

1 Modular Equipment

Modular Circuit Breakers	12
Modular circuit breakers VA47-29	12
Modular circuit breakers VA47-29M	19
Modular circuit breakers VA47-60	23
Modular circuit breakers VA47-100	28
Residual current devices	33
Residual current circuit breakers VD1-63 (UZO)	33
Residual current circuit breakers VD1-63S (selective UZO)	37
Residual current circuit breakers with overcurrent protection AD12, AD14	41
Residual current circuit breakers with overcurrent protection AD12M	45
Residual current circuit breakers with overcurrent protection AVDT32	49
Auxiliary Modular Devices	52
Switch disconnecter VN-32	52
Modular contactors KM	56
Surge overvoltage protection devices OPS1	60
Auxiliary modular devices	63
Auxiliary contact KS47. Signal auxiliary contact (emergency) KSV47	63
AE1031 to VA47-29 adapter	63
Over- and undervoltage release RMM47. Shunt trip RN47	64
Auxiliary universal contacts KDU60 (for VA47-60 IEK modular circuit breaker)	64
Digital timer switch TE15	66
Analog timer switch TEM181	67
Lighting time-delay switches TO-47	68
Schuko socket RAP10-3-OP	69
Bell alarm ZD-47	69
Indicator lamp LS-47 with a neon light	70
Indicator lamp LS-47M with a LED matrix	70
Phase Indicator	70
Module control button KMU11	71

Modular Circuit Breakers

Modular Circuit Breakers VA47-29

Modular Circuit Breakers VA47-29 are designed for protection of distribution & branch circuits under the different load:

- electric devices, lighting – circuit breakers with B characteristics;
- engines with low starting currents (compressor, fan) – circuit breakers with C characteristics;
- engines with low starting currents (vertical transport, pumps) – circuit breakers with D characteristics.

Modular Circuit Breakers VA47-29 are recommended for usage in the lead-in distributors used for residential and public buildings.

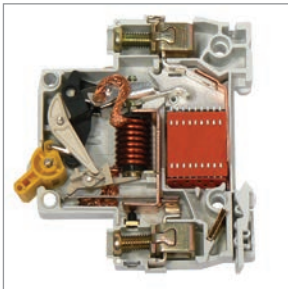
200 items per 18 rated currents (0,5 to 63 A).



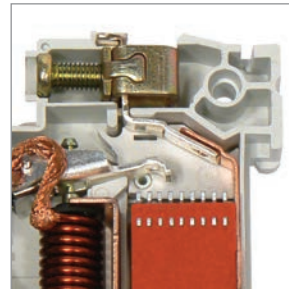
Advantages

- Two types of protection against overload and short circuit.
- Full set of auxiliary devices that can be installed independently:
 - auxiliary contact KS47;
 - signal Auxiliary contact KSV47;
 - undervoltage release RMM47;
 - shunt trip RN47.
- Wide range of ambient temperature (–40 to +50°C).
- Improved wider control lever with an increased contact area.
- Notches on the terminal clamps to reduce the heat loss and improve mechanical stability of connection.

Design Features



Design of this circuit breaker provides two types of overload and short circuit protection. This significantly increases protection of distribution & branch circuit.



Welding deposition of the argentiferous increases the contact block's wear-resistance and reduces the transient resistance.



Universal casing with auxiliary elements connection ability does not require disassembling. It is possible to install the elements independently.



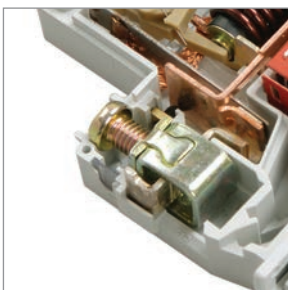
Improved wider control lever with an increased contact area facilitates the commutation process.



Increased screw head size with a universal crest (+, -) facilitates mounting and prevents the screws from falling out during the installation.



Notches on the terminal clamps reduce the heat loss and improve the mechanical stability of connection.



Plexiglass fitting-based protection of the thermal cut-off mechanism against changing the factory settings.

Ассортимент



Name	Rated current I _n , A	Tripping characteristic	Bridging bars type	PCS/ PACKAGE	PCS/CTN	Article
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	120	MVA20-1-001-D
VA47-29 1P 2 A type D	2	D	1P PIN 63 A	12	120	MVA20-1-002-D
VA47-29 1P 3 A type D	3	D	1P PIN 63 A	12	120	MVA20-1-003-D
VA47-29 1P 4 A type D	4	D	1P PIN 63 A	12	120	MVA20-1-004-D
VA47-29 1P 5 A type D	5	D	1P PIN 63 A	12	120	MVA20-1-005-D
VA47-29 1P 6 A type D	6	D	1P PIN 63 A	12	120	MVA20-1-006-D
VA47-29 1P 8 A type D	8	D	1P PIN 63 A	12	120	MVA20-1-008-D
VA47-29 1P 10 A type D	10	D	1P PIN 63 A	12	120	MVA20-1-010-D
VA47-29 1P 13 A type D	13	D	1P PIN 63 A	12	120	MVA20-1-013-D
VA47-29 1P 16 A type D	16	D	1P PIN 63 A	12	120	MVA20-1-016-D
VA47-29 1P 20 A type D	20	D	1P PIN 63 A	12	120	MVA20-1-020-D
VA47-29 1P 25 A type D	25	D	1P PIN 63 A	12	120	MVA20-1-025-D
VA47-29 1P 32 A type D	32	D	1P PIN 63 A	12	120	MVA20-1-032-D
VA47-29 1P 40 A type D	40	D	1P PIN 63 A	12	120	MVA20-1-040-D
VA47-29 1P 50 A type D	50	D	1P PIN 63 A	12	120	MVA20-1-050-D
VA47-29 1P 63 A type D	63	D	1P PIN 63 A	12	120	MVA20-1-063-D



Name	Rated current I _n , A	Tripping characteristic	Bridging bars type	PCS/ PACKAGE	PCS/CTN	Article
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	60	MVA20-2-001-C
VA47-29 2P 2 A type C	2	C	2P PIN 63 A	6	60	MVA20-2-002-C
VA47-29 2P 3 A type C	3	C	2P PIN 63 A	6	60	MVA20-2-003-C
VA47-29 2P 4 A type C	4	C	2P PIN 63 A	6	60	MVA20-2-004-C
VA47-29 2P 5 A type C	5	C	2P PIN 63 A	6	60	MVA20-2-005-C
VA47-29 2P 6 A type C	6	C	2P PIN 63 A	6	60	MVA20-2-006-C
VA47-29 2P 8 A type C	8	C	2P PIN 63 A	6	60	MVA20-2-008-C
VA47-29 2P 10 A type C	10	C	2P PIN 63 A	6	60	MVA20-2-010-C
VA47-29 2P 13 A type C	13	C	2P PIN 63 A	6	60	MVA20-2-013-C
VA47-29 2P 16 A type C	16	C	2P PIN 63 A	6	60	MVA20-2-016-C
VA47-29 2P 20 A type C	20	C	2P PIN 63 A	6	60	MVA20-2-020-C
VA47-29 2P 25 A type C	25	C	2P PIN 63 A	6	60	MVA20-2-025-C
VA47-29 2P 32 A type C	32	C	2P PIN 63 A	6	60	MVA20-2-032-C
VA47-29 2P 40 A type C	40	C	2P PIN 63 A	6	60	MVA20-2-040-C
VA47-29 2P 50 A type C	50	C	2P PIN 63 A	6	60	MVA20-2-050-C
VA47-29 2P 63 A type C	63	C	2P PIN 63 A	6	60	MVA20-2-063-C



