

# 30AF MCCB

## ABS30c



ABS52c



ABS53c



ABS54c

### Ratings

Frame size		<b>30AF</b>			
<b>Type and Pole</b>		<b>S-Type</b>			
2-pole		<b>ABS32c</b>			
3-pole		<b>ABS33c</b>			
4-pole		<b>ABS34c</b>			
Rated current, I <sub>n</sub>		(3-5-10)-15-20-30A			
Rated operational voltage, U <sub>e</sub>		AC: 690V			
		DC: 500V			
Rated insulation voltage, U <sub>i</sub>		AC: 750V			
Rated impulse withstand voltage, U <sub>imp</sub>		8kV			
<b>Rated short-circuit breaking capacity, I<sub>cu</sub></b>		<b>S-Type</b>			
AC 690V				2.5 kA	
480/500V				7.5 kA	
IEC 60947-2 (I <sub>cu</sub> )		<b>460V</b>		<b>14 (10)kA</b>	
415V				14 (10)kA	
380V				18 (14)kA	
<b>220/250V</b>				<b>30 (25)kA</b>	
DC 500V(3P)				5 kA	
250V(2P)				5 kA	
<b>Protective function</b>		Overload, Short-circuit			
Type of trip unit		Thermal-Magnetic			
Magnetic trip range		400A			
Endurance		Mechanical		25000 operations	
		Electrical		10000 operations	
Connection		Standard		Front connection	
		Optional		Rear connection	
				Plug-in	
Mounting		Standard		Screw fixing	
<b>Dimensions (mm)</b>		Pole	2p	3p	4p
		a	50	75	100
		b	130	130	130
		c1 <i>Note)</i>	60	60	60
		c2 <i>Note)</i>	64	64	64
		d	82	82	82
		Weight, kg	Standard	0.5	0.7
<b>Certification</b>		Pole	2p	3p	4p
CE marking			○	○	○

*Note)* Depth by door cut size : c1 for large cut, c2 for small cut

#### For more information

- Drawings ▶ 106 page
- Trip curves ▶ 98 page
- Accessories ▶ 74 page
- Connection and mounting ▶ 123 page

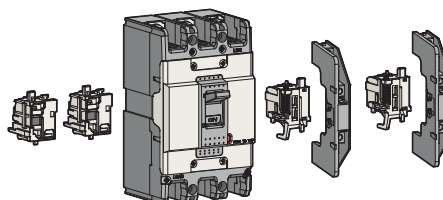
## Ordering types

### Breaker types

ABS type (10kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
3 A	ABS32c/3	ABS33c/3	ABS34c/3
5 A	ABS32c/5	ABS33c/5	ABS34c/5
10 A	ABS32c/10	ABS33c/10	ABS34c/10

ABS type (14kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
15 A	ABS32c/15	ABS33c/15	ABS34c/15
20 A	ABS32c/20	ABS33c/20	ABS34c/20
30 A	ABS32c/30	ABS33c/30	ABS34c/30

### Accessories



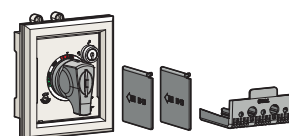
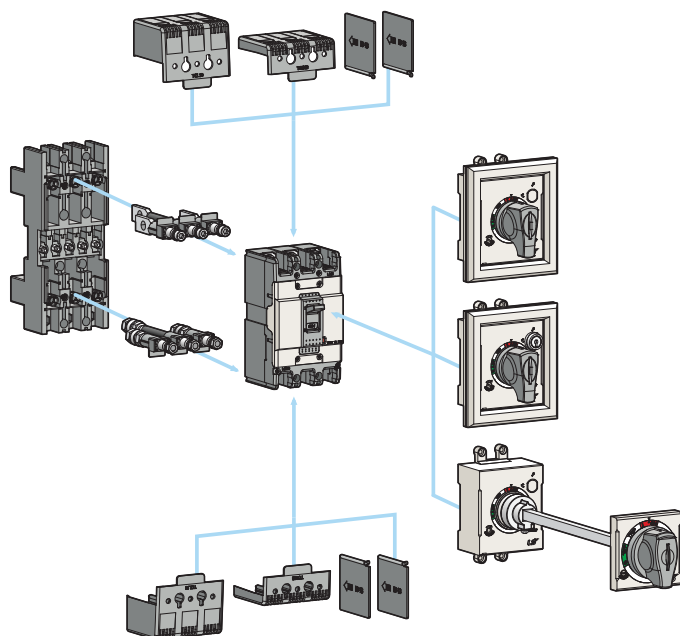
### Electrical auxiliaries

AX	Auxiliary Switch	
AL	Alarm Switch	
AX+AL	Combination switch	
SHT	Shunt Trip	
UVT	Undervoltage trip	

### Maximum possibilities

T-position	One of above auxiliaries
R-position	Option of AX or AL or AX+AL

Note) For more detail see 74 page



### External accessories

ABS30c	Name
IB13	Insulation barrier
TCL13	Terminal cover (Long) - Inde type, D-Handle type, N-Handle type
TCS13	Terminal cover (Short) - Inde type, D-Handle type, N-Handle type
DH100	Rotary handle (Direct)
DHK100	Rotary handle (Direct, Key lock)
EH100	Rotary handle (Extended)
RTR1	Rear terminal (Round)
PB-A3	Plug-in kit
PHL100C	Pad handle lock

Note) For more detail see 82 page

- Inde type: This cover is used without auxiliary Handle.
- D-Handle type: This cover is used with D-Handle.
- N-Handle type: This cover is used with N-Handle.

