

# Protection Circuit protection iC60L circuit breakers (curve B, C, K, Z)



## IEC/EN 60947-2 IEC/EN 60898-1 up to 40 A

- iC60L circuit breakers are multi-standard circuit breakers which combine the following functions:
  - circuit protection against short-circuit currents,
  - circuit protection against overload currents,
  - suitable for industrial isolation according to IEC/EN 60947-2, standard.
  - fault tripping indication by a red mechanical indicator in circuit breaker front face.

### Alternating current (AC) 50/60 Hz

Breaking capacity (Icu) according to IEC/EN 60947-2						Service breaking capacity (Ics)
		Voltage (Ue)				
Ph/Ph (2P, 3P, 4P)		12 to 133 V	220 to 240 V	380 to 415 V	440 V	100 % of Icu
Ph/N (1P)		12 to 60 V	100 to 133 V	220 to 240 V	-	
Rating (In)	0.5 to 4 A	100 kA	100 kA	100 kA	70 kA	100 % of Icu
	6 to 25 A	70 kA	50 kA	25 kA	20 kA	50 % of Icu <sup>(1)</sup>
	32 / 40 A	70 kA	36 kA	20 kA	15 kA	50 % of Icu
	50 / 63 A	70 kA	30 kA	15 kA	10 kA	50 % of Icu

Breaking capacity (Icn) according to IEC/EN 60898-1	
Voltage (Ue)	
Ph/Ph	400 V
Ph/N	230 V
Rating (In)	0.5 to 40 A 15000 A

### Direct current (DC)

Breaking capacity (Icu) according to IEC/EN 60947-2						Service breaking capacity (Ics)	
		Voltage (Ue)					
Between +/-		12 to 60 V	≤ 72 V	≤ 125 V	≤ 180 V	≤ 250 V	100 % of Icu
Number of poles		1P		2P	3P	4P	
Rating (In)	0.5 to 63 A	25 kA	20 kA	20 kA	20 kA	20 kA	

