

E2000 Miniature Circuit Breakers

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Miniature Circuit Breakers

E2000 Miniature Circuit Breakers

EP60 Series

Section 7

Applications

—Industrial

Performance

Thermal setting In (A)	0.5-63
Rated Vac Un (V)	240/415
Minimum operating voltage U_g min (V)	12
Tripping characteristics	B-C-D
Selectivity class	3
Mechanical/electrical endurance	20000/10000
Tropicalisation acc. to IEC 60068-2	95% RH at 55°C
Terminal capacity flexible/rigid cable mm ²	25-35
Poles	1, 2, 3, 4
Weight (g/pole)	120

Short-circuit Capacity

Per UL 1077 & CSA 22.2 No. 235-1989 (File E151139)

Poles	Max. Voltage Rating		Short Circuit Rating kAIC RMS Symmetrical				kAIC DC	
	AC	DC	120	120/240	277	480V/277	50	110
1	277	50	10	—	6	—	10	—
2	480V/277	110	10	10	6	6	—	10
3, 4	480V/277	110	10	10	6	6	—	—

AC acc. to IEC 60898

Poles	V	Icn/Ics (kA)
1-4	230/400	6

AC acc. to IEC 60947-2

Poles	V	Icu (kA) ¹
1	240	10
2,3,4	240	20
2,3,4	415	10

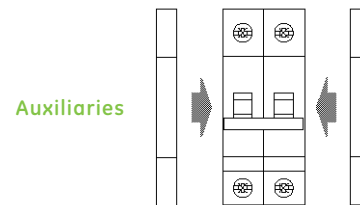
¹Ics = 75% Icu

DC acc. to IEC 60947-2

Poles	V	Icu/Ics (kA)
1	60	20
2	125	25

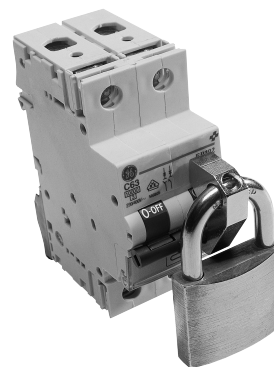
Approval/Marking

—CE
—CURus
—CEBEC
—KEMA EUR



Auxiliaries

Add-on Devices



KS Padlocking Bracket

Miniature Circuit Breakers

E2000 Miniature Circuit Breakers

EP60 Series

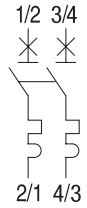
Section 7

EP60 Series, 6 kAIC @277 or 480Y/277 Vac, Tripping Characteristics B-C-D

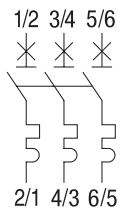
Poles	Std. Pack	Tripping Characteristic				GO-135VB		
		6 kAIC In (A)	B (3-5X) Product No.	C (5-10X) Product No.	D (10-20X) Product No.			
1	12	0.5	-	EP61ULC0.5	EP61ULD0.5			
		1	-	EP61ULC01	EP61ULD01			
		2	-	EP61ULC02	EP61ULD02			
		3	-	EP61ULC03	EP61ULD03			
		4	-	EP61ULC04	EP61ULD04			
		5	EP61ULB05	EP61ULC05	EP61ULD05			
		6	EP61ULB06	EP61ULC06	EP61ULD06			
		10	EP61ULB10	EP61ULC10	EP61ULD10			
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		16	EP61ULB16	EP61ULC16	EP61ULD16			
		20	EP61ULB20	EP61ULC20	EP61ULD20			
		25	EP61ULB25	EP61ULC25	EP61ULD25			
		30	EP61ULB30	EP61ULC30	EP61ULD30			
		32	EP61ULB32	EP61ULC32	EP61ULD32			
		40	EP61ULB40	EP61ULC40	EP61ULD40			
		50	EP61ULB50	EP61ULC50	EP61ULD50			
		60	EP61ULB60	EP61ULC60	EP61ULD60			
		63	EP61ULB63	EP61ULC63	EP61ULD63			
		2	6	0.5	-	EP62ULC0.5	EP62ULD0.5	
				1	-	EP62ULC01	EP62ULD01	
				2	-	EP62ULC02	EP62ULD02	
				3	-	EP62ULC03	EP62ULD03	
				4	-	EP62ULC04	EP62ULD04	
5	EP62ULB05			EP62ULC05	EP62ULD05			
6	EP62ULB06			EP62ULC06	EP62ULD06			
10	EP62ULB10			EP62ULC10	EP62ULD10			
13	EP62ULB13			EP62ULC13	EP62ULD13			
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25	EP62ULB25			EP62ULC25	EP62ULD25			
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32	EP62ULB32			EP62ULC32	EP62ULD32			
40	EP62ULB40			EP62ULC40	EP62ULD40			
50	EP62ULB50			EP62ULC50	EP62ULD50			
60	EP62ULB60			EP62ULC60	EP62ULD60			
63	EP62ULB63			EP62ULC63	EP62ULD63			
3	4			0.5	-	EP63ULC0.5	EP63ULD0.5	
				1	-	EP63ULC01	EP63ULD01	
				2	-	EP63ULC02	EP63ULD02	
				3	-	EP63ULC03	EP63ULD03	
				4	-	EP63ULC04	EP63ULD04	
		5	EP63ULB05	EP63ULC05	EP63ULD05			
		6	EP63ULB06	EP63ULC06	EP63ULD06			
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		20	EP63ULB20	EP63ULC20	EP63ULD20			
		25	EP63ULB25	EP63ULC25	EP63ULD25			
		30	EP63ULB30	EP63ULC30	EP63ULD30			
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		50	EP63ULB50	EP63ULC50	EP63ULD50			
		60	EP63ULB60	EP63ULC60	EP63ULD60			
		63	EP63ULB63	EP63ULC63	EP63ULD63			
		4	3	0.5	-	EP64ULC0.5	EP64ULD0.5	
				1	-	EP64ULC01	EP64ULD01	
				2	-	EP64ULC02	EP64ULD02	
				3	-	EP64ULC03	EP64ULD03	
				4	-	EP64ULC04	EP64ULD04	
5	EP64ULB05			EP64ULC05	EP64ULD05			
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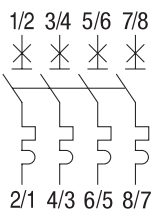
1 Pole