# 50AF MCCB

## ABN50c, ABS50c, ABH50c



ABS52c



ABS53c



### Ratings

Frame size		50AF										
<b>Type and Pole</b>		<b>N-Type</b>			<b>S-Type</b>			<b>H-Type</b>				
2-pole		ABN52c			ABS52c			ABH52c				
3-pole		ABN53c			ABS53c			ABH53c				
4-pole		ABN54c			ABS54c			ABH54c				
Rated current, I <sub>n</sub>		15-20-30-40-50A										
Rated operational voltage, U <sub>e</sub>		AC: 690V										
		DC: 500V										
Rated insulation voltage, U <sub>i</sub>		AC: 750V										
Rated impulse withstand voltage, U <sub>imp</sub>		8kV										
<b>Rated short-circuit breaking capacity, I<sub>cu</sub></b>		<b>N-Type</b>			<b>S-Type</b>			<b>H-Type</b>				
AC 690V		2.5kA			5kA			10kA				
480/500V		7.5kA			10kA			35kA				
IEC 60947-2 (I <sub>cu</sub> )		460V			14kA			18kA				
IEC 60947-2 (I <sub>cu</sub> )		460V			14kA			18kA				
I <sub>cs</sub> =100%I <sub>cu</sub>		415V			14kA			18kA				
		380V			18kA			22kA				
		220/250V			30kA			35kA				
DC 500V(3P)		5kA			10kA			30kA				
DC 250V(2P)		5kA			10kA			30kA				
<b>Protective function</b>		Overload, Short-circuit										
Type of trip unit		Thermal-Magnetic										
Magnetic trip range		12 × I <sub>n</sub> (30A and under: 400A)										
Endurance		Mechanical			25000 operations							
		Electrical			10000 operations							
Connection		Standard			Front connection							
		Optional			Rear connection							
					Plug-in							
Mounting		Standard			Screw fixing							
<b>Dimensions (mm)</b>		Pole		2p	3p	4p	2p	3p	4p	2p	3p	4p
		a		50	75	100	50	75	100	60	90	120
		b		130			130			155		
		c1 <small>Note)</small>		60			60			60		
		c2 <small>Note)</small>		64			64			64		
		d		82			82			82		
Weight, kg		Standard		0.5	0.7	0.9	0.5	0.7	0.9	0.7	1	1.2
<b>Certification</b>		Pole		2p	3p	4p	2p	3p	4p	2p	3p	4p
CE marking		CE		○			○			○		

Note) Depth by door cut size : c1 for large cut, c2 for small cut

#### For more information

- Drawings ▶ 106, 107 page
- Trip curves ▶ 98, 99 page
- Accessories ▶ 74 page
- Connection and mounting ▶ 123 page

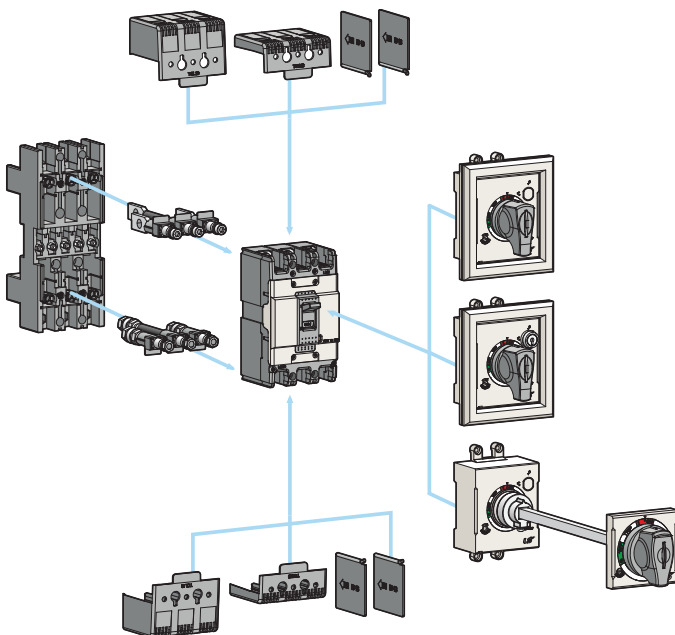
## Ordering types

### Breaker types

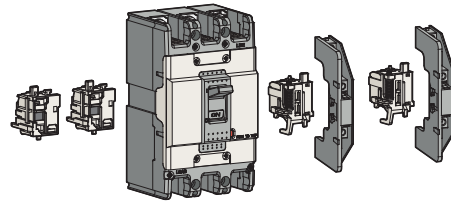
ABN type (14kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
15 A	ABN52c/15	ABN53c/15	ABN54c/15
20 A	ABN52c/20	ABN53c/20	ABN54c/20
30 A	ABN52c/30	ABN53c/30	ABN54c/30
40 A	ABN52c/40	ABN53c/40	ABN54c/40
50 A	ABN52c/50	ABN53c/50	ABN54c/50

ABS type (18kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
15 A	ABS52c/15	ABS53c/15	ABS54c/15
20 A	ABS52c/20	ABS53c/20	ABS54c/20
30 A	ABS52c/30	ABS53c/30	ABS54c/30
40 A	ABS52c/40	ABS53c/40	ABS54c/40
50 A	ABS52c/50	ABS53c/50	ABS54c/50

ABH type (50kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
15 A	ABH52c/15	ABH53c/15	ABH54c/15
20 A	ABH52c/20	ABH53c/20	ABH54c/20
30 A	ABH52c/30	ABH53c/30	ABH54c/30
40 A	ABH52c/40	ABH53c/40	ABH54c/40
50 A	ABH52c/50	ABH53c/50	ABH54c/50

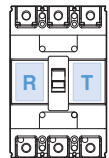


### Accessories



#### Electrical auxiliaries

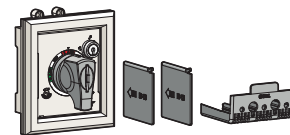
<b>AX</b>	Auxiliary Switch
<b>AL</b>	Alarm Switch
<b>AX+AL</b>	Combination switch
<b>SHT</b>	Shunt Trip
<b>UVT</b>	Undervoltage trip



#### Maximum possibilities

<b>T-position</b>	One of above auxiliaries
<b>R-position</b>	Option of AX or AL or AX+AL

Note) For more detail see 74 page



#### External accessories

ABN50c ABS50c	ABH50c	Name
IB13	IB23	Insulation barrier
TCL13	TCL23	Terminal cover (Long) - Inde type, D-Handle type, N-Handle type
TCS13	TCS23	Terminal cover (Short) - Inde type, D-Handle type, N-Handle type
DH100	DH125	Rotary handle (Direct)
DHK100	DHK125	Rotary handle (Direct, Key lock)
EH100	EH125	Rotary handle (Extended)
-	RTB2	Rear terminal (Bar)
RTR1	RTR2	Rear terminal (Round)
PB-A3	PB-C3	Plug-in kit
PHL100	PHL125	Pad handle lock

Note) For more detail see 82 page

- Inde type: This cover is used without auxiliary Handle.
- D-Handle type: This cover is used with D-Handle.
- N-Handle type: This cover is used with N-Handle.