VA47-29 2P 1 A type D	1	D	2P PIN 63 A	6	60	MVA20-2-001-D
VA47-29 2P 2 A type D	2	D	2P PIN 63 A	6	60	MVA20-2-002-D
VA47-29 2P 3 A type D	3	D	2P PIN 63 A	6	60	MVA20-2-003-D
VA47-29 2P 4 A type D	4	D	2P PIN 63 A	6	60	MVA20-2-004-D
VA47-29 2P 5 A type D	5	D	2P PIN 63 A	6	60	MVA20-2-005-D
VA47-29 2P 6 A type D	6	D	2P PIN 63 A	6	60	MVA20-2-006-D
VA47-29 2P 8 A type D	8	D	2P PIN 63 A	6	60	MVA20-2-008-D
VA47-29 2P 10 A type D	10	D	2P PIN 63 A	6	60	MVA20-2-010-D
VA47-29 2P 13 A type D	13	D	2P PIN 63 A	6	60	MVA20-2-013-D
VA47-29 2P 16 A type D	16	D	2P PIN 63 A	6	60	MVA20-2-016-D
VA47-29 2P 20 A type D	20	D	2P PIN 63 A	6	60	MVA20-2-020-D
VA47-29 2P 25 A type D	25	D	2P PIN 63 A	6	60	MVA20-2-025-D
VA47-29 2P 32 A type D	32	D	2P PIN 63 A	6	60	MVA20-2-032-D
VA47-29 2P 40 A type D	40	D	2P PIN 63 A	6	60	MVA20-2-040-D
VA47-29 2P 50 A type D	50	D	2P PIN 63 A	6	60	MVA20-2-050-D
VA47-29 2P 63 A type D	63	D	2P PIN 63 A	6	60	MVA20-2-063-D



	Name	Rated current I _n , A	Tripping characteristic	Bridging bars type	PCS/ PACKAGE	PCS/CTN	Article
	VA47-29 3P 1 A type B	1	B	3P PIN 63 A	4	40	MVA20-3-001-B
	VA47-29 3P 2 A type B	2	B	3P PIN 63 A	4	40	MVA20-3-002-B
	VA47-29 3P 3 A type B	3	B	3P PIN 63 A	4	40	MVA20-3-003-B
	VA47-29 3P 4 A type B	4	B	3P PIN 63 A	4	40	MVA20-3-004-B
	VA47-29 3P 5 A type B	5	B	3P PIN 63 A	4	40	MVA20-3-005-B
	VA47-29 3P 6 A type B	6	B	3P PIN 63 A	4	40	MVA20-3-006-B
	VA47-29 3P 8 A type B	8	B	3P PIN 63 A	4	40	MVA20-3-008-B
	VA47-29 3P 10 A type B	10	B	3P PIN 63 A	4	40	MVA20-3-010-B
	VA47-29 3P 13 A type B	13	B	3P PIN 63 A	4	40	MVA20-3-013-B
	VA47-29 3P 16 A type B	16	B	3P PIN 63 A	4	40	MVA20-3-016-B
	VA47-29 3P 20 A type B	20	B	3P PIN 63 A	4	40	MVA20-3-020-B
	VA47-29 3P 25 A type B	25	B	3P PIN 63 A	4	40	MVA20-3-025-B
	VA47-29 3P 32 A type B	32	B	3P PIN 63 A	4	40	MVA20-3-032-B
	VA47-29 3P 40 A type B	40	B	3P PIN 63 A	4	40	MVA20-3-040-B
	VA47-29 3P 50 A type B	50	B	3P PIN 63 A	4	40	MVA20-3-050-B
	VA47-29 3P 63 A type B	63	B	3P PIN 63 A	4	40	MVA20-3-063-B
	VA47-29 3P 1 A type C	1	C	3P PIN 63 A	4	40	MVA20-3-001-C
	VA47-29 3P 2 A type C	2	C	3P PIN 63 A	4	40	MVA20-3-002-C
	VA47-29 3P 3 A type C	3	C	3P PIN 63 A	4	40	MVA20-3-003-C
	VA47-29 3P 4 A type C	4	C	3P PIN 63 A	4	40	MVA20-3-004-C
	VA47-29 3P 5 A type C	5	C	3P PIN 63 A	4	40	MVA20-3-005-C
	VA47-29 3P 6 A type C	6	C	3P PIN 63 A	4	40	MVA20-3-006-C
	VA47-29 3P 8 A type C	8	C	3P PIN 63 A	4	40	MVA20-3-008-C
	VA47-29 3P 10 A type C	10	C	3P PIN 63 A	4	40	MVA20-3-010-C
	VA47-29 3P 13 A type C	13	C	3P PIN 63 A	4	40	MVA20-3-013-C
	VA47-29 3P 16 A type C	16	C	3P PIN 63 A	4	40	MVA20-3-016-C
	VA47-29 3P 20 A type C	20	C	3P PIN 63 A	4	40	MVA20-3-020-C
	VA47-29 3P 25 A type C	25	C	3P PIN 63 A	4	40	MVA20-3-025-C
	VA47-29 3P 32 A type C	32	C	3P PIN 63 A	4	40	MVA20-3-032-C
	VA47-29 3P 40 A type C	40	C	3P PIN 63 A	4	40	MVA20-3-040-C
	VA47-29 3P 50 A type C	50	C	3P PIN 63 A	4	40	MVA20-3-050-C
	VA47-29 3P 63 A type C	63	C	3P PIN 63 A	4	40	MVA20-3-063-C
	VA47-29 3P 1 A type D	1	D	3P PIN 63 A	4	40	MVA20-3-001-D
	VA47-29 3P 2 A type D	2	D	3P PIN 63 A	4	40	MVA20-3-002-D
	VA47-29 3P 3 A type D	3	D	3P PIN 63 A	4	40	MVA20-3-003-D
	VA47-29 3P 4 A type D	4	D	3P PIN 63 A	4	40	MVA20-3-004-D
	VA47-29 3P 5 A type D	5	D	3P PIN 63 A	4	40	MVA20-3-005-D
	VA47-29 3P 6 A type D	6	D	3P PIN 63 A	4	40	MVA20-3-006-D
	VA47-29 3P 8 A type D	8	D	3P PIN 63 A	4	40	MVA20-3-008-D
	VA47-29 3P 10 A type D	10	D	3P PIN 63 A	4	40	MVA20-3-010-D
	VA47-29 3P 13 A type D	13	D	3P PIN 63 A	4	40	MVA20-3-013-D
	VA47-29 3P 16 A type D	16	D	3P PIN 63 A	4	40	MVA20-3-016-D
	VA47-29 3P 20 A type D	20	D	3P PIN 63 A	4	40	MVA20-3-020-D
	VA47-29 3P 25 A type D	25	D	3P PIN 63 A	4	40	MVA20-3-025-D
	VA47-29 3P 32 A type D	32	D	3P PIN 63 A	4	40	MVA20-3-032-D
	VA47-29 3P 40 A type D	40	D	3P PIN 63 A	4	40	MVA20-3-040-D
	VA47-29 3P 50 A type D	50	D	3P PIN 63 A	4	40	MVA20-3-050-D
	VA47-29 3P 63 A type D	63	D	3P PIN 63 A	4	40	MVA20-3-063-D