2 Pole



3 Pole



4 Pole

Miniature Circuit Breakers

E2000 Miniature Circuit Breakers

EP100 Series

Applications

—Industrial

Performance

Thermal setting In (A)	0.5-63
Rated Vac Un (V)	240/415
Minimum operating voltage U_g min (V)	12
Tripping characteristics	B-C-D
Selectivity class	3
Mechanical/electrical endurance	20000/10000
Tropicalisation acc. to IEC 60068-2	95% RH at 55°C
Terminal capacity flexible/rigid cable mm ²	25-35
Poles	1, 2, 3, 4
Weight (g/pole)	120

Short-circuit Capacity

Per UL 1077 & CSA 22.2 No. 235-1989 (File E151139)

Poles	Max. Voltage Rating		Short Circuit Rating kAIC RMS Symmetrical				kAIC DC	
	AC	DC	120	120/240	277	480Y/277	50	110
1	277	50	10	—	10	—	10	—
2	480Y/277	110	10	10	10	—	—	10
3, 4	480Y/277	110	10	10	10	10	—	—

AC acc. to IEC 60898

Poles	V	Icn (kA) ¹
1-4	230/400	10

¹Ics = 75% Icu

AC acc. to IEC 60947-2

Poles	V	Icu (kA) ²
1	240	15
2,3,4	240	30
2,3,4	415	15

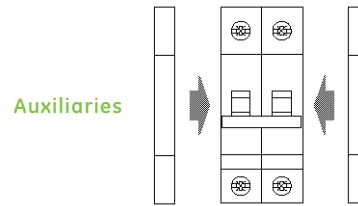
²Ics = 50% Icu

DC acc. to IEC 60947-2

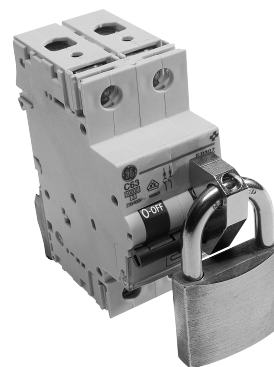
Poles	V	Icu/Ics (kA)
1	60	25
2	125	30

Approval/Marking

- CE
- CSA
- cURus
- CEBEC
- KEMA EUR



Add-on Devices



KS Padlocking Bracket

Miniature Circuit Breakers

E2000 Miniature Circuit Breakers

EP100 Series

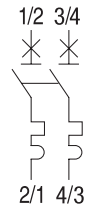
Section 7

EP100 Series, 10 kAIC @120 or 120/240 Vac, Tripping Characteristics B-C-D

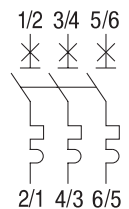
Poles	10 kAIC In (A)	Tripping Characteristic			GO-135VB
		B (3-5X) Product No.	C (5-10X) Product No.	D (10-20X) Product No.	
1	0.5	-	EP101ULC0.5	EP101ULD0.5	
	1	-	EP101ULC01	EP101ULD01	
	2	-	EP101ULC02	EP101ULD02	
	3	-	EP101ULC03	EP101ULD03	
	4	-	EP101ULC04	EP101ULD04	
	5	EP101ULB05	EP101ULC05	EP101ULD05	
	6	EP101ULB06	EP101ULC06	EP101ULD06	
	10	EP101ULB10	EP101ULC10	EP101ULD10	
	13	EP101ULB13	EP101ULC13	EP101ULD13	
	15	EP101ULB15	EP101ULC15	EP101ULD15	
	16	EP101ULB16	EP101ULC16	EP101ULD16	
	20	EP101ULB20	EP101ULC20	EP101ULD20	
	25	EP101ULB25	EP101ULC25	EP101ULD25	
	30	EP101ULB30	EP101ULC30	EP101ULD30	
	32	EP101ULB32	EP101ULC32	EP101ULD32	
	40	EP101ULB40	EP101ULC40	EP101ULD40	
	50	EP101ULB50	EP101ULC50	EP101ULD50	
	60	EP101ULB60	EP101ULC60	EP101ULD60	
	63	EP101ULB63	EP101ULC63	EP101ULD63	
	2	0.5	-	EP102ULC0.5	EP102ULD0.5
1		-	EP102ULC01	EP102ULD01	
2		-	EP102ULC02	EP102ULD02	
3		-	EP102ULC03	EP102ULD03	
4		-	EP102ULC04	EP102ULD04	
5		EP102ULB05	EP102ULC05	EP102ULD05	
6		EP102ULB06	EP102ULC06	EP102ULD06	
10		EP102ULB10	EP102ULC10	EP102ULD10	
13		EP102ULB13	EP102ULC13	EP102ULD13	
15		EP102ULB15	EP102ULC15	EP102ULD15	
16		EP102ULB16	EP102ULC16	EP102ULD16	
20		EP102ULB20	EP102ULC20	EP102ULD20	
25		EP102ULB25	EP102ULC25	EP102ULD25	
30		EP102ULB30	EP102ULC30	EP102ULD30	
32		EP102ULB32	EP102ULC32	EP102ULD32	
40		EP102ULB40	EP102ULC40	EP102ULD40	
50		EP102ULB50	EP102ULC50	EP102ULD50	
60		EP102ULB60	EP102ULC60	EP102ULD60	
63		EP102ULB63	EP102ULC63	EP102ULD63	
3		0.5	-	EP103ULC0.5	EP103ULD0.5
	1	-	EP103ULC01	EP103ULD01	
	2	-	EP103ULC02	EP103ULD02	
	3	-	EP103ULC03	EP103ULD03	
	4	-	EP103ULC04	EP103ULD04	
	5	EP103ULB05	EP103ULC05	EP103ULD05	
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	25	EP103ULB25	EP103ULC25	EP103ULD25	
	30	EP103ULB30	EP103ULC30	EP103ULD30	
	32	EP103ULB32	EP103ULC32	EP103ULD32	
	40	EP103ULB40	EP103ULC40	EP103ULD40	
	50	EP103ULB50	EP103ULC50	EP103ULD50	
	60	EP103ULB60	EP103ULC60	EP103ULD60	
	63	EP103ULB63	EP103ULC63	EP103ULD63	
	4	0.5	-	EP104ULC0.5	EP104ULD0.5
1		-	EP104ULC01	EP104ULD01	
2		-	EP104ULC02	EP104ULD02	
3		-	EP104ULC03	EP104ULD03	
4		-	EP104ULC04	EP104ULD04	
5		EP104ULB05	EP104ULC05	EP104ULD05	
6		EP104ULB06	EP104ULC06	EP104ULD06	
10		EP104ULB10	EP104ULC10	EP104ULD10	
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32		EP104ULB32	EP104ULC32	EP104ULD32	
40		EP104ULB40	EP104ULC40	EP104ULD40	
50		EP104ULB50	EP104ULC50	EP104ULD50	
60		EP104ULB60	EP104ULC60	EP104ULD60	
63		EP104ULB63	EP104ULC63	EP104ULD63	



