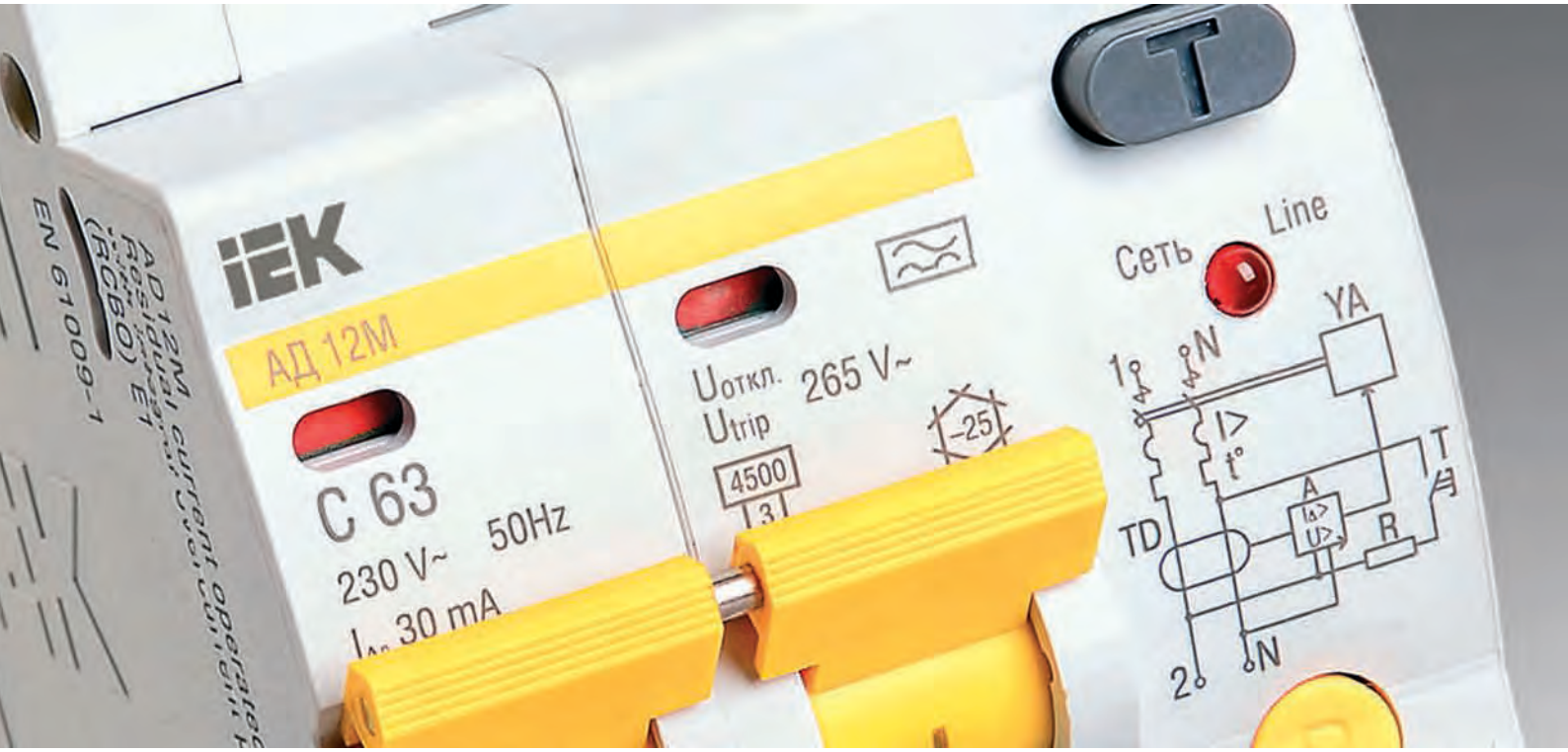
IEK
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1 Modular Equipment

Modular circuit breakers

Modular circuit breakers (MCB) VA47-29

Modular circuit breakers (MCB) VA47-29 are intended for protecting distribution and group systems having different loads:
– electric appliances, lighting – B characteristic switches;
– drives with moderate starting currents (compressor, fan group) – C characteristic switches;
– drives with high starting currents (hoisting mechanisms, pumps) – D characteristic switches;
Modular circuit breakers VA47-29 are recommended for use in electrical distribution panels of residential and public buildings.
200 items per 18 rated currents ranging from 0.5 up to 63 A.

Advantages

- Two types of protection against overloads and short circuit
- Complete set of supplementary devices with the possibility of simple independent installation:
  – State contact KS47;
  – State contact KSV47;
  – Undervoltage trip RMM47;
  – Low-voltage release RN47.
- Improved arc suppression system: extended service life, increased resistance to short-circuit currents.
- Contact position indicator.
- Wide operating temperature range from –40 to +50° C.
- Simultaneous connection by FORK bar and flexible conductor is possible for power supply distribution via upper terminals, as well as connection by PIN bar.
- New ergonomic design of ON/OFF lever.
- Notched terminal clamps reduce the heat loss and increase mechanical stability of the connection.

Design Features

Improved arc suppression system: extended service life, increased resistance to short-circuit currents: patent No. RU 139886.

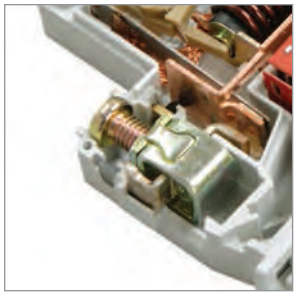
Soldered-on composite material with silver improves wear resistance of the contact assembly and decreases the transient resistance.

Simultaneous connection by FORK bar and flexible conductor is possible for power supply distribution via upper terminals, as well as connection by PIN bar.

Increased robustness of the casing in conductor connection area due to two additional rivets and solid faceplate.

Contact position indicator.

Notched terminal clamps reduce the heat loss and increase mechanical stability of the connection.



Factory settings of the thermal release mechanism are protected from modification by the insert made from acrylic plastic.

The circuit breaker casing is additionally protected from burnout by plastic and metal anti-burnout plates that also withdraw heat.

Quick installation and additional reliability of snapping on to the DIN-rail due to the latch with double locking.

Range

	Name	Rated current I_n, A	Curve Type	Bar type	Package amount, pcs		Product ID
					multiple	transport	
	VA47-29 1P 1 A type B	1	B	1P PIN 63 A	12	120	MVA20-1-001-B
	VA47-29 1P 2 A type B	2	B	1P PIN 63 A	12	120	MVA20-1-002-B
	VA47-29 1P 3 A type B	3	B	1P PIN 63 A	12	120	MVA20-1-003-B
	VA47-29 1P 4 A type B	4	B	1P PIN 63 A	12	120	MVA20-1-004-B
	VA47-29 1P 5 A type B	5	B	1P PIN 63 A	12	120	MVA20-1-005-B
	VA47-29 1P 6 A type B	6	B	1P PIN 63 A	12	120	MVA20-1-006-B
	VA47-29 1P 8 A type B	8	B	1P PIN 63 A	12	120	MVA20-1-008-B
	VA47-29 1P 10 A type B	10	B	1P PIN 63 A	12	120	MVA20-1-010-B
	VA47-29 1P 13 A type B	13	B	1P PIN 63 A	12	120	MVA20-1-013-B
	VA47-29 1P 16 A type B	16	B	1P PIN 63 A	12	120	MVA20-1-016-B
	VA47-29 1P 20 A type B	20	B	1P PIN 63 A	12	120	MVA20-1-020-B
	VA47-29 1P 25 A type B	25	B	1P PIN 63 A	12	120	MVA20-1-025-B
	VA47-29 1P 32 A type B	32	B	1P PIN 63 A	12	120	MVA20-1-032-B
	VA47-29 1P 40 A type B	40	B	1P PIN 63 A	12	120	MVA20-1-040-B
	VA47-29 1P 50 A type B	50	B	1P PIN 63 A	12	120	MVA20-1-050-B
	VA47-29 1P 63 A type B	63	B	1P PIN 63 A	12	120	MVA20-1-063-B
	VA47-29 1P 0,5 A type C	0,5	C	1P PIN 63 A	12	120	MVA20-1-D05-C
	VA47-29 1P 1 A type C	1	C	1P PIN 63 A	12	120	MVA20-1-001-C
	VA47-29 1P 1,6 A type C	1,6	C	1P PIN 63 A	12	120	MVA20-1-D16-C
	VA47-29 1P 2 A type C	2	C	1P PIN 63 A	12	120	MVA20-1-002-C
	VA47-29 1P 2,5 A type C	2,5	C	1P PIN 63 A	12	120	MVA20-1-D25-C
	VA47-29 1P 3 A type C	3	C	1P PIN 63 A	12	120	MVA20-1-003-C
	VA47-29 1P 4 A type C	4	C	1P PIN 63 A	12	120	MVA20-1-004-C
	VA47-29 1P 5 A type C	5	C	1P PIN 63 A	12	120	MVA20-1-005-C
	VA47-29 1P 6 A type C	6	C	1P PIN 63 A	12	120	MVA20-1-006-C
	VA47-29 1P 8 A type C	8	C	1P PIN 63 A	12	120	MVA20-1-008-C
	VA47-29 1P 10 A type C	10	C	1P PIN 63 A	12	120	MVA20-1-010-C
	VA47-29 1P 13 A type C	13	C	1P PIN 63 A	12	120	MVA20-1-013-C
	VA47-29 1P 16 A type C	16	C	1P PIN 63 A	12	120	MVA20-1-016-C
	VA47-29 1P 20 A type C	20	C	1P PIN 63 A	12	120	MVA20-1-020-C
	VA47-29 1P 25 A type C	25	C	1P PIN 63 A	12	120	MVA20-1-025-C
	VA47-29 1P 32 A type C	32	C	1P PIN 63 A	12	120	MVA20-1-032-C
	VA47-29 1P 40 A type C	40	C	1P PIN 63 A	12	120	MVA20-1-040-C
	VA47-29 1P 50 A type C	50	C	1P PIN 63 A	12	120	MVA20-1-050-C
	VA47-29 1P 63 A type C	63	C	1P PIN 63 A	12	120	MVA20-1-063-C
	VA47-29 1P 1 A type D	1	D	1P PIN 63 A	12	144	MVA20-1-001-D
	VA47-29 1P 2 A type D	2	D	1P PIN 63 A	12	144	MVA20-1-002-D
	VA47-29 1P 3 A type D	3	D	1P PIN 63 A	12	144	MVA20-1-003-D
	VA47-29 1P 4 A type D	4	D	1P PIN 63 A	12	144	MVA20-1-004-D
	VA47-29 1P 5 A type D	5	D	1P PIN 63 A	12	144	MVA20-1-005-D
	VA47-29 1P 6 A type D	6	D	1P PIN 63 A	12	144	MVA20-1-006-D
	VA47-29 1P 8 A type D	8	D	1P PIN 63 A	12	144	MVA20-1-008-D
	VA47-29 1P 10 A type D	10	D	1P PIN 63 A	12	144	MVA20-1-010-D
	VA47-29 1P 13 A type D	13	D	1P PIN 63 A	12	144	MVA20-1-013-D
	VA47-29 1P 16 A type D	16	D	1P PIN 63 A	12	144	MVA20-1-016-D
	VA47-29 1P 20 A type D	20	D	1P PIN 63 A	12	144	MVA20-1-020-D
	VA47-29 1P 25 A type D	25	D	1P PIN 63 A	12	144	MVA20-1-025-D
	VA47-29 1P 32 A type D	32	D	1P PIN 63 A	12	144	MVA20-1-032-D
	VA47-29 1P 40 A type D	40	D	1P PIN 63 A	12	144	MVA20-1-040-D
	VA47-29 1P 50 A type D	50	D	1P PIN 63 A	12	144	MVA20-1-050-D
	VA47-29 1P 63 A type D	63	D	1P PIN 63 A	12	144	MVA20-1-063-D

	Name	Rated current I_n, A	Curve Type	Bar type	Package amount, pcs		Product ID
					multiple	transport	
	VA47-29 2P 1 A type B	1	B	2P PIN 63 A	6	60	MVA20-2-001-B
	VA47-29 2P 2 A type B	2	B	2P PIN 63 A	6	60	MVA20-2-002-B
	VA47-29 2P 3 A type B	3	B	2P PIN 63 A	6	60	MVA20-2-003-B
	VA47-29 2P 4 A type B	4	B	2P PIN 63 A	6	60	MVA20-2-004-B
	VA47-29 2P 5 A type B	5	B	2P PIN 63 A	6	60	MVA20-2-005-B
	VA47-29 2P 6 A type B	6	B	2P PIN 63 A	6	60	MVA20-2-006-B
	VA47-29 2P 8 A type B	8	B	2P PIN 63 A	6	60	MVA20-2-008-B
	VA47-29 2P 10 A type B	10	B	2P PIN 63 A	6	60	MVA20-2-010-B
	VA47-29 2P 13 A type B	13	B	2P PIN 63 A	6	60	MVA20-2-013-B
	VA47-29 2P 16 A type B	16	B	2P PIN 63 A	6	60	MVA20-2-016-B
	VA47-29 2P 20 A type B	20	B	2P PIN 63 A	6	60	MVA20-2-020-B
	VA47-29 2P 25 A type B	25	B	2P PIN 63 A	6	60	MVA20-2-025-B
	VA47-29 2P 32 A type B	32	B	2P PIN 63 A	6	60	MVA20-2-032-B
	VA47-29 2P 40 A type B	40	B	2P PIN 63 A	6	60	MVA20-2-040-B
	VA47-29 2P 50 A type B	50	B	2P PIN 63 A	6	60	MVA20-2-050-B
	VA47-29 2P 63 A type B	63	B	2P PIN 63 A	6	60	MVA20-2-063-B
	VA47-29 2P 1 A type C	1	C	2P PIN 63 A	6	72	MVA20-2-001-C
	VA47-29 2P 2 A type C	2	C	2P PIN 63 A	6	72	MVA20-2-002-C
	VA47-29 2P 3 A type C	3	C	2P PIN 63 A	6	72	MVA20-2-003-C
	VA47-29 2P 4 A type C	4	C	2P PIN 63 A	6	72	MVA20-2-004-C
	VA47-29 2P 5 A type C	5	C	2P PIN 63 A	6	72	MVA20-2-005-C
	VA47-29 2P 6 A type C	6	C	2P PIN 63 A	6	72	MVA20-2-006-C
	VA47-29 2P 8 A type C	8	C	2P PIN 63 A	6	72	MVA20-2-008-C
	VA47-29 2P 10 A type C	10	C	2P PIN 63 A	6	72	MVA20-2-010-C
	VA47-29 2P 13 A type C	13	C	2P PIN 63 A	6	72	MVA20-2-013-C
	VA47-29 2P 16 A type C	16	C	2P PIN 63 A	6	72	MVA20-2-016-C
	VA47-29 2P 20 A type C	20	C	2P PIN 63 A	6	72	MVA20-2-020-C
	VA47-29 2P 25 A type C	25	C	2P PIN 63 A	6	72	MVA20-2-025-C
	VA47-29 2P 32 A type C	32	C	2P PIN 63 A	6	72	MVA20-2-032-C
	VA47-29 2P 40 A type C	40	C	2P PIN 63 A	6	72	MVA20-2-040-C
	VA47-29 2P 50 A type C	50	C	2P PIN 63 A	6	72	MVA20-2-050-C
	VA47-29 2P 63 A type C	63	C	2P PIN 63 A	6	72	MVA20-2-063-C
	VA47-29 2P 1 A type D	1	D	2P PIN 63 A	6	72	MVA20-2-001-D
	VA47-29 2P 2 A type D	2	D	2P PIN 63 A	6	72	MVA20-2-002-D
	VA47-29 2P 3 A type D	3	D	2P PIN 63 A	6	72	MVA20-2-003-D
	VA47-29 2P 4 A type D	4	D	2P PIN 63 A	6	72	MVA20-2-004-D
	VA47-29 2P 5 A type D	5	D	2P PIN 63 A	6	72	MVA20-2-005-D
	VA47-29 2P 6 A type D	6	D	2P PIN 63 A	6	72	MVA20-2-006-D
	VA47-29 2P 8 A type D	8	D	2P PIN 63 A	6	72	MVA20-2-008-D
	VA47-29 2P 10 A type D	10	D	2P PIN 63 A	6	72	MVA20-2-010-D
	VA47-29 2P 13 A type D	13	D	2P PIN 63 A	6	72	MVA20-2-013-D
	VA47-29 2P 16 A type D	16	D	2P PIN 63 A	6	72	MVA20-2-016-D
	VA47-29 2P 20 A type D	20	D	2P PIN 63 A	6	72	MVA20-2-020-D
	VA47-29 2P 25 A type D	25	D	2P PIN 63 A	6	72	MVA20-2-025-D
	VA47-29 2P 32 A type D	32	D	2P PIN 63 A	6	72	MVA20-2-032-D
	VA47-29 2P 40 A type D	40	D	2P PIN 63 A	6	72	MVA20-2-040-D
	VA47-29 2P 50 A type D	50	D	2P PIN 63 A	6	72	MVA20-2-050-D
	VA47-29 2P 63 A type D	63	D	2P PIN 63 A	6	72	MVA20-2-063-D