# 60AF MCCB

## ABN60c, ABS60c



ABS62c



ABS63c



ABS64c

### Ratings

Frame size		60AF						
<b>Type and Pole</b>		<b>N-Type</b>			<b>S-Type</b>			
	2-pole	<b>ABN62c</b>			<b>ABS62c</b>			
	3-pole	<b>ABN63c</b>			<b>ABS63c</b>			
	4-pole	<b>ABN64c</b>			<b>ABS64c</b>			
Rated current, I <sub>n</sub>		15-20-30-40-50-60A						
Rated operational voltage, U <sub>e</sub>		AC: 690V						
		DC: 500V						
Rated insulation voltage, U <sub>i</sub>		AC: 750V						
Rated impulse withstand voltage, U <sub>imp</sub>		8kV						
<b>Rated short-circuit breaking capacity, I<sub>cu</sub></b>		<b>N-Type</b>			<b>S-Type</b>			
AC	690V	2.5kA			5kA			
	480/500V	7.5kA			10kA			
IEC 60947-2 (I <sub>cu</sub> )		<b>460V</b>			<b>18kA</b>			
I <sub>cs</sub> =100%I <sub>cu</sub>	415V	14kA			18kA			
	380V	18kA			22kA			
	<b>220/250V</b>	<b>30kA</b>			<b>35kA</b>			
DC	500V(3P)	5kA			10kA			
	250V(2P)	5kA			10kA			
<b>Protective function</b>		Overload, Short-circuit						
Type of trip unit		Thermal-Magnetic						
Magnetic trip range		12 × I <sub>n</sub> (30A and under: 400A)						
Endurance	Mechanical	25000 operations						
	Electrical	10000 operations						
Connection	Standard	Front connection						
	Optional	Rear connection						
Mounting		Screw fixing						
<b>Dimensions (mm)</b>		Pole	2p	3p	4p	2p	3p	4p
	a		50	75	100	50	75	100
	b			130			130	
	c1 <small>Note)</small>			60			60	
	c2 <small>Note)</small>			64			64	
	d			82			82	
	Weight, kg	Standard	0.5	0.7	0.9	0.5	0.7	0.9
<b>Certification</b>		Pole	2p	3p	4p	2p	3p	4p
CE marking			☐	○		○		

Note) Depth by door cut size : c1 for large cut, c2 for small cut

#### For more information

- Drawings ▶ 106 page
- Trip curves ▶ 98 page
- Accessories ▶ 74 page
- Connection and mounting ▶ 123 page

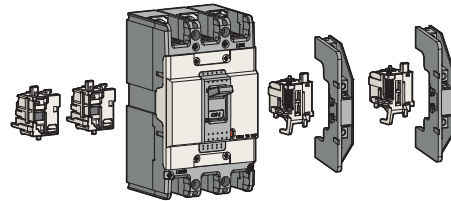
## Ordering types

### Breaker types

ABN type (14kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
15 A	ABN62c/15	ABN63c/15	ABN64c/15
20 A	ABN62c/20	ABN63c/20	ABN64c/20
30 A	ABN62c/30	ABN63c/30	ABN64c/30
40 A	ABN62c/40	ABN63c/40	ABN64c/40
50 A	ABN62c/50	ABN63c/50	ABN64c/50
60 A	ABN62c/60	ABN63c/60	ABN64c/60

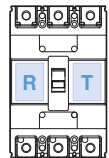
ABS type (18kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
15 A	ABS62c/15	ABS63c/15	ABS64c/15
20 A	ABS62c/20	ABS63c/20	ABS64c/20
30 A	ABS62c/30	ABS63c/30	ABS64c/30
40 A	ABS62c/40	ABS63c/40	ABS64c/40
50 A	ABS62c/50	ABS63c/50	ABS64c/50
60 A	ABS62c/60	ABS63c/60	ABS64c/60

### Accessories



#### Electrical auxiliaries

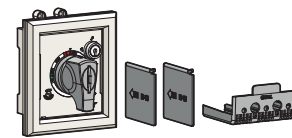
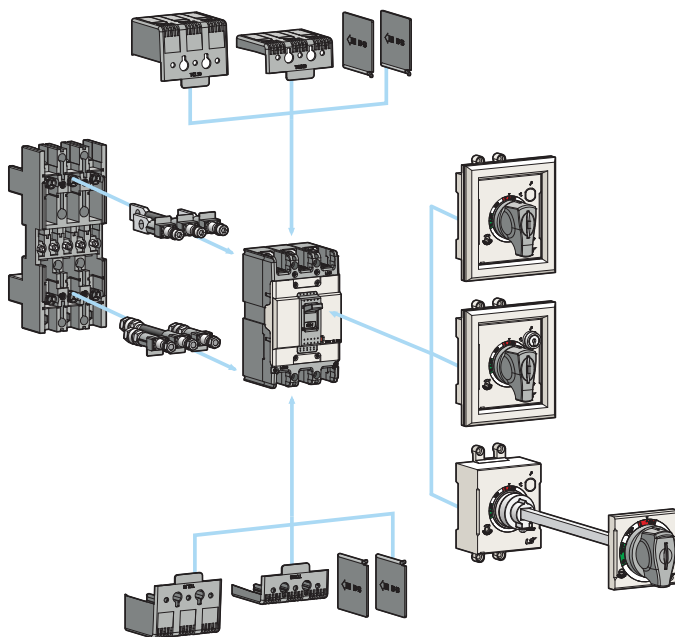
<b>AX</b>	Auxiliary Switch
<b>AL</b>	Alarm Switch
<b>AX+AL</b>	Combination switch
<b>SHT</b>	Shunt Trip
<b>UVT</b>	Undervoltage trip



#### Maximum possibilities

<b>T-position</b>	One of above auxiliaries
<b>R-position</b>	Option of AX or AL or AX+AL

Note) For more detail see 74 page



#### External accessories

ABS60c ABN60c	Name
<b>IB13</b>	Insulation barrier
<b>TCL13</b>	Terminal cover (Long) - Inde type, D-Handle type, N-Handle type
<b>TCS13</b>	Terminal cover (Short) - Inde type, D-Handle type, N-Handle type
<b>DH100</b>	Rotary handle (Direct)
<b>DHK100</b>	Rotary handle (Direct, Key lock)
<b>EH100</b>	Rotary handle (Extended)
<b>RTB1</b>	Rear terminal (Bar)
<b>RTR1</b>	Rear terminal (Round)
<b>PB-A3</b>	Plug-in kit
<b>PHL100</b>	Pad handle lock

Note) For more detail see 82 page

- Inde type: This cover is used without auxiliary Handle.
- D-Handle type: This cover is used with D-Handle.
- N-Handle type: This cover is used with N-Handle.

