

Megatiker M5 Thermal magnetic and MS5 trip-free switches

Reference(s) :

T753F500/630/800/1000/1250; T753N500/630/800/1000/1250; T753H500/630/800/1000/1250;
T753L500/630/800/1000/1250; T754F500/630/800/1000/1250; T754N500/630/800/1000/1250;
T754H500/630/800/1000/1250; T754L500/630/800/1000/1250;
T752F1000/1250; T752N1000/1250; T752H1000/1250; T752L1000/1250



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1. USE

Megatiker platform, for premium segment, is able to cover extended ranges in terms of breaking capacities and rated currents, make protection suitable for different levels of power involved in installations. Megatiker platform provide easy assembly procedures during the phase of installation and mounting of accessories, suitable for professional use.

2. RANGE

Circuit breaker

M5						
36 kA			50 kA			
I _n (A)	3P	4P	3P + N/2	3P	4P	3P + N/2
500	T753F500	T754F500	-	T753N500	T754N500	-
630	T753F630	T754F630	-	T753N630	T754N630	-
800	T753F800	T754F800	-	T753N800	T754N800	-
1000	T753F1000	T754F1000	T752F1000	T753N1000	T754N1000	T752N1000
1250	T753F1250	T754F1250	T752F1250	T753N1250	T754N1250	T752N1250
70 kA			100 kA			
I _n (A)	3P	4P	3P + N/2	3P	4P	3P + N/2
500	T753H500	T754H500	-	T753L500	T754L500	-
630	T753H630	T754H630	-	T753L630	T754L630	-
800	T753H800	T754H800	-	T753L800	T754L800	-
1000	T753H1000	T754H1000	T752H1000	T753L1000	T754L1000	T752L1000
1250	T753H1250	T754H1250	T752H1250	T753L1250	T754L1250	T752L1250

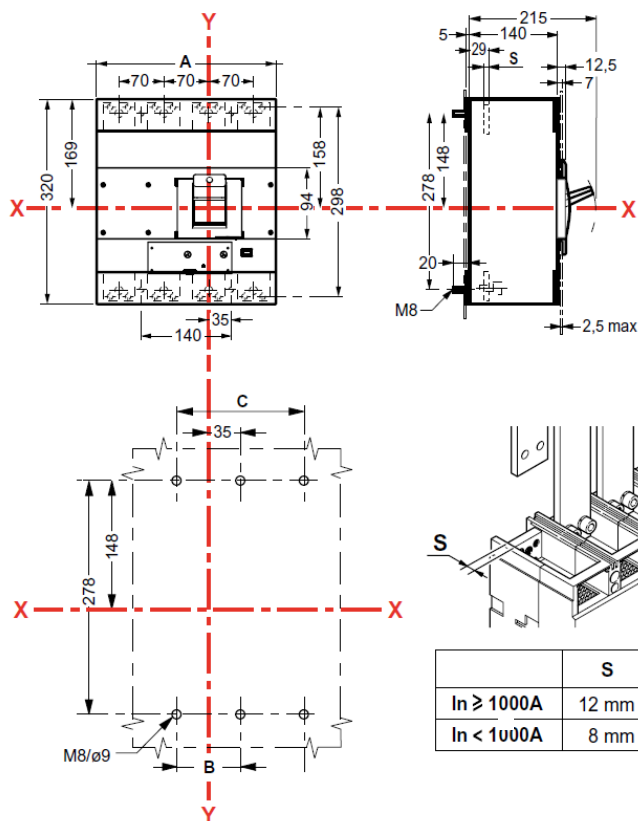
Switch disconnectors

MS5		
I _n (A)	3P	4P
500	-	-
630	T753S630	T754S630
800	T753S800	T754S800
1000	-	-
1250	T753S1250	T754S1250
1600	T753S1600	T754S1600

3. DIMENSIONS AND WEIGHTS

3.1 Dimensions

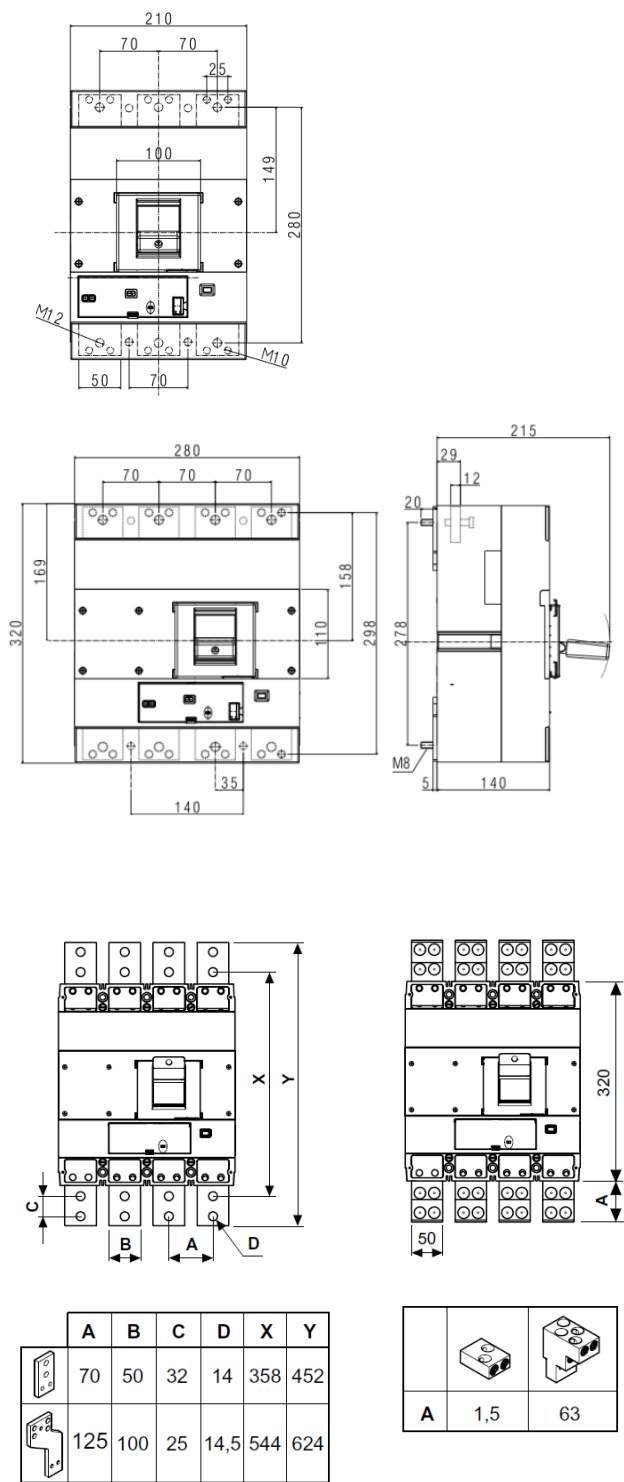
Implantation



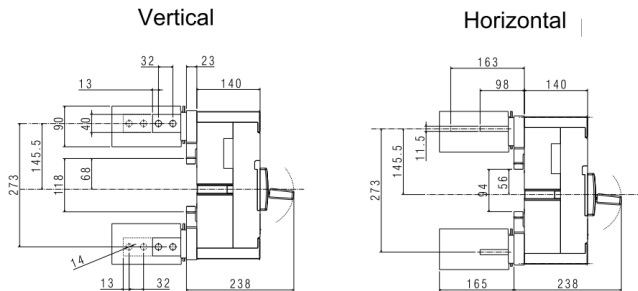
Megatiker M5 Thermal magnetic
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T754H500/630/800/1000/1250; T754L500/630/800/1000/1250;
T752F1000/1250; T752N1000/1250; T752H1000/1250; T752L1000/1250

