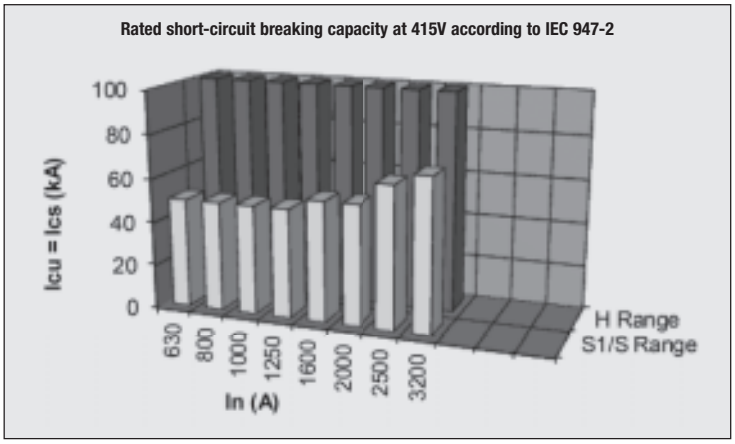
Air circuit breakers

Series ME07 690V/AC 630 up to 3200A

Description

Two ranges of circuit breakers Series ME for time delayed selectivity with different breaking capacities in each frame size offer a compact and economic solution for all installations.



Certifications

ABS	American Bureau of Shipping
BV	Bureau Veritas
DNV	Det Norske Veritas
GL	German Lloyd
LRoS	Lloyd's Register of Shipping
RINA	Registro Italiano Navale
RMRoS	Russian Maritime Register of Shipping

Conformity

The circuit breakers Series ME07 comply with the standard "Low-voltage switchgear and controlgear" VDE 0660 Part 101, respectively IEC 947-2 and VDE 0113.
The disconnecting switches Series MET are in accordance with the standard "Low-voltage switchgear and controlgear" VDE 0660 Part 107, respectively IEC 947-3 and VDE 0113.

Standard range S1
The solution for heavy power distribution requirements with sufficiently high breaking capacity for complete time selective discrimination.

High performance range H
The compact solution for distribution of extremely high power levels up to 100 kA in industrial and marine installations in each frame size.

Complete line
- Compact, robust steel frame construction which reduces the space requirements within enclosures.
- Circuit breakers and disconnecting switches.
- Fixed and withdrawable versions.
- Appearance of the operator control panel in a modern industry design is identical for the complete productline.
- Drive mechanisms, trip units and accessories e.g. undervoltage trip, shunt trip and auxiliary contacts are common for all frame sizes.
- Manual or motor operated stored energy drive mechanism for direct and remote actuation.
- Microprocessor controlled trip units for advanced protection.
- Bus connection.

Design and specifications are subject to change without notice.

Technical data

Series ME07S1 - Standard range - Frame size 10-40 - 3 poles - 630 up to 3200 A 500/690V/AC

Frame size			10				20		30	40
Series ME			**637S1**	**807S1**	**1007S1**	**1257S1**	**1607S1**	**2007S1**	**2507S1**	**3207S1**
Rated insulation voltage Ui			AC 1000V							
Rated impulse withstand voltage Uimp			8kV							
Pollution degree			3							
Rated voltage Ue			Up to 3 AC 690V							
Rated current Ie			Fixed and withdrawable							
Pollution degree IP00	Temperature									
For use in enclosures with interior	40°C	(A)	630	800	1000	1250	1600	2000	2500	3200
temperatures of 40 to 60°C,	45°C	(A)	630	800	1000	1250	1600	1980	2500	3200
the relevant IP00 values can be applied	50°C	(A)	630	800	1000	1250	1600	1920	2400	3200
basically. Connection cross sections are to be	55°C	(A)	630	800	1000	1250	1600	1840	2360	3200
rated to the rated current of the equipment.	60°C	(A)	630	800	1000	1250	1600	1760	2250	3100
Rated breaking capacity Icn										
according to IEC 947-2 (RMS values)										
Power supply to top or bottom										
Icu = Ics	3 AC 400/415V	(kA)	50	50	50	50	55	55	65	70
		cos φ	0.25	0.25	0.25	0.25	0.25	0.25	0.2	0.2
	3 AC 500V	(kA)	50	50	50	50	55	55	65	70
		cos φ	0.25	0.25	0.25	0.25	0.25	0.25	0.2	0.2
	3 AC 690V(1)	(kA)	50	50	50	50	55	55	65	70
		cos φ	0.25	0.25	0.25	0.25	0.25	0.25	0.2	0.2
Rated making capacity Icm										
Peak values	3 AC 400/415V	(kA)	105	105	105	105	121	121	143	154
	3 AC 500V	(kA)	105	105	105	105	121	121	143	154
	3 AC 690V(1)	(kA)	105	105	105	105	121	121	143	154
Rated short time current Icw	0.3s	(kA)	50	50	50	50	55	55	65	70
	1.0s	(kA)	50	50	50	50	55	55	55	65
	3.0s	(kA)	20	20	20	20	30	30	35	40
Selectivity when "Switching ON"		(kA)	23	23	23	23	30	30	35	40
RMS values		cos φ	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
(making current trip type kse)										
Setting value kse-trip (RMS value)		(kA)	35	35	35	35	45	45	52	60
Selectivity with breaker "ON"		(kA)	50	50	50	50	55	55	65	70
		cos φ	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Total breaking time										
via kse trip		(ms)	20	20	20	20	20	20	20	20
via bse trip unit - s channel		(ms)	65	65	65	65	65	65	65	65
via bse trip unit - k channel		(ms)	45	45	45	45	45	45	45	45
Number of poles			3	3	3	3	3	3	3	3
Mechanical endurance										
without maintenance	$x10^3$ ops.		10	10	10	10	10	10	5	5
with maintenance	$x10^3$ ops.		20	20	20	20	20	20	10	10
Switching frequency	ops. /h		60	60	60	60	60	60	30	30
Total power losses at rated current										
and breaker at operating temperature										
fixed version		(W)	75	105	145	205	230	325	405	445
withdrawable version		(W)	110	162	234	344	444	503	600	708