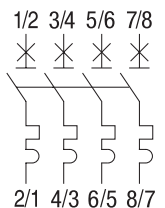
1 Pole



2 Pole



3 Pole



4 Pole

Miniature Circuit Breakers

E2000 Miniature Circuit Breakers with UL 489 Approval

EP100 ULH34 Series (Branch Circuit Protection)

Section 7

Applications

- Industrial
- Commercial

Performance

Thermal setting I_n (A)	0.5-40
Rated Vac U_n (V)	277/480V
Minimum operating voltage U_{Bmin} (V)	12
Tripping characteristics	B-C-D
Selectivity class	3
Mechanical/electrical endurance	20000/10000
Tropicalisation acc. to IEC 60068-2-28/2-30	95%RH at 55°C
Terminal capacity flexible/rigid cable (mm ²)	25-35
Poles	1, 2, 3
Weight/(g/pole)	130

Short-circuit Capacity

According to UL 489

Poles	V	I_{cc} (kA)
1	277	10
2, 3	480	10

According to IEC 60947-2

Poles	V	I_{cu} (kA) ⁽¹⁾
1	127	30
	240	15
	415	4
2	127	40
	240	30
	415	15
2, 3	440	10

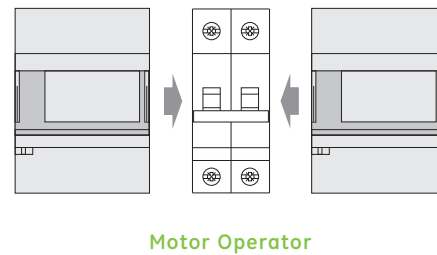
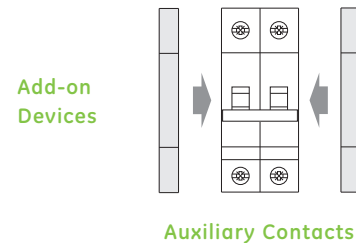
DC acc. to IEC 60947-2

Poles	U_n (V=)	I_{cu} (kA)/ I_{cs} (kA)
1	60	25
2	125	30

¹ $I_{cs} = 50\% I_{cu}$

Approval/Marking

- UL
- CE



Miniature Circuit Breakers

E2000 Miniature Circuit Breakers with UL 489 Approval

EP100 ULH34 Series (Branch Circuit Protection)

