

Megatiker M3 electronic (no display) circuit breakers

Reference(s) :

T733F40EB / 100EB / 160EB / 250EB; T734F40EB / 100EB / 160EB / 250EB;
T733N40EB / 100EB / 160EB / 250EB; T734N40EB / 100EB / 160EB / 250EB;
T733H40EB / 100EB / 160EB / 250EB; T734H40EB / 100EB / 160EB / 250EB;
T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;



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1. USE

Megatiker M3 platform has been developed to give a new solution of protection devices for a more precise approach in power installations in order to offer the correct answer for different project needs.

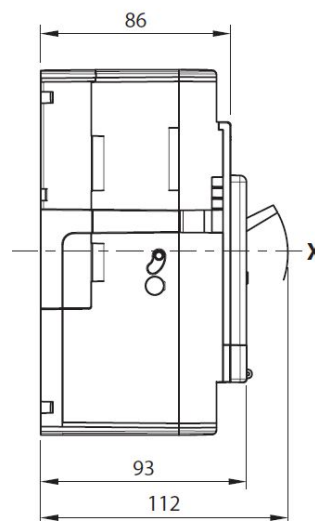
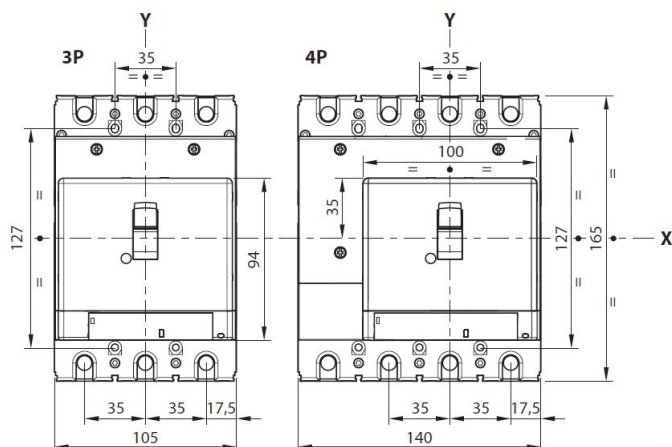
Megatiker M3 platform provide a complete project approach in premium market segment, offering a range completely suitable for high power application with high performance breakers in compact dimensions and at a competitive costs.

2. RANGE

In (A)	Megatiker M3 electronic (no display) version			
	36 kA		50 kA	
	3P	4P	3P	4P
40	T733F40EB	T734F40EB	T733N40EB	T734N40EB
100	T733F100EB	T734F100EB	T733N100EB	T734N100EB
160	T733F160EB	T734F160EB	T733N160EB	T734N160EB
250	T733F250EB	T734F250EB	T733N250EB	T734N250EB
	70 kA		100 kA	
	3P	4P	3P	4P
40	T733H40EB	T734H40EB	T733L40EB	T734L40EB
100	T733H100EB	T734H100EB	T733L100EB	T734L100EB
160	T733H160EB	T734H160EB	T733L160EB	T734L160EB
250	T733H250EB	T734H250EB	T733L250EB	T734L250EB

3. DIMENSIONS AND WEIGHTS

3.1 Dimensions

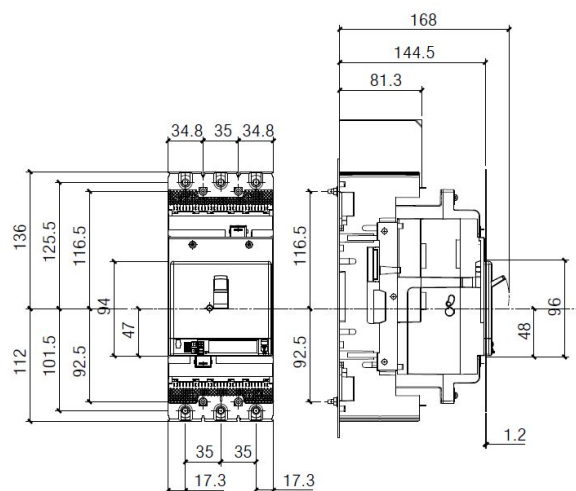
Lateral view

Frontal view (3 and 4 poles)


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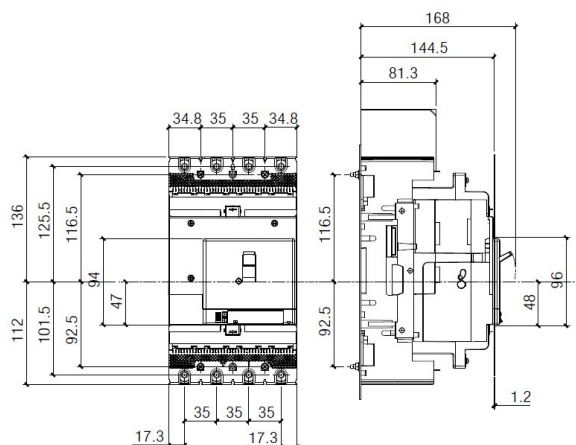
Reference(s) :

T733F40EB / 100EB / 160EB / 250EB; T734F40EB / 100EB / 160EB / 250EB;
T733N40EB / 100EB / 160EB / 250EB; T734N40EB / 100EB / 160EB / 250EB;
T733H40EB / 100EB / 160EB / 250EB; T734H40EB / 100EB / 160EB / 250EB;
T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;

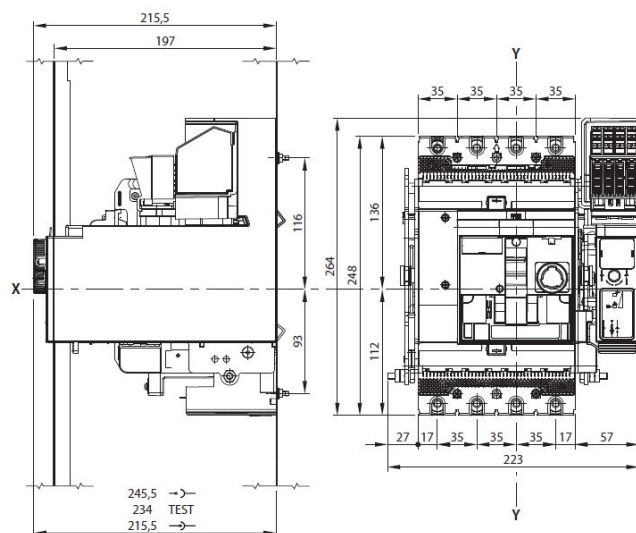
Plug-in version (3P)



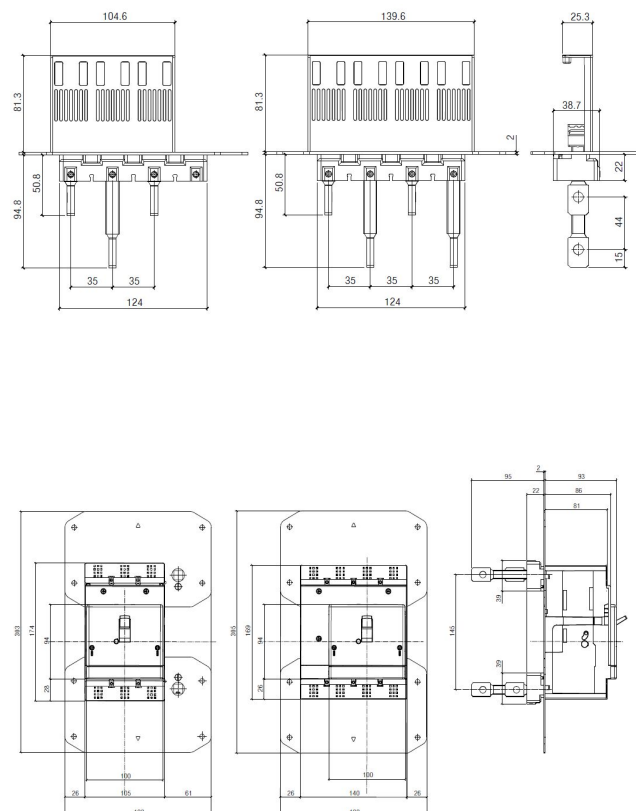
Plug-in version (4P)



Draw-out version (4P)



Rear terminals



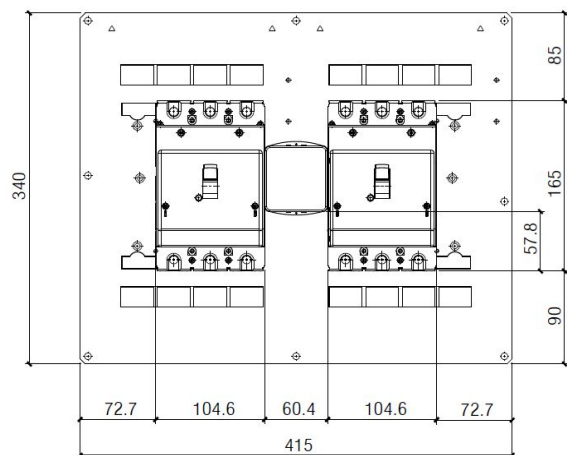
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T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;

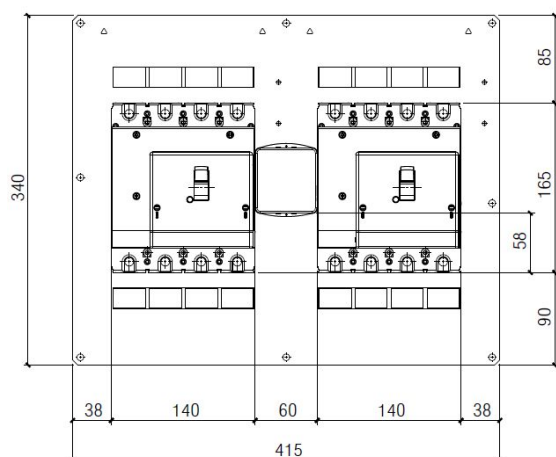
Interlock (3P)

(for rear plate interlock dimension, see relative instruction sheet)