## Catalogue numbers

### iC60L circuit breaker

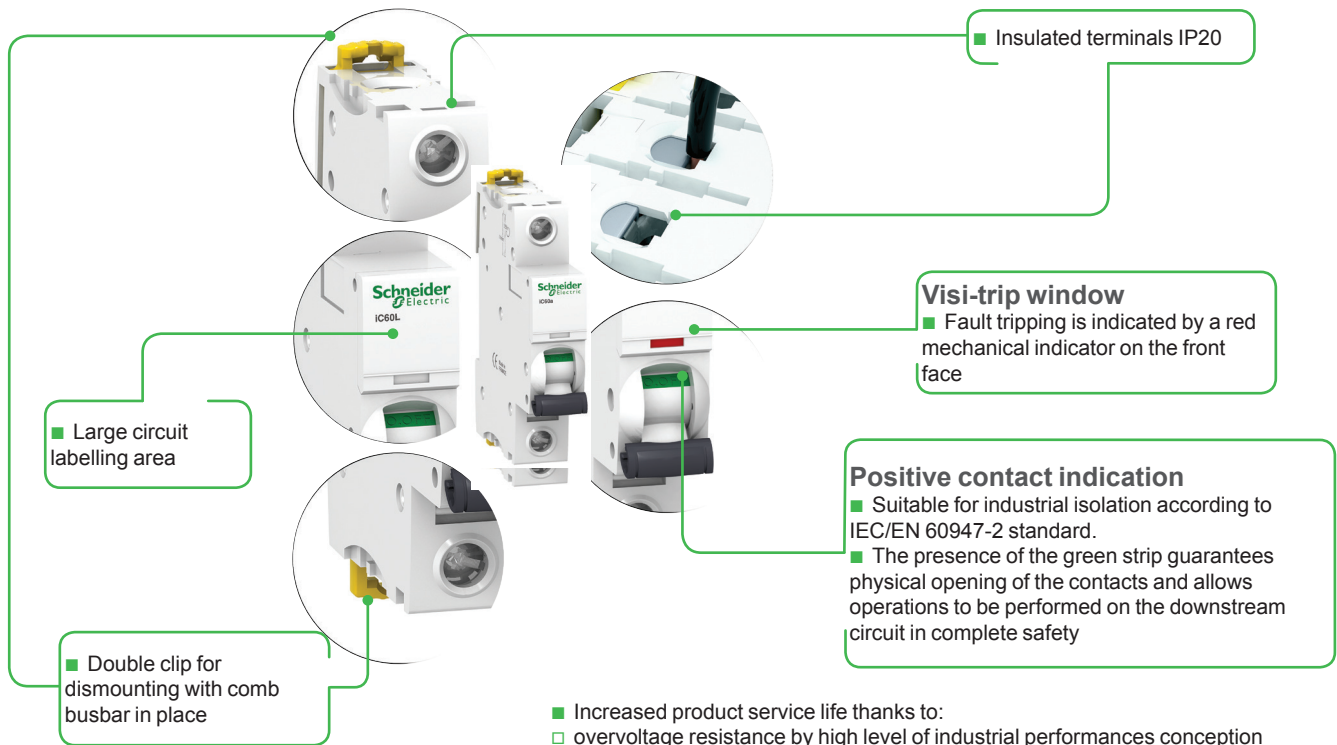
Type	1P	2P						
Auxiliaries	Remote tripping and indication, module CA907000 and CA907002	Remote tripping and indication, module CA907000 and CA907002						
Vigi iC60	Vigi iC60 add-on residual current device, module CA902005	Vigi iC60 add-on residual current device, module CA902005						
Rating (In)	Curve				Curve			
Quality label (2)	B	C	K	Z	B	C	K	Z
0.5 A	A9F93170	A9F94170	A9F95170	A9F92170	A9F93270	A9F94270	A9F95270	A9F92270
1 A	A9F93101	A9F94101	A9F95101	A9F92101	A9F93201	A9F94201	A9F95201	A9F92201
1.6 A	-	-	A9F95172	A9F92172	-	-	A9F95272	A9F92272
2 A	A9F93102	A9F94102	A9F95102	A9F92102	A9F93202	A9F94202	A9F95202	A9F92202
3 A	A9F93103	A9F94103	A9F95103	A9F92103	A9F93203	A9F94203	A9F95203	A9F92203
4 A	A9F93104	A9F94104	A9F95104	A9F92104	A9F93204	A9F94204	A9F95204	A9F92204
6 A	A9F93106	A9F94106	A9F95106	A9F92106	A9F93206	A9F94206	A9F95206	A9F92206
10 A	A9F93110	A9F94110	A9F95110	A9F92110	A9F93210	A9F94210	A9F95210	A9F92210
16 A	A9F93116	A9F94116	A9F95116	A9F92116	A9F93216	A9F94216	A9F95216	A9F92216
20 A	A9F93120	A9F94120	A9F95120	A9F92120	A9F93220	A9F94220	A9F95220	A9F92220
25 A	A9F93125	A9F94125	A9F95125	A9F92125	A9F93225	A9F94225	A9F95225	A9F92225
32 A	A9F93132	A9F94132	A9F95132	A9F92132	A9F93232	A9F94232	A9F95232	A9F92232
40 A	A9F93140	A9F94140	A9F95140	A9F92140	A9F93240	A9F94240	A9F95240	A9F92240
50 A	A9F93150	A9F94150	A9F95150 <sup>(3)</sup>	A9F92150	A9F93250	A9F94250	A9F95250	A9F92250
63 A	A9F93163	A9F94163	A9F95163 <sup>(3)</sup>	A9F92163	A9F93263	A9F94263	A9F95263	A9F92263
Width in 9-mm modules	2				4			
Accessories	Module CA907000 and CA907001				Module CA907000 and CA907001			

(1) 100 % of Icu for ratings 6 to 25 A under Ue 100 to 133 V AC Ph/Ph and Ue 12 to 60 V AC Ph/N.  
 (2) Information to be provided by the country.  
 (3) Without approval.

