



Switching solutions for industry

Market leading range of switches and
switching solutions

With close to 80 years of experience in designing and manufacturing, Katko are market leaders in the field of industrial switching. APS Industrial are proud to bring a complete range of enclosed isolating switches, PV isolating switches and cable glands to the local Australian market.



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KATKO LOAD BREAK SWITCHING SOLUTIONS

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KATKO is a specialised manufacturer of load break switches, switch fuses, safety switches, motor protection switches and a range of complementary accessories. With close to 80 years of experience in designing and manufacturing load break switches, isolators and switch fuses, from their inception, Katko have been focused on product innovation and customer service.

Based in Finland and with manufacturing facilities both there and in Poland, APS Industrial are proud national distributors of the Katko range in Australia. The product portfolio covers a full range of enclosed switches in polycarbonate, ABS, aluminium, stainless steel and sheet steel to match all specifications in a broad spectrum of applications and industries



FOOD INDUSTRY

FOOD PROCESSING, DAIRY, MEAT PACKING & PROCESSING, BEVERAGE-MAKING.

KATKO is a solution provider for the global dairy industry, leading the way in both food hygiene and work safety. KATKO products can be tailored in collaboration with the customer to suit their specific hygiene and performance needs: endurance of both cold and warm jet water sprays, moisture, chemicals and detergents.



HEAVY INDUSTRY

WATER AND WASTE-WATER, POWER GENERATION, METAL MANUFACTURING, TIMBER, PULP AND PAPER.

KATKO solutions cover all fields of heavy industry. They have served pulp and paper companies for decades and have grown to be an essential part of the value chain for the widest spectrum of industries all around the world – ranging from metal manufacturing to water purification to strip mills.



HAZARDOUS AND DEMANDING AREAS

MINING AND PROCESSING, OIL AND GAS, FIRE AND MARINE.

Even the world's most demanding and hostile environments need to be switched on and off. KATKO delivers stainless steel casings and extra-strong handles for the mining industry in both the northern and southern hemispheres. Their ATEX products serve high-risk areas and their RINA-certified marine product range was chosen for the world's largest passenger vessel.



RENEWABLE ENERGY

PHOTOVOLTAIC, WIND POWER AND RECYCLING.

KATKO continuously works on new solutions for renewable energy – today's fastest growing area of energy production. The Nordic operational environment is the perfect laboratory setting for product development both because of the region's high-standard of research facilities and also because of its harsh and intensely varied climate.

- Polycarbonate (IP66) or ABS (IP65) enclosure.
- Good resistance against UV and many chemicals. Available in grey/black or yellow/red.



- Stainless steel screw fixing

- Provision for 3 padlocks

- Retained handle, you don't need to unscrew to remove the cover.

- 5 cable entries:
- M20 & M25 mm as standard on the top and bottom and M20 on the base.
- Knock-out glands are easy to open.

- Neutral & earth terminals fitted on 3 pole switch.
- Only earth on 4 pole switch.

- Retrofit 'snap on' auxiliary contacts. No need to touch existing cabling.

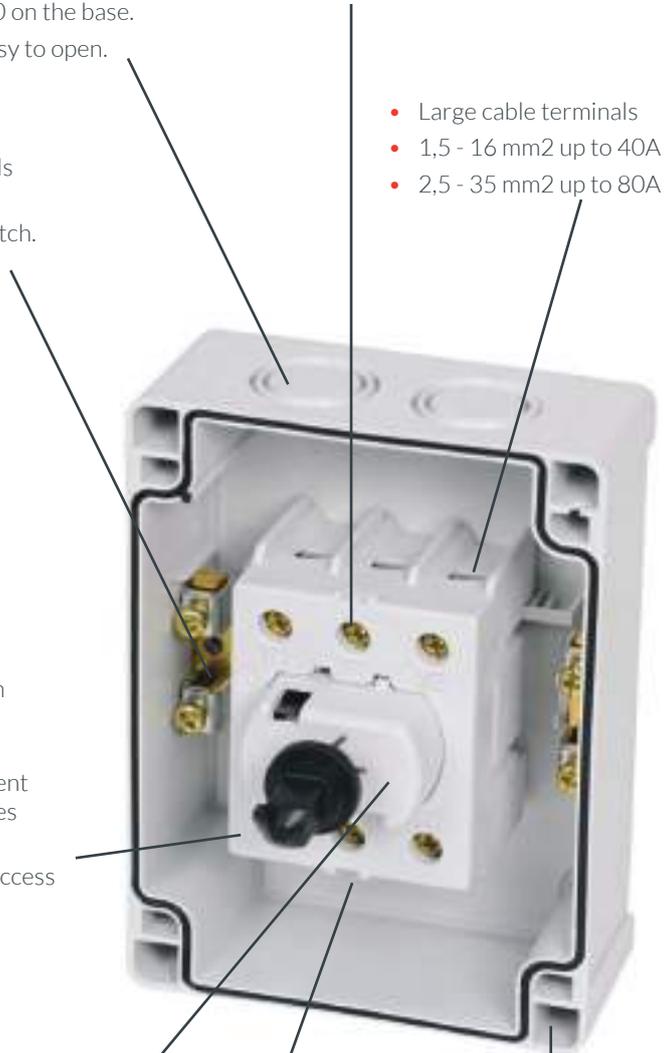
- Large cable terminals
- 1,5 - 16 mm² up to 40A
- 2,5 - 35 mm² up to 80A