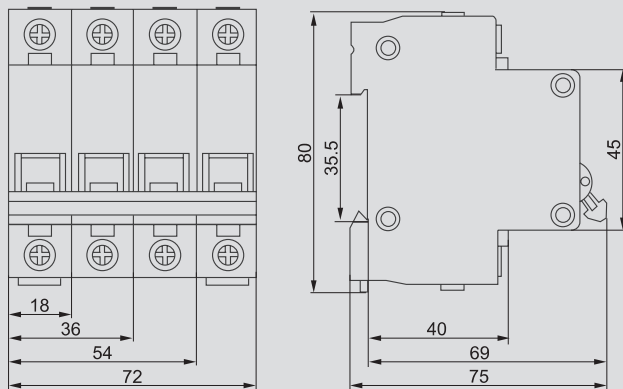
Name	Rated current I _n , A	Tripping characteristic	Bridging bars type	PCS/ PACKAGE	PCS/CTN	Article
VA47-29 4P 1 A type B	1	B	4P PIN 63 A	3	30	MVA20-4-001-B
VA47-29 4P 2 A type B	2	B	4P PIN 63 A	3	30	MVA20-4-002-B
VA47-29 4P 3 A type B	3	B	4P PIN 63 A	3	30	MVA20-4-003-B
VA47-29 4P 4 A type B	4	B	4P PIN 63 A	3	30	MVA20-4-004-B
VA47-29 4P 5 A type B	5	B	4P PIN 63 A	3	30	MVA20-4-005-B
VA47-29 4P 6 A type B	6	B	4P PIN 63 A	3	30	MVA20-4-006-B
VA47-29 4P 8 A type B	8	B	4P PIN 63 A	3	30	MVA20-4-008-B
VA47-29 4P 10 A type B	10	B	4P PIN 63 A	3	30	MVA20-4-010-B
VA47-29 4P 13 A type B	13	B	4P PIN 63 A	3	30	MVA20-4-013-B
VA47-29 4P 16 A type B	16	B	4P PIN 63 A	3	30	MVA20-4-016-B
VA47-29 4P 20 A type B	20	B	4P PIN 63 A	3	30	MVA20-4-020-B
VA47-29 4P 25 A type B	25	B	4P PIN 63 A	3	30	MVA20-4-025-B
VA47-29 4P 32 A type B	32	B	4P PIN 63 A	3	30	MVA20-4-032-B
VA47-29 4P 40 A type B	40	B	4P PIN 63 A	3	30	MVA20-4-040-B
VA47-29 4P 50 A type B	50	B	4P PIN 63 A	3	30	MVA20-4-050-B
VA47-29 4P 63 A type B	63	B	4P PIN 63 A	3	30	MVA20-4-063-B
VA47-29 4P 1 A type C	1	C	4P PIN 63 A	3	30	MVA20-4-001-C
VA47-29 4P 2 A type C	2	C	4P PIN 63 A	3	30	MVA20-4-002-C
VA47-29 4P 3 A type C	3	C	4P PIN 63 A	3	30	MVA20-4-003-C
VA47-29 4P 4 A type C	4	C	4P PIN 63 A	3	30	MVA20-4-004-C
VA47-29 4P 5 A type C	5	C	4P PIN 63 A	3	30	MVA20-4-005-C
VA47-29 4P 6 A type C	6	C	4P PIN 63 A	3	30	MVA20-4-006-C
VA47-29 4P 8 A type C	8	C	4P PIN 63 A	3	30	MVA20-4-008-C
VA47-29 4P 10 A type C	10	C	4P PIN 63 A	3	30	MVA20-4-010-C
VA47-29 4P 13 A type C	13	C	4P PIN 63 A	3	30	MVA20-4-013-C
VA47-29 4P 16 A type C	16	C	4P PIN 63 A	3	30	MVA20-4-016-C
VA47-29 4P 20 A type C	20	C	4P PIN 63 A	3	30	MVA20-4-020-C
VA47-29 4P 25 A type C	25	C	4P PIN 63 A	3	30	MVA20-4-025-C
VA47-29 4P 32 A type C	32	C	4P PIN 63 A	3	30	MVA20-4-032-C
VA47-29 4P 40 A type C	40	C	4P PIN 63 A	3	30	MVA20-4-040-C
VA47-29 4P 50 A type C	50	C	4P PIN 63 A	3	30	MVA20-4-050-C
VA47-29 4P 63 A type C	63	C	4P PIN 63 A	3	30	MVA20-4-063-C
VA47-29 4P 1 A type D	1	D	4P PIN 63 A	3	30	MVA20-4-001-D
VA47-29 4P 2 A type D	2	D	4P PIN 63 A	3	30	MVA20-4-002-D
VA47-29 4P 3 A type D	3	D	4P PIN 63 A	3	30	MVA20-4-003-D
VA47-29 4P 4 A type D	4	D	4P PIN 63 A	3	30	MVA20-4-004-D
VA47-29 4P 5 A type D	5	D	4P PIN 63 A	3	30	MVA20-4-005-D
VA47-29 4P 6 A type D	6	D	4P PIN 63 A	3	30	MVA20-4-006-D
VA47-29 4P 8 A type D	8	D	4P PIN 63 A	3	30	MVA20-4-008-D
VA47-29 4P 10 A type D	10	D	4P PIN 63 A	3	30	MVA20-4-010-D
VA47-29 4P 13 A type D	13	D	4P PIN 63 A	3	30	MVA20-4-013-D
VA47-29 4P 16 A type D	16	D	4P PIN 63 A	3	30	MVA20-4-016-D
VA47-29 4P 20 A type D	20	D	4P PIN 63 A	3	30	MVA20-4-020-D
VA47-29 4P 25 A type D	25	D	4P PIN 63 A	3	30	MVA20-4-025-D
VA47-29 4P 32 A type D	32	D	4P PIN 63 A	3	30	MVA20-4-032-D
VA47-29 4P 40 A type D	40	D	4P PIN 63 A	3	30	MVA20-4-040-D
VA47-29 4P 50 A type D	50	D	4P PIN 63 A	3	30	MVA20-4-050-D
VA47-29 4P 63 A type D	63	D	4P PIN 63 A	3	30	MVA20-4-063-D



