of phase value		0-50-100% of phase value		0-50-100% of phase value		0-50-100% of phase value	
In (A)	—		—		—		—		—		—	
Phase	—		—		—		—		—		—	
N	—		—		—		—		—		—	
Magnetic threshold	8000		5000		4000		8000		5000		4000	
Electrical	25000		20000		10000		25000		20000		10000	
Mechanical												
Endurance												

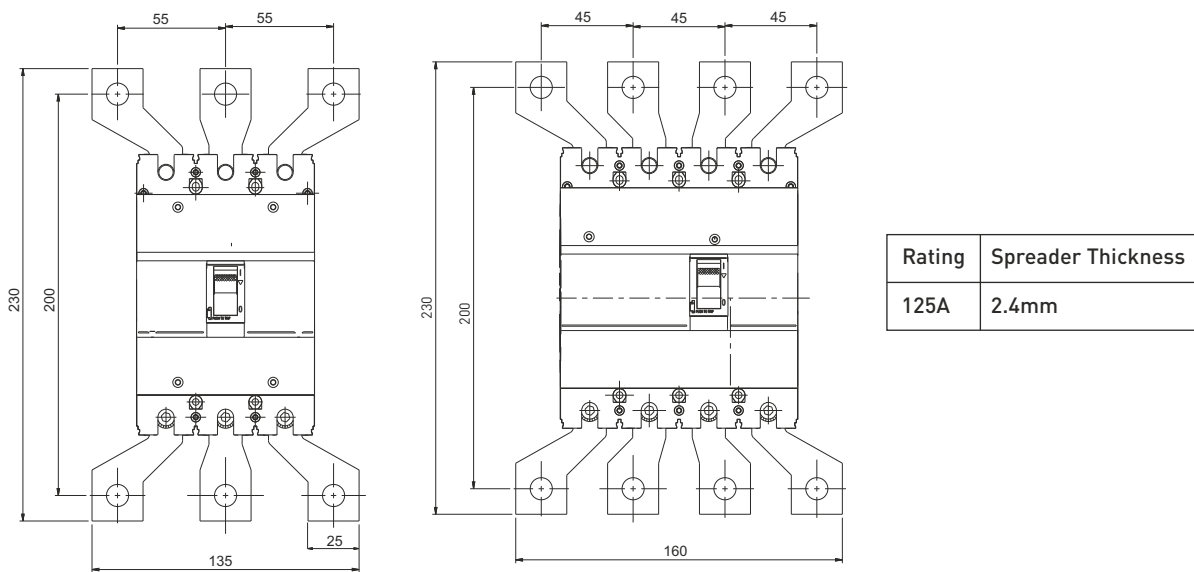
Dimensional Drawings

Optium F1

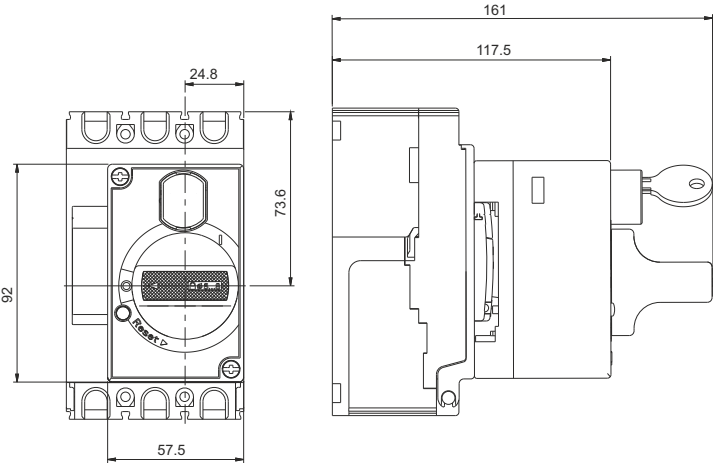
Overall and Mounting Dimensions



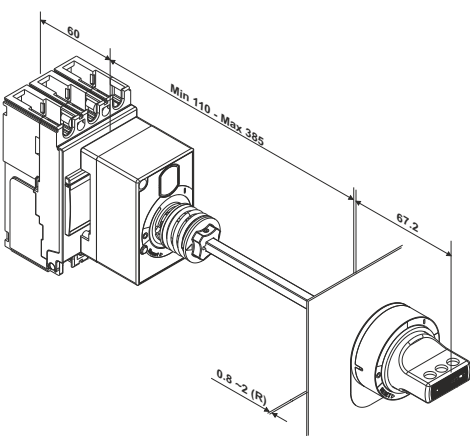
Dimensions with spreader Terminals



Dimensions with Rotary Handle-Direct



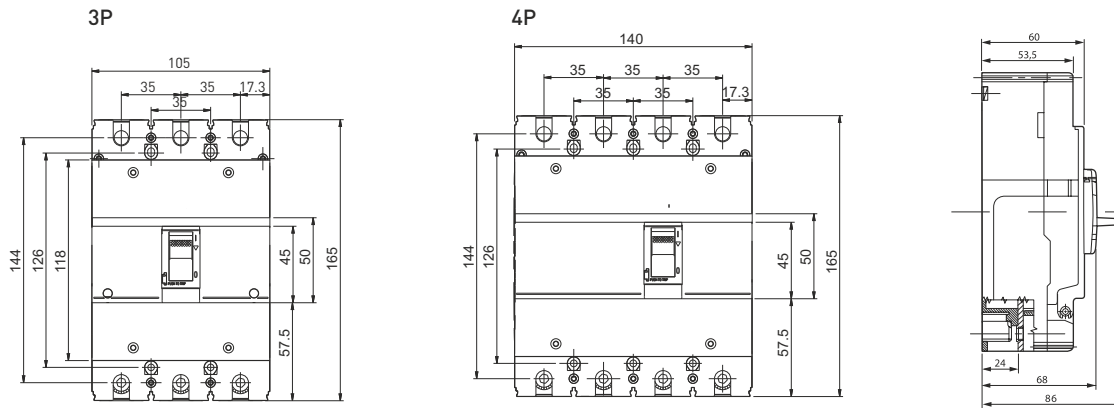
Dimensions with Rotary Handle-Vari-Depth