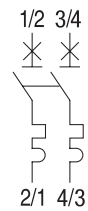
Section 7

UL489 EP100 ULH34 Series, 10kA, Tripping Characteristics B-C-D

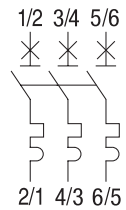
Poles	10 kAIC In (A)	Tripping Characteristic			GO-135VB	
		B (3-5X) Product No.	C (5-10X) Product No.	D (10-20X) Product No.		
1P	0.5	-	EP101ULH3C0.5	EP101ULH3D0.5		
	1	-	EP101ULH3C01	EP101ULH3D01		
	2	-	EP101ULH3C02	EP101ULH3D02		
	3	-	EP101ULH3C03	EP101ULH3D03		
	4	-	EP101ULH3C04	EP101ULH3D04		
	5	EP101ULH3B05	EP101ULH3C05	EP101ULH3D05		
	6	EP101ULH3B06	EP101ULH3C06	EP101ULH3D06		
	8	EP101ULH3B08	EP101ULH3C08	EP101ULH3D08		
	10	EP101ULH3B10	EP101ULH3C10	EP101ULH3D10		
	13	EP101ULH3B13	EP101ULH3C13	EP101ULH3D13		
	15	EP101ULH3B15	EP101ULH3C15	EP101ULH3D15		
	16	EP101ULH3B16	EP101ULH3C16	EP101ULH3D16		
	20	EP101ULH3B20	EP101ULH3C20	EP101ULH3D20		
	25	EP101ULH3B25	EP101ULH3C25	EP101ULH3D25		
	30	EP101ULH3B30	EP101ULH3C30	EP101ULH3D30		
	32	EP101ULH3B32	EP101ULH3C32	EP101ULH3D32		
	35	EP101ULH3B35	EP101ULH3C35	EP101ULH3D35		
	40	EP101ULH3B40	EP101ULH3C40	EP101ULH3D40		
	2P	0.5	-	EP102ULH4C0.5	EP102ULH4D0.5	
		1	-	EP102ULH4C01	EP102ULH4D01	
2		-	EP102ULH4C02	EP102ULH4D02		
3		-	EP102ULH4C03	EP102ULH4D03		
4		-	EP102ULH4C04	EP102ULH4D04		
5		EP102ULH4B05	EP102ULH4C05	EP102ULH4D05		
6		EP102ULH4B06	EP102ULH4C06	EP102ULH4D06		
8		EP102ULH4B08	EP102ULH4C08	EP102ULH4D08		
10		EP102ULH4B10	EP102ULH4C10	EP102ULH4D10		
13		EP102ULH4B13	EP102ULH4C13	EP102ULH4D13		
15		EP102ULH4B15	EP102ULH4C15	EP102ULH4D15		
16		EP102ULH4B16	EP102ULH4C16	EP102ULH4D16		
20		EP102ULH4B20	EP102ULH4C20	EP102ULH4D20		
25		EP102ULH4B25	EP102ULH4C25	EP102ULH4D25		
30		EP102ULH4B30	EP102ULH4C30	EP102ULH4D30		
32		EP102ULH4B32	EP102ULH4C32	EP102ULH4D32		
35		EP102ULH4B35	EP102ULH4C35	EP102ULH4D35		
40		EP102ULH4B40	EP102ULH4C40	EP102ULH4D40		
3P		0.5	-	EP103ULH4C0.5	EP103ULH4D0.5	
		1	-	EP103ULH4C01	EP103ULH4D01	
	2	-	EP103ULH4C02	EP103ULH4D02		
	3	-	EP103ULH4C03	EP103ULH4D03		
	4	-	EP103ULH4C04	EP103ULH4D04		
	5	EP103ULH4B05	EP103ULH4C05	EP103ULH4D05		
	6	EP103ULH4B06	EP103ULH4C06	EP103ULH4D06		
	8	EP103ULH4B08	EP103ULH4C08	EP103ULH4D08		
	10	EP103ULH4B10	EP103ULH4C10	EP103ULH4D10		
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	15	EP103ULH4B15	EP103ULH4C15	EP103ULH4D15		
	16	EP103ULH4B16	EP103ULH4C16	EP103ULH4D16		
	20	EP103ULH4B20	EP103ULH4C20	EP103ULH4D20		
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	30	EP103ULH4B30	EP103ULH4C30	EP103ULH4D30		
	32	EP103ULH4B32	EP103ULH4C32	EP103ULH4D32		
	35	EP103ULH4B35	EP103ULH4C35	EP103ULH4D35		
	40	EP103ULH4B40	EP103ULH4C40	EP103ULH4D40		



1 Pole



2 Pole



3 Pole

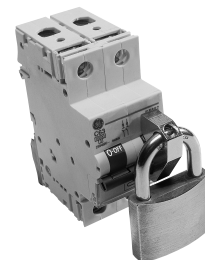
Accessories for MCBs

Description	Std. Pack	Product No.	GO-135VB
Walls for terminals IP ¹	10	WUL	
Padlocking Bracket - cut off the number of poles needed	25	KS	

¹Single pole MCBs mounted side by side must use walls.



Walls



Padlocking Bracket

Miniature Circuit Breakers

E2000 Miniature Circuit Breakers with UL 489 Approval

EP100 ULH12 Series (Branch Circuit Protection)

Section 7

Applications

- Industrial
- Commercial

Performance

Thermal setting I_n (A)	0.5-63
Rated Vac U_n (V)	120/240, 110V
Minimum operating voltage U_{Bmin} (V)	12
Tripping characteristics	B-C-D
Selectivity class	3
Mechanical/electrical endurance	20000/10000
Tropicalisation acc. to IEC 60068-2-28/2-30	95%RH at 55°C
Terminal capacity flexible/rigid cable (mm ²)	25-35
Poles	1, 2, 3
Weight/(g/pole)	130



Short-circuit Capacity

According to UL 489

Poles	V	I_{cc} (kA)
1	120	10
2, 3	240	10

According to IEC 60947-2

Poles	V	I_{cu} (kA) ⁽¹⁾
1	127	30
	240	15
	415	4
2	127	40
	240	30
	415	15
2, 3	440	10

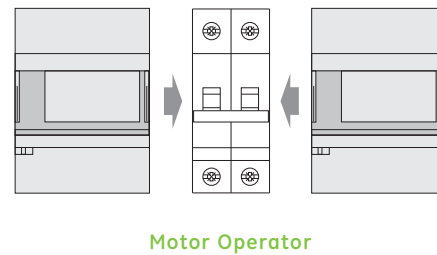
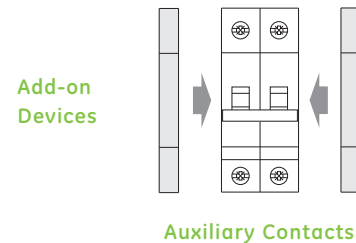
DC acc. to IEC 60947-2

Poles	U_n (V=)	I_{cu} (kA)/ I_{cs} (kA)
1	60	25
2	125	30

¹ $I_{cs} = 50\% I_{cu}$

Approval/Marking

- UL
- CE



Miniature Circuit Breakers

E2000 Miniature Circuit Breakers with UL 489 Approval

EP100 ULH12 Series (Branch Circuit Protection)