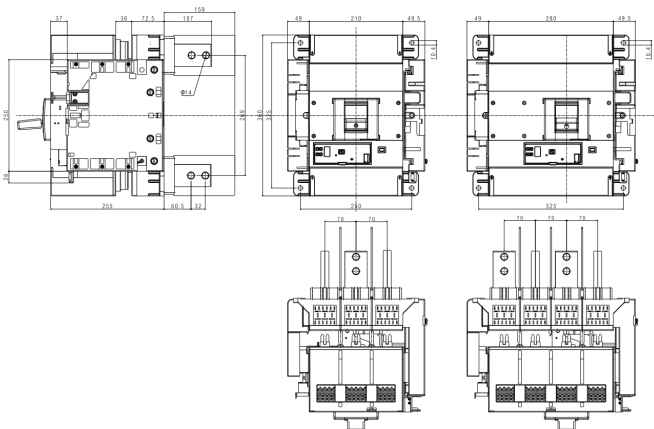
Front terminals, fixed version



Side view, flat rear terminals



Draw-out version, rear terminals



3.2 Weights

Configuration	Weights (Kg)			
	3P		4P	
	I _n ≤1250A	I _n = 1600A	I _n ≤1250A	I _n = 1600A
Circuit breaker (fixed version)	16	17	20	21.5
Draw-out base (with front terminals)*	18	18	22	22
Draw-out base (with rear terminals)*	21.7	21.7	26.2	26.2
Draw-out debro-lift mechanism *	9.9	9.9	11.2	11.2

* to add to fixed version

4. OVERVIEW

4.1 Supplied with:

- fixing screws (4 for 3P and 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:

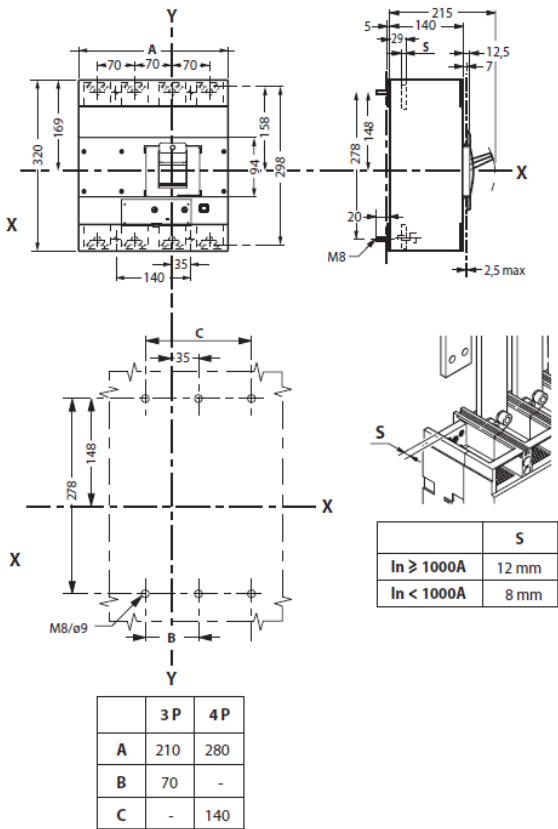
- Vertical
- Horizontal
- Supply inverter type

Megatiker M5 Thermal magnetic and MS5 trip-free switches

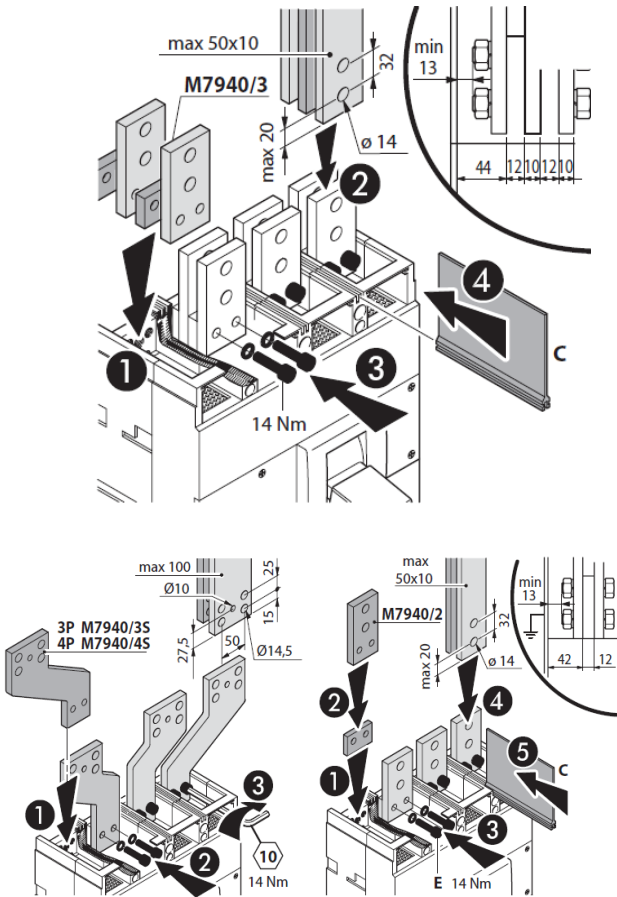
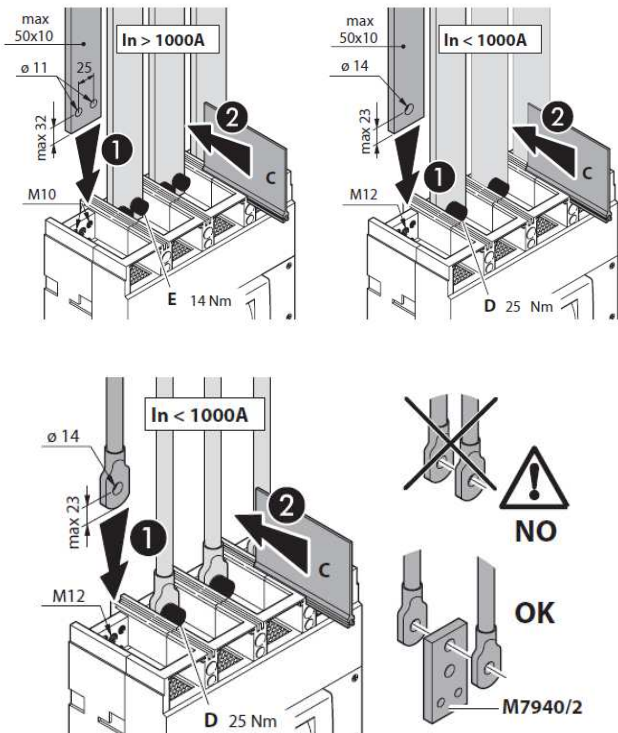
Reference(s) :
T753F500/630/800/1000/1250; T753N500/630/800/1000/1250; T753H500/630/800/1000/1250;
T753L500/630/800/1000/1250; T754F500/630/800/1000/1250; T754N500/630/800/1000/1250;
T754H500/630/800/1000/1250; T754L500/630/800/1000/1250;
T752F1000/1250; T752N1000/1250; T752H1000/1250; T752L1000/1250