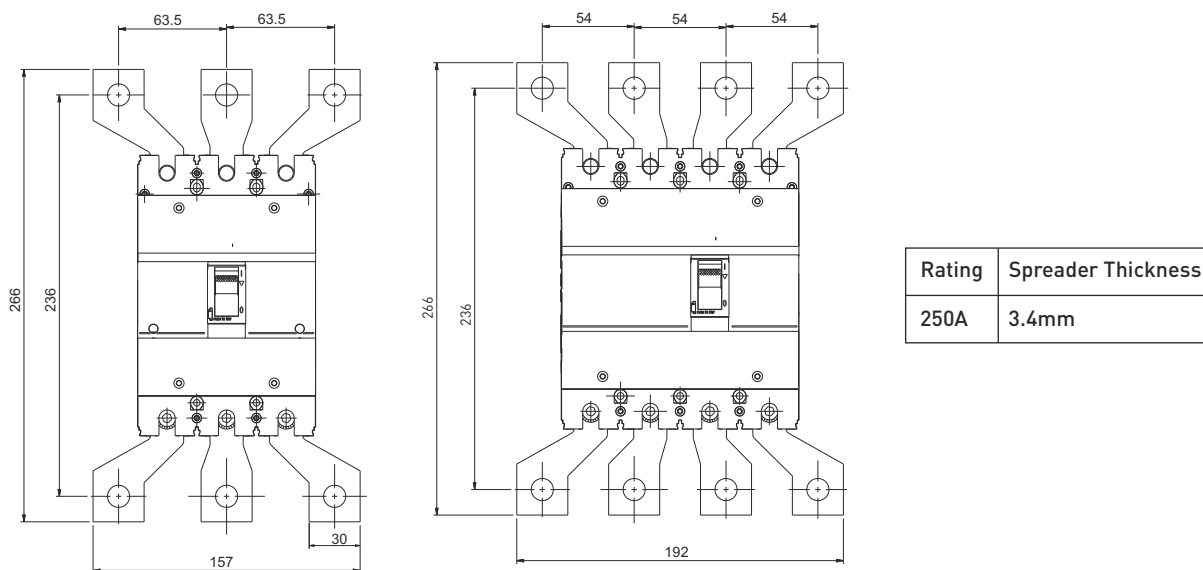
Dimensional Drawings

Optium F2

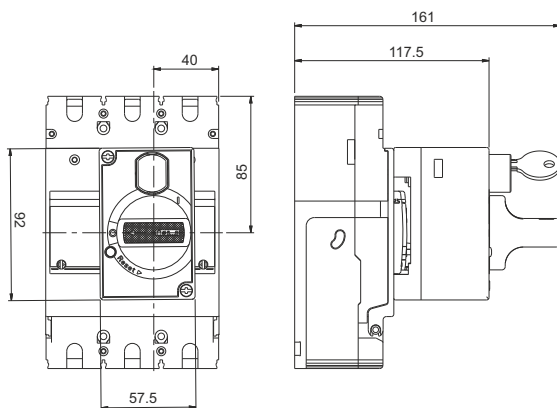
Overall and Mounting Dimensions



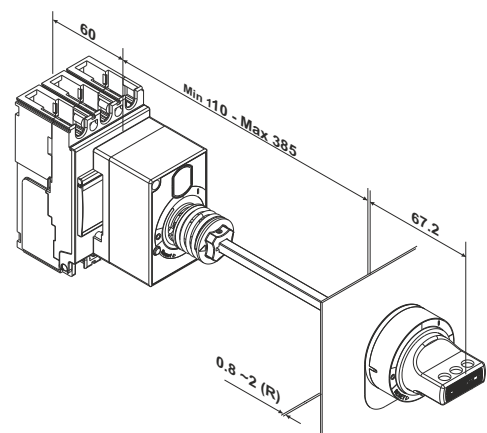
Dimensions with spreader Terminals



Dimensions with Rotary Handle-Direct



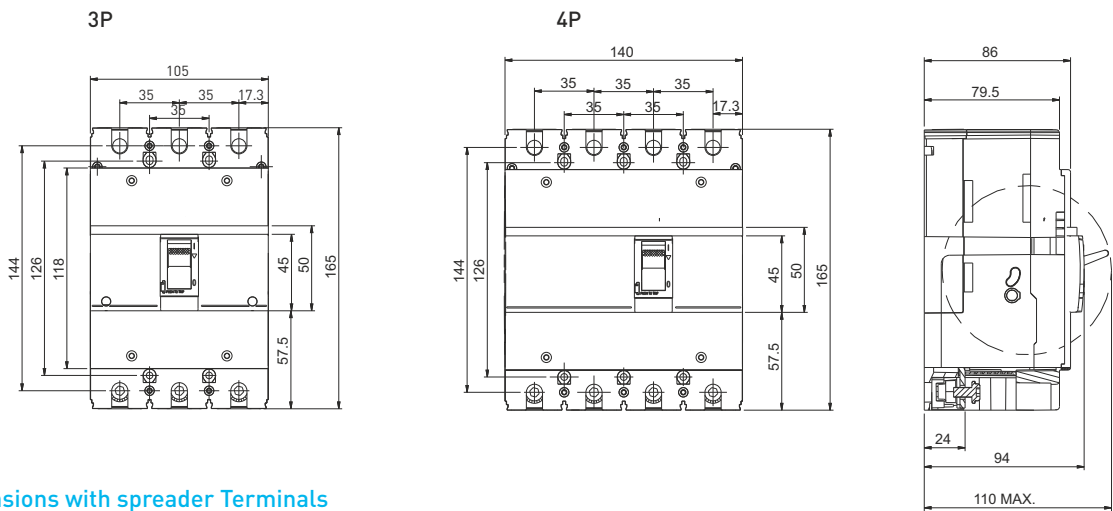
Dimensions with Rotary Handle-Vari-Depth



