

— optium™ —

ALL THAT YOU NEED



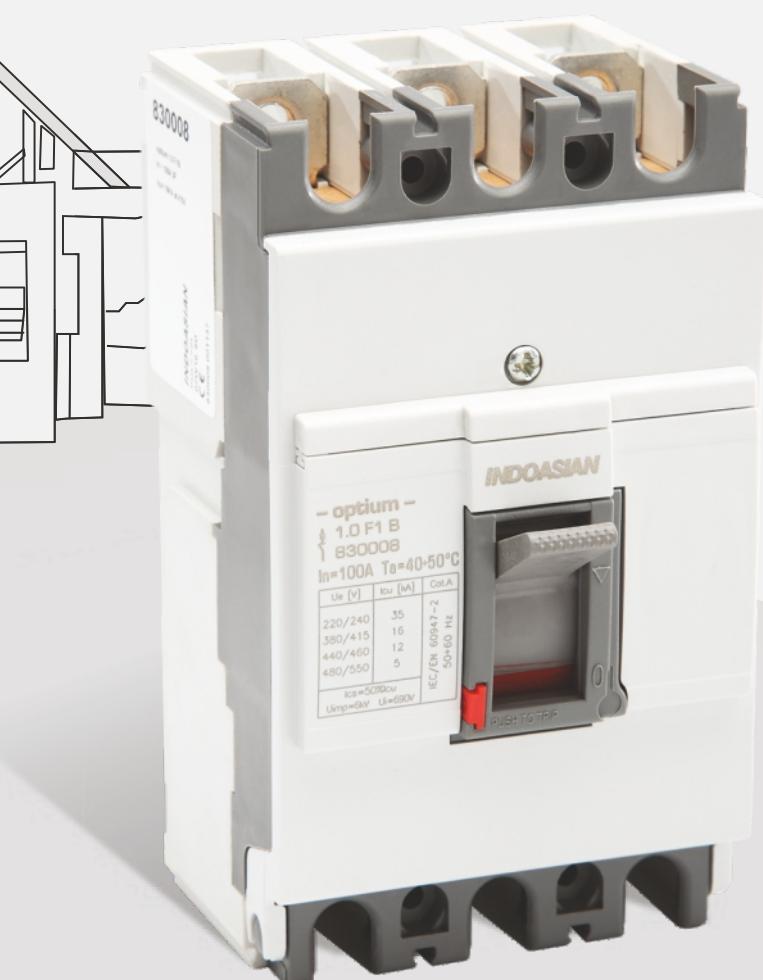
**TRUST.
SAFETY.
DURABILITY.**

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.



F2



F1



F4

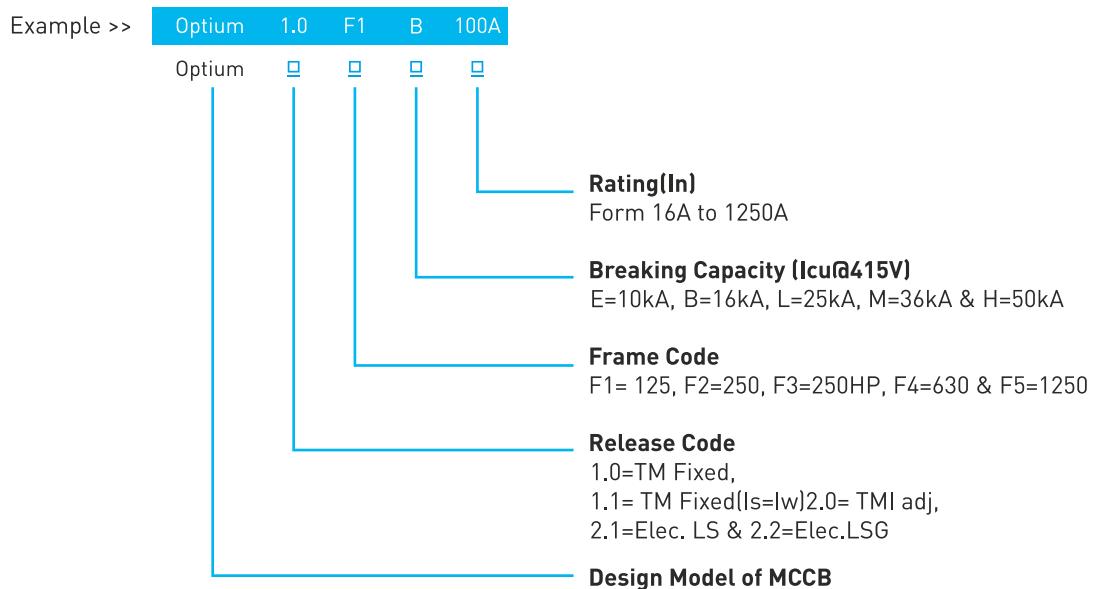
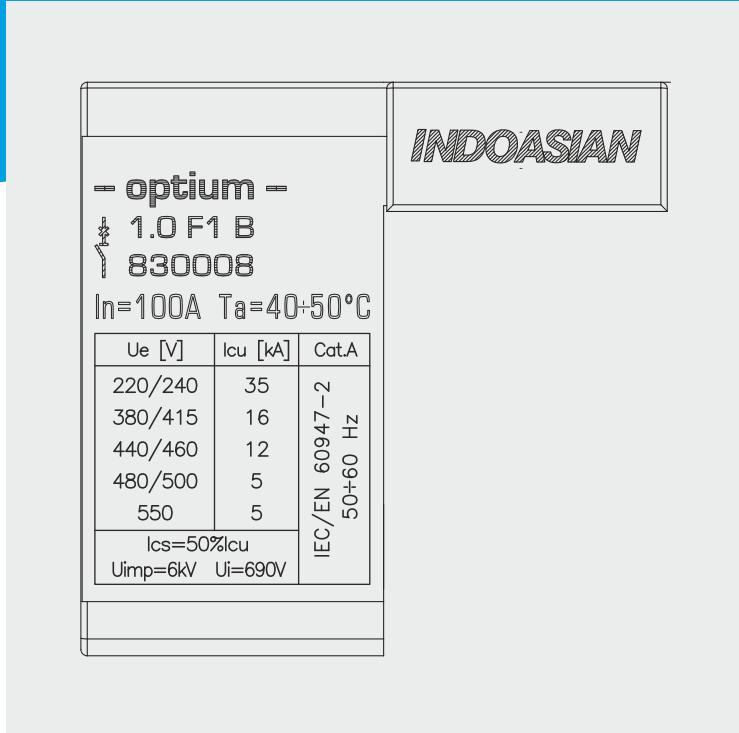


F3



F5

Nomenclature



Adjustable settings



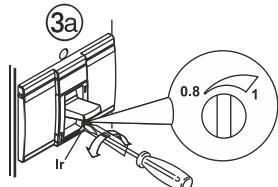
F1 & F2



F3

ONLY ADJ VERSION
THERMAL
REGULATION

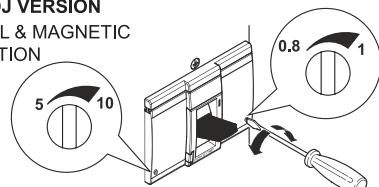
$$I_r = (0,8 \pm 1) \times I_n$$



ONLY ADJ VERSION
THERMAL & MAGNETIC
REGULATION

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

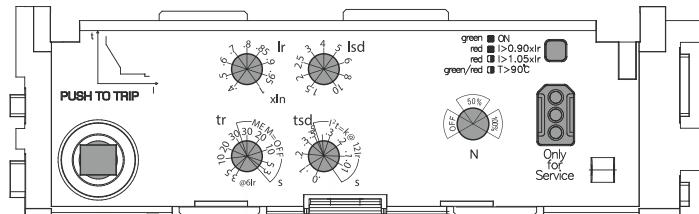
$$I_{sd} = (5 \div 10) \times I_n$$



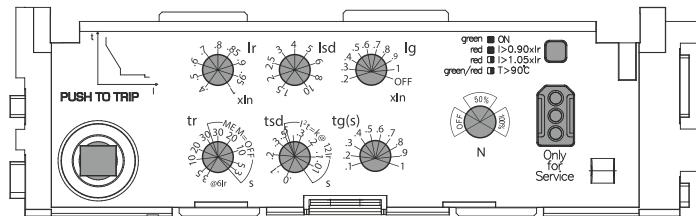
F4



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



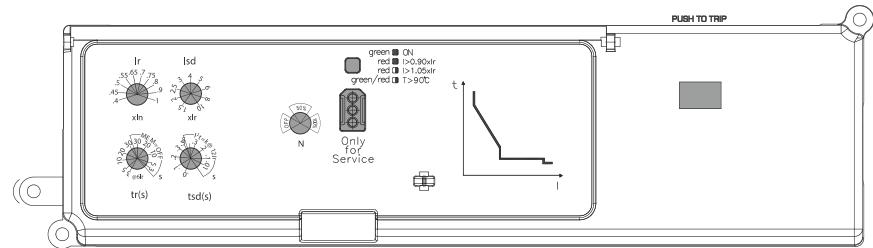
Only Electronic Version (LSG)-SG
830520...830527