5.2 Mounting

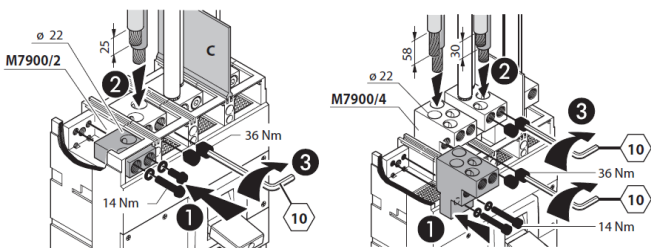
(see instruction sheet for detailed mounting procedures)



Busbars/cable lugs:



Cables:



Flexible Conductors		2x95mm²	MIN	2x185mm²	MAX
Rigid Conductors		4x95mm²	MIN	4x185mm²	MAX
		2x120mm²	MIN	2x240mm²	MAX
		4x120mm²	MIN	4x240mm²	MAX

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T754H500/630/800/1000/1250; T754L500/630/800/1000/1250;
T752F1000/1250; T752N1000/1250; T752H1000/1250; T752L1000/1250

6. ELECTRICAL AND MECHANICAL CHARACTERISTICS

Circuit breaker

Circuit Breaker	Megatiker M5 TM F/N/H/L (36kA, 50kA, 70kA, 100kA)
Rated current (A)	500, 630, 800, 1000, 1250
Poles	3 - 4
Pole pitch (mm)	70
Rated insulation voltage (50/60Hz) U_i (V)	1000
Rated operating voltage (50/60Hz) U_o (V)	690
Rated impulse withstand current U_{imp}	8
Rated frequency (Hz)	50 - 60
Operating temperature (°C)	-25 ÷ 70
Mechanical endurance (cycles)	10000
Mechanical endurance with motor control	5000
Electrical endurance at I_n (cycles)	4000
Electrical endurance at 0.5 I_n (cycles)	8000
Utilization category	A
Suitable for isolation	Yes
Type of protection	Thermal -magnetic
Thermal type protection	Adjustable
Thermal adjustment I_t [$\times I_n$]	0,8 ÷ 0,9 ÷ 1
Thermal adjustment t_r [s]	-
Thermal time tripping at 2 $\times I_n$ (single pole) [s]	<=600
Magnetic type protection	Adjustable
Magnetic adjustment I_{ad} [$\times I_t$]	5 ÷ 10
Time adjustment t_{ad} ($t=k$ o $Pt=k$) [s]	-
Minimum release single pole	1.2 li
Instantaneous electronic adjustment I_i	-
Neutral protection for 4P (% I_{in} of phase pole)	100
Dimensions (W x H x D) (mm)	280 (4P) x 320x 140

Switch disconnecter

Switch disconnecter	Megaswitch MS5
Rated current I_n (A)	630 - 800 - 1250 - 1600
Rated closing capacity on short-circuit I_{cm} (kA)	17 (up to 800A) - 24 (up to 1000A) - 40 (up to 1600A)
Utilization category	AC23A
Short-time resistive current I_{cw} (kA) for 1s	10 (up to 800A) - 12 (up to 1000A) - 20 (up to 1600A)
Isolated voltage U_i (V AC)	1000
Maximum rated operating voltage (50/60Hz) U_o (V)	690
Rated impulse withstand voltage U_{imp} (kV)	8
Rated frequency (Hz)	50 - 60
Operating temperature (°C)	-25 ÷ 70
Suitable for isolation	Yes
Mechanical endurance (cycles)	10000
Mechanical endurance with motor control (cycles)	5000
Electrical endurance (cycles)	4000
Electrical endurance at 0.5 I_n (cycles)	8000
Dimensions (W x H x D) (mm)	280(4P) x 320 x 140

The maximum admissible (absolute) temperature is 125°C
(for detail, see IEC 60947-1 and 60947-2)

Megatiker product line has the possibility to supply both in
"direct" and "reverse" feed.

If "direct", the word "LINE" needs to be marked on supply
terminals (normally the top ones), as well as "LOAD" has to
be written on the output terminals to be connected to the load
(normally the bottom ones).

If "reverse", any indications about LINE / LOAD are NOT
expected on the product.

6.1 Breaking capacity (kA)

		Breaking capacity (kA) & I_{cs}			
		3P-4P			
IEC 60947-2	U_o/I_{cs} (I_{cs} letter)	36kA (F)	50kA (N)	70kA (H)	100kA (L)
	220/240 V AC	70	100	105	150
	380/415 V AC	36	50	70	100
	440/460 V AC	30	45	65	80
	480/500 V AC	25	35	45	55
	480/550 V AC	20	24	28	30
	600 V AC	20	24	28	30
	690V AC	14	20	22	25
	I_{cs} (% I_{cw})	100	100	100	70
	Rated making capacity under short circuit I_{cm}				
NEMA AB-1	I_{cm} (kA) at 415V	76.5	105	154	220
	220/240 V AC	70	100	105	150
	480/500 V AC	25	35	45	55
	690 V AC	14	20	22	25

6.3 Rated current (I_n) at 40°C / 50°C

I_n (A)	Phases limit trip current			
	thermal (I_t)		magnetic (I_i)	
	0.8 $\times I_n$	1 $\times I_n$	5 $\times I_t$	10 $\times I_t$
500	400	500	2500	5000
630	504	630	3150	6300
800	640	800	4000	8000
1000	800	1000	5000	10000
1250	1000	1250	6250	12500

* For neutral adjustment, as explained in technical sheet, please consider the
values ratios 100% on set currents.

6.3 Load operations

Force on handle	$I_n \leq 400A$	$I_n \geq 500A$
Opening operation (N)	80	130
Closing operation (N)	180	210
Restore operation (N)	145	200

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.

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T754H500/630/800/1000/1250; T754L500/630/800/1000/1250;
T752F1000/1250; T752N1000/1250; T752H1000/1250; T752L1000/1250

6.5 Power losses per pole under I_n

Circuit breakers

	Power losses per pole (W)				
	I_n (A)				
	500	630	800	1000	1250
Front terminals - Fixed version	30.7	47.7	46.2	53.7	99.4
Rear terminals - Fixed version	30.0	46.4	44.8	53.0	96.9
Front terminals - D-O version	52.3	81.0	78.1	92.0	170.3
Rear terminals - D-O version	38.5	59.9	57.6	68.0	125.0

Note: power loss 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.