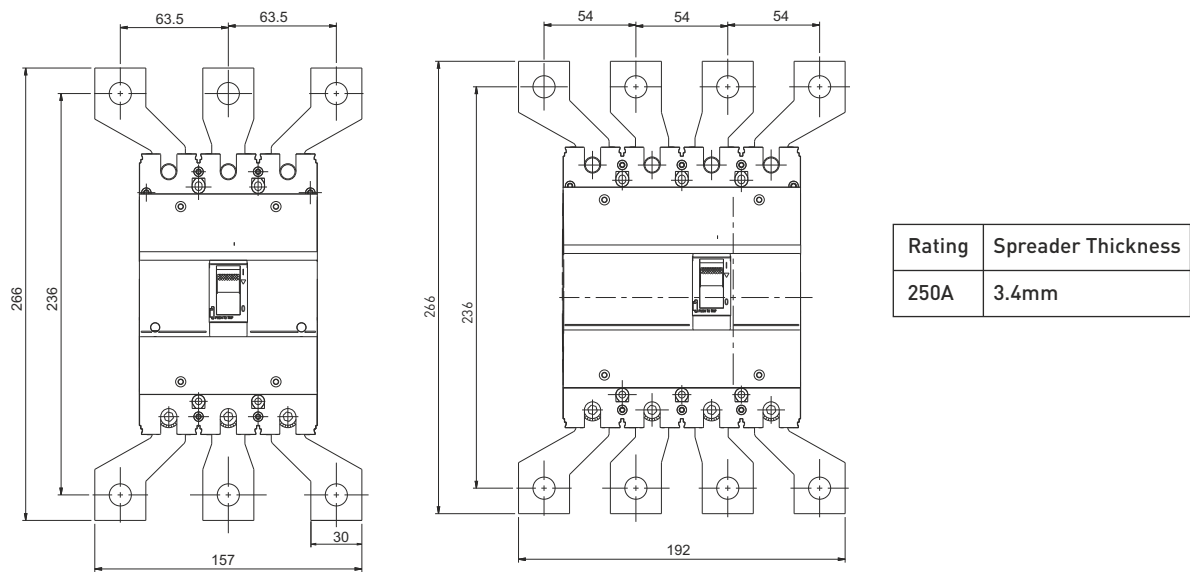
Dimensional Drawings

Optium F3

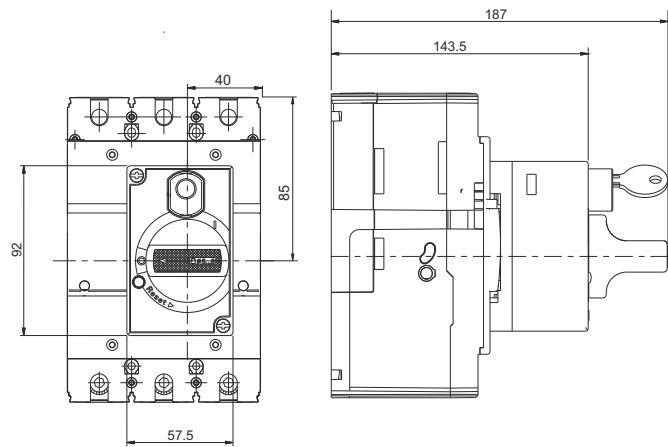
Overall and Mounting Dimensions



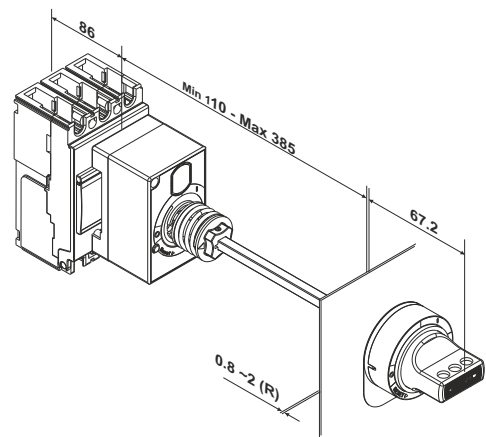