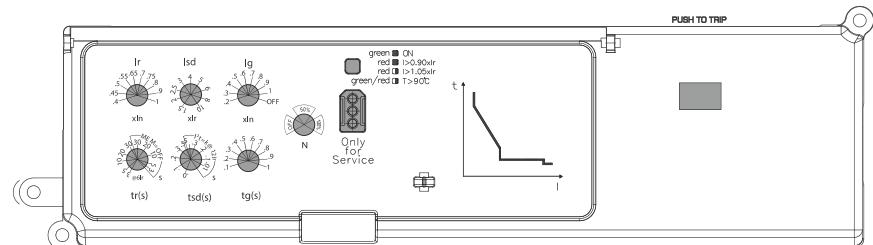
F5



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

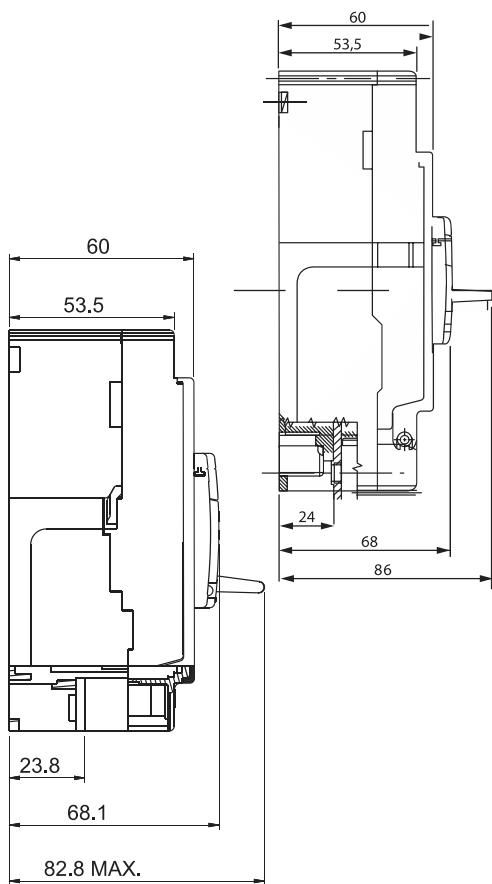
**Fixed range
Ics=100% Icu**

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

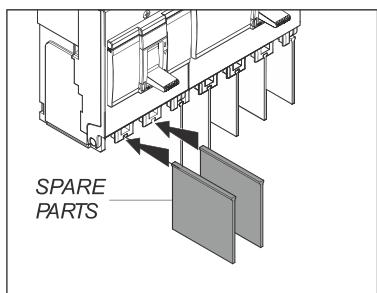


—optimum™—

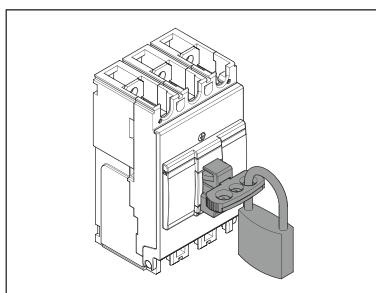
ALL THAT YOU NEED

Accessories

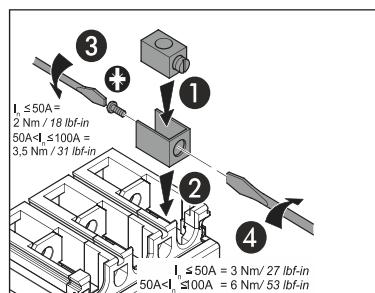
Phase Separator



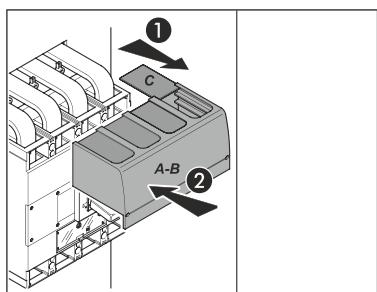
Padlock - Off Position



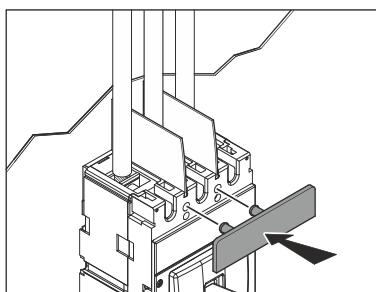
Cage Terminals



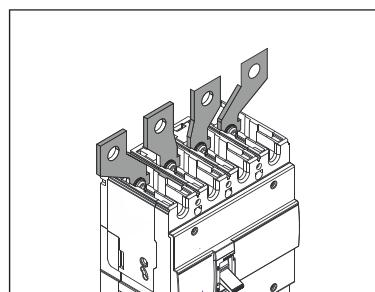
Terminal Shield



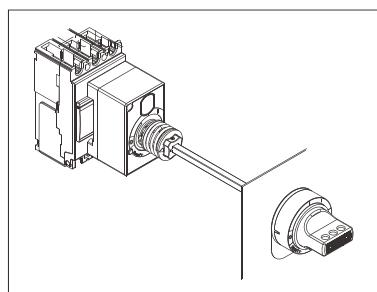
Terminal Cover



Spreader Link



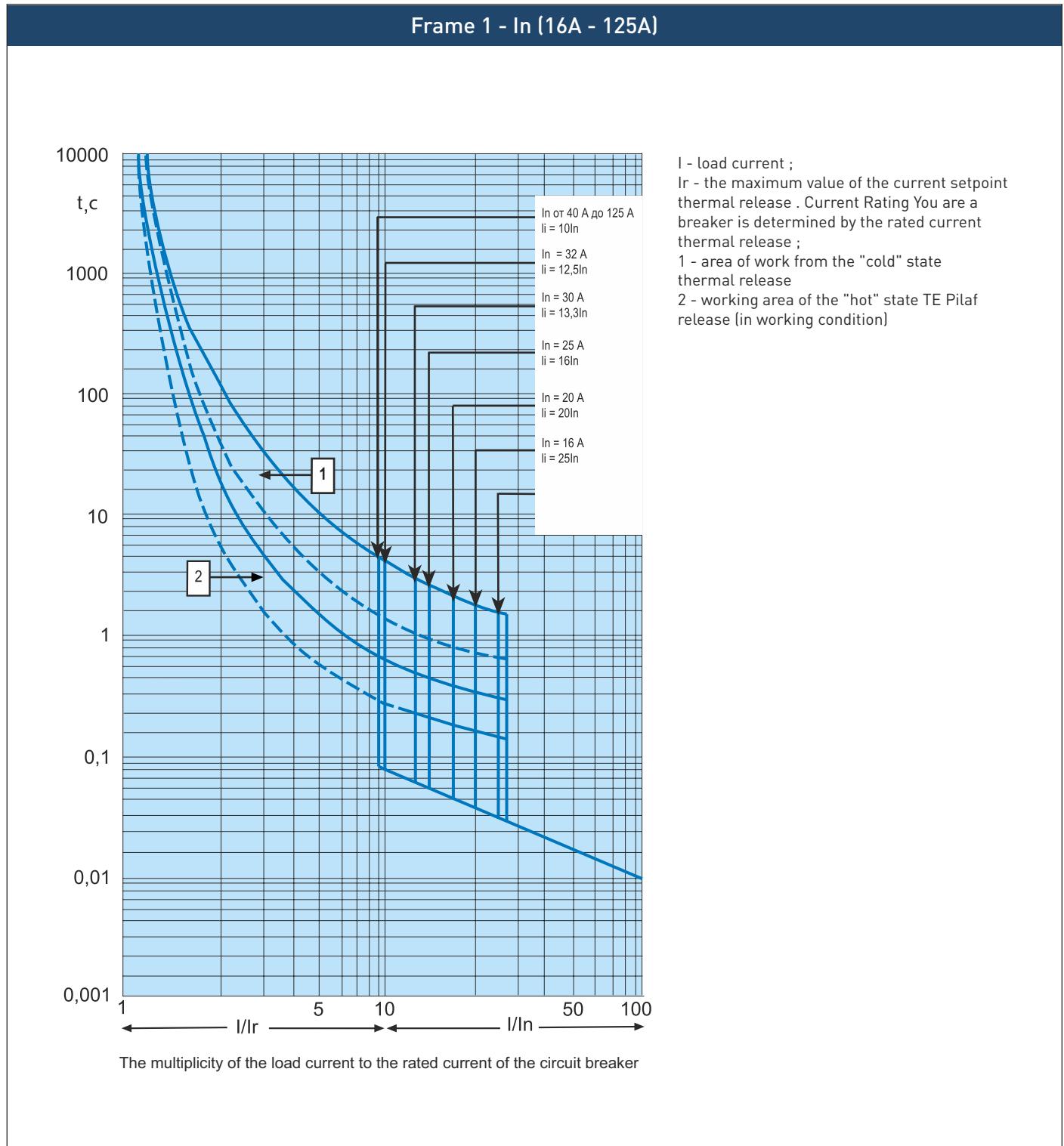
Rotary Handle



Technical Characteristics - MCCB

Time current characteristics

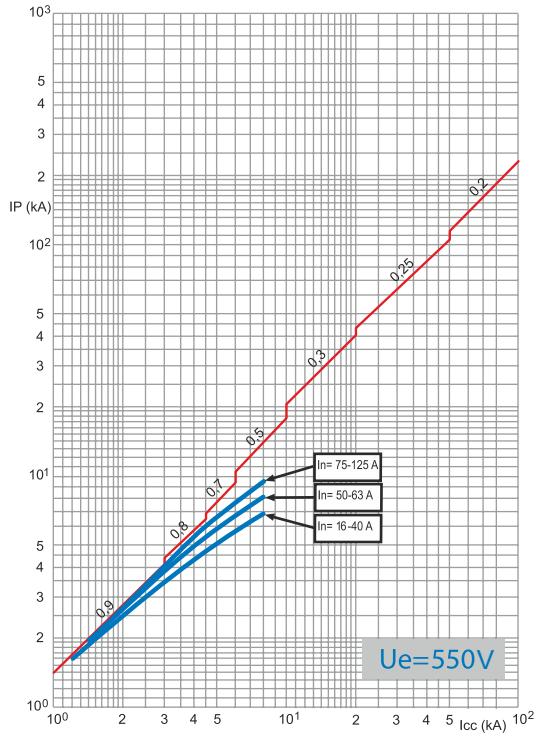
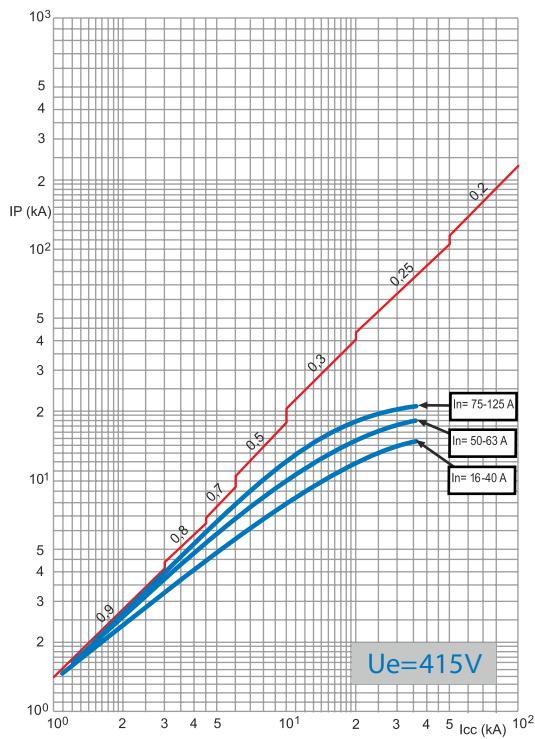
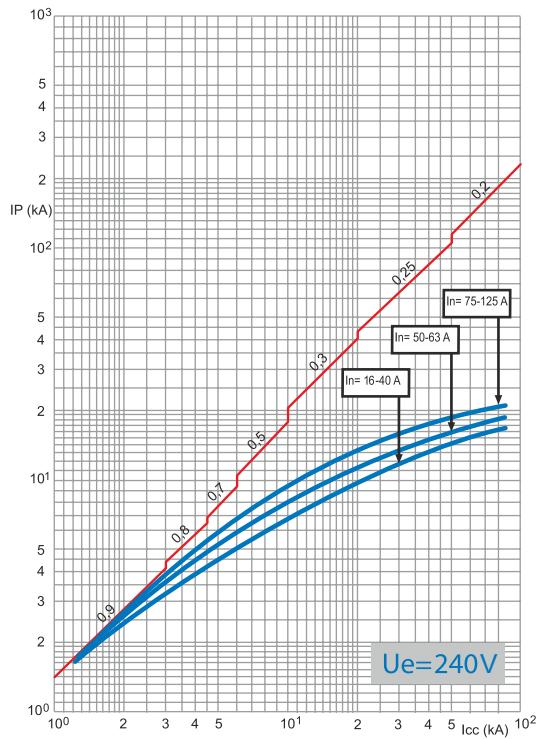
Time current tripping characteristics at ambient temperature 40° C



Technical Characteristics - MCCB

Data limitations of current

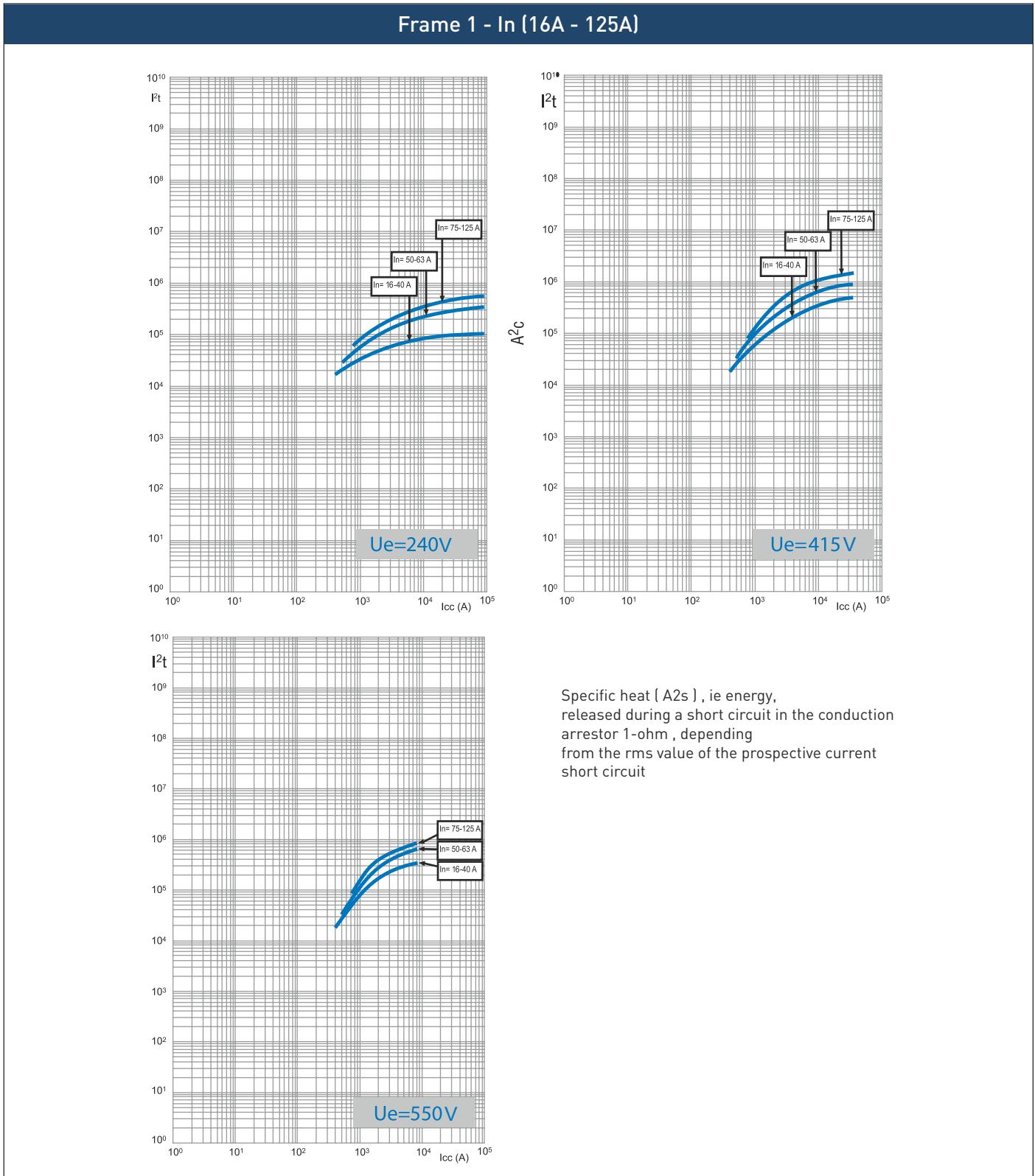
Frame 1 - In (16A - 125A)