Switch disconnectors

	Power losses per pole (W)			
	I_n (A)			
	630	800	1250	1600
Front terminals - Fixed version	50.8	29.8	74.4	65.3
Rear terminals - Fixed version	49.6	29.4	73.4	58.9
Front terminals - D-O version	86.5	51.2	128.1	112.6
Rear terminals - D-O version	63.9	38.4	93.8	97.3

Note: power loss in the table above are referred and measured as described in the standard IEC 60947-3 for switches. Values in the table are referred to a single phase.

6.6 DERATINGS

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)						
	10	20	30	40	50	60	70
500	605	570	535	500	500	430	395
630	743	705	668	630	630	555	518
800	944	896	848	800	800	704	656
1000	1180	1120	1060	1000	1000	880	820
1250	1475	1400	1325	1250	1250	1100	1025

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.

Electromagnetic disturbances (EMC)

for Megatiker M5 circuit breakers, according to IEC/EN 60947-2 Annex F

Pollution degree

for Megatiker M5 circuit breakers, degree 3, according to IEC/EN 60947-2

6.6.3 Altitude

Altitude derating for Megatiker

Altitude (m)	2000	3000	4000	5000
U_e (V)	690	590	520	460
I_n (A) ($T_a = 40^\circ\text{C}/50^\circ\text{C}$)	$1 \times I_n$	$0.98 \times I_n$	$0.93 \times I_n$	$0.9 \times I_n$

6.6.4 Use in DC

See table B.

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T753L500/630/800/1000/1250; T754F500/630/800/1000/1250; T754N500/630/800/1000/1250;
T754H500/630/800/1000/1250; T754L500/630/800/1000/1250;
T752F1000/1250; T752N1000/1250; T752H1000/1250; T752L1000/1250

7. CONFORMITY

Megatiker range of product concerning circuit-breakers and trip-free switches exceed compliance with the EN/IEC standard 60947-2 and 60947-3 respectively.

Certification available by IECEE CB-scheme or LOVAG Compliance scheme.

Marks as CCC (China), EAC (Eurasian Federation) or different local certification are available.

Megatiker are in conformity with the Lloyds Shipping Register, RINA and Bureau Veritas Marine.

Megatiker respect the European Directives REACH, RoHS, RAEE and Product Environment Product (PEP Ecopassport) are available.

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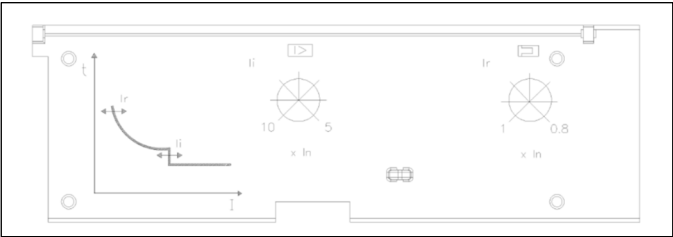
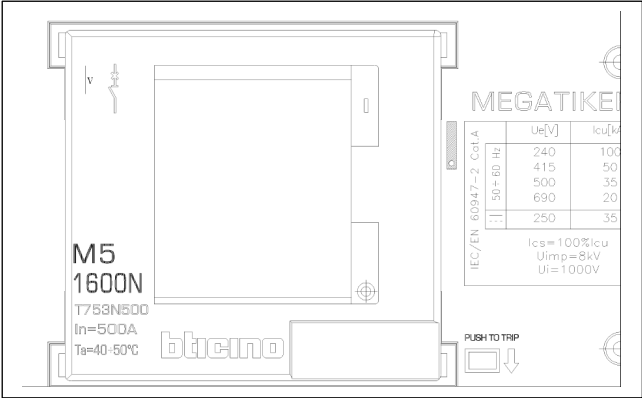
For specific information, please contact Legrand support.

7.1 Marking

Product (both circuit breakers and switch disconnectors) are provided with labelling in full conformity to the referred standard and directives requirements by laser or sticker labels as:

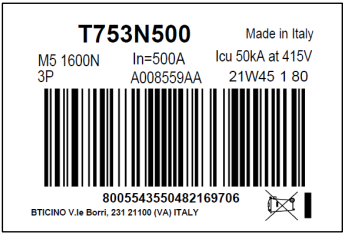
Product laser label on front

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



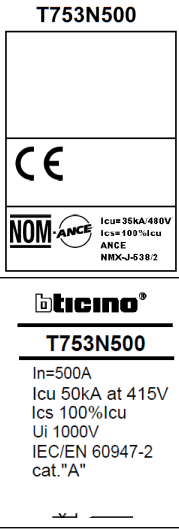
Product sticker label on side

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



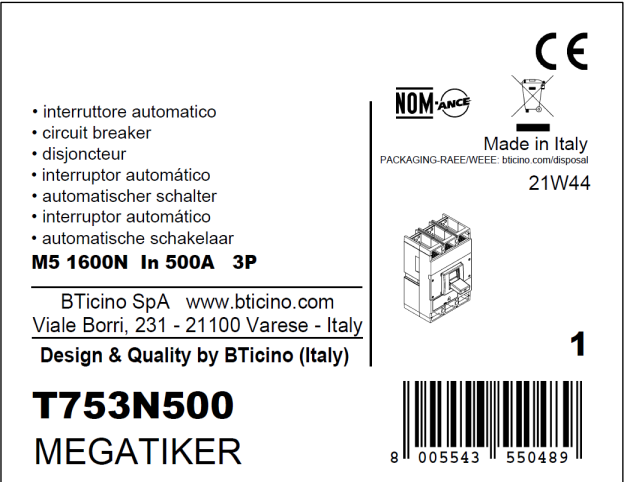
Mark sticker label on side

- 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



8. EQUIPMENTS AND ACCESSORIES

8.1 Releases (for Megatiker M4 and M5)

- shunt releases with voltage:
24 Vac and dc
48 Vac and dc
110÷130 Vac and dc
220÷250 Vac and dc
380÷440 Vac and dc
- ref. M7C024
ref. M7C048
ref. M7C110
ref. M7C230
ref. M7C400

Shunt releases electrical characteristics	
Rated voltage (U _c)	Both ac and dc: 24V/48V/110÷130V/220÷250V/380÷440V
Voltage range (%U _c)	70 ÷ 110
Intervention time (ms)	≤ 50
Power consumption (W/VA)	300
Minimum opening time (ms)	50 ms
Insulation voltage (kV)	2,5

- undervoltage releases with voltage:
24 V dc
24 V ac
48 V dc
110 - 125 V ac
220 - 240 V ac
380 - 415 V ac
- ref. M7T024C
ref. M7T024
ref. M7T048C
ref. M7T110
ref. M7T230
ref. M7T400

Undervoltage relases electrical characteristics	
Rated voltage (U _c)	ac: 24V/110÷125V/220÷240V/380÷415V dc: 24V/48V
Voltage range (%U _c)	85 ÷ 110
Minimum opening time (ms)	50
Power consumption (W/VA)	1.6 / 5

- time-lag undervoltage releases (800 ms)
Time-lag modules with voltage:

24 V ac/dc
230 V ac
400 V ac
- ref. M7000E/024
ref. M7000MR/230
ref. M7000MR/400
- Universal Release
(to be equipped with a time-lag module *M7000MR/230/400*)
- ref. M7TMEV