- Door interlock with defeat mechanism
- Self-extinguishing material and excellent insulating properties
- Padlocking in OFF position prevents access to the actuator.
- Reliable position indication

- Fully rated Load Break Switch. Breaking capacity of 8xAC23 rating. Back up fuse rating to match motor manufacturers recommendation.

- Enclosure mounting screws (4,5 mm in diameter) isolated from the inside housing keeping the integrity of the IP65/IP66 rating.

- Removable Contact Block.
- Enables unplugging the switch for easy cabling



CHOOSING THE CORRECT SWITCH FOR BEST ELECTRICAL PERFORMANCE, AND MECHANICAL ENDURANCE

Electrical Performance:

Utilisation Categories for Alternating Current (AC)

AC-20 Connecting and disconnecting under no-load

AC-21 Switching of resistive loads, including moderate overloads

AC-22 Switching of mixed loads, inductive and resistive loads including moderate overloads (applicable when used as a main switch of a switchboard)

AC-23 Switching of motor loads or other highly inductive loads (applicable when used as an isolator for a machine or a motor)

Utilisation Categories for Direct Current (DC)

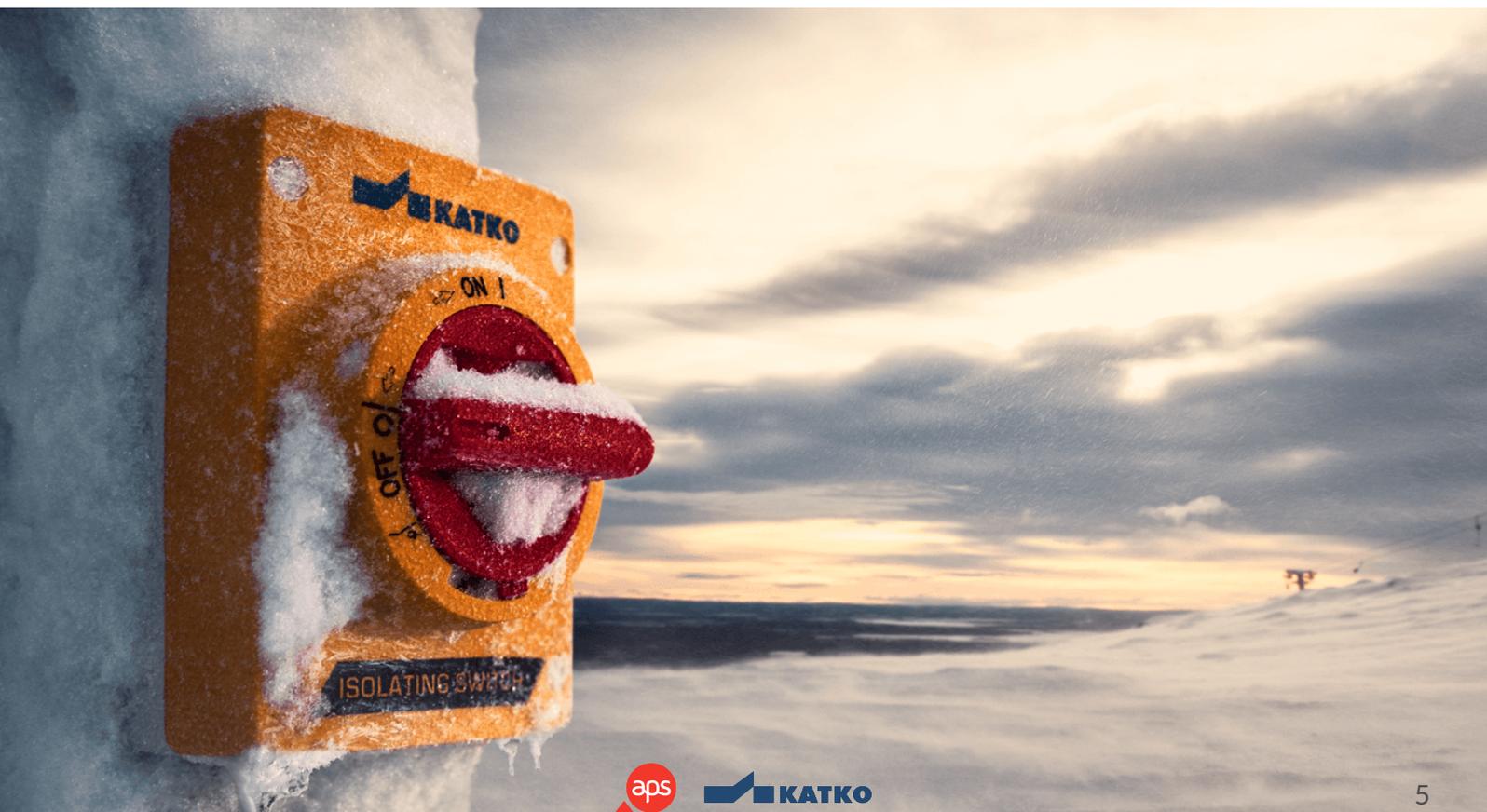
DC-21B Switching of resistive loads, including moderate overloads