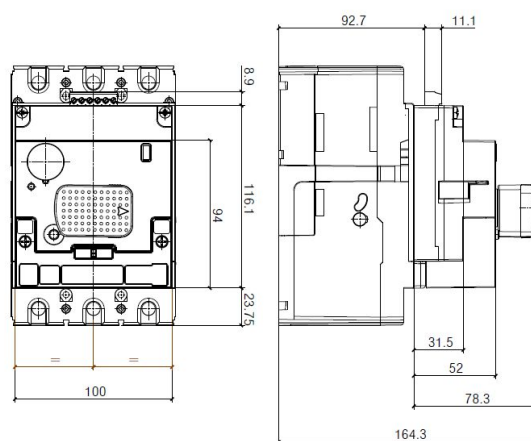
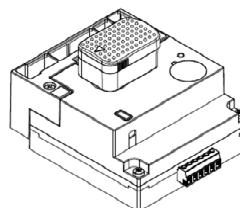
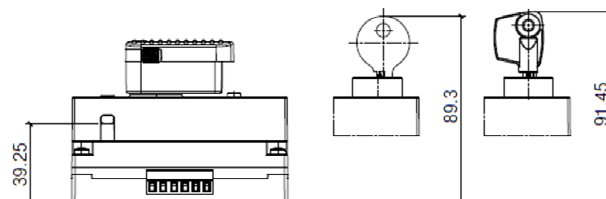
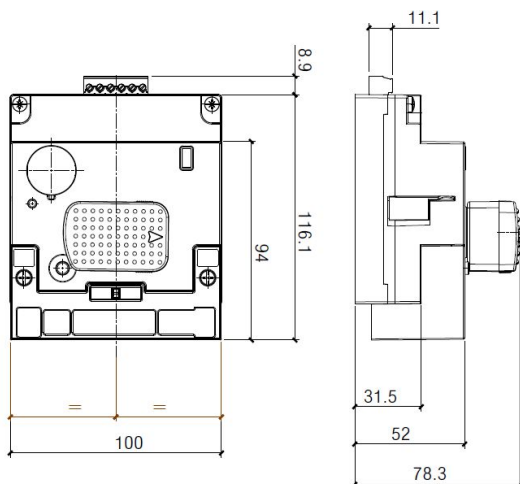


Interlock (4P)

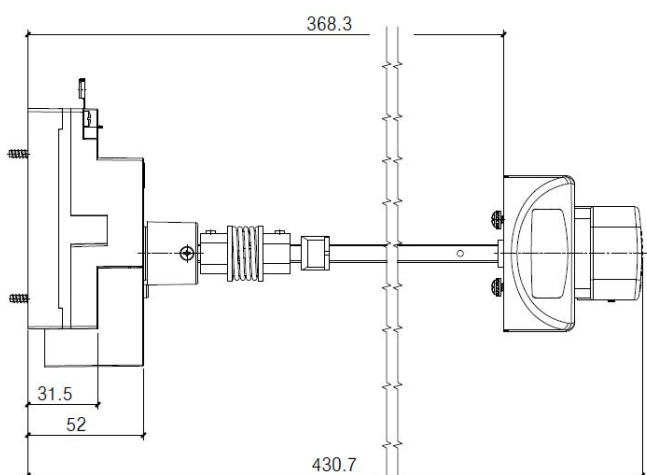
(for rear plate interlock dimension, see relative instruction sheet)



Direct rotary handle



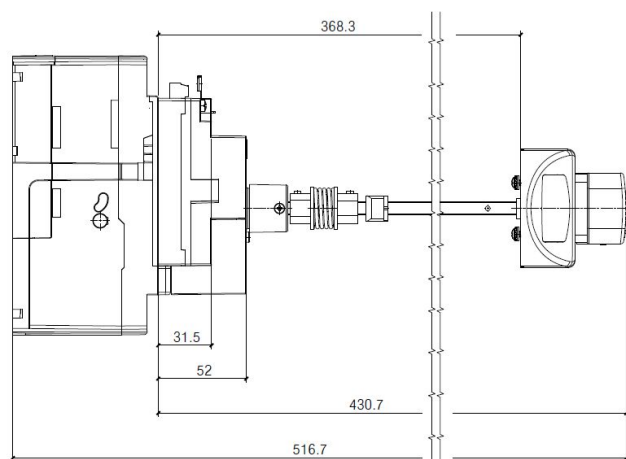
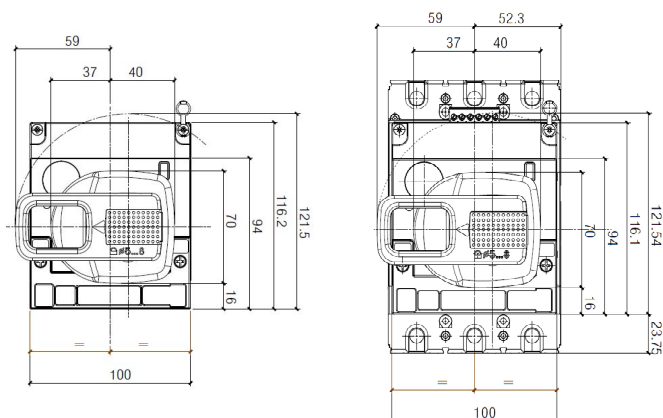
Vari-depth rotary handle



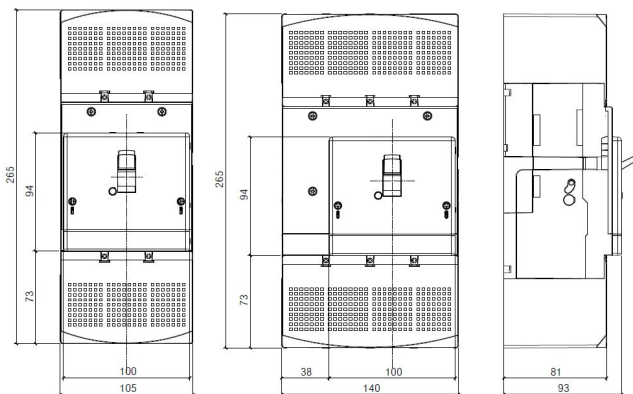
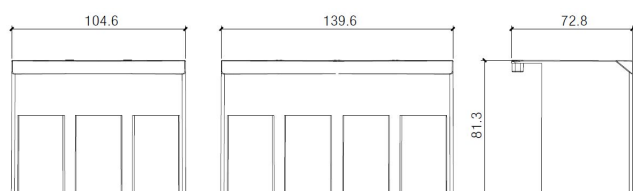
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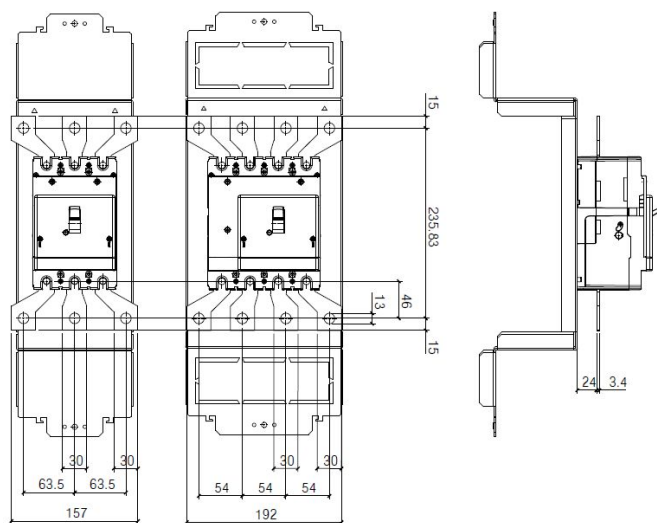
T733F40EB / 100EB / 160EB / 250EB; T734F40EB / 100EB / 160EB / 250EB;
T733N40EB / 100EB / 160EB / 250EB; T734N40EB / 100EB / 160EB / 250EB;
T733H40EB / 100EB / 160EB / 250EB; T734H40EB / 100EB / 160EB / 250EB;
T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;