# 125AF MCCB

## ABS125c, ABH125c



ABS102c



ABS103c



ABS104c

### For more information

- Drawings ▶ 107 page
- Trip curves ▶ 99 page
- Accessories ▶ 74 page
- Connection and mounting ▶ 123 page

## Ratings

Frame size		125AF						
<b>Type and Pole</b>		<b>S-Type</b>			<b>H-Type</b>			
	2-pole	<b>ABS102c</b>			<b>ABH102c</b>			
	3-pole	<b>ABS103c</b>			<b>ABH103c</b>			
	4-pole	<b>ABS104c</b>			<b>ABH104c</b>			
Rated current, I <sub>n</sub>		15-20-30-40-50-60-75-100-125A						
Rated operational voltage, U <sub>e</sub>		AC: 690V						
		DC: 500V						
Rated insulation voltage, U <sub>i</sub>		AC: 750V						
Rated impulse withstand voltage, U <sub>imp</sub>		8kV						
<b>Rated short-circuit breaking capacity, I<sub>cu</sub></b>		<b>S-Type</b>			<b>H-Type</b>			
AC	690V	8kA			10kA			
	480/500V	26kA			35kA			
IEC 60947-2 (I <sub>cu</sub> )		<b>460V</b>			<b>37kA</b>			
I <sub>cs</sub> =100%I <sub>cu</sub>	415V	37kA			50kA			
	380V	42kA			50kA			
	<b>220/250V</b>	<b>85kA</b>			<b>100kA</b>			
	DC 500V(3P)	20kA			30kA			
	250V(2P)	20kA			30kA			
<b>Protective function</b>		Overload, Short-circuit						
Type of trip unit		Thermal-Magnetic						
Magnetic trip range		12 × I <sub>n</sub> (30A and under: 400A)						
Endurance	Mechanical	25000 operations						
	Electrical	10000 operations						
Connection	Standard	Front connection						
	Optional	Rear connection						
Mounting		Screw fixing						
<b>Dimensions (mm)</b>		Pole	2p	3p	4p	2p	3p	4p
		a	60	90	120	60	90	120
		b	155			155		
		c1 <small>Note)</small>	60			60		
		c2 <small>Note)</small>	64			64		
		d	82			82		
		Weight, kg	Standard	0.7	1	1.2	0.7	1
<b>Certification</b>		Pole	2p	3p	4p	2p	3p	4p
CE marking		☑			○			

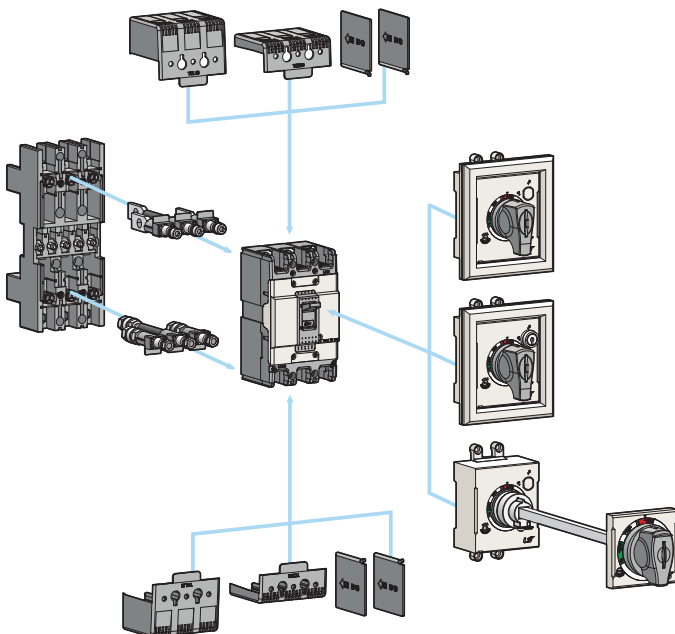
Note) Depth by door cut size : c1 for large cut, c2 for small cut

## Ordering types

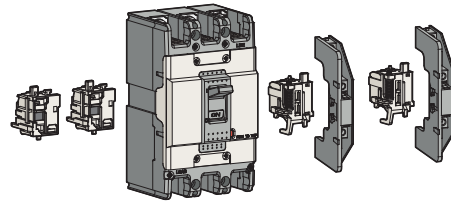
### Breaker types

ABS type (37kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
15 A	ABS102c/15	ABS103c/15	ABS104c/15
20 A	ABS102c/20	ABS103c/20	ABS104c/20
30 A	ABS102c/30	ABS103c/30	ABS104c/30
40 A	ABS102c/40	ABS103c/40	ABS104c/40
50 A	ABS102c/50	ABS103c/50	ABS104c/50
60 A	ABS102c/60	ABS103c/60	ABS104c/60
75 A	ABS102c/75	ABS103c/75	ABS104c/75
100 A	ABS102c/100	ABS103c/100	ABS104c/100
125 A	ABS102c/125	ABS103c/125	ABS104c/125

ABH type (50kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
15 A	ABH102c/15	ABH103c/15	ABH104c/15
20 A	ABH102c/20	ABH103c/20	ABH104c/20
30 A	ABH102c/30	ABH103c/30	ABH104c/30
40 A	ABH102c/40	ABH103c/40	ABH104c/40
50 A	ABH102c/50	ABH103c/50	ABH104c/50
60 A	ABH102c/60	ABH103c/60	ABH104c/60
75 A	ABH102c/75	ABH103c/75	ABH104c/75
100 A	ABH102c/100	ABH103c/100	ABH104c/100
125 A	ABH102c/125	ABH103c/125	ABH104c/125

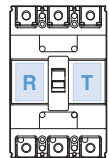


### Accessories



#### Electrical auxiliaries

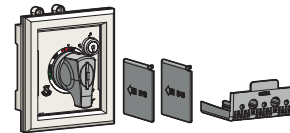
<b>AX</b>	Auxiliary Switch
<b>AL</b>	Alarm Switch
<b>AX+AL</b>	Combination switch
<b>SHT</b>	Shunt Trip
<b>UVT</b>	Undervoltage trip



#### Maximum possibilities

<b>T-position</b>	One of above auxiliaries
<b>R-position</b>	Option of AX or AL or AX+AL

Note) For more detail see 74 page



#### External accessories

ABS125c ABH125c	Name
<b>IB23</b>	Insulation barrier
<b>TCL23</b>	Terminal cover (Long) - Inde type, D-Handle type, N-Handle type
<b>TCS23</b>	Terminal cover (Short) - Inde type, D-Handle type, N-Handle type
<b>DH125</b>	Rotary handle (Direct)
<b>DHK125</b>	Rotary handle (Direct, Key lock)
<b>EH125</b>	Rotary handle (Extended)
<b>RTB2</b>	Rear terminal (Bar)
<b>RTR2</b>	Rear terminal (Round)
<b>PB-C3</b>	Plug-in kit
<b>PHL125</b>	Pad handle lock

Note) For more detail see 82 page

- Inde type: This cover is used without auxiliary Handle.
- D-Handle type: This cover is used with D-Handle.
- N-Handle type: This cover is used with N-Handle.