(1) Values for 690V version

Technical data

Series ME07H - High performance range - 3 poles - 630 up to 3200 A — 500/690 V/AC

Frame size			10				20		30	40
Series ME			**673H**	**807H**	**1007H**	**1257H**	**1607H**	**2007H**	**2507H**	**3207H**
Rated insulation voltage Ui			AC 1000V							
Rated impulse withstand voltage Uimp			8kV							
Pollution degree			3							
Rated voltage Ue			Up to 3 AC 1000V up to DC 750V(1)							
Rated current Ie			Fixed and withdrawable							
Pollution degree IP00	Temperature									
For use in enclosures with interior	40°C	(A)	630	800	1000	1250	1600	2000	2500	3200
temperatures of 40 to 60°C,	45°C	(A)	630	800	1000	1250	1600	1980	2500	3200
the relevant IP00 values can be applied	50°C	(A)	630	800	1000	1250	1600	1920	2400	3200
basically. Connection cross sections are to be	55°C	(A)	630	800	1000	1250	1600	1840	2360	3200
rated to the rated current of the equipment.	60°C	(A)	630	800	1000	1250	1600	1760	2250	3100
Rated breaking capacity Icn										
according to IEC 947-2 (RMS values)										
Power supply to top or bottom										
Icu = Ics	3 AC 400/415V	(kA)	100(2)	100(2)	100(2)	100(2)	100	100	100	100
		cos φ	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	3 AC 440V	(kA)	100(2)	100(2)	100(2)	100(2)	100	100	100	100
		cos φ	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	3 AC 500V	(kA)	70	70	70	70	80	80	90	90
		cos φ	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	3 AC 690V	(kA)	50	50	50	50	60	60	75	80
		cos φ	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.2
	3 AC 1000V	(kA)	25	25	25	25	35	35	40	50
		cos φ	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
DC 220V, T = L/R = 15 ms(1)		(kA)	50	50	50	50	60	60	60	65
DC 440V, T = L/R = 15 ms(1)		(kA)	40	40	40	40	45	45	45	50
DC 750V, T = L/R = 15 ms(1)		(kA)	20	20	20	20	20	20	30	30
Rated making capacity Icm										
Peak values	3 AC 400/415V	(kA)	220	220	220	220	220	220	220	220
	3 AC 440V	(kA)	220	220	220	220	220	220	220	220
	3 AC 500V	(kA)	154	154	154	154	176	176	198	198
	3 AC 690V	(kA)	105	105	105	105	132	132	165	176
	3 AC 1000V	(kA)	52.5	52.5	52.5	52.5	73.5	73.5	84	105
Rated short time current Icw	0.3s	(kA)	50	50	50	50	55	55	65	70
	1.0s	(kA)	50	50	50	50	55	55	55	65
	3.0s	(kA)	20	20	20	20	30	30	35	40
Selectivity up to (at ON operation as well)			23	23	23	23	30	30	35	40
RMS values		cos φ	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Instantaneous short circuit trip type ks										
RMS values		(kA)	35	35	35	35	45	45	52	60
Peak values		(kA)	50	50	50	50	63	63	74	85
Total breaking time										
via ks trip		(ms)	20	20	20	20	20	20	20	20
via bse trip unit - s channel		(ms)	65	65	65	65	65	65	65	65
via bse trip unit - k channel		(ms)	45	45	45	45	45	45	45	45
Number of poles			3	3	3	3	3	3	3	3
Mechanical endurance										
without maintenance	x10^3 ops.		10	10	10	10	10	10	5	5
with maintenance	x10^3 ops.		20	20	20	20	20	20	10	10
Switching frequency	ops. /h		60	60	60	60	60	60	30	30
Total power losses (3-pole) at rated current										
and breaker at operating temperature										
fixed version		(W)	75	105	145	205	230	325	405	445
withdrawable version		(W)	110	162	234	344	444	503	600	708

(1) For DC applications see section Air circuit breakers Series ME07 for DC Applications on pages K.6, K.7
(2) Withdrawable version - Icu 80kA