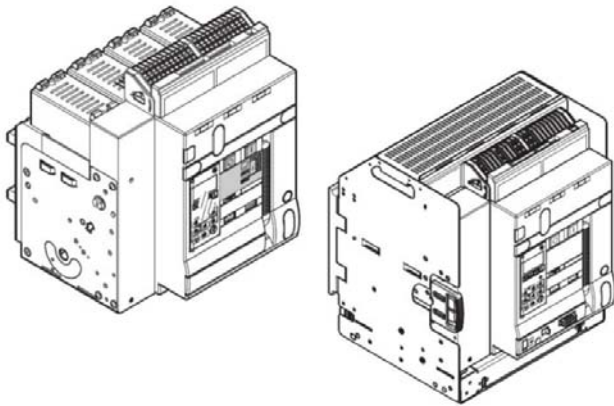


# Megabreak circuit breakers and switch disconnectors

References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500



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## 1. USE

Megabreak air circuit breakers offer optimal solutions to answer to protection requirements on the origin of the low voltage electrical installation (IEC/EN 60364-1) up to 2500A. Their electric and mechanical robustness, in addition to breaking capacity, maintenance and chances of accessorizing, are perfectly suited for these requirements.

## 2. RANGE

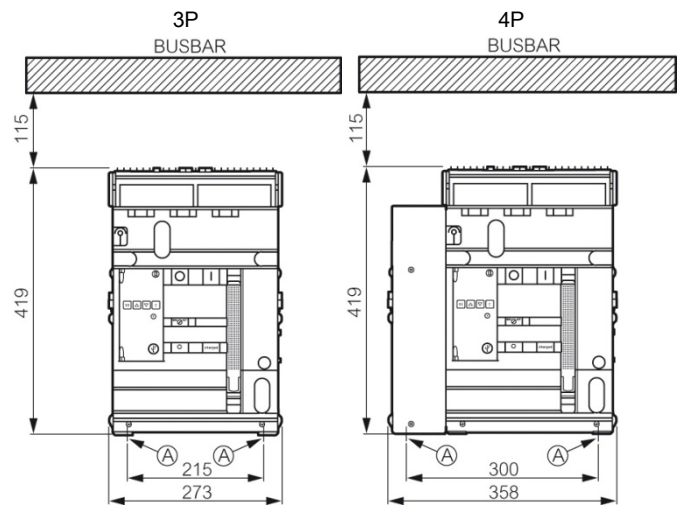
Megabreak circuit breakers						
Fixed version						
	50kA		65kA		100kA	
I <sub>n</sub> (A)	3P	4P	3P	4P	3P	4P
630	T803A630	T804A630	T803H630	T804H630	T803L630	T804L630
800	T803A800	T804A800	T803H800	T804H800	T803L800	T804L800
1000	T803A1000	T804A1000	T803H1000	T804H1000	T803L1000	T804L1000
1250	T803A1250	T804A1250	T803H1250	T804H1250	T803L1250	T804L1250
1600	T803A1600	T804A1600	T803H1600	T804H1600	T803L1600	T804L1600
2000	T803A2000	T804A2000	T803H2000	T804H2000	T803L2000	T804L2000
2500	T803A2500	T804A2500	T803H2500	T804H2500	T803L2500	T804L2500
Draw-out version						
	50kA		65kA		100kA	
I <sub>n</sub> (A)	3P	4P	3P	4P	3P	4P
630	T803AE630	T804AE630	T803HE630	T804HE630	T803LE630	T804LE630
800	T803AE800	T804AE800	T803HE800	T804HE800	T803LE800	T804LE800
1000	T803AE1000	T804AE1000	T803HE1000	T804HE1000	T803LE1000	T804LE1000
1250	T803AE1250	T804AE1250	T803HE1250	T804HE1250	T803LE1250	T804LE1250
1600	T803AE1600	T804AE1600	T803HE1600	T804HE1600	T803LE1600	T804LE1600
2000	T803AE2000	T804AE2000	T803HE2000	T804HE2000	T803LE2000	T804LE2000
2500	T803AE2500	T804AE2500	T803HE2500	T804HE2500	T803LE2500	T804LE2500

Megabreak switch disconnectors				
	Fixed version		Draw-out version	
I <sub>n</sub> (A)	3P	4P	3P	4P
1250	T803M1250	T804M1250	T803ME1250	T804ME1250
1600	T803M1600	T804M1600	T803ME1600	T804ME1600
2000	T803M2000	T804M2000	T803ME2000	T804ME2000
2500	T803M2500	T804M2500	T803ME2500	T804ME2500

## 3. DIMENSIONS

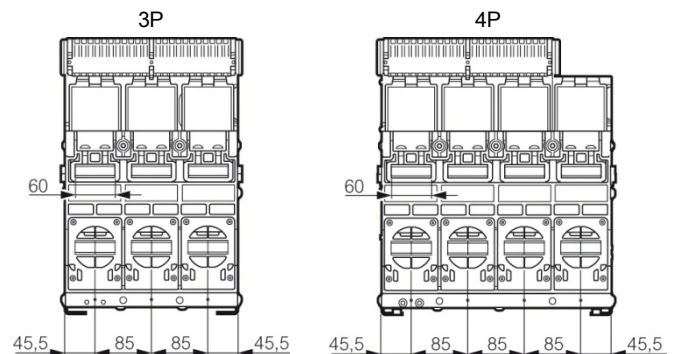
### 3.1 Fixed version (Megabreak A, H and switch disconnectors)

Frontal view



A = fixing point on plate of enclosure

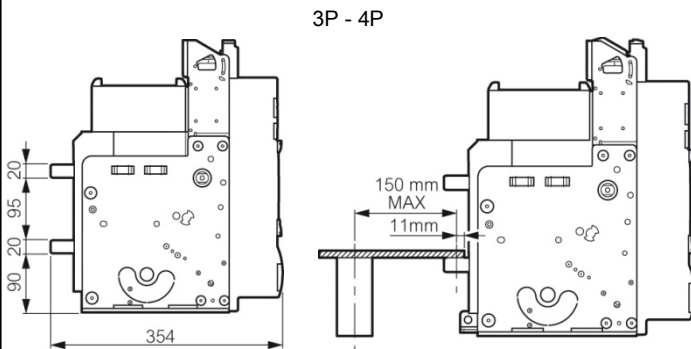
Rear view



# Megabreak circuit breakers and switch disconnectors

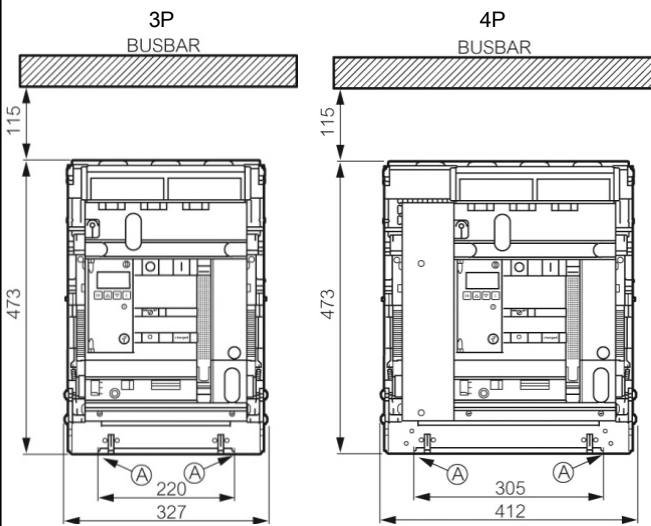
References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

Lateral view



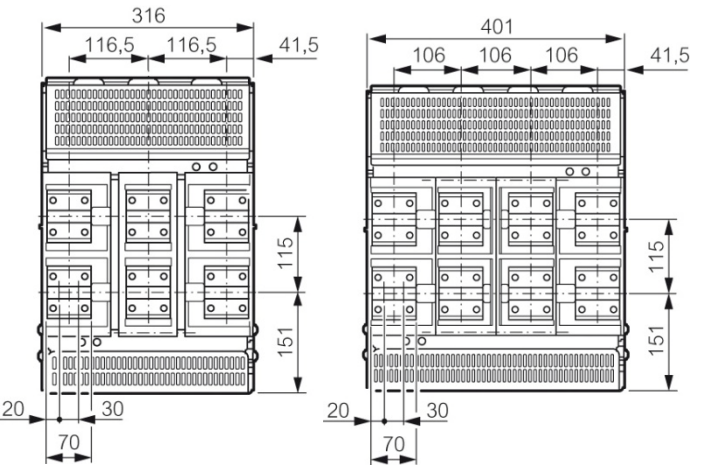
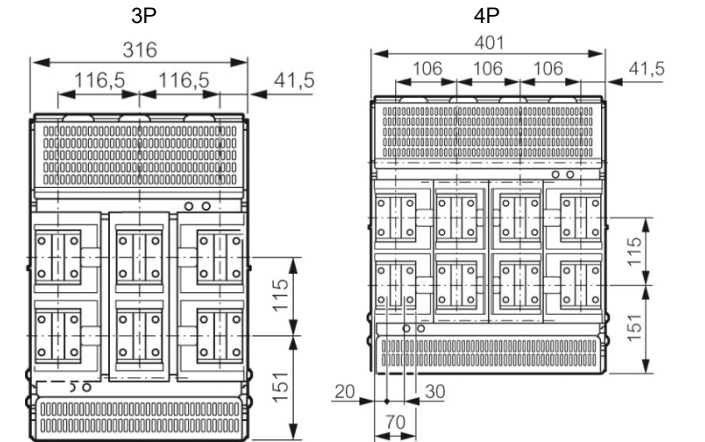
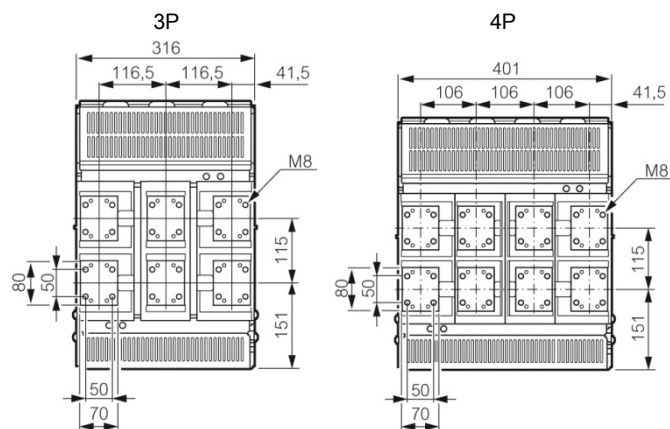
## 3.2 Draw-out version (Megabreak A, H and switch disconnectors)