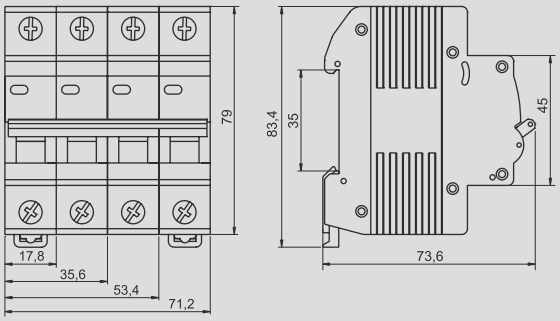
	Name	Rated current I_n, A	Curve Type	Bar type	Package amount, pcs		Product ID
					multiple	transport	
	VA47-29 3P 1 A type B	1	B	3P PIN 63 A	4	48	MVA20-3-001-B
	VA47-29 3P 2 A type B	2	B	3P PIN 63 A	4	48	MVA20-3-002-B
	VA47-29 3P 3 A type B	3	B	3P PIN 63 A	4	48	MVA20-3-003-B
	VA47-29 3P 4 A type B	4	B	3P PIN 63 A	4	48	MVA20-3-004-B
	VA47-29 3P 5 A type B	5	B	3P PIN 63 A	4	48	MVA20-3-005-B
	VA47-29 3P 6 A type B	6	B	3P PIN 63 A	4	48	MVA20-3-006-B
	VA47-29 3P 8 A type B	8	B	3P PIN 63 A	4	48	MVA20-3-008-B
	VA47-29 3P 10 A type B	10	B	3P PIN 63 A	4	48	MVA20-3-010-B
	VA47-29 3P 13 A type B	13	B	3P PIN 63 A	4	48	MVA20-3-013-B
	VA47-29 3P 16 A type B	16	B	3P PIN 63 A	4	48	MVA20-3-016-B
	VA47-29 3P 20 A type B	20	B	3P PIN 63 A	4	48	MVA20-3-020-B
	VA47-29 3P 25 A type B	25	B	3P PIN 63 A	4	48	MVA20-3-025-B
	VA47-29 3P 32 A type B	32	B	3P PIN 63 A	4	48	MVA20-3-032-B
	VA47-29 3P 40 A type B	40	B	3P PIN 63 A	4	48	MVA20-3-040-B
	VA47-29 3P 50 A type B	50	B	3P PIN 63 A	4	48	MVA20-3-050-B
	VA47-29 3P 63 A type B	63	B	3P PIN 63 A	4	48	MVA20-3-063-B
	VA47-29 3P 1 A type C	1	C	3P PIN 63 A	4	48	MVA20-3-001-C
	VA47-29 3P 2 A type C	2	C	3P PIN 63 A	4	48	MVA20-3-002-C
	VA47-29 3P 3 A type C	3	C	3P PIN 63 A	4	48	MVA20-3-003-C
	VA47-29 3P 4 A type C	4	C	3P PIN 63 A	4	48	MVA20-3-004-C
	VA47-29 3P 5 A type C	5	C	3P PIN 63 A	4	48	MVA20-3-005-C
	VA47-29 3P 6 A type C	6	C	3P PIN 63 A	4	48	MVA20-3-006-C
	VA47-29 3P 8 A type C	8	C	3P PIN 63 A	4	48	MVA20-3-008-C
	VA47-29 3P 10 A type C	10	C	3P PIN 63 A	4	48	MVA20-3-010-C
	VA47-29 3P 13 A type C	13	C	3P PIN 63 A	4	48	MVA20-3-013-C
	VA47-29 3P 16 A type C	16	C	3P PIN 63 A	4	48	MVA20-3-016-C
	VA47-29 3P 20 A type C	20	C	3P PIN 63 A	4	48	MVA20-3-020-C
	VA47-29 3P 25 A type C	25	C	3P PIN 63 A	4	48	MVA20-3-025-C
	VA47-29 3P 32 A type C	32	C	3P PIN 63 A	4	48	MVA20-3-032-C
	VA47-29 3P 40 A type C	40	C	3P PIN 63 A	4	48	MVA20-3-040-C
	VA47-29 3P 50 A type C	50	C	3P PIN 63 A	4	48	MVA20-3-050-C
	VA47-29 3P 63 A type C	63	C	3P PIN 63 A	4	48	MVA20-3-063-C
	VA47-29 3P 1 A type D	1	D	3P PIN 63 A	4	48	MVA20-3-001-D
	VA47-29 3P 2 A type D	2	D	3P PIN 63 A	4	48	MVA20-3-002-D
	VA47-29 3P 3 A type D	3	D	3P PIN 63 A	4	48	MVA20-3-003-D
	VA47-29 3P 4 A type D	4	D	3P PIN 63 A	4	48	MVA20-3-004-D
	VA47-29 3P 5 A type D	5	D	3P PIN 63 A	4	48	MVA20-3-005-D
	VA47-29 3P 6 A type D	6	D	3P PIN 63 A	4	48	MVA20-3-006-D
	VA47-29 3P 8 A type D	8	D	3P PIN 63 A	4	48	MVA20-3-008-D
	VA47-29 3P 10 A type D	10	D	3P PIN 63 A	4	48	MVA20-3-010-D
	VA47-29 3P 13 A type D	13	D	3P PIN 63 A	4	48	MVA20-3-013-D
	VA47-29 3P 16 A type D	16	D	3P PIN 63 A	4	48	MVA20-3-016-D
	VA47-29 3P 20 A type D	20	D	3P PIN 63 A	4	48	MVA20-3-020-D
	VA47-29 3P 25 A type D	25	D	3P PIN 63 A	4	48	MVA20-3-025-D
	VA47-29 3P 32 A type D	32	D	3P PIN 63 A	4	48	MVA20-3-032-D
	VA47-29 3P 40 A type D	40	D	3P PIN 63 A	4	48	MVA20-3-040-D
	VA47-29 3P 50 A type D	50	D	3P PIN 63 A	4	48	MVA20-3-050-D
	VA47-29 3P 63 A type D	63	D	3P PIN 63 A	4	48	MVA20-3-063-D

	Name	Rated current I_n, A	Curve Type	Bar type	Package amount, pcs		Product ID
					multiple	transport	
	VA47-29 4P 1 A type B	1	B	4P PIN 63 A	3	36	MVA20-4-001-B
	VA47-29 4P 2 A type B	2	B	4P PIN 63 A	3	36	MVA20-4-002-B
	VA47-29 4P 3 A type B	3	B	4P PIN 63 A	3	36	MVA20-4-003-B
	VA47-29 4P 4 A type B	4	B	4P PIN 63 A	3	36	MVA20-4-004-B
	VA47-29 4P 5 A type B	5	B	4P PIN 63 A	3	36	MVA20-4-005-B
	VA47-29 4P 6 A type B	6	B	4P PIN 63 A	3	36	MVA20-4-006-B
	VA47-29 4P 8 A type B	8	B	4P PIN 63 A	3	36	MVA20-4-008-B
	VA47-29 4P 10 A type B	10	B	4P PIN 63 A	3	36	MVA20-4-010-B
	VA47-29 4P 13 A type B	13	B	4P PIN 63 A	3	36	MVA20-4-013-B
	VA47-29 4P 16 A type B	16	B	4P PIN 63 A	3	36	MVA20-4-016-B
	VA47-29 4P 20 A type B	20	B	4P PIN 63 A	3	36	MVA20-4-020-B
	VA47-29 4P 25 A type B	25	B	4P PIN 63 A	3	36	MVA20-4-025-B
	VA47-29 4P 32 A type B	32	B	4P PIN 63 A	3	36	MVA20-4-032-B
	VA47-29 4P 40 A type B	40	B	4P PIN 63 A	3	36	MVA20-4-040-B
	VA47-29 4P 50 A type B	50	B	4P PIN 63 A	3	36	MVA20-4-050-B
	VA47-29 4P 63 A type B	63	B	4P PIN 63 A	3	36	MVA20-4-063-B
	VA47-29 4P 1 A type C	1	C	4P PIN 63 A	3	36	MVA20-4-001-C
	VA47-29 4P 2 A type C	2	C	4P PIN 63 A	3	36	MVA20-4-002-C
	VA47-29 4P 3 A type C	3	C	4P PIN 63 A	3	36	MVA20-4-003-C
	VA47-29 4P 4 A type C	4	C	4P PIN 63 A	3	36	MVA20-4-004-C
	VA47-29 4P 5 A type C	5	C	4P PIN 63 A	3	36	MVA20-4-005-C
	VA47-29 4P 6 A type C	6	C	4P PIN 63 A	3	36	MVA20-4-006-C
	VA47-29 4P 8 A type C	8	C	4P PIN 63 A	3	36	MVA20-4-008-C
	VA47-29 4P 10 A type C	10	C	4P PIN 63 A	3	36	MVA20-4-010-C
	VA47-29 4P 13 A type C	13	C	4P PIN 63 A	3	36	MVA20-4-013-C
	VA47-29 4P 16 A type C	16	C	4P PIN 63 A	3	36	MVA20-4-016-C
	VA47-29 4P 20 A type C	20	C	4P PIN 63 A	3	36	MVA20-4-020-C
	VA47-29 4P 25 A type C	25	C	4P PIN 63 A	3	36	MVA20-4-025-C
	VA47-29 4P 32 A type C	32	C	4P PIN 63 A	3	36	MVA20-4-032-C
	VA47-29 4P 40 A type C	40	C	4P PIN 63 A	3	36	MVA20-4-040-C
	VA47-29 4P 50 A type C	50	C	4P PIN 63 A	3	36	MVA20-4-050-C
	VA47-29 4P 63 A type C	63	C	4P PIN 63 A	3	36	MVA20-4-063-C
	VA47-29 4P 1 A type D	1	D	4P PIN 63 A	3	36	MVA20-4-001-D
	VA47-29 4P 2 A type D	2	D	4P PIN 63 A	3	36	MVA20-4-002-D
	VA47-29 4P 3 A type D	3	D	4P PIN 63 A	3	36	MVA20-4-003-D
	VA47-29 4P 4 A type D	4	D	4P PIN 63 A	3	36	MVA20-4-004-D
	VA47-29 4P 5 A type D	5	D	4P PIN 63 A	3	36	MVA20-4-005-D
	VA47-29 4P 6 A type D	6	D	4P PIN 63 A	3	36	MVA20-4-006-D
	VA47-29 4P 8 A type D	8	D	4P PIN 63 A	3	36	MVA20-4-008-D
	VA47-29 4P 10 A type D	10	D	4P PIN 63 A	3	36	MVA20-4-010-D
	VA47-29 4P 13 A type D	13	D	4P PIN 63 A	3	36	MVA20-4-013-D
	VA47-29 4P 16 A type D	16	D	4P PIN 63 A	3	36	MVA20-4-016-D
	VA47-29 4P 20 A type D	20	D	4P PIN 63 A	3	36	MVA20-4-020-D
	VA47-29 4P 25 A type D	25	D	4P PIN 63 A	3	36	MVA20-4-025-D
	VA47-29 4P 32 A type D	32	D	4P PIN 63 A	3	36	MVA20-4-032-D
	VA47-29 4P 40 A type D	40	D	4P PIN 63 A	3	36	MVA20-4-040-D
	VA47-29 4P 50 A type D	50	D	4P PIN 63 A	3	36	MVA20-4-050-D
	VA47-29 4P 63 A type D	63	D	4P PIN 63 A	3	36	MVA20-4-063-D

Technical Features

Standards	EN 60898-1, EN 60947-5-1
Rated voltage of 50 Hz (frequency), V	230/400
Rated current In, A	0,5; 1; 1,6; 2; 2,5; 3; 4; 5; 6; 8; 10; 13; 16; 20; 25; 32; 40; 50; 63
Rated short-circuit breaking capacity, A	4500
DC voltage, V/pole	48
Curve Type	B, C, D
NP / No. of poles	1, 2, 3, 4
Protection degree	IP20
Electrical durability, not less than, ops.	6000
Mechanical durability, not less than, ops.	20 000
Cables max. size, mm^2	25
Silver content, (Ag), g/pole	0,15÷0,22
Pole weight, kg	0,1
Contact position indicator (on faceplate)	yes
Bars that can be connected to contact terminals	PIN, FORK
Operating temperature range, °C	–40÷+50

Overall Dimensions



Modular circuit breakers (MCB) VA47-60

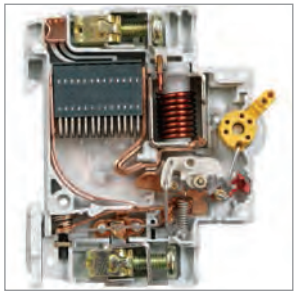
Modular circuit breakers (MCB) VA47-60 are intended for automatic power source cut-off under excess currents.
They are recommended for use in group panels (apartment and floor) and distribution boards of residential, domestic, public and administrative buildings.
64 items per 8 rated currents ranging from 6 up to 63 A.

This circuit breaker was awarded a gold medal of the 20th International Exhibition “Electro 2011” in nomination “Best electrical equipment” for high quality characteristics.

Advantages

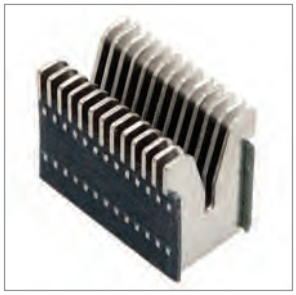
- Two types of overcurrent protection: thermal and electromagnetic.
- Independent contact position indicator.
- Can be snapped on to DIN-rail, with double locking.
- Wide operating temperature range from –40 to +50° C.
- Wide lever for convenient switching ON/OFF of the circuit breaker
- Notches on the terminal clamps reduce the heat loss and increase mechanical strength of the connection.

Design Features



Circuit breaker construction provides for two types of protection against overcurrent that can essentially increase the safety of distribution and group systems.

Conducting parts are made of high quality electric copper.

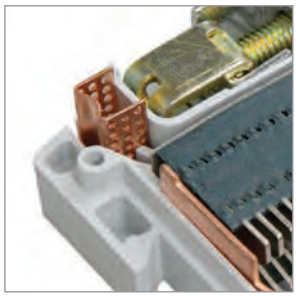


Expanded arc-extinguishing chamber allows splitting the electric arc into numerous smaller arcs that contributes to its faster extinguishing.

Silver-containing alloy on contact group.

Two connection options (PIN and FORK types), from sides of line and load, enabling various connection types and shortened length of conductors.

Advanced trip gear (substantially reduced time of contact loss).



Double quenching grid at the arch chute output raises fire safety preventing combustion products from exposing.

Increased size of screw head with cross-functional crest (+,–) simplifies installation and prevents screws loss during installation

Range

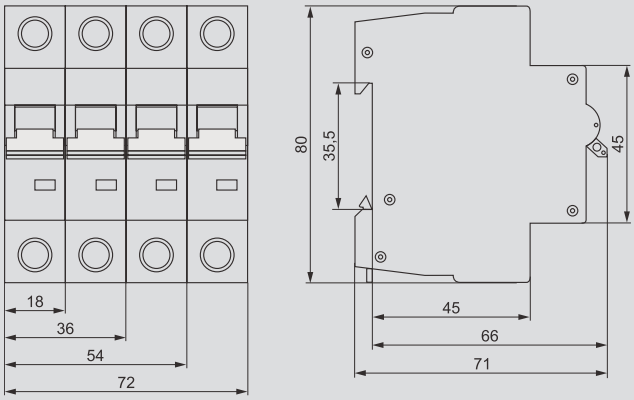
	Name	Rated current I_n, A	Curve Type	Bar type	Package amount, pcs		Product ID
					multiple	transport	
	VA47-60 1P 6 A type C	6	C	1P PIN, FORK 100 A	12	180	MVA41-1-006-C
	VA47-60 1P 10 A type C	10	C	1P PIN, FORK 100 A	12	180	MVA41-1-010-C
	VA47-60 1P 16 A type C	16	C	1P PIN, FORK 100 A	12	180	MVA41-1-016-C
	VA47-60 1P 25 A type C	25	C	1P PIN, FORK 100 A	12	180	MVA41-1-025-C
	VA47-60 1P 32 A type C	32	C	1P PIN, FORK 100 A	12	180	MVA41-1-032-C
	VA47-60 1P 40 A type C	40	C	1P PIN, FORK 100 A	12	180	MVA41-1-040-C
	VA47-60 1P 50 A type C	50	C	1P PIN, FORK 100 A	12	180	MVA41-1-050-C
	VA47-60 1P 63 A type C	63	C	1P PIN, FORK 100 A	12	180	MVA41-1-063-C
	VA47-60 1P 6 A type D	6	D	1P PIN, FORK 100 A	12	180	MVA41-1-006-D
	VA47-60 1P 10 A type D	10	D	1P PIN, FORK 100 A	12	180	MVA41-1-010-D
	VA47-60 1P 16 A type D	16	D	1P PIN, FORK 100 A	12	180	MVA41-1-016-D
	VA47-60 1P 25 A type D	25	D	1P PIN, FORK 100 A	12	180	MVA41-1-025-D
	VA47-60 1P 32 A type D	32	D	1P PIN, FORK 100 A	12	180	MVA41-1-032-D
	VA47-60 1P 40 A type D	40	D	1P PIN, FORK 100 A	12	180	MVA41-1-040-D
	VA47-60 1P 50 A type D	50	D	1P PIN, FORK 100 A	12	180	MVA41-1-050-D
	VA47-60 1P 63 A type D	63	D	1P PIN, FORK 100 A	12	180	MVA41-1-063-D
	VA47-60 2P 6 A type C	6	C	2P PIN, FORK 100 A	4	60	MVA41-3-006-C
	VA47-60 2P 10 A type C	10	C	2P PIN, FORK 100 A	4	60	MVA41-3-010-C
	VA47-60 2P 16 A type C	16	C	2P PIN, FORK 100 A	4	60	MVA41-3-016-C
	VA47-60 2P 25 A type C	25	C	2P PIN, FORK 100 A	4	60	MVA41-3-025-C
	VA47-60 2P 32 A type C	32	C	2P PIN, FORK 100 A	4	60	MVA41-3-032-C
	VA47-60 2P 40 A type C	40	C	2P PIN, FORK 100 A	4	60	MVA41-3-040-C
	VA47-60 2P 50 A type C	50	C	2P PIN, FORK 100 A	4	60	MVA41-3-050-C
	VA47-60 2P 63 A type C	63	C	2P PIN, FORK 100 A	4	60	MVA41-3-063-C
	VA47-60 2P 6 A type D	6	D	2P PIN, FORK 100 A	6	90	MVA41-2-006-D
	VA47-60 2P 10 A type D	10	D	2P PIN, FORK 100 A	6	90	MVA41-2-010-D
	VA47-60 2P 16 A type D	16	D	2P PIN, FORK 100 A	6	90	MVA41-2-016-D
	VA47-60 2P 25 A type D	25	D	2P PIN, FORK 100 A	6	90	MVA41-2-025-D
	VA47-60 2P 32 A type D	32	D	2P PIN, FORK 100 A	6	90	MVA41-2-032-D
	VA47-60 2P 40 A type D	40	D	2P PIN, FORK 100 A	6	90	MVA41-2-040-D
	VA47-60 2P 50 A type D	50	D	2P PIN, FORK 100 A	6	90	MVA41-2-050-D
	VA47-60 2P 63 A type D	63	D	2P PIN, FORK 100 A	6	90	MVA41-2-063-D