Dimensions with spreader Terminals



Dimensions with Rotary Handle-Direct



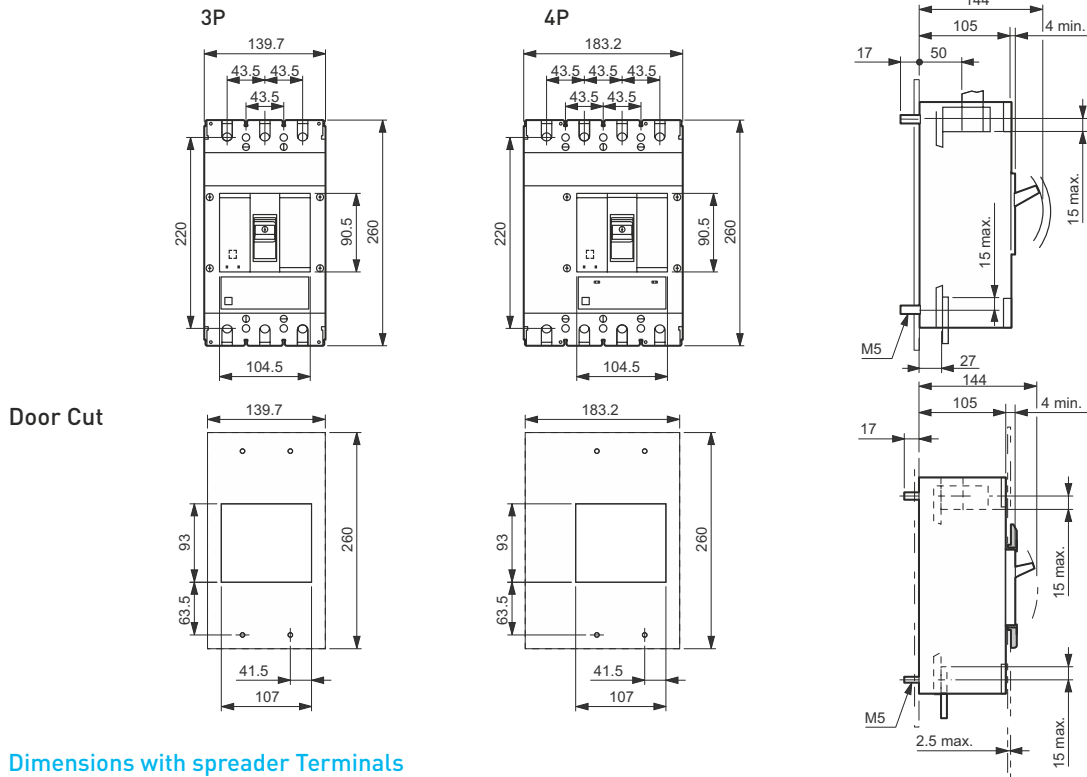
Dimensions with Rotary Handle-Vari-Depth



