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MFG PN: EBN102C,75A,100/200/500mA

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Metasol

Meta Solution

Low voltage circuit breakers

Technical Manual

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Upgrade of Meta-MEC series

... **Metasol** series low voltage circuit breakers



- *Compatible and differentiated design*

- Compatible with the Meta-MEC
- Outlook differentiated design

- *Same External dimension with MCCB and ELCB*

- *Upgrade the coordination*

- Upgrade the coordination with Susol / Meta-MEC mass capacity

- *Upgrade breaking capacity*

- N100AF : 10 ➔ 18kA
- S125AF : 25 ➔ 37kA
- S250AF : 25 ➔ 37kA
- H250AF : 35 ➔ 50kA
- N400AF : 25 ➔ 37kA
- S400AF : 35 ➔ 50kA
- S800AF : 50 ➔ 65kA

- *Ics = 100% Icu*

- *External differentiated Design*

Overview

4. Ratings

Metasol ELCB

AF		30AF		50AF				60AF			
Frame type		EBS		EBN		EBS		EBH			
Type		EBS33c	EBS34c	EBN52c	EBN53c	EBS53c	EBS54c	EBH53c	EBH54c		
Rating	Wiring system	1Ø2W, 1Ø3W, 3Ø3W, 3Ø4W		1Ø2W,	1Ø2W, 1Ø3W, 3Ø3W	1Ø2W, 1Ø3W, 3Ø3W	1Ø2W, 1Ø3W, 3Ø3W, 3Ø4W	1Ø2W, 1Ø3W, 3Ø3W, 3Ø4W	1Ø2W, 1Ø3W, 3Ø3W		
	Type and poles	3P3E	4P3E	2P2E	3P3E	3P3E	4P3E	3P3E	4P3E		
	Protective function	Overload, short circuit and Ground fault		Overload, short circuit and Ground fault		Overload, short circuit and Ground fault		Overload, short circuit and Ground fault		Overload, short circuit and Ground fault	
	Rated operational voltage (Ue) AC (V)	220/460		220/460		220/460		220/460		220/460	
	Rated impulse withstand voltage (Uimp) kV	6		6		6		6		6	
	Rated current (In) A	15, 20, 30		15, 20, 30, 40, 50		15, 20, 30, 40, 50		15, 20, 30, 40, 50		60	
	Rated residual current mA	30,100/200/500mA		30,100/200/500mA		30,100/200/500mA		30,100/200/500mA		30,100/200/500mA	
	Residual current off-time sec	≤0.1sec		≤0.1sec		≤0.1sec		≤0.1sec		≤0.1sec	
Rated short circuit breaking capacity (KA) Icu IEC947-2	415/460V	14		14		18		50		14	
	220/250V	30		30		35		100		30	
Magnetic trip range		Rated current 3-10A : 12In		Rated current 15-30A : 400A		Rated current 15-30A : 400A		Rated current 15-30A : 400A		12In	
		Rated current 15-30A : 400A		Rated current 40-50A : 12In		Rated current 40-50A : 12In		Rated current 40-50A : 12In			
Endurance (Number of operations)	Mechanical	25000		25000		25000		25000		25000	
	Electrical	10000		10000		10000		10000		10000	
Dimensions (mm)	a	75	100	75	75	75	100	90	120	75	
	b	130		130		130		155		130	
	c1	60		60		60		60		60	
	c2	64		64		64		64		64	
	d	82		82		82		82		82	
Type of trip unit		Thermal magnetic type		Thermal magnetic type		Thermal magnetic type		Thermal magnetic type		Thermal magnetic type	
Trip test button		O		O		O		O		O	
Connection	front-connection	O		O		O		O		O	
	rear-connection	O		O		O		O		O	
Mounting (standard)		screw fixing		screw fixing		screw fixing		screw fixing		screw fixing	
Accessories	Auxiliary switch AX	O		O		O		O		O	
	Alarm switch AL	O		O		O		O		O	
	Extended rotary handle	D(Direct)	O		O		O		O		O
		E(Extended)	O		O		O		O		O
	Terminal cover	Long Type	O	O	O	O	O	O	O	O	O
		Short Type	O	O	O	O	O	O	O	O	O
Insulation barrier B		O		O		O		O		O	

