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Electric




# K60 Circuit Breakers

The affordable way to stay safe  
from electrocution and electrical overloads

[schneider-electric.com/sg](https://schneider-electric.com/sg)

# Overview

## K60 Circuit Breaker Technical Specification

		MCB				RCCB	
K60 Circuit Breaker		K60N		K60H		ID K	
Number of poles		1	2-3-4	1	2-3-4	2	4
<b>Electrical characteristics</b>							
Rated current (A)	$I_n$	6-63		6-63		25 - 63	40 - 63
Rated Insulation Voltage (V)	$U_i$	440		440		440	
Maximum operational voltage (V)	$U_e$	AC 50/60 Hz		230	400	230	415
Fast closing		■		■		■	
Suitability for isolation		■		■		■	
<b>AC breaking capacity</b>							
IEC 60898 (EN 60898)	$I_{cn}$ (A)	230/400 V		6000		10000	
	$I_{cs}$	(%of $I_{cn}$ )		100%	100%	75%	75%
						Equal to K60	
<b>Trip units (non adjustable)</b>							
Curve type		B ( $I_m = 3$ to $5 I_n$ )		■		-	
		C ( $I_m = 5$ to $10 I_n$ )		■		-	
		D ( $I_m = 10$ to $14 I_n$ )		-		-	
<b>Earth leakage protection</b>							
Integrated		-		-		■	
Sensitivity type (mA)	 AC	-		-		■	
<b>Electrical auxiliaries</b>							
Auxiliary and alarm switches (OF-SD)		-		-		-	
Shunt trip (MX); undervoltage release (MN)		-		-		-	
Emergency stop opening switch (MNx)		-		-		-	
Voltage threshold release (MSU)		-		-		-	
<b>Connection</b>							
Cable maxi capacity (mm <sup>2</sup> )	Flexible	16(≤20A)		25 (>20A)		25	
	Rigid	16(≤20A)		25 (>20A)		35	
<b>Installation</b>							
Dimensions (mm)	W	18 per pole		36		72	
	D x H	74 x 81		68 x 81			

## General contents

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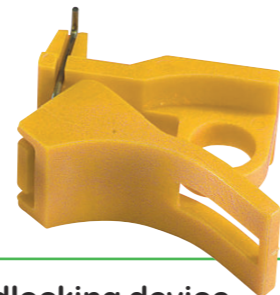
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# Circuit protection

## K60 Biconnect circuit breakers

- Fast closing independent of the speed of actuation of the toggle.

- Reinforced cable pull-out strength: serrated terminals

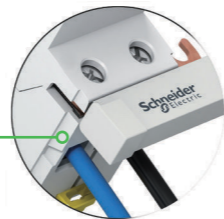


**Padlocking device**



- Padlocking possible for work to be carried out on live parts

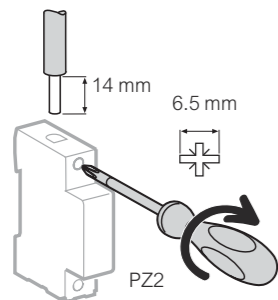
**Connection**

- Downstream by Biconnect comb busbar
- Upstream/downstream by tunnel terminals



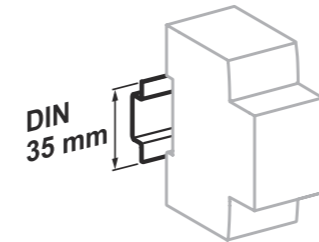
### Connection

Common characteristics			
Type	K60 Biconnect		
Rating	6 to 20 A	32 to 63 A	
Tightening torque	2 N.m	3.5 N.m	
Copper cables			
Rigid		0.5 to 25 mm <sup>2</sup>	0.5 to 35 mm <sup>2</sup>
Flexible or with ferrule		0.5 to 16 mm <sup>2</sup>	0.5 to 25 mm <sup>2</sup>

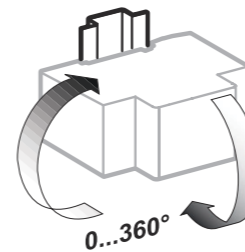


# Circuit protection

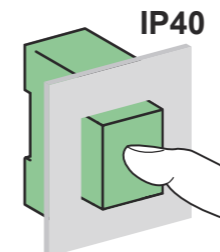
## K60 Biconnect circuit breakers



Clip on DIN rail 35 mm.



Indifferent position of installation.



