



Overview

The EKM7 series high voltage molded case circuit breaker is designed to meet the needs of power distribution networks operating at AC 50/60Hz. With a rated insulation voltage of 1200V, it offers reliable protection for circuits with rated voltages ranging from 690V to 1140V, and a rated current of up to 630A.

This circuit breaker is ideal for infrequent switching of circuits and occasional motor starting. It effectively safeguards against overloads, short circuits, overvoltage, and undervoltage, ensuring the safety and stability of power lines.

In addition, the EKM7 series high voltage molded case circuit breaker complies with the IEC60947-2 standard, guaranteeing its quality and performance.

Product Features

- High mechanical life and electrical life.
- Short arcing distance: standard arc suppression cover and three-layer free metal partition to avoid secondary system failures caused by arcing during disconnection.
- Super current limiting capability.
- Super insulation performance, electrical clearance and creepage distance comply with UL489 standard.
- Reverse inlet line without capacity reduction.
- Anti-humidity, heat, salt spray, and mold resistance.
- New single breakpoint structure, more stable and reliable than double breakpoint structure.

Core Patented Technology

- Repulsion opening anti-drop technology with low repulsion opening reversal point of the moving contact.
- Arc Ionization elimination technology to realize shorter flashover.
- Arrangement of the handle away from the arc extinguishing area to make the operator safer.

Model Fast Selection Guide

EKM7 - 630 H / 3 00 D

EKM7	630	H	3	00	D
↓	↓	↓	↓	↓	↓
Product code	Frame size	Breaking capacity level	Poles	Product Accessories	Color code
EKM7 Series MCCB	320, 630	M: ordinary type H: high breaking type	3P	see table 1	None: off-white cover, black handle D: dark gray cover, red handle

Table 1

Annex Name	Annex code	Annex Name	Annex code
No annex	00	Shunt release + Auxiliary contacts	40
Alarms contacts	08	Shunt release + Auxiliary contacts + Alarm contacts	48
Shunt release	10	Auxiliary contacts + Auxiliary contacts	60
Shunt release + alarm contacts	18	Auxiliary contacts + Auxiliary contacts + alarm contacts	68
Auxiliary contacts	20	Shunt release + double auxiliary contacts	80
Auxiliary contacts + Alarm contacts	28		

Technical Parameters

Model	EKM7-320						EKM7-630				
Rated current (A)	16,20,25,32,40,50,63,75,80,100,125,140,160,180,200,225,250,320						225,250,320,350,400,500,630				
Pole	3P										
Rated working voltage Ue (V)	380/415	690	800	1000	1140	380/415	690	800	1000	1140	
Rated insulation voltage Ui (V)	1200										
Rated impulse withstand voltage Uimp (kV)	12										
Power frequency withstand voltage (1min)(V)	3500										
Rated ultimate short-circuit breaking capacity Icu(kA)	Breaking capacity level	AC380/415V	AC690V	AC800V	AC1000V	AC1140V	AC380/415V	AC690V	AC800V	AC1000V	AC1140V
	M	/	60	50	20	12	/	60	50	20	12
	H	100	65	50	30	20	100	65	50	32	20
Rated operating short-circuit breaking capacity Ics(kA)	M	/	60	50	20	12	/	60	50	20	12
	H	100	65	50	30	20	100	65	50	32	20
Mechanical life (cycles)	15000										
Electrical life (cycles)	5000	3000	3000	1000	1000	5000	3000	3000	1000	1000	
Arc distance(mm)	50										
Dimension W×L×H(mm)	120×200×103						158×325×177				
Instantaneous release	5In or 10In										
Reference ambient temperature	40°C										
Working ambient temperature	-40°C ~ +70°C, no derating at +50°C										
Altitudes	5000m										

Applicable Working Environment and Compensation Coefficient

Ambient temperature	10°C	20°C	25°C	30°C	40°C	50°C	60°C	70°C
Compensation coefficient	1.17	1.14	1.12	1.06	1	0.96	0.87	0.76

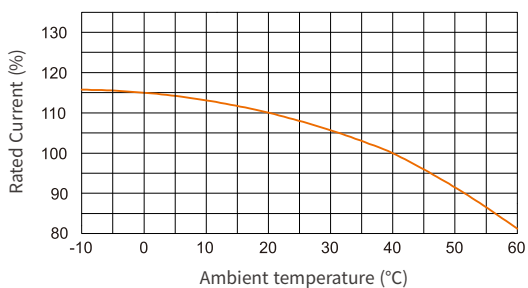
Derating Coefficient of Technical Parameters Based On Altitude

When the altitude is below 2000m, the characteristics of the circuit breaker will not be affected. If the altitude exceeds this value, the decrease in air insulation characteristics and cooling capacity must be considered. The following table provides the applicable correction values for altitudes exceeding 2000m.