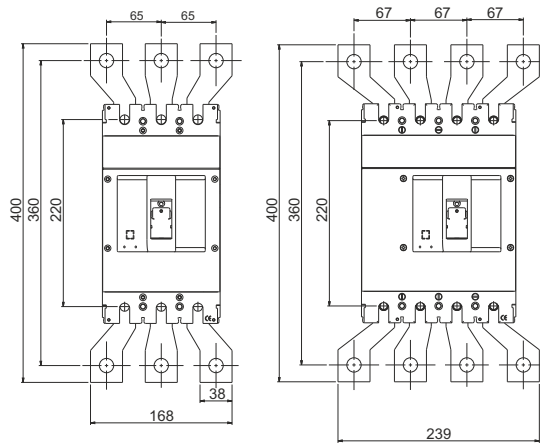
Dimensional Drawings

Optium F4

Overall and Mounting Dimensions

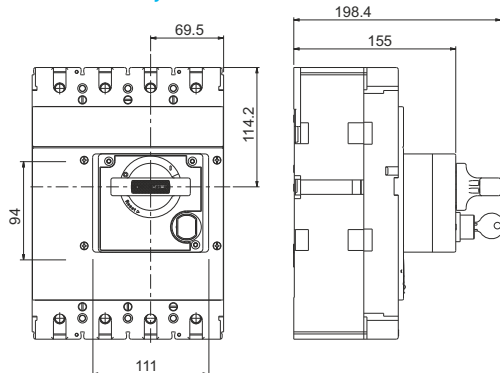


Dimensions with spreader Terminals

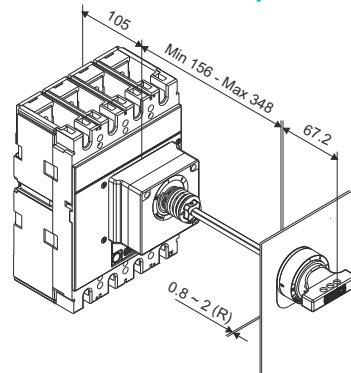


Rating	Spreader Thickness
630A	8mm

Dimensions with Rotary Handle-Direct



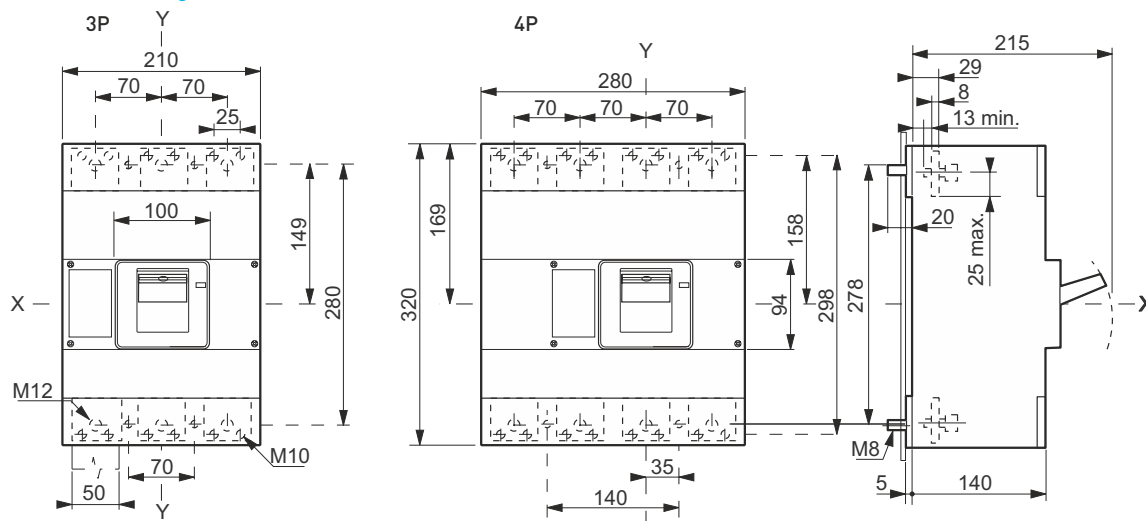
Dimensions with Rotary Handle-Vari-Depth