Frontal view

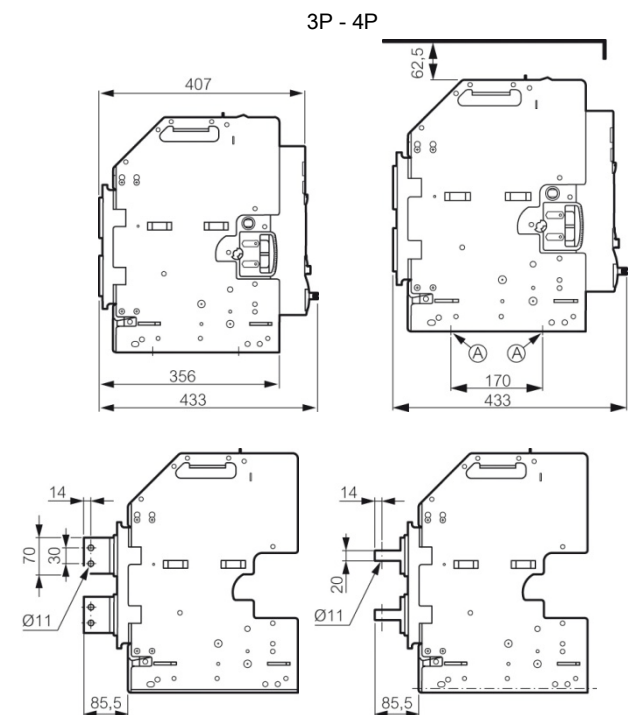


A = fixing point on plate of enclosure

Rear view



Lateral view



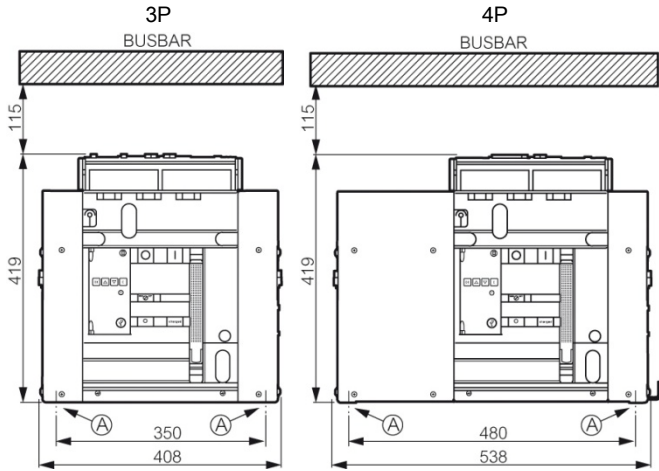
A = fixing point on plate of enclosure

# Megabreak circuit breakers and switch disconnectors

References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

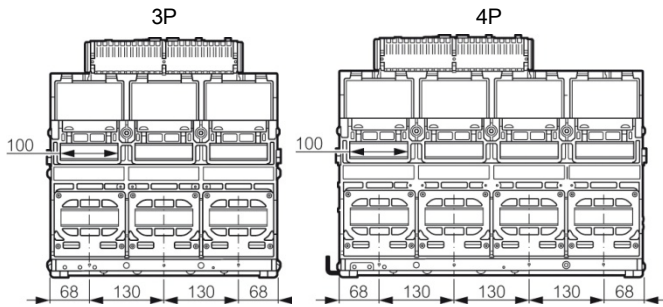
## 3.3 Fixed version (Megabreak L)

Frontal view



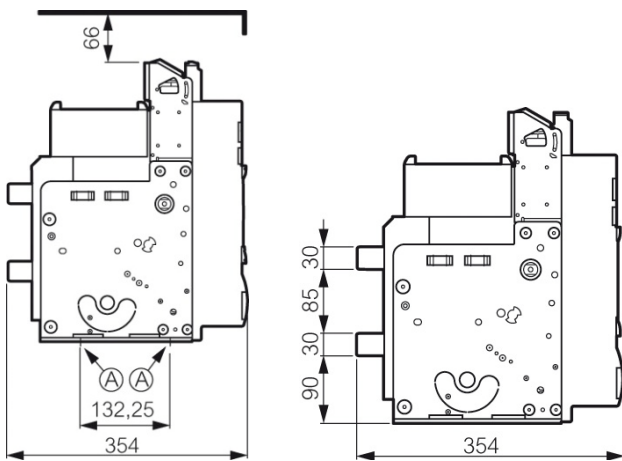
A = fixing point on plate of enclosure

Rear view

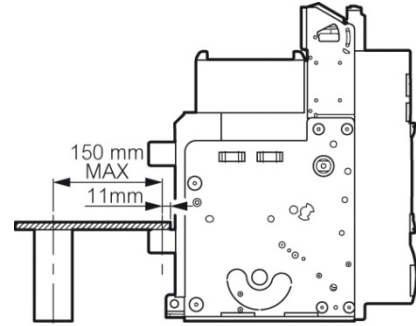


Lateral view

3P - 4P

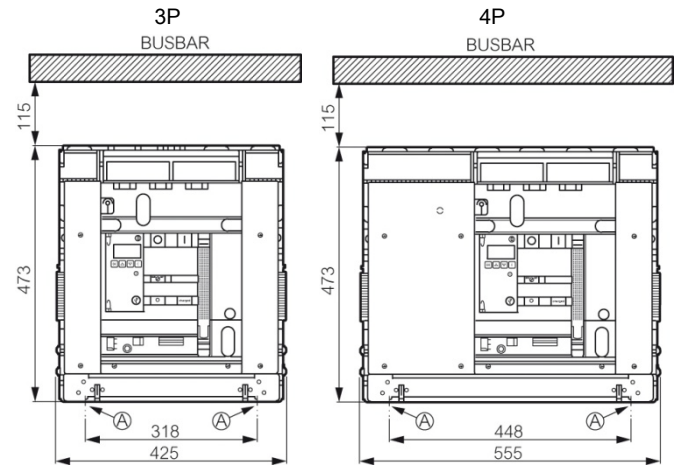


A = fixing point on plate of enclosure



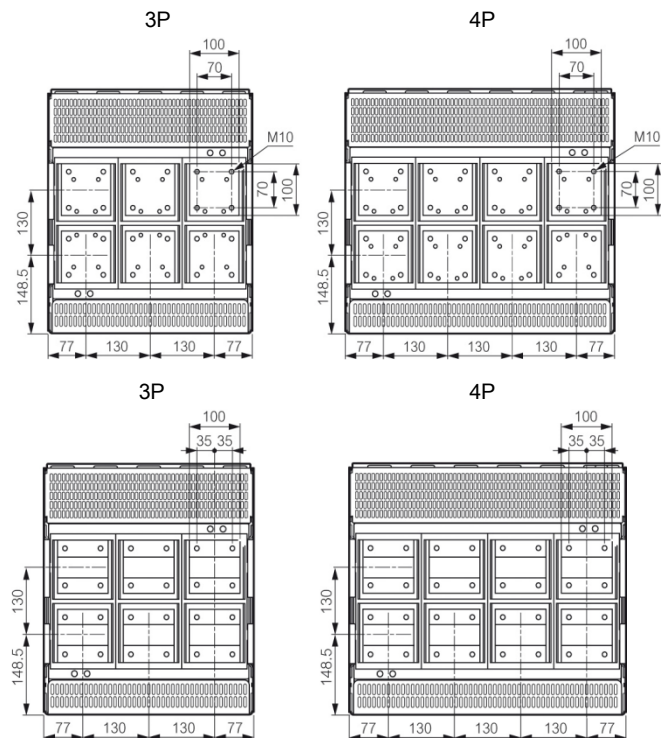
## 3.4 Draw-out version (Megabreak L)

Frontal view



A = fixing point on plate of enclosure

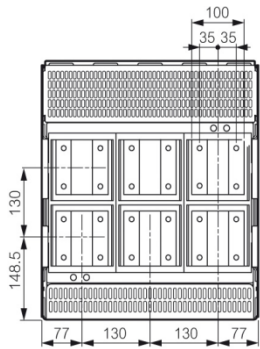
Rear view



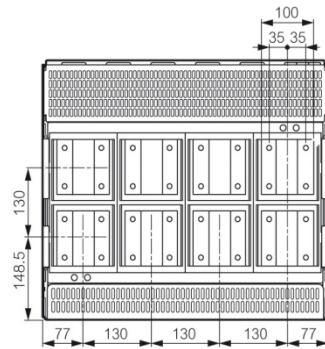
# Megabreak circuit breakers and switch disconnectors

References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

3P

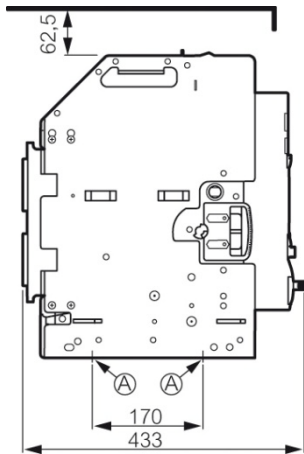


4P

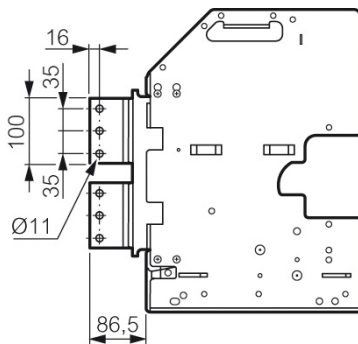
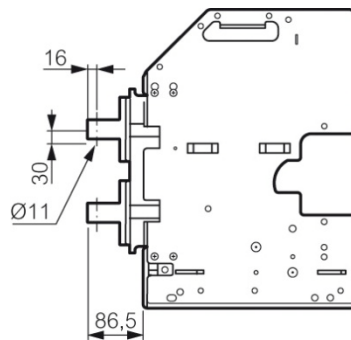


Lateral view

3P - 4P

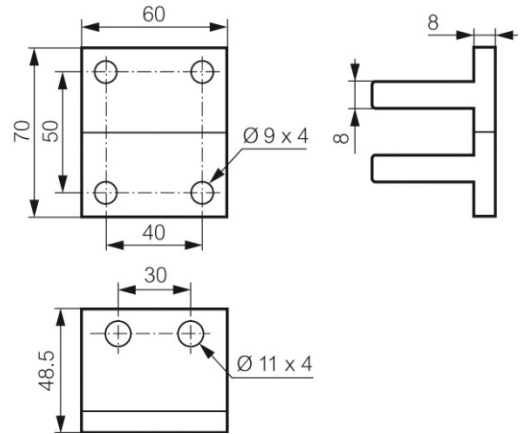
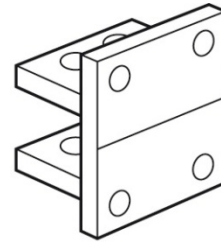


A = fixing point on plate of enclosure

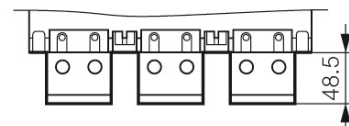
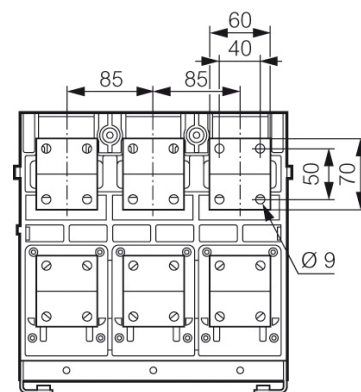


## 3.5 Rear terminals for fixed version – Flat connection (Megabreak A, H and switch disconnectors)

References	
3P	4P
MT8P3P1	MT8P4P1



3P

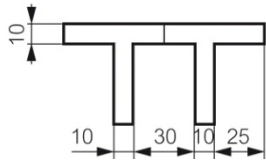
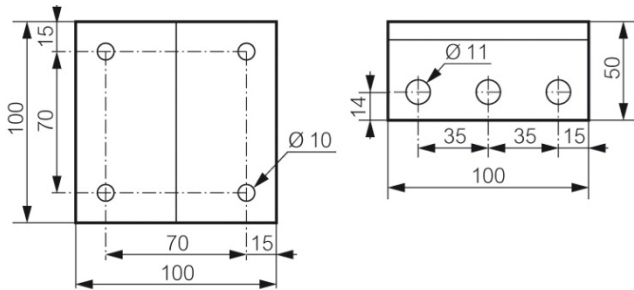
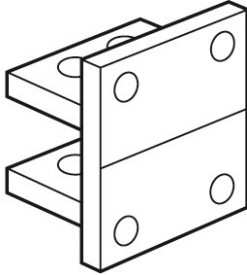