### Technical Data

Main characteristics		K60N	K60H
Insulation voltage (Ui)	Phase-to-phase	440 V AC	
	Phase-to-neutral	230 V AC	
Voltage rating (Ue)	Phase-to-phase	400 V AC	
	B curve	3 to 5 In	■
Magnetic tripping	C curve	5 to 10 In	■

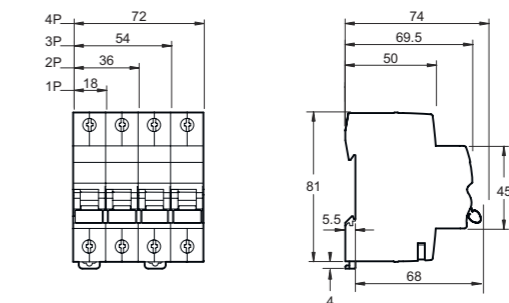
According to EN 60898-1		
Limitation class	3	
Rated breaking capacity (Icn)	6000 A	10000 A
Service breaking capacity (Ics)	100 % of Icn	75 % of Icn
Rated breaking and making capacity on a single pole (Icn1)	Icn1 = Icn	

Additional characteristics			
Degree of protection (IEC 60529)	Device in modular enclosure	IP40 Insulation class II	
Endurance (O-C)	Electrical	>20 A	20,000 cycles
		<32 A	10,000 cycles
	Mechanical	20,000 cycles	
Operating temperature	-5°C to +55°C		
Storage temperature	-25°C to +85°C		
Tropicalization (IEC 60068-1)	Treatment 2 (relative humidity 95% at 55°C)		

### Weight (g)

Circuit-breaker				
Type	1P	2P	3P	4P
K60 Biconnect	120	240	360	480

### Dimensions (mm)



# Circuit protection

## K60N Biconnect circuit breakers



IEC/EN 60898-1

K60N Biconnect circuit breakers are circuit breakers which combine the following functions:

- Circuit protection against short-circuit currents
- Circuit protection against overload currents
- Disconnection, opening and closing

### K60N Biconnect circuit breaker 50/60 Hz

Breaking capacity in short circuit (I<sub>cn</sub>) as per IEC/EN 60898-1

Ph/Ph	400 V
Ph/N	230 V
Rating (I <sub>n</sub> )	6 to 63 A 6000 A

Service breaking capacity (I<sub>cs</sub>)

100 % of I<sub>cn</sub>

## Product Reference

K60N Biconnect circuit breaker								
Type	1P	2P	3P	4P				
Auxiliaries	Without auxiliaries	Without auxiliaries	Without auxiliaries	Without auxiliaries				
Rating (I <sub>n</sub> )	Curve							
	B	C	B	C	B	C	B	C
6 A	A9K01106	A9K02106	A9K01206	A9K02206	A9K01306	A9K02306	A9K01406	A9K02406
10 A	A9K01110	A9K02110	A9K01210	A9K02210	A9K01310	A9K02310	A9K01410	A9K02410
16 A	A9K01116	A9K02116	A9K01216	A9K02216	A9K01316	A9K02316	A9K01416	A9K02416
20 A	A9K01120	A9K02120	A9K01220	A9K02220	A9K01320	A9K02320	A9K01420	A9K02420
32 A	A9K01132	A9K02132	A9K01232	A9K02232	A9K01332	A9K02332	A9K01432	A9K02432
40 A	A9K01140	A9K02140	A9K01240	A9K02240	A9K01340	A9K02340	A9K01440	A9K02440
50 A	A9K01150	A9K02150	A9K01250	A9K02250	A9K01350	A9K02350	A9K01450	A9K02450
63 A	A9K01163	A9K02163	A9K01263	A9K02263	A9K01363	A9K02363	A9K01463	A9K02463
Width in 9-mm modules	2		4		6		8	
Accessories	Padlocking device cat. no. 26970							

# Circuit protection

## K60H Biconnect circuit breakers



IEC/EN 60898-1

K60H Biconnect circuit breakers are circuit breakers which combine the following functions:

- Circuit protection against short-circuit currents
- Circuit protection against overload currents
- Disconnection, opening and closing

### K60H Biconnect circuit breaker 50/60 Hz

Breaking capacity in short circuit (I<sub>cn</sub>) as per IEC/EN 60898-1

Ph/Ph	400 V
Ph/N	230 V
Rating (I <sub>n</sub> )	6 to 63 A 10000 A

Service breaking capacity (I<sub>cs</sub>)