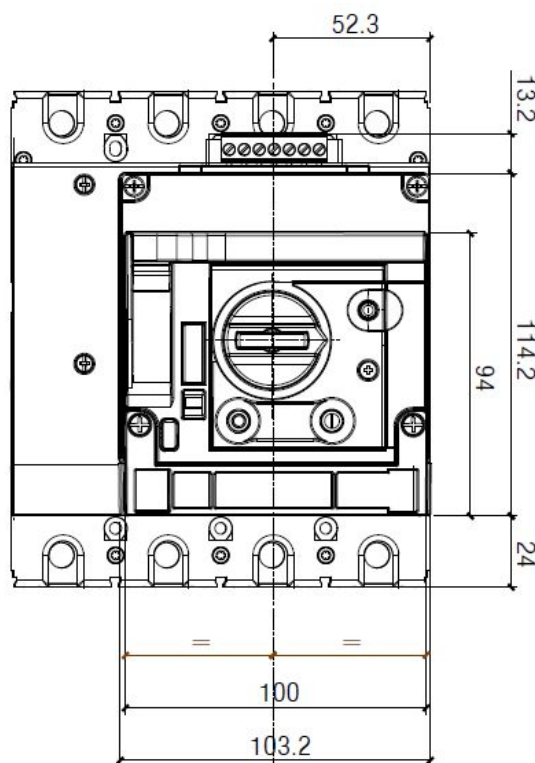
Sealable terminal shields



Spreaders

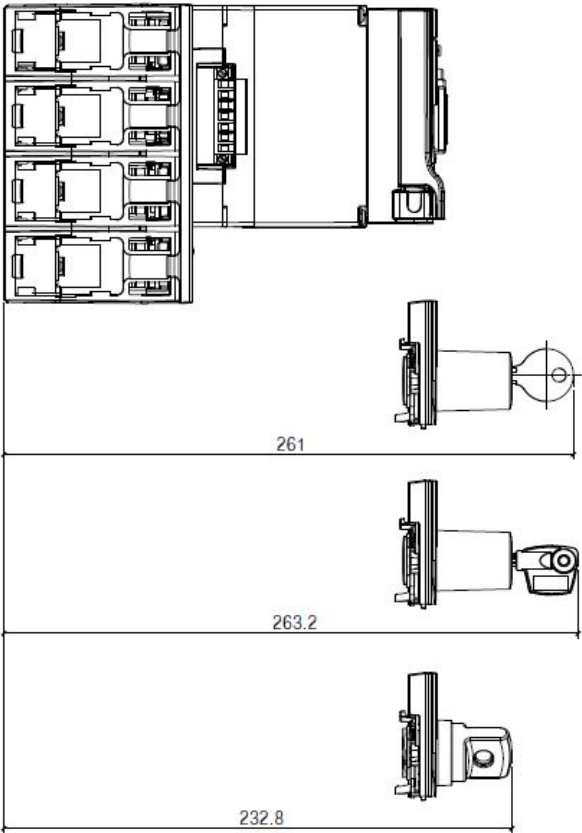
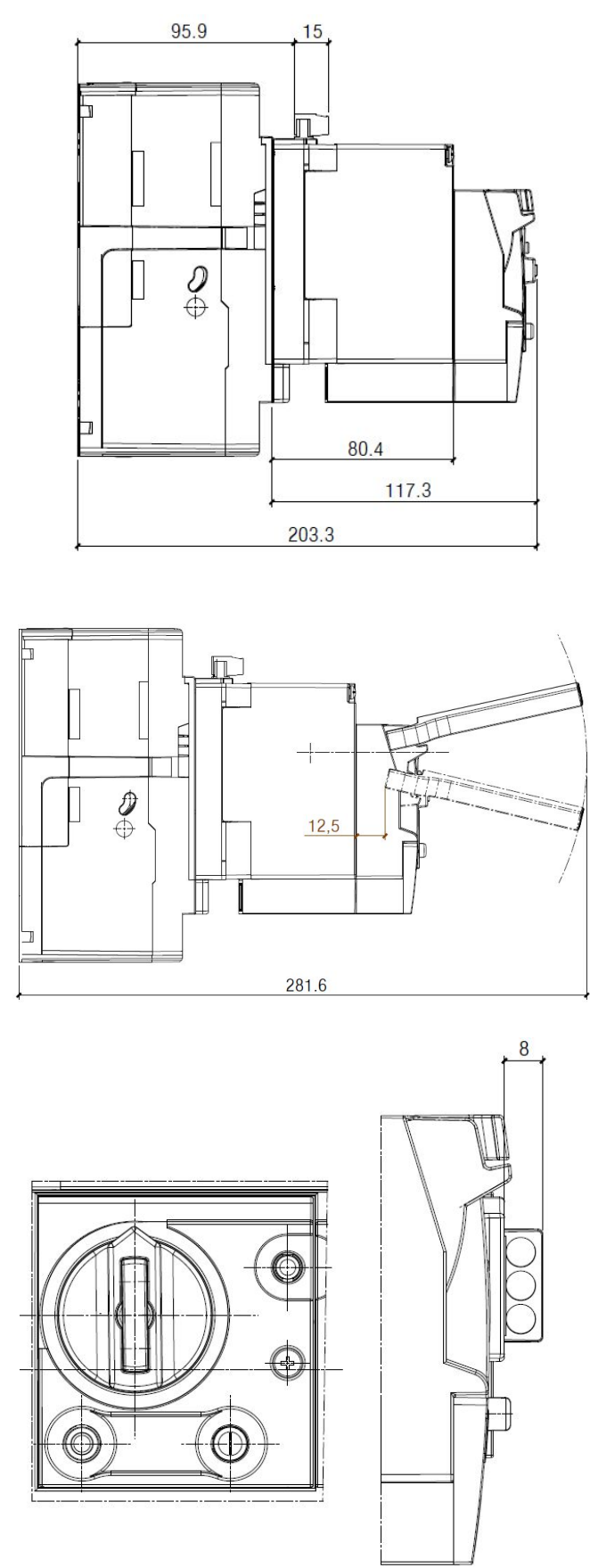


Motor operator



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T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;



3.2 Weights

Configuration	Weights (Kg)	
	3P	4P
Circuit breaker	1.6	2.5
Plug-in*	3.5	4.5
Draw-out**	2.5	
Interlock*	0.35	
Rear interlock (for plug-in/draw-out version)*	5	
Motor operator*	1	
* to add to device weight		
* to add to device and plug-in weights		

4. OVERVIEW

4.1 Supplied with:

- fixing screws (2 for 3P and 4 for 4P)
- screws for connections (6 for 3P and 8 for 4P)
- phase insulators (2 for 3P and 3 for 4P)

5. ELECTRICAL CONNECTIONS

5.1 Mounting possibilities

On plate:

- Vertical
- Horizontal
- Supply inverter type

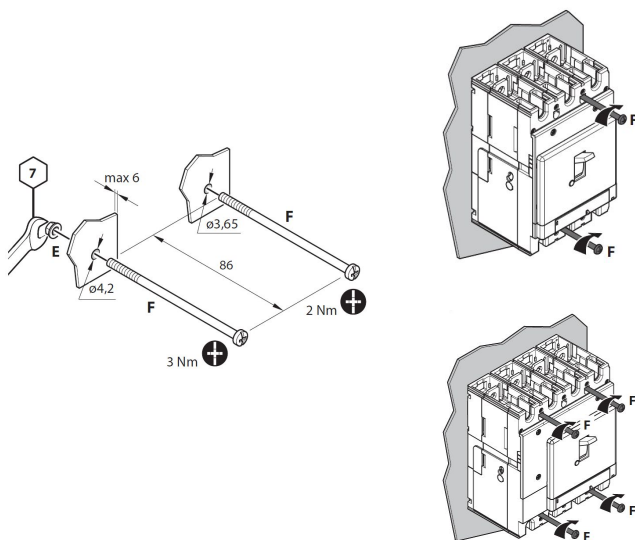
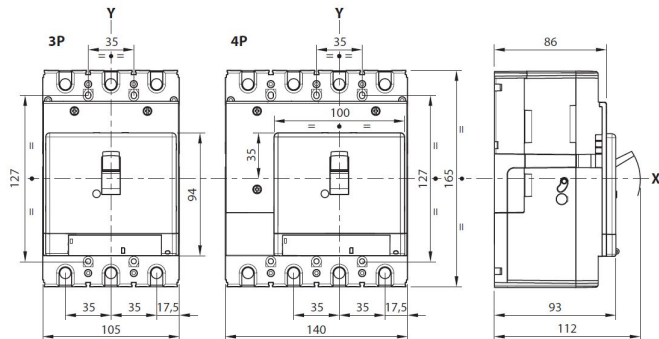
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Reference(s) :

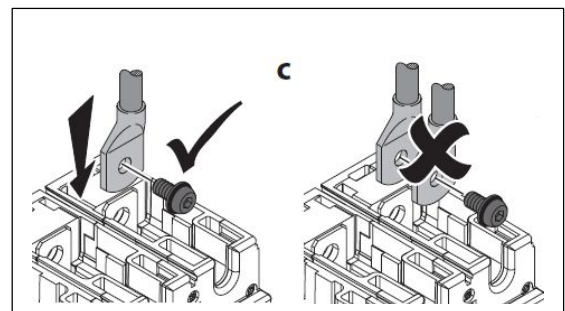
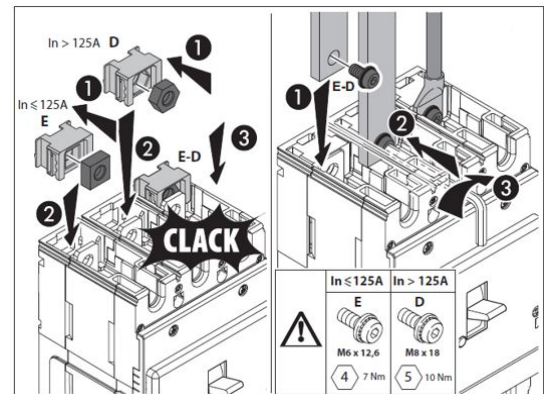
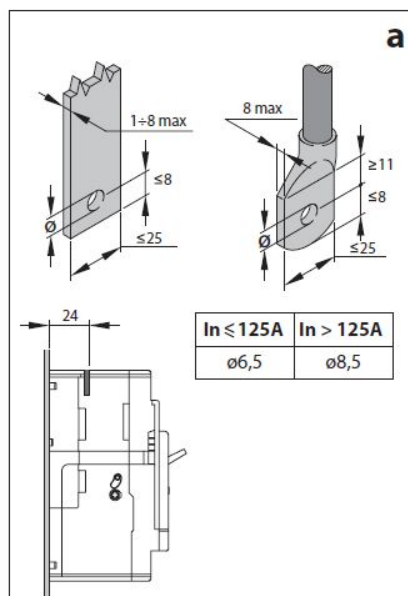
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T733N40EB / 100EB / 160EB / 250EB; T734N40EB / 100EB / 160EB / 250EB;
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T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;

5.2 Mounting

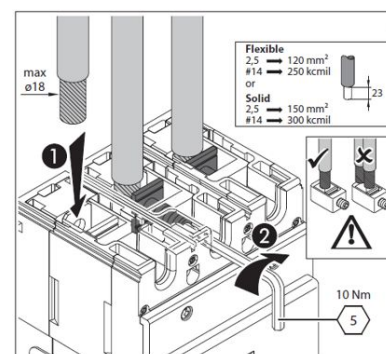
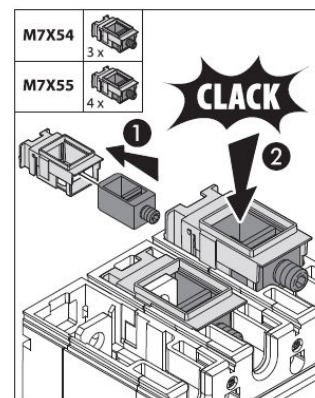
(see instruction sheet for detailed mounting procedures)



Busbars/cable lugs:



Cables:



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T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;

6. ELECTRICAL AND MECHANICAL CHARACTERISTICS

Circuit Breaker	Megatiker M3 F/N/H/L (36kA, 50kA, 70kA, 100kA)
Rated current (A)	40-100-160-250
Poles	3 - 4
Pole pitch (mm)	35
Rated insulation voltage (50/60Hz) U_i (V)	800
Rated operating voltage (50/60Hz) U_o (V)	690
Rated impulse withstand current I_{imp} (kV)	8
Rated frequency (Hz)	50 - 60
Operating temperature (°C)	-25 + 70
Mechanical endurance (cycles)	12000
Mechanical endurance with motor control (cycles)	12000
Electrical endurance at I_n (cycles)	6000
Electrical endurance at 0.5 I_n (cycles)	6000
Utilization category	A
Suitable for isolation	Yes
Type of protection	Electronic (with knobs)
Thermal adjustment I_r	$(0.4+1) \times I_n$
Magnetic adjustment I_{sd} (**)	$(1.5+10) \times I_n$
Neutral protection for 4P (% I_{th} of phase pole)	OFF-50 ¹ -100
Dimensions (W x H x D) (mm)	105 x 165 x 86 (3P) 140 x 165 x 86 (4P)

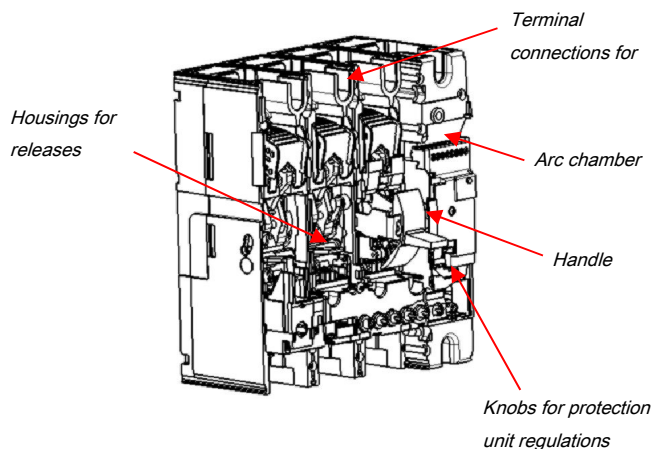
(*) if $I_n=40A$, then 50% regulation is allowed only if $I_r \geq 0,8$

(**) Regulations not adjustable:

- $t_r=5s$
- $t_{sd}=0.1s$
- $I_i=3250A$

When $I_r < 0,8$, knob setting marked with 50% equals to a 100% value.