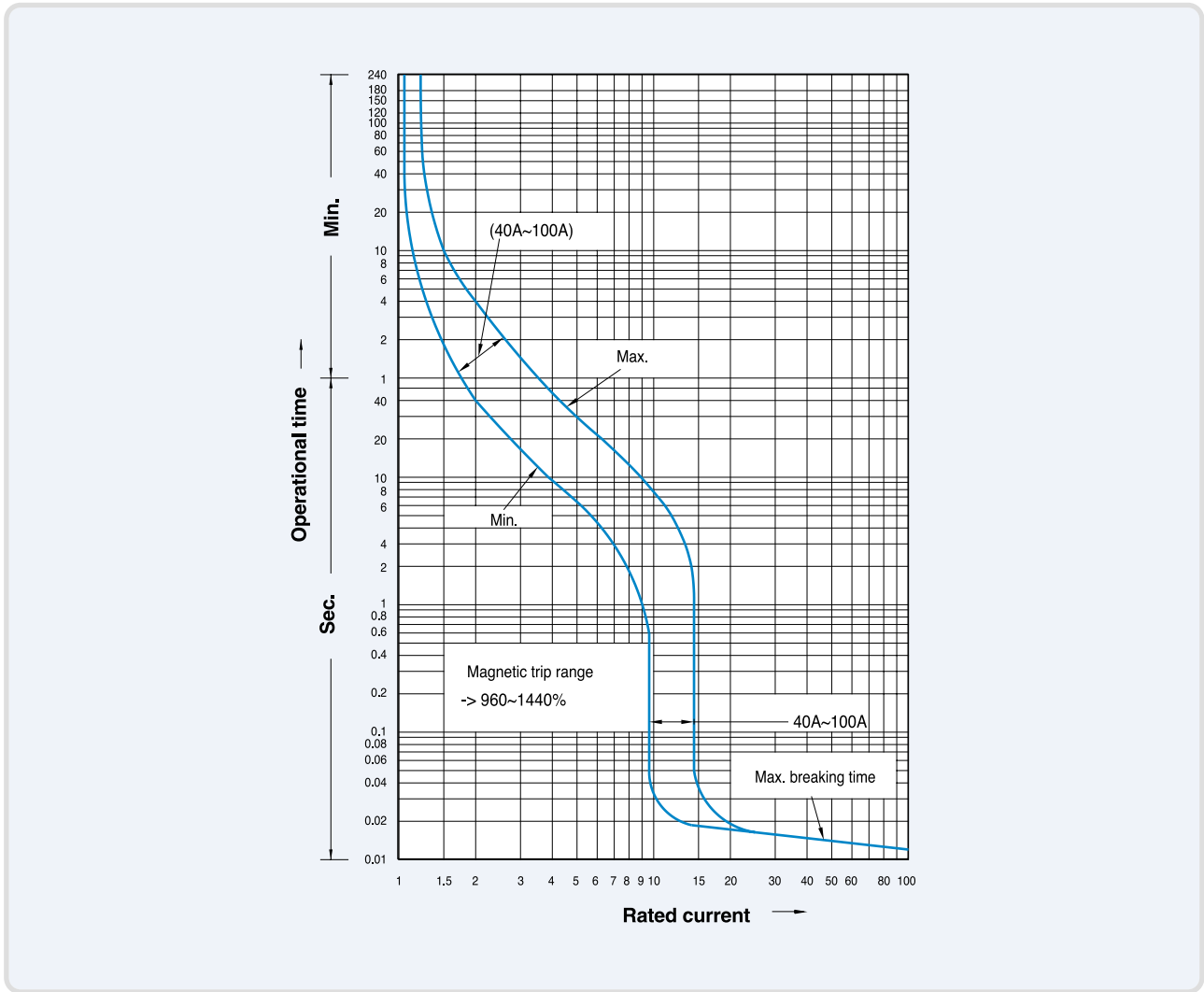
A

		100AF			125AF				250AF					
EBS		EBN			EBS		EBH		EBN		EBS		EBH	
EBS63c	EBS64c	EBS102c	EBS103c	EBS104c	EBS103c	EBS104c	EBH103c	EBH104c	EBS202c	EBS203c	EBS203c	EBS204c	EBH203c	EBH204c
1Ø2W 1Ø3W 3Ø3W	1Ø2W 1Ø3W 3Ø3W 3Ø4W	1Ø2W	1Ø2W 1Ø3W 3Ø3W	1Ø2W 1Ø3W 3Ø3W 3Ø4W	1Ø2W 1Ø3W 3Ø3W	1Ø2W 1Ø3W 3Ø3W 3Ø4W	1Ø2W 1Ø3W 3Ø3W	1Ø2W 1Ø3W 3Ø3W 3Ø4W	1Ø2W 1Ø3W 3Ø3W	1Ø2W 1Ø3W 3Ø3W	1Ø2W 1Ø3W 3Ø3W	1Ø2W 1Ø3W 3Ø3W 3Ø4W	1Ø2W 1Ø3W 3Ø3W	1Ø2W 1Ø3W 3Ø3W 3Ø4W
3P3E	4P3E	2P2E	3P3E	4P3E	3P3E	4P3E	3P3E	4P3E	2P2E	3P3E	3P3E	4P3E	3P3E	4P3E
Overload, short circuit and Ground fault		Overload, short circuit and Ground fault			Overload, short circuit and Ground fault		Overload, short circuit and Ground fault		Overload, short circuit and Ground fault		Overload, short circuit and Ground fault		Overload, short circuit and Ground fault	
220/460		220/460			220/460		220/460		220/460		220/460		220/460	
6		6			6		6		6		6		6	
60		60, 75, 100			15, 20, 30, 40, 50, 60, 75, 100, 125		15, 20, 30, 40, 50, 60, 75, 100, 125		100, 125, 150, 175, 200, 225, 250		100, 125, 150, 175, 200, 225, 250		100, 125, 150, 175, 200, 225, 250	