8.2 Auxiliary contacts (for Megatiker M4 and M5)

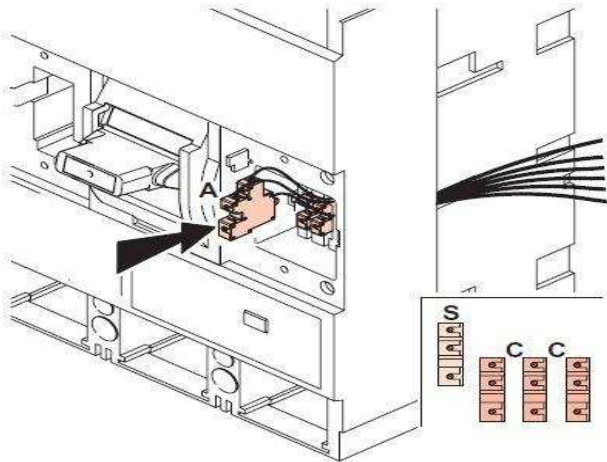
Changeover switch 3A – 250 VAC ref. M7X01

To show the state of the contacts or opening of the Megatiker on a fault:

- Auxiliary contact (standard)
 - Fault signal
- OC
CTR

Auxiliary contact electrica characteristics		
Rated voltage (V _n)	V (ac or dc)	24 to 250
Intensity (A)	24 V dc	5
	48 V dc	1.7
	110 V dc	0.5
	230 V dc	0.25
	110 V ac	4
	230/250 V ac	3

Configurations:
M5/MS5 → 3 auxiliary contacts + 1 fault signal + 1 release



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
 - 1 lock + 1 flat key with fixed mapping (EL43525)
 - 1 lock + 1 flat key with fixed mapping (EL43363)
 - 1 lock + 1 star key with random mapping
- ref. M7K01
ref. M7K02
ref. M7K03
ref. M7K04

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T754H500/630/800/1000/1250; T754L500/630/800/1000/1250;
T752F1000/1250; T752N1000/1250; T752H1000/1250; T752L1000/1250

8.4 Rotary handles

Direct on Megatiker (with auxiliary option)

- Standard (black) ref. M7647

Vari-depth handle IP55 (with auxiliary option)

- Standard (black) ref. T7649
- For emergency use (red / yellow) adapting on standard handle ref. T7649E

Locking accessories (for vary-depth handle with auxiliary option)

- Key lock accessory for vari-depth rotary handle ref. M7R17

Ref. M7R17 must be used with universal keylocks to get the complete locking kit for rotary handle

8.5 Motor-driven handles

Factory assembled

Front operated

- Voltage 24 V AC/DC ref. M7875P/024
- Voltage 48V AC/DC ref. M7875P/048
- Voltage 230 V AC ref. M7875P/230*

*DC versione by request

Customer assembled

Front operated

- Voltage 24 V AC and DC ($I_n \leq 1250A$) ref. 0 261 24
- Voltage 48 V AC and DC ($I_n \leq 1250A$) ref. 0 261 25
- Voltage 110 V AC and DC ($I_n \leq 1250A$) ref. 0 261 26
- Voltage 220 V AC and DC ($I_n \leq 1250A$) ref. 0 261 23
- Voltage 24 V AC and DC ($I_n = 1600A$) ref. 0 261 19
- Voltage 48 V AC and DC ($I_n = 1600A$) ref. 0 261 28
- Voltage 110 V AC and DC ($I_n = 1600A$) ref. 0 261 29
- Voltage 220 V AC and DC ($I_n = 1600A$) ref. 0 261 27

Locking accessories

- Key lock accessory for motor operator ref. 4 228 06

Ref. 4 228 06 must be used with universal keylocks to get the complete locking kit for motor operator

8.6 Mechanical accessories

Phase insulators

- 12x2 set ref. M7695

Sealable terminal shields

- Set of 2 3P ref. M7935
- Set of 2 4P ref. M7936

Padlock

- Accessories to lock in open position ref. M7055

Terminal covers to guarantee IP20

- Set of 2 3P ref. M7C13
- Set of 2 4P ref. M7C14
- External neutral ref. M7X39

8.7 Connection accessories

Cage terminals

- Set of 4 terminals for cables 2x240mm² max (rigid) or 2x185mm² max (flexible) (Cu/Al) ref. M7900/2
- Set of 4 terminals for cables 4x240mm² max (rigid) or 4x185mm² max (flexible) (Cu/Al) ref. M7900/4

Extended front terminals

- Short terminals for 500 - 1250A (2 bars max. per pole) ref. M7940/2
- Long terminals for 1600A (3 bars max. per pole) ref. M7940/3

Spreaders

- Set of 3 (incoming or outgoing 3P) ref. M7940/3S
- Set of 4 (incoming or outgoing 4P) ref. M7940/4S

Rear terminals

(use to connect fixed version with front terminals into fixed version with rear terminal)

- Set of swivel terminals, incoming or outgoing
3P ref. M7960
4P ref. M7961
- Set of flat rear terminals, incoming or outgoing
3P ref. M7950
4P ref. M7951

Cage terminal use specifications

Megatiker M5							
Type of cage terminal	Cable standard suggested cross section (mm ²)*			Dimensions limits of cable for cage terminals			
	In (A)	Cu	Al	MIN cross section (mm ²)		MAX cross section (mm ²)	
				Flexible	Rigid	Flexible	Rigid
Standard	500	2x150	2x240	95	70	185	240
	630	2x185	\				
	800	2x240	\				
	1000	\	\				
	1250	\	\				
High capacity	1600	\	\				
	500	2x150	2x240	95	70	185	240
	630	2x185	3x240				
	800	2x240	3x240				
	1000	4x150	4x240				
	1250	4x185	\				
	1600	4x240	\				

* The suggested cross section are in compliance with standard IEC60947-1 (ed.6 2020/04) and IEC60947-2 (ed.5.1 2019/07)

<div><div>8.8 Draw-out version</div><div>(A Megatiker draw-out version is a plug-in fitted with a "Débro-lift" mechanism which can be used to withdraw the Megatiker while keeping it on its base)</div><div><div>Draw-out base</div><div>Base for Megatiker M5 equipped with "Débro-lift" mechanism</div><div><div>• Front terminals</div><div>3P 4P</div><div>ref. M7B25 ref. M7B26</div></div><div><div>• Rear terminals</div><div>3P 4P</div><div>ref. M7B27 ref. M7B28</div></div><div><div>"Débro-lift" mechanism</div><div>To be fitted on a Megatiker M5 fixed version in order to obtain the movable part of a drawout circuit breaker</div><div><div>• Mobile part for draw-out version</div><div>3P 4P</div><div>ref. M7B29 ref. M7B30</div></div><div><div>Key lock for "Débro-lift" mechanism</div><div><div>• One key for Megatiker only</div><div>(enable locking in draw - out position)</div><div><div>• Key lock accessory for draw-out</div><div>(frontal masks for motor operator or rotary handle)</div><div>ref. M7B40</div></div><div><div>• Key lock accessory for draw-out</div><div>ref. M7B39</div></div></div><div><div>Ref. M7B40 and M7B39 must be used with universal keylocks to get the complete locking kit for draw-out version</div></div></div></div><div><div>8.9 Plate for transfer switches (factory assembled)</div><div>(A transfer switch plate is composed of one plate with interlock for 2 devices)</div><div><div>• Plate for breaker or trip-free switch fixed version</div><div>ref. M7198N</div></div><div><div>• Plate for breaker or trip-free switch plug-in and draw-out version</div><div>ref. M7298N</div></div></div></div></div>
<div><div>Accessories for "Débro-lift" mechanism</div><div><div>• Isolated handle for drawing-out</div><div>ref MT7412</div></div><div><div>• Signal contact (plugged-in / drawn-out)</div><div>ref MT7910N</div></div><div><div>• Set of connectors (8 contacts)</div><div>ref M7500</div></div><div><div>• Support plate for draw-out version</div><div>ref BT-M7B35</div></div><div><div>• Automatic auxiliary contacts (12 pin) D/O version</div><div>ref. M7B21</div></div></div>