6.1 Main parts constituting the circuit breaker



6.2 Breaking capacity (kA)

		Breaking capacity (kA) & I_{cs}			
		3P-4P			
IEC 60947-2	U_e/I_{cu} (I_{cu} letter)	36kA (F)	50kA (N)	70kA (H)	100kA (L)
	220/240 V AC	70	90	100	150
	380/415 V AC	36	50	70	100
	440/460 V AC	25	30	40	50
	480/500 V AC	16	18	30	35
	550 V AC	10	12	22	25
	690V AC	7	8	20	22
	$I_{cs}(\% I_{cu})$	100	100	100	100
	Rated making capacity under short circuit I_{cm}				
	I_{cm} (kA) at 415V	76.5	105	154	220
NEMA AB-1	220/240 V AC	70	90	100	150
	480/500 V AC	16	18	30	35
	690 V AC	7	8	20	22

6.3 Rated current (I_n)

	Phases limit trip current			
	thermal (I_r)		magnetic (I_{sd})	
I_n (A)	$0.4 \times I_n$	$1 \times I_n$	min	max
40	16	40	60	400
100	40	100	150	1000
160	64	160	240	1600
250	100	250	375	2500

6.3 Load operations

Force on handle	N
Opening operation	63,5
Closing operation	66
Restore operation	86,5

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T733H40EB / 100EB / 160EB / 250EB; T734H40EB / 100EB / 160EB / 250EB;
T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;

6.4 Electrodynamic forces

The table below shows an indication of suggested distances to keep between the breaker and the first fixing point of the conductor and bars in order to reduce the effects of the electrodynamic stresses that may be created during a short circuit. In the realization of anchorage system it is recommend the use of isolators suitable for the type of conductor used and the operating voltage.

I _{cc} (kA)	Maximum Distance (mm)
36	350
50	300
70	250
100	200

According to conductor type and bar system (except Legrand bar kits), the choice of the distance to keep is to be calibrated by the installer.
Also installer must take into account the weight of the conductors so that this does not affect the electrical junction between the conductor itself and the connection point.

6.5 Power losses per pole under I_n

Circuit breaker

I _n (A)	Power losses per pole (W)			
	40	100	160	250
Cage terminals	0.49	3.07	7.85	19.20
Lugs	0.45	2.80	7.17	17.50
Spreaders	0.38	2.36	6.04	14.70
Rear terminals	0.46	2.89	7.39	18.10

Note: power losses in the table above are referred and measured as described in the standard IEC 60947-2 (Annex G) for circuit-breakers. Values in the table are referred to a single phase.

6.6 DERATINGS

according to IEC/EN 60947-1

6.6.1 Temperature

Rated current and his adjustment has to be considered relating to a rise or fall of ambient temperature and to a different version or installation conditions. The table below indicates the maximum long-time (LT) protection setting depending on the ambient temperature.

I _n (A)	Temperature T _a (°C)			
	40	50	60	70
40	40	40	40	40
100	100	100	100	95
160	160	160	160	155
250	250	250	210	190

For derating temperature with other configurations, see table A.

6.6.2 Specific condition use

Climatic conditions

according to IEC/EN 60947-1 Annex Q, Cat. F subject to temperature, humidity, vibration, shock and salt mist.

Pollution degree

for Megatiker M3 circuit breakers, degree 3, according to IEC/EN 60947-2

6.6.3 Altitude

Altitude derating for Megatiker M3

Altitude (m)	2000	3000	4000	5000
U _e (V)	690	590	520	460
I _n (A)	1 x I _n	0.98 x I _n	0.93 x I _n	0.9 x I _n

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T733H40EB / 100EB / 160EB / 250EB; T734H40EB / 100EB / 160EB / 250EB;
T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;

7. CONFORMITY

Megatiker M3 range of product concerning circuit-breakers and switch-disconnectors exceed compliance with the IEC/EN standard 60947-2 and 60947-3 respectively. Certification available by IECEE CB-scheme or LOVAG Compliance scheme.

Megatiker M3 respect the European Directives REACh, RoHS, RAEE.

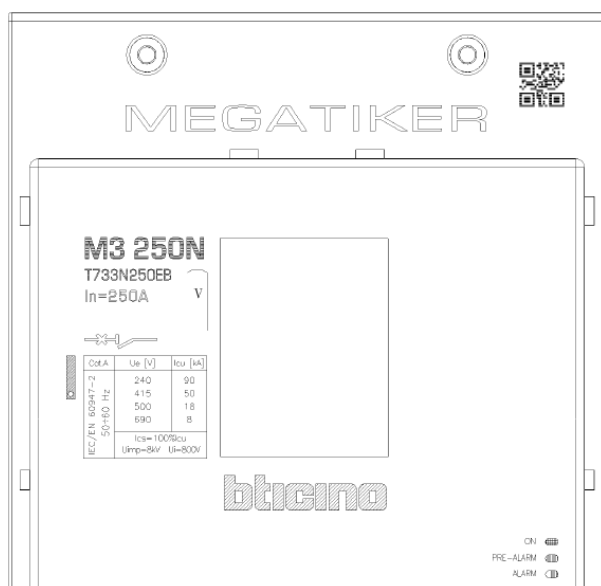
For specific information, please contact Legrand support.

7.1 Marking

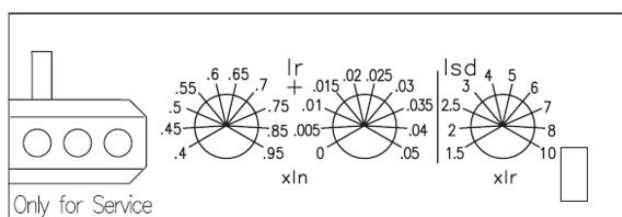
Product (circuit breakers) are provided with labelling in full conformity to the referred standard and directives requirements by laser or sticker labels (for illustrative purposes only) as:

Product laser label on front

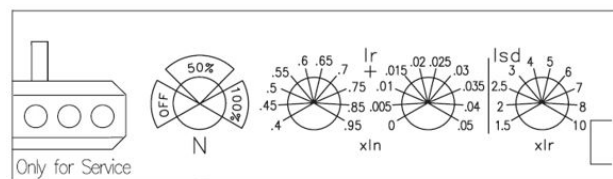
- Manufacturer responsible
- Denomination, type product, code
- Standard conformity
- Standard characteristics declared
- Coloured identification of I_{cu} at 415V



Electronic release label (3P version)

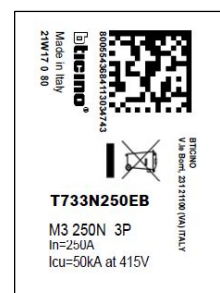


Electronic release label (4P version)



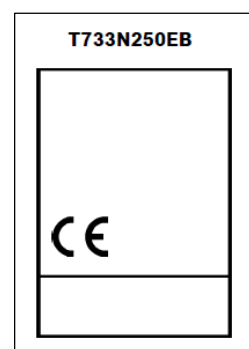
Product sticker label on side

- Manufacturer responsible
- Denomination and type product
- Mark/Licence (if any)
- Directive requirements
- Bar code identification product
- Manufacturing Country



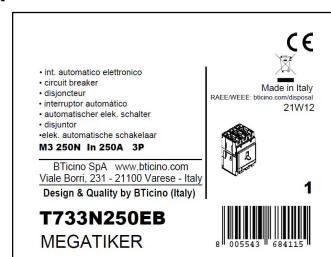
Mark sticker label on side

- Product code
- Mark/Licence (if any)
- Country deviation, if any



Packaging sticker label

- Manufacturer responsible
- Denomination and type product
- Standard conformity
- Mark/Licence (if any)
- Directive requirements
- Bar code identification product



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T733H40EB / 100EB / 160EB / 250EB; T734H40EB / 100EB / 160EB / 250EB;
T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;

8. EQUIPMENTS AND ACCESSORIES

8.1 Releases (for Megatiker M3 125/250, M1 and M2)

- shunt releases with voltage:

12 Vac and dc
24 Vac and dc
48 Vac and dc
110÷130 Vac
220÷277 Vac
380÷480 Vac

ref. M7S012
ref. M7S024
ref. M7S048
ref. M7S110
ref. M7S230
ref. M7S415

Maximum power = 400 VA / W

- undervoltage releases with voltage:

12 Vac and dc
24 Vac and dc
48 Vac and dc
110÷130 Vac and dc
220÷240 Vac
277 Vac
380÷415 Vac
440÷480 Vac

ref. M7U012
ref. M7U024
ref. M7U048
ref. M7U110
ref. M7U230
ref. M7U277
ref. M7U415
ref. M7U480

Maximum power = 4 VA

Circuit breaker opening time < 50 ms

UVR releases can be used on Megatiker M3 125/250 starting from batch 19W15

- time-lag undervoltage releases (800 ms)

Time-lag modules with voltage:

230 V ac
400 V ac

ref. M7000MR/230
ref. M7000MR/400

Release

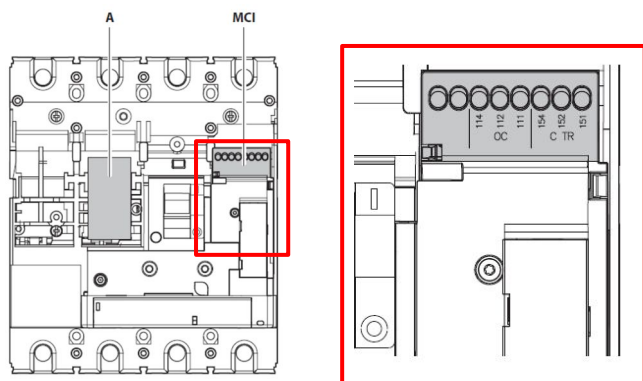
ref. M7UEM

(to be equipped with a time-lag module M7000MR/230 and M7000MR/400)

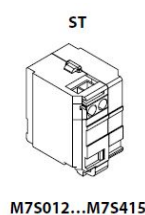
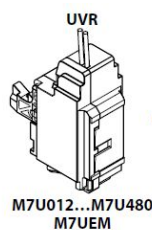
8.2 Auxiliary contacts

For version of Megatiker M3 electronic version, auxiliary contacts are integrated inside module M.C.I (see instruction sheet for details).