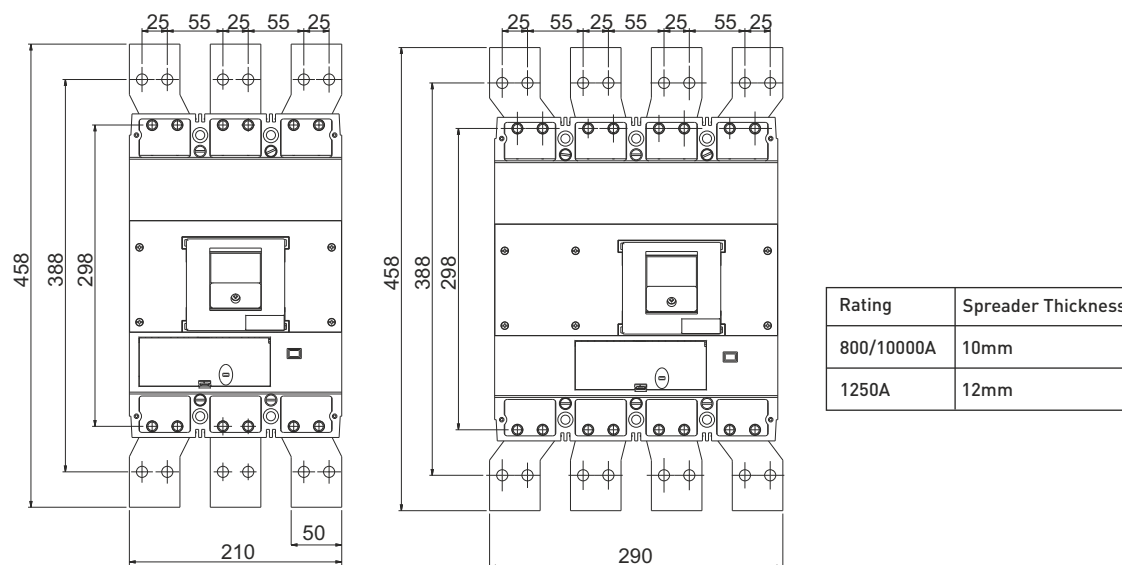
Dimensional Drawings

Optium F5

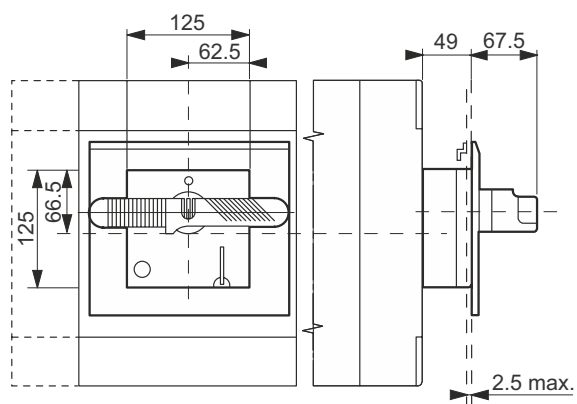
Overall and Mounting Dimensions



Dimensions with spreader Terminals

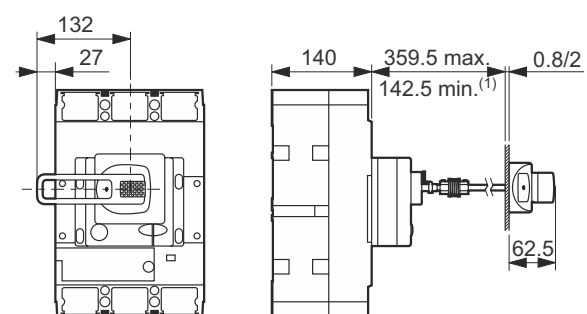


Dimensions with Rotary Handle-Direct



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	10kA	16	830701	830710
	F1	10kA	25	830702	830711
	F1	10kA	32	830703	830712
	F1	10kA	40	830704	830713
	F1	10kA	50	830705	830714
	F1	10kA	63	830706	830715
	F1	10kA	80	830707	830716
	F1	10kA	100	830708	830717
	F1	10kA	125	830709	830718

	Frame	Breaking capacity	Rating	3P	4P
	F1	16kA	16	830001	830015
	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	830045
	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	830075
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 1.1 (Fixed TM Range)

- Ics = 100% Icu as per IEC 60947-II
- Suitable for isolation
- Class II front face
- Fixed Overload & fixed short circuit setting

NEW



Frame	Breaking capacity	Rating	3P	4P
F1	16kA	32	840003	840017
F1	16kA	40	840004	840018
F1	16kA	63	840006	840020
F1	16kA	80	840007	840021
F1	16kA	100	840008	840022
F1	16kA	125	840009	840023
F1	25kA	32	840033	840047
F1	25kA	40	840034	840048
F1	25kA	63	840036	840050
F1	25kA	80	840037	840051
F1	25kA	100	840038	840052
F1	25kA	125	840039	840053
F2	16kA	160	840090	840095
F2	16kA	200	840091	840096
F2	16kA	250	840092	840097
F2	25kA	160	840100	840105
F2	25kA	200	840101	840106
F2	25kA	250	840102	840107

Optium 2.0 (Adjustable Thermal Setting)

- Conforms to IEC 60947-II
- Suitable for isolation
- Ics = 100% Icu
- Adjustable Overload Setting $I_r = (0.8 \text{ to } 1.0) \times I_n$
- Class II front face
- Short Circuit setting fixed



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
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

Optium 2.0 (Adjustable TM Range)

- $I_{cs} = 100\% I_{cu}$ as per IEC 60947-II
