

Evolis 17.5 kV circuit breaker

Vacuum breaking

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

Evolis is an indoor switchgear

- Rated voltage from 7.2 to 17.5 kV
- Rated short-circuit breaking current up to 40 kA
- Rated normal current from 630 to 2500 A.

Evolis is available in 3 versions:

■ **Withdrawable**

- in NEX cradle
- in MC cassette

■ **Fixed**



Withdrawable in NEX cradle



Withdrawable in MC cassette



Fixed

Conformity with standards

- IEC 60694: common specifications for high voltage switchgear and controlgear standards
- IEC 62271-100: high voltage alternating current circuit breaker
- IEC 62271-200: 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 and ISO 9002 standards by IQNET.

Installation

- Fixed
- Designed for retrofit
- Withdrawable in NEX cradle
- Withdrawable in MC cassette.

Operation

- The operating mechanism is activated by a spring.

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

- Electric motor (MCH)
- Undervoltage release (MN)
- Shunt opening release (MX)
- Low energy release (MITOP)
- Shunt closing release (XF)
- Auxiliary contacts
- Operations counter
- Locking by padlocks and/or keylocks/sealing.

Electrical characteristics according to IEC 62271-100

Phase to phase			mm				145				
Withdrawable Evolis in NEX cradle											
Rated voltage	Ur	kV 50/60 Hz	7.2		12						
Insulation level											
- power frequency withstand	Ud	kV 50 Hz 1 min (*)	20		28						
- lightning impulse withstand	Up	kV peak	60		75						
Rated current	Ir	A	630	■	–	■	–				
			1250	■	–	■	–				
			2500	–	–	–	–				
Short circuit current	Isc	kA	25	31.5	25	31.5					
Short time withstand current	Ik/tk	kA/3 s	25	31.5	25	31.5					
Short-circuit making current	Ip	kA peak	50 Hz	63	79	63	79				
			60 Hz	65	82	65	82				
Withdrawable Evolis in MC cassette											
MC1											
Rated voltage	Ur	kV 50/60 Hz	7.2		12						
Insulation level											
- power frequency withstand	Ud	kV 50 Hz 1 min (*)	20		28						
- lightning impulse withstand	Up	kV peak	60		75						
Rated current	Ir	A	630	■	■	■	■				
			1250	■	■	■	■				
			2500	–	–	–	–				
Short circuit current	Isc	kA	25	31.5	25	31.5					
Short time withstand current	Ik/tk	kA/3 s	25	31.5	25	31.5					
Short-circuit making current	Ip	kA peak	50 Hz	63	79	63	79				
			60 Hz	65	82	65	82				
Evolis fixed version											
Rated voltage	Ur	kV 50/60 Hz	7.2		12						
Insulation level											
- power frequency withstand	Ud	kV 50 Hz 1 min (*)	20		28						
- lightning impulse withstand	Up	kV peak	60		75						
Rated current	Ir	A	630	■	■	■	■				
			1250	■	■	■	■				
			2500	–	–	–	–				
Short circuit current	Isc	kA	25	31.5	25	31.5					
Short time withstand current	Ik/tk	kA/3 s	25	31.5	25	31.5					
Short-circuit making current	Ip	kA peak	50 Hz	63	79	63	79				
			60 Hz	65	82	65	82				

Common characteristics according to IEC 62271-100

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	■
Operating times	Opening	< 50 ms
	Breaking	< 60 ms
	Closing	< 65 ms
Service temperature	T	°C
Mechanical endurance	Class	M2
	Number of switching operations	10 000
Electrical endurance	Class	E2
Number of switching operations at full Isc value	25 kA	100
	31.5 kA	50
	40 kA	30
Capacitive current breaking capacity	Class	C1
Average relative humidity	Over 24 h	< 95%
	Over 1 month	< 90%

185									240								
7.2			12			17.5			7.2			12			17.5		
20			28			38			20			28			38		
60			75			95			60			75			95		
■	■	-	■	■	-	■	■	-	-	-	■	-	-	■	-	-	■
■	■	-	■	■	-	■	■	-	-	-	■	-	-	■	-	-	■
-	-	-	-	-	-	-	-	-	■	■	■	■	■	■	■	■	■
25	31.5	40	25	31.5	40	25	31.5	40	25	31.5	40	25	31.5	40	25	31.5	40
25	31.5	40	25	31.5	40	25	31.5	40	25	31.5	40	25	31.5	40	25	31.5	40
63	79	100	63	79	100	63	79	100	63	79	100	63	79	100	63	79	100
65	82	104	65	82	104	65	82	104	65	82	104	65	82	104	65	82	104
MC2									MC3								
7.2			12			17.5			7.2			12			17.5		
20			28			38			20			28			38		
60			75			95			60			75			95		
-	■	■	-	■	■	■	■	■	-	-	■	-	-	■	-	-	-
-	■	■	-	■	■	■	■	■	-	-	■	-	-	■	-	-	■
-	-	-	-	-	-	-	-	-	■	■	■	■	■	■	■	■	■
25	31.5	40	25	31.5	40	25	31.5	40	25	31.5	40	25	31.5	40	25	31.5	40
25	31.5	40	25	31.5	40	25	31.5	40	25	31.5	40	25	31.5	40	25	31.5	40
63	79	100	63	79	100	63	79	100	63	79	100	63	79	100	63	79	100
65	82	104	65	82	104	65	82	104	65	82	104	65	82	104	65	82	104
7.2			12			17.5			7.2			12			17.5		
20			28			38			20			28			38		
60			75			95			60			75			95		
■	■	■	■	■	■	■	■	■	-	-	■	-	-	■	-	-	■
■	■	■	■	■	■	■	■	■	-	-	■	-	-	■	-	-	■
-	-	-	-	-	-	-	-	-	■	■	■	■	■	■	■	■	■
25	31.5	40	25	31.5	40	25	31.5	40	25	31.5	40	25	31.5	40	25	31.5	40
25	31.5	40	25	31.5	40	25	31.5	40	25	31.5	40	25	31.5	40	25	31.5	40
63	79	100	63	79	100	63	79	100	63	79	100	63	79	100	63	79	100
65	82	104	65	82	104	65	82	104	65	82	104	65	82	104	65	82	104

