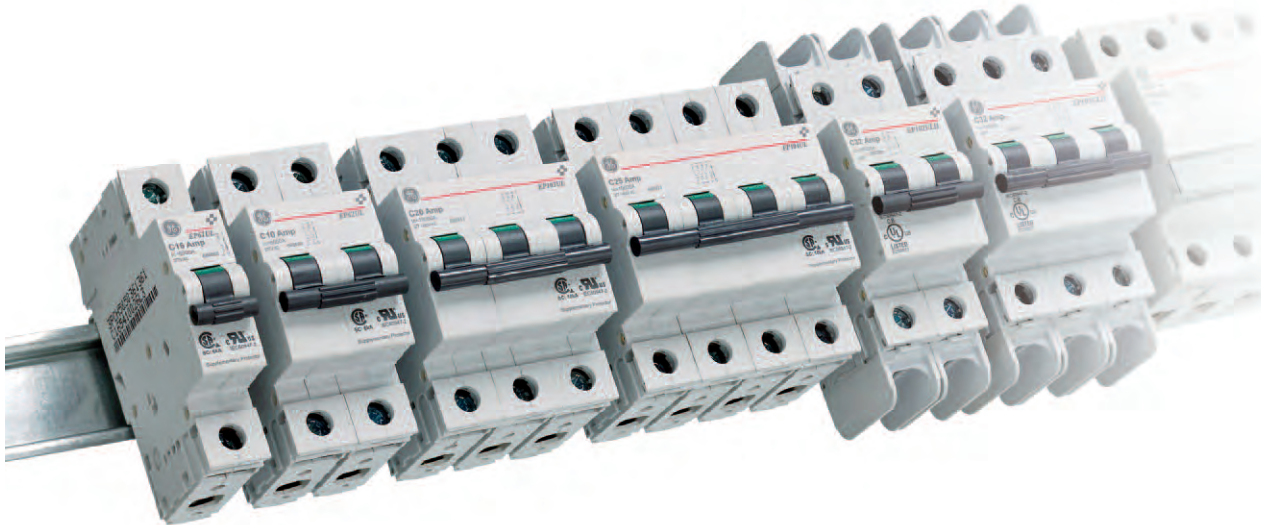


GE Consumer & Industrial
Electrical Distribution

E2000 Miniature Circuit Breakers Catalog/Selection Guide



imagination at work

E2000 Miniature Circuit Breakers

Compact, modular, flexible and approved

E2000 Miniature Circuit Breakers (MCBs) offer superior supplemental overload and short circuit protection. The new E2000 line has two levels of interruption capacity, 6 kAIC and 10 kAIC, at 480Y/277. These circuit breakers provide application flexibility with their small size and modularity. They are DIN rail mounted in one-, two-, three- and four-pole construction. Depending on the line, E2000 MCBs are Component Recognized under UL1077, UL Listed under UL489, and CE marked.

Features and benefits:

- Dual AC & DC Ratings
- 6 kAIC & 10 kAIC Interruption Ratings @480Y/277 Vac
- B Trip Characteristics from 5 to 63 A
- C & D Trip Characteristics from 0.5 to 63 A
- Standard North American 5, 15, 30 & 60 A Ratings
- Left & Right Side Accessory Mounting - up to 4 per side
- 35 mm DIN-rail Mounting
- UL Recognized & CSA Approved

Applications:

- Power supplies/UPS
- PLC I/O points
- Lighting circuits
- Solenoids
- Relay/contactors coils
- Appliances
- Control circuits
- Motor circuits



E2000 Miniature Circuit Breakers

Technical Data

			Series				
			EP60	EP100	EP100 UC	EP100 ULH	
Standards			UL1077, EN60947-2	UL1077, EN60947-2	IEC EN70898-2	UL489, EN60947-2	
Tripping characteristics			B,C,D	B,C,D	B,C	B,C,D	
Nominal current	A		B: 6-63, C/D: 0.5-63	B: 6-63, C/D: 0.5-63	B: 6-63, C: 0.5-63	B: 0.5-32, C/D: 0.5-32	
Calibration temperature	°C		50	50	30	50	
Number of poles (# mod)			1/1+N/2/3/4	1/1+N/2/3/4	1/2	1/2/3	
Neutral pole protected			yes	yes	-	-	
Nominal voltage Un	AC	1P	V	240/415	240/415	240/415	120
		2P	V	415	415	415	240
		3P/3P+N/4P	V	415	415	415	240
	DC	1P (1)	VDC	48	48	220	50
		2P (in series) (1)	VDC	110	110	440	110
Frequency			Hz	50/60	50/60	50/60	50/60
			Hz	DC:magn.trip + 40%	DC:magn.trip + 40%	DC:magn.trip + 40%	DC:magn.trip + 40%
			Hz	DC:magn.trip + 50%	400:magn.trip + 50%	400:magn.trip + 50%	400:magn.trip + 50%
Maximum service voltage U _{max} between two wires			V	250/440; 53/120	250/440; 53/120	250/440; 250/440	250/440; 53/120
Minimum service voltage U _{min}			V	12; 12	12; 12	12; 12	12; 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
Rated insulation voltage – Pollution Degree 3			V	440	440	440	440
Impulse withstand test voltage			Kv	6	6	6	6
Insulation resistance			Mohm	10000	10000	10000	10000
Dielectric rigidity			Kv	2.5	2.5	2.5	2.5
Vibrations resistance (in x,y,z direction) (IEC 77/16,3)				3g	3g	3g	3g
Endurance – electrical at U _n , I _n				10000	10000	10000	10000
Endurance – mechanical				20000	20000	20000	20000
Utilisation category (IEC 60947 - 2)				A	A	A	A
Mounting position				any	any	any	any
Incoming top or bottom				yes	yes	yes	yes
Protection degree (outside / inside enclosure with door)				IP20/IP40	IP20/IP40	IP20/IP40	IP20/IP40
Self extinguish degree (according to UL94)				V0	V0	V0	V0
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
Terminal capacity – Flexible cable min*/max (top)			mm ²	0.75/25	0.75/25	0.75/25	0.75/25
Terminal capacity – Rigid cable min/max (bottom)			mm ²	1/35	1/35	1/35	1/35
Terminal Capacity – Flexible cable min*/max (bottom) (*Flexible cable 0.75/1/1.5 mm ² with cable lug)			mm ²	0.75/25	0.75/25	0.75/25	0.75/25
Torque			Nm	4.5	4.5	4.5	4.5
Add-on services – Auxiliary contacts				yes	yes	yes	yes
Add-on services – Tele U				yes	yes	yes	yes
Add-on services – Tele L				yes	yes	yes	yes
Busbar systems – pin (top/bottom) (non-UL)				yes/yes	yes/yes	yes/yes	no/no
Busbar systems – fork (top/bottom) (non-UL)				-/yes	-/yes	-/yes	no/no
Accessories				yes	yes	yes	yes
Dimensions, weights, packaging							
(HxDxW) 86x68xW*			mm/mod	18	18	18	18
Weight/mod			g	120	120	125	130
Package			mod.	12	12	12	12
Approvals				KEMA	KEMA	-	-
CE-marking				yes	yes	yes	yes