# Megabreak circuit breakers and switch disconnectors

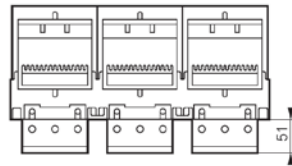
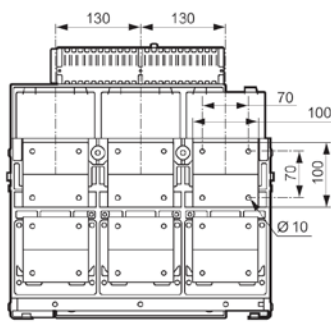
References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

## 3.6 Rear terminals for fixed version – Flat connection (Megabreak L)

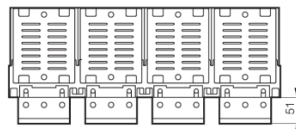
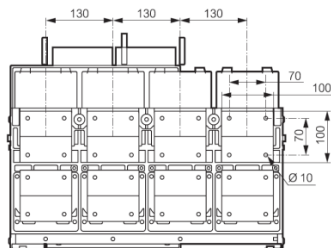
References	
3P	4P
MT8P3P2	MT8P4P2



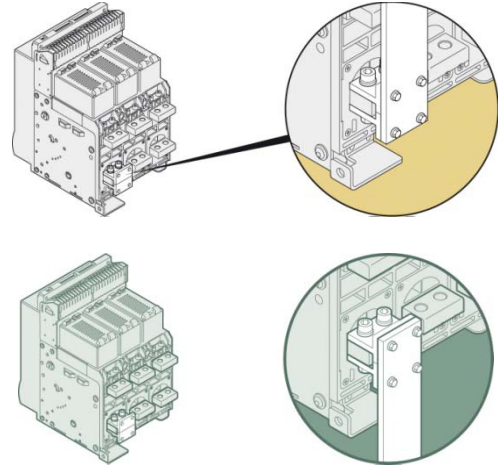
3P



4P

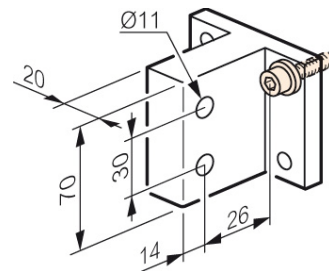
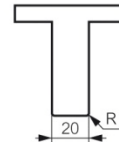
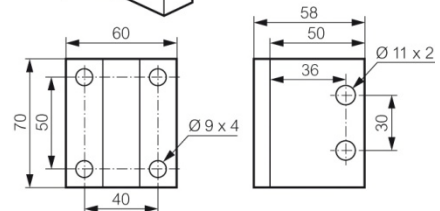
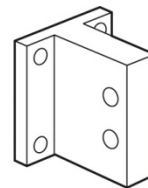


## Mounting examples:



## 3.7 Rear terminals for fixed version – Vertical connection (Megabreak A, H and switch disconnectors)

References	
3P	4P
MT8HV3P1	MT8HV4P1

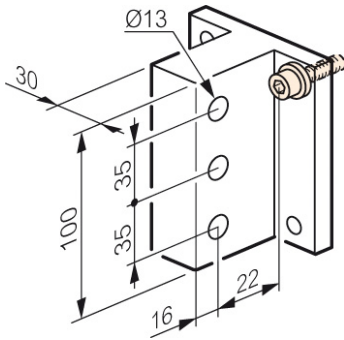


# Megabreak circuit breakers and switch disconnectors

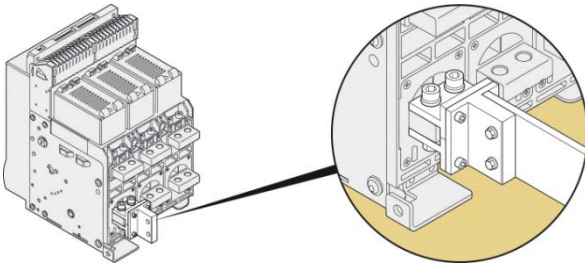
References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

## 3.8 Rear terminals for fixed version – Vertical connection (Megabreak L)

References	
3P	4P
MT8HV3P2	MT8HV4P2

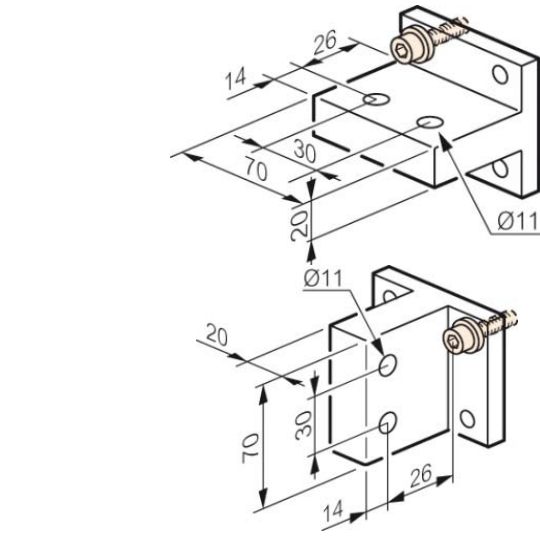


Mounting example:



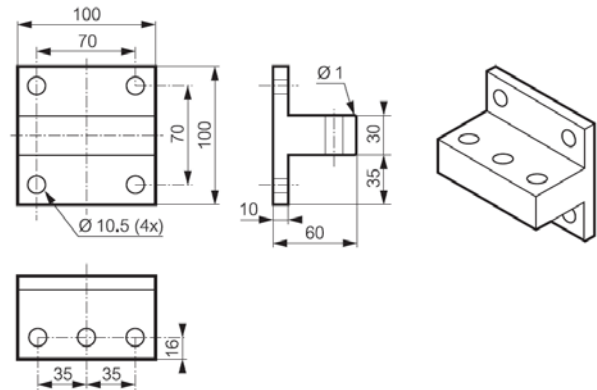
## 3.9 Rear terminals for Draw-out version – Flat/vertical connection (Megabreak A, H and switch disconnectors)

References	
3P	4P
MT8HV3P1S	MT8HV4P1S

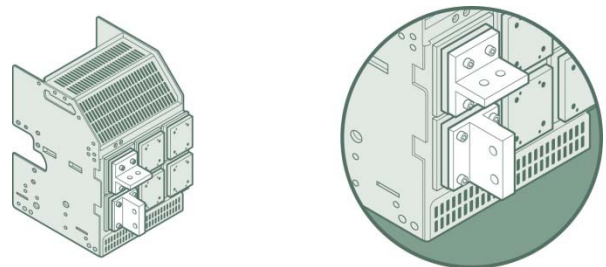


## 3.10 Rear terminals for Draw-out version – Flat/vertical connection (Megabreak L)

References	
3P	4P
MT8HV3P2	MT8HV4P2



Mounting example:

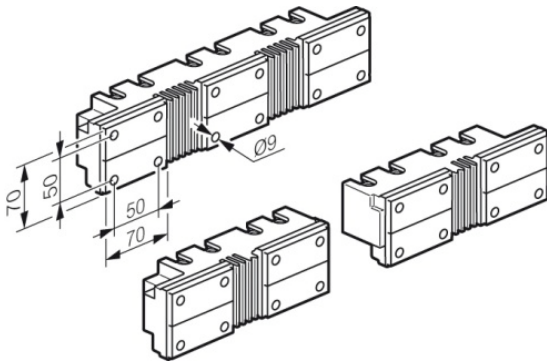


# Megabreak circuit breakers and switch disconnectors

References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

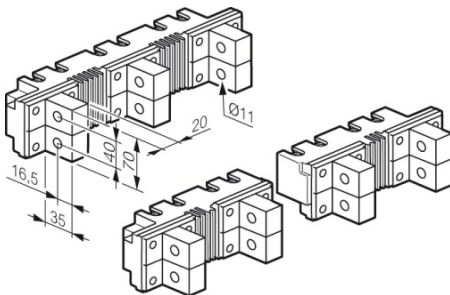
## 3.11 Spreaders for fixed version – Flat connection

References	
3P	4P
MT8P3P1S	MT8P4P1S



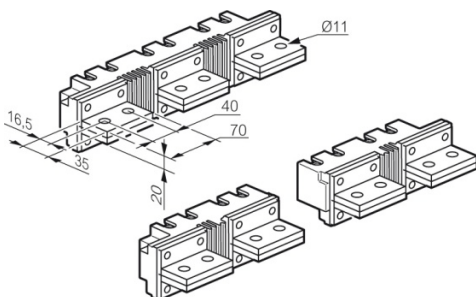
## 3.12 Spreaders for fixed version – Vertical connection

References	
3P	4P
MT8V3P1S	MT8V4P1S



## 3.13 Spreaders for fixed version – Horizontal connection

References	
3P	4P
MT8H3P1S	MT8H4P1S



## 4. OVERVIEW

### 4.1 Supplied with

ACBs are equipped with auxiliary contacts (4 NO/NC, expandable up to 10) and doorframe; besides:

- Fixed version: equipped with rear terminals for horizontal connections with bars.
- Draw-out version: equipped with flat rear terminals for connections with bars and delivered with base equipped with extraction crank and isolating components.
- Door sealing.

## 5. CONNECTIONS

Note: use only as a general guideline to select products. Due to extensive variety of switchgear constructions shapes and conditions that can affect the behaviour of the apparatus, the solution used must always be verified.

Minimum recommended dimensions of COPPER busbars per pole:

- . Fixed version (Megabreak A, H and switch disconnectors)

I <sub>n</sub> (A)	Vertical bars (mm)	Horizontal bars (mm)
630	1 bar 50x10	1 bar 60x10
800	1 bar 60x10	1 bar 60x10
1000	1 bar 80x10 / 2 bars 40 x 10	1 bar 80x10 / 2 bars 40 x 10
1250	1 bar 80x10 / 2 bars 40 x 10	2 bars 60x10
1600	2 bars 60x10	2 bars 80x10 / 3 bars 50x10
2000	3 bars 60x10	3 bars 80x10 / 4 bars 60x10
2500	3 bars 80x10	4 bars 80x10 / 5 bars 60x10

- . Draw-out version (Megabreak A, H and switch disconnectors)

I <sub>n</sub> (A)	Vertical bars (mm)	Horizontal bars (mm)
630	1 bar 50x10	1 bar 60x10
800	1 bar 60x10	1 bar 60x10
1000	1 bar 80x10	1 bar 80x10
1250	1 bar 80x10	2 bars 60x10
1600	2 bars 60x10	2 bars 80x10
2000	3 bars 60x10	3 bars 80x10
2500	3 bars 80x10	4 bars 80x10

# Megabreak circuit breakers and switch disconnectors

References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

. Fixed version (Megabreak L)

I <sub>n</sub> (A)	Vertical bars (mm)	Horizontal bars (mm)
630	1 bar 40x10 / 2 bars 40x5	2 bars 40x5
800	1 bar 50x10 / 2 bars 50x5	2 bars 50x5
1000	1 bar 50x10 / 2 bars 50x5	2 bars 60x5
1250	2 bars 60x5	2 bars 80x5
1600	2 bars 80x5	2 bars 50x10
2000	2 bars 50x10	2 bars 60x10
2500	3 bars 50x10	3 bars 60x10

. Draw-out version (Megabreak L)

I <sub>n</sub> (A)	Vertical bars (mm)	Horizontal bars (mm)
630	1 bar 40x10 / 2 bars 40x5	2 bars 40x5
800	1 bar 50x10 / 2 bars 50x5	2 bars 50x5
1000	1 bar 50x10 / 2 bars 50x5	2 bars 60x5
1250	2 bars 60x5	2 bars 80x5
1600	2 bars 80x5	2 bars 50x10
2000	2 bars 50x10	2 bars 60x10
2500	3 bars 50x10	3 bars 60x10