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

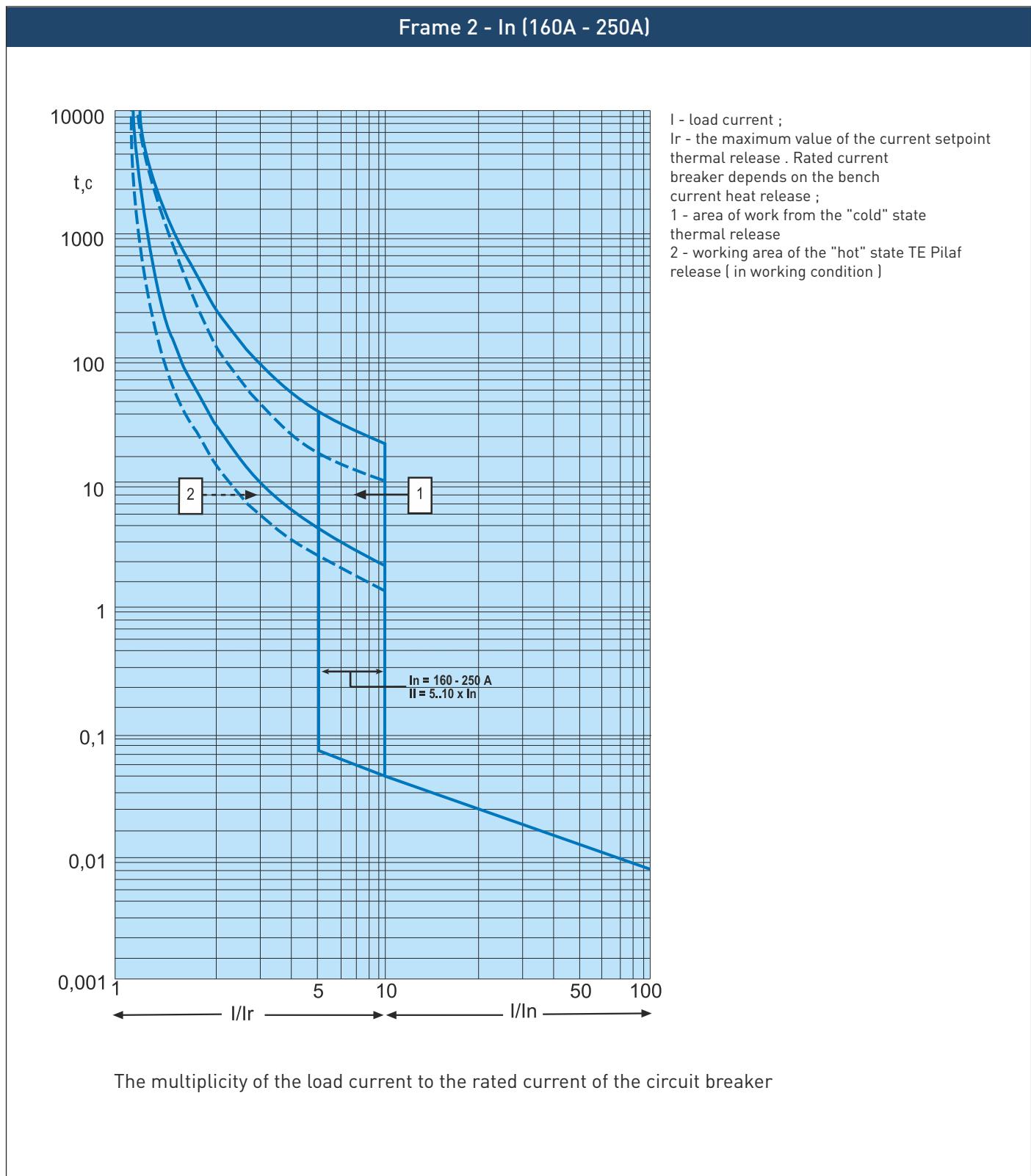
Technical Characteristics - MCCB

Limitations of energy curves



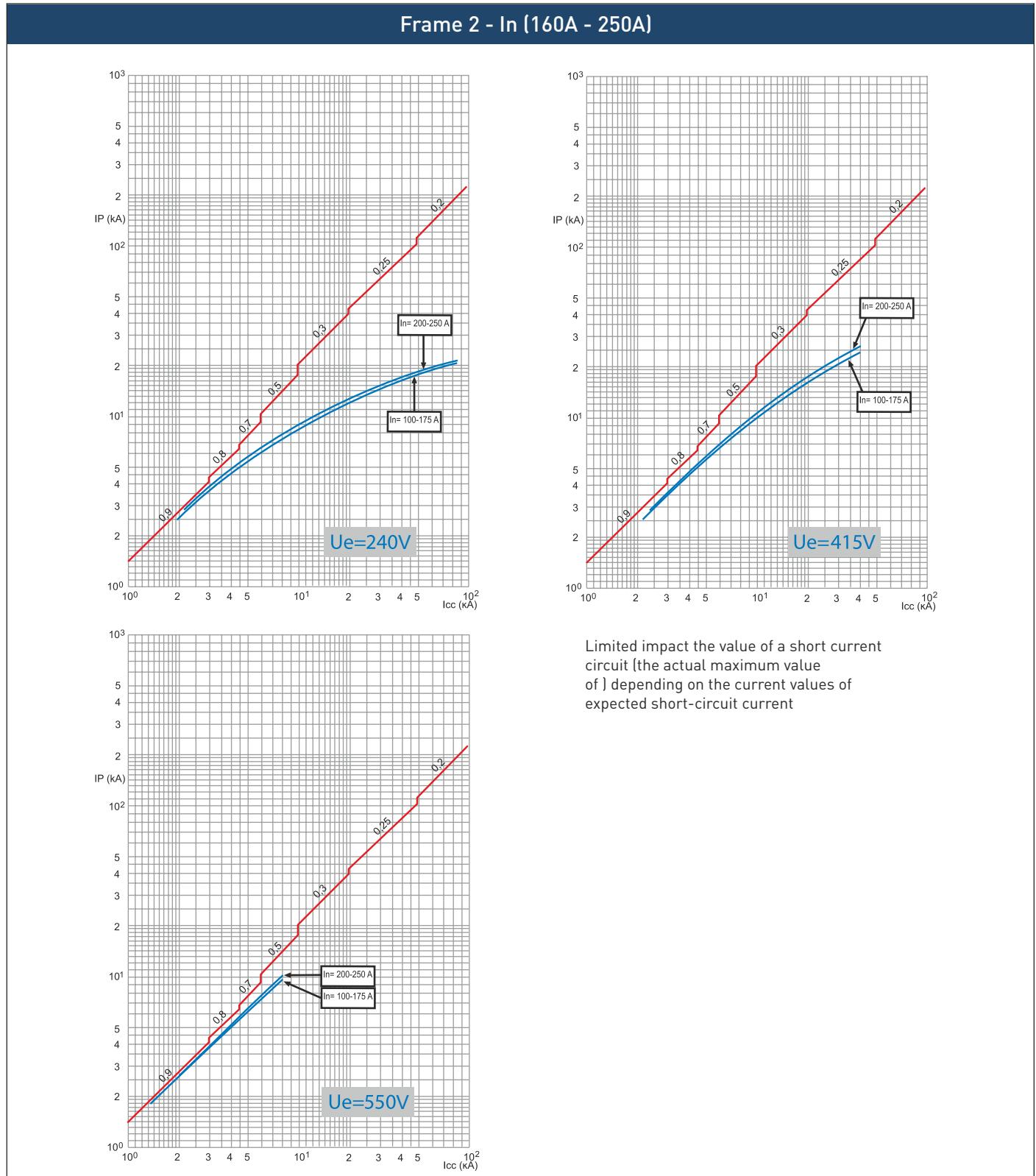
Technical Characteristics - MCCB

Time current characteristics



Technical Characteristics - MCCB

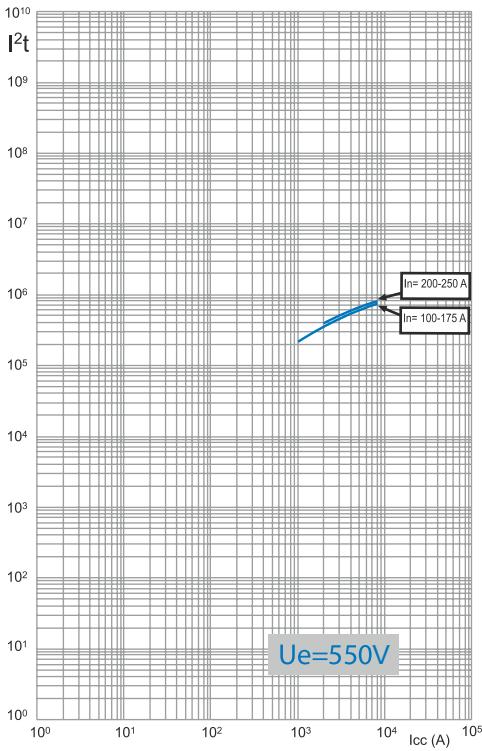
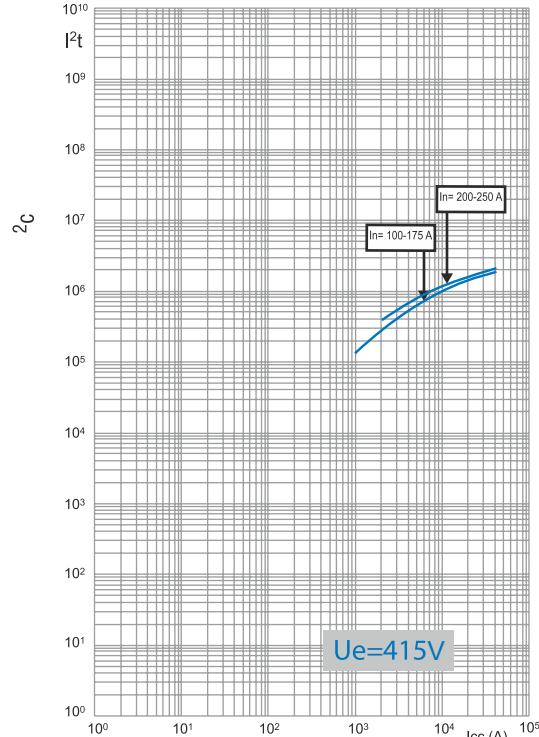
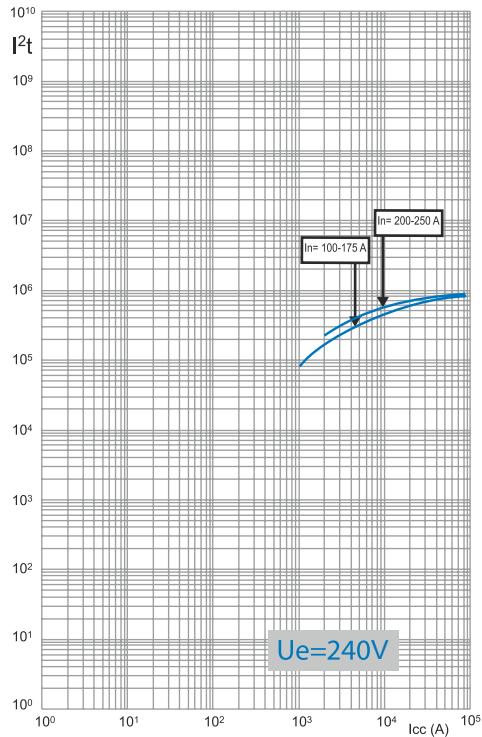
Data limitations of current