*EP100 ULH 116x68xW

E2000 Miniature Circuit Breakers – UL 1077

EP60 Series

Performance

Thermal setting In	(A)	0.5-63
Rated voltage AC Un	(V)	240/415
Minimum operating voltage $U_{B \text{ min}}$	(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	-	6	-	10	-
2	480Y/277	110	10	10	6	-	-	10
3, 4	480Y/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	240	10
2,3,4	240	20
2,3,4	415	10

*Ics = 75% Icu

DC acc. to IEC 60947-2

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

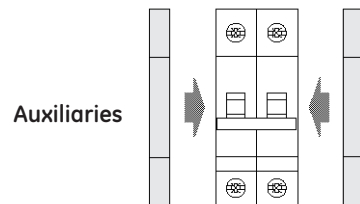
Applications








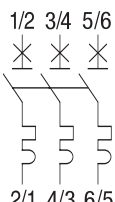

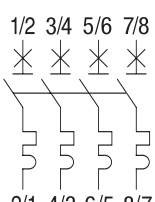
Approval / Marking



Add-on Devices



EP60 Series, 6 kAIC, Tripping Characteristics B-C-D – UL 1077

Poles	In (A)	Tripping Characteristic			List Price Each, GO-135VB	Std. Pack
		B (3-5X) Cat. No.	C (5-10X) Cat. No.	D (10-20X) Cat. No.		
 	0.5	-	EP61ULC0.5	EP61ULD0.5	\$78.00	12
	1	-	EP61ULC01	EP61ULD01	65.00	12
	2	-	EP61ULC02	EP61ULD02	65.00	12
	3	-	EP61ULC03	EP61ULD03	65.00	12
	4	-	EP61ULC04	EP61ULD04	65.00	12
	5	EP61ULB05	EP61ULC05	EP61ULD05	65.00	12
	6	EP61ULB06	EP61ULC06	EP61ULD06	65.00	12
	10	EP61ULB10	EP61ULC10	EP61ULD10	65.00	12
	13	EP61ULB13	EP61ULC13	EP61ULD13	65.00	12
	15	EP61ULB15	EP61ULC15	EP61ULD15	65.00	12
	16	EP61ULB16	EP61ULC16	EP61ULD16	65.00	12
	20	EP61ULB20	EP61ULC20	EP61ULD20	65.00	12
	25	EP61ULB25	EP61ULC25	EP61ULD25	65.00	12
	30	EP61ULB30	EP61ULC30	EP61ULD30	65.00	12
	32	EP61ULB32	EP61ULC32	EP61ULD32	65.00	12
	40	EP61ULB40	EP61ULC40	EP61ULD40	72.00	12
	50	EP61ULB50	EP61ULC50	EP61ULD50	76.00	12
	60	EP61ULB60	EP61ULC60	EP61ULD60	80.00	12
	63	EP61ULB63	EP61ULC63	EP61ULD63	80.00	12
	 	0.5	-	EP62ULC0.5	EP62ULD0.5	156.00
1		-	EP62ULC01	EP62ULD01	141.00	6
2		-	EP62ULC02	EP62ULD02	141.00	6
3		-	EP62ULC03	EP62ULD03	141.00	6
4		-	EP62ULC04	EP62ULD04	141.00	6
5		EP62ULB05	EP62ULC05	EP62ULD05	141.00	6
6		EP62ULB06	EP62ULC06	EP62ULD06	141.00	6
10		EP62ULB10	EP62ULC10	EP62ULD10	141.00	6
13		EP62ULB13	EP62ULC13	EP62ULD13	141.00	6
15		EP62ULB15	EP62ULC15	EP62ULD15	141.00	6
16		EP62ULB16	EP62ULC16	EP62ULD16	141.00	6
20		EP62ULB20	EP62ULC20	EP62ULD20	141.00	6
25		EP62ULB25	EP62ULC25	EP62ULD25	141.00	6
30		EP62ULB30	EP62ULC30	EP62ULD30	141.00	6
32		EP62ULB32	EP62ULC32	EP62ULD32	141.00	6
40		EP62ULB40	EP62ULC40	EP62ULD40	145.00	6
50		EP62ULB50	EP62ULC50	EP62ULD50	156.00	6
60		EP62ULB60	EP62ULC60	EP62ULD60	164.00	6
63		EP62ULB63	EP62ULC63	EP62ULD63	164.00	6
 		0.5	-	EP63ULC0.5	EP63ULD0.5	230.00
	1	-	EP63ULC01	EP63ULD01	204.00	4
	2	-	EP63ULC02	EP63ULD02	204.00	4
	3	-	EP63ULC03	EP63ULD03	204.00	4
	4	-	EP63ULC04	EP63ULD04	204.00	4
	5	EP63ULB05	EP63ULC05	EP63ULD05	204.00	4
	6	EP63ULB06	EP63ULC06	EP63ULD06	204.00	4
	10	EP63ULB10	EP63ULC10	EP63ULD10	204.00	4
	13	EP63ULB13	EP63ULC13	EP63ULD13	204.00	4
	15	EP63ULB15	EP63ULC15	EP63ULD15	204.00	4
	16	EP63ULB16	EP63ULC16	EP63ULD16	204.00	4
	20	EP63ULB20	EP63ULC20	EP63ULD20	204.00	4
	25	EP63ULB25	EP63ULC25	EP63ULD25	204.00	4
	30	EP63ULB30	EP63ULC30	EP63ULD30	204.00	4
	32	EP63ULB32	EP63ULC32	EP63ULD32	204.00	4
	40	EP63ULB40	EP63ULC40	EP63ULD40	210.00	4
	50	EP63ULB50	EP63ULC50	EP63ULD50	219.00	4
	60	EP63ULB60	EP63ULC60	EP63ULD60	229.00	4
	63	EP63ULB63	EP63ULC63	EP63ULD63	229.00	4
	 	0.5	-	EP64ULC0.5	EP64ULD0.5	300.00
1		-	EP64ULC01	EP64ULD01	269.00	3
2		-	EP64ULC02	EP64ULD02	269.00	3
3		-	EP64ULC03	EP64ULD03	269.00	3
4		-	EP64ULC04	EP64ULD04	269.00	3
5		EP64ULB05	EP64ULC05	EP64ULD05	269.00	3
6		EP64ULB06	EP64ULC06	EP64ULD06	269.00	3
10		EP64ULB10	EP64ULC10	EP64ULD10	269.00	3
13		EP64ULB13	EP64ULC13	EP64ULD13	269.00	3
15		EP64ULB15	EP64ULC15	EP64ULD15	269.00	3
16		EP64ULB16	EP64ULC16	EP64ULD16	269.00	3
20		EP64ULB20	EP64ULC20	EP64ULD20	269.00	3
25		EP64ULB25	EP64ULC25	EP64ULD25	269.00	3
30		EP64ULB30	EP64ULC30	EP64ULD30	269.00	3
32		EP64ULB32	EP64ULC32	EP64ULD32	269.00	3
40		EP64ULB40	EP64ULC40	EP64ULD40	272.00	3
50		EP64ULB50	EP64ULC50	EP64ULD50	285.00	3
60		EP64ULB60	EP64ULC60	EP64ULD60	293.00	3
63		EP64ULB63	EP64ULC63	EP64ULD63	293.00	3