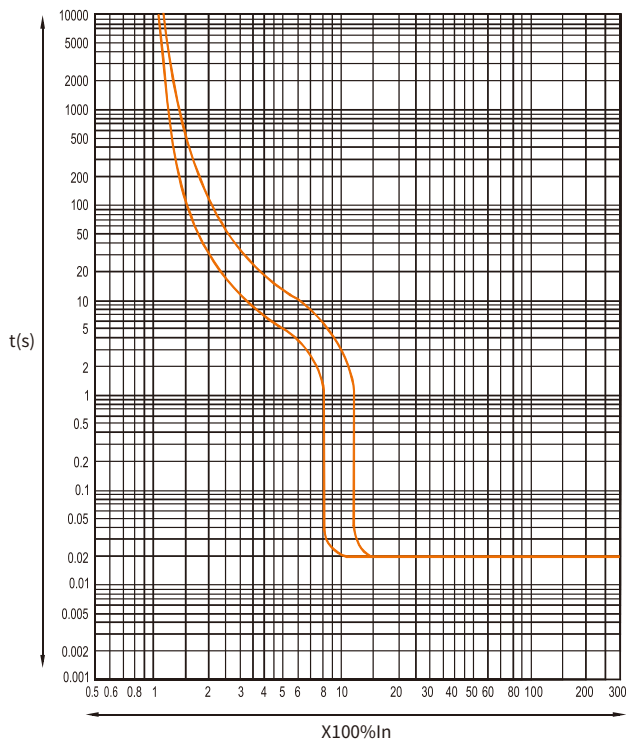
Altitude (m)	2000	2500	3000	3500	4000	4500	5000
Rated current	1In	0.99In	0.98In	0.97In	0.96In	0.95In	0.94In
Rated voltage	1Ue	0.95Ue	0.88Ue	0.85Ue	0.82Ue	0.8Ue	0.75Ue
Rated power frequency withstand voltage	1U	0.95U	0.88U	0.85U	0.82U	0.8U	0.75U

Tripping Curve

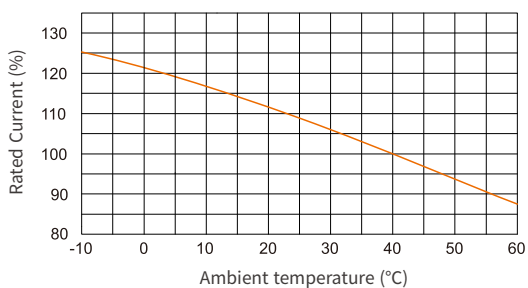
EKM7-320 Current-Temperature Characteristic



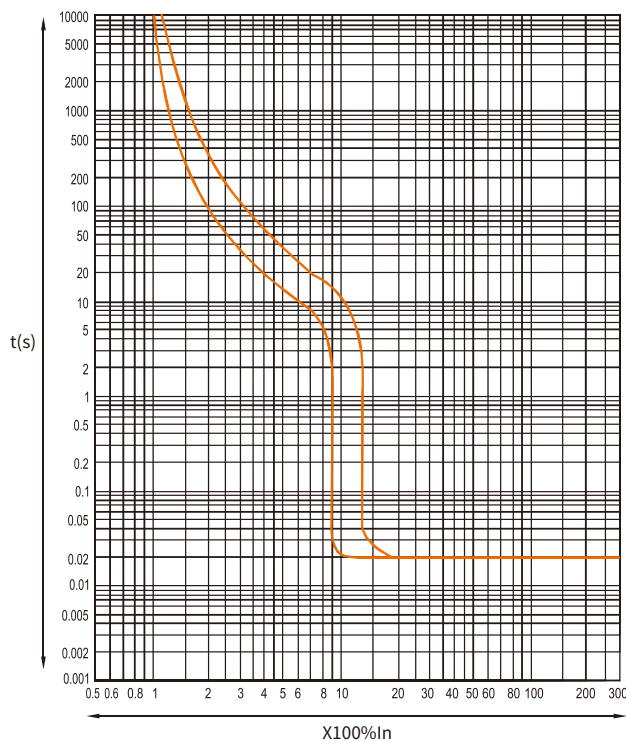
EKM7-320 Time/current Characteristic Curve