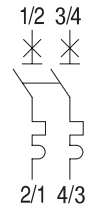
Section 7

UL489 EP100 ULH12 Series, 10kA, Tripping Characteristics B-C-D

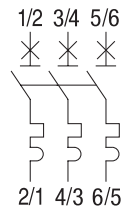
Poles	10 kAIC In (A)	Tripping Characteristic			GO-135VB	
		B (3-5X) Product No.	C (5-10X) Product No.	D (10-20X) Product No.		
1	0.5	-	EP101ULH1C0.5	EP101ULH1D0.5		
	1	-	EP101ULH1C01	EP101ULH1D01		
	2	-	EP101ULH1C02	EP101ULH1D02		
	3	-	EP101ULH1C03	EP101ULH1D03		
	4	-	EP101ULH1C04	EP101ULH1D04		
	5	EP101ULH1B05	EP101ULH1C05	EP101ULH1D05		
	6	EP101ULH1B06	EP101ULH1C06	EP101ULH1D06		
	8	EP101ULH1B08	EP101ULH1C08	EP101ULH1D08		
	10	EP101ULH1B10	EP101ULH1C10	EP101ULH1D10		
	13	EP101ULH1B13	EP101ULH1C13	EP101ULH1D13		
	15	EP101ULH1B15	EP101ULH1C15	EP101ULH1D15		
	16	EP101ULH1B16	EP101ULH1C16	EP101ULH1D16		
	20	EP101ULH1B20	EP101ULH1C20	EP101ULH1D20		
	25	EP101ULH1B25	EP101ULH1C25	EP101ULH1D25		
	30	EP101ULH1B30	EP101ULH1C30	EP101ULH1D30		
	32	EP101ULH1B32	EP101ULH1C32	EP101ULH1D32		
	35	EP101ULH1B35	EP101ULH1C35	EP101ULH1D35		
	40	EP101ULH1B40	EP101ULH1C40	EP101ULH1D40		
	50	EP101ULH1B50	EP101ULH1C50	EP101ULH1D50		
	60	EP101ULH1B60	EP101ULH1C60	EP101ULH1D60		
	63	EP101ULH1B63	EP101ULH1C63	EP101ULH1D63		
	2	0.5	-	EP102ULH2C0.5	EP102ULH2D0.5	
		1	-	EP102ULH2C01	EP102ULH2D01	
		2	-	EP102ULH2C02	EP102ULH2D02	
		3	-	EP102ULH2C03	EP102ULH2D03	
		4	-	EP102ULH2C04	EP102ULH2D04	
5		EP102ULH2B05	EP102ULH2C05	EP102ULH2D05		
6		EP102ULH2B06	EP102ULH2C06	EP102ULH2D06		
8		EP102ULH2B08	EP102ULH2C08	EP102ULH2D08		
10		EP102ULH2B10	EP102ULH2C10	EP102ULH2D10		
13		EP102ULH2B13	EP102ULH2C13	EP102ULH2D13		
15		EP102ULH2B15	EP102ULH2C15	EP102ULH2D15		
16		EP102ULH2B16	EP102ULH2C16	EP102ULH2D16		
20		EP102ULH2B20	EP102ULH2C20	EP102ULH2D20		
25		EP102ULH2B25	EP102ULH2C25	EP102ULH2D25		
30		EP102ULH2B30	EP102ULH2C30	EP102ULH2D30		
32		EP102ULH2B32	EP102ULH2C32	EP102ULH2D32		
35		EP102ULH2B35	EP102ULH2C35	EP102ULH2D35		
40		EP102ULH2B40	EP102ULH2C40	EP102ULH2D40		
50		EP102ULH2B50	EP102ULH2C50	EP102ULH2D50		
60		EP102ULH2B60	EP102ULH2C60	EP102ULH2D60		
63		EP102ULH2B63	EP102ULH2C63	EP102ULH2D63		
3		0.5	-	EP103ULH3C0.5	EP103ULH3D0.5	
		1	-	EP103ULH3C01	EP103ULH3D01	
		2	-	EP103ULH3C02	EP103ULH3D02	
		3	-	EP103ULH3C03	EP103ULH3D03	
		4	-	EP103ULH3C04	EP103ULH3D04	
	5	EP103ULH3B05	EP103ULH3C05	EP103ULH3D05		
	6	EP103ULH3B06	EP103ULH3C06	EP103ULH3D06		
	8	EP103ULH3B08	EP103ULH3C08	EP103ULH3D08		
	10	EP103ULH3B10	EP103ULH3C10	EP103ULH3D10		
	13	EP103ULH3B13	EP103ULH3C13	EP103ULH3D13		
	15	EP103ULH3B15	EP103ULH3C15	EP103ULH3D15		
	16	EP103ULH3B16	EP103ULH3C16	EP103ULH3D16		
	20	EP103ULH3B20	EP103ULH3C20	EP103ULH3D20		
	25	EP103ULH3B25	EP103ULH3C25	EP103ULH3D25		
	30	EP103ULH3B30	EP103ULH3C30	EP103ULH3D30		
	32	EP103ULH3B32	EP103ULH3C32	EP103ULH3D32		
	35	EP103ULH3B35	EP103ULH3C35	EP103ULH3D35		
	40	EP103ULH3B40	EP103ULH3C40	EP103ULH3D40		
	50	EP103ULH3B50	EP103ULH3C50	EP103ULH3D50		
	60	EP103ULH3B60	EP103ULH3C60	EP103ULH3D60		
	63	EP103ULH3B63	EP103ULH3C63	EP103ULH3D63		



1 Pole



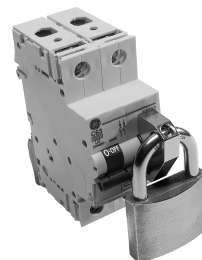
2 Pole



3 Pole



Walls



Padlocking Bracket

Accessories for MCBs

Description	Std. Pack	Product No.	GO-135VB
Walls for terminals IP ¹	10	WUL	
Padlocking Bracket - cut off the number of poles needed	25	KS	

¹Single pole MCBs mounted side by side must use walls.