E2000 Miniature Circuit Breakers – UL 1077

EP100 Series

Performance

Thermal setting In	(A)	0.5-63
Rated voltage AC Un	(V)	277/480
Minimum operating voltage $U_{B \text{ min}}$	(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)	125



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)*
1-4	230/400	10

*Ics = 75% Icu

AC acc. to IEC 60947-2

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

*Ics = 50% Icu

DC acc. to IEC 60947-2

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

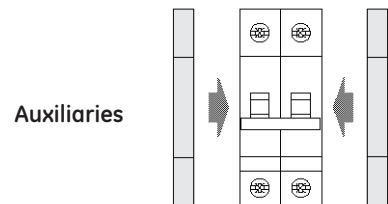
Applications








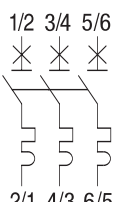

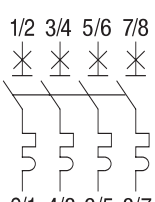
Approval / Marking



Add-on Devices



EP100 Series, 10 kAIC, Tripping Characteristics B-C-D – UL 1077

Poles	In (A)	Tripping Characteristic			List Price Each, GO-135VB
		B (3-5X) Cat. No.	C (5-10X) Cat. No.	D (10-20X) Cat. No.	
1  	0.5	-	EP101ULC0.5	EP101ULD0.5	\$116.00
	1	-	EP101ULC01	EP101ULD01	97.00
	2	-	EP101ULC02	EP101ULD02	97.00
	3	-	EP101ULC03	EP101ULD03	97.00
	4	-	EP101ULC04	EP101ULD04	97.00
	5	EP101ULB05	EP101ULC05	EP101ULD05	97.00
	6	EP101ULB06	EP101ULC06	EP101ULD06	97.00
	10	EP101ULB10	EP101ULC10	EP101ULD10	97.00
	13	EP101ULB13	EP101ULC13	EP101ULD13	97.00
	15	EP101ULB15	EP101ULC15	EP101ULD15	97.00
	16	EP101ULB16	EP101ULC16	EP101ULD16	97.00
	20	EP101ULB20	EP101ULC20	EP101ULD20	97.00
	25	EP101ULB25	EP101ULC25	EP101ULD25	97.00
	30	EP101ULB30	EP101ULC30	EP101ULD30	97.00
	32	EP101ULB32	EP101ULC32	EP101ULD32	97.00
	40	EP101ULB40	EP101ULC40	EP101ULD40	107.00
	50	EP101ULB50	EP101ULC50	EP101ULD50	113.00
	60	EP101ULB60	EP101ULC60	EP101ULD60	119.00
63	EP101ULB63	EP101ULC63	EP101ULD63	119.00	
2  	0.5	-	EP102ULC0.5	EP102ULD0.5	233.00
	1	-	EP102ULC01	EP102ULD01	210.00
	2	-	EP102ULC02	EP102ULD02	210.00
	3	-	EP102ULC03	EP102ULD03	210.00
	4	-	EP102ULC04	EP102ULD04	210.00
	5	EP102ULB05	EP102ULC05	EP102ULD05	210.00
	6	EP102ULB06	EP102ULC06	EP102ULD06	210.00
	10	EP102ULB10	EP102ULC10	EP102ULD10	210.00
	13	EP102ULB13	EP102ULC13	EP102ULD13	210.00
	15	EP102ULB15	EP102ULC15	EP102ULD15	210.00
	16	EP102ULB16	EP102ULC16	EP102ULD16	210.00
	20	EP102ULB20	EP102ULC20	EP102ULD20	210.00
	25	EP102ULB25	EP102ULC25	EP102ULD25	210.00
	30	EP102ULB30	EP102ULC30	EP102ULD30	210.00
	32	EP102ULB32	EP102ULC32	EP102ULD32	210.00
	40	EP102ULB40	EP102ULC40	EP102ULD40	216.00
	50	EP102ULB50	EP102ULC50	EP102ULD50	233.00
	60	EP102ULB60	EP102ULC60	EP102ULD60	245.00
63	EP102ULB63	EP102ULC63	EP102ULD63	245.00	
3  	0.5	-	EP103ULC0.5	EP103ULD0.5	343.00
	1	-	EP103ULC01	EP103ULD01	304.00
	2	-	EP103ULC02	EP103ULD02	304.00
	3	-	EP103ULC03	EP103ULD03	304.00
	4	-	EP103ULC04	EP103ULD04	304.00
	5	EP103ULB05	EP103ULC05	EP103ULD05	304.00
	6	EP103ULB06	EP103ULC06	EP103ULD06	304.00
	10	EP103ULB10	EP103ULC10	EP103ULD10	304.00
	13	EP103ULB13	EP103ULC13	EP103ULD13	304.00
	15	EP103ULB15	EP103ULC15	EP103ULD15	304.00
	16	EP103ULB16	EP103ULC16	EP103ULD16	304.00
	20	EP103ULB20	EP103ULC20	EP103ULD20	304.00
	25	EP103ULB25	EP103ULC25	EP103ULD25	304.00
	30	EP103ULB30	EP103ULC30	EP103ULD30	304.00
	32	EP103ULB32	EP103ULC32	EP103ULD32	304.00
	40	EP103ULB40	EP103ULC40	EP103ULD40	314.00
	50	EP103ULB50	EP103ULC50	EP103ULD50	327.00
	60	EP103ULB60	EP103ULC60	EP103ULD60	342.00
63	EP103ULB63	EP103ULC63	EP103ULD63	342.00	
4  	0.5	-	EP104ULC0.5	EP104ULD0.5	448.00
	1	-	EP104ULC01	EP104ULD01	401.00
	2	-	EP104ULC02	EP104ULD02	401.00
	3	-	EP104ULC03	EP104ULD03	401.00
	4	-	EP104ULC04	EP104ULD04	401.00
	5	EP104ULB05	EP104ULC05	EP104ULD05	401.00
	6	EP104ULB06	EP104ULC06	EP104ULD06	401.00
	10	EP104ULB10	EP104ULC10	EP104ULD10	401.00
	13	EP104ULB13	EP104ULC13	EP104ULD13	401.00
	15	EP104ULB15	EP104ULC15	EP104ULD15	401.00
	16	EP104ULB16	EP104ULC16	EP104ULD16	401.00
	20	EP104ULB20	EP104ULC20	EP104ULD20	401.00
	25	EP104ULB25	EP104ULC25	EP104ULD25	401.00
	30	EP104ULB30	EP104ULC30	EP104ULD30	401.00
	32	EP104ULB32	EP104ULC32	EP104ULD32	401.00
	40	EP104ULB40	EP104ULC40	EP104ULD40	407.00
	50	EP104ULB50	EP104ULC50	EP104ULD50	425.00
	60	EP104ULB60	EP104ULC60	EP104ULD60	437.00
63	EP104ULB63	EP104ULC63	EP104ULD63	437.00	