Technical Characteristics - MCCB

Limitations of energy curves

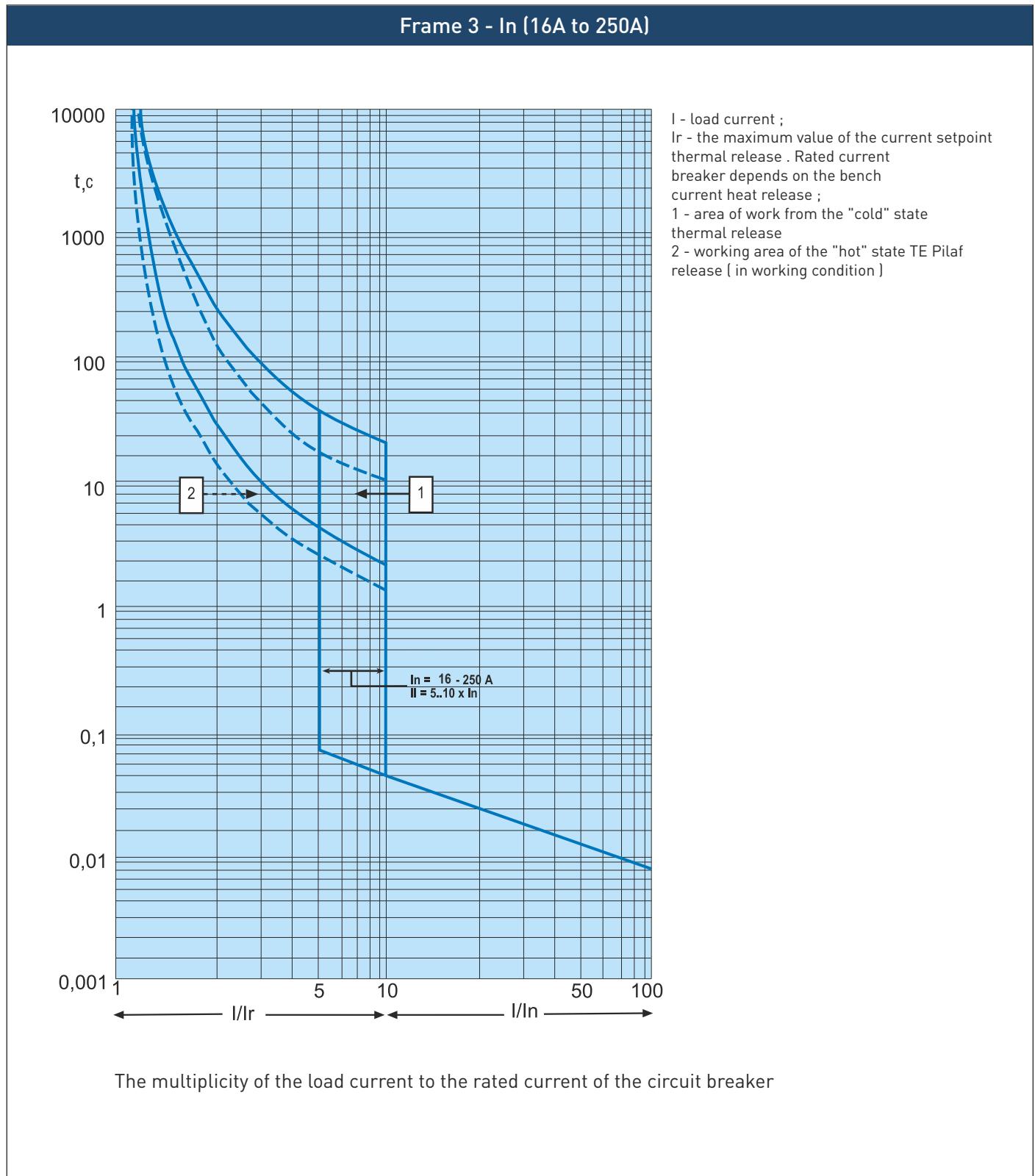
Frame 2 - In (160A - 250A)



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

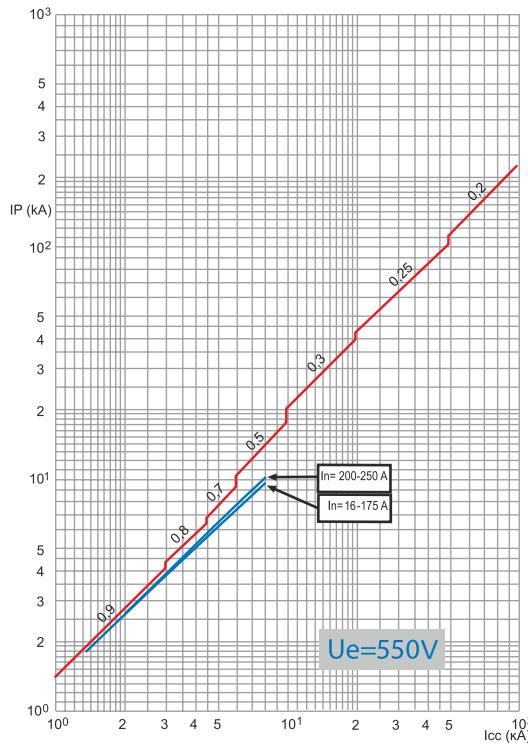
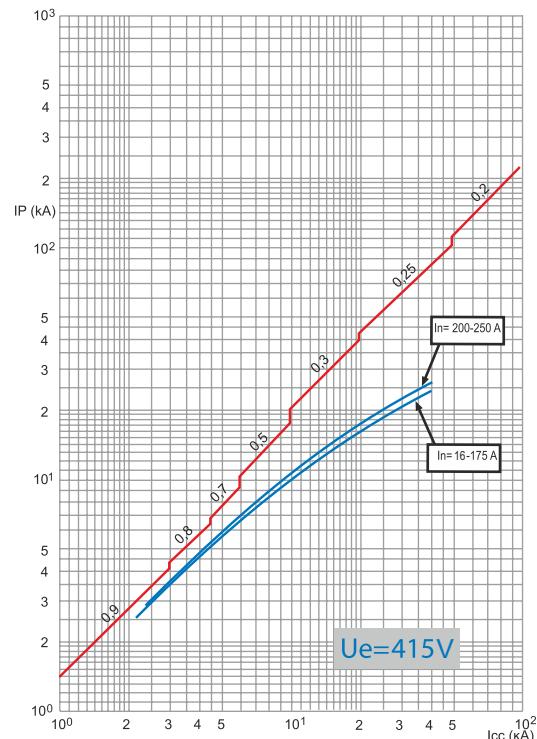
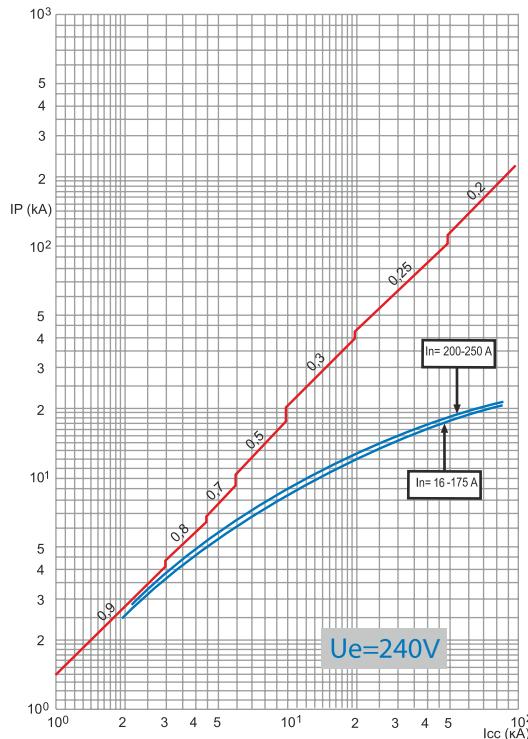
Time current characteristics



Technical Characteristics - MCCB

Data limitations of current

Frame 3 - In (16A to 250A)

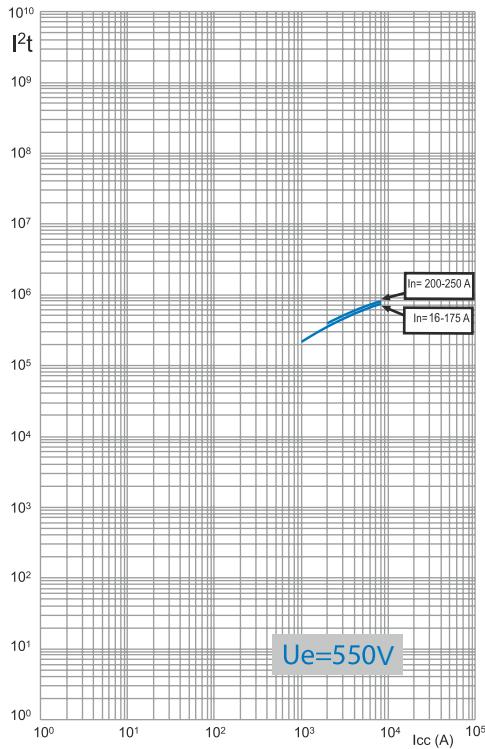
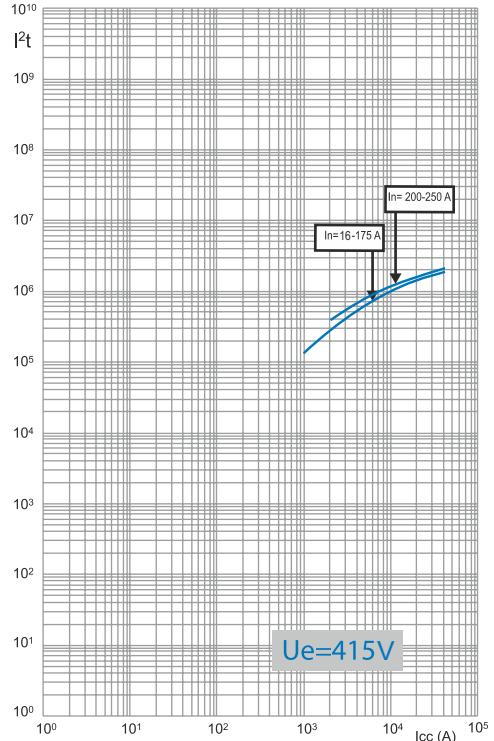
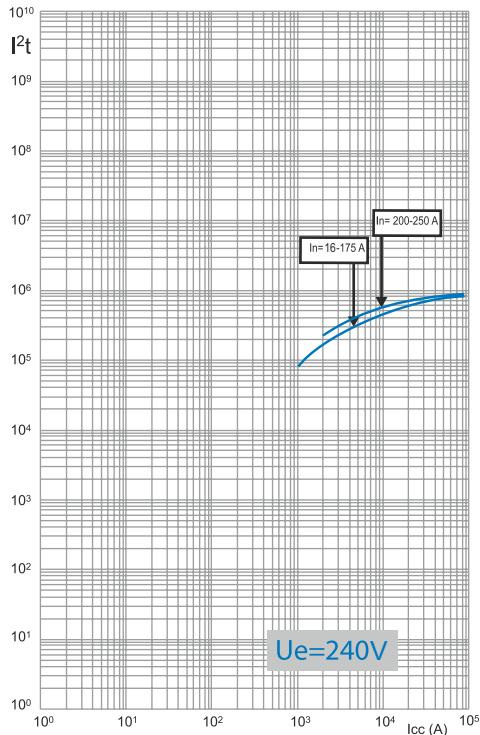


Limited impact the value of a short current circuit (the actual maximum value of) depending on the current values of expected short-circuit current

Technical Characteristics - MCCB

Limitations of energy curves

Frame 3 - In (16A to 250A)

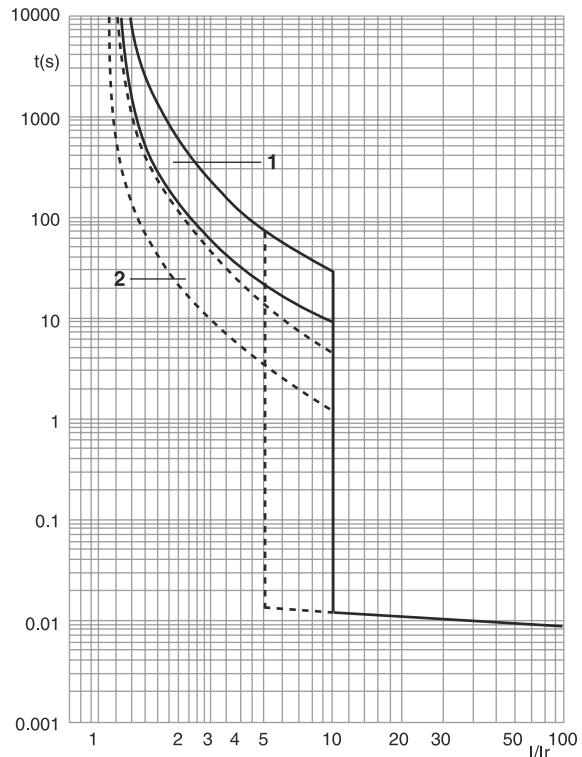


Specific heat [A₂s] , ie energy,
released during a short circuit in the conduction
arrestor 1-ohm , depending
from the rms value of the prospective current
short circuit