Technical features

Standards	GOST R 50345 99, TU 2000 AGIE.641.235.003
Rated voltage U_n , V (Rated frequency: 50 Hz)	230/400
Rated current I_n , 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 I_{cn} , A	4500
DC voltage U_b , DC 1P	48
Tripping characteristics	B, C, D
NP / No. of poles	1, 2, 3, 4
Climate type - MRC4	boreal climate (BC) 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
Ambient temperature, °C	-40 ÷ +50

Dimensions





Modular Circuit Breakers VA47-29M

Modular Circuit Breakers VA4-29M are designed for protection of distribution & branch circuits under the different load.

Modular Circuit Breakers VA47-29M are recommended for usage in the lead-in distributors used for residential and public buildings and in industries. 27 items per 9 rated currents (6 to 63 A).

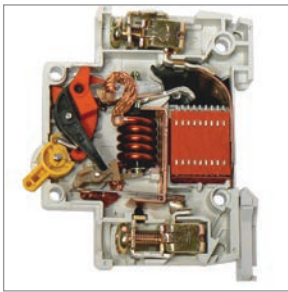


This circuit breaker was awarded gold medal of the 15th International Exhibition «Electro 2006» in nomination «Best electrical equipment» for the solution ensuring electric security of residential and industrial buildings and high performance and economic features.

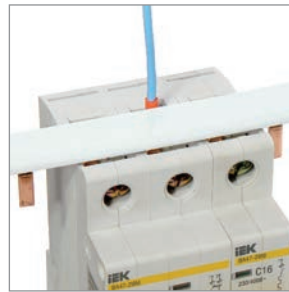
- Advantages**
- Two types of protection against overload and short circuit.
 - Full set of auxiliary devices that can be installed independently:
 - auxiliary contact KS47;
 - signal auxiliary contact KS47;
 - undervoltage release RMM47;
 - shunt trip RN47.

- Special casing design with improved heat dissipation.
- Independent contact position indicator.
- DIN-rail latch with 2 fixed positions.
- Wide range of ambient temperature (–40 to +50°C).
- Improved wider control lever with a increased contact area.
- Notches on the terminal clamps reduce the heat loss and improve mechanical stability of connection.

Design Features



Circuit breaker design provides two types of overload and short circuit protection. This significantly increases the protection of distribution & branch circuit.



Connecting the bus to the Modular Circuit Breaker ensure two or three-wire cabling.



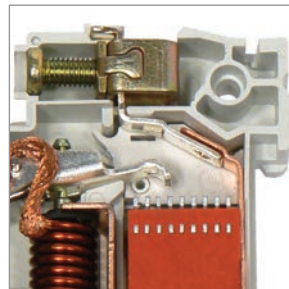
Universal casing with auxiliary elements connection ability does not require disassembling. It is possible to install the elements independently.



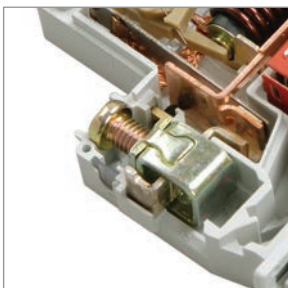
Main circuit status indicator provides exact data on the contacts' status independently from the lever position.



Increased screw head dimension size with a universal crest (+, -) facilitates mounting and prevents the screws from falling out during the installation.



Welding deposition of the argentiferous composite increases the contact block's wear-resistance and reduces the transient resistance.



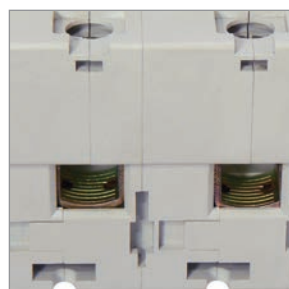
Plexiglass fitting-based protection of the thermal cut-off mechanism against changing the factory settings.



Improved wider control lever with an increased contact area facilitates the commutation process.



Special casing construction with increased heat dissipation allows to obtain a 10% better load-carrying capacity.



Notches on the terminal clamps reduce the heat loss and improve mechanical stability of connection.