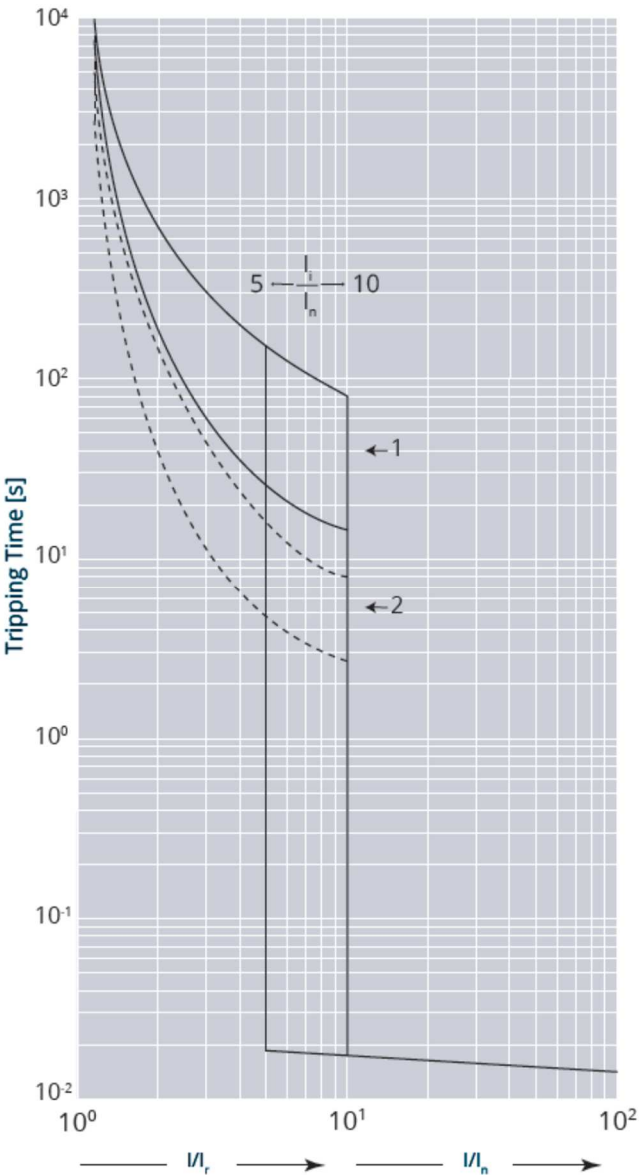
Megatiker M5 Thermal magnetic
and MS5 trip-free switches

Reference(s) :
T753F500/630/800/1000/1250; T753N500/630/800/1000/1250; T753H500/630/800/1000/1250;
T753L500/630/800/1000/1250; T754F500/630/800/1000/1250; T754N500/630/800/1000/1250;
T754H500/630/800/1000/1250; T754L500/630/800/1000/1250;
T752F1000/1250; T752N1000/1250; T752H1000/1250; T752L1000/1250

9. CURVES

9.1 Tripping curve

Update: 02/07/2018

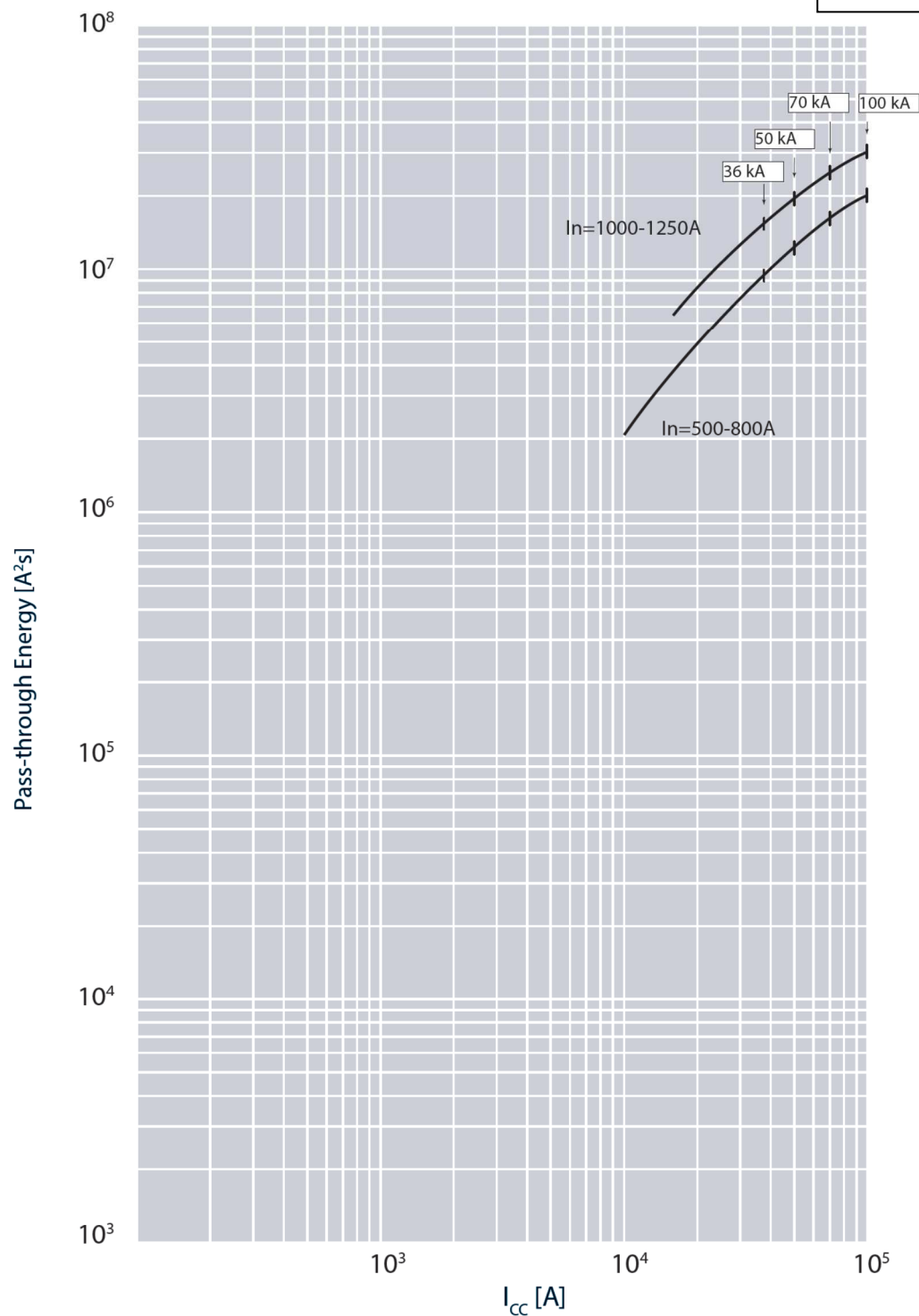


I_{cu} = 36-50-70-100 kA I_{max} = 1600A 3-4 P U_e = 415Vac (IEC/EN 60947-2)