E2000 Miniature Circuit Breakers

EP100 UC Series

Not UL approved

Performance

Thermal setting In	(A)	0.5-63
Rated voltage AC Un	(V)	240/400; 230/440
Minimum operating voltage $U_{B \text{ min}}$	(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 60898-2

Poles	V	Icn (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	Icu/Ics (kA)
1,2	240 AC	10

Applications

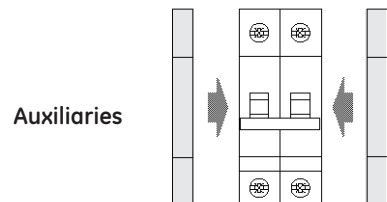


Approval / Marking







IEC 60898-2, DIN VDE 0641



Add-on Devices



EP100UC Series, 10 kAIC, Tripping Characteristics B-C

Poles	In (A)	Tripping Characteristic		List Price Each, GO-135VB	Std. Pack	
		B (3-5X)	C (5-10X)			
		Cat. No.	Cat. No.			
<div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p style="text-align: center;">1</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="text-align: center; margin-right: 10px;"> <p>1/2</p>  </div> <div style="text-align: center;">  <p>2/1</p> </div> </div> </div> </div>	0.5	-	EP101UCC0.5	\$145.00	12	
	1	-	EP101UCC01	121.00	12	
	2	-	EP101UCC02	121.00	12	
	4	-	EP101UCC04	121.00	12	
	6	EP101UCB06	EP101UCC06	121.00	12	
	10	EP101UCB10	EP101UCC10	121.00	12	
	16	EP101UCB16	EP101UCC16	121.00	12	
	20	EP101UCB20	EP101UCC20	121.00	12	
	25	EP101UCB25	EP101UCC25	121.00	12	
	32	EP101UCB32	EP101UCC32	121.00	12	
	40	EP101UCB40	EP101UCC40	121.00	12	
	50	EP101UCB50	EP101UCC50	145.00	12	
	63	EP101UCB63	EP101UCC63	163.00	12	
	<div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p style="text-align: center;">2</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="text-align: center; margin-right: 10px;"> <p>1/2 3/4</p>  </div> <div style="text-align: center;">  <p>2/1 4/3</p> </div> </div> </div> </div>	0.5	-	EP102UCC0.5	320.00	6
		1	-	EP102UCC01	267.00	6
2		-	EP102UCC02	267.00	6	
4		-	EP102UCC04	267.00	6	
6		EP102UCB06	EP102UCC06	267.00	6	
10		EP102UCB10	EP102UCC10	267.00	6	
16		EP102UCB16	EP102UCC16	267.00	6	
20		EP102UCB20	EP102UCC20	267.00	6	
25		EP102UCB25	EP102UCC25	267.00	6	
32		EP102UCB32	EP102UCC32	267.00	6	
40		EP102UCB40	EP102UCC40	267.00	6	
50		EP102UCB50	EP102UCC50	319.00	6	
63		EP102UCB63	EP102UCC63	360.00	6	

E2000 Miniature Circuit Breakers – UL 489

EP100 ULH

Performance

Thermal setting In	(A)	0.5-32
Rated voltage AC Un	(V)	120/240, 110
Minimum operating voltage U_B min	(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

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	110	—	10	10	—	—	—	—
2	240	—	10	10	—	—	—	—
3	240	—	10	10	—	—	—	—

AC acc. to UL 489

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

AC acc. to IEC 60947-2

Poles	V	I _{cu} (kA)*
1	127	30
	240	15
	415	4
2	127	40
2,3	240	30
	415	150
	440	10