Minimum recommended dimensions of ALUMINIUM busbars  
per pole:

. Fixed version (Megabreak A, H and switch disconnectors)

I <sub>n</sub> (A)	Vertical bars (mm)	Horizontal bars (mm)
630	2 bars 50x8	2 bars 50x10
800	2 bars 50x10	2 bars 50x10
1000	2 bars 60x10	2 bars 60x10
1250	2 bars 60x10	4 bars 50x10
1600	4 bars 50x10	4 bars 60x10
2000	4 bars 60x10	4 bars 80x10
2500	4 bars 100x10	5 bars 100x10

. Draw-out version (Megabreak A, H and switch disconnectors)

I <sub>n</sub> (A)	Vertical bars (mm)	Horizontal bars (mm)
630	2 bars 50x8	2 bars 50x10
800	2 bars 50x10	2 bars 50x10
1000	2 bars 60x10	2 bars 60x10
1250	2 bars 60x10	4 bars 50x10
1600	4 bars 50x10	4 bars 60x10
2000	4 bars 60x10	4 bars 80x10
2500	4 bars 100x10	5 bars 100x10

. Fixed version (Megabreak L)

I <sub>n</sub> (A)	Vertical bars (mm)	Horizontal bars (mm)
630	2 bars 40x8	2 bars 40x8
800	2 bars 50x8	2 bars 50x8
1000	2 bars 50x8	2 bars 50x10
1250	2 bars 50x10	2 bars 60x10
1600	2 bars 60x10	4 bars 60x10
2000	4 bars 50x8	4 bars 50x10
2500	4 bars 60x10	4 bars 80x10

. Draw-out version (Megabreak L)

I <sub>n</sub> (A)	Vertical bars (mm)	Horizontal bars (mm)
630	2 bars 40x8	2 bars 40x8
800	2 bars 50x8	2 bars 50x8
1000	2 bars 50x8	2 bars 50x10
1250	2 bars 50x10	2 bars 60x10
1600	2 bars 60x10	4 bars 50x8
2000	4 bars 50x8	4 bars 50x10
2500	4 bars 60x10	4 bars 80x10



# Megabreak circuit breakers and switch disconnectors

References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

## 6. ELECTRICAL AND MECHANICAL CHARACTERISTICS

### Circuit breaker

	Megabreak			
	Megabreak A 50 kA	Megabreak H 65 kA	Megabreak L 100 kA	
Frame current (A)	2500			
Number of poles	3P - 4P			
Rated current I <sub>n</sub> (A)	630/800/1000/1250/1600/2000/2500			
Release type	electronic			
Rated insulation voltage U <sub>i</sub> (V)	1000			
Rated impulse withstand voltage U <sub>imp</sub> (kV)	12			
Rated operational voltage (50/60Hz) U <sub>e</sub> (V)	690			
Category of use	B			
Rated ultimate short-circuit breaking capacity I <sub>cs</sub> (kA)	220 / 240 V AC	50	65	100
	380 / 415 V AC	50	65	100
	440 / 460 V AC	50	65	100
	480 / 500 V AC	50	65	100
	480 / 550 V AC	50	60	75
	600 V AC	50	60	75
Rated service short-circuit breaking capacity I <sub>cs</sub> (% I <sub>cs</sub> )	100%			
Rated short-circuit making capacity I <sub>cm</sub> (kA)	220 / 240 V AC	105	143	220
	380 / 415 V AC	105	143	220
	440 / 460 V AC	105	143	220
	480 / 500 V AC	105	143	220
	480 / 550 V AC	105	132	165
	600 V AC	105	132	165
Rated short time withstand current I <sub>sw</sub> (kA) for t = 1s	220 / 240 V AC	50	65	85
	380 / 415 V AC	50	65	85
	440 / 460 V AC	50	65	85
	480 / 500 V AC	50	65	85
	480 / 550 V AC	50	60	75
	600 V AC	50	60	75
Rated short time withstand current I <sub>sw</sub> (kA) for t = 3s	220 / 240 V AC	45	45	65
	380 / 415 V AC	45	45	65
	440 / 460 V AC	45	45	65
	480 / 500 V AC	45	45	65
	480 / 550 V AC	45	45	65
	600 V AC	45	45	65
Suitable for isolation	Yes			
Neutral protection (% I <sub>n</sub> )	0 - 50 - 100			
Endurance (cycles)	mechanical	10000 (w/o maintenance); 20000 (with maintenance)		
	electrical	10000 (w/o maintenance)		
Weight (Kg)	3P - Fixed	41	59	
	3P - Drawout	77	108	
	4P - Fixed	48	76	
	4P - Drawout	94	137	
Height (mm)	3P - Fixed	419		
	3P - Drawout	465		
	4P - Fixed	419		
	4P - Drawout	465		
Depth (mm)	3P - Fixed	354		
	3P - Drawout	433		
	4P - Fixed	354		
	4P - Drawout	433		
Width (mm)	3P - Fixed	273	408	
	3P - Drawout	327	425	
	4P - Fixed	358	538	
	4P - Drawout	412	555	
Temperature	operation	-25°C to +70°C		
	storage	-25°C to +85°C		
Maintenance	Yes (see specific guide)			

### Switch disconnector

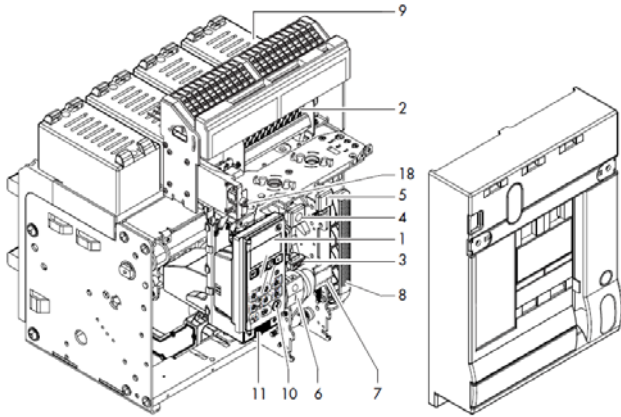
	Megabreak	
Frame current (A)	2500	
Number of poles	3P - 4P	
Rated current I <sub>n</sub> (A)	1250/1600/2000/2500	
Rated insulation voltage U <sub>i</sub> (V)	1000	
Rated impulse withstand voltage U <sub>imp</sub> (kV)	12	
Rated operational voltage (50/60Hz) U <sub>e</sub> (V)	690	
Category of use	AC23A	
Rated short circuit making capacity I <sub>cm</sub> (kA)	220 / 240 V AC	143
	380 / 415 V AC	143
	440 / 460 V AC	143
	480 / 500 V AC	143
	480 / 550 V AC	132
	600 V AC	132
Rated short time withstand current I <sub>sw</sub> (kA) for t = 1s	220 / 240 V AC	65
	380 / 415 V AC	65
	440 / 460 V AC	65
	480 / 500 V AC	65
	480 / 550 V AC	60
	600 V AC	55
Rated short time withstand current I <sub>sw</sub> (kA) for t = 3s	220 / 240 V AC	45
	380 / 415 V AC	45
	440 / 460 V AC	45
	480 / 500 V AC	45
	480 / 550 V AC	45
	600 V AC	45
Suitable for isolation	Yes	
Minimum opening time (ms)	15	
Maximum closing time (ms)	30	
Endurance (cycles)	mechanical	10000 (w/o maint.); 20000 (with maint.)
	electrical	10000 (w/o maint.)
Weight (Kg)	3P - Fixed	39
	3P - Drawout	75
	4P - Fixed	45
	4P - Drawout	91
Height (mm)	3P - Fixed	419
	3P - Drawout	465
	4P - Fixed	419
	4P - Drawout	465
Depth (mm)	3P - Fixed	354
	3P - Drawout	433
	4P - Fixed	354
	4P - Drawout	433
Width (mm)	3P - Fixed	273
	3P - Drawout	327
	4P - Fixed	358
	4P - Drawout	412
Temperature	operation	-25°C to +70°C
	storage	-25°C to +85°C
Maintenance	Yes (see specific guide)	

# Megabreak circuit breakers and switch disconnectors

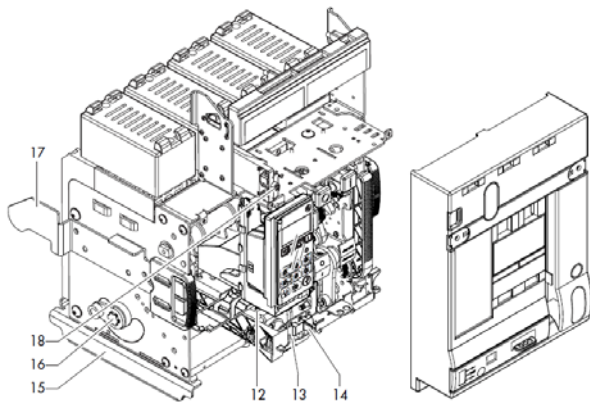
References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

## 6.1 Main parts constituting the circuit breaker

### Fixed version

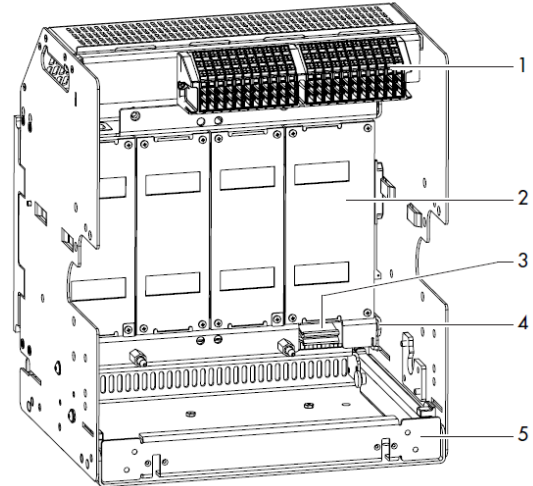


### Draw-out version



1. Protection Unit
2. Auxiliary Contacts
3. Reset button
4. OFF button
5. ON button
6. ON-OFF Indication
7. Spring Status Indication
8. Charging handle
9. Dejon cell
10. Mini USB cover
11. Battery cover
12. Draw-out mechanism
13. Draw-out bar insertion
14. Racking shutter
15. Support to place the breaker in draw-out cassette
16. Draw-out main shaft
17. Insertion guide
18. Dielectric test selector (if present)

### Draw-out base



1. Aux terminal block
2. Safety shutter
3. Earth connection
4. Earth terminal
5. Removable cassette

## 6.2 Regulated currents ( $I_n$ )

$I_n$ (A)	Phases			
	$I_r$		$I_{sd}$	
	$0.4 \times I_n$	$1 \times I_n$	$1.5 \times I_{r \min}$	$10 \times I_{r \max}$
<b>630</b>	252	630	378	6300
<b>800</b>	320	800	480	8000
<b>1000</b>	400	1000	600	10000
<b>1250</b>	500	1250	750	12500
<b>1600</b>	640	1600	960	16000
<b>2000</b>	800	2000	1200	20000
<b>2500</b>	1000	2500	1500	25000

\* For neutral adjustment, as explained in technical sheet, please consider the values  $(0 - 0.5 - 1) \times I_r$ .