# 250AF MCCB

ABN250c, ABS250c, ABH250c



ABS202c



ABS203c



ABS204c

## Ratings

Frame size		250AF									
<b>Type and Pole</b>		<b>N-Type</b>			<b>S-Type</b>			<b>H-Type</b>			
	2-pole	<b>ABN202c</b>			<b>ABS202c</b>			<b>ABH202c</b>			
	3-pole	<b>ABN203c</b>			<b>ABS203c</b>			<b>ABH203c</b>			
	4-pole	<b>ABN204c</b>			<b>ABS204c</b>			<b>ABH204c</b>			
Rated current, I <sub>n</sub>		100-125-150-175-200-225-250A									
Rated operational voltage, U <sub>e</sub>		AC: 690V									
		DC: 500V									
Rated insulation voltage, U <sub>i</sub>		AC: 750V									
Rated impulse withstand voltage, U <sub>imp</sub>		8kV									
<b>Rated short-circuit breaking capacity, I<sub>cu</sub></b>		<b>N-Type</b>			<b>S-Type</b>			<b>H-Type</b>			
AC	690V	8kA			8kA			10kA			
	480/500V	18kA			26kA			35kA			
IEC 60947-2 (I <sub>cu</sub> )		<b>460V</b>			<b>26kA</b>			<b>37kA</b>			
I <sub>cs</sub> =100%I <sub>cu</sub>	415V	26kA			37kA			50kA			
	380V	30kA			42kA			50kA			
	<b>220/250V</b>	<b>65kA</b>			<b>85kA</b>			<b>100kA</b>			
	DC 500V(3P)	10kA			20kA			30kA			
	250V(2P)	10kA			20kA			30kA			
<b>Protective function</b>		Overload, Short-circuit									
Type of trip unit		Thermal-Magnetic									
Magnetic trip range		12 × I <sub>n</sub>									
Endurance	Mechanical	25000 operations									
	Electrical	10000 operations									
Connection	Standard	Front connection									
	Optional	Rear connection									
		Plug-in									
Mounting		Standard									
<b>Dimensions (mm)</b>		Pole	2p	3p	4p	2p	3p	4p	2p	3p	4p
		a	105	105	140	105	105	140	105	105	140
		b		165			165			165	
		c1 <small>Note)</small>		60			60			60	
		c2 <small>Note)</small>		64			64			64	
		d		87			87			87	
		Weight, kg	Standard	1.1	1.2	1.6	1.1	1.2	1.6	1.1	1.2
<b>Certification</b>		Pole	2p	3p	4p	2p	3p	4p	2p	3p	4p
CE marking				○			○			○	

Note) Depth by door cut size : c1 for large cut, c2 for small cut

### For more information

- Drawings ▶ 108 page
- Trip curves ▶ 100 page
- Accessories ▶ 74 page
- Connection and mounting ▶ 123 page

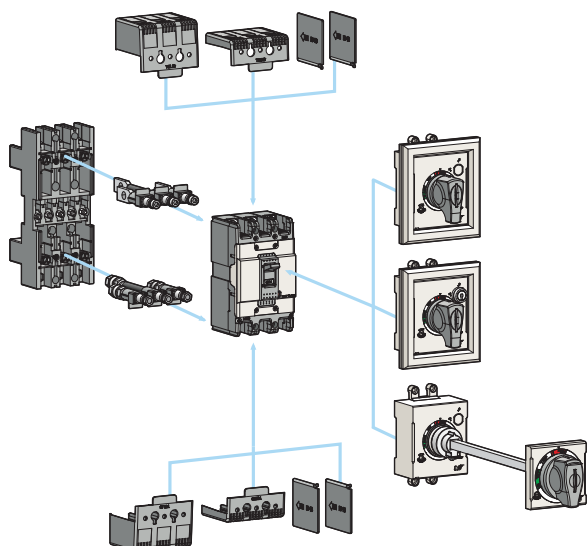
## Ordering types

### Breaker types

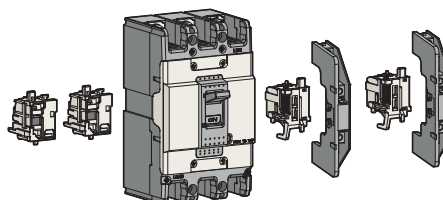
ABN type (25kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
100 A	ABN202c/100	ABN203c/100	ABN204c/100
125 A	ABN202c/125	ABN203c/125	ABN204c/125
150 A	ABN202c/150	ABN203c/150	ABN204c/150
175 A	ABN202c/175	ABN203c/175	ABN204c/175
200 A	ABN202c/200	ABN203c/200	ABN204c/200
225 A	ABN202c/225	ABN203c/225	ABN204c/225
250 A	ABN202c/250	ABN203c/250	ABN204c/250

ABS type (37kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
100 A	ABS202c/100	ABS203c/100	ABS204c/100
125 A	ABS202c/125	ABS203c/125	ABS204c/125
150 A	ABS202c/150	ABS203c/150	ABS204c/150
175 A	ABS202c/175	ABS203c/175	ABS204c/175
200 A	ABS202c/200	ABS203c/200	ABS204c/200
225 A	ABS202c/225	ABS203c/225	ABS204c/225
250 A	ABS202c/250	ABS203c/250	ABS204c/250

ABH type (50kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
100 A	ABH202c/100	ABH203c/100	ABH204c/100
125 A	ABH202c/125	ABH203c/125	ABH204c/125
150 A	ABH202c/150	ABH203c/150	ABH204c/150
175 A	ABH202c/175	ABH203c/175	ABH204c/175
200 A	ABH202c/200	ABH203c/200	ABH204c/200
225 A	ABH202c/225	ABH203c/225	ABH204c/225
250 A	ABH202c/250	ABH203c/250	ABH204c/250



### Accessories



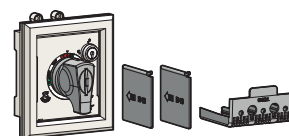
#### Electrical auxiliaries

<b>AX</b>	Auxiliary Switch	
<b>AL</b>	Alarm Switch	
<b>AX+AL</b>	Combination switch	
<b>SHT</b>	Shunt Trip	
<b>UVT</b>	Undervoltage trip	

#### Maximum possibilities

<b>T-position</b>	One of above auxiliaries
<b>R-position</b>	Option of AX or AL or AX+AL

Note) For more detail see 74 page



#### External accessories

ABH250c	Name
<b>B33</b>	Insulation barrier
<b>TCL33</b>	Terminal cover (Long) - Inde type, D-Handle type, N-Handle type
<b>TCS33</b>	Terminal cover (Short) - Inde type, D-Handle type, N-Handle type
<b>DH250</b>	Rotary handle (Direct)
<b>DHK250</b>	Rotary handle (Direct, Key lock)
<b>EH250</b>	Rotary handle (Extended)
<b>RTB3</b>	Rear terminal (Bar)
<b>RTR3</b>	Rear terminal (Round)
<b>PBA250C</b>	Plug-in kit
<b>PHL250</b>	Pad handle lock

Note) For more detail see 82 page

- Inde type: This cover is used without auxiliary Handle.
- D-Handle type: This cover is used with D-Handle.
- N-Handle type: This cover is used with N-Handle.

