

# SUPER AE-SW

## Low Voltage Switchgear

### Air Circuit Breakers

Built for the global demands of the 21st century



Simple operation for maximum user-friendliness



Flexible installation and customised protection for your systems



Class leading performance range and extended service life

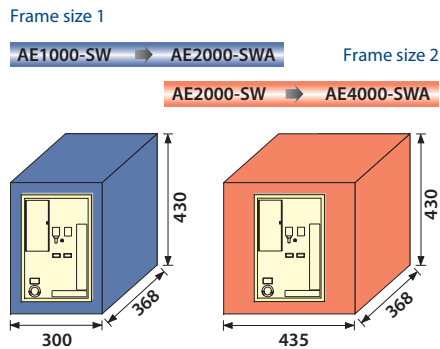


Enhanced network support for comprehensive monitoring and control

# Compact Intelligence at the In-feed Point

## Very user-friendly design

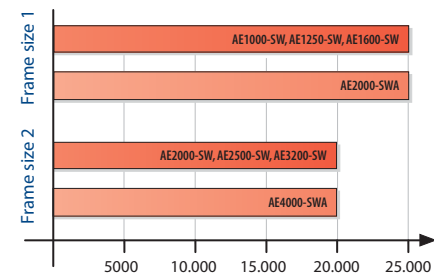
All breakers in the series are available in both 3 and 4 pole versions with fixed or drawout configurations to suit your individual requirements. There are only two standard sizes, making planning much easier.



Installation dimensions: 3-pole drawout versions

The external frame sizes and connection details are identical with the units' predecessors, making retrofitting quick and simple. The main connections of the new SWA models are arranged vertically.

In addition to an automatic reset these circuit breakers also have a manual reset feature.



Number of switching cycles (On/Off)

The range of air circuit breakers and load interrupter switches is complemented by a comprehensive range of accessories. In contrast to earlier models it is now possible to save space by installing some accessories (for example the UVT undervoltage trip) inside the breaker unit.

All live components in the vicinity of the control connections have IP20 protection rating.

The SUPER AE-SW air circuit breakers are designed for the world market and have all important international industrial and shipping registry certifications.

## Individually configured protection

The circuit breakers are delivered with an electronic trip relay. It is available in versions for all standard power supply voltages. Optional modules are also available for most common applications like protecting transformers, cables, motors and generators. This ensures optimum protection for long time, short time and instantaneous tripping.

All parameters can be adjusted individually, ensuring that you can achieve optimum selectivity for every application.

In addition to options like pre-alarm, ground fault and earth leakage protection, the electronic trip relay provides complete protection against overloads and short circuits. The protection characteristic can be adjusted individually for the needs of your application.



Relay in the maximum configuration

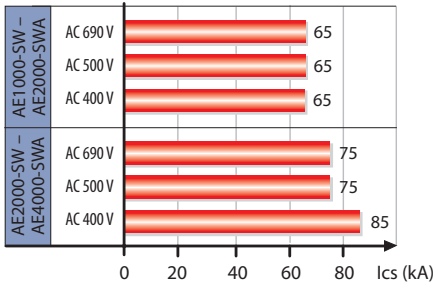
The main functions, including trip status, alarm and load current are displayed on the LCD screen and can also be output as signals. For easy and quick recognition of alarms, the screen automatically turns red when a fault is detected.

In addition, the protection of the N pole can also be optionally reduced from 100 % to 50 % on the 4-pole versions of the breakers.

# Broad performance range

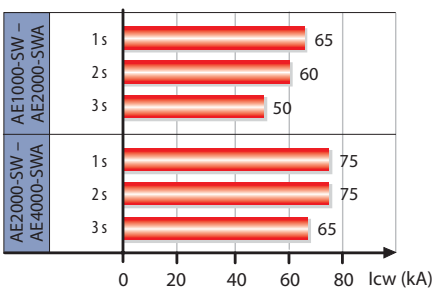
The growing demand for power naturally increases the levels of short circuit currents in power distribution systems. The SUPER AE series breakers deliver excellent protection against thermal and mechanical damage. The rated surge withstand capability (Uimp) is 12kV. With a short circuit breaking capacity of 65 – 85 kA they cover the great majority of applications, providing very high-quality protection for your systems.