30,100/200/500mA		30,100/200/500mA			30,100/200/500mA		30,100/200/500mA		30,100/200/500mA		30,100/200/500mA		30,100/200/500mA	
≤0.1sec		≤0.1sec			≤0.1sec		≤0.1sec		≤0.1sec		≤0.1sec		≤0.1sec	
18		18			37		50		25		37		50	
35		35			85		100		65		85		100	
12In		Rated current 15-30A : 400A Rated current 40-100A : 12In			Rated current 15-30A : 400A Rated current 40-125A : 12In		Rated current 15-30A : 400A Rated current 40-100A : 12In		2In		12In		12In	
25000		25000			25000		25000		20000		20000		20000	
10000		10000			10000		10000		5000		5000		5000	
75 100		75 75 100			90 120		90 120		105		105 140		105 140	
130		130			155		155		165		165		165	
60		60			60		60		60		60		60	
64		64			64		64		64		64		64	
82		82			82		82		87		87		87	
Thermal magnetic type		Thermal magnetic type			Thermal magnetic type		Thermal magnetic type		Thermal magnetic type		Thermal magnetic type		Thermal magnetic type	
O		O			O		O		O		O		O	
O		O			O		O		O		O		O	
O		O			O		O		O		O		O	
screw fixing		screw fixing			screw fixing		screw fixing		screw fixing		screw fixing		screw fixing	
O		O			O		O		O		O		O	
O		O			O		O		O		O		O	
O		O			O		O		O		O		O	
O		O			O		O		O		O		O	
O O		O O O			O O		O O		O O		O O		O O	
O O		O O O			O O		O O		O O		O O		O O	
O		O			O		O		O		O		O	