Miniature Circuit Breakers

E2000 Miniature Circuit Breakers

EP100 UC Series¹

Section 7

Applications

—Industrial

Performance

Thermal setting I _n (A)	0.5-63
Rated Vac U _n (V)	240/400; 230/440
Minimum operating voltage U _B min (V)	12
Tripping characteristics	B-C
Selectivity class	3
Mechanical/electrical endurance	20000/10000
Tropicalisation acc. to IEC 60068-2	95% RH at 55°C
Terminal capacity flexible/rigid cable mm ²	25-35
Poles	1, 2
Weight (g/pole)	120

Short-circuit Capacity

AC acc. to IEC 60898

Poles	V	I _{cu} /I _{cs} (kA)
1	125 DC	10
	220 DC	6
	230/400 AC	6
2	250 DC	10
	440 DC	6
	400 AC	6

AC acc. to IEC 60947-2

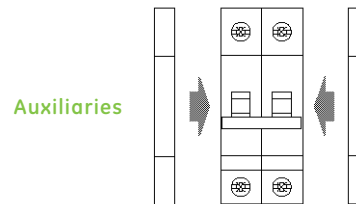
Poles	V	I _{cu} /I _{cs} (kA)
1, 2	240 AC	10

Approval/Marking

—IEC 60898-2, DIN VDE 0641

—CE

¹Not UL approved



Auxiliaries

Add-on Devices

Miniature Circuit Breakers

E2000 Miniature Circuit Breakers

EP100 UC Series¹

Section 7

EP100 UC Series, 10 kAIC @125 Vdc, Tripping Characteristics B-C

Poles	Std. Pack	6 kAIC In (A)	Tripping Characteristic		GO-135VB
			B (3-5X) Product No.	C (5-10X) Product No.	
1	12	0.5	-	EP101UCC0.5	
		1	-	EP101UCC01	
		2	-	EP101UCC02	
		4	-	EP101UCC04	
		6	EP101UCB06	EP101UCC06	
		10	EP101UCB10	EP101UCC10	
		16	EP101UCB16	EP101UCC16	
		20	EP101UCB20	EP101UCC20	
		25	EP101UCB25	EP101UCC25	
		32	EP101UCB32	EP101UCC32	
		40	EP101UCB40	EP101UCC40	
		50	EP101UCB50	EP101UCC50	
		63	EP101UCB63	EP101UCC63	
		2	6	0.5	
1	-			EP102UCC01	
2	-			EP102UCC02	
4	-			EP102UCC04	
6	EP102UCB06			EP102UCC06	
10	EP102UCB10			EP102UCC10	
16	EP102UCB16			EP102UCC16	
20	EP102UCB20			EP102UCC20	
25	EP102UCB25			EP102UCC25	
32	EP102UCB32			EP102UCC32	
40	EP102UCB40			EP102UCC40	
50	EP102UCB50			EP102UCC50	
63	EP102UCB63			EP102UCC63	

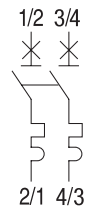
¹Not UL approved



1 Pole



2 Pole



Miniature Circuit Breakers

E2000 Miniature Circuit Breakers

Series CA Auxiliary Switch and Bell Alarm

Applications

- Commercial
- Industrial

Features

- Common for all MCBs
- Can be coupled on both sides of MCBs
- Gold contact version available for low current and low voltage applications
- Stack up to four CA on left and right sides
- Permits the pass-through of busbars, pin and fork, top and bottom, by changing the position of the base of the auxiliaries

Performance

Change-over contacts	1 Form C
Rate current In (A)	5
Rated voltage AC Un (V)	240
Electrical endurance	10000
Terminal capacity flexible/rigid cable (mm ²)	2.5
Weight (g)	70

Functions

Auxiliary contacts are units to be added on to protection devices. They allow information about the status of the protection device to be monitored from a distance.

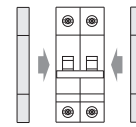
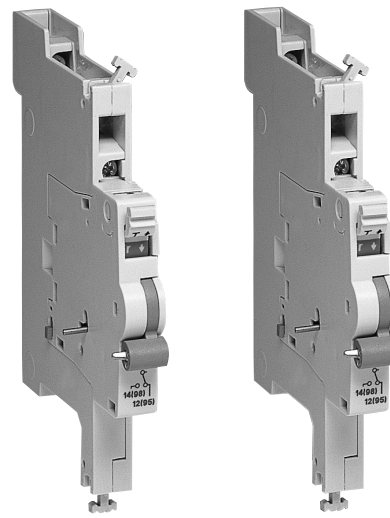
Auxiliary contact CA H (function H) reports the OPEN/CLOSED status. CA S/H or CA S/H G act as either an auxiliary contact (function H) or a signal contact (function S). The user can set the function at the time of installation. When used as a signal contact, it reports information about the automatic tripping of the protection devices. A test button on the front simulates functions H or S. There are also a reset button for the contacts (function S) and a tripping signal (function S).

Approval/Marking

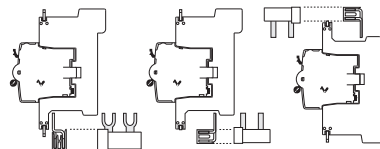
- CE
- cURus
- CEBEC
- KEMA EUR

Series CA

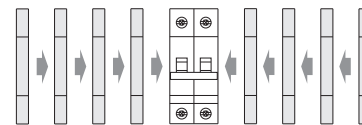
Function	Std. Pack	Product No.	List Price GO-135VB
H	1	CA H	\$47.00
S/H	1	CA S/H	\$59.00
S/H (gold contacts)	1	CA S/H G	\$59.00
Padlocking Bracket	25	KS	\$12.00



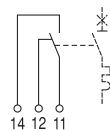
Coupling



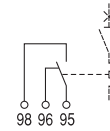
Busbar pass-through



Stack-on



H



S

1/2 mod.