## 6.3 Power losses per pole under $I_n$

### Circuit breaker

Version	Power Losses (W) Megabreak				
	Fixed		Draw-out		
Number of poles	3 - 4		3 - 4		
Rated $I_{cu}$ (kA)	up to 65kA		100kA		
Rated current $I_n$ (A)	630	5.7	11.1	3.2	6.4
	800	9.2	17.9	5.2	10.2
	1000	14.4	28.0	8.1	16.0
	1250	22.4	43.8	12.7	25.0
	1600	36.7	71.7	20.8	41.0
	2000	57.4	112.0	32.5	64.0
2500	89.7	175.0	50.8	100.0	

# Megabreak circuit breakers and switch disconnectors

References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

## Switch disconnector

Power Losses (W) Megabreak					
Version		Fixed	Draw-out	Fixed	Draw-out
Number of poles		3 - 4		3 - 4	
Rated $I_{cu}$ (kA)		up to 65kA		100kA	
Rated current $I_n$ (A)	1250	22.4	43.8	12.7	25.0
	1600	36.7	71.7	20.8	41.0
	2000	57.4	112.0	32.5	64.0
	2500	89.7	175.0	50.8	100.0

## 6.4 Deratings

### 6.4.1 Temperature

Temperature deratings for fixed versions – horizontal terminals

Temperature	Fixed version									
	up to 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)	$I_r / I_n$
Megabreak A Megabreak H	630	1	630	1	630	1	630	1	630	1
	800	1	800	1	800	1	800	1	800	1
	1000	1	1000	1	1000	1	1000	1	1000	1
	1250	1	1250	1	1250	1	1250	1	1250	1
	1600	1	1600	1	1600	1	1600	1	1600	1
	2000	1	2000	1	2000	1	2000	1	1900	0.95
Megabreak L	2500	1	2500	1	2375	0.95	2125	0.85	1875	0.75
	630	1	630	1	630	1	630	1	630	1
	800	1	800	1	800	1	800	1	800	1
	1000	1	1000	1	1000	1	1000	1	1000	1
	1250	1	1250	1	1250	1	1250	1	1250	1
	1600	1	1600	1	1600	1	1600	1	1600	1
2000	1	2000	1	2000	1	2000	1	2000	1	
2500	1	2500	1	2500	1	2500	1	2500	1	

Temperature deratings for draw-out versions – horizontal terminals

Temperature	Draw-out version									
	up to 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)	$I_r / I_n$
Megabreak A Megabreak H	630	1	630	1	630	1	630	1	630	1
	800	1	800	1	800	1	800	1	800	1
	1000	1	1000	1	1000	1	1000	1	1000	1
	1250	1	1250	1	1250	1	1250	1	1250	1
	1600	1	1600	1	1600	1	1600	1	1600	1
	2000	1	2000	1	2000	1	2000	1	1800	0.9
Megabreak L	2500	1	2125	0.85	2000	0.8	1875	0.75	1750	0.7
	630	1	630	1	630	1	630	1	630	1
	800	1	800	1	800	1	800	1	800	1
	1000	1	1000	1	1000	1	1000	1	1000	1
	1250	1	1250	1	1250	1	1250	1	1250	1
	1600	1	1600	1	1600	1	1600	1	1600	1
2000	1	2000	1	2000	1	2000	1	2000	1	
2500	1	2500	1	2500	1	2500	1	2250	0.9	

### 6.4.2 Altitude

Altitude (m)	< 2000	3000	4000	5000
Rated current (at 40°C/50°C) $I_n$ (A)	$I_n$	$0.98 \times I_n$	$0.94 \times I_n$	$0.9 \times I_n$
Rated voltage $U_e$ (V)	690	600	500	440
Rated insulation voltage $U_i$ (V)	1000	900	750	600
Dielectric withstand (V)	3500	3200	2500	2000

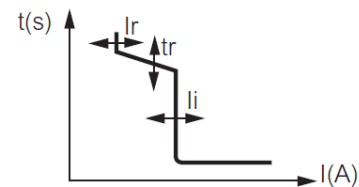
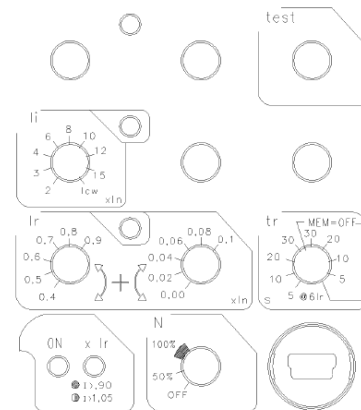
## 6.5 MP4 electronic protection unit

All MP4 protection units range has an integrated LCD screen to display electrical values, settings and logs. Adjustments are accomplished by selector switches.

All protection units have onboard a USB type "B" socket.

All protection units are equipped with batteries for powering in case of mains fault or when the breaker is open or not connected.

### 6.5.1 MP4 LI release (ref. MP4/BA) – Adjustment of $I_r$ , $t_r$ , $I_i$



Long delay protection against overloads with an adjustable threshold bases on the RMS value of the current:

- $I_r = (0.4 \div 1) \times I_n$  on two selectors (6 + 6 steps): (0.4 ÷ 0.9) by steps of 0.1 and (0.0 ÷ 0.1), by steps of 0.02
- $t_r$  at  $6 \times I_r$  (4 + 4 steps): 5-10-20-30 s (MEM ON) or 30-20-10-5 s (MEM OFF)

Short delay protection against short-circuits with fixed threshold:

- $I_{sd} = 10 \times I_r$
- $t_{sd} = 1$  s

Instantaneous protection  $I_i$  with fixed threshold:

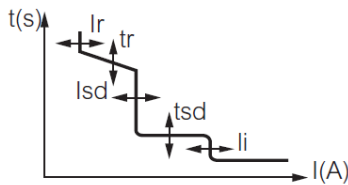
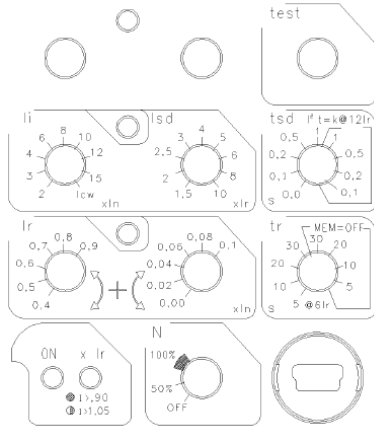
$I_i$  (2 ÷ 15)  $\times I_n$  or  $I_{cw}$  (9 steps) [ $I_i = 2-3-4-6-8-10-12-15 \times I_n$  or  $I_{cw}$ ]

Neutral adjustment = OFF – 0.5  $\times I_n$  – 1  $\times I_n$

# Megabreak circuit breakers and switch disconnectors

References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

## 6.5.2 MP4 LSI release (ref. MP4/SA) – Adjustment of $I_r$ , $t_r$ , $I_{sd}$ , $t_{sd}$ , $I_i$



Long delay protection against overloads with an adjustable threshold bases on the RMS value of the current:

- $I_r = (0.4 \div 1) \times I_n$  on two selectors (6 + 6 steps): (0.4 ÷ 0.9) by steps of 0.1 and (0.0 ÷ 0.1), by steps of 0.02
- $t_r$  at  $6 \times I_r$  (4 + 4 steps): 5-10-20-30 s (MEM ON) or 30-20-10-5 s (MEM OFF)

Short delay protection against short-circuits with an adjustable  $I_{sd}$  threshold:

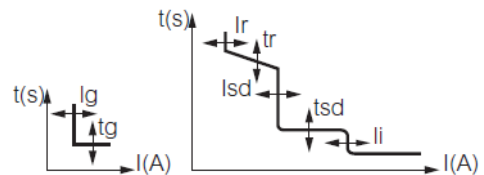
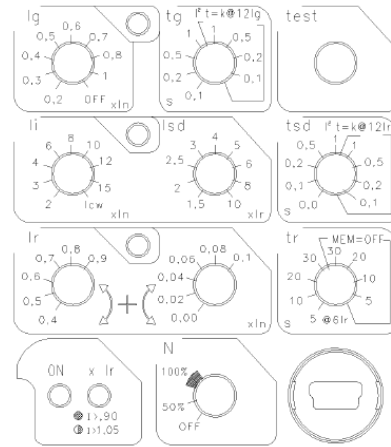
- $I_{sd} (1.5 \div 10) \times I_r$  (9 steps) [ $I_{sd} = 1.5-2-2.5-3-4-5-6-8-10 \times I_r$ ]
- $t_{sd} = 0-0.1-0.2-0.5-1$  s ( $t = k$ ) or  $1-0.5-0.2-0.1-0.01$  s ( $I^2t = k$ )

Instantaneous protection  $I_i$  with fixed threshold:

$I_i (2 \div 15) \times I_n$  or  $I_{cw}$  (9 steps) [ $I_i = 2-3-4-6-8-10-12-15 \times I_n$  or  $I_{cw}$ ]

Neutral adjustment = OFF –  $0.5 \times I_n$  –  $1 \times I_n$

## 6.5.3 MP4 LSIg release (ref. MP4/TA) – Adjustment of $I_r$ , $t_r$ , $I_{sd}$ , $t_{sd}$ , $I_i$ , $I_g$ , $t_g$



Long delay protection against overloads with an adjustable threshold bases on the RMS value of the current:

- $I_r = (0.4 \div 1) \times I_n$  on two selectors (6 + 6 steps): (0.4 ÷ 0.9) by steps of 0.1 and (0.0 ÷ 0.1), by steps of 0.02
- $t_r$  at  $6 \times I_r$  (4 + 4 steps): 5-10-20-30 s (MEM ON) or 30-20-10-5 s (MEM OFF)

Short delay protection against short-circuits with an adjustable  $I_{sd}$  threshold:

- $I_{sd} (1.5 \div 10) \times I_r$  (9 steps) [ $I_{sd} = 1.5-2-2.5-3-4-5-6-8-10 \times I_r$ ]
- $t_{sd} = 0-0.1-0.2-0.5-1$  s ( $t = k$ ) or  $1-0.5-0.2-0.1-0.01$  s ( $I^2t = k$ )

Instantaneous protection  $I_i$  with fixed threshold:

$I_i (2 \div 15) \times I_n$  or  $I_{cw}$  (9 steps) [ $I_i = 2-3-4-6-8-10-12-15 \times I_n$  or  $I_{cw}$ ]

Neutral adjustment = OFF –  $0.5 \times I_n$  –  $1 \times I_n$

Adjustment for ground fault:

- $I_g (0.2 \div 1) \times I_n$  (9 steps) and OFF [ $I_g = 0.2-0.3-0.4-0.5-0.6-0.7-0.8-1 \times I_n$ ; OFF]
- $t_g (0.1 \div 1)$  s (4 steps) (both  $t = k$  and  $I^2t = k$ ) [ $t_g = 0.1-0.2-0.5-1$  s]

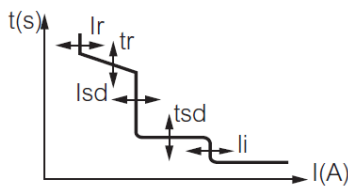
# Megabreak circuit breakers and switch disconnectors

References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

## 6.6 MP6 electronic protection unit

All MP6 protection units range has an integrated LCD colour touch screen to display electrical values, settings and logs and measurements. Adjustments are accomplished by icon menus. All protection units have onboard a USB type "B" socket. All protection units are equipped with batteries for powering in case of mains fault or when the breaker is open or not connected.