DC-PV1 Connecting and disconnecting single PV string(s) where reverse currents and significant overcurrent cannot occur.

DC-PV2 Connecting and disconnecting PV circuits where significant overcurrents may prevail and where current flow can be in both directions; for example, where several strings are connected in parallel and to the same inverter, or, one or more strings with a battery.

The Utilization category defines the products current ratings in the table (1.1 or 1.2). In the “Selection Table” you will find the utilization categories AC-22 and AC-23 for 415V, as these are the most commonly used categories. However, the 500V and the 690V ratings can be found in the KATKO product catalogue. Why 690V ratings? Heavy industrial sites are typically using higher voltages to minimize sizing of cables in high power applications. Most of the competitors offer products with only AC-20 and AC-21 ratings, which are then mathematically derated for other utilization categories. Important note is that an electrical motor takes 6-8 times the nominal current when its starting.

Protection against overvoltage: IEC 60364-4-44 defines four categories for impulse withstand, the highest one of which is 8 kV (equipment placed at the head of an installation). Most KATKO products are rated 8 kV – refer to the product catalogue.



Mechanical Endurance – Protection of the Switch:

Multiple options for enclosures are offered in order to maximise the longevity of the switch without compromising its electrical performance. When determining the correct enclosure material for the installation environment should be considered.

For example, KATKO polycarbonate enclosures are manufactured from the highest grade polycarbonate that incorporates, UV, and chemical resistance improving and flame retardant additives, and are IP66 protection class. However, in certain indoor and outdoor installations Aluminum enclosures out-run the Polycarbonate in longevity by a mile.

Customer can be reminded that “saving money in the short-term” doesn’t necessarily mean saving money. Having to later replace the lower price point isolator and discontinuing operations for the duration of installation, the overall costs associated with the lower price point isolator far exceed the difference in price of the appropriate solution for the application. This view point can be high lightened with sustainable values; buying 1 product instead of buying 2 products. Furthermore, the recycling properties of Aluminum are better than those of Plastic’s.

P54	Protected against dust – limited ingress permitted (no desposit) Protected against water sprayed from all directions – limited ingress permitted
IP55	IP55 Protected against dust – limited ingress permitted (no desposit) Protected against low pressure jets of water from all directions – limited ingress permitted
IP65	Totally protected against dust Protected against low pressure jets of water from all directions – limited ingress permitted
IP66	Totally protected against dust Protected against strong jets of water e.g. for use on shipdecks – limited ingress permitted
IP66NW	Totally protected against dust Protected against strong jets of water – no ingress permitted
IP67	Totally protected against dust Protected against the effects of immersion between 15 cm and 1m
IP69K	Totally protected against dust Protected against close-range high pressure, high temperature spray downs of up to 80°C



KEM POLYCARBONATE ENCLOSED ISOLATING SWITCHES 10-630 A



- | P66; Enclosure types M2, M3, M4
- | IP65; Enclosure types MF11, MF03, MF04
- | Self-extinguishing material
- | Wide operating temperature range
- | Padlockable
- | Door interlock with defeat mechanism
- | Excellent insulating properties
- | Good UV resistance
- | Good resistance against many chemicals
- | Available up to 630 A
- | For M2 and M3, Y/R is yellow cover with red handle
- | For large enclosure sizes Y/R is grey enclosure with yellow/red handle
- | Cable gland knock out entries provided for enclosure types M1, M2, M3, MF11
- | Gland plate entries provided for enclosure types MF01, MF02, MF03, MF04