Technical Characteristics - MCCB

Frame 4 - In (315A - 630A)

Performance data for Frame F4



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

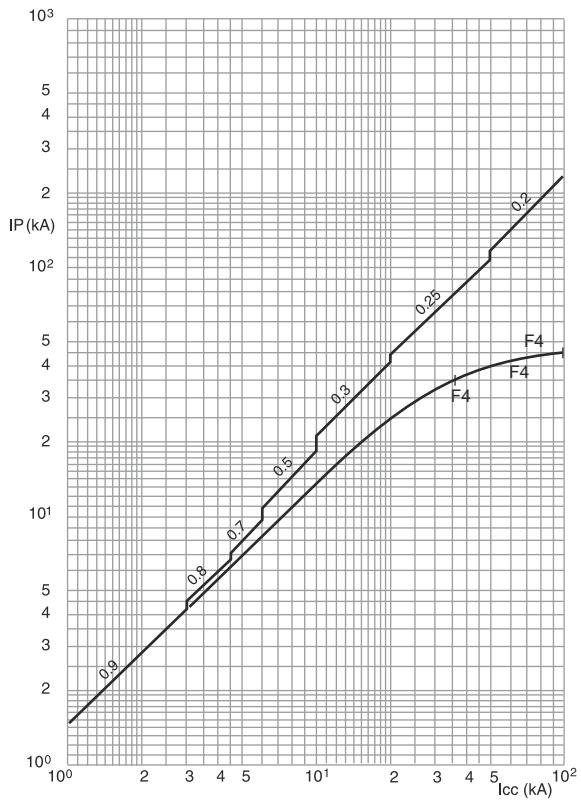
I = actual current

Ir = max. adjustment current of thermal release

1 = thermal release zone when cold

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

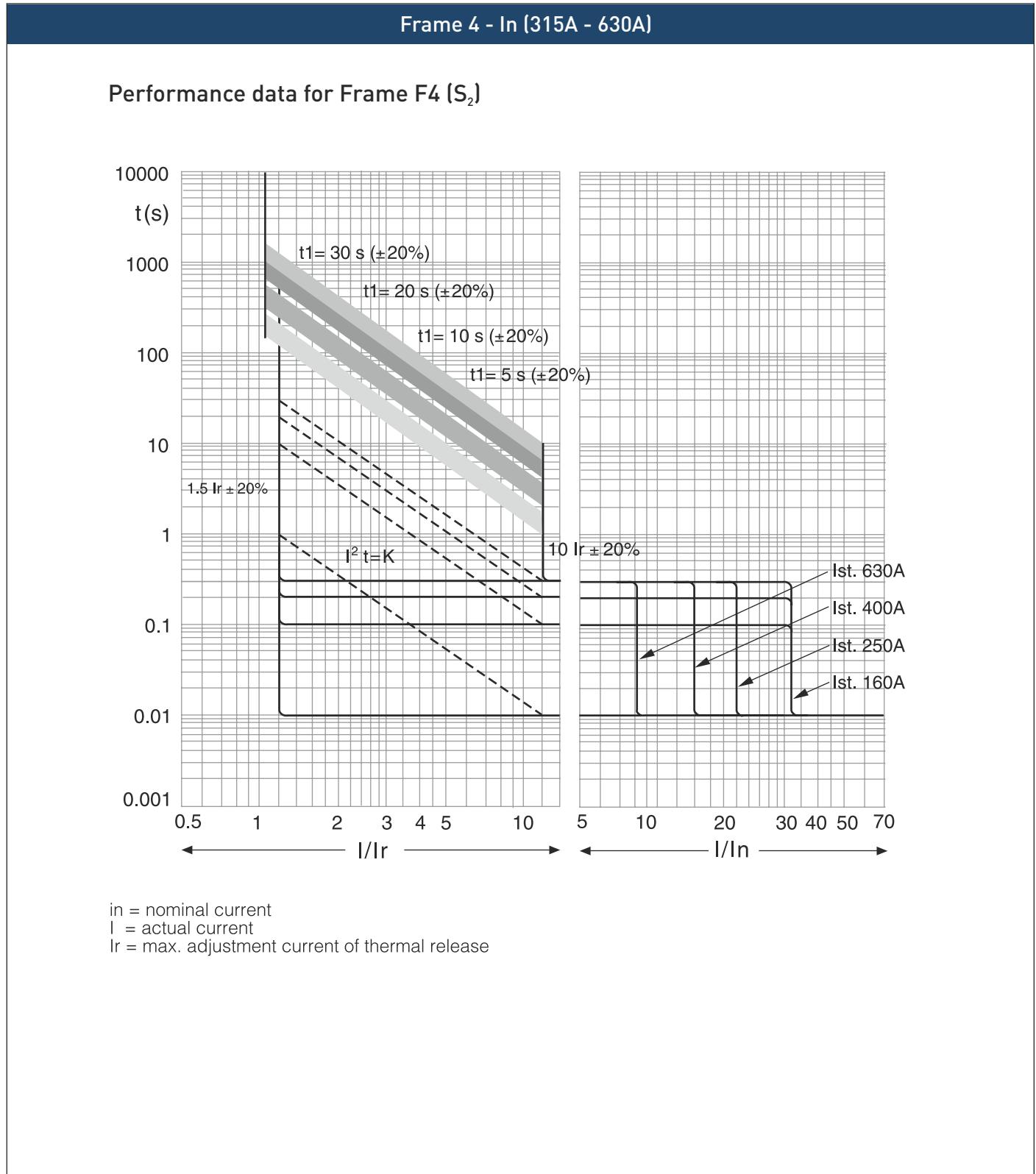
Current limitation curves



Icc = prospective short-circuit symmetrical current
(rms value in kA)

IP = maximum peak value (in kA)

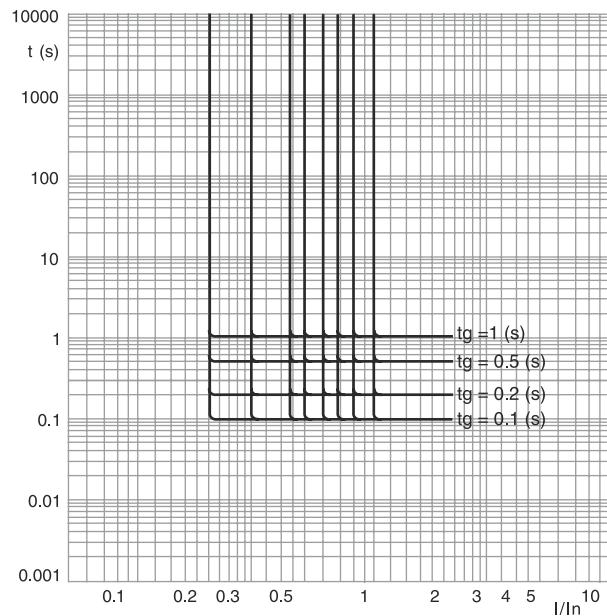
Technical Characteristics - MCCB



Technical Characteristics - MCCB

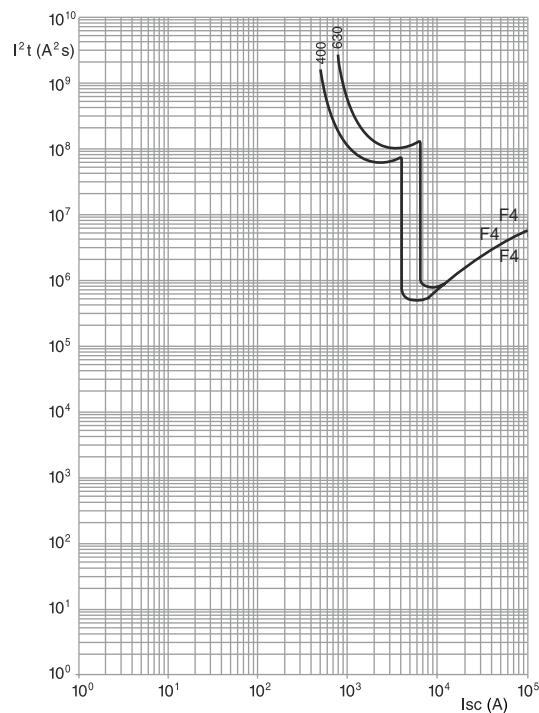
Frame 4 - In (315A - 630A)

Performance data (earth fault) Sg



I = actual current / I_n = nominal current

Thermal stress limitation curves

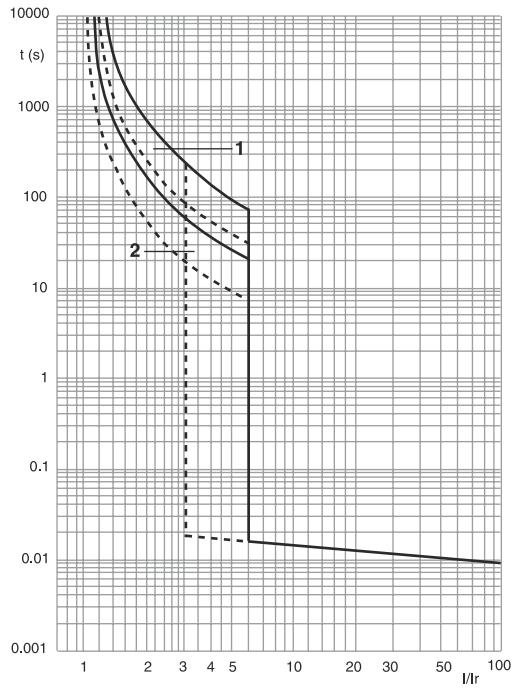


I_{sc} = prospective short-circuit symmetrical current (rms value in A)
 I^2t = limited thermal stress (in A^2s)

Technical Characteristics - MCCB

Frame 5 - In (800A - 1250A)

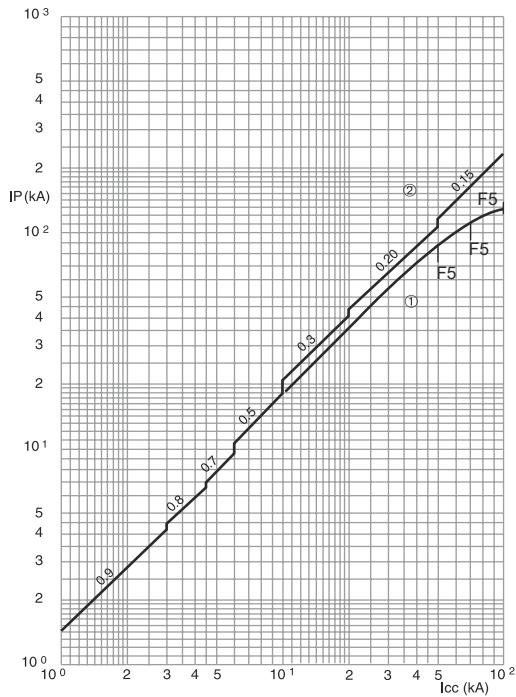
Performance data for Frame F5



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



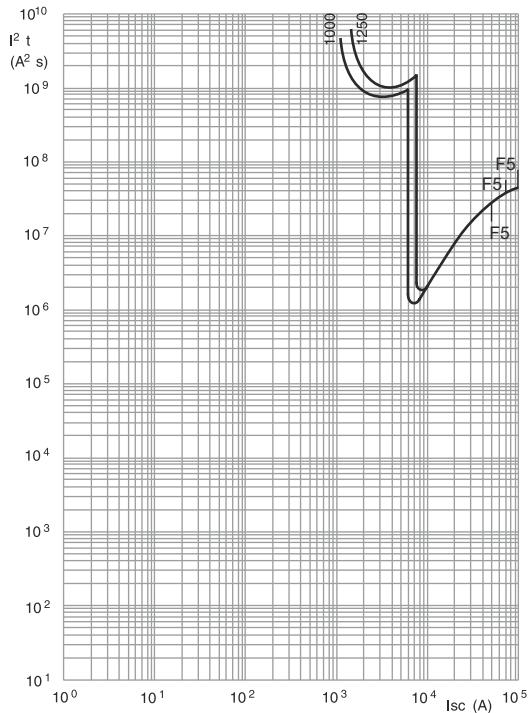
at ambient $\theta = 40^\circ \text{ C}$

