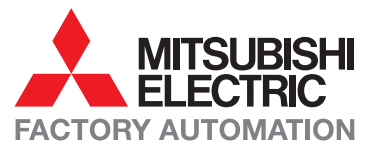


Partner Product

EBG 227-EN



# LV Switchgear

## Modular Enclosure Systems

**Approved solutions to EN 61439-1/2**  
Meeting demanding safety standards



**e-Factory**  
Partner Product

LATEST STANDARDS 

Guaranteed approval to EN 61439-1/2

IMPROVED QUALITY 

Best of breed ASTA certified ACBs and MCCBs

MORE FLEXIBILITY 

Optimal configuration of systems

# Meeting demanding safety standards



Modular enclosure solutions

## Guaranteed safety

Low voltage switchgear products and assembled panels for use in applications such as water treatment, machine construction, process industries, building distribution systems and the chemical industries have to undergo rigorous safety approvals, to demonstrate high levels of user protection and systems safety under conditions of fire, over-voltage, over-current events and general misuse, taking into account that personnel of varying skill levels may have access to the panel.

This can be something of a challenge to designers and installers of low voltage switchgear and control gear assemblies. But a solution comes in the form of flexible, modular enclosure systems, built around type tested devices, that offer ASTA certification and conformance to EN 61439-1/2 as standard.

## Modular solution

An enclosure system that provides a modular system for the assembly type tested low voltage switchgear and control gear offers numerous benefits to the installer. The flexible combination of sections allow for optimal configuration of the system, while the use of pre-approved devices delivers guaranteed conformance with the most demanding safety standards.



To meet user requirements for just such systems, Mitsubishi Electric in conjunction with its e-F@ctory partner Rittal, the enclosure specialists have developed a modular solution utilising Rittals Ri4Power Structured System and Mitsubishi's innovative low voltage switchgear. The Ri4Power system has been designed for the fast and reliable construction of low voltage switchgear systems for machines, plants, buildings and motor control systems, for loads up to 3200 A. The system is ASTA certified, and complies to EN 61439-1/2, design verified assembly, to guarantee the highest safety standards in power distribution.

Ri4Power provides easy planning, simple handling, perfect installation and a high degree of modularity. The system is built around Rittal's TS8 modular enclosures. Their dimensions and expandability offer complete flexibility, while divided interiors allow the internal space to be internally adapted to the function-related switchgear installation.

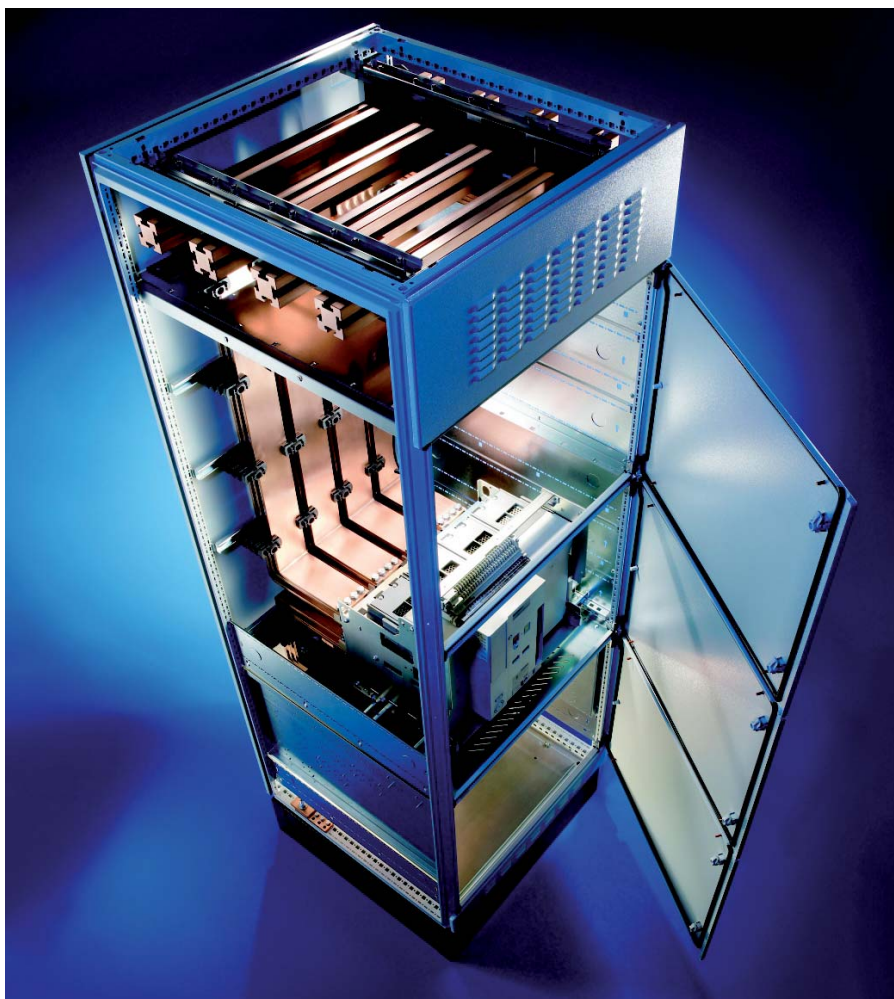
This new concept in installation technology and multifunctional components makes it possible to install the inside equipment of a low-voltage plant in just a few operations. Available as "flat pack" or assembled as steel work and copper, Ri4Power represents a flexible approach to motor control centres and distribution boards.