	Name	Rated current I_n, A	Curve Type	Bar type	Package amount, pcs		Product ID
					multiple	transport	
	VA47-60 3P 6 A type C	6	C	3P PIN, FORK 100 A	4	60	MVA41-3-006-C
	VA47-60 3P 10 A type C	10	C	3P PIN, FORK 100 A	4	60	MVA41-3-010-C
	VA47-60 3P 16 A type C	16	C	3P PIN, FORK 100 A	4	60	MVA41-3-016-C
	VA47-60 3P 25 A type C	25	C	3P PIN, FORK 100 A	4	60	MVA41-3-025-C
	VA47-60 3P 32 A type C	32	C	3P PIN, FORK 100 A	4	60	MVA41-3-032-C
	VA47-60 3P 40 A type C	40	C	3P PIN, FORK 100 A	4	60	MVA41-3-040-C
	VA47-60 3P 50 A type C	50	C	3P PIN, FORK 100 A	4	60	MVA41-3-050-C
	VA47-60 3P 63 A type C	63	C	3P PIN, FORK 100 A	4	60	MVA41-3-063-C
	VA47-60 3P 6 A type D	6	D	3P PIN, FORK 100 A	4	60	MVA41-3-006-D
	VA47-60 3P 10 A type D	10	D	3P PIN, FORK 100 A	4	60	MVA41-3-010-D
	VA47-60 3P 16 A type D	16	D	3P PIN, FORK 100 A	4	60	MVA41-3-016-D
	VA47-60 3P 25 A type D	25	D	3P PIN, FORK 100 A	4	60	MVA41-3-025-D
	VA47-60 3P 32 A type D	32	D	3P PIN, FORK 100 A	4	60	MVA41-3-032-D
	VA47-60 3P 40 A type D	40	D	3P PIN, FORK 100 A	4	60	MVA41-3-040-D
	VA47-60 3P 50 A type D	50	D	3P PIN, FORK 100 A	4	60	MVA41-3-050-D
	VA47-60 3P 63 A type D	63	D	3P PIN, FORK 100 A	4	60	MVA41-3-063-D
	VA47-60 4P 6 A type C	6	C	4P PIN, FORK 100 A	3	45	MVA41-4-006-C
	VA47-60 4P 10 A type C	10	C	4P PIN, FORK 100 A	3	45	MVA41-4-010-C
	VA47-60 4P 16 A type C	16	C	4P PIN, FORK 100 A	3	45	MVA41-4-016-C
	VA47-60 4P 25 A type C	25	C	4P PIN, FORK 100 A	3	45	MVA41-4-025-C
	VA47-60 4P 32 A type C	32	C	4P PIN, FORK 100 A	3	45	MVA41-4-032-C
	VA47-60 4P 40 A type C	40	C	4P PIN, FORK 100 A	3	45	MVA41-4-040-C
	VA47-60 4P 50 A type C	50	C	4P PIN, FORK 100 A	3	45	MVA41-4-050-C
	VA47-60 4P 63 A type C	63	C	4P PIN, FORK 100 A	3	45	MVA41-4-063-C
	VA47-60 4P 6 A type D	6	D	4P PIN, FORK 100 A	3	45	MVA41-4-006-D
	VA47-60 4P 10 A type D	10	D	4P PIN, FORK 100 A	3	45	MVA41-4-010-D
	VA47-60 4P 16 A type D	16	D	4P PIN, FORK 100 A	3	45	MVA41-4-016-D
	VA47-60 4P 25 A type D	25	D	4P PIN, FORK 100 A	3	45	MVA41-4-025-D
	VA47-60 4P 32 A type D	32	D	4P PIN, FORK 100 A	3	45	MVA41-4-032-D
	VA47-60 4P 40 A type D	40	D	4P PIN, FORK 100 A	3	45	MVA41-4-040-D
	VA47-60 4P 50 A type D	50	D	4P PIN, FORK 100 A	3	45	MVA41-4-050-D
	VA47-60 4P 63 A type D	63	D	4P PIN, FORK 100 A	3	45	MVA41-4-063-D

Technical Features

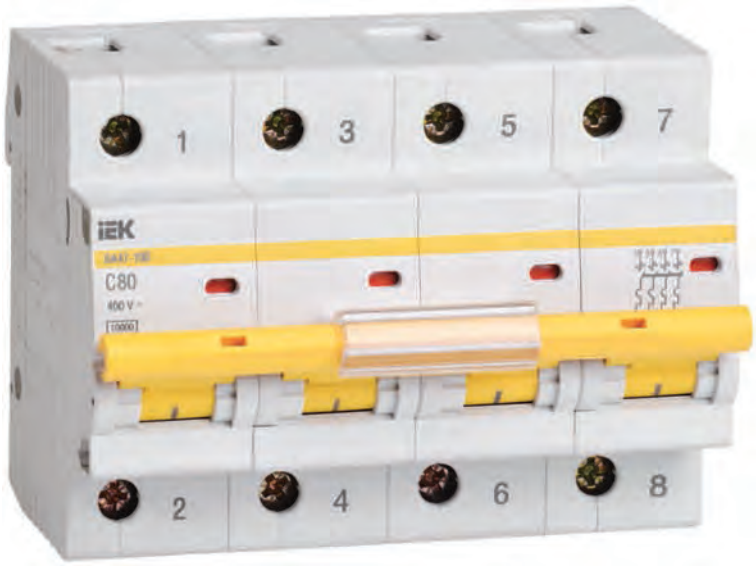
Standards	EN 60898-1
Rated voltage of 50 Hz (frequency), V	230/400
Rated current, A	6, 10, 16, 25, 32, 40, 50, 63
Rated short-circuit breaking capacity, A	6000
DC voltage, V/pole	48
Curve Type	C, D
NP / No. of poles	1÷4
Protection degree	IP20
Electrical durability, not less than, ops.	6000
Mechanical durability, not less than, ops.	20 000
Cables max. size, mm^2	25
Silver content, (Ag), g/pole	0,2
Pole weight, kg	0,2
Operating temperature range, °C	– 40÷+50

Overall Dimensions



Modular circuit breakers (MCB) VA47-100

Modular circuit breakers (MCB) VA47-100 protect distribution and group systems with active and inductive loads.
They are recommended for use in lead-in distributors of domestic and industrial electric installations.
80 items per 10 rated currents ranging from 10 up to 100 A.

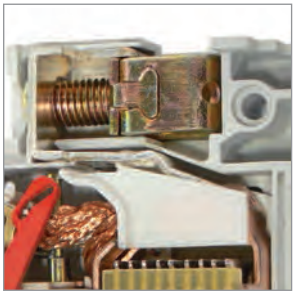


Advantages

- Two types of protection against overload and short circuit.
- Complete set of supplementary devices with the possibility of simple independent installation:
  – State contact KS47;
  – State contact KSV47;
  – Undervoltage trip RMM47;
  – Low-voltage release RN47.
- Indication of contact position.
- Latching on DIN-rail with double locking.
- Wide operating temperature range from –40 to +50° C.
- Updated wider engagement lever with improved contact area.
- Notches on contact terminals reduce heat loss and increase mechanical stability of the connection.
- Higher switching capacity of 10 kA provides for installing VA47-100 as input circuit breakers.

Design Features

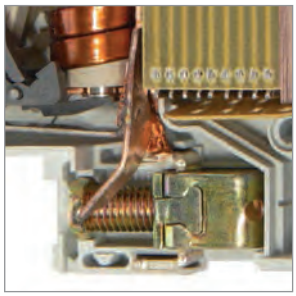
Main circuit status indicator provides correct information on contacts status, regardless of the lever position.



Soldered-on composite material with silver improves wear resistance of the contact assembly and decreases the transient resistance.

Unified casing with possibility to attach additional devices does not require disassembling: unassisted connection can be carried out.

Notched terminal clamps reduce the heat loss and increase mechanical stability of the connection.



Factory settings of the thermal release mechanism are protected from modification by the insert made from acrylic plastic.

Design of VA 47-100 allows for attachment of additional devices (RN47, RMM47, KS/KSV47) without use of screws.

Ergonomic design of ON/OFF lever facilitates the commutation process.

Quick installation and additional reliability of snapping on to the DIN-rail due to the latch with double locking.

Range

	Name	Rated current I_n, A	Curve Type	Bar type	Package amount, pcs		Product ID
					multiple	transport	
	VA47-100 1P 10 A type C	10	C	1P PIN 100 A step 27 mm	12	120	MVA40-1-010-C
	VA47-100 1P 16 A type C	16	C	1P PIN 100 A step 27 mm	12	120	MVA40-1-016-C
	VA47-100 1P 25 A type C	25	C	1P PIN 100 A step 27 mm	12	120	MVA40-1-025-C
	VA47-100 1P 32 A type C	32	C	1P PIN 100 A step 27 mm	12	120	MVA40-1-032-C
	VA47-100 1P 35 A type C	35	C	1P PIN 100 A step 27 mm	12	120	MVA40-1-035-C
	VA47-100 1P 40 A type C	40	C	1P PIN 100 A step 27 mm	12	120	MVA40-1-040-C
	VA47-100 1P 50 A type C	50	C	1P PIN 100 A step 27 mm	12	120	MVA40-1-050-C
	VA47-100 1P 63 A type C	63	C	1P PIN 100 A step 27 mm	12	120	MVA40-1-063-C
	VA47-100 1P 80 A type C	80	C	1P PIN 100 A step 27 mm	12	120	MVA40-1-080-C
	VA47-100 1P 100 A type C	100	C	1P PIN 100 A step 27 mm	12	120	MVA40-1-100-C
	VA47-100 1P 10 A 10 kA type D	10	D	1P PIN 100 A step 27 mm	12	120	MVA40-1-010-D
	VA47-100 1P 16 A 10 kA type D	16	D	1P PIN 100 A step 27 mm	12	120	MVA40-1-016-D
	VA47-100 1P 25 A 10 kA type D	25	D	1P PIN 100 A step 27 mm	12	120	MVA40-1-025-D
	VA47-100 1P 32 A 10 kA type D	32	D	1P PIN 100 A step 27 mm	12	120	MVA40-1-032-D
	VA47-100 1P 35 A 10 kA type D	35	D	1P PIN 100 A step 27 mm	12	120	MVA40-1-035-D
	VA47-100 1P 40 A 10 kA type D	40	D	1P PIN 100 A step 27 mm	12	120	MVA40-1-040-D
	VA47-100 1P 50 A 10 kA type D	50	D	1P PIN 100 A step 27 mm	12	120	MVA40-1-050-D
	VA47-100 1P 63 A 10 kA type D	63	D	1P PIN 100 A step 27 mm	12	120	MVA40-1-063-D
	VA47-100 1P 80 A 10 kA type D	80	D	1P PIN 100 A step 27 mm	12	120	MVA40-1-080-D
	VA47-100 1P 100 A 10 kA type D	100	D	1P PIN 100 A step 27 mm	12	120	MVA40-1-100-D
	VA47-100 2P 10 A type C	10	C	1P PIN 100 A step 27 mm	6	60	MVA40-2-010-C
	VA47-100 2P 16 A type C	16	C	2P PIN 100 A step 27 mm	6	60	MVA40-2-016-C
	VA47-100 2P 25 A type C	25	C	2P PIN 100 A step 27 mm	6	60	MVA40-2-025-C
	VA47-100 2P 32 A type C	32	C	2P PIN 100 A step 27 mm	6	60	MVA40-2-032-C
	VA47-100 2P 35 A type C	35	C	2P PIN 100 A step 27 mm	6	60	MVA40-2-035-C
	VA47-100 2P 40 A type C	40	C	2P PIN 100A step 27 mm	6	60	MVA40-2-040-C
	VA47-100 2P 50 A type C	50	C	2P PIN 100A step 27 mm	6	60	MVA40-2-050-C
	VA47-100 2P 63 A type C	63	C	2P PIN 100 A step 27 mm	6	60	MVA40-2-063-C
	VA47-100 2P 80 A type C	80	C	2P PIN 100 A step 27 mm	6	60	MVA40-2-080-C
	VA47-100 2P 100 A type C	100	C	2P PIN 100 A step 27 mm	6	60	MVA40-2-100-C
	VA47-100 2P 10 A 10 kA type D	10	D	2P PIN 100 A step 27 mm	6	60	MVA40-2-010-D
	VA47-100 2P 16 A 10 kA type D	16	D	2P PIN 100 A step 27 mm	6	60	MVA40-2-016-D
	VA47-100 2P 25 A 10 kA type D	25	D	2P PIN 100 A step 27 mm	6	60	MVA40-2-025-D
	VA47-100 2P 32 A 10 kA type D	32	D	2P PIN 100 A step 27 mm	6	60	MVA40-2-032-D
	VA47-100 2P 35 A 10 kA type D	35	D	2P PIN 100 A step 27 mm	6	60	MVA40-2-035-D
	VA47-100 2P 40 A 10 kA type D	40	D	2P PIN 100A step 27 mm	6	60	MVA40-2-040-D
	VA47-100 2P 50 A 10 kA type D	50	D	2P PIN 100 A step 27 mm	6	60	MVA40-2-050-D
	VA47-100 2P 63 A 10 kA type D	63	D	2P PIN 100 A step 27 mm	6	60	MVA40-2-063-D
	VA47-100 2P 80 A 10 kA type D	80	D	2P PIN 100 A step 27 mm	6	60	MVA40-2-080-D
	VA47-100 2P 100 A 10 kA type D	100	D	2P PIN 100 A step 27 mm	6	60	MVA40-2-100-D

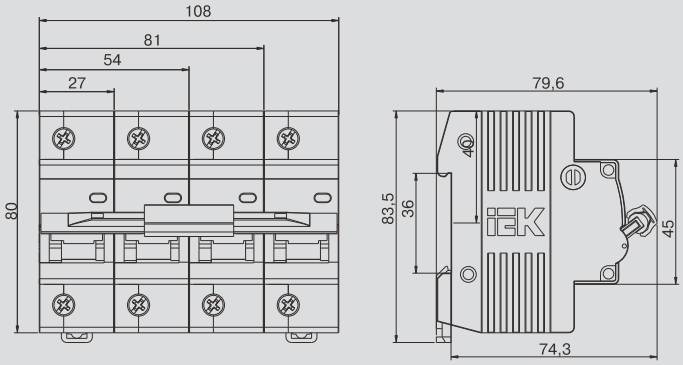
Ассортимент

	Name	Rated current I_n, A	Curve Type	Bar type	Package amount, pcs		Product ID
					multiple	transport	
	VA47-100 3P 10 A type C	10	C	3P PIN 100 A step 27 mm	4	40	MVA40-3-010-C
	VA47-100 3P 16 A type C	16	C	3P PIN 100 A step 27 mm	4	40	MVA40-3-016-C
	VA47-100 3P 25 A type C	25	C	3P PIN 100 A step 27 mm	4	40	MVA40-3-025-C
	VA47-100 3P 32 A type C	32	C	3P PIN 100 A step 27 mm	4	40	MVA40-3-032-C
	VA47-100 3P 35 A type C	35	C	3P PIN 100 A step 27 mm	4	40	MVA40-3-035-C
	VA47-100 3P 40 A type C	40	C	3P PIN 100 A step 27 mm	4	40	MVA40-3-040-C
	VA47-100 3P 50 A type C	50	C	3P PIN 100 A step 27 mm	4	40	MVA40-3-050-C
	VA47-100 3P 63 A type C	63	C	3P PIN 100 A step 27 mm	4	40	MVA40-3-063-C
	VA47-100 3P 80 A type C	80	C	3P PIN 100 A step 27 mm	4	40	MVA40-3-080-C
	VA47-100 3P 100 A type C	100	C	3P PIN 100 A step 27 mm	4	40	MVA40-3-100-C
	VA47-100 3P 10 A 10 kA type D	10	D	3P PIN 100 A step 27 mm	4	40	MVA40-3-010-D
	VA47-100 3P 16 A 10 kA type D	16	D	3P PIN 100 A step 27 mm	4	40	MVA40-3-016-D
	VA47-100 3P 25 A 10 kA type D	25	D	3P PIN 100 A step 27 mm	4	40	MVA40-3-025-D
	VA47-100 3P 32 A 10 kA type D	32	D	3P PIN 100 A step 27 mm	4	40	MVA40-3-032-D
	VA47-100 3P 35 A 10 kA type D	35	D	3P PIN 100 A step 27 mm	4	40	MVA40-3-035-D
	VA47-100 3P 40 A 10 kA type D	40	D	3P PIN 100 A step 27 mm	4	40	MVA40-3-040-D
	VA47-100 3P 50 A 10 kA type D	50	D	3P PIN 100 A step 27 mm	4	40	MVA40-3-050-D
	VA47-100 3P 63 A 10 kA type D	63	D	3P PIN 100 A step 27 mm	4	40	MVA40-3-063-D
	VA47-100 3P 80 A 10 kA type D	80	D	3P PIN 100 A step 27 mm	4	40	MVA40-3-080-D
	VA47-100 3P 100 A 10 kA type D	100	D	3P PIN 100 A step 27 mm	4	40	MVA40-3-100-D
	VA47-100 4P 10 A type C	10	C	4P PIN 100 A step 27 mm	3	30	MVA40-4-010-C
	VA47-100 4P 16 A type C	16	C	4P PIN 100 A step 27 mm	3	30	MVA40-4-016-C
	VA47-100 4P 25 A type C	25	C	4P PIN 100 A step 27 mm	3	30	MVA40-4-025-C
	VA47-100 4P 32 A type C	32	C	4P PIN 100 A step 27 mm	3	30	MVA40-4-032-C
	VA47-100 4P 35 A type C	35	C	4P PIN 100 A step 27 mm	3	30	MVA40-4-035-C
	VA47-100 4P 40 A type C	40	C	4P PIN 100 A step 27 mm	3	30	MVA40-4-040-C
	VA47-100 4P 50 A type C	50	C	4P PIN 100 A step 27 mm	3	30	MVA40-4-050-C
	VA47-100 4P 63 A type C	63	C	4P PIN 100 A step 27 mm	3	30	MVA40-4-063-C
	VA47-100 4P 80 A type C	80	C	4P PIN 100 A step 27 mm	3	30	MVA40-4-080-C
	VA47-100 4P100 A type C	100	C	4P PIN 100 A step 27 mm	3	30	MVA40-4-100-C
	VA47-100 4P 10 A 10 kA type D	10	D	4P PIN 100 A step 27 mm	3	30	MVA40-4-010-D
	VA47-100 4P 16 A 10 kA type D	16	D	4P PIN 100 A step 27 mm	3	30	MVA40-4-016-D
	VA47-100 4P 25 A 10 kA type D	25	D	4P PIN 100 A step 27 mm	3	30	MVA40-4-025-D
	VA47-100 4P 32 A 10 kA type D	32	D	4P PIN 100 A step 27 mm	3	30	MVA40-4-032-D
	VA47-100 4P 35 A 10 kA type D	35	D	4P PIN 100 A step 27 mm	3	30	MVA40-4-035-D
	VA47-100 4P 40 A 10 kA type D	40	D	4P PIN 100 A step 27 mm	3	30	MVA40-4-040-D
	VA47-100 4P 50 A 10 kA type D	50	D	4P PIN 100 A step 27 mm	3	30	MVA40-4-050-D
	VA47-100 4P 63 A 10 kA type D	63	D	4P PIN 100 A step 27 mm	3	30	MVA40-4-063-D
	VA47-100 4P 80 A 10 kA type D	80	D	4P PIN 100 A step 27 mm	3	30	MVA40-4-080-D
	VA47-100 4P 100 A 10 kA type D	100	D	4P PIN 100 A step 27 mm	3	30	MVA40-4-100-D