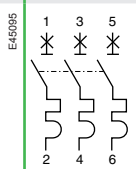
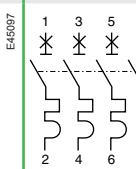
# Protection Circuit protection

## iC60L circuit breakers (curve B, C, K, Z) (cont.)

PB 104436-40

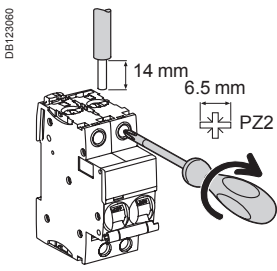


- Increased product service life thanks to:
  - overvoltage resistance by high level of industrial performances conception (pollution degree, rated impulse withstand voltage and insulation voltage),
  - high performance limitation (see limitation curves),
  - fast closing independent of the speed of actuation of the toggle.
- Remote indication, open/closed/tripped, by optional auxiliary contacts.
- Top or bottom electrical feeding.

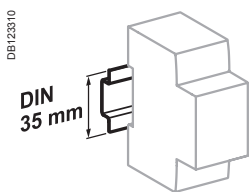
3P				4P			
							
Remote tripping and indication, module CA907000 and CA907002				Remote tripping and indication, module CA907000 and CA907002			
Vigi iC60 add-on residual current device, module CA902005				Vigi iC60 add-on residual current device, module CA902005			
Curve		Curve		Curve		Curve	
B	C	K	Z	B	C	K	Z
A9F93370	A9F94370	A9F95370	A9F92370	A9F93470	A9F94470	A9F95470	A9F92470
A9F93301	A9F94301	A9F95301	A9F92301	A9F93401	A9F94401	A9F95401	A9F92401
-	-	A9F95372	A9F92372	-	-	A9F95472	A9F92472
A9F93302	A9F94302	A9F95302	A9F92302	A9F93402	A9F94402	A9F95402	A9F92402
A9F93303	A9F94303	A9F95303	A9F92303	A9F93403	A9F94403	A9F95403	A9F92403
A9F93304	A9F94304	A9F95304	A9F92304	A9F93404	A9F94404	A9F95404	A9F92404
A9F93306	A9F94306	A9F95306	A9F92306	A9F93406	A9F94406	A9F95406	A9F92406
A9F93310	A9F94310	A9F95310	A9F92310	A9F93410	A9F94410	A9F95410	A9F92410
A9F93316	A9F94316	A9F95316	A9F92316	A9F93416	A9F94416	A9F95416	A9F92416
A9F93320	A9F94320	A9F95320	A9F92320	A9F93420	A9F94420	A9F95420	A9F92420
A9F93325	A9F94325	A9F95325	A9F92325	A9F93425	A9F94425	A9F95425	A9F92425
A9F93332	A9F94332	A9F95332	A9F92332	A9F93432	A9F94432	A9F95432	A9F92432
A9F93340	A9F94340	A9F95340	A9F92340	A9F93440	A9F94440	A9F95440	A9F92440
A9F93350	A9F94350	A9F95350	A9F92350	A9F93450	A9F94450	A9F95450	A9F92450
A9F93363	A9F94363	A9F95363	A9F92363	A9F93463	A9F94463	A9F95463	A9F92463
4				6			
Module CA907000 and CA907001				Module CA907000 and CA907001			