### 6.6.1 MP6 LSI release (ref. MP6SH) – Adjustment of $I_r$ , $t_r$ , $I_{sd}$ , $t_{sd}$ , $I_i$



Long delay protection against overloads with an adjustable threshold bases on the RMS value of the current:

- $I_r = (0.4 \div 1) \times I_n$  (with steps of 0.1)
- $t_r = 5-10-20-30$  s (MEM ON) or  
5-10-20-30 s (MEM OFF)

Short delay protection against short-circuits with an adjustable  $I_{sd}$  threshold:

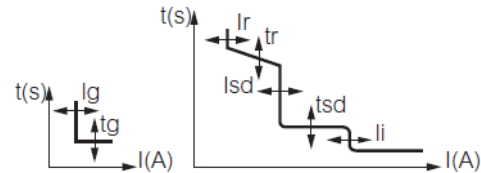
- $I_{sd} (1.5 \div 10) \times I_r$  (9 steps) [ $I_{sd} = 1.5-2-2.5-3-4-5-6-8-10 \times I_r$ ]
- $t_{sd} = (0 \div 1)$  s (both for  $t = k$  and  $I^2t = k$ , with steps of 0.1)

Instantaneous protection  $I_i$  with fixed threshold:

$I_i (2 \div 15) \times I_n$  or  $I_{cw}$  (9 steps) [ $I_i = 2-3-4-6-8-10-12-15 \times I_n$  or  $I_{cw}$ ]

Neutral adjustment = OFF –  $0.5 \times I_n - 1 \times I_n$

### 6.6.2 MP6 LSig release (ref. MP6TH) – Adjustment of $I_r$ , $t_r$ , $I_{sd}$ , $t_{sd}$ , $I_i$ , $I_g$ , $t_g$



Long delay protection against overloads with an adjustable threshold bases on the RMS value of the current:

- $I_r = (0.4 \div 1) \times I_n$  (with steps of 0.1)
- $t_r = 5-10-20-30$  s (MEM ON) or  
5-10-20-30 s (MEM OFF)

Short delay protection against short-circuits with an adjustable  $I_{sd}$  threshold:

- $I_{sd} (1.5 \div 10) \times I_r$  (9 steps) [ $I_{sd} = 1.5-2-2.5-3-4-5-6-8-10 \times I_r$ ]
- $t_{sd} = (0 \div 1)$  s (both for  $t = k$  and  $I^2t = k$ , with steps of 0.1)

Instantaneous protection  $I_i$  with fixed threshold:

$I_i (2 \div 15) \times I_n$  or  $I_{cw}$  (9 steps) [ $I_i = 2-3-4-6-8-10-12-15 \times I_n$  or  $I_{cw}$ ]

Neutral adjustment = OFF –  $0.5 \times I_n - 1 \times I_n$

Adjustment for ground fault:

- $I_g (0.2 \div 1) \times I_n$  and OFF  
[ $I_g = 0.2-0.3-0.4-0.5-0.6-0.7-0.8-1 \times I_n$ ; OFF]
- $t_g (0.1 \div 1)$  s (both  $t = k$  and  $I^2t = k$ )  
[ $t_g = 0.1-0.2-0.5-1$  s]

## 6.7 Common accessories for protection units

- External auxiliary power supply ref. M8ALIM12

Input supply	24 V DC or AC @50-60Hz
Output current	250 mA
Operating temperature (°C)	-10 ÷ +55
Input power supply (W / VA)	≥ 5
Dimension	35mm Din rail: 2 modules

- Communication option ref. M8COM
- External neutral for DMX<sup>3</sup> 2500 ref. M8TA
- Programmable output module ref. M7TICPROG

Input supply	24 V DC or AC @50-60Hz
Contact rated current (A)	AC: 250V 8A DC: 30V 8A; 110V 0.3A; 230V 0.12A
Operating temperature (°C)	-10 ÷ +55
Dimension	35mm Din rail: 6 modules

# Megabreak circuit breakers and switch disconnectors

References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

## 6.8 Batteries for protection units

All protection units are equipped with batteries for powering in case of mains fault or when the breaker is open or not connected. All settings, stored parameters and logs are kept saved on protection unit's memory also if batteries are removed to be replaced.

The protection unit has to be equipped with four CR2 Lithium batteries (voltage 3V).

## 7. CONFORMITY

Megabreak range of product concerning circuit-breakers and switch-disconnectors are in full compliance with the IEC/EN standard 60947-2 and 60947-3 respectively.

The certificate are issued by LOVAG and/or by IECEE CB-scheme certification scheme.

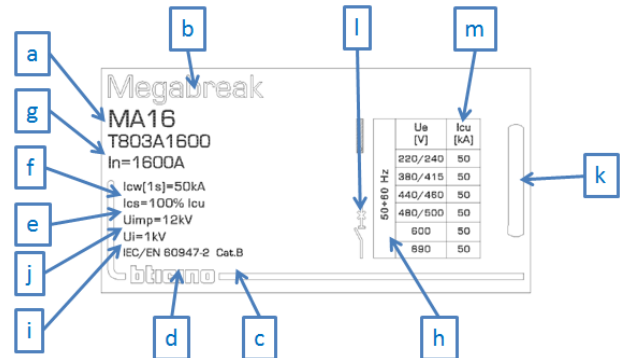
All the product range are CE, CCC, EAC marked. Other local markings are available.

DMX<sup>3</sup> are full in compliance with the Shipping Register of Lloyds, RINA, Bureau Veritas.

Particular conditions:

- execution II (all climates) according to IEC 60947-1 Annex Q, Cat. F.

## 7.1 MARKING



Reference	Meaning
a	Product reference
b	Product type
c	Utilization Category
d	Standards compliance
e	Rated service short-circuit breaking capacity
f	Rated short-time withstand current
g	Rated current
h	Rated frequencies
i	Rated insulation voltage
j	Rated impulse withstand voltage
k	Coloured label for breaking capacity
l	Identification symbol of the device
m	Rated ultimate short-circuit breaking capacity, according to the operational voltage U <sub>e</sub>

# Megabreak circuit breakers and switch disconnectors

References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

## 8. EQUIPMENTS AND ACCESSORIES

Note: where not specified, accessories are common for every Megabreak (A, H, L and switch disconnector)

### 8.1 Control and signalling auxiliaries

- shunt trip: when energised the circuit breaker will be tripped

24 V AC and DC ref. M8T024C  
48 V AC and DC ref. M8T048C  
110 ÷ 130 V AC and DC ref. M8T110C  
220 ÷ 250 V AC and DC ref. M8T230C  
415 ÷ 480 V AC ref. M8T415

Rated operating voltage (U <sub>c</sub> )	AC: 24V;48V;110V ÷ 130V;220V ÷ 250V;415V/440V/480V DC: 24V; 48V; 110V ÷ 130V; 220V ÷ 250V
Voltage range (%U <sub>c</sub> )	70 ÷ 110
Pick-up consumption (W / VA)	500 / 500
Pick-up time (ms)	180
Hold consumption (W / VA)	5 / 5
Minimum opening time (ms)	30
Insulation voltage (kV)	2.5

- undervoltage releases: when the coil is de-energised, the circuit breaker will be tripped

24 V AC and DC ref. M8M024C  
48 V AC and DC ref. M8M048C  
110 ÷ 130 V AC and DC ref. M8M110C  
220 ÷ 250 V AC and DC ref. M8M230C  
415 ÷ 480 V AC ref. M8M415

Rated operating voltage (U <sub>c</sub> )	AC: 24V;48V;110V ÷ 130V;220V ÷ 250V;415V/440V/480V DC: 24V; 48V; 110V ÷ 130V; 220V ÷ 250V
Voltage range (%U <sub>c</sub> )	85 ÷ 110
Pick-up consumption (W / VA)	500 / 500
Pick-up time (ms)	180
Hold consumption (W / VA)	5 / 5
Minimum opening time (ms)	60
Insulation voltage (kV)	2.5

- Modules for delayed tripping, to be used with undervoltage releases

110 V AC and DC ref. M8MR110C  
230 V AC and DC ref. M8MR230C

Rated operating voltage (U <sub>c</sub> )	AC: 110V / 230V DC: 110V / 230V
Voltage range (%U <sub>c</sub> )	85 ÷ 110
Pick-up consumption (W / VA)	16.5 (@110V) / 34.5 (@230V)
Time delay (s)	1 <sup>(1)</sup>
Hold consumption (W / VA)	5 (@110V) / 10 (@230V)
Opening threshold	0.35 ÷ 0.7 U <sub>n</sub>
Closing threshold	0.85 U <sub>n</sub>
Operating temperature (°C)	-10 ÷ +55

<sup>(1)</sup> It is possible to connect up to 3 modules - 1s of delay for each module installed

- Motor operators

To motorize a Megabreak, it is possible to attach, to the motor operators, a release coil (undervoltage or trip on energising) and a closing coil

24 V AC and DC ref. M8MT024C  
48 V AC and DC ref. M8MT048C  
110 ÷ 130 V AC and DC ref. M8MT110C  
220 ÷ 250 V AC and DC ref. M8MT230C  
415 ÷ 440 V AC ref. M8MT415  
480 V AC and DC ref. M8MT480

Rated operating voltage (U <sub>c</sub> )	AC: 24V;48V;110V ÷ 130V;220V ÷ 250V;415V ÷ 440V;480V DC: 24V; 48V; 110V ÷ 130V; 220V ÷ 250V
Voltage range (%U <sub>c</sub> )	85 ÷ 110
Maximum Power consumption (W / VA)	180 / 180 (Megabreak A, H and switch disconn.); 240/240 (Megabreak L)
Maximum peak current for 80ms	(2 ÷ 3) × I <sub>n</sub>
Charging time (s)	5 (Megabreak A, H and switch disconn.); 7 (Megabreak L)
Operating frequency (n° / min)	2 (Megabreak A, H and switch disconn.); 1 (Megabreak L)

- Closing coils

To enable remote closing of the circuit breaker if the closing spring is charged

24 V AC and DC ref. M8C024C  
48 V AC and DC ref. M8C048C  
110 ÷ 130 V AC and DC ref. M8C110C  
220 ÷ 250 V AC and DC ref. M8C230C  
415 ÷ 480 V AC ref. M8C415

Rated operating voltage (U <sub>c</sub> )	AC: 24V;48V;110V ÷ 130V;220V ÷ 250V;415V/440V/480V DC: 24V; 48V; 110V ÷ 130V; 220V ÷ 250V
Voltage range (%V <sub>n</sub> )	85 ÷ 110
Pick-up consumption (W / VA)	500 / 500
Pick-up time (ms)	180
Hold consumption (W / VA)	5 / 5
Maximum closing time (ms)	50
Insulation voltage (kV)	2.5

- Signalling contact for draw-out version

Inserted / test / draw-out signalling contact

3 changeover contacts per position ref. M8POS

Rated operating voltage (U <sub>c</sub> )	DC	250V 0.3A 125V 0.6A
	AC	250V 16A 125V 16A

- Contact "ready to close" with charged springs ref. M8PC

Rated operating voltage (U <sub>c</sub> )	AC	250V 16A 125V 16A
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- Additional signalling contact

ref. M8AGG

Rated operating voltage (U <sub>c</sub> )	DC	250V 0.3A 125V 0.6A
	AC	250V 16A 125V 16A

- Signalling contact for auxiliaries (ST, CC and UVR)

ref. M8AUX

Rated operating voltage (U <sub>c</sub> )	DC	250V 0.3A 125V 0.6A
	AC	250V 16A 125V 16A

# Megabreak circuit breakers and switch disconnectors

References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

## 8.2 Locking

- Key locking in "open" position
  - 1 lock + 1 Profalux star type flat key ref. MT805AP
  - 1 lock + 1 Ronis type flat key ref. MT805AR
  - 2 holes support frame for locks ref. MT805A

- Key locking in "draw-out" position
  - Mounting of the lock on the base
  - Lock and key Profalux type star key ref. MT805EP
  - Lock and key Ronis type flat key ref. MT805ER

- Door locking
  - Prevents opening of the door with the circuit breaker closed
  - Left-hand and right-hand side mounting ref. MT807SD

- Padlocks in "open" position
  - Padlocking system for ACB (padlock not supplied) ref. MT807OP
  - Padlock for buttons ref. MT807LT
  - Padlocking for shutters (padlock not supplied) ref. MT805SS

## 8.3 Accessories

- Mechanical operations counter: to count total number of operation cycles of device ref. MT807CM
- Rating mis-insertion device: to prevent the insertion of a draw-out circuit breaker into an incompatible base ref. MT806AT
- Lifting plate ref. MT809PS

## 8.4 Fixing devices for Megabreak

To integrate Megabreak into MAS enclosures ranges (fixing plates, metal faceplates for circuit breakers and cable sleeves, etc...) see specific instruction sheets.