1 POLE

PART NUMBER		IE A AC-23 (400/415V)	KW AC-23 (240V)	ENCLOSURE SIZE	IP RATING
GREY ENCLOSURE BLACK HANDLE	YELLOW/RED HANDLE				
KEM110 M2	KEM110YR M2	10/10	2	M2	IP66
KEM116 M2	KEM116YR M2	16/16	3	M2	IP66
KEM125 M3	KEM125YR M3	25/25	4	M3	IP66

3 POLE

PART NUMBER		IE A AC-23 (415/690V)	KW AC-23 (415/690V)	ENCLOSURE SIZE	IP RATING
GREY ENCLOSURE BLACK HANDLE	YELLOW/RED HANDLE				
KEM310 M2	KEM310YR M2	10/10	5.5/7.5	M2	IP66
KEM316 M2	KEM316YR M2	16/16	7.5/11	M2	IP66
KEM325 M2	KEM325YR M2	25/25	11/22	M2	IP66
KEM325 M3	KEM325YR M3	25/25	11/22	M3	IP66
KEM340 M2	KEM340YR M2	40/32	22/30	M2	IP66
KEM340 M3	KEM340YR M3	40/32	22/30	M3	IP66
KEM363 M3	KEM363YR M3	40/40	22/37	M3	IP66
KEM380 M3	KEM380YR M3	63/40	30/37	M3	IP66
KEM3125 M4	KEM3125YR M4	125/80	55/75	M4	IP66
KEM3160 MF11	KEM3160YR MF11	160/100	90/90	MF11	IP65
KEM3200 MF03	KEM3200YR MF03	200/200	110/160	MF03	IP65
KEM3250 MF03	KEM3250YR MF03	250/250	132/250	MF03	IP65
KEM3250C MF11	KEM3250CYRMF11	250*	132*	MF11	IP65
KEM3400 MF03	KEM3400YR MF03	400/400	200/355	MF03	IP65
KEM3630 MF04	KEM3630YR MF04	630/500	355/500	MF04	IP65

* 400/415V only



4 POLE

PART NUMBER		IE A AC-23 (415/690V)	KW AC-23 (415/690V)	ENCLOSURE SIZE	IP RATING
GREY ENCLOSURE BLACK HANDLE	YELLOW/RED HANDLE				
KEM416 M2	KEM416YR M2	16/16	7.5/11	M2	IP66
KEM425 M2	KEM425YR M2	25/25	11/22	M2	IP66
KEM425 M3	KEM425YR M3	25/25	11/22	M3	IP66
KEM440 M2	KEM440YR M2	40/32	22/30	M2	IP66
KEM440 M3	KEM440YR M3	40/32	22/30	M3	IP66
KEM463 M3	KEM463YR M3	40/40	22/37	M3	IP66
KEM480 M3	KEM480YR M3	63/40	30/37	M3	IP66
KEM4125 M4	KEM4125YR M4	125/80	55/75	M4	IP66
KEM4160 MF11	KEM4160YR MF11	160/100	90/90	MF11	IP65
KEM4200 MF03	KEM4200YR MF03	200/200	110/160	MF03	IP65
KEM4250 MF03	KEM4250YR MF03	250/250	132/250	MF03	IP65
KEM4250C MF11	KEM4250CYRMF11	250*	132*	MF11	IP65
KEM4400 MF03	KEM4400YR MF03	400/400	200/355	MF03	IP65
KEM4630 MF04	KEM4630YR MF04	630/500	355/500	MF04	IP65

* 400/415V only

6 POLE

PART NUMBER		IE A AC-23 (415/690V)	KW AC-23 (415/690V)	ENCLOSURE SIZE	IP RATING
GREY ENCLOSURE BLACK HANDLE	YELLOW/RED HANDLE				
KEM616U	KEM616YR M3	16/16	7.5/11	M3	IP66
KEM625U	KEM625YR M3	25/25	11/22	M3	IP66
KEM640U	KEM640YR M3	40/32	22/30	M3	IP66
KEM663U	KEM663YR M3	40/40	22/37	M3	IP66
KEM680U	KEM680YR M3	63/40	30/37	M3	IP66
KEM6125	KEM6125YR MF11	125/80	55/75	MF11	IP66
KEM6160	KEM6160YR MF11	160/100	90/90	MF11	IP65

8 POLE

PART NUMBER		IE A AC-23 (415/690V)	KW AC-23 (415/690V)	ENCLOSURE SIZE	IP RATING
GREY ENCLOSURE BLACK HANDLE	YELLOW/RED HANDLE				
KEM825U	KEM825YR M3	25/25	11/22	M3	IP66