*I_{cs} = 75% I_{cu}

DC acc. to IEC 60947-2

Poles	Un (V)	I _{cu} (kA) / I _{cs} (kA)
1	60	25
2	125	30

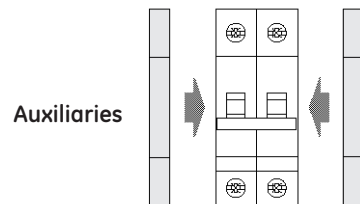
Applications






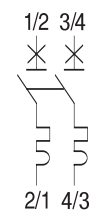

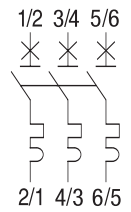
Approval / Marking





Add-on Devices



EP100 ULH Series, 10 kAIC, Tripping Characteristics B-C-D – UL 489

Poles	In (A)	Tripping Characteristic			List Price Each, GO-135VB
		B (3-5X)	C (5-10X)	D (10-20X)	
		Cat. No.	Cat. No.	Cat. No.	
 <p style="text-align: center;">1</p> 	0.5	-	EP101ULHC0.5	EP101ULHD0.5	\$122.00
	1	-	EP101ULHC01	EP101ULHD01	102.00
	2	-	EP101ULHC02	EP101ULHD02	102.00
	4	-	EP101ULHC04	EP101ULHD04	102.00
	6	EP101ULHB06	EP101ULHC06	EP101ULHD06	102.00
	10	EP101ULHB10	EP101ULHC10	EP101ULHD10	102.00
	16	EP101ULHB16	EP101ULHC16	EP101ULHD16	102.00
	20	EP101ULHB20	EP101ULHC20	EP101ULHD20	102.00
	25	EP101ULHB25	EP101ULHC25	EP101ULHD25	102.00
	32	EP101ULHB32	EP101ULHC32	EP101ULHD32	102.00
 <p style="text-align: center;">2</p> 	0.5	-	EP102ULHC0.5	EP102ULHD0.5	245.00
	1	-	EP102ULHC01	EP102ULHD01	221.00
	2	-	EP102ULHC02	EP102ULHD02	221.00
	4	-	EP102ULHC04	EP102ULHD04	221.00
	6	EP102ULHB06	EP102ULHC06	EP102ULHD06	221.00
	10	EP102ULHB10	EP102ULHC10	EP102ULHD10	221.00
	16	EP102ULHB16	EP102ULHC16	EP102ULHD16	221.00
	20	EP102ULHB20	EP102ULHC20	EP102ULHD20	221.00
	25	EP102ULHB25	EP102ULHC25	EP102ULHD25	221.00
	32	EP102ULHB32	EP102ULHC32	EP102ULHD32	221.00
 <p style="text-align: center;">3</p> 	0.5	-	EP103ULHC0.5	EP103ULHD0.5	361.00
	1	-	EP103ULHC01	EP103ULHD01	320.00
	2	-	EP103ULHC02	EP103ULHD02	320.00
	4	-	EP103ULHC04	EP103ULHD04	320.00
	6	EP103ULHB06	EP103ULHC06	EP103ULHD06	320.00
	10	EP103ULHB10	EP103ULHC10	EP103ULHD10	320.00
	16	EP103ULHB16	EP103ULHC16	EP103ULHD16	320.00
	20	EP103ULHB20	EP103ULHC20	EP103ULHD20	320.00
	25	EP103ULHB25	EP103ULHC25	EP103ULHD25	320.00
	32	EP103ULHB32	EP103ULHC32	EP103ULHD32	320.00

Accessories

	Accessory	Description	Cat. No.	List Price Each, GO-135VB	Std. Pack
	Walls	For use between 1-pole breakers of opposite polarity mounted side by side	WUL	\$5.00	10
	Padlocking bracket	For use in cutting off the numbers of poles needed	EPP	12.00	1

E2000 Miniature Circuit Breakers

Series CA Auxiliary Switch & Bell Alarm

- 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).

Applications

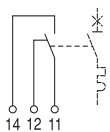


Approval / Marking

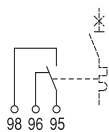


Series CA

Function	Cat. No.	List Price Each, GO-135VB	Std. Pack
H	CA H	\$47.00	1
S/H	CA S/H	59.00	1
S/H (gold contacts)	CA S/H G	59.00	1



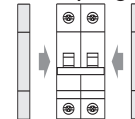
H



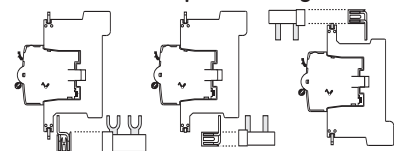
S

1/2 mod.

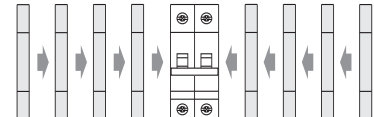
Coupling



Busbar pass-through



Stack-on



E2000 Miniature Circuit Breakers

Series CB Auxiliary Switch & Bell Alarm

- 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

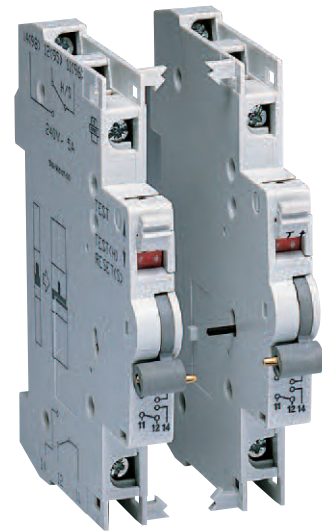
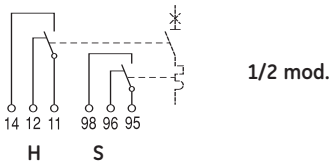
Functions

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).

Series CB

Function	Coupling	Cat. No.	List Price Each, GO-135VB	Std. Pack
SH/HH	Right	CB SH/HH-R	\$87.00	1
SH/HH	Left	CB SH/HH-L	87.00	1



Applications

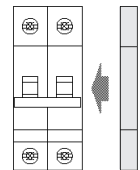


Approval / Marking

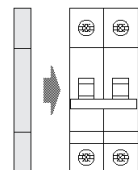


Add-on Devices

Coupling right



Coupling left



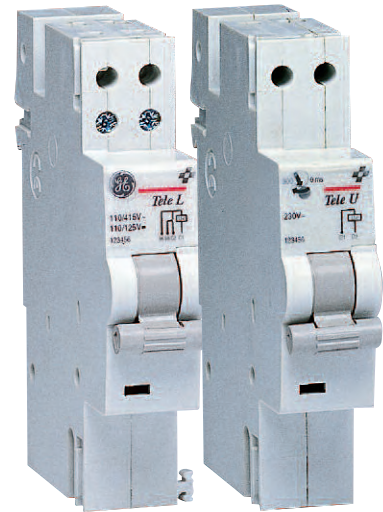
E2000 Miniature Circuit Breakers

Shunt Trip & Undervoltage Release

- 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

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.



Performance

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

Poles	Voltage		Cat. No.	List Price Each, GO-135VB	Std. pack
	AC	DC			
1	24-60 V	24-48 V	TELE L-1	\$90.00	1
	110-415 V	110-125 V	TELE L-2	90.00	1

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.