Technical Features

Standards	EN 60898-1
Rated voltage of 50 Hz (frequency), V	230/400
Rated current In, A	10; 16; 25; 32; 35; 40; 50; 63; 80; 100
Rated short-circuit breaking capacity, A	10 000
DC voltage, V/pole	60
Curve Type	C, D
NP / No. of poles	1, 2, 3, 4
Protection degree	IP20
Electrical durability, not less than, ops.	6000
Mechanical durability, not less than, ops.	20 000
Cables max. size, mm^2	35
Silver content, (Ag), g/pole	0,9÷1,2
Bars that can be connected to contact terminals	PIN
Pole weight, kg	0,15
Operating temperature range, °C	–40÷+50

Overall Dimensions



Residual current circuit breakers (RCCB)

Residual current circuit breaker (RCCB) VD1-63

Quick safety breaker with response to residual currents without integrated overcurrent protection. It is intended for electric shock hazard protection in case of eventual unintentional contact with conducting parts of electric installations and preventing fires caused by earth current leakage. The device has no energy consumption and is notable for its high mechanical wear resistance.
More than 50 items per 8 rated currents ranging from 16 up to 100 A.

Advantages

- Electromechanical design, without use of electronic components.
- The most reliable protection of a person in case of direct contact with live parts.
- Independent contact position indicator.
- Wide operating temperature range, from –25 °C to +40 °C.
- TEST button to check the device operability and correct connections.
- No power consumption, operability is maintained when neutral conductor is broken.
- Notched terminal clamps reduce the heat loss and increase mechanical stability of the connection.
- Quick installation using the latch with double locking.
- Conditional short-circuit current value is 4.5 kA.

Design Features

TEST button to check the device operability and correct connections.

Simultaneous connection by FORK bar and flexible conductor is possible for power supply distribution via upper terminals, as well as connection by PIN bar.

Electromechanical design, without use of electronic components. No power consumption, operability is maintained when neutral conductor is broken.

Notched terminal clamps reduce the heat loss and increase mechanical stability of the connection.

Main circuit status indicator provides correct information on contacts status, regardless of the lever position.

Wide operating temperature range, from −25°C to +40°C, allows using the circuit breaker in various climatic zones.

Arc suppression chambers for each pole ensure more efficient suppression of electric arc.

Range

Name	Rated current I_n, A	Rated breaking residual current, mA	Package amount, pcs multiple	transport	Product ID
VD1-63 2P 16 A 10 mA	16	10	1	48	MDV10-2-016-010
VD1-63 2P 25 A 10 mA	25	10	1	48	MDV10-2-025-010
VD1-63 2P 16 A 30 mA	16	30	1	48	MDV10-2-016-030
VD1-63 2P 25 A 30 mA	25	30	1	48	MDV10-2-025-030
VD1-63 2P 32 A 30 mA	32	30	1	48	MDV10-2-032-030
VD1-63 2P 40 A 30 mA	40	30	1	48	MDV10-2-040-030
VD1-63 2P 50 A 30 mA	50	30	1	48	MDV10-2-050-030
VD1-63 2P 63 A 30 mA	63	30	1	48	MDV10-2-063-030
VD1-63 2P 80 A 30 mA	80	30	1	48	MDV10-2-080-030
VD1-63 2P 100 A 30 mA	100	30	1	48	MDV10-2-100-030
VD1-63 2P 16 A 100 mA	16	100	1	48	MDV10-2-016-100
VD1-63 2P 25 A 100 mA	25	100	1	48	MDV10-2-025-100
VD1-63 2P 32 A 100 mA	32	100	1	48	MDV10-2-032-100
VD1-63 2P 40 A 100 mA	40	100	1	48	MDV10-2-040-100
VD1-63 2P 50 A 100 mA	50	100	1	48	MDV10-2-050-100
VD1-63 2P 63 A 100 mA	63	100	1	48	MDV10-2-063-100
VD1-63 2P 80 A 100 mA	80	100	1	48	MDV10-2-080-100
VD1-63 2P 100 A 100 mA	100	100	1	48	MDV10-2-100-100
VD1-63 2P 16 A 300 mA	16	300	1	48	MDV10-2-016-300
VD1-63 2P 25 A 300 mA	25	300	1	48	MDV10-2-025-300
VD1-63 2P 40 A 300 mA	40	300	1	48	MDV10-2-040-300
VD1-63 2P 50 A 300 mA	50	300	1	48	MDV10-2-050-300
VD1-63 2P 63 A 300 mA	63	300	1	48	MDV10-2-063-300
VD1-63 2P 80 A 300 mA	80	300	1	48	MDV10-2-080-300
VD1-63 2P 100 A 300 mA	100	300	1	48	MDV10-2-100-300

VD1-63 4P 16 A 10 mA	16	10	1	24	MDV10-4-016-010
VD1-63 4P 25 A 10 mA	25	10	1	24	MDV10-4-025-010
VD1-63 4P 16 A 30 mA	16	30	1	24	MDV10-4-016-030
VD1-63 4P 25 A 30 mA	25	30	1	24	MDV10-4-025-030
VD1-63 4P 32 A 30 mA	32	30	1	24	MDV10-4-032-030
VD1-63 4P 40 A 30 mA	40	30	1	24	MDV10-4-040-030
VD1-63 4P 50 A 30 mA	50	30	1	24	MDV10-4-050-030
VD1-63 4P 63 A 30 mA	63	30	1	24	MDV10-4-063-030
VD1-63 4P 80 A 30 mA	80	30	1	24	MDV10-4-080-030
VD1-63 4P 100 A 30 mA	100	30	1	24	MDV10-4-100-030
VD1-63 4P 25 A 100 mA	25	100	1	24	MDV10-4-025-100
VD1-63 4P 32 A 100 mA	32	100	1	24	MDV10-4-032-100
VD1-63 4P 40 A 100 mA	40	100	1	24	MDV10-4-040-100
VD1-63 4P 50 A 100 mA	50	100	1	24	MDV10-4-050-100
VD1-63 4P 63 A 100 mA	63	100	1	24	MDV10-4-063-100
VD1-63 4P 80 A 100 mA	80	100	1	24	MDV10-4-080-100
VD1-63 4P 100 A 100 mA	100	100	1	24	MDV10-4-100-100
VD1-63 4P 16 A 300 mA	16	300	1	24	MDV10-4-016-300
VD1-63 4P 25 A 300 mA	25	300	1	24	MDV10-4-025-300
VD1-63 4P 32 A 300 mA	32	300	1	24	MDV10-4-032-300
VD1-63 4P 40 A 300 mA	40	300	1	24	MDV10-4-040-300
VD1-63 4P 50 A 300 mA	50	300	1	24	MDV10-4-050-300
VD1-63 4P 63 A 300 mA	63	300	1	24	MDV10-4-063-300
VD1-63 4P 80 A 300 mA	80	300	1	24	MDV10-4-080-300
VD1-63 4P 100 A 300 mA	100	300	1	24	MDV10-4-100-300

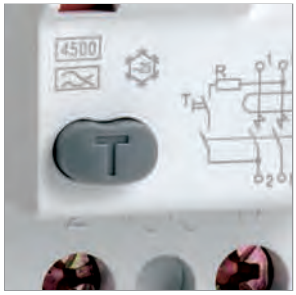
Residual current circuit breaker (RCCB) VD1-63 type A

VD1-63 type A residual current circuit breaker is designed for protection of persons against electric shock in case of accidental unintentional contact with live parts of electric installations of voltage 230/400 VAC and frequency 50 Hz.
Residual current circuit breaker VD1-63 type A without integrated overcurrent protection responds not only to sinusoidal AC residual current, but also to discontinuous DC residual current. The sources of such discontinuous currents can be washing machines with variable-speed control, controlled lighting, TVs, video recorders, PCs etc.
Residual current circuit breaker VD1-63 type A meet EN 61008-1, EN 61008-2-1, EN 61543 requirements as “functionally independent from the power source”.
Residual current circuit breaker VD1-63 type A is manufactured as 2- and 4-pole type items per rated currents of 16, 25, 32, 40, 50 and 63 A and rated breaking residual currents of 10, 30 and 100 mA.

Advantages

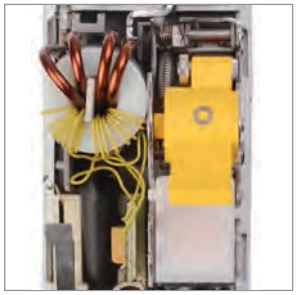
- VD1-63 type A RCCB is a reliable noise-immune electromechanical protective cut-out device that is capable, in contrast to RCCB of type AS, to ensure a universal protection against electric shock in case of accidental unintentional contact with a conductor and against leakage currents.
- Good electric wear resistance: at least 4000 switching operations.
- Rated conditional short-circuit current is 4500 A.
- Wide range of rated currents (16, 25, 32, 40, 50, 63 A) and rated tripping differential currents (10, 30, 100 mA).
- Quick installation using the latch with double locking.
- Soldered-on material with silver on the contacts.
- Notches on the terminal clamps reduce the heat loss and increase mechanical strength of the connection.
- The load can be connected to either upper or lower terminals.
- Wide range of working voltages for operation monitoring device (110 to 265 V for 2-pole version and 200 to 460 V for 4-pole version).
- Design of the main contacts of 4-pole VD1-63 type A RCCB provides for early make and delayed break of neutral contact, thus preventing voltage unbalance in the load as in case of broken mains neutral.

Design Features



Ergonomic TEST button to check the device operability and correct connections. Rated conditional short-circuit current is 4500 A that allows withstanding higher overcurrents compared with older series of RCCBs.

The terminals are marked on the casing to avoid connection errors. The screws joining the casing parts are sealed to prevent from unauthorized disassembly of the device.

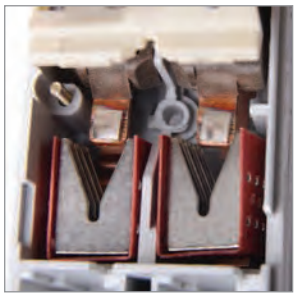


No power consumption, operability is maintained when neutral conductor is broken.

Main circuit status indicator provides correct information on contacts status, regardless of the lever position.

Simultaneous connection by FORK bar and flexible conductor is possible for power supply distribution via upper terminals, as well as connection by PIN bar.

Notches on the terminal clamps reduce the heat loss and increase mechanical strength of the connection.



Arc suppression grids with increased number of the plates located on each pole ensure more efficient suppression of electric arc.

Extended operating temperature range, from −25 °C to +40 °C, allows using the circuit breaker in various climatic zones.

Range

Name	Rated current I_n, A	Rated breaking residual current, mA	Package amount, pcs		Product ID
			multiple	transport	
UZO type A VD1-63 2P 16 A 10 mA	16	10	1	100	MDV11-2-016-010
UZO type A VD1-63 2P 16 A 30 mA	16	30	1	100	MDV11-2-016-030
UZO type A VD1-63 2P 25 A 10 mA	25	10	1	100	MDV11-2-025-010
UZO type A VD1-63 2P 25 A 30 mA	25	30	1	100	MDV11-2-025-030
UZO type A VD1-63 2P 32 A 30 mA	32	30	1	100	MDV11-2-032-030
UZO type A VD1-63 2P 40 A 30 mA	40	30	1	100	MDV11-2-040-030
UZO type A VD1-63 2P 50 A 30 mA	50	30	1	100	MDV11-2-050-030
UZO type A VD1-63 2P 63 A 30 mA	63	30	1	100	MDV11-2-063-030
UZO type A VD1-63 2P 63 A 100 mA	63	100	1	100	MDV11-2-063-100

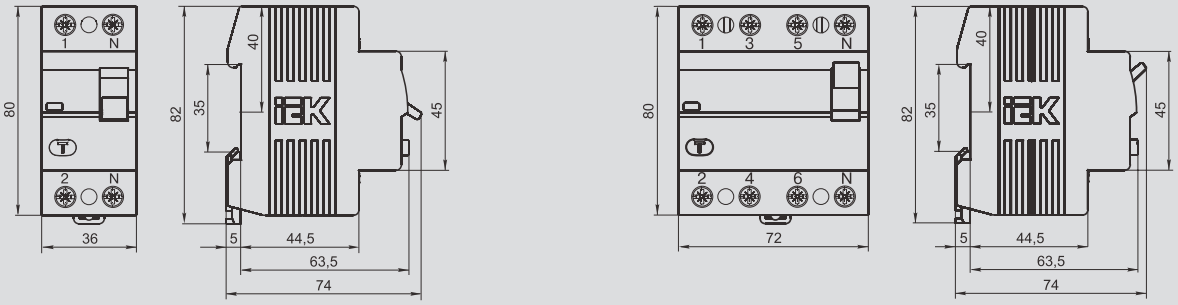
UZO type A VD1-63 4P 16 A 10 mA	16	10	1	50	MDV11-4-016-010
UZO type A VD1-63 4P 16 A 30 mA	16	30	1	50	MDV11-4-016-030
UZO type A VD1-63 4P 25 A 10 mA	25	10	1	50	MDV11-4-025-010
UZO type A VD1-63 4P 25 A 30 mA	25	30	1	50	MDV11-4-025-030
UZO type A VD1-63 4P 32 A 30 mA	32	30	1	50	MDV11-4-032-030
UZO type A VD1-63 4P 40 A 30 mA	40	30	1	50	MDV11-4-040-030
UZO type A VD1-63 4P 50 A 30 mA	50	30	1	50	MDV11-4-050-030
UZO type A VD1-63 4P 50 A 100 mA	50	100	1	50	MDV11-4-050-100
UZO type A VD1-63 4P 63 A 30 mA	63	30	1	50	MDV11-4-063-030
UZO type A VD1-63 4P 63 A 100 mA	63	100	1	50	MDV11-4-063-100

Technical Features

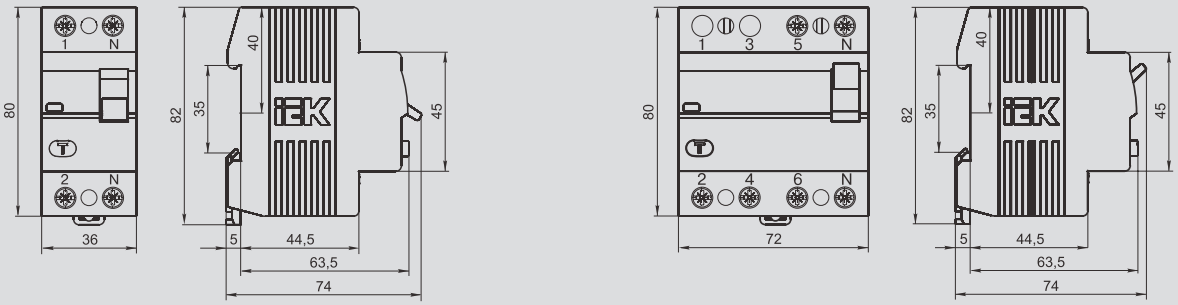
Feature	VD1-63	VD1-63 type A
Standards	EN 61008-1, EN 61008-2-1, EN 61543	EN 61008-1, EN 61008-2-1, EN 61543
Rated voltage of 50 Hz (frequency), V	230/400	230/400
Rated current I_n, A	16; 25; 32; 40; 50; 63; 80; 100	16, 25, 32, 40, 50, 63
Rated breaking residual current $I_{\Delta n}$, mA	10; 30; 100; 300	10, 30, 100
Rated nominal short circuit current I_{nc}, A	4500	4500
RCCB Type	AC	A
Tripping time, ms	≤40	≤40
NP / No. of poles	2; 4	2, 4
Protection degree	IP20	IP20
Electrical durability, not less than, ops.	4000	4000
Mechanical durability, not less than, ops.	10 000	10 000
Cables max. size, mm^2	50	50
Silver content, (Ag), g/pole	0,6÷2,0	0,5÷1,0
Weight (2-and 4-polar), kg	0,2/0,4	0,2/0,4
Operating temperature range, °C	–25÷+40	–25÷+40

Overall Dimensions

VD1-63



VD1-63 type A



VD1-63S residual current circuit breakers (selective RCCBs)

VD1-63S circuit breakers with release mechanism controlled by differential current, without built-in protection against overcurrents, without functional dependence on mains voltage, for household or similar use, with delayed tripping are intended for automatic power cut-off when differential leakage currents occur in single-phase and three-phase AC electric systems of rated voltage up to 400 V.
VD1-63S are designed for installation in low-voltage complex input and distribution devices used in residential, public and industrial objects as well as construction sites.
Ultimate breaking capacity – 6000 A.
26 items per 7 rated currents ranging from 16 up to 80 A.