## Type tested components

A key aspect of the system is that it is built around Mitsubishi's type-tested low voltage switchgear products. These air circuit breakers and motor control circuit breakers are approved in accordance with EN 61439-1/2 and ASTA. The Ri4Power enclosures are built around these products and are certified as a design verified assembly in accordance with EN 61439-1/2.



Mitsubishi's fully approved Air Circuit breakers and MCCB's



A complete enclosure solution

Users can turn to Ri4Power knowing that all system components – cabinet, busbar, control gear, switchgear, safety devices, etc – have been tested together to guarantee the required levels of safety for the protection of devices and personnel of any skill level to the highest and most stringent international standards

Rittal is the world leading manufacturer for industrial enclosures and power distribution systems, but the Ri4Power systems take the company's enclosure solutions to a new level. With the ability to supply design verified assemblies built around Mitsubishi's low voltage switchgear means a complete solution can now be supplied, making it easy for users to select best of breed components and systems with the assurance that all possible safety requirements have been satisfied.

# Specifications ///

Type	AE1000-SW	AE1250-SW	AE1600-SW	AE2000-SWA	AE2000-SW	AE2500-SW	AE3200-SW	AE4000-SWA	AE4000-SW	AE5000-SW	AE6300-SW												
Frame type	1				2				3														
Rated current Iu (A) 40 °C	1000	1250	1600	2000	2000	2500	3200	4000	4000	5000	6000												
Max. rated operational voltage Ue (V)	690				690				690														
Rated insulation voltage Ui (V)	1000				1000				1000														
Rated impulse withstand voltage Uimp(kV)	12				12				12														
Suitable for isolation	yes				yes				yes														
Category	B				B				B														
Pollution degree	3				3				3														
Number of poles	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4							
Rated current Ir (A) adjustment range at 40 °C	500–1000		325–1250		800–1600		1000–2000		625–2000		1250–2500		1600–3200		2000–4000		2000–4000		2500–5000		3150–6300		
Rated current of neutral pole (A)	1000		1250		1600		2000		2000		2500		3200		4000		2000		2500		3150		
Rated service short-circuit breaking capacity <sup>①</sup> Icu (kA, rms) Ics=Icu=100%	690 V AC				65				75				85										
	400 V AC				65				85				130										
Rated short-timewithstand current (kA rms) Icw	1 s				65				75				100										
Operating cycles <sup>②</sup> (ON/OFF)	without rated current				25000				20000				10000 (3P)/5000 (4P)										
Connecting terminal	horizontal	yes				no				yes				no									
	vertical	yes <sup>③</sup>				yes				yes <sup>③</sup>				yes									
	frontal	yes <sup>③</sup>				no				yes <sup>③</sup>				no									
Outline dimensions (mm) HxWxD	fixed type	3-pole: 410x340x290 4-pole: 410x425x290								3-pole: 410x475x290 4-pole: 410x605x290				3 pole: 414x873x290 4 pole: 414x1003x290									
	draw-out type	3-pole: 430x300x368 4-pole: 430x385x368								3-pole: 430x435x368 4-pole: 430x565x368				3-pole: 430x439x368 4-pole: 430x569x368				3 pole: 480x875x368 4 pole: 480x1005x368					
Weight (kg)	fixed type	41	51	41	51	42	52	47	57	60	72	61	73	63	75	81	99	160	180	160	180	160	180
	draw-out type	64	78	64	78	65	79	70	84	92	113	93	114	95	116	108	136	233	256	233	256	240	263
	cradle only	26	30	26	30	26	30	31	35	35	43	35	43	36	44	49	61	118	133	118	133	125	140

- ① Conforms to IEC 60947-2, EN 60947-2  
 ② Number of mechanical operating cycles (on/off).  
 ③ Optional

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