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)

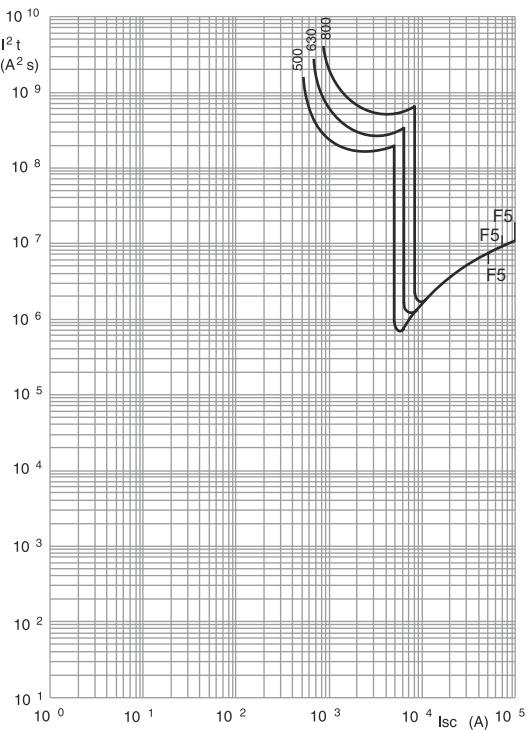
Technical Characteristics - MCCB

Frame 5 - In (800A - 1250A)

Thermal stress limitation curves



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



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 220/240V 50%	16kA 220/240V 50%	25kA 220/240V 50%	36kA 220/240V 50%	16kA 220/240V 50%	25kA 220/240V 50%	36kA 220/240V 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 2.5 to 10 mm ² 17mm 3 Nm				10 to 50 mm ² 10 to 50 mm ² 17mm 6 Nm				
Nominal current at 40 degree In (A) Phase N	16	25	32	40	50	63	80	100	125	160	200	250
Magnetic threshold In (A) Phase N	16	25	32	40	50	63	80	100	125	160	200	250
Endurance Electrical Mechanical	1500 8000								1000 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 %lcu	50kA 50%	36kA 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 ln)	FIXED FIXED (10 ln)	FIXED FIXED (10 ln)
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 Nm10 Nm	300 mm ² or 2 x 240 mm ² 240 mm ² or 2 x 185 mm ² 50 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 20 25 32 40 50 63 80 100 125 160 200 250 16 20 25 32 40 50 63 80 100 125 160 200 250 16 20 25 32 40 50 63 80 100 125 160 200 250	315 to 630 A 315 400 500 630 315 400 500 630	800 A 800 800
Magnetic threshold In (A) Phase N	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	315 400 500 630 3150 4000 5000 6300 3150 4000 5000 6300	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				
Characteristics of use Nominal frequency Maximum rated operating voltage Category of use	50Hz	50Hz			50Hz	50Hz				
Thermal magnetic adjustment Thermal Magnetic	FIXED (1xIn) FIXED (10xIn)	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	40	50	63	80	100	125	160	200	250
Magnetic threshold In (A) Phase N	Fixed 32 320 320	Fixed 40 50 63 80 100 125						Fixed 160 200 250 1600 2000 2500 1600 2000 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 %lcu	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		10 to 50 mm ²		35 to 50 mm ²	35 to 150 mm ²		
2.5 to 10 mm ²		10 to 35 mm ²		35 to 50 mm ²	35 to 120 mm ²			
17mm		17 mm		17 mm	25 mm			
3 Nm		6 Nm		6 Nm	13 Nm			
Nominal current at 40 degree In (A) Phase N	25 to 125A				160 to 250 A			
25	32	40	50	63	80	100		
25	32	40	50	63	80	100		
125					125			
160					160	200		
200					200	250		
250								
Magnetic threshold In (A) Phase N	Fixed (10 In)				Fixed (10 In)			
25	32	40	50	63	80	100		
250	320	400	500	630	800	1000		
125					1250			
1600					1250	2500		
2000					1600	2000		
2500						2500		
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		
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		

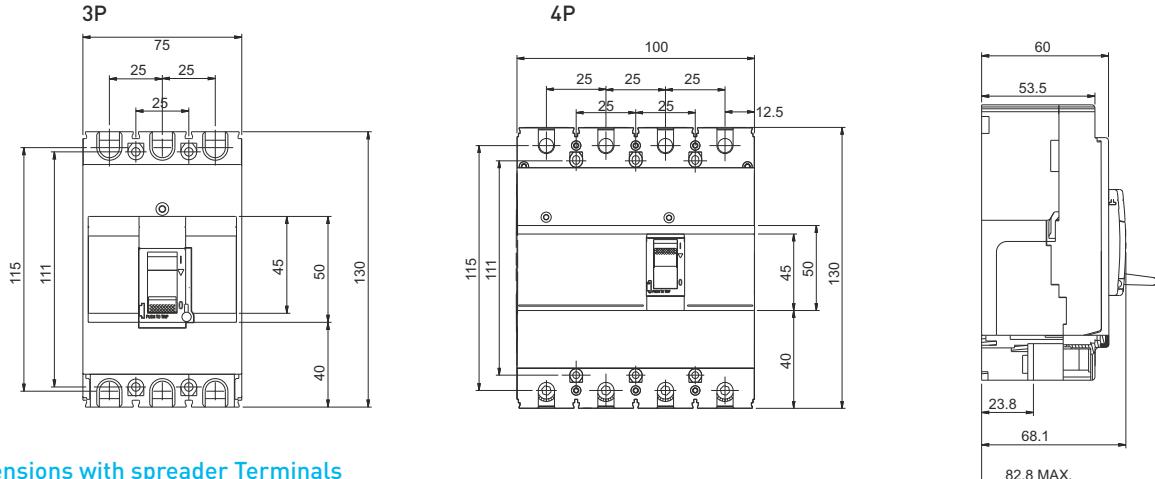
Technical Table

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						
380/415V	36kA	50kA	36kA	50kA	36kA	50kA
220/240V						
Breaking capacity %lcu	100%	100%	100%	100%	100%	100%
Characteristics of use						
Nominal frequency	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz
Maximum rated operating voltage	Upto 550 V	Upto 550 V	Upto 550 V	Upto 550 V	Upto 550 V	Upto 550 V
Category of use	A	A:In 630A-B:In 200 to 400A	B	A	A:In 630A-B:In 200 to 400A	B
Thermal magnetic adjustment	—	—	—	—	—	—
Thermal	—	—	—	—	—	—
Magnetic	—	—	—	—	—	—
Electronic protection adjustment	Ir : 0,4 to 1 In Isd : 1,5 to 10 Ir	Ir = 0.4 - 1 x ln tr = 3-30 s Isd = 1.5 - 10 Ir tsd (I=K) = 0-500 ms tsd(I2t=K) = 0-500 ms	Ir = 0.4 - 1 x ln tr = 3-30 s Isd = 1.5 - 10 Ir tsd (I=K) = 0-500 ms tsd(I2t=K) = 0-500 ms	Ir : 0,4 to 1 In Isd : 1,5 to 10 Ir	Ir = 0.4 - 1 x ln tr = 3-30 s Isd = 1.5 - 10 Ir tsd (I=K) = 0-500 ms tsd(I2t=K) = 0-500 ms lg = 0.2 - 1 x ln tg = 0.1 - 1 s	Ir = 0.4 - 1 x ln tr = 3-30 s Isd = 1.5 - 10 Ir tsd (I=K) = 0-500 ms tsd(I2t=K) = 0-500 ms lg = 0.2 - 1 x ln tg = 0.1 - 1 s"
Maximum cable cross-section						
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						
In (A)	40A,100A, 160A, 250A	400 to 630 A	800 to 1250 A	40A,100A, 160A, 250A	400 to 630 A	800 to 1250 A
Phase		400 to 630 A	800 to 1250 A		400 to 630 A	800 to 1250 A
N		0-50-100% of phase value	0-50-100% of phase value		0-50-100% of phase value	0-50-100% of phase value
Magnetic threshold	—	—	—	—	—	—
In (A)	—	—	—	—	—	—
Phase	—	—	—	—	—	—
N	—	—	—	—	—	—
Endurance						
Electrical	8000	5000	4000	8000	5000	4000
Mechanical	25000	20000	10000	25000	20000	10000

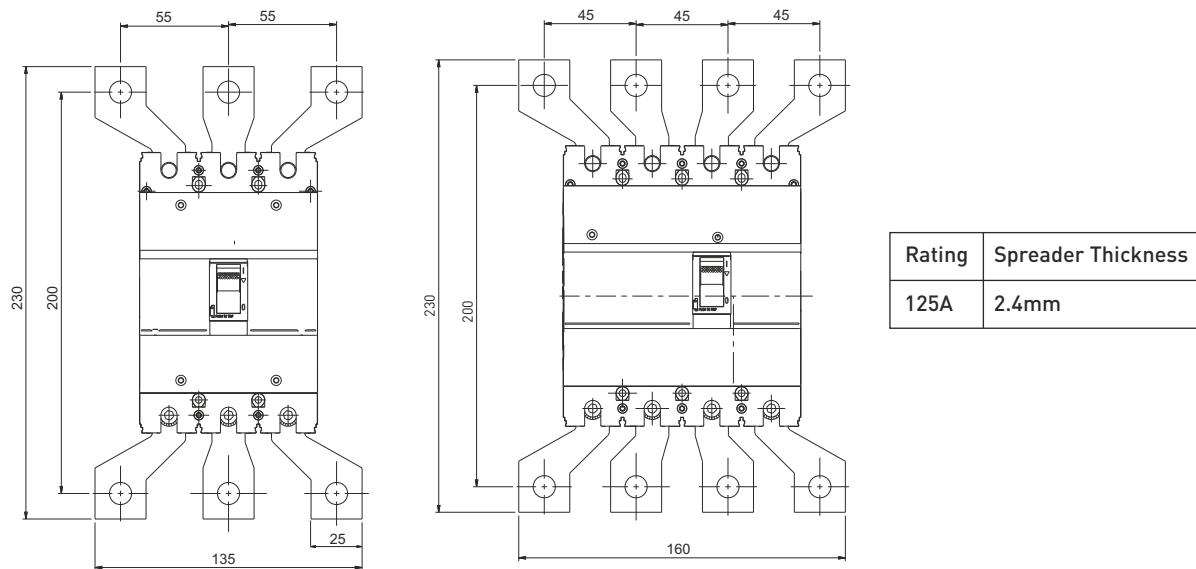
Dimensional Drawings

Optum F1

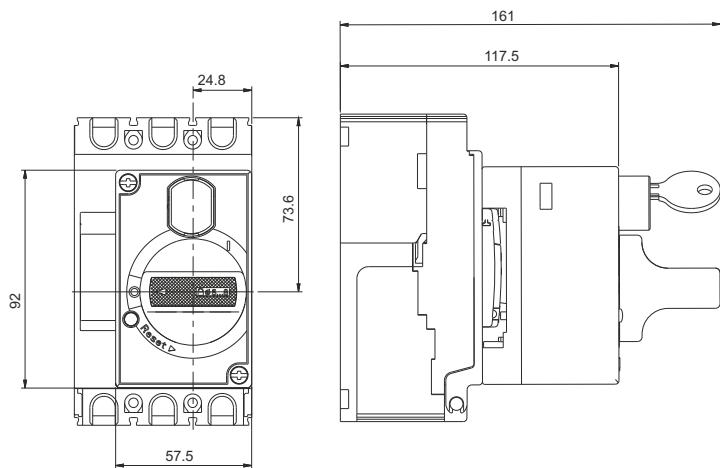
Overall and Mounting Dimensions



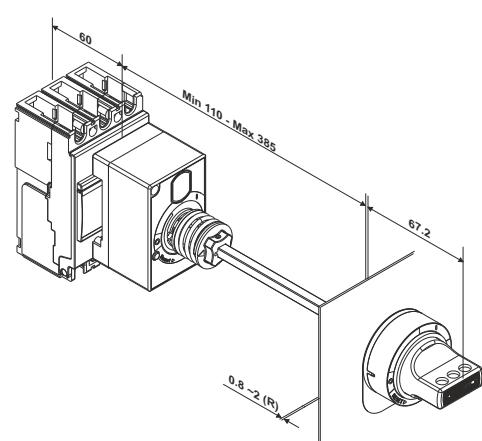
Dimensions with spreader terminals



Dimensions with Rotary Handle-Direct



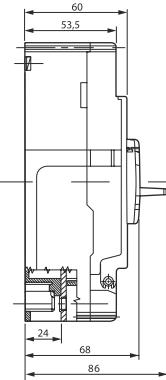
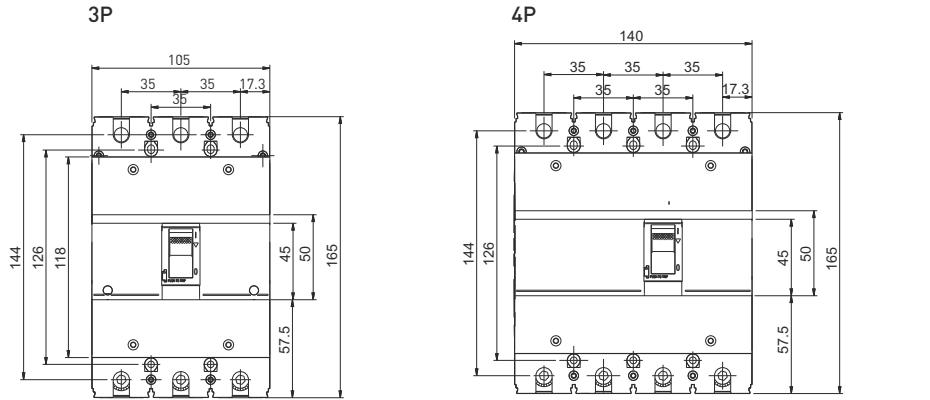
Dimensions with Rotary Handle-Vari-Depth