Miniature Circuit Breakers

E2000 Miniature Circuit Breakers

Series CB Auxiliary Switch and Bell Alarm

Applications

- Commercial
- Industrial

Features

- Common for all MCBs
- Can be coupled on both sides of MCBs
- There are two change-over contacts – the upper one features changeable function S/H
- CB SH/HH-R couples to the right side of the protection devices; CB SH/HH-L couple to the left
- No stack-on possibilities (only one auxiliary)
- No busbar pass-through facilities

Performance

Change-over contacts	2 Form C
Rate current In (A)	5
Rated voltage AC Un (V)	240
Electrical endurance	10000
Terminal capacity flexible/rigid cable (mm ²)	2.5
Weight (g)	80

Functions

The bottom auxiliary contact (function H) reports the OPEN/ CLOSED status.

The top auxiliary contact can act as either an auxiliary contact (function H) or a signal contact (function S). The user can set the function at the time of installation. When used as a signal contact, it reports information about the automatic tripping of the protection devices.

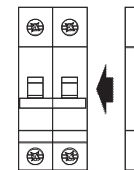
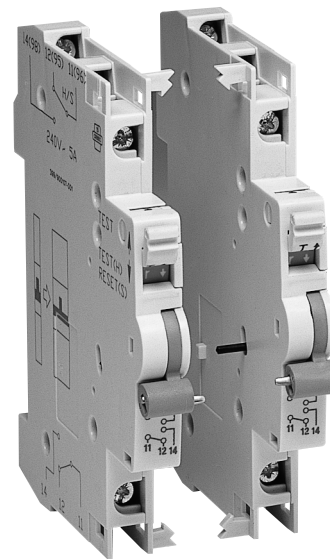
A test button on the front simulates functions H or S. There are also a reset button for the contacts (function S) and a tripping signal (function S).

Approval/Marking

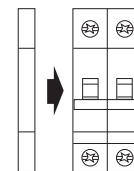
- cURus

Series CB

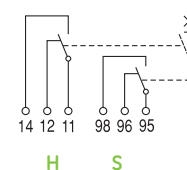
Function	Coupling	Std. Pack	Product No.	GO-135VB
SH/HH	Right	1	CB SH/HH-R	
SH/HH	Left	1	CB SH/HH-L	



Coupling right



Coupling left



1/2 mod.

Miniature Circuit Breakers

E2000 Miniature Circuit Breakers

Shunt Trip and Undervoltage Release

Applications

- Commercial
- Industrial

Features

- Common devices for all miniature circuit breakers
- Can be coupled on both sides of MCBs
- Permits pass-through of busbars, pin and fork, at top or bottom terminals
- Stack up to four modules on left and right sides

Approval/Marking

- cURus
- IEC 947-2

Shunt Trip Tele L

The Tele L allows remote switching of any miniature circuit breaker by means of push buttons or any other automatic management processor. A built-in contact, in series with the coil, prevents burnout damage if the voltage remains.



Shunt Trip Tele L Performance

Rated voltage (V)	110/415, 110/125 DC
	24/60, 24/48 DC
Tripping time (ms)	<10
Electrical endurance	10000
Terminal capacity flexible/rigid cable (mm ²)	2.5
Weight (g)	125

Shunt Trip Tele L

Poles	Std. Pack	Voltage		Product No.	GO-135VB
		AC	DC		
1	1	24-60 V	24-48 V	TELE L-1	
		110-415 V	110-125 V	TELE L-2	

Undervoltage Release Tele U

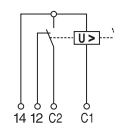
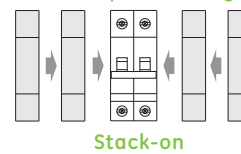
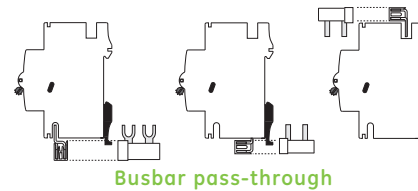
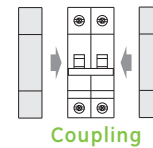
The Tele U releases the main miniature circuit breaker in case the power supply drops below 0.5xUn. Time delay is adjustable up to 300 ms.

Undervoltage Release Tele U Performance

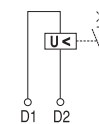
Rated voltage AC UN (V)	240
Rated voltage DC/AC UN (V)	12, 24, 48 DC/AC
Tripping voltage (V)	≤0.5xUN ±10%
Resetting voltage (V)	>0.5xUN ±10%
Tripping time (ms)	Adjustable 1-300
Electrical endurance	2000
Terminal capacity flexible/rigid cable (mm ²)	2.5
Weight (g)	125

Undervoltage Release Tele U

Poles	Std. Pack	Voltage	Product No.	GO-135VB
AC/DC 12V	TELE U-12			
AC/DC 24V	TELE U-24			
AC/DC 48V	TELE U-48			