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

■ Available

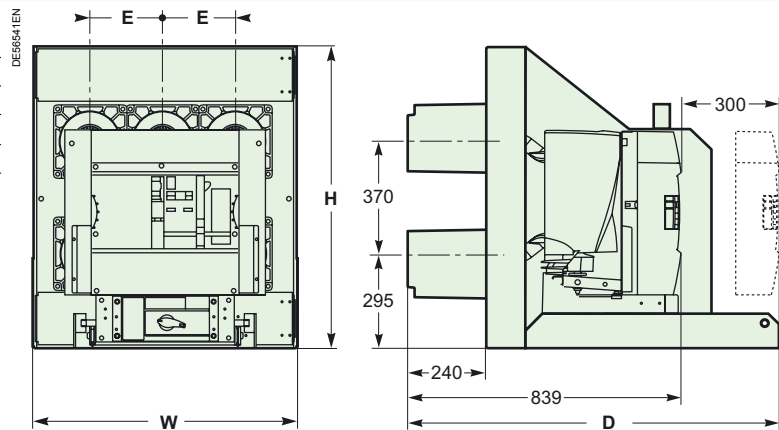
- Not available.

Dimensions and weights

Device

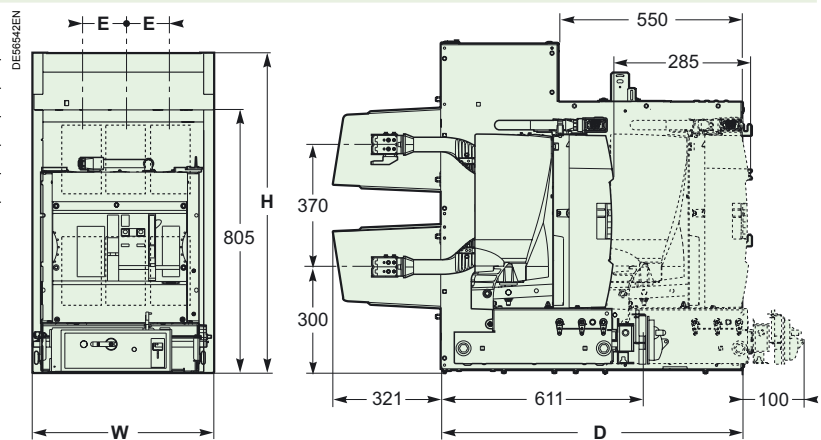
Withdrawable in NEX cradle

Phase to phase (mm)	E	145	185	240
Dimensions (mm)	W	576	686	866
	H	965	965	965
	D	1140	1140	1140
Weight (kg)		165	174	272



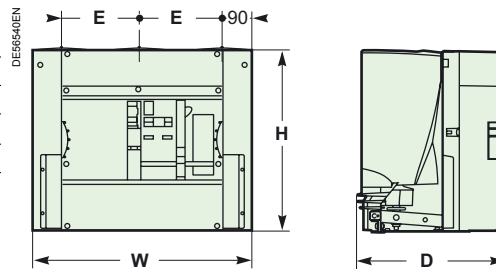
Withdrawable in MC cassette

Cassette		MC1	MC2	MC3
Phase to phase (mm)	E	145	185	240
Dimensions (mm)	W	556	686	886
	H	980	980	980
	D	1223	1223	1223
Weight (kg)		222	255	326



Basic fixed

Phase to phase (mm)	E	145	185	240
Dimensions (mm)	W	470	550	660
	H	535	535	535
	D	429	429	429
Weight (kg)		51	55	79



Schneider Electric Industries SAS

89, boulevard Franklin Roosevelt
F-92506 Rueil-Malmaison Cedex
Tel.: +33 (0)1 41 29 85 00
www.schneider-electric.com
www.merlin-gerin.com

As standards, specifications and designs change from time to time, please ask for confirmation of the information given in this publication.



This document has been printed
on ecological paper

Publishing: Schneider Electric Industries SAS
Design: Schneider Electric Industries SAS
Printing: Imprimerie du Pont de Claix/JPF - Made in France