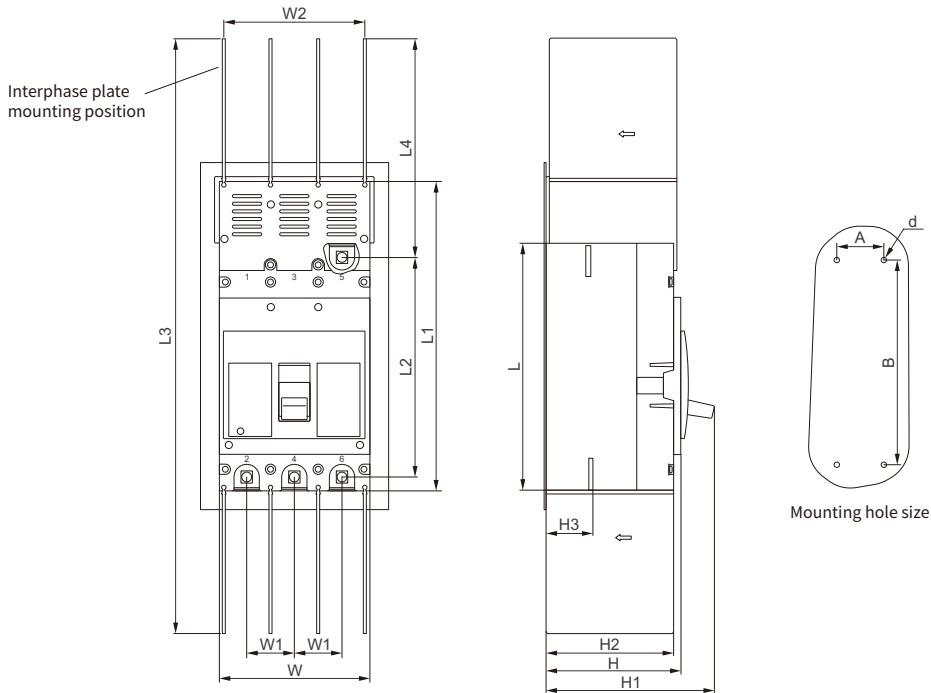
EKM7-630 Current-Temperature Characteristic



EKM7-630 Time/current Characteristic Curve

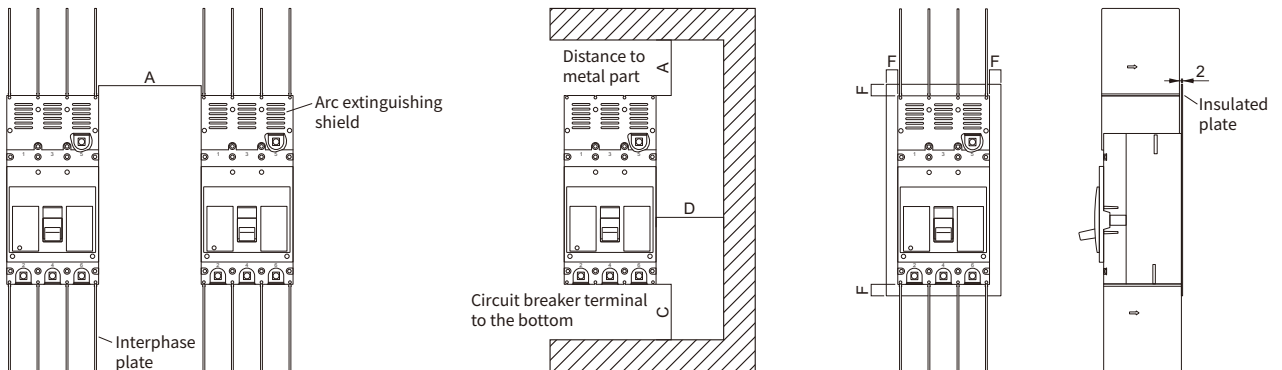


Overall Dimensions and Mounting Dimensions



Circuit breaker model	Dimensions (mm)														
	W	W1	W2	L	L1	L2	L3	L4	H	H1	H2	H3	A	B	d
EKM7-320	120	38	110	200	264	178	657	272	108	137	100	31.5	38	161	Ø5.5
EKM7-630	158	50	148	260	325	231	625	229	142	177	134	50	50	215	Ø6.5

Mounting Diagram



Circuit breaker model	Dimensions (mm)				
	A	B	C	D	F
EKM7-320	50	50	50	50	25
EKM7-630	50	50	50	50	20