Range

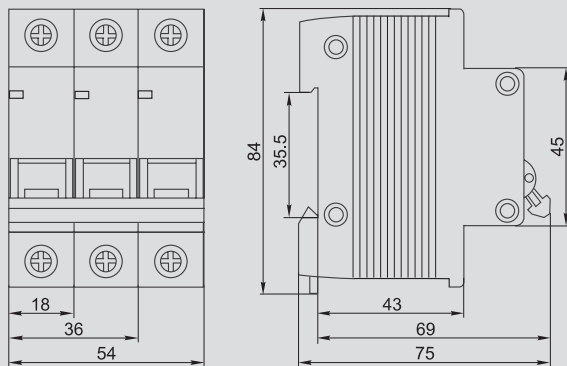
	Name	Rated current I _n , A	Tripping characteristic	Bridging bars type	PCS/ PACKAGE	PCS/ CTN	Article
	VA47-29M 1P 6 A type C	6	C	1P PIN, FORK 63 A	12	120	MVA21-1-006-C
	VA47-29M 1P 10 A type C	10	C	1P PIN, FORK 63 A	12	120	MVA21-1-010-C
	VA47-29M 1P 16 A type C	16	C	1P PIN, FORK 63 A	12	120	MVA21-1-016-C
	VA47-29M 1P 20 A type C	20	C	1P PIN, FORK 63 A	12	120	MVA21-1-020-C
	VA47-29M 1P 25 A type C	25	C	1P PIN, FORK 63 A	12	120	MVA21-1-025-C
	VA47-29M 1P 32 A type C	32	C	1P PIN, FORK 63 A	12	120	MVA21-1-032-C
	VA47-29M 1P 40 A type C	40	C	1P PIN, FORK 63 A	12	120	MVA21-1-040-C
	VA47-29M 1P 50 A type C	50	C	1P PIN, FORK 63 A	12	120	MVA21-1-050-C
	VA47-29M 1P 63 A type C	63	C	1P PIN, FORK 63 A	12	120	MVA21-1-063-C
	VA47-29M 2P 6 A type C	6	C	1P PIN, FORK 63 A	6	60	MVA21-2-006-C
	VA47-29M 2P 10 A type C	10	C	1P PIN, FORK 63 A	6	60	MVA21-2-010-C
	VA47-29M 2P 16 A type C	16	C	1P PIN, FORK 63 A	6	60	MVA21-2-016-C
	VA47-29M 2P 20 A type C	20	C	1P PIN, FORK 63 A	6	60	MVA21-2-020-C
	VA47-29M 2P 25 A type C	25	C	1P PIN, FORK 63 A	6	60	MVA21-2-025-C
	VA47-29M 2P 32 A type C	32	C	1P PIN, FORK 63 A	6	60	MVA21-2-032-C
	VA47-29M 2P 40 A type C	40	C	1P PIN, FORK 63 A	6	60	MVA21-2-040-C
	VA47-29M 2P 50 A type C	50	C	1P PIN, FORK 63 A	6	60	MVA21-2-050-C
	VA47-29M 2P 63 A type C	63	C	1P PIN, FORK 63 A	6	60	MVA21-2-063-C
	VA47-29M 3P 6 A type C	6	C	1P PIN, FORK 63 A	4	40	MVA21-3-006-C
	VA47-29M 3P 10 A type C	10	C	1P PIN, FORK 63 A	4	40	MVA21-3-010-C
	VA47-29M 3P 16 A type C	16	C	1P PIN, FORK 63 A	4	40	MVA21-3-016-C
	VA47-29M 3P 20 A type C	20	C	1P PIN, FORK 63 A	4	40	MVA21-3-020-C
	VA47-29M 3P 25 A type C	25	C	1P PIN, FORK 63 A	4	40	MVA21-3-025-C
	VA47-29M 3P 32 A type C	32	C	1P PIN, FORK 63 A	4	40	MVA21-3-032-C
	VA47-29M 3P 40 A type C	40	C	1P PIN, FORK 63 A	4	40	MVA21-3-040-C
	VA47-29M 3P 50 A type C	50	C	1P PIN, FORK 63 A	4	40	MVA21-3-050-C
	VA47-29M 3P 63 A type C	63	C	1P PIN, FORK 63 A	4	40	MVA21-3-063-C



Technical features

Standards	GOST R 50345 99, TU 2000 AGIE.641.235.003
Rated voltage U_n , V (Rated frequency: 50 Hz)	230/400
Rated current I_n , A	6; 10; 16; 20; 25; 32; 40; 50; 63
Rated short-circuit breaking capacity I_{cn} , A	4500
DC voltage U_b , DC 1P	48
Tripping characteristics	C
NP / No. of poles	1, 2, 3
Climate type - MRC4	boreal climate (BC) 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	0,5
Pole weight, kg	0,11
Ambient temperature, °C	-40 ÷ +50

Dimensions





Modular Circuit Breakers VA47-60

Modular Circuit Breakers VA47-60 are designed for providing the automatic power source cut-off under excess currents.

They are recommended for application in the master panel-boards (apartment and floor ones), record panel-boards in residential, public, domestic and administrative buildings.

64 items per 8 rated currents (6 to 63 A).



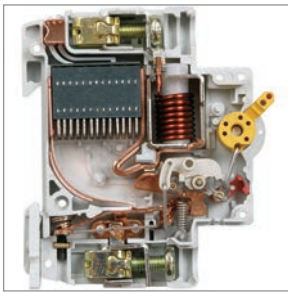
This circuit breaker was awarded gold medal of the 20th International Exhibition «Electro 2011» in nomination «Best electrical equipment» for the best quality ratings.

Advantages

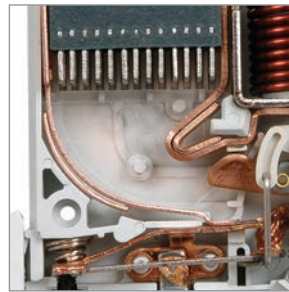
- Two types of overcurrent protection-heat and electro-magnetic.
- Independent contact position indicator.
- DIN-rail latch with 2 fixed positions.

- Wide range of ambient temperature(-40 to +50°C).
- Improved wider control lever with an increased contact area.
- Notches on the terminal clamps reduce heat loss and improve mechanical stability of connection.

Design Features



Design of this circuit breaker provides for two types of over-current protection. This significantly increases the protection of distribution and branch circuit.



Conducting parts are made of high-quality electrical copper.



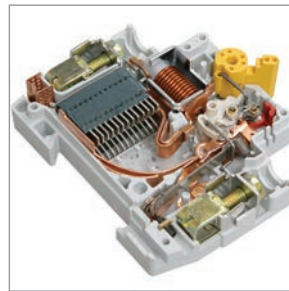
Increased arc chute splits the electric arc into many smaller arcs ensuring its rapid extinguishing.



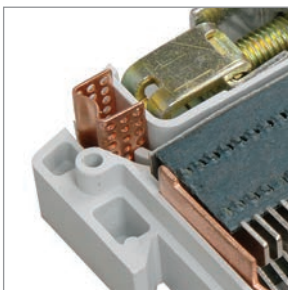
Welding deposition of the argentiferous composite on the contact block.



Option of using buses (PIN, FORK).



A new construction of the trip-free release mechanism (reduced time of contact breaking).



Double quenching grid at the end of the arc chute increases the device's fire safety eliminating ejection of combustion products.



Increased screw head size with a universal crest (+, -) facilitates mounting and prevents the screws from falling out during the installation.



Range

	Name	Rated current I _n , A	Tripping characteristic	Bridging bars type	PCS/ PACKAGE	PCS/ CTN	Article
	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



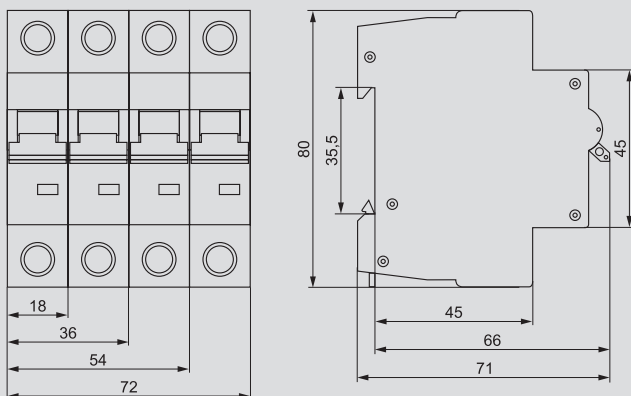
	Name	Rated current I_n , A	Tripping characteristic	Bridging bars type	PCS/ PACKAGE	PCS/ CTN	Article
	VA47-60 3P 6 A type C	6	C	3P PIN, FORK 100 A	4	60	MVA41-3-006-C
	VA47-60 3P 10 A type C	10	C	3P PIN, FORK 100 A	4	60	MVA41-3-010-C
	VA47-60 3P 16 A type C	16	C	3P PIN, FORK 100 A	4	60	MVA41-3-016-C
	VA47-60 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	GOST R 50345, TU 3421 035 18461115 2010
Rated voltage U_n , V (Rated frequency: 50 Hz)	230/400
Rated current I_n , A	6, 10, 16, 25, 32, 40, 50, 63
Rated short-circuit breaking capacity I_{cn} , A	6000
DC voltage U_b , DC 1P	48
Tripping characteristics	C, D
NP / No. of poles	1 ÷ 4
Climate type - MRC4	boreal climate (BC) 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 min.	0,2
Pole weight, kg max.	0,2
Ambient temperature, °C	- 40 ÷ +50

Dimensions





Modular Circuit Breakers VA47-100

Automatic circuit breakers VA47-29M are designed for protection of distribution & branch circuits under the different load.

