

MCB's - Technical data

Series		EP60 UL	EP100 UL	EP100 ULH
Standards UL 1077 (recognized) & CSA C22.2		yes	yes	-
Standards UL 489 (listed)		-	-	yes
UL file		E151139	E151139	E256870
CSA file		235-04	235-04	-
Nominal voltage acc. UL & CSA	1P	277VAC/50VDC	277VAC/50VDC	120VAC/50VDC
	2P	480VAC/110VDC	480VAC/110VDC	240VAC/110VDC
	3P	480VAC/110VDC	480VAC/110VDC	240VAC/110VDC
	4P	480VAC/110VDC	480VAC/110VDC	-
Reference temperature	°C	25	25	25
Terminal capacity	60/75°C	14-4 AWG	14-4 AWG	14-8 AWG
Torque	N.m/lbs.in	2.5/22.5	2.5/22.5	2.5/22.5
Standards EN/IEC 60947-2		yes	yes	yes
Tripping characteristics		B,C,D	B,C,D	B,C,D
Nominal current	A	B 6-63, C/D 0.5-63	B 6-63, C/D 0.5-63	B 5-32, C/D 0.5-32
Calibration temperature	°C	50	50	50
Number of poles		1/2/3/4	1/2/3/4	1/2/3
Number of modules		1,2,3,4	1,2,3,4	1,2,3
Nominal voltage Un				
	AC 1P V	230/400	230/400	230/400
	1P+N V	-	-	-
	2P V	400	400	400
	3P V	400	400	400
	3P+N/4P V	400	400	400
	DC 1P ⁽¹⁾ VDC	48	48	48
	2P (in series) ⁽¹⁾ VDC	110	110	110
Frequency	Hz	50/60	50/60	50/60
Maximum service voltage U _{bmax} between two wires	V	250/440; 53/120 ≡	250/440; 53/120 ≡	250/440; 53/120 ≡
Minimum service voltage U _{bmin}	V	12 and 12 ≡	12 and 12 ≡	12 and 12 ≡
Selectivity class (IEC 60898)		3	3	3
Isolator application	IEC 60947-2	yes	yes	yes
Rated insulation voltage	Pollution degree 2 V	500	500	500
	Pollution degree 3 V	440	440	440
Impulse withstand test voltage	kV	6	6	6
Insulation resistance	MOhm	10,000	10,000	10,000
Dielectric rigidity	kV	2.5	2.5	2.5
Mounting position		Any	Any	Any
Incoming top or bottom		Any	Any	Any
Vibrations resistance (in x, y, z direction) (IEC 77/16.3)		3g	3g	3g
Endurance	electrical at Un, In	10,000	10,000	10,000
	mechanical	20,000	20,000	20,000
Utilisation category (IEC 60947-2)		A	A	A
Protection distance (IEC 60947-2) mm		12	12	12
Protection degree (outside / inside enclosure with door)		IP20/IP40	IP20/IP40	IP20/IP40
Self-extinguish degree (according to UL94)		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
Operating temperature °C		-25/+55	-25/+55	-25/+55
Storage temperature °C		-55/+55	-55/+55	-55/+55
Terminal capacity				
	Rigid cable min/max (top) mm ²	1/35	1/35	1/35
	Flexible cable min*/max (top) mm ²	0.75/25	0.75/25	0.75/25
	Rigid cable min/max (bottom) mm ²	1/35	1/35	1/35
	Flexible cable min*/max (bottom) mm ²	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
Add-on devices				
(side add-on)	Auxiliary contacts	yes	yes	yes
	Tele L	yes	yes	yes
	Tele Mp	yes	yes	yes
Dimensions, weights, packaging (HxDxW) 86x68xW ⁽²⁾ mm/mod.		18	18	18
Weight/mod. g		125	125	130
Package mod.		see page 7	see page 9	see page 11
Approvals		UL/CSA/VDE	UL/CSA/VDE	UL
CE-marking		yes	yes	yes
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(1) Preferred values of rated control supply voltage (IEC 60947-2): 24VDC, 48VDC, 110VDC, 125VDC, 220VDC, 250VDC
 (2) EP100ULH executions 2P & 3P: H = 116 mm



MCB's - Short-circuit capacity

Series		EP60 UL	EP100 UL	EP100 ULH
Interrupting capacity acc. to		UL1077	UL1077	UL489
UL	1P/2P 277VAC	6	10	-
	3P/4P 480VAC	6	10	-
	1P 120VAC	6	10	10
	2P/3P 240VAC	6	10	10
	1P 50VDC	6	10	10
	2P 110VDC	6	10	10
Short-circuit capacity AC				
EN/IEC 60947-2	Icu (ultimate) kA			
	1 P 127 V	20	30	30
	240V	10	15	15
	415 V	3	4	4
	1+N /2P 127 V	30	40	40
	240 V	20	30	30
	2 P 415 V	10	15	15
	3/3+N/4P 240 V	20	30	30
	415 V	10	15	15
	440 V	6	10	10
Ics (service)	75% Icu	50% Icu	50% Icu	
Short-circuit capacity DC				
EN/IEC 60947-2	Icu (ultimate) kA			
	1 P ≤ 60 V $\overline{=}$	20	25	25
	≤ 220 V $\overline{=}$	-	-	-
	2 P ≤ 125 V $\overline{=}$	25	30	30
	≤ 440 V $\overline{=}$	-	-	-
	Ics (service)	100%Icu	100%Icu	10%Icu
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Characteristics according to EN/IEC 60947-2

Magnetic release

An electromagnet with plunger ensures instantaneous tripping in the event of short-circuit. The standard leaves the calibration of magnetic release to the manufacturer's discretion.

GE offers instantaneous tripping ranges:

- B: 4 I_n
- C: 8.5 I_n (7.5 I_n for 63A)
- D: 14 I_n

Thermal release

The release is initiated by a bimetal strip in case of overload. The standard defines the range of releases for two special overload values.

Reference ambient temperature is 50°C

Test current	Tripping time
B - C - D 1.05 x I _n	t ≥ 1h (I _n ≤ 63A) t ≥ 2h (I _n > 63A)
1.30 x I _n	t < 1h (I _n ≤ 63A) t < 2h (I _n > 63A)

Tripping characteristic curves (EN/IEC 60947-2)