- Adjustable Overload Setting $I_r = (0.8 \text{ to } 1.0) \times I_n$
- Class II front face
- Adjustable Short Circuit Setting $I_{sd} = (5 - 10) \times I_n$
- Suitable for isolation



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
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

Optimum 2.1 (Electronic / Micro Processor Range)

- Ics =100% Icu as per IEC 60947-II
- Class II front face
- Suitable for isolation
- Adjustable Overload Setting $I_r = 0.4 - 1 \times I_n$
- 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

Optimum 2.1 (Electronic / Micro Processor Range)

- Ics =100% Icu as per IEC 60947-II
- Class II front face
- Suitable for isolation
- Transparent cover for trip unit as standard
- Adjustable Neutral pole protection -N,N/2 & Off for 4 pole MCCB
- Innovative front indication LED's(Ready, Overload pre-alarm & Overload)
- Adjustable Overload Setting $I_r = 0.4 - 1 \times I_n$; $T_r = 3-30$ sec
- 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	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

Optimum 2.2 (With Electronic / Micro Processor Release)

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

	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

Optimum 2.2 (Electronic / Micro Processor Range)

- $I_{cs} = 100\% I_{cu}$ as per IEC 60947-II
- Class II front face
- Suitable for isolation
- Adjustable Neutral pole protection -N,N/2 & Off for 4 pole MCCB
- Innovative front indication LED's (Ready, Overload pre-alarm & Overload)
- Adjustable Overload Setting $I_r = 0.4 - 1 \times I_n$; $T_r = 3-30$ sec
- 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
- Ground fault Setting:- $I_g = 0.2 - 1 \times I_n$; $T_g = 0.1 - 1$ s

	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
Auxiliary Contact /Alarm Contact	F1 F2 F3	830694



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

[illegible]