Here a connection scheme to get auxiliary functionality:



TRIP STATUS	151 Common contact	154	
	152 Normal close contact	152	
	154 Normal open contact	152	
OPEN/CLOSE STATUS	111 Common contact	114	
	112 Normal close contact	112	
	114 Normal open contact	112	



	A
UVR	✓
ST	✓

To get more information on auxiliary mounting procedures, please refer to product instruction sheet.

8.3 Universal keylocks

These keylocks must be used for all the accessories that can be locked:

- rotary handle
- motor operator
- plug-in mechanism
- draw-out mechanism

For each of these, a specific accessory (indicated in the specific section of this datasheet) must be added in order to get the complete locking kits for the specific application.

- 1 lock + 1 flat key with random mapping ref. M7R24
- 1 lock + 1 flat key with fixed mapping (EL43525) ref. M7R25
- 1 lock + 1 flat key with fixed mapping (EL43363) ref. M7R26
- 1 lock + 1 star key with random mapping ref. M7R27

Megatiker M3 electronic (no display) circuit breakers

Reference(s) :

T733F40EB / 100EB / 160EB / 250EB; T734F40EB / 100EB / 160EB / 250EB;
T733N40EB / 100EB / 160EB / 250EB; T734N40EB / 100EB / 160EB / 250EB;
T733H40EB / 100EB / 160EB / 250EB; T734H40EB / 100EB / 160EB / 250EB;
T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;

8.4 Rotary handles

Direct on DPX³ (with auxiliary option)

- Standard (black) ref. M7R24
- For emergency use (red / yellow) ref. M7R25

Vari-depth handle IP55 (with auxiliary option)

- Standard (black) ref. M7R26
- For emergency use (red / yellow) ref. M7R27

Locking accessories (for rotary handle with auxiliary option)

- Key lock accessory for direct rotary handle ref. M7R30
- Key lock accessory for vari-depth rotary handle ref. M7R31
(ref. M7R31 is compatible with Megatiker M3 125 also)

Ref. M7R30 and M7R31 must be used with universal keylocks to get the complete locking kit for rotary handle

8.5 Motor operators

For synchronized operations (energy storage type):

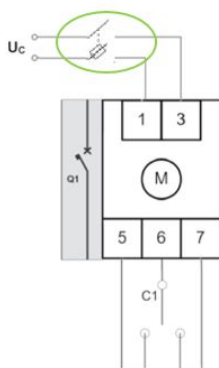
- 24 Vac and dc ref. M7M024
- 48 Vac and dc ref. M7M048
- 110 Vac ref. M7M110
- 230 Vac ref. M7M230

Technical parameters:

Voltage	Property	AC		DC	
		Opening	Closing	Opening	Closing
24V ac/dc	Maximum inrush power (VA)	75	430	55	320
	Rated power (VA)	45	-	20	-
	Absorption time (s)	2.8	0.01	3.3	0.01
	Operating current time (s)	1.1	0.03	1.2	0.03
48V ac/dc	Maximum inrush power (VA)	85	1000	70	690
	Rated power (VA)	65	-	15	-
	Absorption time (s)	3.3	0.006	3.8	0.006
	Operating current time (s)	1.1	0.02	1.3	0.02
110V ac	Maximum inrush power (VA)	95	600	-	-
	Rated power (VA)	60	-	-	-
	Absorption time (s)	3	0.02	-	-
	Operating current time (s)	1.0	0.03	-	-
230V ac	Maximum inrush power (VA)	125	460	-	-
	Rated power (VA)	70	-	-	-
	Absorption time (s)	2.5	0.08	-	-
	Operating current time (s)	0.9	0.03	-	-

It is necessary to foresee a protection device (e.g. fuse) along the motor operator power line. The correct size of the fuse depends on the motor version and on the number of users.

Here a schematic example:



Locking accessory (for motor operator)

- Padlock (for motor operator locking) ref. M7M61
- Key lock accessory for motor operator ref. M7M60

Ref. M7M60 must be used with universal keylocks to get the complete locking kit for motor operator

8.6 Mechanical accessories

- Padlock (for locking in "OPEN" position) ref. M7X02
(ref. M7X02 is compatible with Megatiker M3 125 / M1 / M2)

- Sealable terminal shields:
 - Set of 2 (for 3P) ref. M7C22
 - Set of 3 (for 4P) ref. M7C23

- Insulated shields:
 - Set of 2 (for 3P) ref. M7F01
 - Set of 3 (for 4P) ref. M7F02
 (ref. M7F01/ M7F02 are compatible with Megatiker M3 125 also)

8.7 Connection accessories

Cage terminals

- Set of 3 terminals for cables 150 mm² max (solid) ref. M7X54
or 120 mm² max (flexible) Cu/Al

- Set of 4 terminals for cables 150 mm² max (rigid) ref. M7X55
or 120 mm² max (flexible) Cu/Al

Spreaders (incoming or outgoing):

- Set of 3 (for 3P) ref. M7A52
- Set of 4 (for 4P) ref. M7A53

Rear terminals (incoming or outgoing):

- Set of 3 (for 3P) ref. M7A56
- Set of 4 (for 4P) ref. M7A57

Megatiker M3 electronic (no display) circuit breakers

Reference(s) :

T733F40EB / 100EB / 160EB / 250EB; T734F40EB / 100EB / 160EB / 250EB;
T733N40EB / 100EB / 160EB / 250EB; T734N40EB / 100EB / 160EB / 250EB;
T733H40EB / 100EB / 160EB / 250EB; T734H40EB / 100EB / 160EB / 250EB;
T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;

8.8 Plug-in version

(A plug-in is a Megatiker M3 250 fitted with special terminals and mounted on a plug-in base)

Bases

(for plug-in and draw-out versions for Megatiker M3 250 and MS3 250)

- Plug-in/draw-out base for 3P *ref. M7B50*
- Plug-in/draw-out base for 4P *ref. M7B51*
- Plug-in/draw-out mobile part kit for 3P *ref. M7B52*
- Plug-in/draw-out mobile part kit for 4P *ref. M7B53*

Plug-in accessories

Locking accessory (for plug-in)

- Key lock accessory for plug-in *ref. M7B64*

Ref. M7B64 must be used with universal keylocks to get the complete locking kit for plug-in version

8.9 Draw-out version

(A Megatiker M3 250 draw-out version is a plug-in Megatiker M3 250 fitted with a "Debro-lift" mechanism which can be used to withdraw the breaker while keeping it on its base)

"Debro-lift" mechanism

(supplied with a rigid slide and handle for drawing-out)

- transformation kit for 3P *ref. M7B54*
- transformation kit for 4P *ref. M7B55*

Frontal masks for draw-out version

(to provide in addition to debro-lift mechanism according to accessory mounted)

- Frontal module, with frontal mask (3P and 4P) *ref. M7B60*
(if neither motor operator nor rotary handle are mounted)
- Frontal mask for motor operator (3P and 4P) *ref. M7B61*

Locking accessory (for draw-out)

- Padlock for draw-out position *ref. M7B65*
- Key lock accessory for draw-out *ref. M7B63*

Ref. M7B63 must be used with universal keylocks to get the complete locking kit for draw-out version

Auxiliary contacts

- Automatic auxiliary contacts for draw-out version *ref. M7B05*
- 6 contact connector (under sliding contacts) *ref. F15/7500P6*

(Ref. F15/7500P6 can be used with both plug-in and draw-out version)

8.10 Interlock mechanism

(for interlocking 2 Megatiker M3 125 HP or 2 Megatiker M3 250)

No frame mixing in interlock mechanism

- Interlock mechanism – standard version *ref. M7I01*
(for fixed version Megatiker M3 125 and 250)
 - Interlock mechanism – for electronic module *ref. M7I02*
(for fixed version Megatiker M3 125 and 250)
 - Interlock plate for Megatiker M3 250 *ref. M7I05*
 - Rear interlock mechanism *ref. M7I03*
(for Megatiker M3 250 plug-in and/or draw-out version)
- If used ref. F15/7500P6, maximum 1 set

Megatiker M3 electronic (no display) circuit breakers

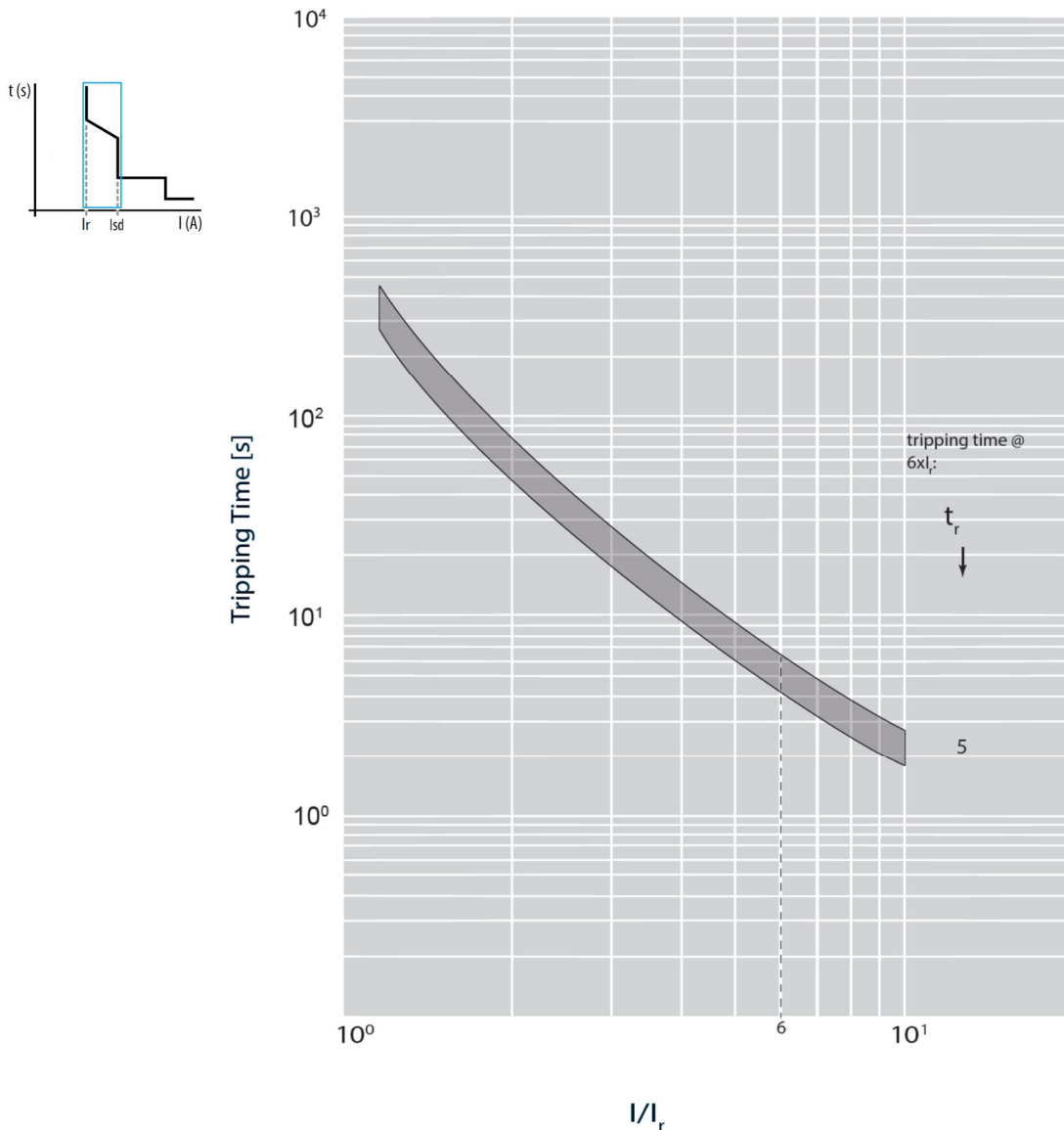
Reference(s) :