# 400AF MCCB

ABN400c, ABS400c, ABH400c, ABL400c



ABS403c



ABL404c

## Ratings

Frame size		400AF														
<b>Type and Pole</b>		<b>N-Type</b>			<b>S-Type</b>			<b>H-Type</b>			<b>L-Type</b>					
	2-pole	<b>ABN402c</b>			<b>ABS402c</b>			<b>ABH402c</b>			<b>ABL402c</b>					
	3-pole	<b>ABN403c</b>			<b>ABS403c</b>			<b>ABH403c</b>			<b>ABL403c</b>					
	4-pole	<b>ABN404c</b>			<b>ABS404c</b>			<b>ABH404c</b>			<b>ABL404c</b>					
Rated current, I <sub>n</sub>		250-300-350-400A														
Rated operational voltage, U <sub>e</sub>		AC: 690V														
		DC: 500V														
Rated insulation voltage, U <sub>i</sub>		AC: 750V														
Rated impulse withstand voltage, U <sub>imp</sub>		8kV														
<b>Rated short-circuit breaking capacity, I<sub>cu</sub></b>		<b>N-Type</b>			<b>S-Type</b>			<b>H-Type</b>			<b>L-Type</b>					
	AC 690V	5kA			8kA			10kA			14kA					
		480/500V			18kA			35kA			50kA			65kA		
IEC 60947-2 (I <sub>cu</sub> )		<b>415/460V</b>			<b>37kA</b>			<b>50kA</b>			<b>65kA</b>			<b>85kA</b>		
		380V			42kA			65kA			70kA			100kA		
	DC 500V(3P)	10kA			20kA			40kA			40kA					
		250V(3P)			10kA			20kA			40kA			40kA		
I <sub>cs</sub> =100%I <sub>cu</sub>	125V	100%			100%			100%			75%					
<b>Protective function</b>		Overload, Short-circuit														
Type of trip unit		Thermal-Magnetic														
Magnetic trip range		8~12I <sub>n</sub>														
Endurance	Mechanical	4000 operations														
	Electrical	1000 operations														
Connection	Standard	Front connection														
	Optional	Rear connection														
		Plug-in														
Mounting	Standard	Screw fixing														
<b>Dimensions (mm)</b>		Pole	2p	3p	4p	2p	3p	4p	2p	3p	4p	2p	3p	4p		
		a	140	140	184	140	140	184	140	140	184	140	140	184		
		b	257			257			257			257				
		c1 <small>Note)</small>	109			109			109			109				
		c2 <small>Note)</small>	113			113			113			113				
		d	145			145			145			145				
		Weight, kg	Standard	5.2	6.2	7.8	5.2	6.2	7.8	5.2	6.2	7.8	5.2	6.2	7.8	
<b>Certification</b>		Pole	2p	3p	4p	2p	3p	4p	2p	3p	4p	2p	3p	4p		
CE marking		CE	○			○			○			○				

Note) Depth by door cut size : c1 for large cut, c2 for small cut

### For more information

- Drawings ▶ 109 page
- Trip curves ▶ 101 page
- Accessories ▶ 75 page
- Connection and mounting ▶ 124 page

## Ordering types

### Breaker types

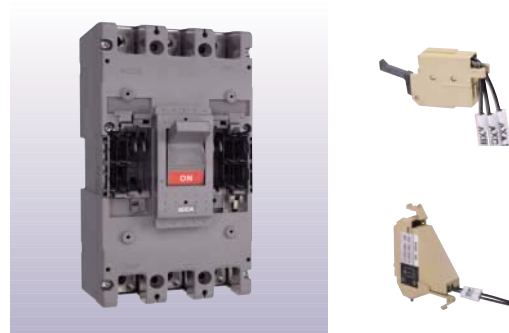
ABN type (37kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
250 A	ABN402c/250	ABN403c/250	ABN404c/250
300 A	ABN402c/300	ABN403c/300	ABN404c/300
350 A	ABN402c/350	ABN403c/350	ABN404c/350
400 A	ABN402c/400	ABN403c/400	ABN404c/400

ABS type (50kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
250 A	ABS402c/250	ABS403c/250	ABS404c/250
300 A	ABS402c/300	ABS403c/300	ABS404c/300
350 A	ABS402c/350	ABS403c/350	ABS404c/350
400 A	ABS402c/400	ABS403c/400	ABS404c/400

ABH type (65kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
250 A	ABH402c/250	ABH403c/250	ABH404c/250
300 A	ABH402c/300	ABH403c/300	ABH404c/300
350 A	ABH402c/350	ABH403c/350	ABH404c/350
400 A	ABH402c/400	ABH403c/400	ABH404c/400

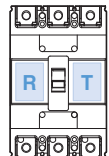
ABL type (85kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
250 A	ABL402c/250	ABL403c/250	ABL404c/250
300 A	ABL402c/300	ABL403c/300	ABL404c/300
350 A	ABL402c/350	ABL403c/350	ABL404c/350
400 A	ABL402c/400	ABL403c/400	ABL404c/400

### Accessories



#### Electrical auxiliaries

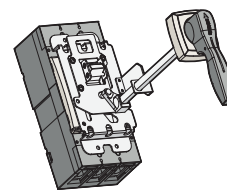
<b>AX</b>	Auxiliary Switch
<b>AL</b>	Alarm Switch
<b>SHT</b>	Shunt Trip
<b>UVT</b>	Undervoltage trip



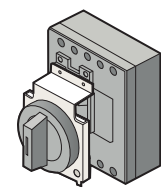
Maximum possibilities

<b>T-position</b>	Option of 2AX, 2AL and SHT or UVT
<b>R-position</b>	Option of 2AX, 2AL and SHT or UVT