## 8.5 Equipment for conversion of a fixed device into draw-out device

- Bases for draw-out device
  - For Megabreak A, H and switch disconnectors
    - 3P ref. M803B1
    - 4P ref. M804B1
  - For Megabreak L
    - 3P ref. M803B2
    - 4P ref. M804B2
- Transformation kit for draw-out version
  - For Megabreak A, H and switch disconnectors
    - 3P ref. M803P1
    - 4P ref. M804P1
  - For Megabreak L
    - 3P ref. M803P2
    - 4P ref. M804P2

## 8.6 Equipment for interlocking

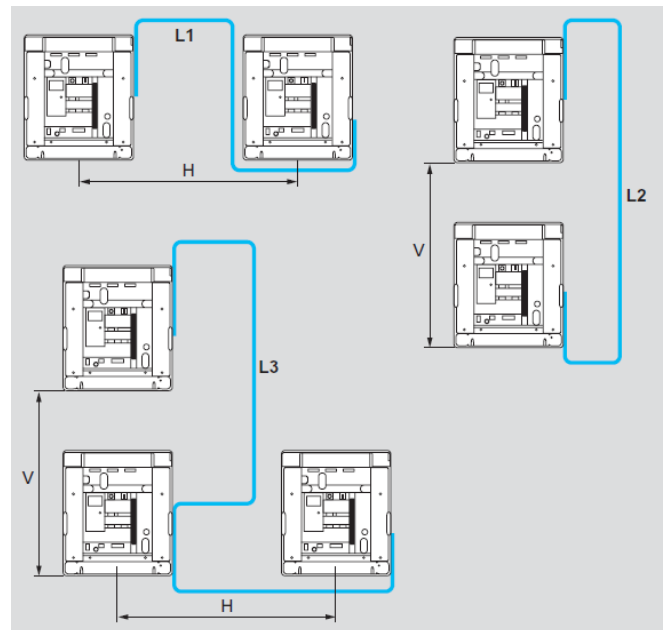
The mechanical interlock is set up using cables and can interlock 2 or 3 devices, which may be different type in a vertical or horizontal configuration. The interlock unit is mounted on the right-hand side of the device. Interlock cables to be ordered separately.

- Interlock for Megabreak A, H and switch disconnectors ref. MT817F1
- Interlock for Megabreak L ref. MT817F2

## 8.7 Interlock cables

- 1000 mm ref. MT807M7
- 1500 mm ref. MT807M8
- 2600 mm ref. MT807M1
- 3000 mm ref. MT807M2
- 3600 mm ref. MT807M3
- 4000 mm ref. MT807M4
- 4600 mm ref. MT807M5
- 5600 mm ref. MT807M6

### Choice of interlock cable



Calculation of cable length:

$$L1 = 1430 + H$$

$$L2 = 1570 + V$$

$$L3 = 1430 + V + H$$



# Megabreak circuit breakers and switch disconnectors

References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

## 8.8 Spreaders for Megabreak fixed version

To be fixed onto horizontal rear terminals of the circuit breaker

- For flat connections with bars, 3P ref. MT8P3P1S
- For flat connections with bars, 4P ref. MT8P4P1S
- For vertical connections with bars, 3P ref. MT8V3P1S
- For vertical connections with bars, 4P ref. MT8V4P1S
- For horizontal connections with bars, 3P ref. MT8H3P1S
- For horizontal connections with bars, 4P ref. MT8H4P1S

## 8.9 Rear terminals

- For fixed version (Megabreak A, H and switch disconnectors)

For flat connections with bars, 3P ref. MT8P3P1

For flat connections with bars, 4P ref. MT8P4P1

For vertical connections with bars, 3P ref. MT8HV3P1

For vertical connections with bars, 4P ref. MT8HV4P1

*Note 1: refs. MT8P3P1 / MT8P4P1 to be fixed onto horizontal rear terminals of the circuit breaker*

*Note 2: refs. MT8HV3P1 / MT8HV4P1 to be used to transform a flat connection into a vertical one. To be fixed onto Cat.Nos MT8P3P1 / MT8P4P1 according to the number of poles.*

- For draw-out version (Megabreak A, H and switch disconnectors)

For vertical or horizontal connections with bars, 3P

ref. MT8HV3P1S

For vertical or horizontal connections with bars, 4P

ref. MT8HV4P1S

- For fixed version (Megabreak L)

For flat connections with bars, 3P ref. MT8P3P2

For flat connections with bars, 4P ref. MT8P4P2

For vertical connections with bars, 3P ref. MT8HV3P2

For vertical connections with bars, 4P ref. MT8HV4P2

*Note 1: refs. MT8P3P2 / MT8P4P2 to be fixed onto horizontal rear terminals of the circuit breaker*

*Note 2: refs. MT8HV3P2 / MT8HV4P2 to be used to transform a flat connection into a vertical one. To be fixed onto Cat.Nos MT8P3P2 / MT8P4P2 according to the number of poles.*

- For draw-out version (Megabreak L)

For vertical or horizontal connections with bars, 3P ref. MT8HV3P2

For vertical or horizontal connections with bars, 4P ref. MT8HV4P2

*Note: to be fixed directly onto plate rear terminals of the circuit breaker*

## 8.10 Insulating shields

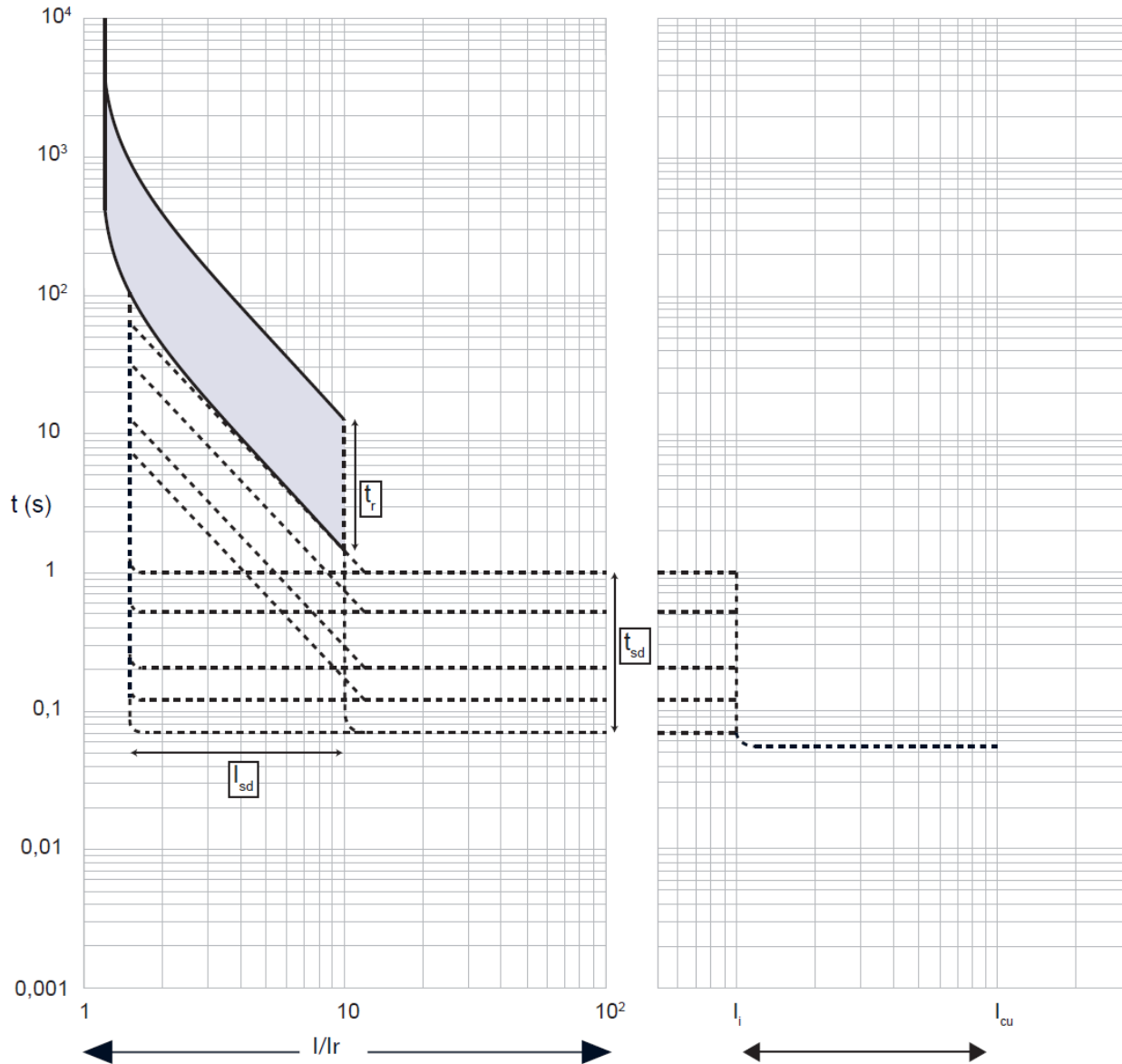
- Fixed version 3P ref. MT8SF3P
- Fixed version 4P ref. MT8SF4P
- Draw-out version 3P ref. MT8SE3P
- Draw-out version 4P ref. MT8SE4P