T733F40EB / 100EB / 160EB / 250EB; T734F40EB / 100EB / 160EB / 250EB;
T733N40EB / 100EB / 160EB / 250EB; T734N40EB / 100EB / 160EB / 250EB;
T733H40EB / 100EB / 160EB / 250EB; T734H40EB / 100EB / 160EB / 250EB;
T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;

9. CURVES

9.1.1 Tripping curve [1/3]

Update: 11/06/2019



$I_{cu} = 36-50-70-100 \text{ kA}$ $I_{max} = 250A$ 3-4 P $U_o = 415Vac$ (IEC/EN 60947-2)

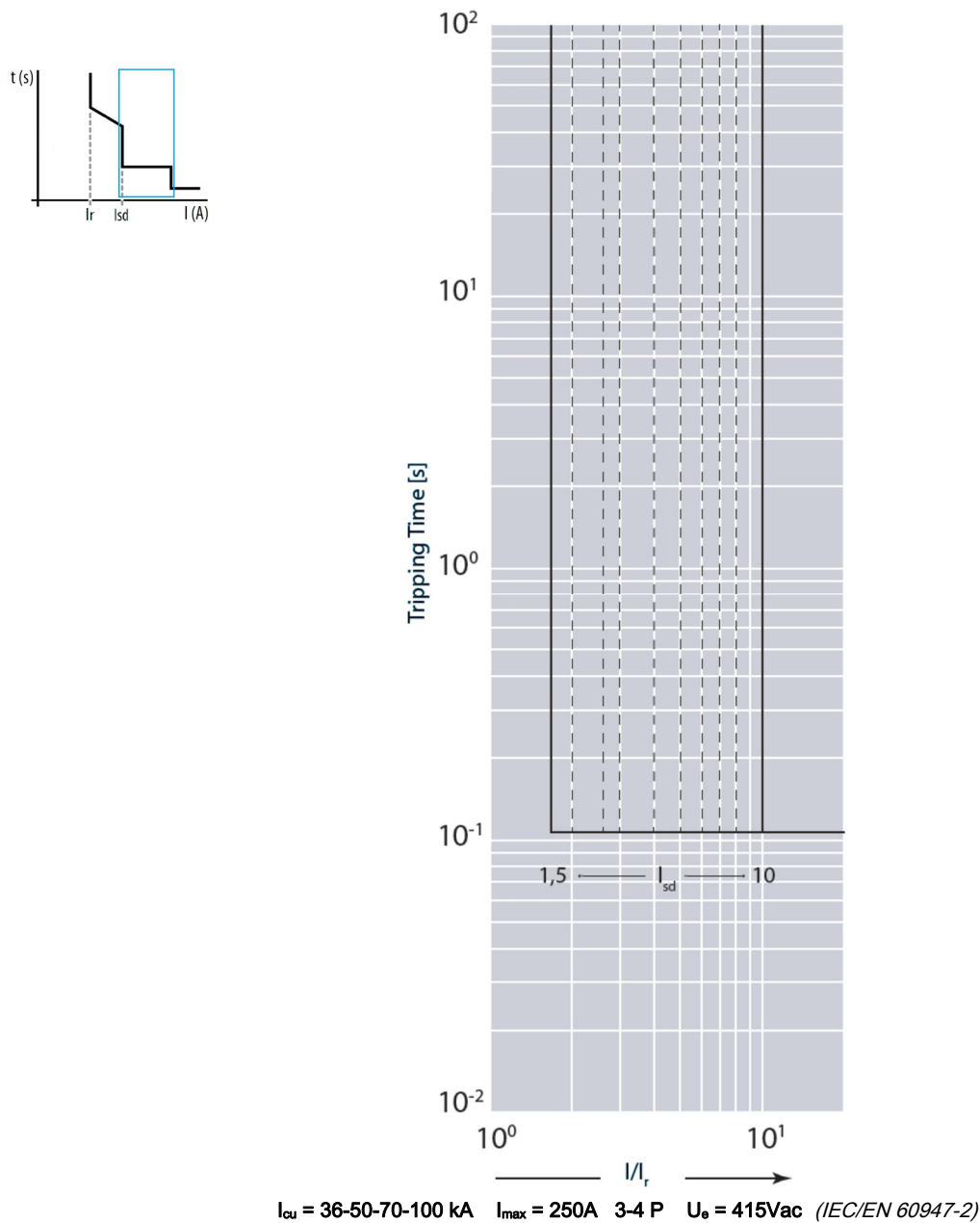
Value	Description
t	time
I	current
I_r	long time setting current
t_r	long time delay
I_{sd}	short time setting current
t_{sd}	short time delay
I_i	instantaneous release
I_{cu}	rated ultimate short-circuit breaking capacity
$I^2t = K$	constant pass-through energy setting
$t = K$	constant tripping time setting
————	long time trip curve
-----	short time trip curve
Current tolerance	10% up to I_{sd} ; 20% up to I_i

Megatiker M3 electronic (no display) circuit breakers

Reference(s) :
T733F40EB / 100EB / 160EB / 250EB; T734F40EB / 100EB / 160EB / 250EB;
T733N40EB / 100EB / 160EB / 250EB; T734N40EB / 100EB / 160EB / 250EB;
T733H40EB / 100EB / 160EB / 250EB; T734H40EB / 100EB / 160EB / 250EB;
T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;

9.1.2 Tripping curve [2/3]

Update: 11/06/2019



Value	Description
t	time
I	current
I_r	long time setting current
t_r	long time delay
I_{sd}	short time setting current
t_{sd}	short time delay
I_i	instantaneous release
I_{cu}	rated ultimate short-circuit breaking capacity
$I^2t = K$	constant pass-through energy setting
$t = K$	constant tripping time setting
-----	long time trip curve
-----	short time trip curve
Current tolerance	10% up to I_{sd} ; 20% up to I_i

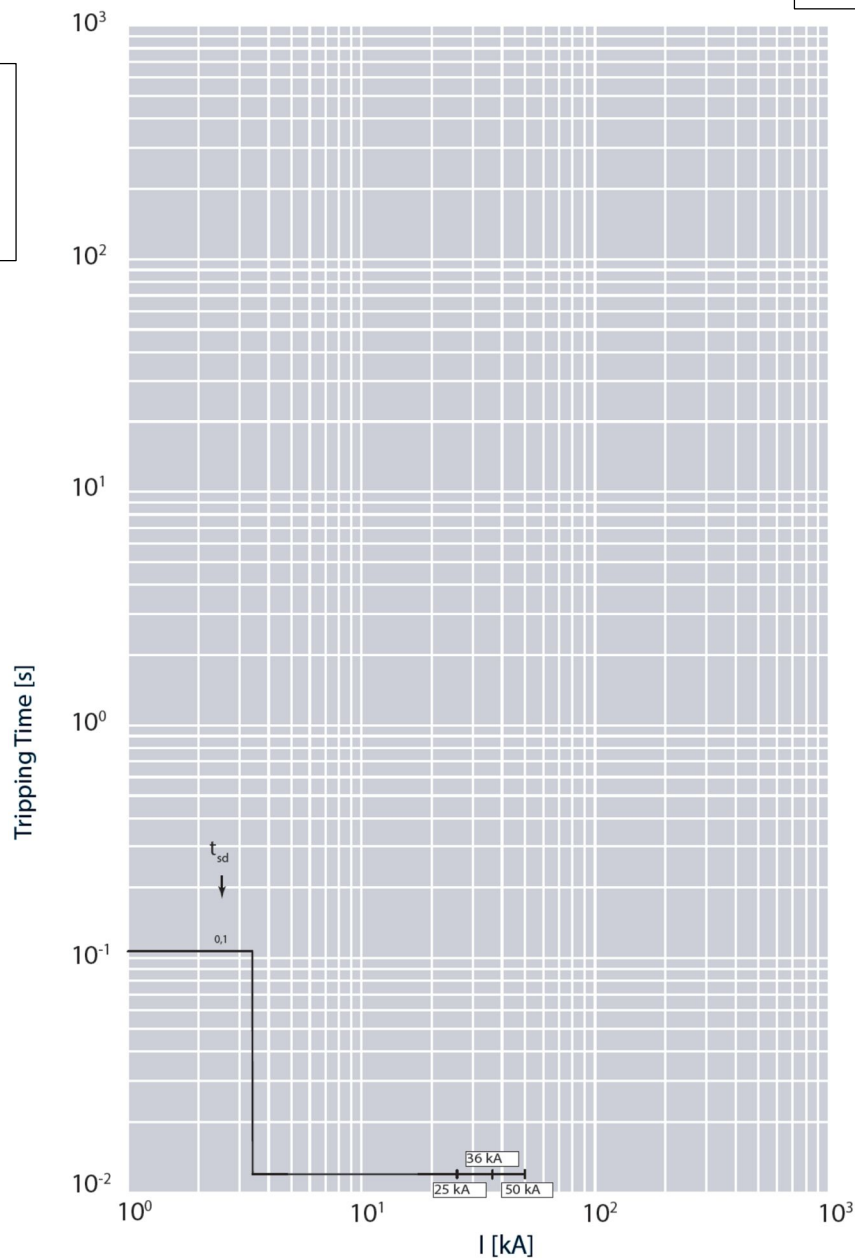
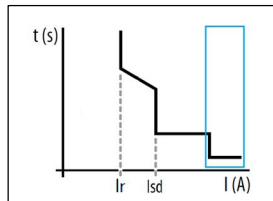
Megatiker M3 electronic (no display) circuit breakers

Reference(s) :