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

Poles	Voltage	Cat. No.	List Price Each, GO-135VB	Std. pack
1	AC 230V	TELE U-230	\$128.00	1
	AC/DC 12V	TELE U-12	128.00	1
	AC/DC 24V	TELE U-24	128.00	1
	AC/DC 48V	TELE U-48	128.00	1

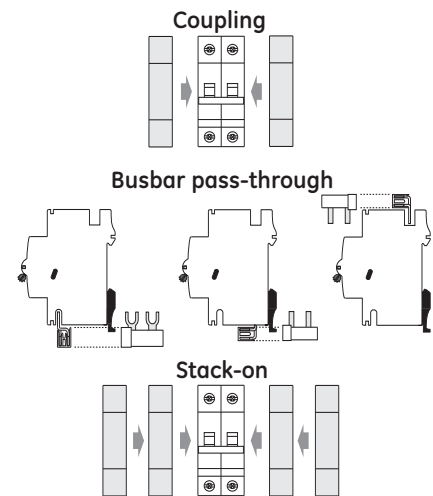
Applications



Approval / Marking



Add-on Devices



E2000 Miniature Circuit Breakers

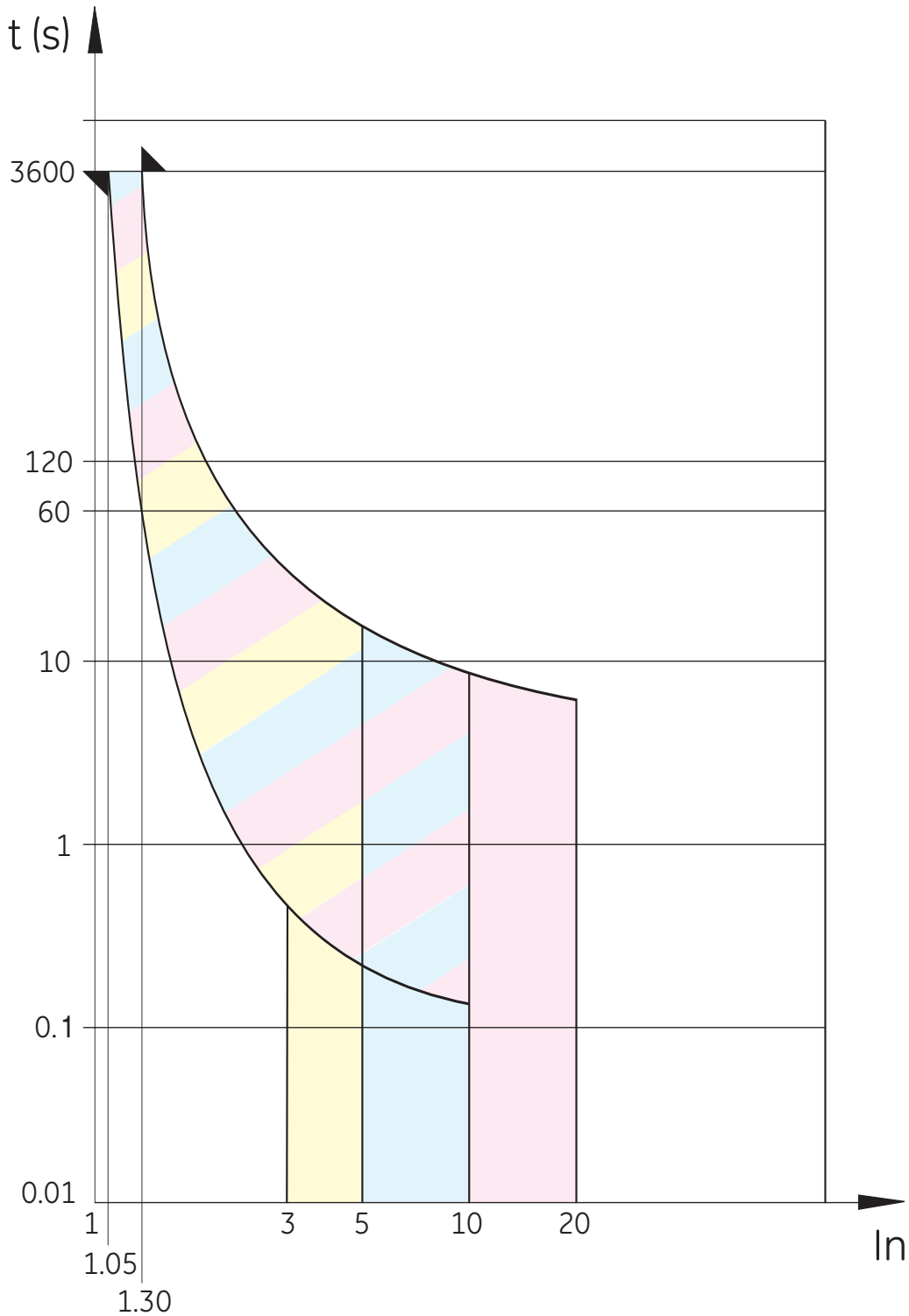
Trip Time Characteristics

Magnetic trip

"B" Curve For resistive or slightly inductive loads. Trip between 3-5 I_n

"C" Curve For inductive loads. Trip between 5-10 I_n

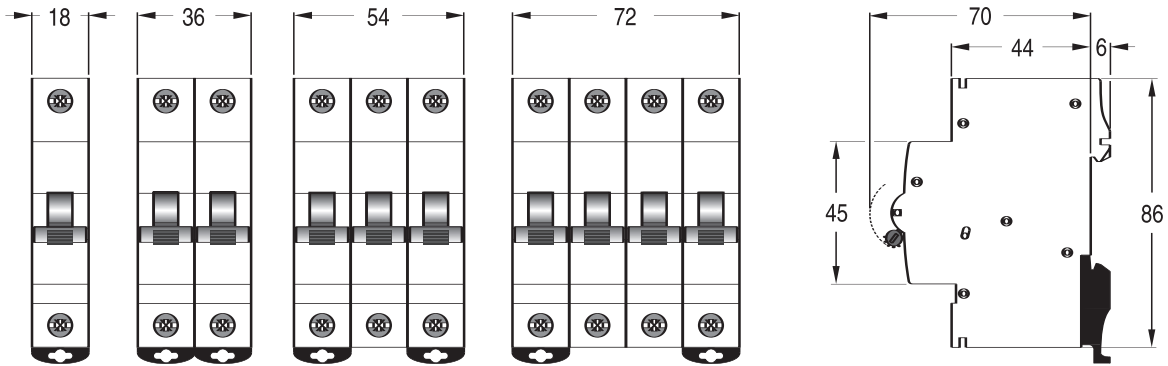
"D" Curve For highly inductive loads. Trip between 10-20 I_n