Ics = Icu (100 %)



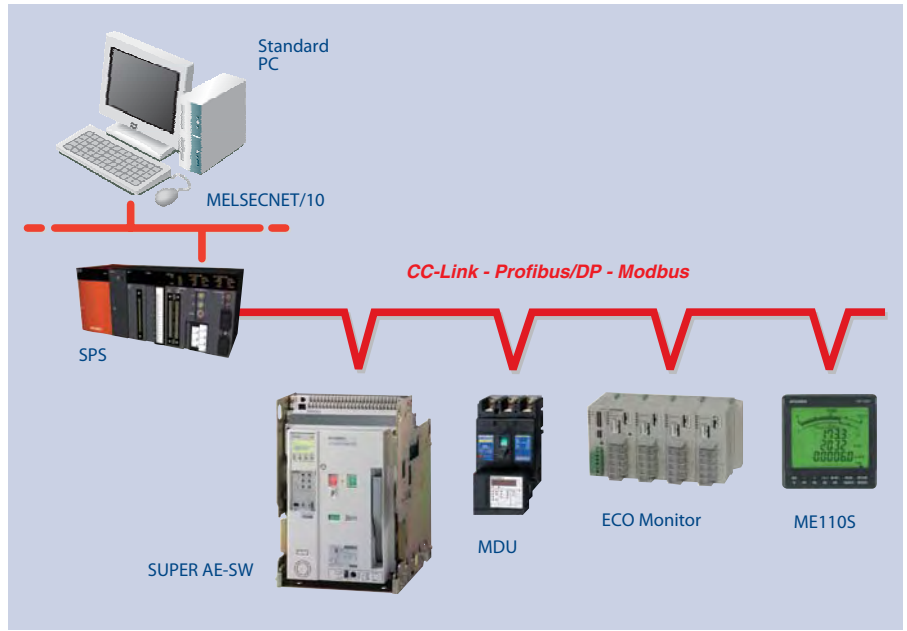
Rated short circuit breaking capacity Ics

Icw



Rated short time withstand current Icw

The small number of components and high production standards ensure a long service life. The breakers of the SUPER AE series are virtually maintenance-free.



The SUPER AE in network configurations

# Comprehensive communications capabilities

Together with optional network interface modules the SUPER AE can now become a fully integrated part of the total network and system concept. In addition to Profibus/DP and CC-Link, an interface module for Modbus is also available.

In combination with an additional I/O module the breaker can be switched on and off remotely via the network. A drawout position switch can also be checked for the current drawout position via the network.

The following table lists the data and functions that can be transmitted and controlled via the network.

Measurement / Alarms	Voltage, current, power etc
	Tripping cause / current
	Alarm (PAL, TAL, self diagnosis)
Breaker control	Breaker ON/OFF
	Spring charge
Breaker state	ON/OFF spring charge state
	Draw-out position
	ETR characteristics setting



Profibus/DP module

The SUPER AE's network modules enable the monitoring and control of a number of different parameters including voltage and current performance values. In addition, the networking connection can also be used to report alarm and error messages from the breaker back to a centralized control point like a PLC or a SCADA system.

# Switchgear selection made easy

The MELSHORT 2 software package for system dimensioning and selection makes it easy to select the right switchgear for your needs.

# Specifications ///

Type	AE1000-SW	AE1250-SW	AE1600-SW	AE2000-SWA	AE2000-SW	AE2500-SW	AE3200-SW	AE4000-SWA									
Frame type	1				2												
Rated current Iu (A) 40 °C	1000	1250	1600	2000	2000	2500	3200	4000									
Max. rated operational voltage Ue (V)	690				690												
Rated insulation voltage Ui (V)	1000				1000												
Rated impulse withstand voltage Uimp (kV)	12				12												
Suitable for isolation	●				●												
Category	B				B												
Pollution degree	3				3												
Number of poles	3	4	3	4	3	4	3	4									
Rated current Ir (A) adjustment range at 40 °C	500 – 1000	625 – 1250	800 – 1600	1000 – 2000	625 – 2000	1250 – 2500	1600 – 3200	2000 – 4000									
Rated current of neutral pole (A)	1000	1250	1600	2000	2000	2500	3200	4000									
Rated service short-circuit breaking capacity ① Icu (kA, rms) Ics = Icu = 100 %	690 V AC	65				75											
	400 V AC	65				85											
Rated short-time withstand current (kA rms) Icw	1 s	65				75											
Operating cycles ② (ON/OFF)	without rated current	25000				20000											
Connecting terminal	horizontal	●				●				—							
	vertical	● ③				●				●							
	frontal	● ③				—				● ③							
Outline dimensions (mm) H x W x D	Fixed type	3-pole: 410 x 340 x 290 4-pole: 410 x 425 x 290				3-pole: 410 x 475 x 290 4-pole: 410 x 605 x 290											
	Draw-out type	3-pole: 430 x 300 x 368 4-pole: 430 x 385 x 368				3-pole: 430 x 435 x 368 4-pole: 430 x 565 x 368				3-pole: 430 x 439 x 368 4-pole: 430 x 569 x 368							
Weight (kg)	Fixed type	41	51	41	51	42	52	47	57	60	72	61	73	63	75	81	99
	Draw-out type	64	78	64	78	65	79	70	84	92	113	93	114	95	116	108	136
	Cradle only	26	30	26	30	26	30	31	35	35	43	35	43	36	44	49	61

① Conforms to IEC60947-2, EN60947-2

② Number of mechanical operating cycles (on/off).