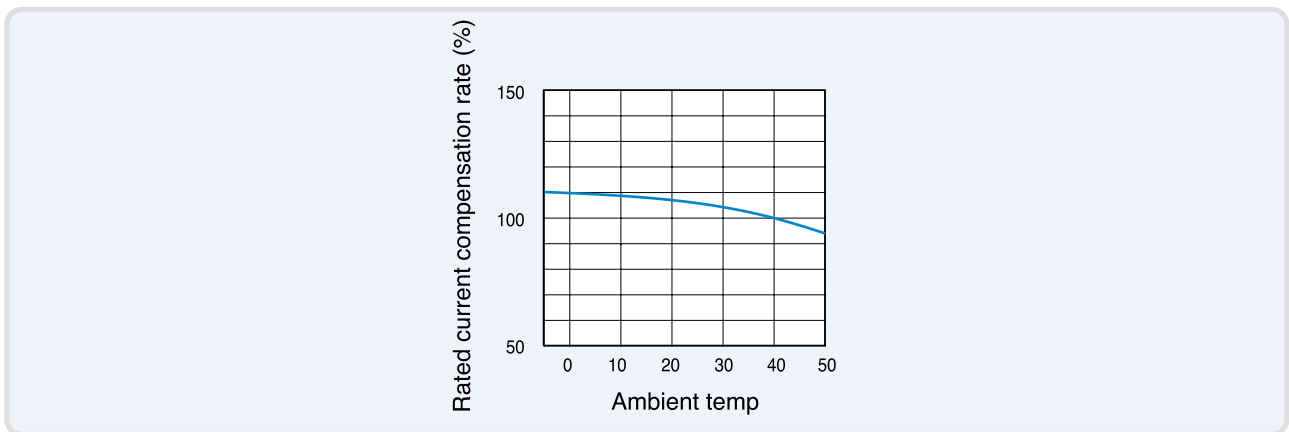
Product characteristics

1. 100AF Product characteristics

Characteristic curves (Rated current: 40~100A)



Compensation curves (Rated current: 40~100A)



Products Type Overview

MCCB

AB	S	10	3	C	M	100A	AX	SHT=220V				
MCCB	Type	Ampere Frame		Pole	Series	Application		Rated current	Accessory	Control voltage of accessory		
N	N-Type	3	30AF	2	2-pole	-	Conventional	3A	150A	AX	Auxiliary Switch	SHT
S	S-Type	5	50AF	3	3-pole	a	Hi-MEC	5A	175A	AL	Alarm Switch	AC/DC 12V
H	H-Type	6	60AF	4	4-pole	b	Meta-MEC	10A	200A	SHT	Shunt Trip	AC/DC 24V
L	L-Type	10	100/125AF			c	Metasol	15A	225A	UVT	Undervoltage trip	AC/DC 48V
		20	225/250AF					20A	250A	DH	Rotary handle (Direct)	AC/DC 60V
		40	400AF					30A	300A	EH	Rotary handle (Extended)	AC/DC
		80	800AF					40A	350A	RTR	Rear terminal	100V~130V
								50A	400A	RTB	Rear terminal	AC/DC
								60A	500A			200V-250V
								75A	630A			AC 380V-450V
								100A	700A			AC 440V-500V
								125A	800A			UVT
												AC/DC 24V
												AC/DC 48V
												AC/DC
												100V~110V
												AC/DC
												200V-220V
												AC 380V-440V
												AC 440V-480V

ELCB


EB	S	10	3	C	100A	30mA	AX					
ELCB	Type	Ampere Frame		Pole	Series	Rated current	Rated residual current	Accessory				
N	N-Type	3	30AF	2	2-pole	-	Conventional	3A	150A	30mA	AX	Auxiliary Switch
S	S-Type	5	50AF	3	3-pole	a	Hi-MEC	5A	175A	100/200/500mA	AL	Alarm Switch
H	H-Type	6	60AF	4	4-pole	b	Meta-MEC	10A	200A		DH	Rotary handle (Direct)
L	L-Type	10	100/125AF			c	Metasol	15A	225A		EH	Rotary handle (Extended)
		20	225/250AF					20A	250A		RTR	Rear terminal
		40	400AF					30A	300A		RTB	Rear terminal
		80	800AF					40A	350A			
								50A	400A			
								60A	500A			
								75A	630A			
								100A	700A			
								125A	800A			

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Safety Instructions

- For your safety, please read user's manual thoroughly before operating.
- Contact the nearest authorized service facility for examination, repair, or adjustment.
- Please contact a qualified service technician when you need maintenance. Do not disassemble or repair by yourself!
- Any maintenance and inspection shall be performed by the personnel having expertise concerned.

LS Industrial Systems Co., Ltd.

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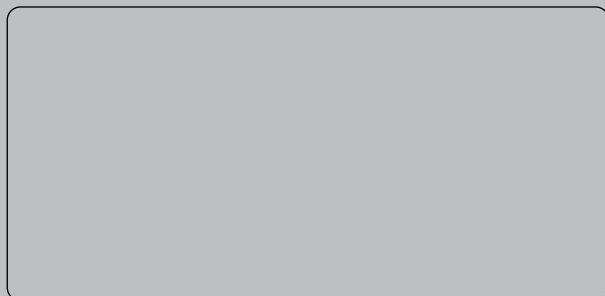
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