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 ² t = 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

9.2 Pass-through specific energy characteristic curve

Update: 03/07/2018



I_{cu} = 36-50-70-100 kA I_{max} = 1600A 3-4 P U_o = 415Vac (IEC/EN 60947-2)

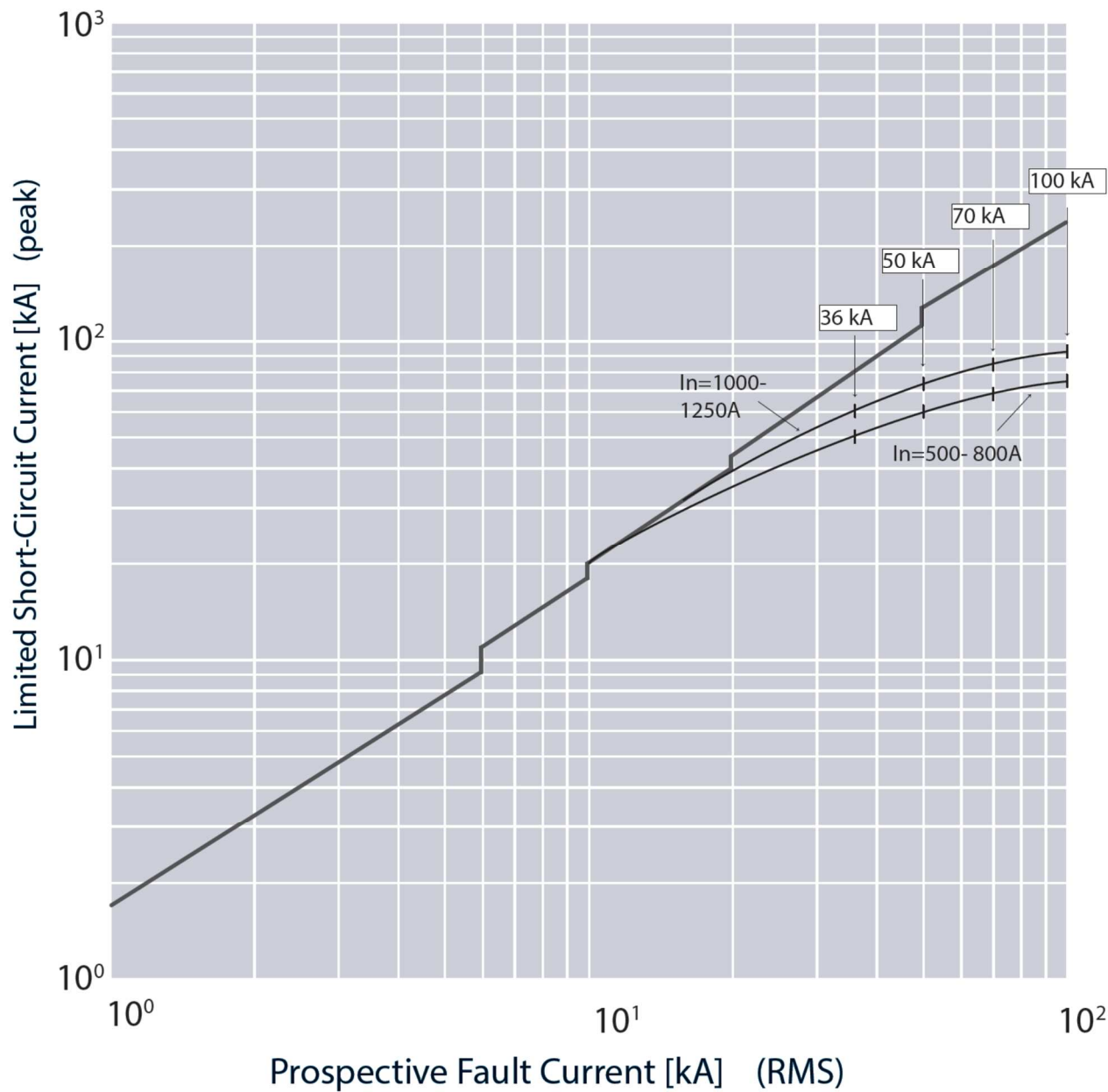
Value	Description
I_{cc}	short circuit current
I^2t (A^2s)	pass-through specific energy

Megatiker M5 Thermal magnetic
and MS5 trip-free switches

Reference(s) :
T753F500/630/800/1000/1250; T753N500/630/800/1000/1250; T753H500/630/800/1000/1250;
T753L500/630/800/1000/1250; T754F500/630/800/1000/1250; T754N500/630/800/1000/1250;
T754H500/630/800/1000/1250; T754L500/630/800/1000/1250;
T752F1000/1250; T752N1000/1250; T752H1000/1250; T752L1000/1250

9.3 Cut-off peak current characteristic curve (kA)

Update: 02/07/2018



$I_{cu} = 36-50-70-100\text{ kA}$ $I_{max} = 1600A$ 3-4 P $U_e = 415Vac$ (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 M5 Thermal magnetic and MS5 trip-free switches

Reference(s) :

T753F500/630/800/1000/1250; T753N500/630/800/1000/1250; T753H500/630/800/1000/1250;
T753L500/630/800/1000/1250; T754F500/630/800/1000/1250; T754N500/630/800/1000/1250;
T754H500/630/800/1000/1250; T754L500/630/800/1000/1250;
T752F1000/1250; T752N1000/1250; T752H1000/1250; T752L1000/1250