They are recommended for usage in the lead-in distributors of domestic and industrial electric installations. 80 items per 10 rated current (10 to 100 A).

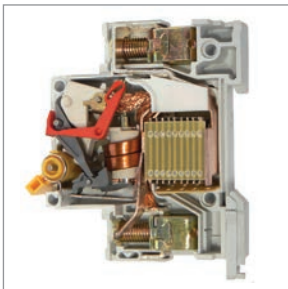


Advantages

- Two types of protection against overload and short circuit.
- Full set of auxiliary devices that can be installed independently:
 - auxiliary contact KS47;
 - signal auxiliary contact KS47;
 - undervoltage release RMM47;
 - shunt trip RN47.
- Independent contact position indicator.

- DIN-rail latch with 2 fixed positions.
- Wide range of ambient temperature (–40 to +50°C).
- Improved wider control lever with an increased contact area.
- Notches on the terminal clamps reduce heat loss and improve mechanical stability of connection.
- Increased switching capacity of 10 kA allows installing VA47-100 as incoming switches.

Design Features



Design of this circuit breaker provides two types of overload and short circuit protection. This significantly increases the protection of distribution & branch circuit.



Main circuit status indicator provides exact data on the contacts' status independently from the lever position.



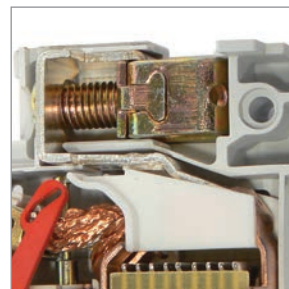
Universal casing with auxiliary elements connection ability does not require disassembling. It is possible to install the elements independently



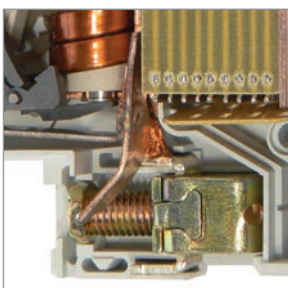
Latch with a double fixed position contributes to speeding up the process of the breaker's mounting/disassembling.



Increased screw head size with a universal crest (+, -) facilitates mounting and prevents the screws from falling out during the installation.



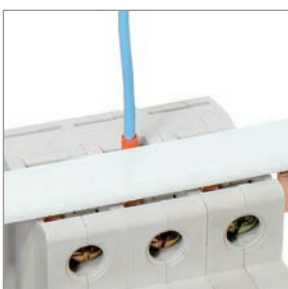
Welding deposition of the argentiferous composite increases the contact block's wear-resistance and reduces transient resistance.



Plexiglass fitting-based protection of the thermal cut-off mechanism against changing the factory settings.



Improved wider control lever with an increased contact area facilitates the commutation process.



Connecting the bus to the Modular Circuit Breaker ensure two or three-wire cabling.



Notches on the terminal clamps reduce the heat loss and improve mechanical stability of connection.



Range

	Name	Rated current I _n , A	Tripping characteristic	Bridging bars type	PCS/ PACKAGE	PCS/ CTN	Article
	VA47-100 1P 10 A type C	10	C	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-010-C
	VA47-100 1P 16 A type C	16	C	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-016-C
	VA47-100 1P 25 A type C	25	C	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-025-C
	VA47-100 1P 32 A type C	32	C	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-032-C
	VA47-100 1P 35 A type C	35	C	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-035-C
	VA47-100 1P 40 A type C	40	C	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-040-C
	VA47-100 1P 50 A type C	50	C	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-050-C
	VA47-100 1P 63 A type C	63	C	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-063-C
	VA47-100 1P 80 A type C	80	C	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-080-C
	VA47-100 1P 100 A type C	100	C	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-100-C
	VA47-100 1P 10 A 10 kA type D	10	D	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-010-D
	VA47-100 1P 16 A 10 kA type D	16	D	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-016-D
	VA47-100 1P 25 A 10 kA type D	25	D	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-025-D
	VA47-100 1P 32 A 10 kA type D	32	D	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-032-D
	VA47-100 1P 35 A 10 kA type D	35	D	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-035-D
	VA47-100 1P 40 A 10 kA type D	40	D	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-040-D
	VA47-100 1P 50 A 10 kA type D	50	D	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-050-D
	VA47-100 1P 63 A 10 kA type D	63	D	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-063-D
	VA47-100 1P 80 A 10 kA type D	80	D	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-080-D
	VA47-100 1P 100 A 10 kA type D	100	D	1P PIN 100 A pitch 27 mm	12	120	MVA40-1-100-D
	VA47-100 2P 10 A type C	10	C	1P PIN 100 A pitch 27 mm	6	60	MVA40-2-010-C
	VA47-100 2P 16 A type C	16	C	2P PIN 100 A pitch 27 mm	6	60	MVA40-2-016-C
	VA47-100 2P 25 A type C	25	C	2P PIN 100 A pitch 27 mm	6	60	MVA40-2-025-C
	VA47-100 2P 32 A type C	32	C	2P PIN 100 A pitch 27 mm	6	60	MVA40-2-032-C
	VA47-100 2P 35 A type C	35	C	2P PIN 100 A pitch 27 mm	6	60	MVA40-2-035-C
	VA47-100 2P 40 A type C	40	C	2P PIN 100A pitch 27 mm	6	60	MVA40-2-040-C
	VA47-100 2P 50 A type C	50	C	2P PIN 100A pitch 27 mm	6	60	MVA40-2-050-C
	VA47-100 2P 63 A type C	63	C	2P PIN 100 A pitch 27 mm	6	60	MVA40-2-063-C
	VA47-100 2P 80 A type C	80	C	2P PIN 100 A pitch 27 mm	6	60	MVA40-2-080-C
	VA47-100 2P 100 A type C	100	C	2P PIN 100 A pitch 27 mm	6	60	MVA40-2-100-C
	VA47-100 2P 10 A 10 kA type D	10	D	2P PIN 100 A pitch 27 mm	6	60	MVA40-2-010-D
	VA47-100 2P 16 A 10 kA type D	16	D	2P PIN 100 A pitch 27 mm	6	60	MVA40-2-016-D
	VA47-100 2P 25 A 10 kA type D	25	D	2P PIN 100 A pitch 27 mm	6	60	MVA40-2-025-D
	VA47-100 2P 32 A 10 kA type D	32	D	2P PIN 100 A pitch 27 mm	6	60	MVA40-2-032-D
	VA47-100 2P 35 A 10 kA type D	35	D	2P PIN 100 A pitch 27 mm	6	60	MVA40-2-035-D
	VA47-100 2P 40 A 10 kA type D	40	D	2P PIN 100A pitch 27 mm	6	60	MVA40-2-040-D
	VA47-100 2P 50 A 10 kA type D	50	D	2P PIN 100 A pitch 27 mm	6	60	MVA40-2-050-D
	VA47-100 2P 63 A 10 kA type D	63	D	2P PIN 100 A pitch 27 mm	6	60	MVA40-2-063-D
	VA47-100 2P 80 A 10 kA type D	80	D	2P PIN 100 A pitch 27 mm	6	60	MVA40-2-080-D
	VA47-100 2P 100 A 10 kA type D	100	D	2P PIN 100 A pitch 27 mm	6	60	MVA40-2-100-D