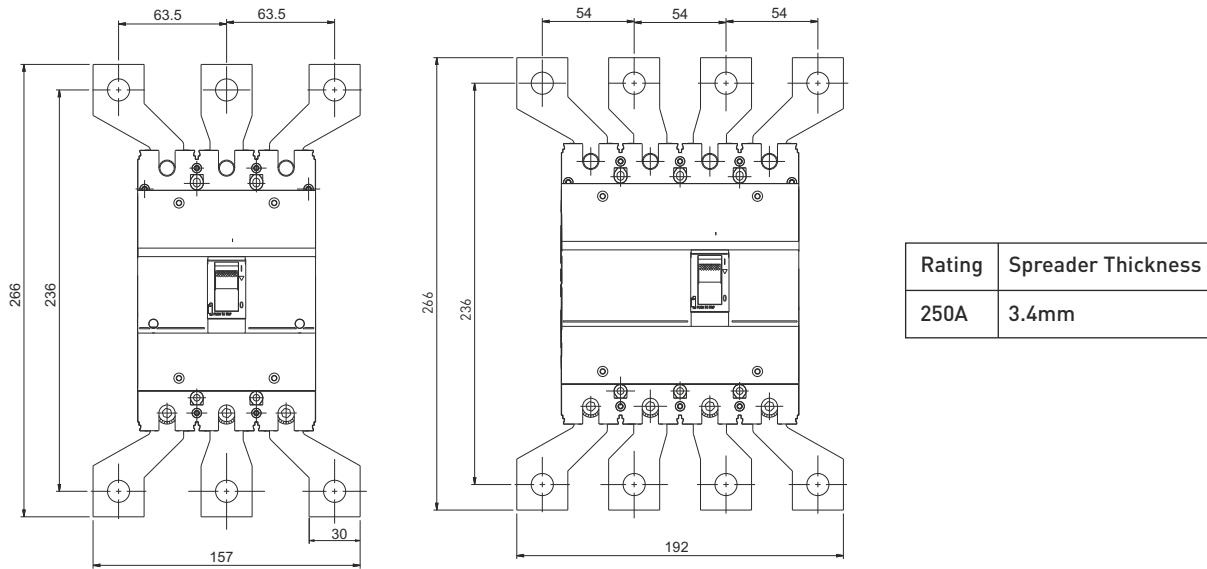
Dimensional Drawings

Optum F2

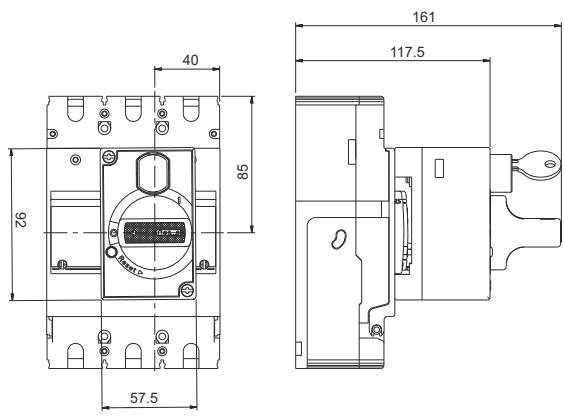
Overall and Mounting Dimensions



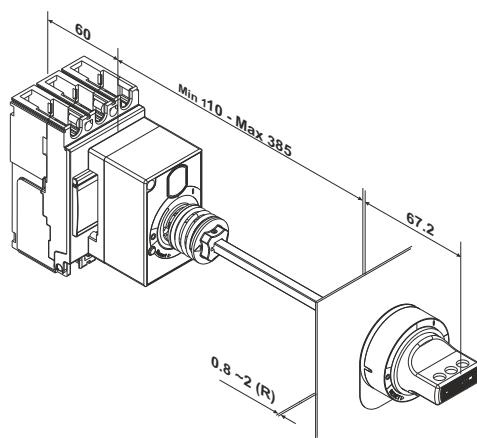
Dimensions with spreader terminals



Dimensions with Rotary Handle-Direct



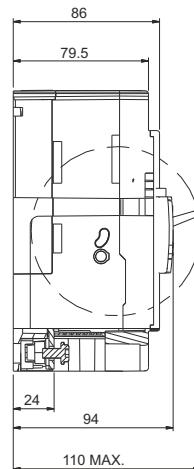
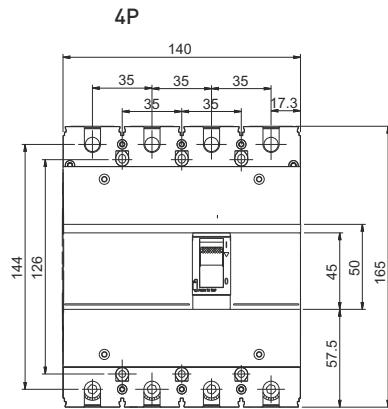
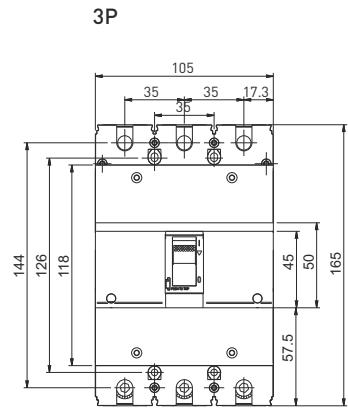
Dimensions with Rotary Handle-Vari-Depth



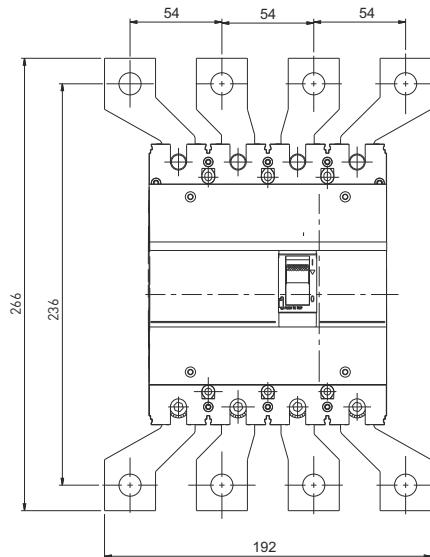
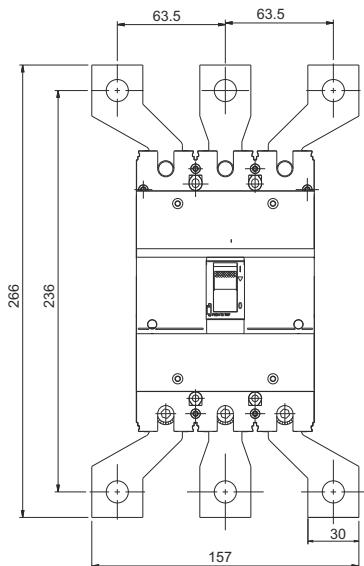
Dimensional Drawings

Optum F3

Overall and Mounting Dimensions

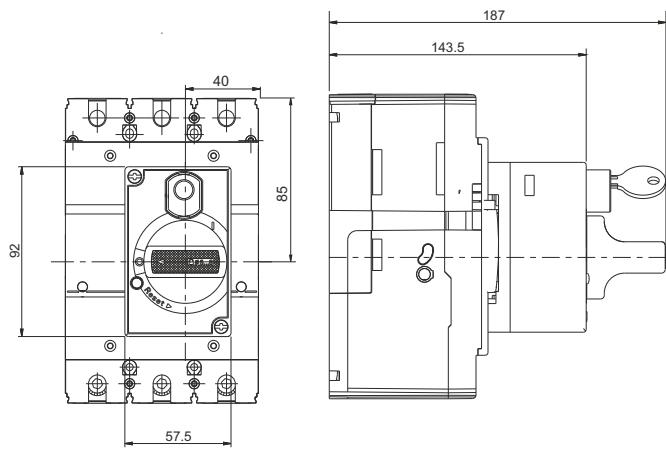


Dimensions with spreader Terminals

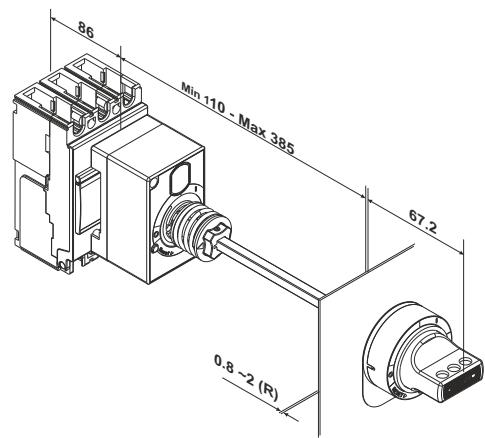


Rating	Spreader Thickness
250A	3.4mm

Dimensions with Rotary Handle-Direct



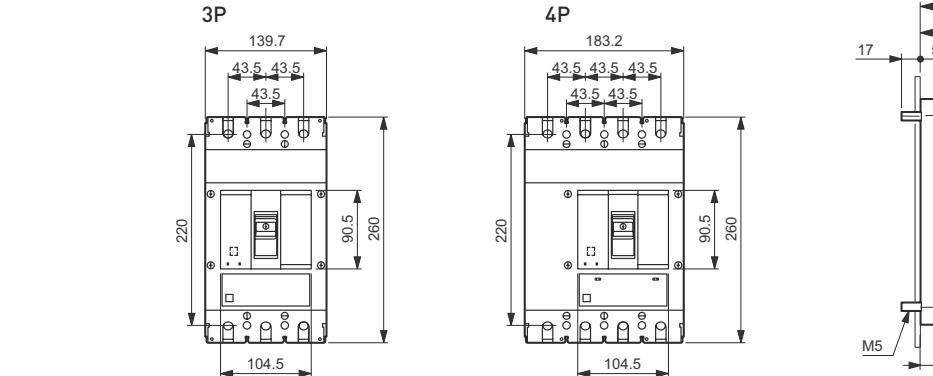
Dimensions with Rotary Handle-Vari-Depth



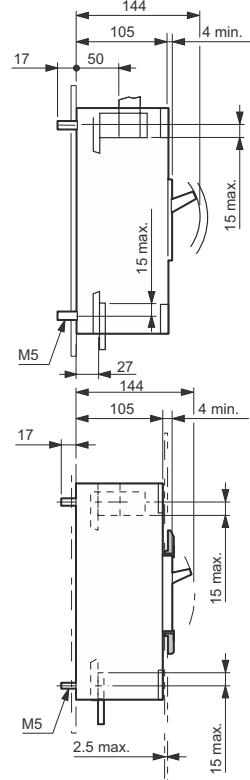
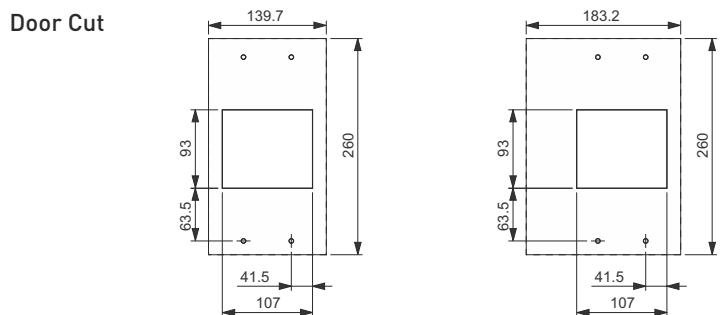
Dimensional Drawings