Advantages

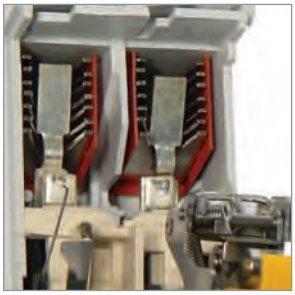
- Electromechanical design, with delayed tripping.
- The most reliable protection of a person in case of direct contact with live parts.
- No power consumption, operability is maintained when neutral conductor is broken.
- Independent contact position indicator.
- Test circuit of the breaker remains operable within wide voltage range: 110 to 265 V for 2-pole version, 200 to 460 V for 4-pole version.
- Quick installation using the latch with double locking.
- Improved reliability of the selective assembly.

Design Features

Electromechanical device with built-in delay assembly, without its own power consumption that maintains operability when neutral conductor is broken.

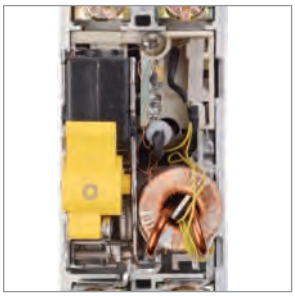
Wide operating temperature range, from −25°C to +40°C, allows using the circuit breaker in various climatic zones.

Main circuit status indicator provides correct information on contacts status, regardless of the lever position.



Arc suppression chambers for each pole ensure more efficient suppression of electric arc.

TEST button to check the device operability and correct connections.



New design of the selective assembly featured by improved reliability: patent No. RU 116709.

Notches on the terminal clamps reduce the heat loss and increase mechanical strength of the connection.

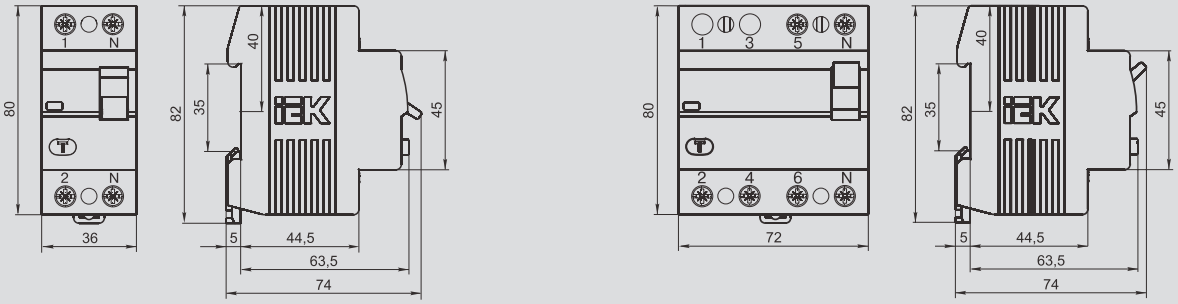
Range

	Name	Rated current I_n, A	Rated breaking residual current, mA	Package amount, pcs	Product ID
	VD1-63S 2P 25 A 100 mA	25	100	100	MDV12-2-025-100
	VD1-63S 2P 32 A 100 mA	32	100	100	MDV12-2-032-100
	VD1-63S 2P 40 A 100 mA	40	100	100	MDV12-2-040-100
	VD1-63S 2P 50 A 100 mA	50	100	100	MDV12-2-050-100
	VD1-63S 2P 63 A 100 mA	63	100	100	MDV12-2-063-100
	VD1-63S 2P 80 A 100 mA	80	100	100	MDV12-2-080-100
	VD1-63S 2P 25 A 300 mA	25	300	100	MDV12-2-025-300
	VD1-63S 2P 32 A 300 mA	32	300	100	MDV12-2-032-300
	VD1-63S 2P 40 A 300 mA	40	300	100	MDV12-2-040-300
	VD1-63S 2P 50 A 300 mA	50	300	100	MDV12-2-050-300
	VD1-63S 2P 63 A 300 mA	63	300	100	MDV12-2-063-300
	VD1-63S 2P 80 A 300 mA	80	300	100	MDV12-2-080-300
	VD1-63S 4P 25 A 100 mA	25	100	50	MDV12-4-025-100
	VD1-63S 4P 32 A 100 mA	32	100	50	MDV12-4-032-100
	VD1-63S 4P 40 A 100 mA	40	100	50	MDV12-4-040-100
	VD1-63S 4P 50 A 100 mA	50	100	50	MDV12-4-050-100
	VD1-63S 4P 63 A 100 mA	63	100	50	MDV12-4-063-100
	VD1-63S 4P 25 A 300 mA	25	300	50	MDV12-4-025-300
	VD1-63S 4P 32 A 300 mA	32	300	50	MDV12-4-032-300
	VD1-63S 4P 40 A 300 mA	40	300	50	MDV12-4-040-300
	VD1-63S 4P 50 A 300 mA	50	300	50	MDV12-4-050-300
	VD1-63S 4P 63 A 300 mA	63	300	50	MDV12-4-063-300

Technical Features

Standards	EN 61008-1, EN 61008-2-1, EN 61543
Rated voltage of 50 Hz (frequency), V	230/400
Rated current I_n, A	16; 25; 32; 40; 50; 63; 80
Rated breaking residual current $I_{\Delta n}$, mA	100; 300
Rated nominal short-circuit residual current $I_{\Delta c}$, A	6000
Performance value in case of residual current with DC component	AC
Tripping time at the rated residual current, s	0,13÷0,5
NP / No. of poles	2/4
Protection degree	IP20
Electrical durability, not less than, ops.	4000
Mechanical durability, not less than, ops.	10 000
Cables max. size, mm^2	50
Silver content, (Ag), g/pole	0,5÷1,0
Weight (2/4-polar), kg	0,2/0,4
Temperature range, °C	–25÷+40

Overall Dimensions



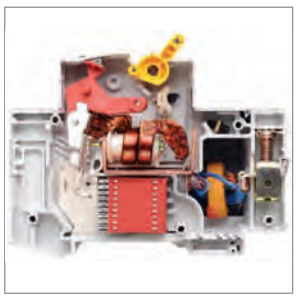
AD12, AD12M, AD14 residual current circuit breakers

The quick-acting protection circuit breakers ensure:
– versions with tripping settings 10, 30 and 100 mA: protection of persons against electric shock in case of unintentional direct contact with live parts of electric equipment;
– versions with tripping setting 300 mA: protection against fire caused by ignition of live parts insulation;
– protection against overload and short-circuit;
– protection against inadmissibly increased mains voltage (AD12M).
The devices have indication of tripping caused by differential current, and AD12M also has LED indicator of ON status. The AD12M maintains operability when mains voltage drops to 50 V.
The devices utilize VA47-29 circuit breakers of new series as commutation assemblies.

Advantages

- Improved arc suppression system: patent No. RU 139886.
- Simultaneous connection by FORK bar and flexible conductor is possible for power supply distribution via upper terminals, as well as connection by PIN bar.
- Increased robustness in conductor connection area due to two additional rivets and solid faceplate.
- Contact position indicator.
- Compact energy efficient design: due to use of smaller size differential assembly, space in a cabinet is saved.
- Soldered-on composite material with silver improves wear resistance of the contact assembly and decreases the transient resistance.
- New design of AD12/12M/14 allows for attachment of additional devices (KS47, KSV47) without use of screws.
- Indicator of tripping caused by differential current – “Reset” button.
- LED indicator of voltage presence on “Load” terminals and built-in protection against lasting (265 V, 0.5 s) mains overvoltages (AD12M).
- Convenient mounting/removal without need of tools.

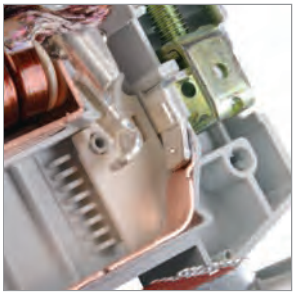
Design Features



Improved arc suppression system: patent No. RU 139886.

Contact position indicator.

Simultaneous connection by FORK bar and flexible conductor is possible for power supply distribution via upper terminals, as well as connection by PIN bar.

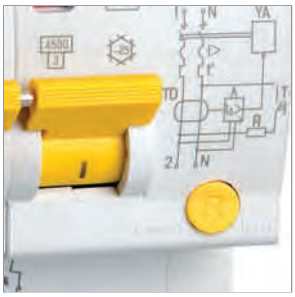


Soldered-on composite material with silver improves wear resistance of the contact assembly and decreases the transient resistance.

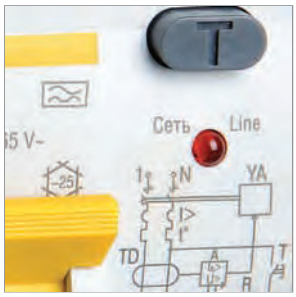
Increased robustness in conductor connection area due to two additional rivets and solid faceplate.

New design of AD12/12M/14 allows for attachment of additional devices (KS47, KSV47) without use of screws.

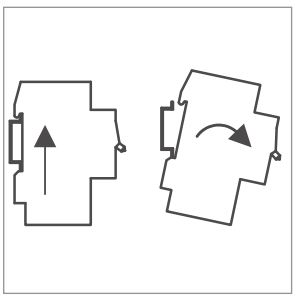
Compact energy efficient design: due to use of smaller size differential assembly, space in a cabinet is saved.



Indicator of tripping caused by differential current – “Reset” button.
Curve AC for AD12/14, curve A for AD12M.



LED indicator of voltage presence on “Load” terminals and built-in protection against lasting (265 V, 0.5 s) mains overvoltages (AD12M).



Convenient mounting/removal without need of tools.

Range

Name	Rated current I_n, A	Rated breaking residual current, mA	Package amount, pcs multiple	transport	Product ID
AD12 2P 6 A 10 mA	6	10	5	40	MAD10-2-006-C-010
AD12 2P 10 A 10 mA	10	10	5	40	MAD10-2-010-C-010
AD12 2P 16 A 10 mA	16	10	5	40	MAD10-2-016-C-010
AD12 2P B16 30 mA	16	30	5	40	MAD10-2-016-B-030
AD12 2P B25 30 mA	25	30	5	40	MAD10-2-025-B-030
AD12 2P 25 A 10 mA	25	10	5	40	MAD10-2-025-C-010
AD12 2P 32 A 10 mA	32	10	5	40	MAD10-2-032-C-010
AD12 2p 40 A 10 mA	40	10	4	32	MAD10-2-040-C-010
AD12 2P 10 A 30 mA	10	30	5	40	MAD10-2-010-C-030
AD12 2P 16 A 30 mA	16	30	5	40	MAD10-2-016-C-030
AD12 2P 20 A 30 mA	20	30	5	40	MAD10-2-020-C-030
AD12 2P 25 A 30 mA	25	30	5	40	MAD10-2-025-C-030
AD12 2P 32 A 30 mA	32	30	5	40	MAD10-2-032-C-030
AD12 2P 40 A 30 mA	40	30	4	32	MAD10-2-040-C-030
AD12 2P 50 A 30 mA	50	30	4	32	MAD10-2-050-C-030
AD12 2P 63 A 30 mA	63	30	4	32	MAD10-2-063-C-030
AD12 2P 10 A 100 mA	10	100	5	40	MAD10-2-010-C-100
AD12 2P 16 A 100 mA	16	100	5	40	MAD10-2-016-C-100
AD12 2P 25 A 100 mA	25	100	5	40	MAD10-2-025-C-100
AD12 2P 32 A 100 mA	32	100	5	40	MAD10-2-032-C-100
AD12 2P 40 A 100 mA	40	100	4	32	MAD10-2-040-C-100
AD12 2P 50 A 100 mA	50	100	4	32	MAD10-2-050-C-100
AD12 2P 63 A 100 mA	63	100	4	32	MAD10-2-063-C-100
AD12 2P 25 A 300 mA	25	300	5	40	MAD10-2-025-C-300
AD12 2p 40 A 300 mA	40	300	4	32	MAD10-2-040-C-300
AD12 2P 50 A 300 mA	50	300	4	32	MAD10-2-050-C-300
AD12 2P 63 A 300 mA	63	300	4	32	MAD10-2-063-C-300

AD14 4P 6 A 10 mA	6	10	3	24	MAD10-4-006-C-010
AD14 4P 10 A 10 mA	10	10	3	24	MAD10-4-010-C-010
AD14 4P 16 A 10 mA	16	10	3	24	MAD10-4-016-C-010
AD14 4P 10 A 30 mA	10	30	3	24	MAD10-4-010-C-030
AD14 4P 16 A 30 mA	16	30	3	24	MAD10-4-016-C-030
AD14 4P 25 A 30 mA	25	30	3	24	MAD10-4-025-C-030
AD14 4P 32 A 30 mA	32	30	3	24	MAD10-4-032-C-030
AD14 4P 40 A 30 mA	40	30	3	24	MAD10-4-040-C-030
AD14 4P 50 A 30 mA	50	30	3	24	MAD10-4-050-C-030
AD14 4P 63 A 30 mA	63	30	3	24	MAD10-4-063-C-030
AD14 4P 16 A 100 mA	16	100	3	24	MAD10-4-016-C-100
AD14 4P 25 A 100 mA	25	100	3	24	MAD10-4-025-C-100
AD14 4P 32 A 100 mA	32	100	3	24	MAD10-4-032-C-100
AD14 4P 40 A 100 mA	40	100	3	24	MAD10-4-040-C-100
AD14 4P 50 A 100 mA	50	100	3	24	MAD10-4-050-C-100
AD14 4P 63 A 100 mA	63	100	3	24	MAD10-4-063-C-100
AD14 4P 16 A 300 mA	16	300	3	24	MAD10-4-016-C-300
AD14 4P 25 A 300 mA	25	300	3	24	MAD10-4-025-C-300
AD14 4P 32 A 300 mA	32	300	3	24	MAD10-4-032-C-300
AD14 4P 40 A 300 mA	40	300	3	24	MAD10-4-040-C-300
AD14 4P 50 A 300 mA	50	300	3	24	MAD10-4-050-C-300
AD14 4P 63 A 300 mA	63	300	3	24	MAD10-4-063-C-300

All the range positions of AD12/14 have the characteristic of the magnetic trip response equaling to “C”, except those positions where the name contains “B” characteristic.

Range

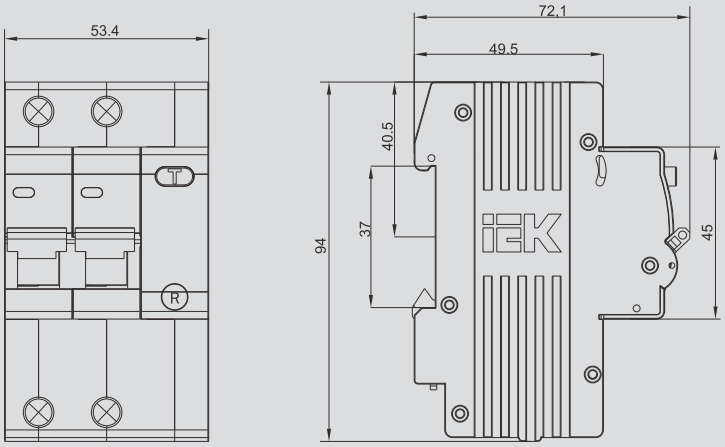
Name	Rated current I_n, A	Rated breaking residual current, mA	Package amount, pcs multiple	transport	Product ID
AD12M 2P B16 30 mA	16	30	5	40	MAD12-2-016-B-030
AD12M 2P B25 30 mA	25	30	5	40	MAD12-2-025-B-030
AD12M 2P C10 30 mA	10	30	5	40	MAD12-2-010-C-030
AD12M 2P C16 30 mA	16	30	5	40	MAD12-2-016-C-030
AD12M 2P C20 30 mA	20	30	5	40	MAD12-2-020-C-030
AD12M 2P C25 30 mA	25	30	5	40	MAD12-2-025-C-030
AD12M 2P C32 30 mA	32	30	5	40	MAD12-2-032-C-030
AD12M 2P C40 30 mA	40	30	4	32	MAD12-2-040-C-030
AD12M 2P C50 30 mA	50	30	4	32	MAD12-2-050-C-030
AD12M 2P C63 30 mA	63	30	4	32	MAD12-2-063-C-030

Technical Features

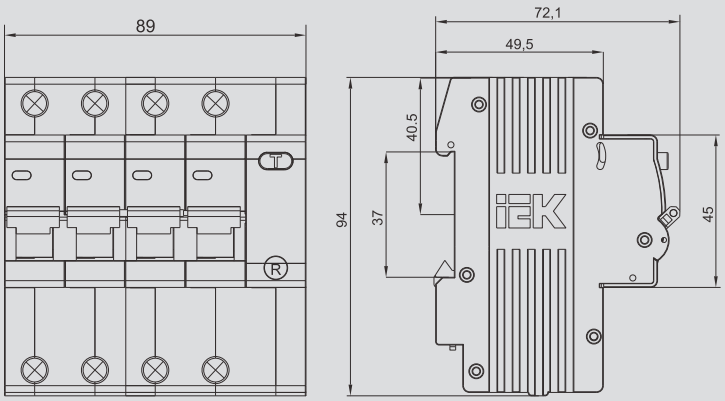
Name	AD12	AD12M	AD14
Compliance to standards	EN 61009-1, EN 61543		
Rated voltage at frequency 50 Hz, V	230		230/400
Rated current In, A	6, 10, 16, 20, 25, 32, 40, 50, 63	10, 16, 20, 25, 32, 40, 50, 63	6, 10, 16, 25, 32, 40, 50, 63
Rated tripping differential current IDn, mA	10, 30, 100, 300	30	10, 30, 100, 300
Rated breaking capacity, A	4500		
Working curve at presence of differential current	AC	A	AC
Tripping time at rated differential current, ms	≤40		
Number of poles	2		4
Operation conditions	UHL4		
Breaker degree of protection	IP20		
Wear resistance, ON-OFF cycles, at least	20 000		10 000
Maximum cross-section of connected wires, mm^2	от 2,5 до 35		
Weight (2/4-pole), kg	0,26		0,29
Range of operating temperatures, °C	–25÷+40		
Tripping voltage in case of mains overvoltage Utrip, V	–	265±10	–
Duration of exposure to tripping voltage required for actuation, s	0,2÷0,5		

Overall Dimensions

AD12, AD 12M



AD14



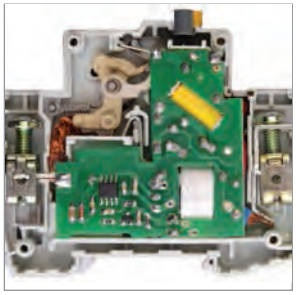
AVDT32 residual current circuit breakers for currents up to 63 A

The AVDT32 RCCBs are designed for protection of persons against electric shock in case of damaged insulation in electric installations, preventing fires caused by earth leakage currents and protection against overloads and short-circuits.