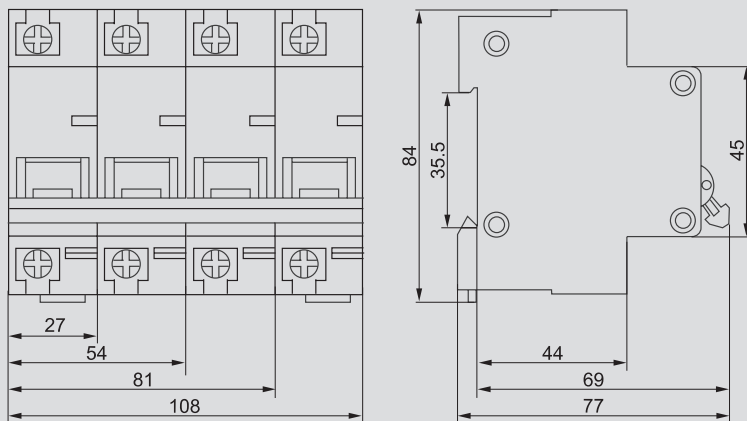
	Name	Rated current I _n , A	Tripping characteristic	Bridging bars type	PCS/ PACKAGE	PCS/ CTN	Article
	VA47-100 3P 10 A type C	10	C	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-010-C
	VA47-100 3P 16 A type C	16	C	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-016-C
	VA47-100 3P 25 A type C	25	C	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-025-C
	VA47-100 3P 32 A type C	32	C	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-032-C
	VA47-100 3P 35 A type C	35	C	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-035-C
	VA47-100 3P 40 A type C	40	C	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-040-C
	VA47-100 3P 50 A type C	50	C	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-050-C
	VA47-100 3P 63 A type C	63	C	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-063-C
	VA47-100 3P 80 A type C	80	C	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-080-C
	VA47-100 3P 100 A type C	100	C	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-100-C
	VA47-100 3P 10 A 10 kA type D	10	D	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-010-D
	VA47-100 3P 16 A 10 kA type D	16	D	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-016-D
	VA47-100 3P 25 A 10 kA type D	25	D	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-025-D
	VA47-100 3P 32 A 10 kA type D	32	D	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-032-D
	VA47-100 3P 35 A 10 kA type D	35	D	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-035-D
	VA47-100 3P 40 A 10 kA type D	40	D	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-040-D
	VA47-100 3P 50 A 10 kA type D	50	D	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-050-D
	VA47-100 3P 63 A 10 kA type D	63	D	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-063-D
	VA47-100 3P 80 A 10 kA type D	80	D	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-080-D
	VA47-100 3P 100 A 10 kA type D	100	D	3P PIN 100 A pitch 27 mm	4	40	MVA40-3-100-D
	VA47-100 4P 10 A type C	10	C	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-010-C
	VA47-100 4P 16 A type C	16	C	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-016-C
	VA47-100 4P 25 A type C	25	C	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-025-C
	VA47-100 4P 32 A type C	32	C	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-032-C
	VA47-100 4P 35 A type C	35	C	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-035-C
	VA47-100 4P 40 A type C	40	C	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-040-C
	VA47-100 4P 50 A type C	50	C	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-050-C
	VA47-100 4P 63 A type C	63	C	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-063-C
	VA47-100 4P 80 A type C	80	C	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-080-C
	VA47-100 4P 100 A type C	100	C	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-100-C
	VA47-100 4P 10 A 10 kA type D	10	D	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-010-D
	VA47-100 4P 16 A 10 kA type D	16	D	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-016-D
	VA47-100 4P 25 A 10 kA type D	25	D	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-025-D
	VA47-100 4P 32 A 10 kA type D	32	D	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-032-D
	VA47-100 4P 35 A 10 kA type D	35	D	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-035-D
	VA47-100 4P 40 A 10 kA type D	40	D	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-040-D
	VA47-100 4P 50 A 10 kA type D	50	D	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-050-D
	VA47-100 4P 63 A 10 kA type D	63	D	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-063-D
	VA47-100 4P 80 A 10 kA type D	80	D	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-080-D
	VA47-100 4P 100 A 10 kA type D	100	D	4P PIN 100 A pitch 27 mm	3	30	MVA40-4-100-D



Technical features

Standards	GOST R 50345 99, TU 2000 AGIE.641.235.003
Rated voltage U_n , V (Rated frequency: 50 Hz)	230/400
Rated current I_n , A	10; 16; 25; 32; 35; 40; 50; 63; 80; 100
Rated short-circuit breaking capacity I_{cn} , A	10 000
DC voltage U_b , DC 1P	60
Tripping characteristics	C, D
NP / No. of poles	1, 2, 3, 4
Climate type - MRC4	boreal climate (BC) 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
Pole weight, kg	0,15
Ambient temperature, °C	-40 ÷ +50

Dimensions



Residual Current Devices

Residual Current Circuit Breakers VD1-63 (UZO)

Fast safety circuit breaker without an integrated overcurrent protection responds to the residual current. It is designed to protect against an electric shock in case of accidental contact with conducting parts of electric equipment and to prevent fire caused by earth current leakage. It has zero internal consumption high mechanical wear resistance. More than 50 items per 8 rated currents (16 to 100 A).