T733F40EB / 100EB / 160EB / 250EB; T734F40EB / 100EB / 160EB / 250EB;
T733N40EB / 100EB / 160EB / 250EB; T734N40EB / 100EB / 160EB / 250EB;
T733H40EB / 100EB / 160EB / 250EB; T734H40EB / 100EB / 160EB / 250EB;
T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;

9.1.3 Tripping curve [3/3]

Update: 11/06/2019



$I_{cu} = 36-50-70-100 \text{ kA}$ $I_{max} = 250A$ 3-4 P $U_o = 415Vac$ (IEC/EN 60947-2)

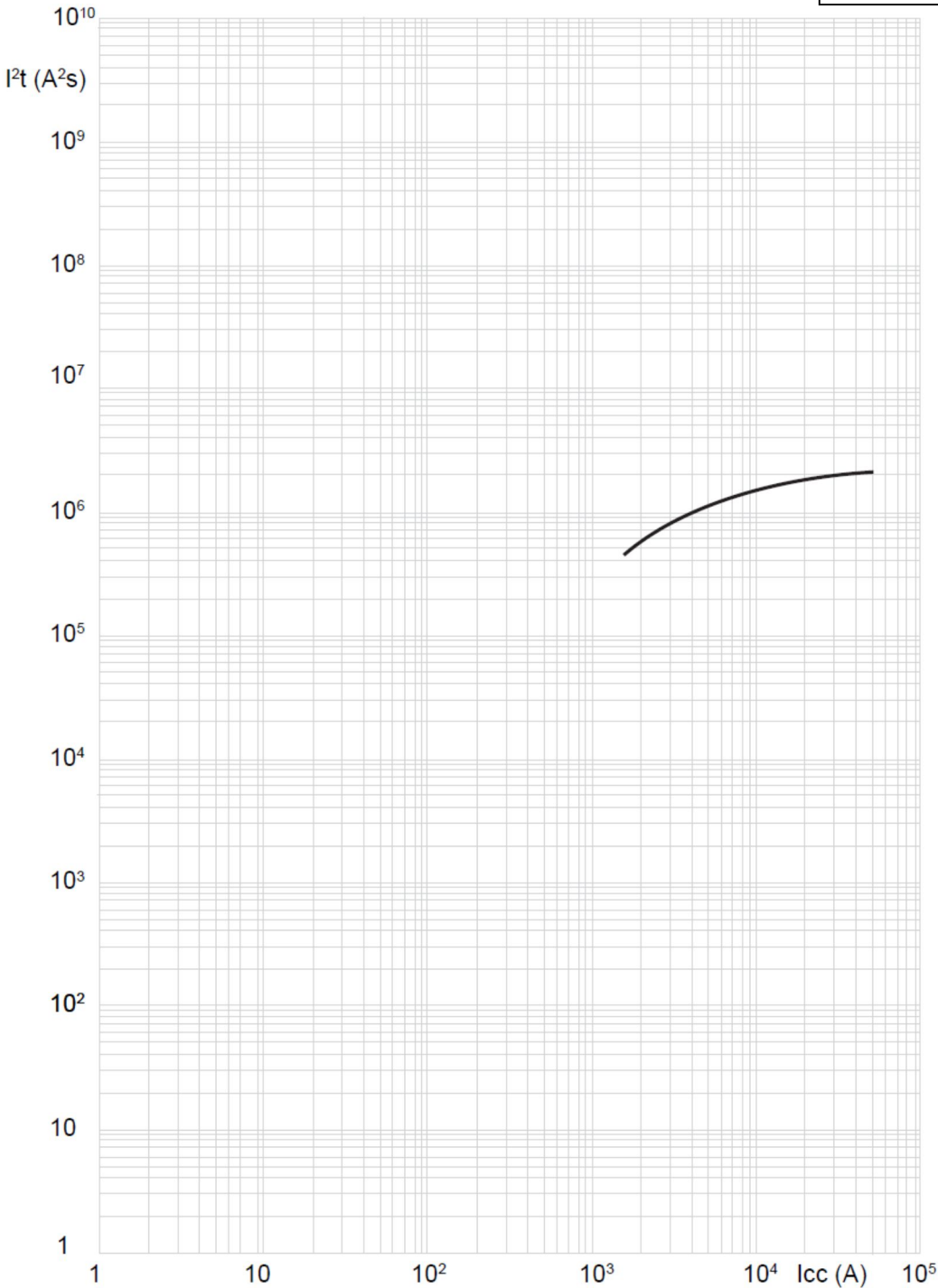
Value	Description
t	time
I	current
I_r	long time setting current
t_r	long time delay
I_{sd}	short time setting current
t_{sd}	short time delay
I_i	instantaneous release
I_{cu}	rated ultimate short-circuit breaking capacity
$I^2t = K$	constant pass-through energy setting
$t = K$	constant tripping time setting
-----	long time trip curve
-----	short time trip curve
Current tolerance	10% up to I_{sd} ; 20% up to I_i

Megatiker M3 electronic (no display)
circuit breakers

Reference(s) :
T733F40EB / 100EB / 160EB / 250EB; T734F40EB / 100EB / 160EB / 250EB;
T733N40EB / 100EB / 160EB / 250EB; T734N40EB / 100EB / 160EB / 250EB;
T733H40EB / 100EB / 160EB / 250EB; T734H40EB / 100EB / 160EB / 250EB;
T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;

9.2.1 Pass-through specific energy characteristic curve (breaking capacity $I_{cu} \leq 50\text{kA}$)

Update: 30/08/2019



$I_{cu} = 36\text{-}50\text{ kA}$ $I_{max} = 250\text{A}$ 3-4 P $U_e = 415\text{Vac}$ (IEC/EN 60947-2)

Value	Description
I_{cc}	short circuit current
$I^2t \text{ (A}^2\text{s)}$	pass-through specific energy

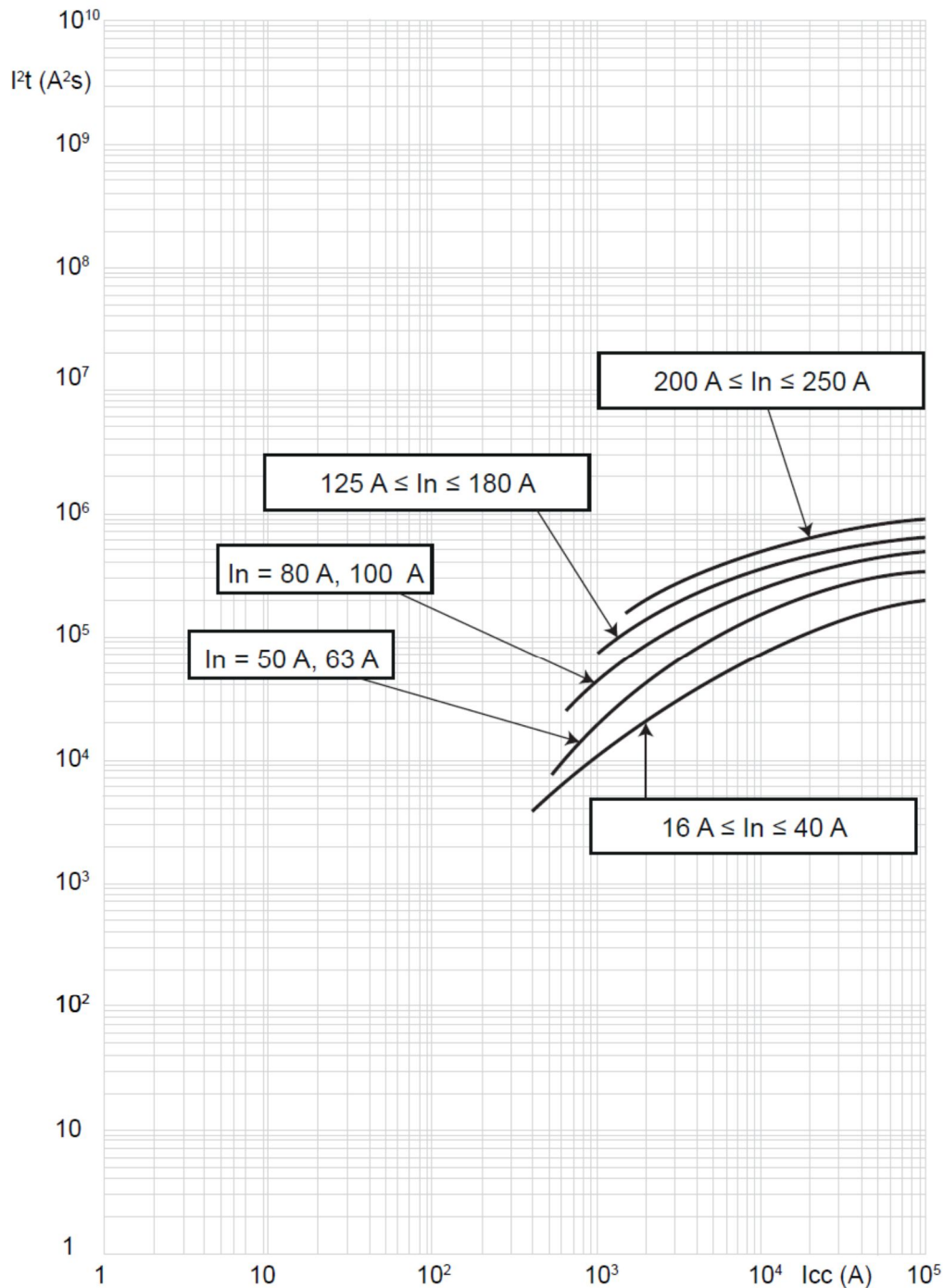
Megatiker M3 electronic (no display) circuit breakers

Reference(s) :

T733F40EB / 100EB / 160EB / 250EB; T734F40EB / 100EB / 160EB / 250EB;
T733N40EB / 100EB / 160EB / 250EB; T734N40EB / 100EB / 160EB / 250EB;
T733H40EB / 100EB / 160EB / 250EB; T734H40EB / 100EB / 160EB / 250EB;
T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;

9.2.2 Pass-through specific energy characteristic curve (breaking capacity $I_{cu} > 50\text{kA}$)

Update: 20/11/2020



$I_{cu} = 70\text{-}100 \text{ kA}$ $I_{max} = 250\text{A}$ 3-4 P $U_o = 415\text{Vac}$ (IEC/EN 60947-2)

Value	Description
I_{cc}	short circuit current
I^2t (A^2s)	pass-through specific energy