③ Optional

## EUROPEAN BRANCHES

MITSUBISHI ELECTRIC EUROPE B.V. 25, Boulevard des Bouvets F-92741 Nanterre Cedex Phone +33 (0) 1 55 68 55 68	FRANCE
MITSUBISHI ELECTRIC EUROPE B.V. Gothaer Straße 8 D-40880 Ratingen Phone +49 (0) 21 02/4 86-0	GERMANY
MITSUBISHI ELECTRIC EUROPE B.V. Westgate Business Park, Ballymount IREL-Dublin 24 Phone +353-1/4 50 50 07	IRELAND
MITSUBISHI ELECTRIC EUROPE B.V. Via Paracelso 12 I-20041 Agrate Brianza (MI) Phone +39 (0) 3 96 05 31	ITALY
MITSUBISHI ELECTRIC EUROPE B.V. Carretera de Rubí, 76-80 E-08190 Sant Cugat del Vallés Phone +34 93/5 65 31 60	SPAIN
MITSUBISHI ELECTRIC EUROPE B.V. Travelers Lane GB-Hatfield Herts. AL10 8 XB Phone +44 (0) 1707/27 61 00	UK

## REPRESENTATIVES

Emac S.A. Industrialaan 1 BE-1702 Groot-Bijgaarden Phone:+32 (0) 2 / 481 02 11	BELGIUM	GINO INDUSTRIES LTD 26, Ophir street IL-32235 Haifa Phone:+972 (0) 4 / 867 06 56	ISRAEL	SCANELEC AS Leirvikasen 438 NO-5020 Bergen Phone:+47 55 50 60 00	NORWAY	Electrotechnical Shetinkina St.33, Office 116 RU-630088 Novosibirsk Phone +7 3832 / 11 95 98	RUSSIA	Euro Energy Comp. AB Järnvägsgatan 36 S-434 24 Kungsbacka Phone:+46 (0) 300 / 69 00 40	SWEDEN	CBI Ltd Private Bag 2016 ZA-1600 Isando Phone +27 (0) 11 / 9 28 20 00	SOUTH AFRICA
AutoCont Nemocnicni 12 CZ-70200 Ostrava 2 Phone:+420 59 / 6152 111	CZECH REPUBLIC	Kazpromautomatiks Ltd. 2, Scladskaya Str. KAZ-470046 Karaganda Phone +7 3212 50 11 50	KAZAKHSTAN	MPL Technology ul. Slizczna 36 PL-31-444 Kraków Phone +48 (0) 12 / 6 32 28 85	POLAND	ELEKTROSTYLE Krasnij Prospekt 220-1, Office 312 RU-630049 Novosibirsk Phone +7 3832 / 10 6618	RUSSIA	TRIELEC AG Mühlentalstr. 136 CH-8200 Schaffhausen Phone:+41 (0) 52 / 625 84 25	SWITZERLAND		
louis poulsen Geminivej 32 DK-2670 Greve Phone +45 (0) 43 / 95 95 95	DENMARK	RIFAS UAB Tinklu 29A LT-5300 Panevezys Phone:+370 (45) 582-728	LITHUANIA	Sirius Trad. & Serv.srl Str. Biharua Nr.67-77 RO-013981 Bucuresti 1 Phone +40 (0) 21 / 2 01 1146	ROMANIA	ELEKTROSTYLE Poslannikov Per., 9, Str.1 RU-107005 Moscow Phone +7 095 / 542-4323	RUSSIA	GTS Dartilaceze Cad.No.43A KAT.2 TR-80270 Okmeydanı-Istanbul Phone +90 (0) 212 / 3 20 16 40	TURKEY		
ELECTRAPOTHIKI ATHENS S.A. Acharon Av. 426 GR-11143 Athens Phone:+30 210 / 2014454	GREECE	INTEHSIS SRL Bld. Traian 23/1 MD-2060 Kishinev Phone:+30 (45) 582-728	MOLDOVA	Automatika Sever Ltd. Lva Tolstogo Str. 7, Off. 311 RU-197376 St Petersburg Phone +7 812 / 718 32 38	RUSSIA	IGOS Byazanskij Prospekt, 8A, Office 100 RU-109428 Moscow Phone +7 095 / 232 0207	RUSSIA				
Meltrade Automatika Ltd Fertő Utca 14. HU-1107 Budapest Phone:+36 (0) 1 / 431-9726	HUNGARY	IMTECH Sklajesdijk 155 NL-3087 AG Rotterdam Phone:+31 (0) 10 / 487 19 11	NETHERLANDS	CONSYS Promyshlennaya St. 42 RU-198099 St Petersburg Phone +7 812 / 325 3653	RUSSIA	INEA d.o.o. Stegne 11 SI-1000 Ljubljana Phone +386 (0) 1 / 5 13 81 00	SLOVENIA				



Mitsubishi Electric Europe B.V. /// FA - European Business Group /// Gothaer Straße 8 /// D-40880 Ratingen /// Germany  
Tel.: +49(0)2102-4860 /// Fax: +49(0)2102-486112 /// info@mitsubishi-automation.com /// www.mitsubishi-automation.com

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