Shunt Trip Tele L



Undervoltage Release Tele L

Miniature Circuit Breakers

E2000 Miniature Circuit Breakers

Technical Data

Section 7

Technical Data–E2000 Miniature Circuit Breakers

			Series					
			EP60 UL	EP100 UL	EP100 ULH34	EP100 ULH12	EP100 UC	
Standards			UL1077, EN60947-2	UL1077, EN60947-2	UL489, EN60947-2	UL489, EN60947-2	IEC EN70898-2	
UL file			E151139	E151139	E256870	E256870	–	
Nominal voltage acc. UL	1P		277VAC/50VDC	277VAC/50VDC	277VAC/60VDC	120VAC/60VDC		
		2P	480VAC/110VDC	480VAC/110VDC	480VAC/120VDC	240VAC/120VDC		
		3P	480VAC/110VDC	480VAC/110VDC	480VAC/120VDC	240VAC/120VDC		
		4P	480VAC/110VDC	480VAC/110VDC				
Tripping characteristics			B,C,D	B,C,D	B,C,D	B,C,D	B,C	
Nominal current			B 6-63, C/D 0.5-63	B 6-63, C/D 0.5-63	B 5-40, C/D 0.5-40	B 0.5-63, C/D 0.5-63	B 6-63, C 0.5-63	
Calibration temperature			°C	50	50	50	30	
Number of poles			(# mod)	1/2/3/4	1/2/3	1/2/3	1/2	
Nominal voltage Un								
AC	1P	V	230/400	230/400	230/400	230/400	240/415	
	2P	V	400	400	400	400	415	
	3P	V	400	400	400	400	415	
	3P+N/4P	V	400	400	400	400	415	
DC	1P	VDC	48	48	48	48	220	
	2P (in series)	VDC	110	110	110	110	440	
Frequency			Hz	50/60	50/60	50/60	50/60	
Maximum service voltage U _{max} between two wires			V	250/440; 53/120	250/440; 53/120	250/440; 53/120	250/440; 53/120	250/440; 250/440
Minimum service voltage U _{min}			V	12 and 12	12 and 12	12 and 12	12 and 12	12 and 12
Selectivity class (IEC 60898)				3	3	3	3	
Isolator application			IEC 60947-2	yes	yes	yes	yes	
Rated insulation voltage	Pollution degree 2	V	500	500	500	500	500	
	Pollution degree 3	V	440	440	440	440	440	
Impulse withstand test voltage			kV	6	6	6	6	
Insulation resistance			MΩ	10000	10000	10000	10000	
Dielectric rigidity			kV	2.5	2.5	2.5	2.5	
Mounting position				any	any	any	any	
Incoming top or bottom				any	any	any	any	
Vibrations resistance (in x, y, z direction) (IEC 77/16.3)				3g	3g	3g	3g	
Endurance	electrical at Un, In		10000	10000	10000	10000	10000	
	mechanical		20000	20000	20000	20000	20000	
Utilisation category (IEC 60947-2)				A	A	A	A	
Protection distance (IEC 60947-2)			mm	12	12	12	12	
Protection degree (outside / inside enclosure with door)				IP20/IP40	IP20/IP40	IP20/IP40	IP20/IP40	
Self-extinguish degree (according to UL94)				V0	V0	V0	V2	
Tropicalisation (according to IEC 60068-2 / DIN 40046)			°C/RH	+55°C / 95%RH	+55°C / 95%RH	+55°C / 95%RH	+55°C / 95%RH	
Operating temperature			°C	-25/+55	-25/+55	-25/+55	-25/+55	
Storage temperature			°C	-55/+55	-55/+55	-55/+55	-55/+55	
Terminal capacity								
		Rigid cable min/max (top)	mm ²	1/35	1/35	1/35	1/35	
		Flexible cable min*/max (top)	mm ²	0.75/25	0.75/25	0.75/25	0.75/25	
		Rigid cable min/max (bottom)	mm ²	1/35	1/35	1/35	1/35	
		Flexible cable min*/max (bottom)	mm ²	0.75/25	0.75/25	0.75/25	0.75/25	
		(* Flexible cable 0.75/1/1.5 mm ² with cable lug)						
		Torque	Nm	max 4.5	max 4.5	max 4.5	max 4.5	
Add-on devices								
		Auxiliary contacts		yes	yes	yes	yes	
(side add-on)								
		Tele L		yes	yes	yes	yes	
		Tele Mp		yes	yes	yes	yes	
Dimensions, weights, packaging (HxDxW) 86x68xW ¹			mm/mod.	18	18	18	18	
Weight/mod.			g	125	125	130	125	
Approvals				UL/CSA/VDE	UL/CSA/VDE	UL	UL	
CE marking				yes	yes	yes	yes	

¹EP100ULH executions 2P and 3P: H = 16 mm

Miniature Circuit Breakers

E2000 Miniature Circuit Breakers with UL 489 Approval

EP100 ULH Series (Branch Circuit Protection)

Section 7

Short Circuit Capacity-E2000 Miniature Circuit Breakers

		Series				
		EP60 UL	EP100 UL	EP100 ULH34	EP100 ULH12	EP100 UC
Interrupting capacity acc. to						
	kA	UL1077	UL1077	UL489	UL489	
1P/2P	277VAC	6	10	10	-	
3P/4P	480VAC	6	10	10	-	
1P	120VAC	6	10	-	10	
2P/3P	240VAC	-	-	-	10	
1P	50VDC	6	10	10	10	
2P	110VDC	6	10	10	10	
Short-circuit capacity AC						
Icu (ultimate)						
	kA					
1 P	127 V	20	30	30	30	
	240 V	10	15	15	15	
	415 V	3	4	4	4	
1+N /2P	127 V	30	40	40	40	
	240 V	20	30	30	30	
2 P	415 V	10	15	15	15	
3/3+N/4P	240 V	20	30	30	30	
	415 V	10	15	15	15	
	440 V	6	10	10	10	
Ics (service)		75% Icu	50% Icu	50% Icu	50% Icu	
Short-circuit capacity DC						
Icu (ultimate)						
	kA					
1 P	≤ 60 V	20	25	25	25	
	≤ 220 V	-	-	-	-	6
2 P	≤ 125 V	25	30	30	30	
	≤ 440 V	-	-	-	-	6
Ics (service)		100% Icu	100% Icu	10% Icu	10% Icu	