A) Derating Temperature and configurations

		Ambient temperature											
		30 °C		40 °C		50 °C		60 °C		65 °C		70 °C	
		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	I_{max} (A)	I_r / I_n
Fixed version - 500A	Cage terminals, flexible cable	500	1	500	1	500	1	500	1	500	1	500	1
	Cage terminals, flexible cable + sealable terminal shields	500	1	500	1	500	1	500	1	500	1	500	1
	Lugs, rigid cable	500	1	500	1	500	1	500	1	500	1	500	1
	Spreaders, flexible cable	500	1	500	1	500	1	500	1	500	1	500	1
	Spreaders, bars 2x50x10 Cu	500	1	500	1	500	1	500	1	500	1	500	1
	Rear flat terminals, bars 2x80x5 Cu, vertical	500	1	500	1	500	1	500	1	500	1	500	1
	Rear flat staggered terminals, bars 2x80x5 Cu, vertical	500	1	500	1	500	1	500	1	500	1	500	1
Fixed version - 800A		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	I_{max} (A)	I_r / I_n
	Cage terminals, flexible cable	800	1	800	1	800	1	800	1	800	1	800	1
	Cage terminals, flexible cable + sealable terminal shields	800	1	800	1	800	1	800	1	800	1	800	1
	Lugs, rigid cable	800	1	800	1	800	1	800	1	800	1	800	1
	Spreaders, flexible cable	800	1	800	1	800	1	800	1	800	1	800	1
	Spreaders, bars 2x50x10 Cu	800	1	800	1	800	1	800	1	800	1	800	1
	Rear flat terminals, bars 2x80x5 Cu, vertical	800	1	800	1	800	1	800	1	800	1	800	1
	Rear flat staggered terminals, bars 2x80x5 Cu, vertical	800	1	800	1	800	1	800	1	800	1	800	1
Fixed version - 1000A		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	I_{max} (A)	I_r / I_n
	Cage terminals, flexible cable	1000	1	1000	1	1000	1	1000	1	950	0.95	900	0.9
	Cage terminals, flexible cable + sealable terminal shields	1000	1	1000	1	1000	1	1000	1	950	0.95	900	0.9
	Lugs, rigid cable	1000	1	1000	1	1000	1	1000	1	950	0.95	900	0.9
	Spreaders, flexible cable	1000	1	1000	1	1000	1	1000	1	1000	1	900	0.9
	Spreaders, bars 2x50x10 Cu	1000	1	1000	1	1000	1	1000	1	1000	1	900	0.9
	Rear flat terminals, bars 2x80x5 Cu, vertical	1000	1	1000	1	1000	1	1000	1	1000	1	900	0.9
	Rear flat staggered terminals, bars 2x80x5 Cu, vertical	1000	1	1000	1	1000	1	1000	1	1000	1	900	0.9
Fixed version - 1250A		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	I_{max} (A)	I_r / I_n
	Cage terminals, flexible cable	1250	1	1250	1	1250	1	1087.5	0.87	975	0.78	937.5	0.75
	Cage terminals, flexible cable + sealable terminal shields	1250	1	1250	1	1250	1	1087.5	0.87	975	0.78	937.5	0.75
	Lugs, rigid cable	1250	1	1250	1	1250	1	1087.5	0.87	975	0.78	937.5	0.75
	Spreaders, flexible cable	1250	1	1250	1	1250	1	1125	0.9	1000	0.8	937.5	0.75
	Spreaders, bars 2x50x10 Cu	1250	1	1250	1	1250	1	1125	0.9	1000	0.8	937.5	0.75
	Rear flat terminals, bars 2x80x5 Cu, vertical	1250	1	1250	1	1250	1	1125	0.9	1000	0.8	937.5	0.75
	Rear flat staggered terminals, bars 2x80x5 Cu, vertical	1250	1	1250	1	1250	1	1125	0.9	1000	0.8	937.5	0.75

For further technical information, please contact Legrand technical support.

B) Use in DC

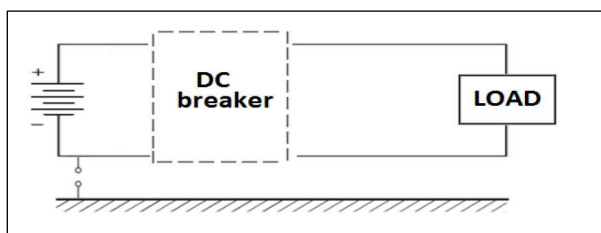
B.1 Circuit breakers: breaking capacity in DC (kA) (values estimates only)

Applied to DC networks insulated from the ground
(this diagram applies to both 3P and 4P circuit breakers):

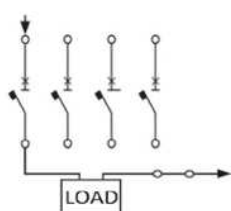
I_{cu} (kA)	I_n (A)	1 pole *	2 poles in series *				3 poles in series *		
		60 V	60 V	110 V	250 V	110 V	250 V	500 V	
36	500 ÷ 1250	35	35	35	35	35	35	35	
50	500 ÷ 1250	50	50	50	50	50	50	35	
70	500 ÷ 1250	70	70	70	70	70	70	70	
100	500 ÷ 1250	100	100	100	70	100	70	70	

DC breaking capacity in the table respect the standards.

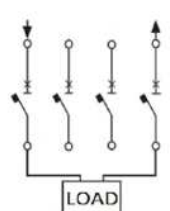
The positive tolerance is between 0% to 5% of voltage status.



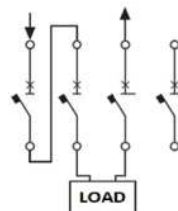
* Connection modality for DC breaker (polarity can be inverted):



1 pole



2 poles in series

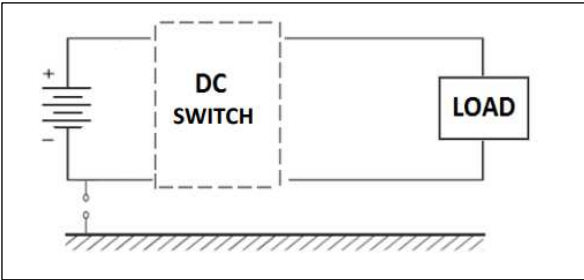


3 poles in series

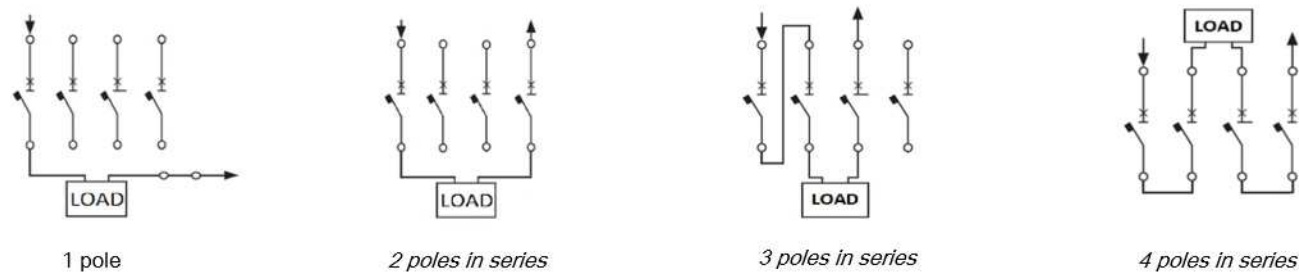
B.2 Switch disconnectors: category of use

	1 pole *	2 poles in series *		3 poles in series *	4 poles in series *
I _n (A)	60 V	110 V	250	500 V	750 V
800	DC23	DC23	DC23	DC23	DC23
1250	DC23	DC23	DC23	DC23	DC23
1600	DC23	DC23	DC23	DC23	DC23

Applied to DC networks insulated from the ground



* *Connection modality for DC switch disconnectors (polarity can be inverted):*



Data indicated in this document refers exclusively to test conditions according to product standards, unless otherwise indicated in the documentation.

For the different conditions of use of the product, inside electrical equipment or in any case inserted in the installation context, refer to the regulatory requirements of the equipment, local regulations and design specifications of the system