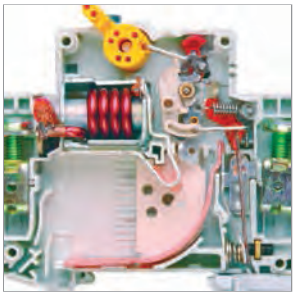
Advantages

- Combined design with electronic differential protection module and built-in circuit breaker of VA47-60 series.
- The most reliable protection of a person in case of direct contact with live parts.
- Independent contact position indicator.
- Wide operating temperature range from −25 to +40° C.
- Quick installation using the latch with double locking (AVDT32 for currents up to 40 A).
- Quick mounting/removal without need of tools (AVDT32 for currents 50 and 63 A).
- Energy efficient design (AVDT32 for currents 50 and 63 A).
- Notched terminal clamps reduce the heat loss and increase mechanical stability of the connection.
- TEST button to check the device operability and correct connections.
- Size of AVDT corresponds to 2-module device due to placement of design components.
- Increased breaking capacity of 6 кА allows for installation of AVDT as input protection circuit breakers.

Design Features

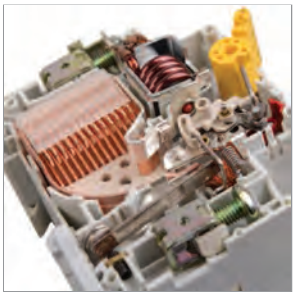


Combined design with electronic differential protection module, class D varistor and built-in circuit breaker of VA47-60 series provides for 4 types of protection: against differential (leakage) current; short circuit; overload; and protection of device internal components against pulse surges.



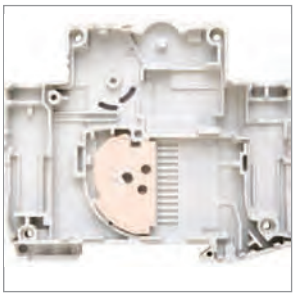
Noise-immune design excluding false tripping: patent No. RU 124453.

Simultaneous connection by FORK bar and flexible conductor is possible for power supply distribution via upper terminals, as well as connection by PIN bar.



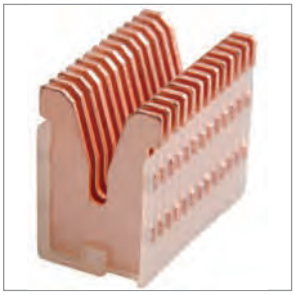
Soldered-on composite material with silver improves wear resistance of the contact assembly and decreases the transient resistance.

Main circuit status indicator provides correct information on contacts status, regardless of the lever position.



Additional protection of the device casing from burnout and heat withdrawal by anti-burnout plate.

Wide operating temperature range, from −25°C to +40°C, allows using the circuit breaker in various climatic zones.



Arc suppression chamber made of 13 steel plates for efficient arc suppression.

Quick installation, additional reliability of snapping on to the DIN-rail due to the latch with double locking.

Notched terminal clamps reduce the heat loss and increase mechanical stability of the connection.

Range

	Name	Rated current I_n, A	Rated breaking residual current, mA	Package amount, pcs multiple	transport	Product ID
	AVDT32 B16	16	10	6	60	MAD22-5-016-B-10
	AVDT32 B25	25	10	6	60	MAD22-5-025-B-10
	AVDT32 C6	6	30	6	60	MAD22-5-006-C-30
	AVDT32 C10	10	30	6	60	MAD22-5-010-C-30
	AVDT32 C16	16	30	6	60	MAD22-5-016-C-30
	AVDT32 C20	20	30	6	60	MAD22-5-020-C-30
	AVDT32 C25	25	30	6	60	MAD22-5-025-C-30
	AVDT32 C32	32	30	6	60	MAD22-5-032-C-30
	AVDT32 C40	40	30	6	60	MAD22-5-040-C-30
	AVDT32 C40	40	100	6	60	MAD22-5-040-C-100
	AVDT32 C50	50	100	6	60	MAD22-5-050-C-100
	AVDT32 C63	63	100	6	60	MAD22-5-063-C-100

AVDT32M residual current circuit breakers

The AVDT32M RCCBs for single-phase systems, in single-module version (18 mm), are designed for protection of persons against electric shock in case of damaged insulation in electric installations and against overloads and short-circuits in AC circuits of voltage 230 V and frequency 50 Hz; their specifications meet requirements of EN 61009-1, EN 61543.

Advantages

- Size of AVDT32M corresponds to single-module device – cabinet space saving.
- The most reliable protection of a person in case of direct contact with live parts.
- TEST button to check the device operability and correct connections.

Design features

Single-module device (18 mm) – cabinet space saving.

Latch with double locking for easy mounting.

Soldered-on composite material with silver improves wear resistance of the contact assembly and decreases the transient resistance.

TEST button to check the device operability and correct connections.

Wide operating temperature range, from –25°C to +40°C, allows using the circuit breaker in various climatic zones.

Range

Name	Rated current, A	Rated breaking residual current, mA	Package amount, pcs multiple	transport	Product ID
AVDT32M B10 30mA	10	30	10	100	MAD32-5-010-B-30
AVDT32M B16 30mA	16	30	10	100	MAD32-5-016-B-30
AVDT32M B6 10mA	6	10	10	100	MAD32-5-006-B-10
AVDT32M C10 10mA	10	10	10	100	MAD32-5-010-C-10
AVDT32M C10 30mA	10	30	10	100	MAD32-5-010-C-30
AVDT32M C16 10mA	16	10	10	100	MAD32-5-016-C-10
AVDT32M C16 30mA	16	30	10	100	MAD32-5-016-C-30
AVDT32M C20 10mA	20	10	10	100	MAD32-5-020-C-10
AVDT32M C20 30mA	20	30	10	100	MAD32-5-020-C-30
AVDT32M C25 100mA	25	100	10	100	MAD32-5-025-C-100
AVDT32M C25 10mA	25	10	10	100	MAD32-5-025-C-10
AVDT32M C25 30mA	25	30	10	100	MAD32-5-025-C-30
AVDT32M C32 100mA	32	100	10	100	MAD32-5-032-C-100
AVDT32M C32 10mA	32	10	10	100	MAD32-5-032-C-10
AVDT32M C32 30mA	32	30	10	100	MAD32-5-032-C-30
AVDT32M C6 10mA	6	10	10	100	MAD32-5-006-C-10
AVDT32M C6 30mA	6	30	10	100	MAD32-5-006-C-30

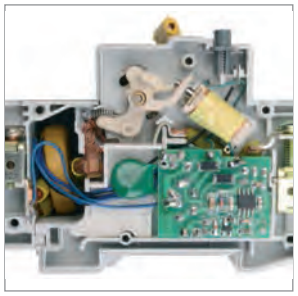
AVDT34 residual current circuit breakers for currents 6–63 A

The AVDT34 RCCBs are designed for protection of persons against electric shock in case of damaged insulation in electric installations, preventing fires caused by earth leakage currents and protection against overloads and short-circuits in AC systems of voltage 400 V and frequency 50 Hz.
The AVDT34 with built-in overcurrent protection respond not only for sinusoidal alternating differential currents but also for pulsing direct differential currents. The sources of pulsing current can be, for example, washing machines with speed control, adjustable luminaries, TV sets, VCRs, personal computers, etc.
The AVDT34 are produced as 4-pole devices for rated currents 6, 10, 16, 25, 32, 40, 50, 63 A and rated tripping differential currents 10, 30, 100, 300 mA

Advantages

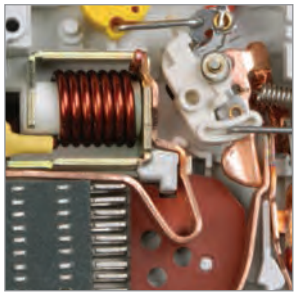
- Compact design of the circuit breaker controlled by differential current, with built-in overcurrent protection.
- Rated conditional short-circuit current 6000 A allows for use of AVDT34 RCCBs as input protection devices.
- Wide range of rated currents (6, 10, 16, 25, 32, 40, 50, 63 A) and rated tripping differential currents (10, 30, 100, 300 mA).
- Good electric wear resistance: at least 6000 switching operations.
- Ergonomic TEST button to check the device operability and correct connections.
- The work curve A at presence of differential current ensures a universal protection against electric shock in case of unintentional contact with conductor and protection against leakage currents.
- Design of the main contacts of 4-pole AVDT34 RCCB provides for early make and delayed break of neutral contact, thus preventing voltage unbalance in the load as in case of broken mains neutral.

Design Features



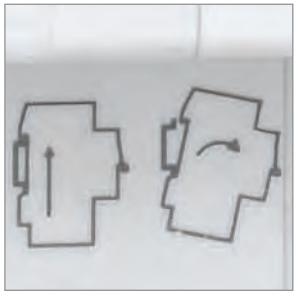
Noise-immune design excluding false tripping: patent No. RU 124453.

Simultaneous connection by FORK bar and flexible conductor is possible for power supply distribution via upper terminals, as well as connection by PIN bar.



Free release mechanism of new design that ensures fast break of the main contacts.

The range of AVDT34 breakers is extended to include currents 40, 50, 63 A and tripping settings 30, 100, 300 mA.

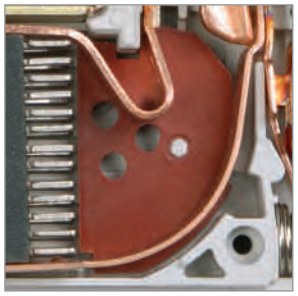


The AVDT34 design ensures quick mounting/removal without need of tools and extra reliability of snapping on to the DIN-rail.

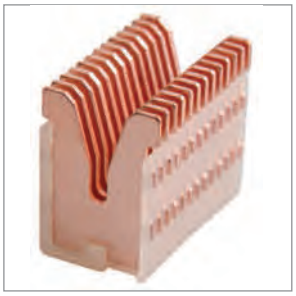
Ergonomic TEST button to check the device operability and correct connections.

Soldered-on composite material with silver improves wear resistance of the contact assembly and decreases the transient resistance.

Notched terminal clamps reduce the heat loss and increase mechanical stability of the connection.



Arcing plate of the moving contact is made as smooth curved surface that considerably facilitates arc pulling into the arc suppression chamber.



Arc suppression chamber made of 13 steel plates for efficient arc suppression.

Range

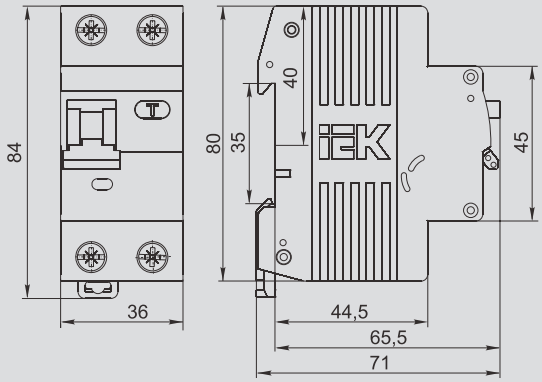
Name	Rated current I_n, A	Rated breaking residual current, mA	Package amount, pcs multiple	transport	Product ID
AVDT34 C6 10 mA	6	10	3	30	MAD22-6-006-C-10
AVDT34 C10 10 mA	10		3	30	MAD22-6-010-C-10
AVDT34 C16 10 mA	16		3	30	MAD22-6-016-C-10
AVDT34 C10 30 mA	10	30	3	30	MAD22-6-010-C-30
AVDT34 C16 30 mA	16		3	30	MAD22-6-016-C-30
AVDT34 C25 30 mA	25		3	30	MAD22-6-025-C-30
AVDT34 C32 30 mA	32		3	30	MAD22-6-032-C-30
AVDT34 C16 100 mA	16	100	3	30	MAD22-6-016-C-100
AVDT34 C25 100 mA	25		3	30	MAD22-6-025-C-100
AVDT34 C32 100 mA	32		3	30	MAD22-6-032-C-100
AVDT34 C16 300 mA	16	300	3	30	MAD22-6-016-C-300
AVDT34 C25 300 mA	25		3	30	MAD22-6-025-C-300
AVDT34 C40 30 mA	40	30	3	30	MAD22-6-040-C-30
AVDT34 C50 30 mA	50		3	30	MAD22-6-050-C-30
AVDT34 C63 30 mA	63		3	30	MAD22-6-063-C-30
AVDT34 C40 100 mA	40	100	3	30	MAD22-6-040-C-100
AVDT34 C50 100 mA	50		3	30	MAD22-6-050-C-100
AVDT34 C63 100 mA	63		3	30	MAD22-6-063-C-100
AVDT34 C40 300 mA	40	300	3	30	MAD22-6-040-C-300
AVDT34 C50 300 mA	50		3	30	MAD22-6-050-C-300
AVDT34 C63 300 mA	63		3	30	MAD22-6-063-C-300

Technical Features

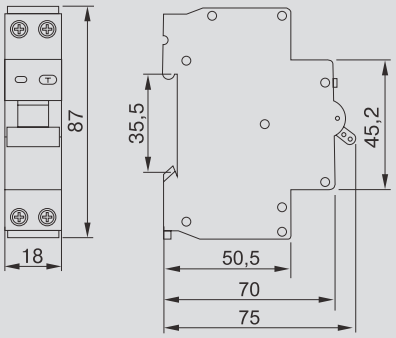
Feature	AVDT32	AVDT34	AVDT32M
NP / No. of poles	1P+N	3P+N	1P+N
Overcurrent protection	In phase pole	In each phase pole	In phase pole
Rated operating voltage U_e, V	230	400	230
Operating voltage range U, V	50÷265	50÷460	–
Rated frequency, Hz	50	50	50
Rated current I_n, A	6; 10; 16; 20; 25; 32; 40; 50; 63	6; 10; 16; 20; 25; 32; 40; 50; 63	6; 10; 16; 20; 25; 32
Rated breaking residual current $I_{\Delta n}$ (setting value), mA	10; 30; 100	10; 30; 100, 300	0,01; 0,03; 0,1
Rated non-breaking residual current $I_{\Delta n0}$, A	0,5 $I_{\Delta n}$	0,5 $I_{\Delta n}$	0,5 $I_{\Delta n}$
Rated max. short-circuit switching capacity I_{cn}, A	6000	6000	4500
Performance value in case of residual current with DC component, type	A	A	AC
Overcurrent cutoff characteristics, type	B, C	C	B, C
Mechanical durability, not less than, ops.	10 000	10 000	15000
Electrical durability, not less than, ops.	6000	6000	6000
Cables max. size, mm^2	25	25	no more 6
Silver content, (Ag), g/pole	0,8	0,8	–
Weight, kg	0,25	0,4	no more 0,19
Protection degree	IP20	IP20	IP20

Overall Dimensions

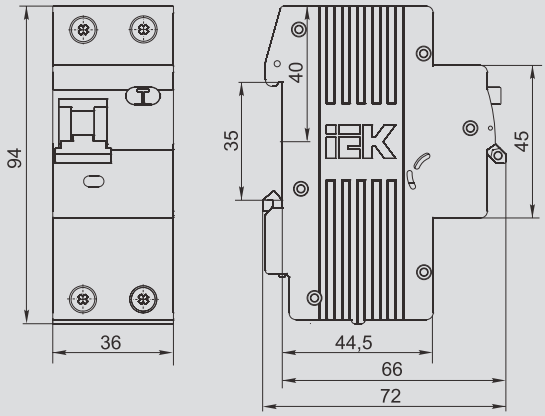
AVDT32



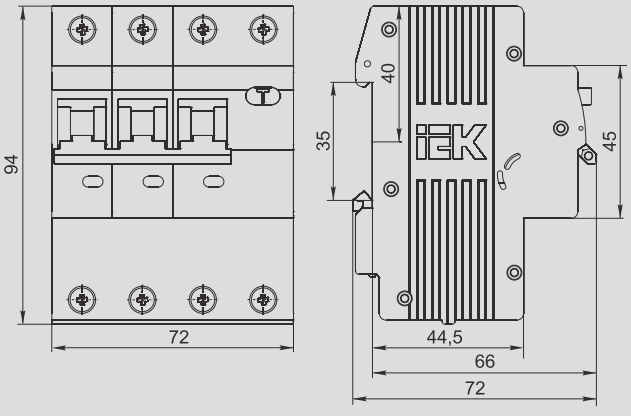
AVDT32M



AVDT32 I_n=50, 63 A



AVDT34



Additional modular devices

PR fuses/disconnectors with indicators and PVTs cylindrical melt inserts

PR fuses/disconnectors and PVTs cylindrical melt inserts made by IEK® are designed for protection of cable lines, household and industrial equipment against overload and short-circuit.