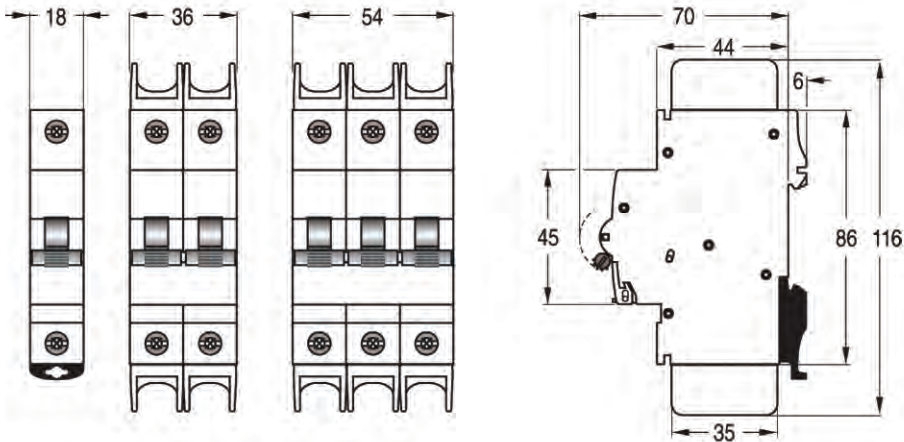
E2000 Miniature Circuit Breakers

Dimensions

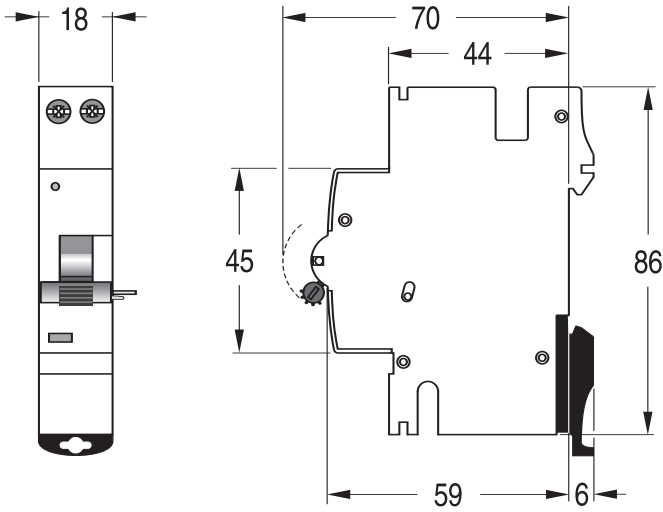
Series EP60, EP100, EP100UC



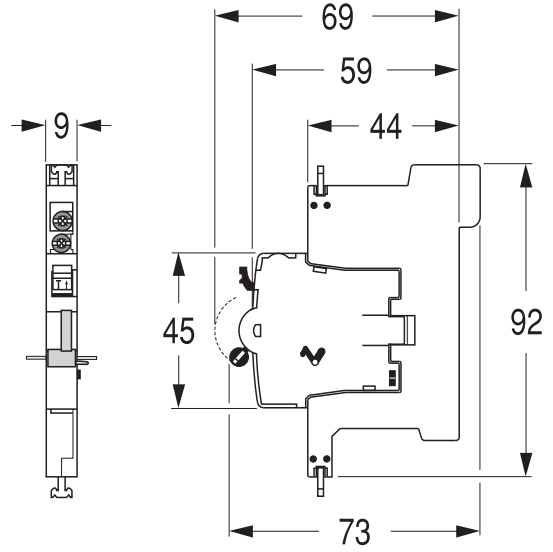
Series EP100ULH



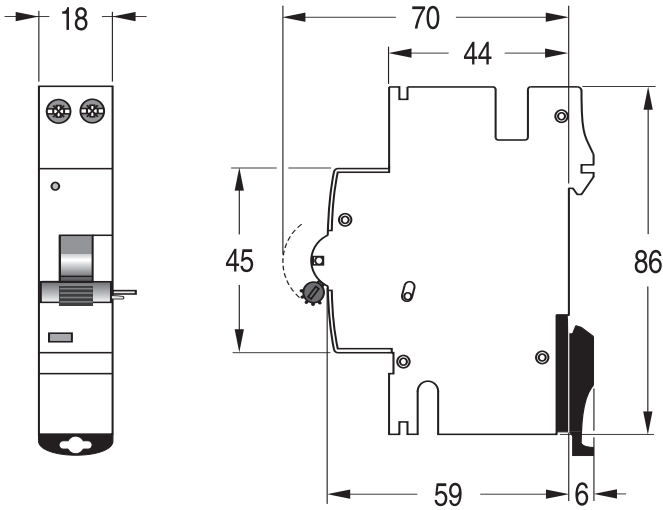
Tele L Shunt Trip



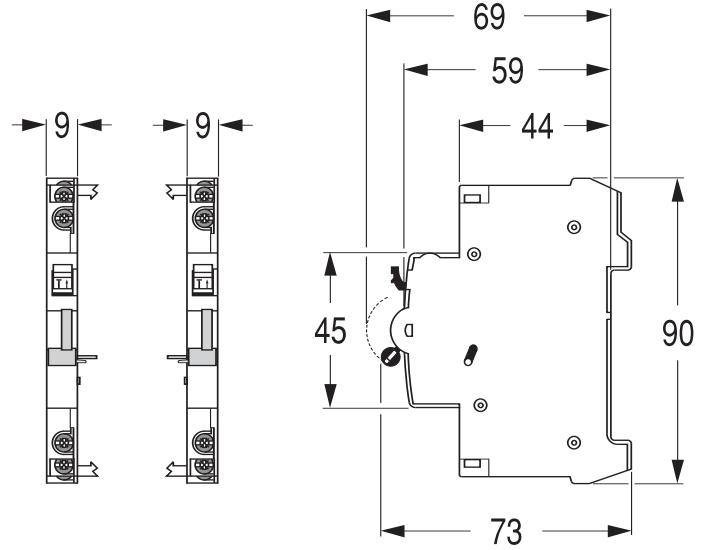