# Megabreak circuit breakers and switch disconnectors

References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

## 9. CURVES

### 9.1 TRIPPING CURVE FOR MP4 protection units

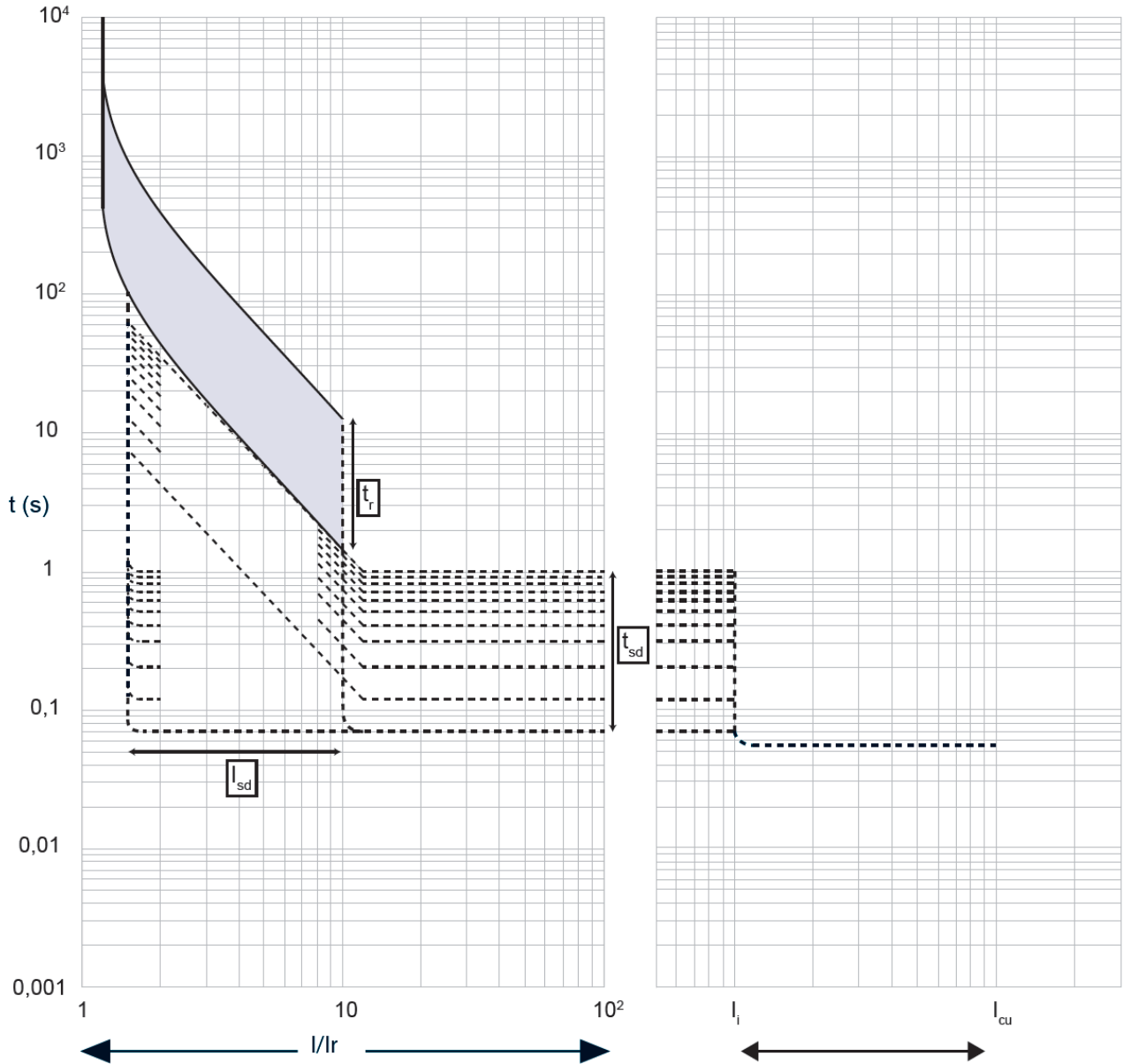


Value	Description
$t$	time
$I$	current
$I_r$	long time setting current
$t_r$	long time delay
$I_{sd}$	short time setting current
$t_{sd}$	short time delay
$I_i$	Instantaneous release
$I_{cu}$	Rated ultimate short-circuit breaking capacity

# Megabreak circuit breakers and switch disconnectors

References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

## 9.2 TRIPPING CURVE FOR MP6 protection units



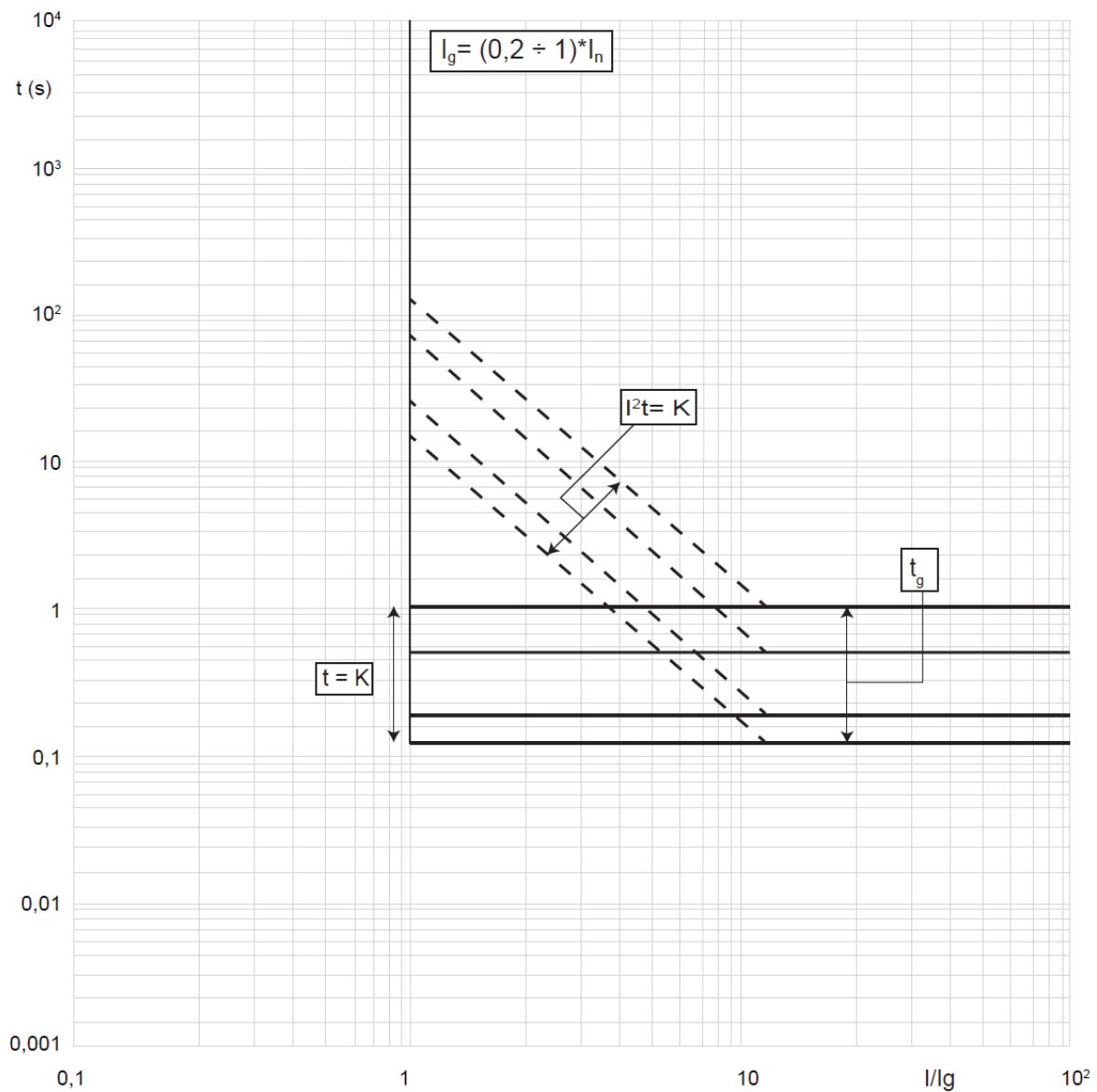
Value	Description
t	time
I	current
$I_r$	long time setting current
$t_r$	long time delay
$I_{sd}$	short time setting current
$t_{sd}$	short time delay
$I_i$	Instantaneous release
$I_{cu}$	Rated ultimate short-circuit breaking capacity

# Megabreak circuit breakers and switch disconnectors

References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

## 9.3 GROUND FAULT TRIPPING CURVE

Only LSIg releases (MP4 and MP6)

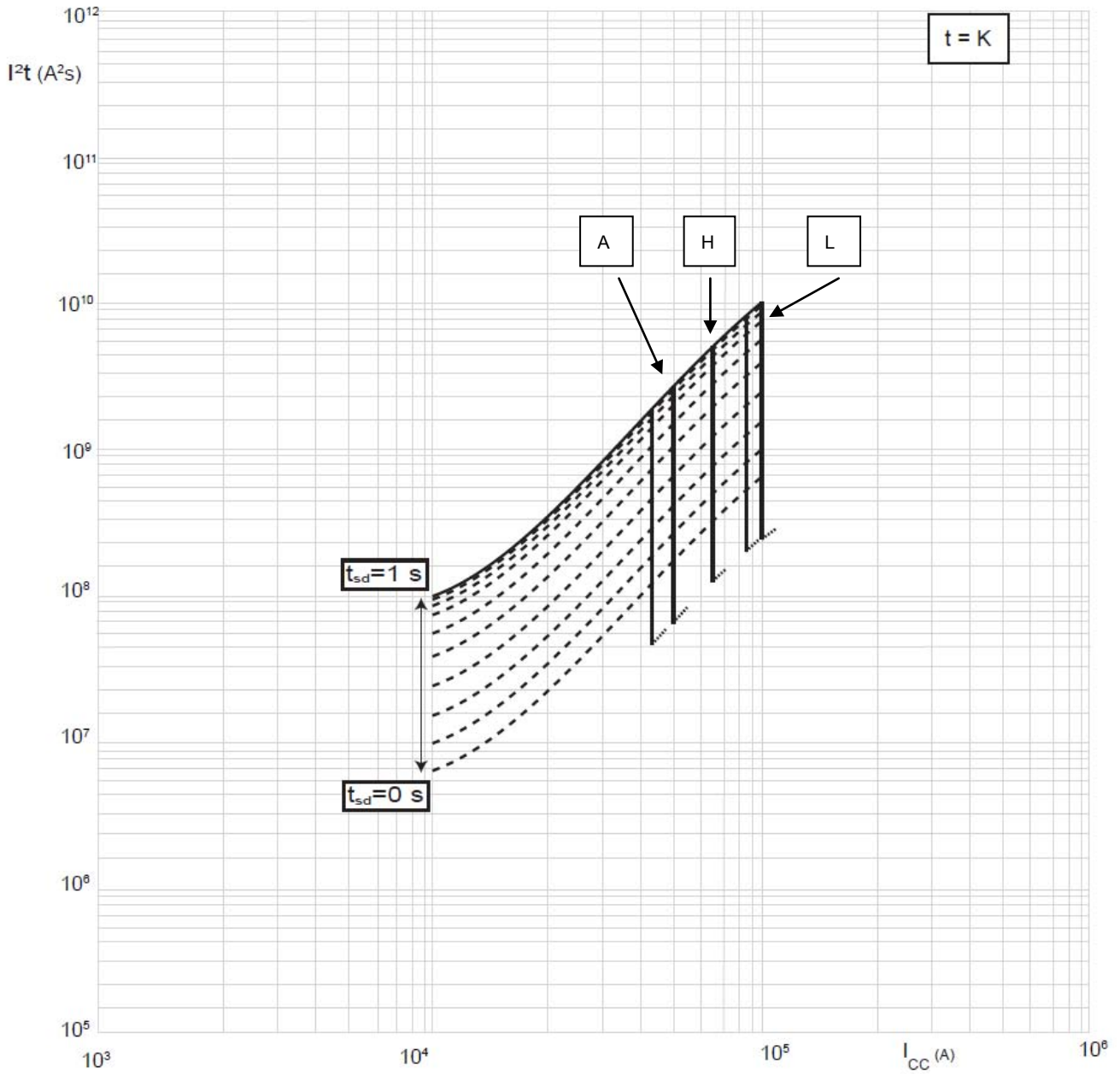


Value	Description
$t$	time
$I$	current
$I_n$	rated current
$I_g$	Ground fault current
$t = k$	Constant tripping time setting
$I^2t = k$	Constant pass-through energy setting

# Megabreak circuit breakers and switch disconnectors

References: T803A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804A630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804H630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804L630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804AE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804HE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T804LE630 / 800 / 1000 / 1250 / 1600 / 2000 / 2500 / T803M1250 / 1600 / 2000 / 2500 / T804ME1250 / 1600 / 2000 / 2500

## 9.4 PASS-THROUGH SPECIFIC ENERGY CURVE ( $U_b = 415V$ )



Value	Description
$I_{cc}$	short circuit current
$I^2t$	pass-through specific energy