Advantages

- Economy (price of a melt insert is much lower than price of a circuit breaker).
- Improved reliability of tripping due to simple design.

Design features

Ensures the visible interruption disconnection to make works on a line possible.

Indicator of melted insert in the holder enables quick response in case of emergency.

Protection of electric installations for operating voltages up to 690 VAC with high rated breaking capacity equal to 100 kA.

Melt inserts are available for full protection against short-circuit currents and overload currents.

Range

	Description	Number of DIN modules	Rated breaking residual current, mA	Package amount, pcs multiple	transport	Product ID
	Fuse/disconnector with indicator PR32 1P 10*38 32A	1	32	12	216	CFH01-32S
	Fuse/disconnector with indicator PR32 2P 10*38 32A	2	32	6	108	CFH02-32S
	Fuse/disconnector with indicator PR32 3P 10*38 32A	3	32	4	72	CFH03-32S
	Cylindrical melt insert PVTs 10*38 0,5A		0,5	20	1000	CFL10-0005
	Cylindrical melt insert PVTs 10*38 1A		1	20	1000	CFL10-001
	Cylindrical melt insert PVTs 10*38 2A		2	20	1000	CFL10-002
	Cylindrical melt insert PVTs 10*38 4A		4	20	1000	CFL10-004
	Cylindrical melt insert PVTs 10*38 6A		6	20	1000	CFL10-006
	Cylindrical melt insert PVTs 10*38 8A		8	20	1000	CFL10-008
	Cylindrical melt insert PVTs 10*38 10A		10	20	1000	CFL10-010
	Cylindrical melt insert PVTs 10*38 12A		12	20	1000	CFL10-012
	Cylindrical melt insert PVTs 10*38 16A		16	20	1000	CFL10-016
	Cylindrical melt insert PVTs 10*38 20A		20	20	1000	CFL10-020
	Cylindrical melt insert PVTs 10*38 25A		25	20	1000	CFL10-025
	Cylindrical melt insert PVTs 10*38 32A		32	20	1000	CFL10-032

Technical Features

PR

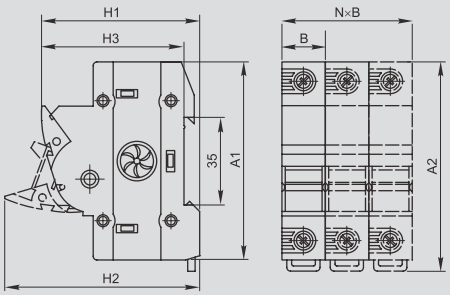
Device type	PR 10×38
Number of poles	1÷3
Rated voltage, V	230/400/500/660/690
Mains rated frequency, Hz	50
Rated current I_n, A*	32
Melt insert size	10×38
Rated insulation voltage Ui, V	690
Rated impulse withstand voltage U_{imp}, kV	6
Indicator	neon lamp
Maximum cross-section of connected wires, mm^2	35
Usage category	AC 22B

PVTs

Device type	PVTs 10×38
PVTs type	gG
Kind of current	direct / alternating
Mains rated frequency, Hz	50
Rated voltage, V	230/400/500/660/690
Rated current I_n, A	0.5, 1, 2, 4, 6, 8, 10, 16, 20, 25, 32
Rated breaking capacity, kA	100
Maximum power dissipation, W	3
Weight, g, at least	7,7
Degree of protection according to GOST 14254 (IEC 529)	IP20
Storage time	5 years

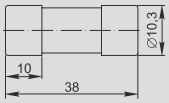
Overall Dimensions

PR



Model	External dimensions (mm)					
	A1	A2	B	H1	H2	H3
PR 1P 10×38	81	86	17,5	64,5	80	58
PR 2P 10×38	81	86	35	64,5	80	58
PR 3P 10×38	81	86	52,5	64,5	80	58

PVTs



Supplementary modular devices
Switch-disconnectors VN-32

VN-32 load-break switches are switching apparatuses without protection functions. From functional point of view, the VN-32 are knife switches with double break of contacts that prevents occurrence of leakage even under environmental conditions of elevated humidity.
Switch versions for 100 A have two contact bridges working in parallel in order to improve reliability of contacts and limit heat loss at contact junctions.
The switches do not have arc suppression elements and cannot be used for switching on/off of capacitance and inductance loads.

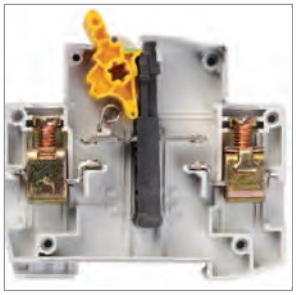
Advantages

- Improved wider engagement lever with enlarged contact surface.
- Notched terminal clamps reduce the heat loss and increase mechanical stability of the connection.
- Wide operating temperature range from –40 to +50 °C.
- Quick installation using the latch with double locking.

Design Features

Increased robustness of the casing in conductor connection area due to two additional rivets and solid faceplate.

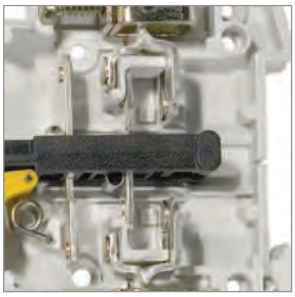
Soldered-on composite material with silver improves wear resistance of the contact assembly and decreases the transient resistance.



No power consumption, manually controlled device.

Notched terminal clamps reduce the heat loss and increase mechanical stability of the connection.

Quick installation and additional reliability of snapping on to the DIN-rail due to the latch with double locking.



The design (double break of a circuit) allows virtually excluding breakdown and insulation flashover even after prolonged operation and in heavy pollution conditions.

Full compliance to the standard: ON/OFF lever position corresponds to the contact status.

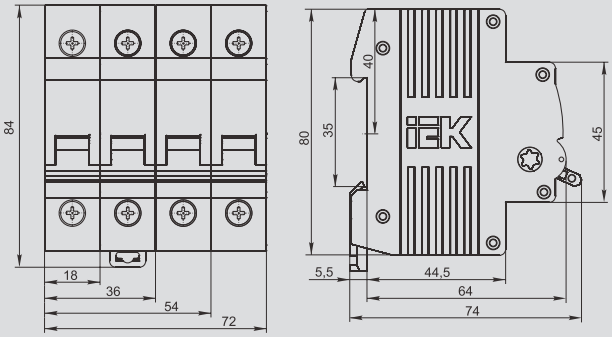
Range

	Name	Rated current I_n, A	Bridge contacts Nr.	Wear resistance, ops.	Package amount, pcs multiple	transport	Product ID
	VN-32 1P 20 A	20	1	30 000	12	240	MNV10-1-020
	VN-32 1P 25 A	25	1	30 000	12	240	MNV10-1-025
	VN-32 1P 32 A	32	1	30 000	12	240	MNV10-1-032
	VN-32 1P 40 A	40	1	20 000	12	240	MNV10-1-040
	VN-32 1P 63 A	63	2	20 000	12	240	MNV10-1-063
	VN-32 1P 100 A	100	2	10 000	12	240	MNV10-1-100
	VN-32 2P 20 A	20	1	30 000	6	120	MNV10-2-020
	VN-32 2P 25 A	25	1	30 000	6	120	MNV10-2-025
	VN-32 2P 32 A	32	1	30 000	6	120	MNV10-2-032
	VN-32 2P 40 A	40	1	20 000	6	120	MNV10-2-040
	VN-32 2P 63 A	63	2	20 000	6	120	MNV10-2-063
	VN-32 2P 100 A	100	2	10 000	6	120	MNV10-2-100
	VN-32 3P 20 A	20	1	30 000	4	80	MNV10-3-020
	VN-32 3P 25 A	25	1	30 000	4	80	MNV10-3-025
	VN-32 3P 32 A	32	1	30 000	4	80	MNV10-3-032
	VN-32 3P 40 A	40	1	20 000	4	80	MNV10-3-040
	VN-32 3P 63 A	63	2	20 000	4	80	MNV10-3-063
	VN-32 3P 100 A	100	2	10 000	4	80	MNV10-3-100
	VN-32 4P 20 A	20	1	30 000	3	60	MNV10-4-020
	VN-32 4P 25 A	25	1	30 000	3	60	MNV10-4-025
	VN-32 4P 32 A	32	1	30 000	3	60	MNV10-4-032
	VN-32 4P 40 A	40	1	20 000	3	60	MNV10-4-040
	VN-32 4P 63 A	63	2	20 000	3	60	MNV10-4-063
	VN-32 4P 100 A	100	2	10 000	3	60	MNV10-4-100

Technical Features

Standards	IEC 60947-3
Rated voltage of 50 Hz (frequency), V	230/400
Rated operation current I_e, A	20; 25; 32; 40; 63; 100
Rated short-time current (t = 1 sec.)	15 I_e
Primary application category	AC 22 V
NP / No. of poles	1; 2; 3; 4
Protection degree	IP20
Electrical durability, not less than, ops.	10 000
Mechanical durability, not less than, ops.	20 000
Cables max. size, mm^2	35
Silver content, (Ag), g/pole	1,2
Pole weight, not less than, kg	0,13
Operating temperature range, °C	–40÷+50

Overall Dimensions



Module contactors KM

KM type module contactors are intended for use in AC networks of 400 V (50 Hz) and serve for commutating low inductance loads with rated currents up to 63 V.
They are applied for automation and control of various technological processes including that of lighting, ventilation and conditioning systems.

Advantages

- Wide range of contactors with 2 or 4 normally open contacts.
- Size compatibility with modular series devices .
- Independent control coil supply – AC or DC (excluding KM20).
- Visual main contacts state indication.
- Lowered electromagnetic hum due to using a DC magnetic system.
- High mechanical and electrical wear resistance.
- Energy saving, holding current is 5 times less than operating current.
- Fast response (turning on – 20 ms, shutdown – 30 ms).
- Bridge contacts provide double break at main contacts trip.
- Low noise level.
- Correspondence to EN 61095
- Warranty period – 5 years.

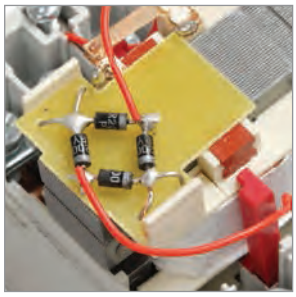
Design Features

Visual main contacts state indication.

Connection terminals provide for connecting wires from 1 to 25 mm² in cross-section.

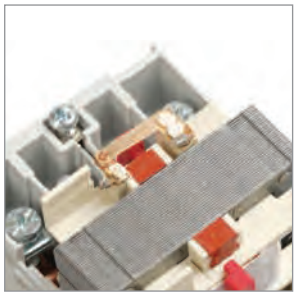
Size compatibility allows installing the contactor into a conventional board with any modular series devices.

Bridge contact ensures high electric insulation characteristics.

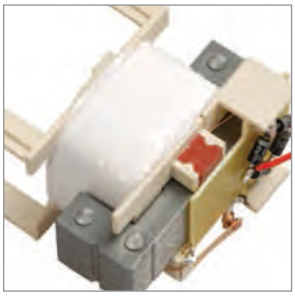


Rectifier bridge in the control coil circuit provides for controlling the contactor from 220 V AC networks.

Contacts made of silver-containing composite allow boosting their wear-resistance, service life and lowering losses and transient resistance.



Additional normally closed contact installed in the control coil circuit of KM25-40, KM40-40 and KM63-40 permits 5 times lowering of the holding current as compared to the operating one.



Increased reliability due to use of the polyconductor for the coil block connection.

Range

	Name	Rated operating current, V	Cables max. size, mm^2	Package amount, pcs multiple	transport	Product ID
	KM20-11	230	10	8	120	MKK10-20-11
	KM20-20	230	10	8	120	MKK10-20-20
	KM40-11	230	25	4	60	MKK10-40-11
	KM40-20	230	25	4	60	MKK10-40-20
	KM63-11	230	25	4	60	MKK10-63-11
	KM63-20	230	25	4	60	MKK10-63-20
	KM20-22	400	10	4	60	MKK20-20-22
	KM20-40	400	10	4	60	MKK20-20-40
	KM25-22	400	10	4	60	MKK20-25-22
	KM25-40	400	25	4	60	MKK20-25-40
	KM40-40	400	25	4	60	MKK20-40-40
	KM63-40	400	25	4	60	MKK20-63-40

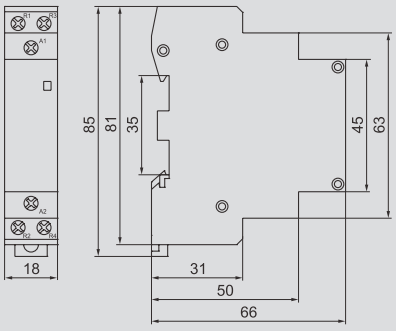
Technical Features

Parameter		KM20-20	KM20-11	KM40-11	KM40-20	KM63-11	KM63-20	KM20-22	KM20-40	KM25-22	KM25-40	KM40-40	KM63-40
Usage category		AC-1, AC-7a, AC -7b	AC-1, AC-7a, AC -7b	AC-1, AC-7a									
Number of poles		2						4					
Rated operating voltage U_e, V		230						400					
Rated frequency, Hz		50											
Rated insulation voltage U_i, V		500											
Rated operating current I_e, A	AC-1	20		40		63		20		25		40	63
	AC-7a	20		40		63		20		25		40	63
	AC-7b	9		–		–		–		–		–	
Rated thermal current I_{th}, A		20		40		63		20		25		40	63
Power dissipation, W/pole		1		3		6		1		1,2		3	6
Rated control coil voltage U_c, V~		230											
Power consumption of control coil in pull-in mode, not more		14		37						37	88	88	
Power consumption of control coil in hold mode, not more		4,5		5						5	3,5	3,5	
Control voltage ranges	closure	195…253											
	opening	46…172											
Rated conditional short-circuit current, A		3000											
Maximum cross-section of connected single-core wires, mm^2		10		25				10		10	25	25	
Mechanical endurance, switching cycles		10^6											
Electrical endurance, switching cycles		$0{,}15 \cdot 10^6$											
Degree of protection		IP20											
Installation type		35 mm wide DIN-rail											

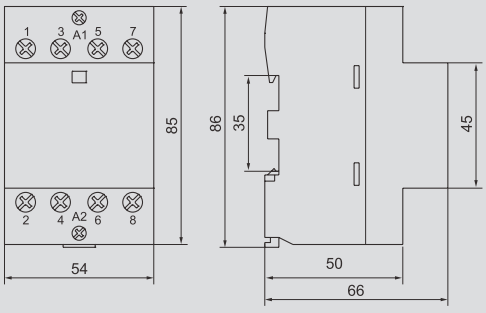
(1) – A rectifying bridge is installed in the control coil that enables use of the contactors in 220 VDC circuits.

Overall Dimensions

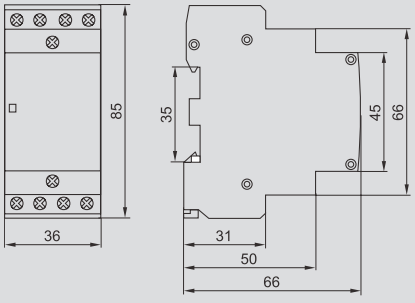
KM20-11, KM20-20



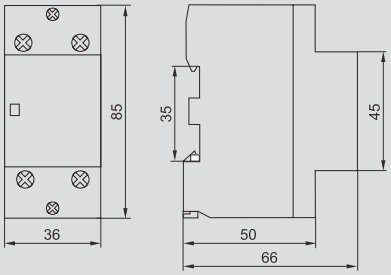
KM25-40, KM40-40, KM63-40



KM20-22, KM25-22, KM20-40



KM63-20, KM63-11, KM40-20, KM40-11



Surge protective devices OPS1

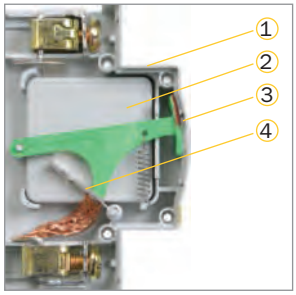
Surge protective devices OPS1 are intended for protection of internal distribution networks of residential and public building from lightning and surge overvoltages.
Correspond to the requirements EN 61643-11.

OPS1 surge protective devices were awarded gold medal of the 21st International Exhibition “Electro-2012” in nomination “Best electrical equipment of 2012” for their high quality characteristics.

Advantages

- Improved reliability of suppressor by reducing power dissipation.
- Improved rating of residual voltage arising at surge overvoltage.
- High level of fire protection is provided by reliable thermal protection.

Design Features



1 – casing;
2 – protective element (varistor module);
3 - operation indicator;
4 - fuse element (thermal protection).

High level of fire protection is provided by reliable thermal protection.

Improved reliability of suppressor by reducing power dissipation (per 15–20%) at the expense of excluding transient resistance in the separable termination of interchangeable module and the device's casing.

Notches on contact terminals prevent overheating and wires melting through denser and larger contact area. It also helps to lower transient resistance and, therefore, losses. Improved mechanical wear resistance of connection.

Rotating mechanism of operation indicator allows to avoid indication faults.

Possibility of double simultaneous connection with bar (pin or fork) and with flexible conductor; flexible conductor section is up to 25 mm^2.

Latch for DIN-rail with double fixed position for easy installation.

Range

	Name*	No. of poles	Rated discharge current 8/20 Mx, kA	Rated operating voltage, V	Max. discharge current 8/20 Mx, kA	Package amount, pcs		Product ID
						multiple	transport	
	OPS1-B 1P	1	30	400	60	1	120	MOP20-1-B
	OPS1-B 2P	2	30	400	60	1	60	MOP20-2-B
	OPS1-B 3P	3	30	400	60	1	40	MOP20-3-B
	OPS1-B 4P	4	30	400	60	1	30	MOP20-4-B
	OPS1-C 1P	1	20	400	40	1	120	MOP20-1-C
	OPS1-C 2P	2	20	400	40	1	60	MOP20-2-C
	OPS1-C 3P	3	20	400	40	1	40	MOP20-3-C
	OPS1-C 4P	4	20	400	40	1	30	MOP20-4-C
	OPS1-D 1P	1	5	230	10	1	120	MOP20-1-D
	OPS1-D 2P	2	5	230	10	1	60	MOP20-2-D
	OPS1-D 3P	4	5	230	10	1	30	MOP20-4-D

* **Class I (B):**
Protection from direct lightning strikes into the building's or electricity transmission line's lightning protection system. OPS1 are installed at the entrance into electrical distribution panels or main distribution boards.