Series CA Auxiliary Switch & Bell Alarm



Tele U Undervoltage Release

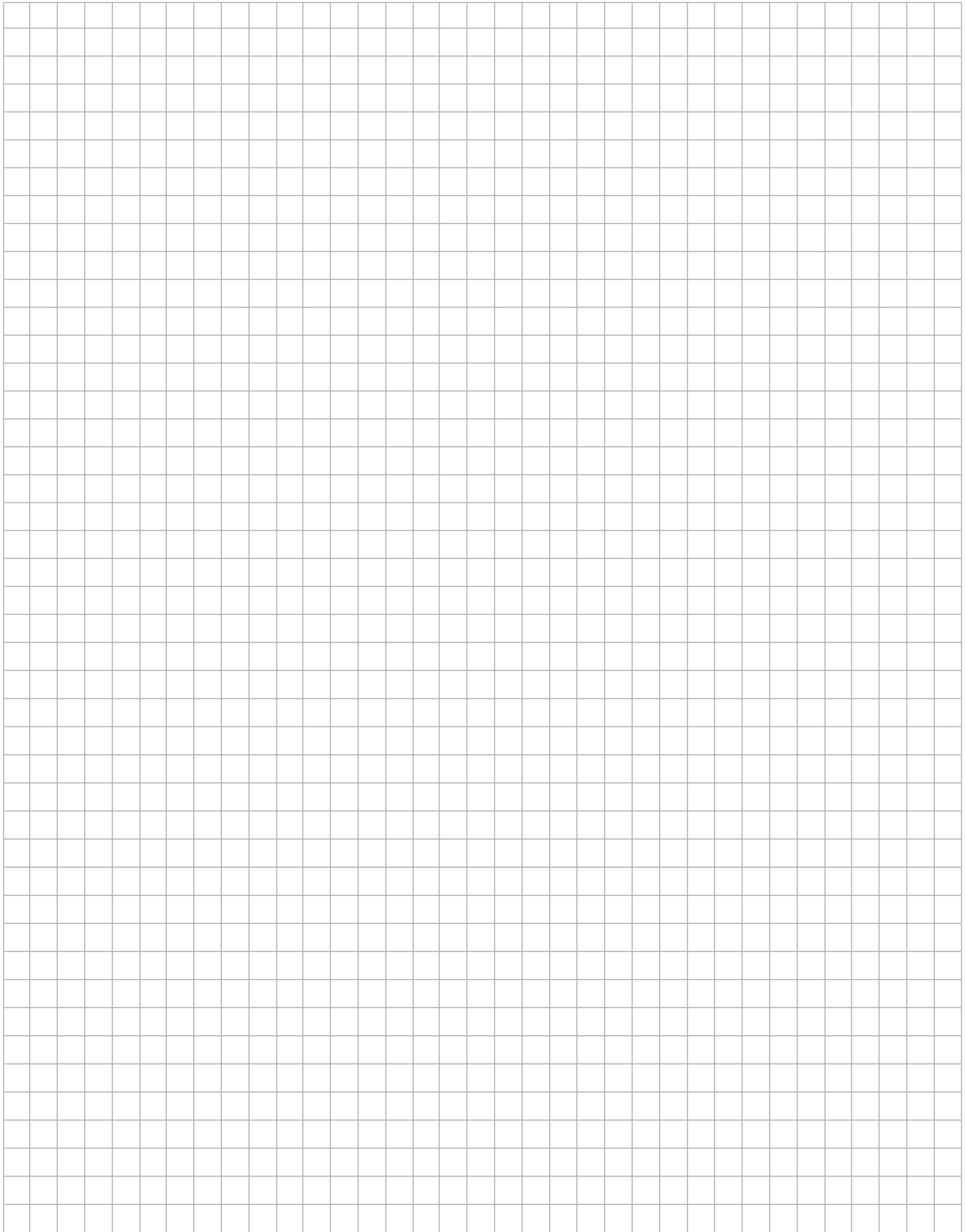


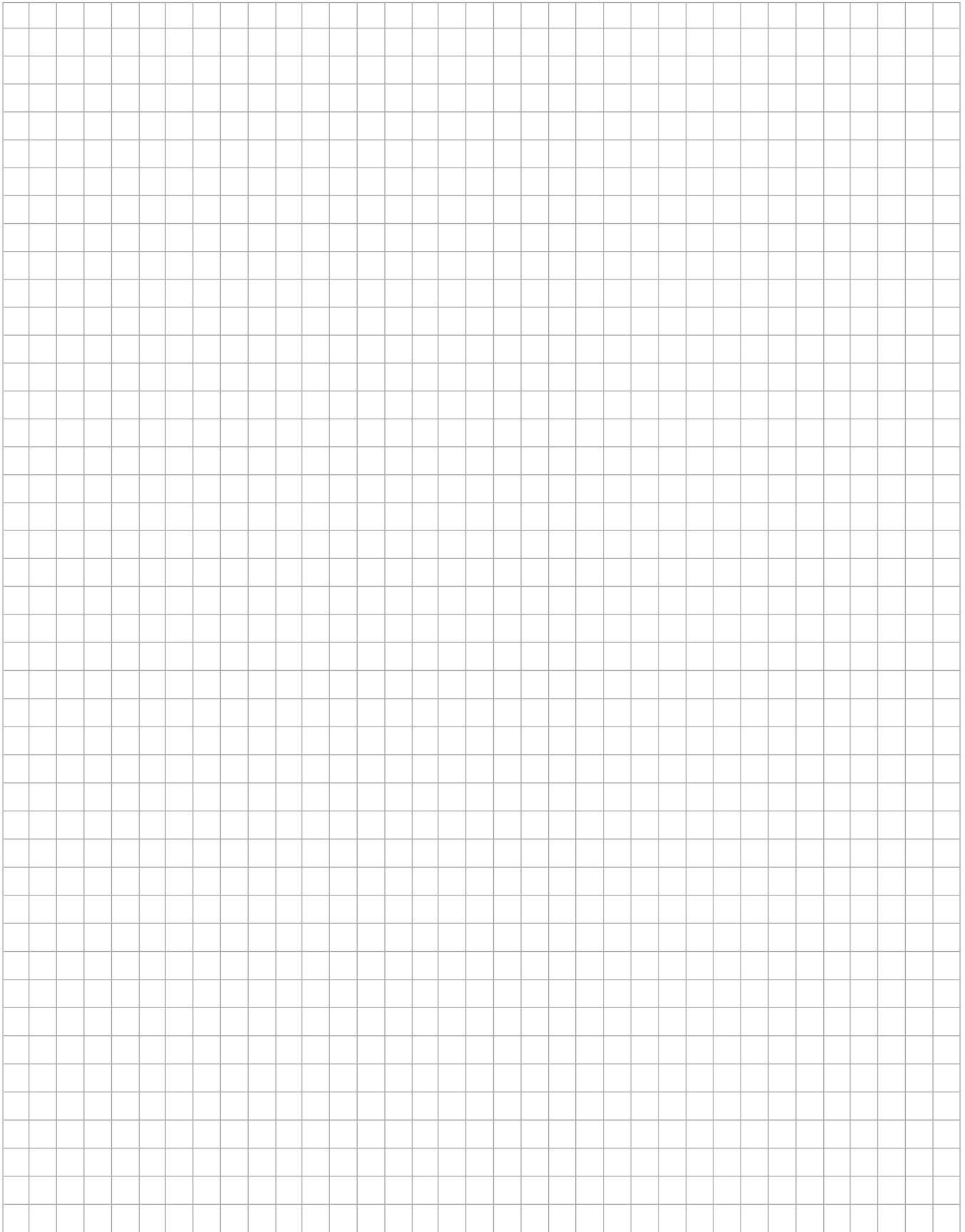
Series CB Auxiliary Switch & Bell Alarm



E2000 Miniature Circuit Breakers

Notes





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