# iC60L circuit breakers (curve B, C, K, Z) (cont.)

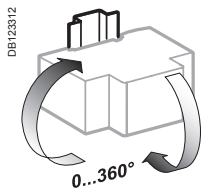
## Connection



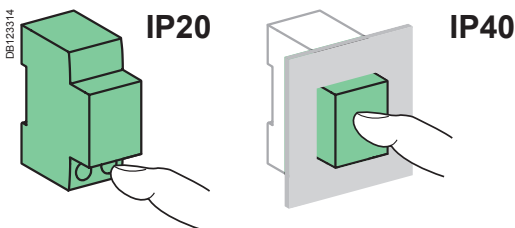
Rating	Tightening torque	Without accessory		With accessories		
		Rigid	Flexible or with ferrule	50 mm <sup>2</sup> Al terminal	Screw-on connection for ring terminal	Multi-cables terminal
0.5 to 25 A	2 N.m	DB122945	DB122946	DB122935	DB118789	DB118787
32 to 63 A	3.5 N.m	1 to 25 mm <sup>2</sup>	1 to 16 mm <sup>2</sup>	-	Ø 5 mm	-
		1 to 35 mm <sup>2</sup>	1 to 25 mm <sup>2</sup>	50 mm <sup>2</sup>		3 x 16 mm <sup>2</sup>
						3 x 10 mm <sup>2</sup>



Clip on DIN rail 35 mm.



Indifferent position of installation.



## Technical data

### Main characteristics

#### According to IEC/EN 60947-2

Insulation voltage (Ui)	500 V AC	
Pollution degree	3	
Rated impulse withstand voltage (Uimp)	6 kV	
Thermal tripping	Reference temperature	50 °C
	Temperature derating	See module CA908007
Magnetic tripping	B curve	4 In ± 20 %
	C curve	8 In ± 20 %
	K curve	12 In ± 20 %
	Z curve	3 In ± 20 %
Utilization category	A	

#### According to IEC/EN 60898-1

Rated making and breaking capacity of an individual pole (Icn1)	Icn1 = Icn	
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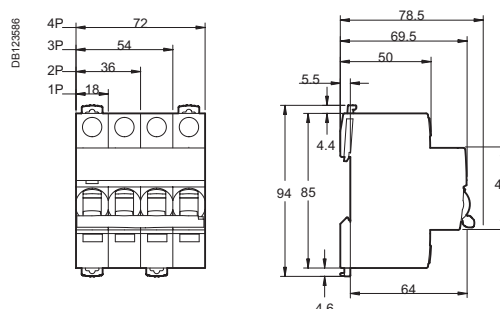
### Additional characteristics

Breaking capacity under 1 pole with IT 380-415 V isolated neutral system (case of double fault)	40 A	4 kA
	50/63 A	3 kA
Degree of protection (IEC 60529)	Device only	IP20
	Device in modular enclosure	IP40
		Insulation class II
Endurance (O-C)	Electrical	10,000 cycles
	Mechanical	20,000 cycles
Overvoltage category (IEC 60364)	IV	
Operating temperature	-35°C to +70°C	
Storage temperature	-40°C to +85°C	
Tropicalization (IEC 60068-1)	Treatment 2 (relative humidity 95 % to 55°C)	

## Weight (g)

Circuit-breaker	
Type	iC60L
1P	125
2P	250
3P	375
4P	500

## Dimensions (mm)



# iC60L circuit breakers (curve B, C, K, Z) (cont.)



4.0	15/03/2017	New charte	Sonovision
3.6	14/10/2014	Changed rating 1 to 0.5 A, in direct current breaking capacity table	Sedoc
3.5	14/03/2013	Deleted Limitation class 3	Sedoc
3.4	19/09/2012	Changed DC 12 to 48 V by 12 to 60 V	Sedoc
3.3	13/09/2012	Changed AC breaking capacity (220 to 240 V)	Sedoc
3.2	10/07/2012	Changed DC breaking capacity	Sedoc
3.1	9/11/2011	Add IMQ pictogram	Sedoc
3.0	30/05/2011	In Design CS5	Sedoc
2.4	12/05/2011	Change characteristics in "DC-Breaking capacity"	Sedoc
2.3	07/04/2011	Add IT Breaking capacity in Additional characteristic table	Sedoc
2.2	01/10/2010	Change rating 0.5 to 1 A, in direct current breaking capacity table	Sedoc
1.0	21/09/2010	Creation	Sedoc
<b>Indice</b>	<b>Date</b>	<b>Modification</b>	<b>Name</b>