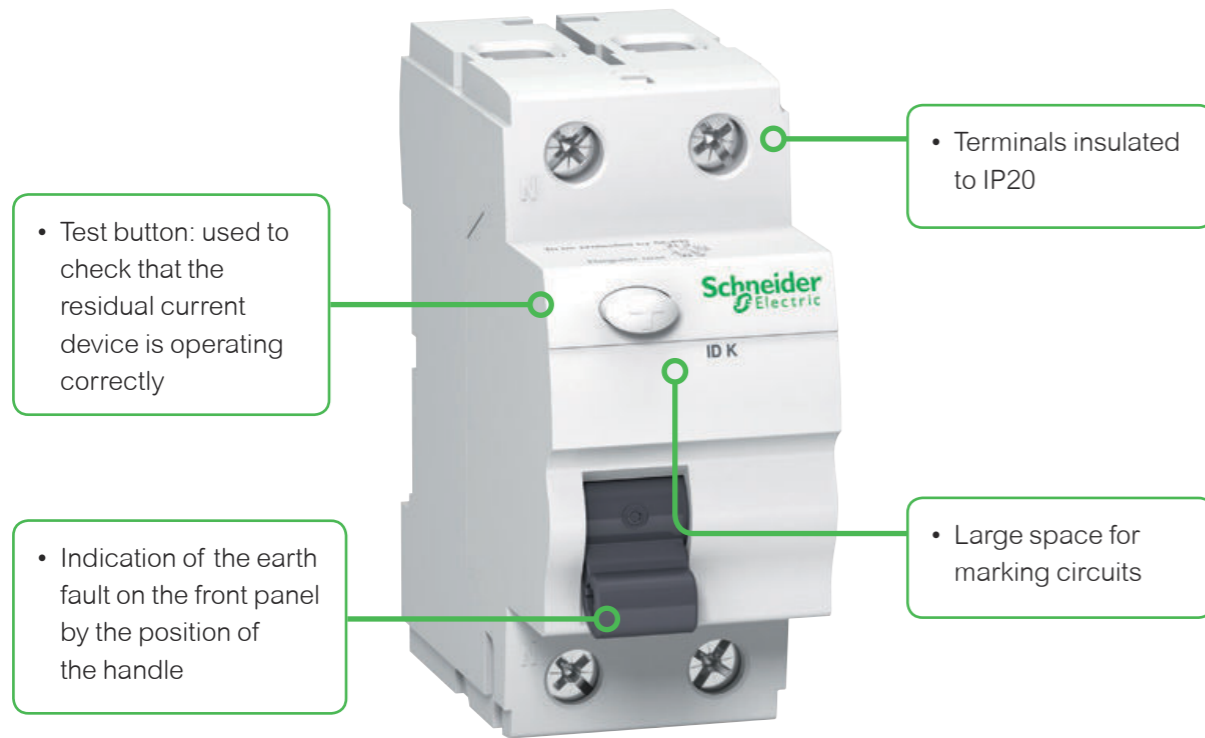
75 % of I<sub>cn</sub>

## Product Reference

K60H Biconnect circuit breaker								
Type	1P	2P	3P	4P				
Auxiliaries	Without auxiliaries	Without auxiliaries	Without auxiliaries	Without auxiliaries				
Rating (I <sub>n</sub> )	Curve							
	B	C	B	C	B	C	B	C
6 A	A9K11106	A9K12106	A9K11206	A9K12206	A9K11306	A9K12306	A9K11406	A9K12406
10 A	A9K11110	A9K12110	A9K11210	A9K12210	A9K11310	A9K12310	A9K11410	A9K12410
16 A	A9K11116	A9K12116	A9K11216	A9K12216	A9K11316	A9K12316	A9K11416	A9K12416
20 A	A9K11120	A9K12120	A9K11220	A9K12220	A9K11320	A9K12320	A9K11420	A9K12420
32 A	A9K11132	A9K12132	A9K11232	A9K12232	A9K11332	A9K12332	A9K11432	A9K12432
40 A	A9K11140	A9K12140	A9K11240	A9K12240	A9K11340	A9K12340	A9K11440	A9K12440
50 A	A9K11150	A9K12150	A9K11250	A9K12250	A9K11350	A9K12350	A9K11450	A9K12450
63 A	A9K11163	A9K12163	A9K11263	A9K12263	A9K11363	A9K12363	A9K11463	A9K12463
Width in 9-mm modules	2		4		6		8	
Accessories	Padlocking device cat. no. 26970							