*Note*) For more detail see 75 page



E-70U



N-70

#### External accessories

<b>IBL400</b>	Insulation barrier
<b>T1-43A</b>	Terminal cover (Long) - 2, 3pole
<b>T1-44A</b>	Terminal cover (Long) - 4pole
<b>N-70</b>	Rotary handle (Direct)
<b>E-70U</b>	Rotary handle (Extended)
<b>MI-43</b>	Mechanical interlock - 2, 3pole
<b>MI-44</b>	Mechanical interlock - 4pole
<b>PB-I3-FR</b>	Plug-in kit

*Note*) For more detail see 82 page

# 800AF MCCB

## ABN800c, ABS800c, ABL800c



ABS803c



ABL804c

### Ratings

Frame size		800AF									
<b>Type and Pole</b>		<b>N-Type</b>			<b>S-Type</b>			<b>L-Type</b>			
2-pole		<b>ABN802c</b>			<b>ABS802c</b>			<b>ABL802c</b>			
3-pole		<b>ABN803c</b>			<b>ABS803c</b>			<b>ABL803c</b>			
4-pole		<b>ABN804c</b>			<b>ABS804c</b>			<b>ABL804c</b>			
Rated current, I <sub>n</sub>		500-630-700-800A									
Rated operational voltage, U <sub>e</sub>		AC: 690V									
		DC: 500V									
Rated insulation voltage, U <sub>i</sub>		AC: 750V									
Rated impulse withstand voltage, U <sub>imp</sub>		8kV									
<b>Rated short-circuit breaking capacity, I<sub>cu</sub></b>		<b>N-Type</b>			<b>S-Type</b>			<b>L-Type</b>			
AC 690V		8kA			10kA			14kA			
480/500V		25kA			45kA			65kA			
IEC 60947-2 (I <sub>cu</sub> )		<b>415/460V</b>			<b>37kA</b>			<b>65kA</b>			
380V		45kA			75kA			100kA			
<b>220/250V</b>		<b>50kA</b>			<b>85kA</b>			<b>125kA</b>			
DC 500V(3P)		10kA			20kA			40kA			
250V(3P)		10kA			20kA			40kA			
I <sub>cs</sub> =100%I <sub>cu</sub>		125V			100%			100%			
<b>Protective function</b>		Overload, Short-circuit									
Type of trip unit		Thermal-Magnetic									
Magnetic trip range		8~12I <sub>n</sub>									
Endurance		Mechanical			2500 operations						
		Electrical			500 operations						
Connection		Standard			Front connection						
		Optional			Rear connection						
					Plug-in						
Mounting		Standard			Screw fixing						
<b>Dimensions (mm)</b>		Pole	2p	3p	4p	2p	3p	4p	2p	3p	4p
		a	210	210	280	210	210	280	210	210	280
		b		280			280			280	
		c1 <small>Note)</small>		109			109			109	
		c2 <small>Note)</small>		113			113			113	
		d		145			145			145	
		Weight, kg	Standard	11	11.5	18.2	11	11.5	18.2	11	11.5
<b>Certification</b>		Pole	2p	3p	4p	2p	3p	4p	2p	3p	4p
CE marking				o			o			o	

Note) Depth by door cut size : c1 for large cut, c2 for small cut

#### For more information

- Drawings ▶ 110 page
- Trip curves ▶ 101 page
- Accessories ▶ 75 page
- Connection and mounting ▶ 124 page

## Ordering types

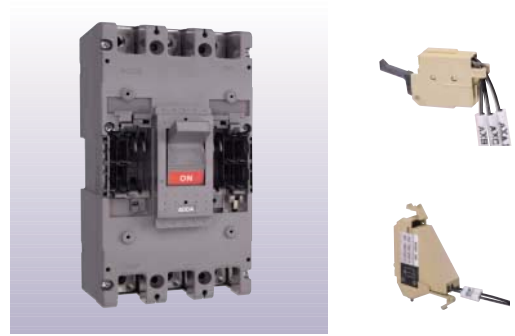
### Breaker types

ABN type (37kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
500 A	ABN802c/500	ABN803c/500	ABN804c/500
630 A	ABN802c/630	ABN803c/630	ABN804c/630
700 A	ABN802c/700	ABN803c/700	ABN804c/700
800 A	ABN802c/800	ABN803c/800	ABN804c/800

ABS type (65kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
500 A	ABS802c/500	ABS803c/500	ABS804c/500
630 A	ABS802c/630	ABS803c/630	ABS804c/630
700 A	ABS802c/700	ABS803c/700	ABS804c/700
800 A	ABS802c/800	ABS803c/800	ABS804c/800

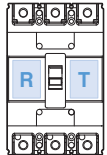
ABL type (85kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
500 A	ABL802c/500	ABL803c/500	ABL804c/500
630 A	ABL802c/630	ABL803c/630	ABL804c/630
700 A	ABL802c/700	ABL803c/700	ABL804c/700
800 A	ABL802c/800	ABL803c/800	ABL804c/800

### Accessories



#### Electrical auxiliaries

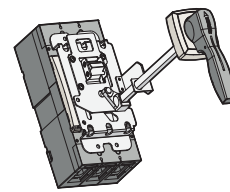
<b>AX</b>	Auxiliary Switch
<b>AL</b>	Alarm Switch
<b>SHT</b>	Shunt Trip
<b>UVT</b>	Undervoltage trip



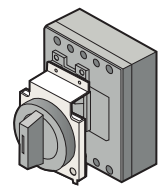
#### Maximum possibilities

<b>T-position</b>	Option of 2AX, 2AL and SHT or UVT
<b>R-position</b>	Option of 2AX, 2AL and SHT or UVT

Note) For more detail see 75 page



E-80U



N-80

#### External accessories

<b>IBL800</b>	Insulation barrier
<b>T1-63A</b>	Terminal cover (Long) - 2, 3pole
<b>T1-64A</b>	Terminal cover (Long) - 4pole
<b>N-80</b>	Rotary handle (Direct)
<b>E-80U</b>	Rotary handle (Extended)
<b>MI-83S</b>	Mechanical interlock - 2, 3pole
<b>MI-84S</b>	Mechanical interlock - 4pole
<b>PB-J3-FR</b>	Plug-in kit