Optum F4

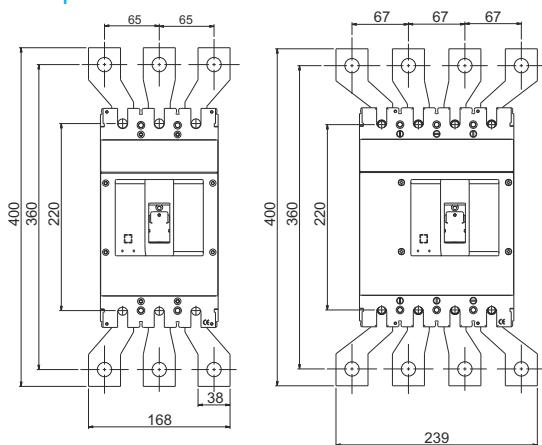
Overall and Mounting Dimensions



Door Cut

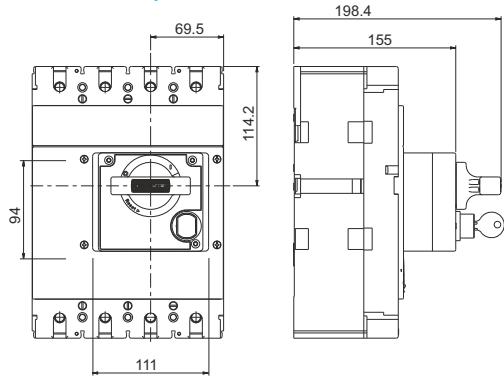


Dimensions with spreader terminals

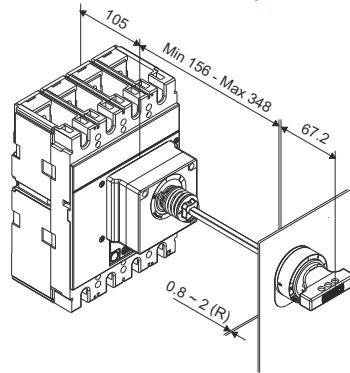


Rating	Spreader Thickness
630A	8mm

Dimensions with Rotary Handle-Direct



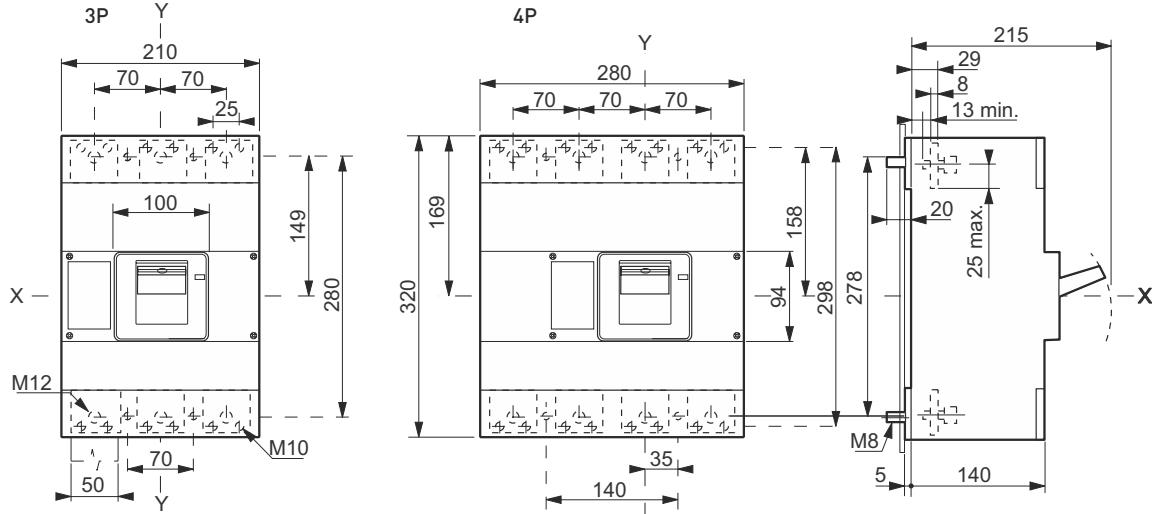
Dimensions with Rotary Handle-Vari-Depth



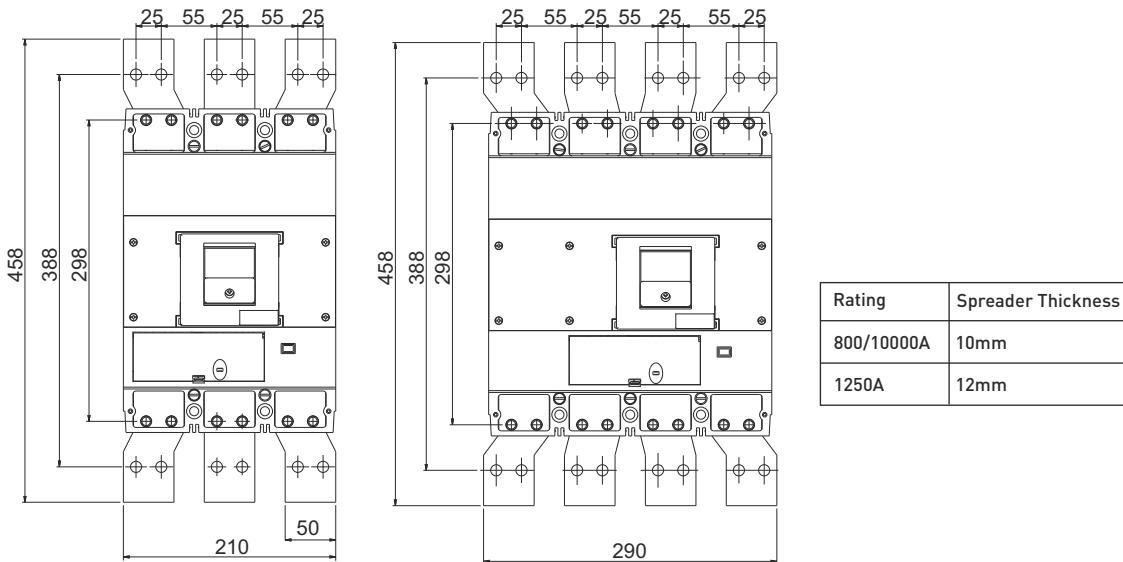
Dimensional Drawings

Optum F5

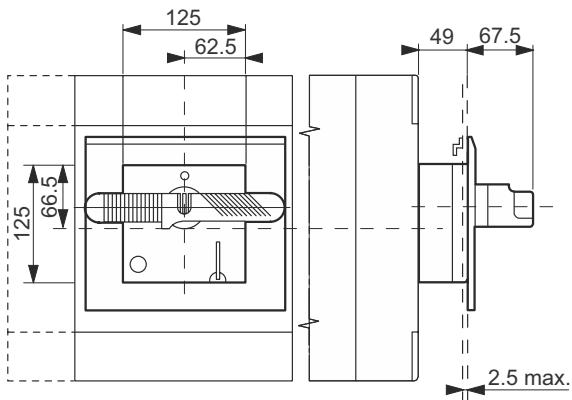
Overall and Mounting Dimensions



Dimensions with spreader Terminals

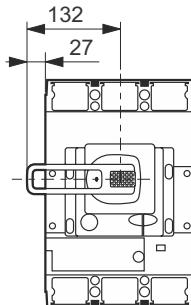


Dimensions with Rotary Handle-Direct



Dimensions with Rotary Handle-Vari-Depth

Mounting with flexible seal



Optium 1.0 (Fixed TM Range)

- $I_{cs} = 50\% I_{cu}$ as per IEC 60947-II
- Suitable for isolation
- Class II front face
- 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)

- $I_{cs} = 100\% I_{cu}$ 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
- $I_{cs} = 100\% I_{cu}$
- Adjustable Overload Setting $I_r = [0.8 \text{ to } 1.0] \times I_{In}$
- 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
- Suitable for isolation
- Adjustable Short Circuit Setting $I_{sd} = [5 \text{ to } 10] \times I_n$

	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

Optium 2.1 (Electronic / Micro Processor Range)

- $I_{cs} = 100\% I_{cu}$ as per IEC 60947-II
- Adjustable Overload Setting $I_r = 0.4 - 1 \times I_n$
- Class II front face
- Suitable for isolation
- 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 / Micro Processor Range)

- $I_{cs} = 100\% I_{cu}$ as per IEC 60947-II
- Transparent cover for trip unit as standard
- 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; $T_{sd} (I^2t=K) = 0-500$ ms
- Class II front face
- Suitable for isolation
- Adjustable Neutral pole protection -N,N/2 & Off for 4 pole MCCB

	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 (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

Optium 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
- Ground fault Setting:- $I_g = 0.2 - 1 \times I_n$; $T_g = 0.1 - 1$ s
- 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
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

Notes

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CORPORATE OFFICE:

V. J. Business Towers, A-6, 1st Floor, Sector-125, Noida-201301, U.P., India. Ph.: +91-0120-3305100
 E-mail: customer.care@indoasian.com, international@indoasian.com Website: www.indoasian.com

CUSTOMER CARE HEAD:

V. J. Business Towers, A-6, 1st Floor, Sector-125, Noida-201301, U.P., India.
 Ph.: +91-0120-3305111 E-mail: customer.care@indoasian.com

NORTH**Regional Sales office****DELHI NCR**

V. J. Business Towers
 A-6, Ground Floor,
 Sector-125, Noida-201301
 Ph.: 0120-3365300

Branch offices**CHANDIGARH**

S.C.O.-11, 2nd Floor,
 Sector-26, Madhya Marg,
 Chandigarh-160002
 Ph.: 0172-3934651

Branch offices**JAIPUR**

433, 4th Floor, Ganpati Plaza,
 M. I. Road,
 Jaipur-302001
 Ph.: 0141-4113528

Branch offices**LUCKNOW**

301, 3rd Floor, Chintel House,
 Station Road,
 Lucknow-226001
 Ph.: 0522-4013210

SOUTH**Regional Sales office****BANGALORE**

787, 1st Floor "Skyline Vista"
 15th Cross, 100 Feet Ring Road
 J P Nagar 1st Phase
 Bangalore-560 078
 Tel: 080-46219999

Branch offices**COCHIN**

Door No.65/1317, Syda Building,
 2nd Floor, Kaloor-Kadavanthra Road,
 Kaloor, Ernakulam District,
 Kochi-682017 (Kerala)
 Ph.: 0484-4055581-88

Branch offices**COIMBATORE**

Door No. 83,
 Dr. Nanjappa Road,
 Coimbatore-641018
 Ph.: 0422-2302715

Branch offices**CHENNAI**

No.5, 1st Floor, Mahalingapuram Main Road,
 Nungambakkam,
 Chennai-600034
 Ph.: 044-28172096, 28170527

Branch offices**HYDERABAD**

312, 3rd Floor,
 Amrutha Estates, Himayath Nagar,
 Hyderabad-500029
 Ph.: 040-66742425

WEST**Regional Sales office****MUMBAI**

401 & 408, K.P. Arrum,
 Marol Morshi Road, Andheri East,
 Mumbai-400059
 Ph.: 022-61035800

Branch offices**AHMEDABAD**

102, 1st Floor, Shivalik High Street,
 Near Mansi Circle, Vastrapur,
 Ahmedabad-380015
 Ph.: 079-29701351-53

Branch offices**INDORE**

202, KK Bafna Arcade,
 Janjeerwala Square, Race Course Road,
 Indore-452001
 Ph.: 0731-4064064

Branch offices**PUNE**

1307, 4th Floor, Rajadwar Building,
 Off. J. M. Road, Shivaji Nagar,
 Pune-411005
 Ph.: 8087610722

EAST**Regional Sales office****KOLKATA**

"Raikva Building" Room No. 8, 2nd Floor,
 3A Ram Mohan Garden Lane,
 Beliaghata E.M.Bypass, Kolkata-700010
 Ph.: 033-66041503