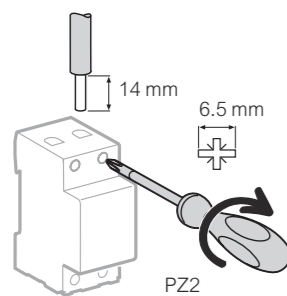
# Earth leakage protection

## ID K Biconnect residual current circuit breakers



### Connection

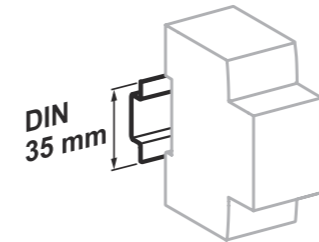
- Downstream by Biconnect comb busbar
- Upstream/downstream by tunnel terminals



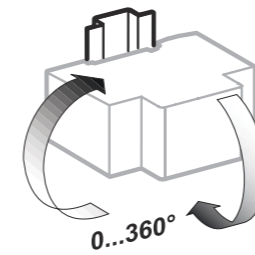
Common characteristics	
Type	IDK Biconnect
Tightening torque	3.5 N.m
Copper cables	
Rigid	1 to 35 mm <sup>2</sup>
Flexible or with ferrule	1 to 25 mm <sup>2</sup>

# Earth leakage protection

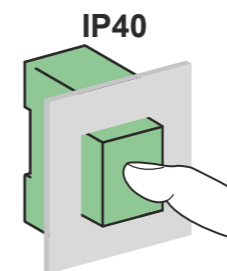
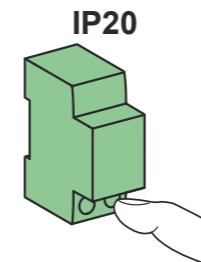
## ID K Biconnect residual current circuit breakers



Clip on DIN rail 35 mm.



Indifferent position of installation.



### Technical Data

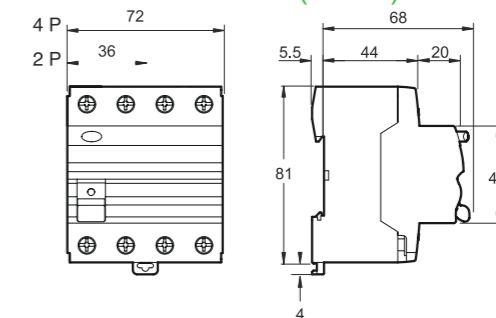
Main characteristics		
Insulation voltage (Ui)		440 V
Degree of pollution		2
Rated impulse withstand voltage (Uimp)		4 kV
Making and breaking capacity (Im/I m Lc)	25 - 40 A	500 A
	63 A	630 A
Impulse current withstand (8/20 μs) without dripping		Up to 200 A
Conditional rated short-circuit current (Im/I m Lc)	With circuit break	6000 A
	With fuse	4500 A
Behaviour in case of voltage drop		Residual current protection down to 0 V according to IEC/EN 61008-1 § 3.3.4

Additional characteristics		
Degree of protection	Device only	IP20
	Device in modular enclosure	IP40 Insulation class II
Endurance (O-C)	Electrical	4000 cycles (AC1)
	Mechanical	5000 cycles
Operating temperature	AC type	-5°C to +55°C
Storage temperature		-25°C to +85°C
Tropicalization (IEC 60068-1)		Treatment 2 (relative humidity 95% at 55°C)

### Weight (g)

Residual current circuit breakers		
Type	2P	4P
ID K Biconnect	180	350

### Dimensions (mm)



# Earth leakage protection

## ID K Biconnect residual current circuit breakers



IEC/EN 61008-1


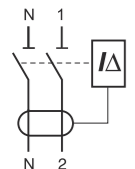
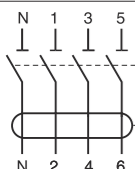
The ID K Biconnect residual current circuit breakers offer the following functions:

- Protection of persons against electric shock by direct contact (30 mA)
- Protection of persons against electric shock by indirect contact (> 100 mA)
- Protection of installations against the risks of fire (300 mA)



## Product Reference

### ID K Biconnect residual current circuit breakers

Type	AC 				Width in 9 mm modules	
2P 	Sensitivity	30 mA	100 mA	300 mA	4	
	Rating	25 A	A9KR13225S	-		A9KR16225
		40 A	A9KR13240S	A9KR15240		A9KR16240
63 A	A9KR13263S	A9KR15263	A9KR16263			
4P 	Sensitivity				8	
	Rating	40 A	A9KR13440S	A9KR15440		A9KR16440
		63 A	A9KR13463S	A9KR15463		A9KR16463
Operating voltage (Ue)	2P	230 V				
	4P	415 V				
Operating frequency	50 Hz					



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At Schneider Electric, we call this **Life Is On.**

Life Is On

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