

# LF circuit breaker

SF6 breaking up to 17.5 kV

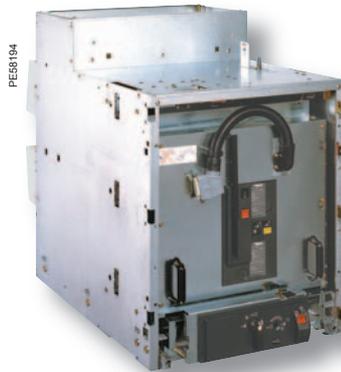
**LF circuit breaker is used to protect and control MV public or industrial distribution network.**

**LF is an indoor switchgear**

- Rated voltage from 7.2 to 17.5 kV
- Rated short-circuit breaking current up to 50 kA
- Rated normal current from 630 to 3150 A.

**LF is available in 2 versions:**

- **Withdrawable** with MC cassette
- **Fixed:** can be completed by kits and delivered in separate components.



## Conformity with standards

- IEC 62 271-1: common specifications for high voltage switchgear and controlgear standards
- IEC 62 271-100: high voltage alternating current circuit breaker
- IEC 62 271-200 (previously IEC 60298): AC metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV.

## Certification

- By independent laboratories in accordance with ISO/IEC 17025 and EN 45011 standards
- Our factories implement a quality system certified to ISO 9001 : 2000 and ISO 14000 standards by IQNET.

## Installation

- Fixed
- Designed for retrofit
- MC cassette can be delivered separately.

## Operation

- The operating mechanism is identical to that of the Schneider Electric SF6 MV circuit breaker SF ranges
- Metal protection shutter on cassette
- Racking in/out operation possible in the cubicle with the door closed.
- A position indication device by mechanical indicator (black and white)
- A double contact pressure switch is activated when the gas pressure reduces below:
  - 1st stage: 0.18 Mpa (relative pressure: 1.8 bar)
  - 2nd stage: 0.1 Mpa (relative pressure: 1 bar)

## A full range of accessories and auxiliaries factory-mounted or delivered separately

- Electric motor (M)
- Undervoltage release (YM)
- Shunt opening releases (YO1, YO2)
- Low energy release (MITOP)
- Shunt closing release (YF)
- Auxiliary contacts
- Operations counter
- Locking by padlocks and/or keylocks/sealing.

PE57191



### Electrical characteristics according to IEC 62271-100

LF fixed				LF1			
Rated voltage	<b>Ur</b>	kV 50/60 Hz		7.2	12		
Insulation level							
- power frequency withstand	<b>Ud</b>	kV 50 Hz 1min (*)		20	28		
- lightning impulse withstand	<b>Up</b>	kV peak		60	75		
Rated current	<b>Ir</b>	A	630	■	■	■	■
			1250	■	■	■	■
			2000	–	–	–	–
			2500	–	–	–	–
			3150	–	–	–	–
Short circuit current	<b>Isc</b>	kA		25	31.5	25	31.5
Short time withstand current	<b>Ik/tk</b>	kA/3 s		25	31.5	25	31.5
Short-circuit making current	<b>Ip</b>	Peak kA	50 Hz	63	79	63	79
			60 Hz	65	82	65	82
Rated switching sequence	O-3 min-CO-3 min-CO			■	■	■	■
	O-0.3 s-CO-3 min-CO			■	■	■	■
	O-0.3 s-CO-15 s-CO			■	■	■	■

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LF withdrawable (circuit breaker/cassette)				LF1/MC1			
Rated voltage	<b>Ur</b>	kV 50/60 Hz		7.2	12		
Insulation level							
- power frequency withstand	<b>Ud</b>	kV 50 Hz 1min (*)		20	28		
- lightning impulse withstand	<b>Up</b>	kV peak		60	75		
Rated current	<b>Ir</b>	A	630	■	■	■	■
			1250	■	■	■	■
			1600	–	–	–	–
			2500	–	–	–	–
			3150	–	–	–	–
Short circuit current	<b>Isc</b>	kA		25	31.5	25	31.5
Short time withstand current	<b>Ik/tk</b>	kA/3 s, kA/1 s		25	31.5	25	31.5
Short-circuit making current	<b>Ip</b>	Peak kA	50 Hz	63	79	63	79
			60 Hz	65	82	65	82
Rated switching sequence	O-3 min-CO-3 min-CO 60 Hz			■	■	■	■
	O-0.3 s-CO-3 min-CO			■	■	■	■
	O-0.3 s-CO-15 s-CO			■	■	■	■
	O-0.3 s-CO-15 s-CO			■	■	■	■

### Common characteristics

Operating times	Opening ms		< 54
	Breaking ms		< 70
	Closing ms		< 72
Service temperature	<b>T</b>	°C	– 25 to + 40
Mechanical endurance	Class		M2
	Number of switching operations		10,000
Electrical endurance	Class		E2
Capacitive current breaking capacity	Class		C2

(\*) Ud 42 kV 50 Hz, 1 min possible

(\*\*) Rated short-circuit breaking duration (tk): 1 s

■ Available

– Not available.

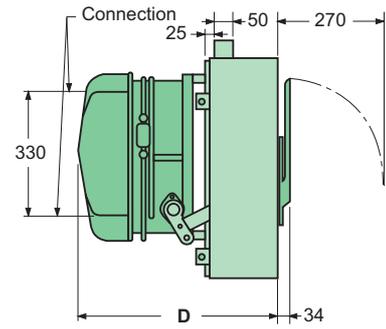
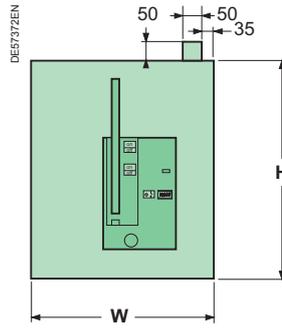


# Dimensions and weights

## Device

### Basic fixed

Circuit breaker	LF1	LF2	LF3
Dimensions (mm)			
W	493	554	728
H	590	590	590
D	536	536	536
Weight (kg)	106	128	149.5



### Basic withdrawable

C.B./Cassette	LF1/MC1	LF2/MC2	LF3/MC3
Phase to phase (mm)	E	185	240
Dimensions (mm)			
W	556	686	886
H	980	980	980
D	1223	1223	1223
Weight (kg)	245	285	325 (1250 A) 365 (2500 A) 435 (3150 A)