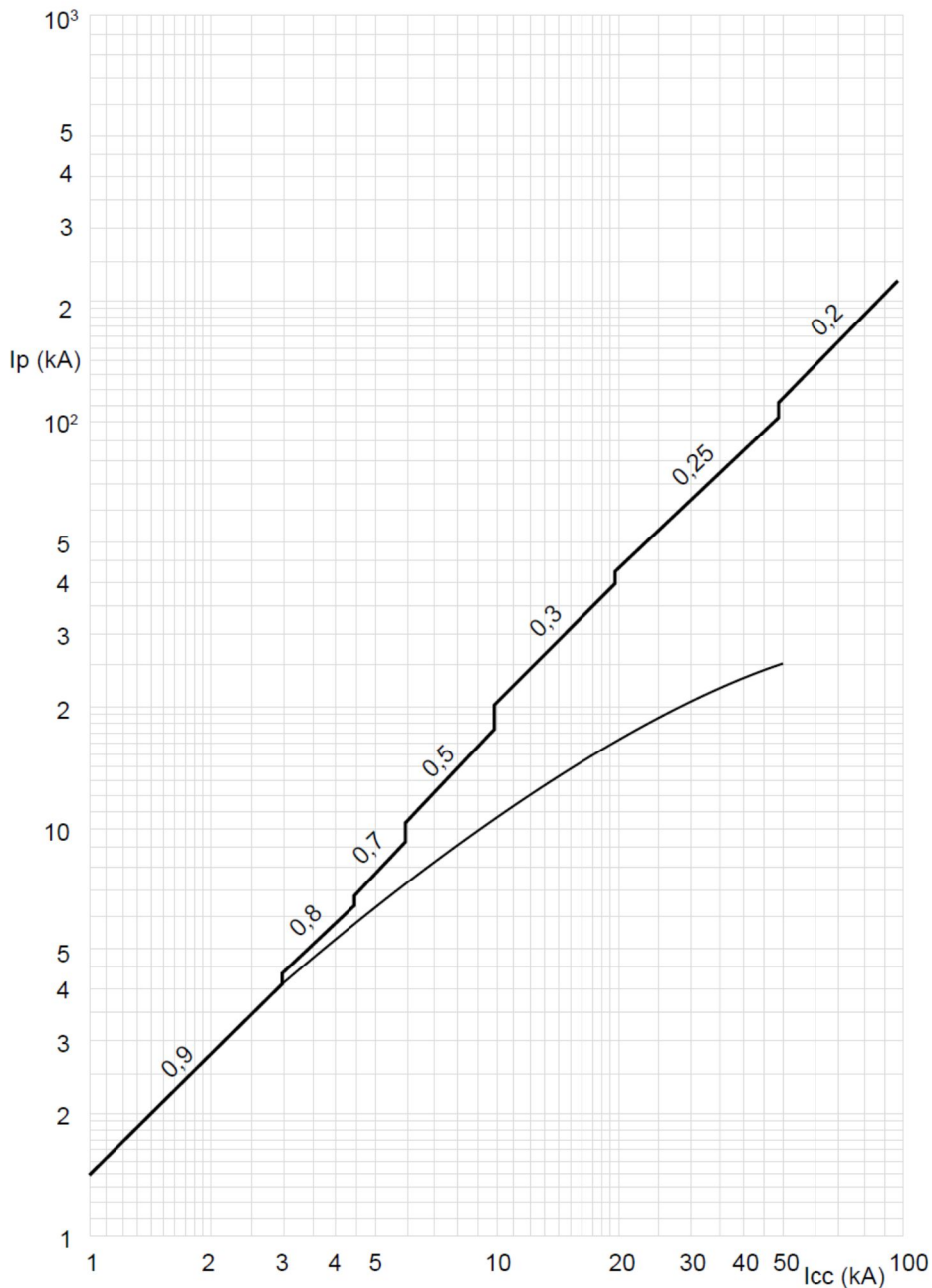
Megatiker M3 electronic (no display) circuit breakers

Reference(s) :

T733F40EB / 100EB / 160EB / 250EB; T734F40EB / 100EB / 160EB / 250EB;
T733N40EB / 100EB / 160EB / 250EB; T734N40EB / 100EB / 160EB / 250EB;
T733H40EB / 100EB / 160EB / 250EB; T734H40EB / 100EB / 160EB / 250EB;
T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;

9.3.1 Cut-off peak current characteristic curve (breaking capacity $I_{cu} \leq 50 \text{ kA}$)

Update: 30/08/2019



$I_{cu} = 36-50 \text{ kA}$ $I_{max} = 250 \text{ A}$ 3-4 P $U_e = 415 \text{ Vac}$ (IEC/EN 60947-2)

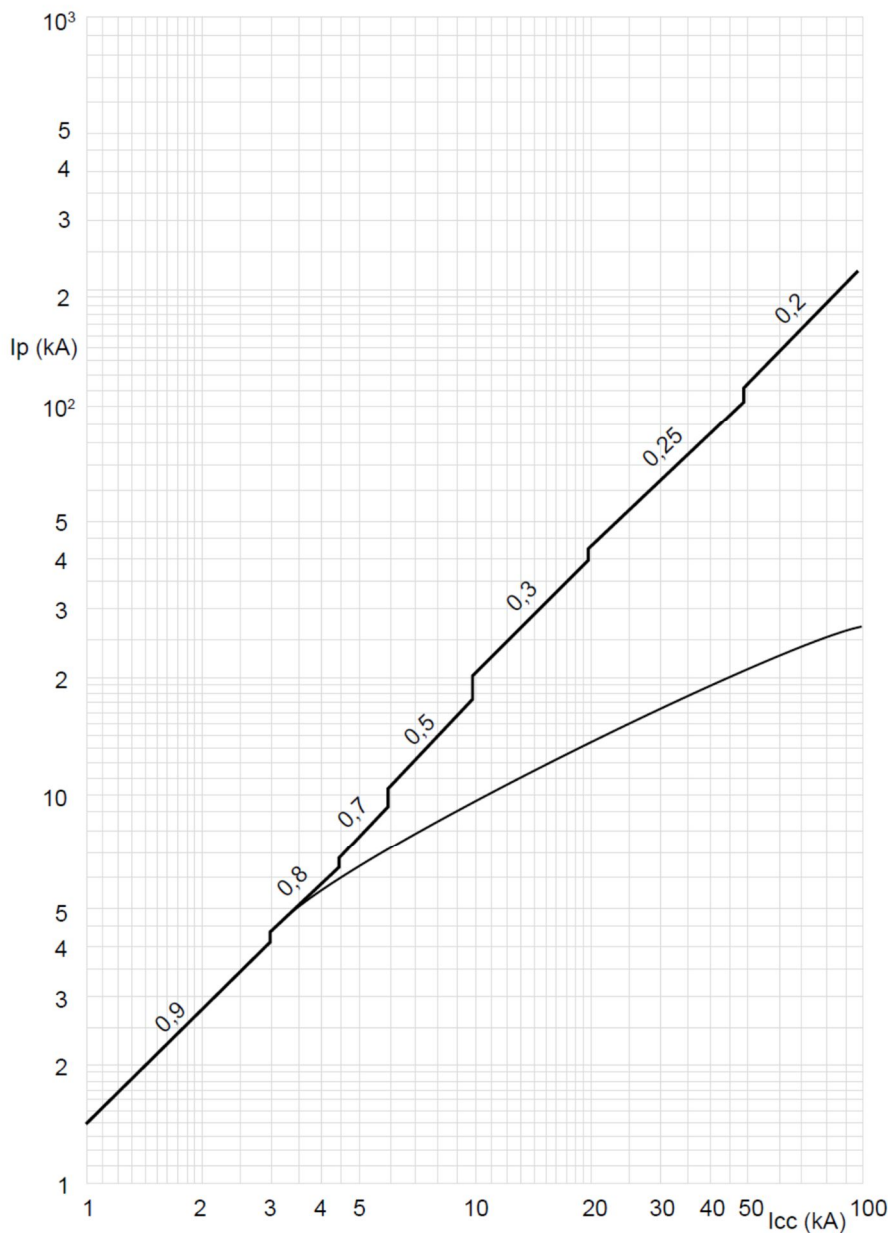
Value	Description
I_{cc}	estimated short circuit symmetrical current (RMS value)
I_p	maximum short circuit peak current
	maximum prospective short circuit peak current corresponding at the power factor
	maximum real peak short circuit current

Megatiker M3 electronic (no display) circuit breakers

Reference(s) :
T733F40EB / 100EB / 160EB / 250EB; T734F40EB / 100EB / 160EB / 250EB;
T733N40EB / 100EB / 160EB / 250EB; T734N40EB / 100EB / 160EB / 250EB;
T733H40EB / 100EB / 160EB / 250EB; T734H40EB / 100EB / 160EB / 250EB;
T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;

9.3.2 Cut-off peak current characteristic curve (breaking capacity $I_{cu} > 50\text{kA}$)

Update: 20/11/2020



$I_{cu} = 70\text{-}100\text{ kA}$ $I_{max} = 250\text{A}$ 3-4 P $U_o = 415\text{Vac}$ (IEC/EN 60947-2)

Value	Description
I_{cc}	estimated short circuit symmetrical current (RMS value)
I_p	maximum short circuit peak current
	maximum prospective short circuit peak current corresponding at the power factor
	maximum real peak short circuit current

Megatiker M3 electronic (no display) circuit breakers

Reference(s) :

T733F40EB / 100EB / 160EB / 250EB; T734F40EB / 100EB / 160EB / 250EB;
T733N40EB / 100EB / 160EB / 250EB; T734N40EB / 100EB / 160EB / 250EB;
T733H40EB / 100EB / 160EB / 250EB; T734H40EB / 100EB / 160EB / 250EB;
T733L40EB / 100EB / 160EB / 250EB; T734L40EB / 100EB / 160EB / 250EB;

A) Derating Temperature and configurations

	Ambient temperature									
	30 °C		40 °C		50 °C		60 °C		70 °C	
Fixed version	I_{max} (A)	I_r / I_n	I_{max} (A)	I_r / I_n	I_{max} (A)	I_r / I_n	I_{max} (A)	I_r / I_n	I_{max} (A)	I_r / I_n
Cage terminals, flexible cable	250	1	250	1	230	0.92	210	0.84	190	0.76
Cage terminals, flexible cable + sealable terminal shields	250	1	238	0.95	200	0.80	175	0.70	175	0.70
Lugs, flexible cable	250	1	213	0.85	200	0.80	200	0.80	150	0.60
Spreaders, flexible cable	250	1	250	1	200	0.80	175	0.70	163	0.65
Rear terminals, flexible cable	250	1	213	0.85	188	0.75	163	0.65	163	0.65
Plug-in/draw-out version	I_{max} (A)	I_r / I_n	I_{max} (A)	I_r / I_n	I_{max} (A)	I_r / I_n	I_{max} (A)	I_r / I_n	I_{max} (A)	I_r / I_n
Cage terminals, flexible cable	250	1	238	0.95	238	0.95	233	0.93	225	0.90

For further technical information, please contact Legrand technical support.