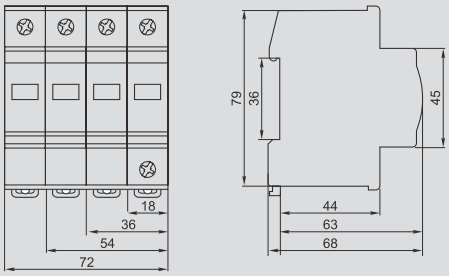
Class II (C):
Protection of power distribution networks from switching disturbances or installation as a second protection stage in case of lightning strikes. OPS1 is installed into electrical distribution panels.

Class III (D):
Consumer protection from residual voltage surges, residual (irregular) overvoltages as well as high frequency interference filtering. OPS1 is installed directly near the consumer.

Technical Features

Feature	OPS1 B (I)	OPS1 C (II)	OPS1 D (III)
Rated operating voltage, V	400	400	230
Max. operating voltage, V	440	440	250
Rated discharge current 8/20 Mx, kA	30	20	5
Max. discharge current 8/20 Mx, kA	60	40	10
Voltage protection level, max., kV	2,0	1,8	1,0
Classified voltage, V	700 ± 5%	650 ± 5%	530 ± 5%
Tripping time, max., ms	25	25	25
NP / No. of poles	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4
Cross-section of connected wires, mm^2	4...25	4...25	4...25

Overall Dimensions



Supplementary Modular Series Devices

KS47 status contact
KSV47 status contact (alarm)

The KS47 and KSV47 serve for obtaining information on status of VA47-29 and VA47-100 circuit breakers in process automation systems or protection of individual facilities.
KS47 has function of auxiliary contact of the circuit breaker or RCCB. The KS47 contacts are switched over even when breaker control lever is held in ON position.
KSV47 has function of auxiliary contact and position indication for the circuit breaker or RCCB re-setting mechanism. When KSV47 module is engaged with the mechanism of the circuit breaker (VA) or RCCB (AD), at first switching ON the contacts are switched over. KSV47 contacts remain in closed (open) state also when VA or AD devices are switched OFF manually. The contacts will be switched over only when the breaker trips because of overcurrent (caused by overload or short-circuit).
A pad is provided in the module upper part, pushing on which causes forced mechanism resetting and contacts switchover.
The devices are attached without screws to VA47-29, VA47-100 circuit breakers and devices of AD series of any version.

Range

	Name	Module width, mm	Rated operating voltage, V	Cables max. size, mm^2	Package amount, pcs multiple	transport	Product ID
	KS47	9	230	2,5	14	280	MVA01D-KS-1
	KSV47	9	230	2,5	14	280	MVA01D-AK-1

AE1031 to VA47-29 adapter

Serves for mounting modular circuit breakers into the distribution boards of old design.

Range

Name	Width, mm	Package amount, pcs multiple/transport	Product ID
AE1031 to VA47-29 adapter	18	10/3600	MVA10D-AE1

Over and undervoltage release RMM47 low-voltage release RN47

RMM47 over- and undervoltage release is designed for tripping function of VA47 series circuit breaker when mains voltage becomes inadmissibly low or high.
The RN47 shunt release is designed for remote tripping function of VA47 series circuit breaker. The devices are attached without screws to VA47-29 and VA47-100 circuit breakers of any version.

Range

	Name	Rated operating voltage, V	Cables max. size, mm^2	Package amount, pcs multiple	transport	Product ID
	RMM47	230	25	10	100	MVA01D-RMM
	RN47	230	25	10	100	MVA01D-RN

Auxiliary universal contact KDU60
RN60 low-voltage release

The KDU60 serves for obtaining information on status of VA47-60 circuit breakers in process automation systems or protection of individual facilities. The KDU60 has functions of auxiliary contact and position indication for the circuit breaker or RCCB resetting mechanism.
The device comprise two switchover contacts: status contact (SC) and status | alarm contact (SC | AC). The contact SC | AC works depending on position of function selector: either as status contact or as alarm contact.

The RN60 shunt release is designed for remote tripping function of VA47-60 series 1-, 2-, 3- and 4-pole circuit breakers.
If KDU60 and RN60 shall be used simultaneously, the devices are attached to left-hand side.

Range

	Name	Module width, mm	Rated operating voltage, V		Cables max. size, mm^2	Package amount, pcs		Product ID
			DC	AC		multiple	transport	
	KDU60	9	110	250	2,5	11	165	MVA30D-AKS
	RN60	18	110…220	110…415	25	7	105	MVA30D-RN

Leads lockout device

The BVM leads mechanical lockout device is designed to avoid not authorized connection or disconnection of modular devices to/from electric circuits and also to protect personnel against contact with live parts.
The device is used for sealing of VA47-29 circuit breakers having up to 3 poles inclusive and VA47-100 circuit breakers having 2 poles.

Products' range

	Description	Package qty., pcs		Item No.
		multiple	transport	
	BVM leads mechanical lockout device	36	180	MVA20D-BVM

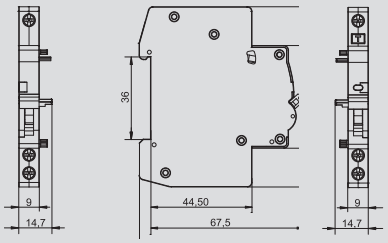
Technical Features

Feature		KS47	KSV47	RMM47	RN47
Meet standards		EN 60898-1, EN 60947-5-1	EN 60898-1, EN 60947-5-1	IEC 60898-1	IEC 60898-1
Rated voltage, V≈		230	230	230	230
Tripping voltage	min	–	–	165±10	–
	max	–	–	265±10	–
Rated current, A		4	4	–	–
Rated operating current depending on the application category, A	AC-13	3	3	–	–
	DC-12	1	1	–	–
Max. power consumption, VA		–	–	3	3
Status indicator, on/off		n/a	white/red	–	–
Wear resistance, min. power cycles		10 000	10 000	10 000	10 000
Cables size, mm^2		0,5÷2,5	0,5÷2,5	1÷25	1÷25
Compatible MCBs		VA47-29, VA47-100	VA47-29, VA47-100	VA47-29, VA47-100	VA47-29, VA47-100
Connection to MCB		left	left	right	right
Module width, mm		9	9	18	18

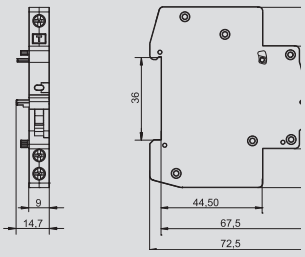
Feature		KDU60	RN60
Rated operating voltage, V	AC	250	110…415
	DC	110	110…220
AC frequency, Hz		50	50
Rated insulation voltage U_i, min. V		415	415
Pulse power consumption, max. W		–	3
Rated thermal current I_{th}, A		4	–
Rated operating current depending on the application category, A	AC-13	3	–
	AC-15	2	–
	DC-12	0,5	–
Electrical wear resistance, min. power cycles		6000	6000
Cables size, mm^2		from 0,5 to 2,5	from 1 to 25
Operating temperature range, °C		-40 ÷+45	-40 ÷+50
Protection degree		IP20	IP20
Weight, max. kg		0,04	0,1
Connection to MCB		left	left

Overall Dimensions

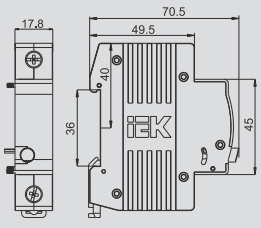
KS47



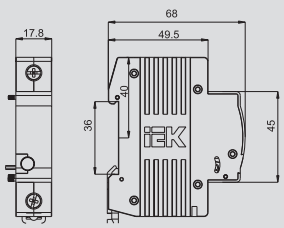
KSV47



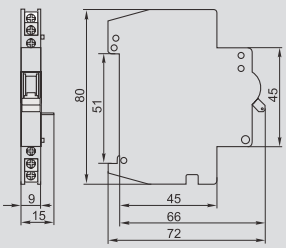
RMM47



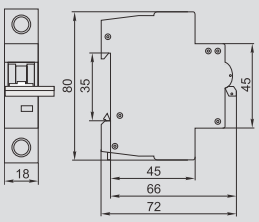
RN47



KDU60



RN60



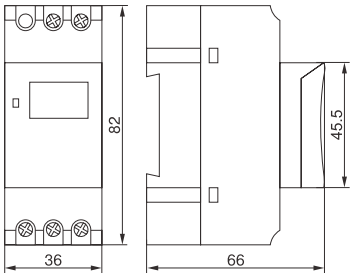
TE15 digital timer switch

These devices are intended for counting time intervals, automated shutting down/switching on the electrical equipment at pre-defined time periods during a week and managing different processes. The timer switch can be used in industrial and domestic electric installations. It is installed into electric distribution panels.

Preset control programs are designed for a weekly cycle.
TE15 maintains for operation modes:
– all business days (mon-fri);
– weekend days (sat-sun);
– whole week (mon-sun);
– any one day.

It can be manually switched on/off any time.

Range

	Overall dimensions	Name	Rated operating current, V	Package amount, pcs multiple	transport	Product ID
		TE15	230	1	100	MTA10-16

Technical Features

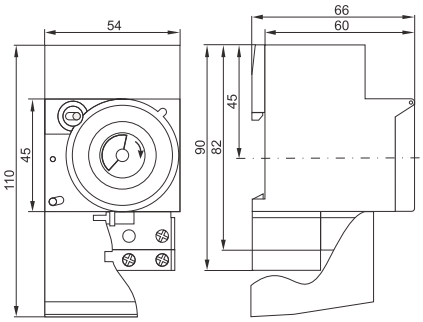
Meet standards		IEC 60730-1, IEC 60730-2-7
Rated voltage, V		230
Rated frequency, Hz		50
Number of control programs, on/off		8
Min. operation time setting interval, min		1
Time interval reading error, max. s/day		2
Max. load current, A	at cos φ = 1 at cos φ = 0,5	16 8
Power consumption, max. W		5
Preset program saving at supply voltage off, min. h		150
Operating temperature range, °C		–10÷+40
Mechanical wear resistance, min. power cycles		10 000 000
Electrical wear resistance, min. power cycles		100 000
Protection degree		IP20
Weight, max. kg		0,15

TEM181 analog timer switch

These devices are intended for counting time intervals, automated shutting down/switching on the electrical equipment at pre-defined time periods during a day and managing different processes.
The time switch can be used in industrial and domestic electric installations. It is installed into electric distribution panels.

Preset control programs are designed for a 24-hour cycle.
It can be manually switched on/off any time.

Range

	Overall dimensions	Name	Rated operating current, V	Package amount, pcs multiple	transport	Product ID
		TEM181	230	1	100	MTA20-16

Technical Features

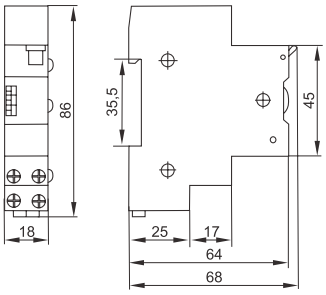
Meet standards	IEC 60730-1, IEC 60730-2-7
Rated voltage, V	230
Operating voltage range	180÷264
Rated frequency, Hz	50
Number of control programs, on/off	24
Min. operation time setting interval, min	30
Time interval reading error, max. s/day	5
Rated max. load current of switching contacts (at AC voltage of 230 V), A	16
Power consumption, max. W	1
Preset program saving at supply voltage off, min. h	72
Operating temperature range, °C	–10÷+40
Mechanical wear resistance, min. power cycles	10 000 000
Electrical wear resistance, min. power cycles	100 000
Protection degree	IP20
Weight, max. kg	0,15

TO-47 lighting time-delay switch

These devices are intended for automated shutting down/switching on the lighting of staircase landings, corridors or other objects within a pre-defined time period (from 1 to 7 min).

TO-47 is applied in lighting circuits up to 3,5 kW and is intended for using with incandescent and halogen lamps.

Range

	Overall dimensions	Name	Rated operating current, V	Package amount, pcs multiple	Package amount, pcs transport	Product ID
		TO47	230	1	200	MTA30-16

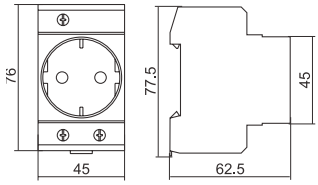
Technical Features

Meet standards	IEC 60669-1, IEC 60669-2-3
Rated load circuit voltage, V	230
Rated control circuit voltage, V	230
Control button output current, max. mA	50
Time delay adjustment range, min	1÷7
Time delay setting interval, min	0,5
On delay, max. s	1
Operating temperature range, °C	–25÷+50
Mechanical wear resistance, min. power cycles	10 000 000
Electrical wear resistance, min. power cycles	100 000
Protection degree	IP20
Cables size, mm^2	4,0

PAp10-3-OP modular socket

This socket is intended for installing into the distribution board and serves for connecting a portable light or low-power electric tool when performing maintenance and service works on the electric unit in situ.

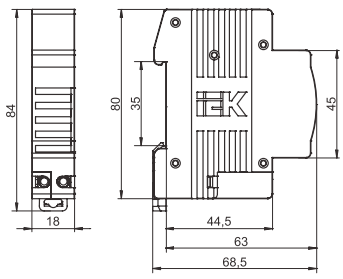
Range

	Overall dimensions	Name	Rated operating current, V	Rated current I_n, A	Module width, mm	Package amount, pcs multiple/transport.	Product ID
		PAp10-3-OP	250	16	45	5/100	MRD10-16

ZD-47 emergency bell

ZD-47 serves for giving out signals of an emergency in the operated electric circuit.

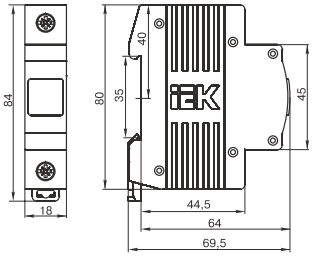
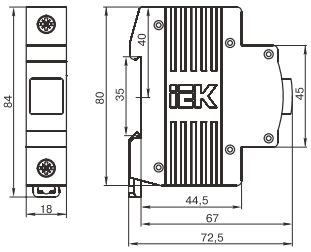
Range

	Overall dimensions	Name	Rated operating current, V	Rated current, mA	Sound intensity, dB	Rated power, W	Package amount, pcs multiple/ transport.	Product ID
		ZD-47	230	60	60	1	12/120	MZD10-230

Modular neon indicator pilot lamp LS-47
Modular LED indicator pilot lamp LS-47M

They serve for visual indication of the involved electrical circuit's state.

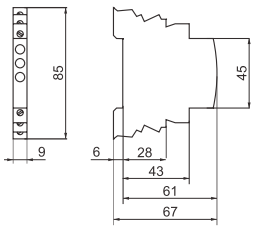
Range

	Overall dimensions	Name	Rated operating voltage, V	Rated power, W	Package amount, pcs multiple/transport	Product ID
		LS-47 (red)	230	0,5	12/240	MLS10-230-K04
		LS-47 (yellow)	230	0,5	12/240	MLS10-230-K05
		LS-47 (green)	230	0,5	12/240	MLS10-230-K06
		LS-47 (blue)	230	0,5	12/240	MLS10-230-K07
		LS-47M (red)	230		12/120	MLS20-230-K04
		LS-47M (yellow)	230		12/120	MLS20-230-K05
		LS-47M (green)	230		12/120	MLS20-230-K06
		LS-47M (blue)	230		12/120	MLS20-230-K07

LED phase indicator light

It is intended for indicating voltage presence in each phase.

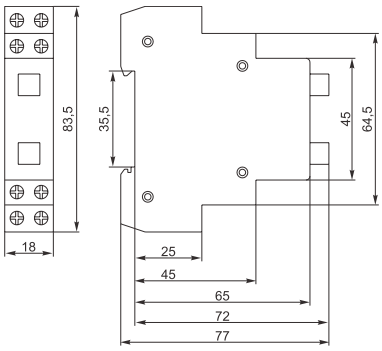
Range

	Overall dimensions	Name	Rated operating voltage, V	Module width, mm	Package amount, pcs multiple/transport	Product ID
		LED phase monitor	400	9	24/480	MIF10-400

Modular control button KMU11

KMU-11 modular control buttons are designed to operate solenoid starters (contactors), automatics relays and other process equipment installed in AC electrical circuits of voltages up to 230 V.

Range

	Overall dimensions	Name	Rated operating voltage, V	Cables max. size, m^2	Package amount, pcs multiple/transport		Product ID
		KMU11	100≈, 230=	6	12	144	MBD10-11-K51

Technical Features

Feature			Value	
Conventional free air thermal current I_{th}, A			20	
Rated operating voltage, V	AC		230	
	DC		110	
Rated operational contact current, A	Primary application category		AC-12	AC-13
	AC, V	230	10	7,5
		120	12,5	10
		48	12,5	10
	Primary application category		DC-12	DC-13
	DC, V	110	2,5	0,6
		48	5	1,3
		24	10	2,5
Rated insulation voltage U_i, V			400	
No. of contacts, pcs.	NC contact		1	
	NO contact		1	
Neon lamp rated voltage, V			230	
Neon lamp current consumption, mA			0,6	
Overcurrent protection, fuse gG, A			25	
Conditional short-circuit current, A			1000	
Mechanical durability, ops. $*\cdot 10^6$			0,6	
Electrical durability, ops. $* 10^6$			0,3	
Cables max. size, mm			6	
Tightening torque, Nm			0,4	
Protection degree			IP20	
Mounting type			35 mm wide DIN-rail	