Note) For more detail see 82 page

# 1000/1200AF MCCB

## ABS1000b/1200b, ABL1000b/1200b



① Adjustable instantaneous for each phase

### Ratings

Frame size		1000AF		1200AF		
<b>Type and Pole</b>		<b>S-Type</b>	<b>L-Type</b>	<b>S-Type</b>	<b>L-Type</b>	
	2-pole	-	-	-	-	
	3-pole	<b>ABS1003b</b>	<b>ABL1003b</b>	<b>ABS1203b</b>	<b>ABL1203b</b>	
	4-pole	<b>ABS1004b</b>	<b>ABL1004b</b>	<b>ABS1204b</b>	<b>ABL1204b</b>	
Rated current, In		1000A		1200A		
Rated operational voltage, Ue		AC: 600V				
Rated insulation voltage, Ui		690V				
Rated impulse withstand voltage, Uimp		6kV				
<b>Rated short-circuit breaking capacity, Icu</b>		<b>S-Type</b>	<b>L-Type</b>	<b>S-Type</b>	<b>L-Type</b>	
AC	690V	45kA	65kA	45kA	65kA	
	480/500V	50kA	75kA	50kA	75kA	
IEC 60947-2 (Icu)	<b>415/460V</b>	<b>65kA</b>	<b>85kA</b>	<b>65kA</b>	<b>85kA</b>	
	380V	65kA	85kA	65kA	85kA	
	<b>220/250V</b>	<b>100kA</b>	<b>125kA</b>	<b>100kA</b>	<b>125kA</b>	
Ics=100%Icu	125V	50kA	50kA	50kA	50kA	
<b>Protective function</b>		Overload, Short-circuit				
Type of trip unit		Thermal-Magnetic				
Magnetic trip range		3-6 × In ...①				
Endurance	Mechanical	2500 operations				
	Electrical	500 operations				
Connection		Standard				
Mounting		Standard				
<b>Dimensions (mm)</b>		Pole	3p	4p	3p	4p
	a		220	290	220	290
	b		400	400	400	400
	c		105	105	105	105
	d		159	159	159	159
Weight, kg		Standard	19.6	25.7	19.6	25.7
<b>Certification</b>		Pole	3p	4p	3p	4p
CE marking		ABS1003b	ABS1004b	ABS1203b	ABS1204b	
		○	×	○	×	
		ABL1003b	ABL1004b	ABL1203b	ABL1204b	
		×	×	×	×	

Note) Please specify the frequency when ordering.

#### For more information

- Drawings ▶ 111 page
- Trip curves ▶ 102 page

## Ordering types

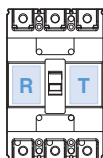
### Breaker types

ABS type (65kA/460V)		
Rated current, In	3-pole	4-pole
1000 A	ABS1003b/1000	ABS1004b/1000
1200 A	ABS1203b/1200	ABS1204b/1200

ABL type (85kA/460V)		
Rated current, In	3-pole	4-pole
1000 A	ABL1003b/1000	ABL1004b/1000
1200 A	ABL1203b/1200	ABL1204b/1200

### Option of below items for T-position

AX1	Auxiliary Switch (1c)
AX2	Auxiliary Switch (2c)
AL1	Alarm Switch (1c)
AL2	Alarm Switch (2c)
AX1+AL	Auxiliary (1c) + Alarm (1c) Switch
AX2+AL	Auxiliary (2c) + Alarm (1c) Switch



### Option of below items for R-position

SHT	Shunt Trip
UVT	Undervoltage trip

### Contact operation for Auxiliary and Alarm Switches

MCCB	ON	OFF	TRIP
AX			
AL			

### Contact rating for Auxiliary and Alarm Switches

Voltage (V)	AC		Voltage (V)	DC	
	Current (A)			Current (A)	
	Resistive load	Inductive load		Resistive load	Inductive load
125	20	20	30	6	5
250	20	20	125	0.4	0.05
500	10	5	250	0.2	0.03

### Rating for Shunt trip (SHT)

	Control voltage	Time rating	Operational voltage
AC	100~110V	Continuous	85~110% of control voltage
	200~220V		
	380~440V		
DC	48V		75~125% of control voltage
	100~110V		
	200~220V		

### Rating for Undervoltage release (UVT)

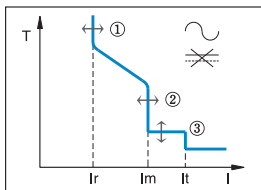
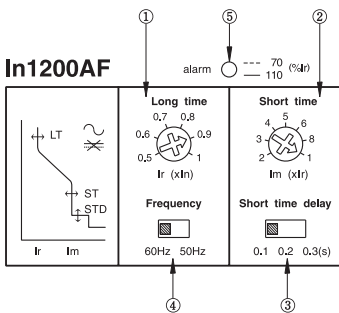
	Control voltage	Time rating	Operational voltage	Trip voltage
AC	100~110V	Continuous	85~110% of control voltage	20~70% of control voltage
	200~220V			
	380~440V			
DC	100V		85~125% of control voltage	20~70% of control voltage
	200V			



# 1200AF Electronic MCCB

## ABS1203bE

Metasol



### For more information

- Drawings ▶ 112 page
- Trip curves ▶ 102 page

## Ratings

Frame size	1200AF	
Type and Pole	<b>S-Type</b>	
2-pole	-	
3-pole	<b>ABS1203bE</b>	
4-pole	-	
Rated current, In	1200A	
Rated operational voltage, Ue	AC: 600V	
Rated insulation voltage, Ui	AC: 600V	
Rated impulse withstand voltage, Uimp	6kV	
Type	Long time Current, IR pick-up time	(0.5-0.6-0.7-0.8-0.9-1.0) × In, adjustable... <sup>①</sup> 5sec ± 20% at 6 × Ir, fixed
	Short time Current, Im pick-up time	(2-3-4-5-6-8-10) × In, adjustable... <sup>②</sup> 0.1-0.2-0.3 sec, adjustable... <sup>③</sup>
	Instantaneous Current, It pick-up time	11 × In, fixed within 0.03 sec, fixed
⑤ LED	Pre-Alarm	between 70 to 110% of set current Ir: LED flickering over 110% of set current Ir: stays on
④ Rated frequency	50-60Hz selectable by the switch of the trip unit	
Rated short-circuit breaking capacity, Icu	AC 690V 480/500V <b>415/460V</b> 380V <b>220/250V</b>	<b>S-Type</b> 45kA 50kA <b>65kA</b> 65kA <b>100kA</b>
Ics=100%Icu	50%	
Protective function	Overload, Short-circuit	
Type of trip unit	Electronic type	
Endurance	Mechanical	2500 operations
	Electrical	500 operations
Connection	Standard	Front connection
Mounting	Standard	Screw fixing
Dimensions (mm)	Pole	3p
	a	220
	b	400
	c	105
	d	159
Weight, kg	Standard	21