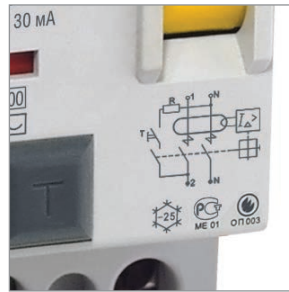
Advantages

- Electromechanical circuit without electronic components.
- The most reliable human protection in case of direct contact with conductive parts.
- Independent contact position indicator.
- Notches on the terminal clamps reduce the heat loss and improve the mechanical stability of connection.
- Wide range of ambient temperature (–25 to +40°C).
- The device has zero internal consumption and ensures operation even in case of disconnection of the neutral conductor.
- “TEST” button for testing the device’s operation and the correctness of connection.

Design Features



“TEST” button for testing the device’s operation and correctness of connection.



Wide range of ambient temperature (–25 to +40°C) allows using the device in various climate zones.



Electromechanical circuit without electronic components. The device has zero internal consumption and ensures operation even in case of disconnection of the neutral conductor.



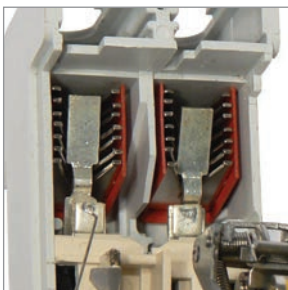
Notches on the terminal clamps reduce the heat loss and improve the mechanical stability of connection.



Main circuit status indicator provides exact data on the contacts’ status independently from the lever position.



Increased screw head size with a universal crest (+, –) facilitates mounting and prevents the screws from falling out during the installation.



Arch chutes at each pole ensure more efficient electric arc suppression.



Наименование	Rated current, A	Rated breaking residual current, mA	PCS/PACKAGE	PCS/CTN	Article
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



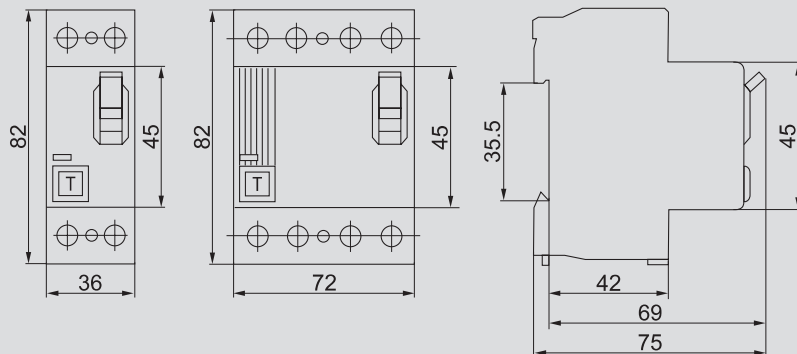
VD1-63 4P 16 A 10 mA	16	10	1	24	MDV10-4-016-010
VD1-63 4P 25 A 10 mA	25	10	1	24	MDV10-4-025-010
VD1-63 4P 16 A 30 mA	16	30	1	24	MDV10-4-016-030
VD1-63 4P 25 A 30 mA	25	30	1	24	MDV10-4-025-030
VD1-63 4P 32 A 30 mA	32	30	1	24	MDV10-4-032-030
VD1-63 4P 40 A 30 mA	40	30	1	24	MDV10-4-040-030
VD1-63 4P 50 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



Technical features

Standards	GOST R 51326.1 99, TU 3421 033 18461115 02
Rated voltage U_n , V (Rated frequency: 50 Hz)	230/400
Rated current I_n , A	16; 25; 32; 40; 50; 63; 80; 100
Rated breaking residual current $I_{\Delta n}$, A	10; 30; 100; 300
Rated conditional residual short-circuit current $I_{\Delta c}$, A	3000
RCD Type	AC
Tripping time, ms	≤ 40
NP / No. of poles	2; 4
Climate type - MRC4	boreal climate (BC) 4
Protection degree	IP20
Electrical durability, not less than, ops.	4000
Mechanical durability, not less than, ops.	10 000
Cables max. size, mm ²	35
Silver content, (Ag), g/pole	0,6 ÷ 2,0
Weight (2/4 polar), kg	0,2/0,4
Ambient temperature, °C	-25 ÷ +40

Dimensions



Residual Current Circuit Breakers VD1-63S (selective UZO)

Automatic circuit breakers controlled by the residual current with no integrated excess current protection do not functionally depend on the supply voltage. They can be used for household and other similar applications. Switches of VD1-63S type are designed for providing an automatic power off in case of a residual current leakage in three- and two-phase AC power networks with nominal voltage up to 400 V. VD1 63S are designed for installation in the low-voltage complex input and distribution equipment operated in residential, public and industrial buildings as well as construction sites. Maximum switching capacity: 6000 A. 26 items per 7 rated currents (16 to 80 A).

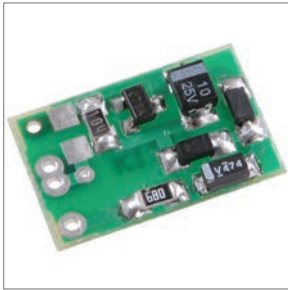


Advantages

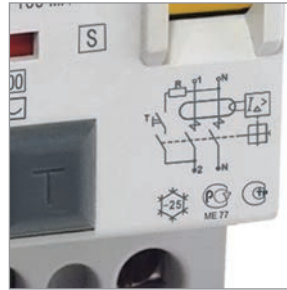
- Electromechanical circuit with an actuation time delay.
- The most reliable human protection in case of direct contact with conductive parts.
- Test circuit survives within a wide voltage range: from 110 to 265 V (2-pole), from 200 to 460 V (4-pole).

- Independent contact position indicator.
- The device has zero internal consumption and ensures operation even in case of disconnection of the neutral conductor.

Design Features



Electromechanical type device with an integrated time delay system has zero internal consumption and ensures operation even in case of disconnection of the neutral conductor.



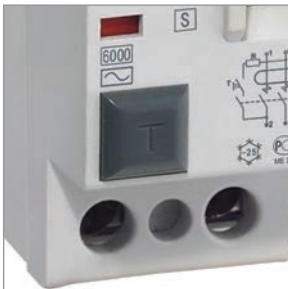
Wide range of ambient temperature (-25 to +40°C) allows using the device in various climate zones.



Main circuit status indicator provides exact data on the contacts' status independently from the lever position.



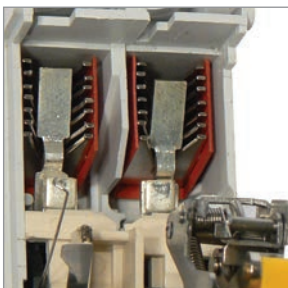
Notches on the terminal clamps reduce the heat loss and improve the mechanical stability of connection.



"TEST" button for testing the device's operation and correctness of connection.



Improved screw head size with a universal crest (+, -) facilitates the mounting and prevents the screws from falling out during the installation.



Arch chutes at each pole ensure more efficient electric arc suppression.



Range



Name	Rated current, A	Rated residual current, A	PCS/CTN	Article
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



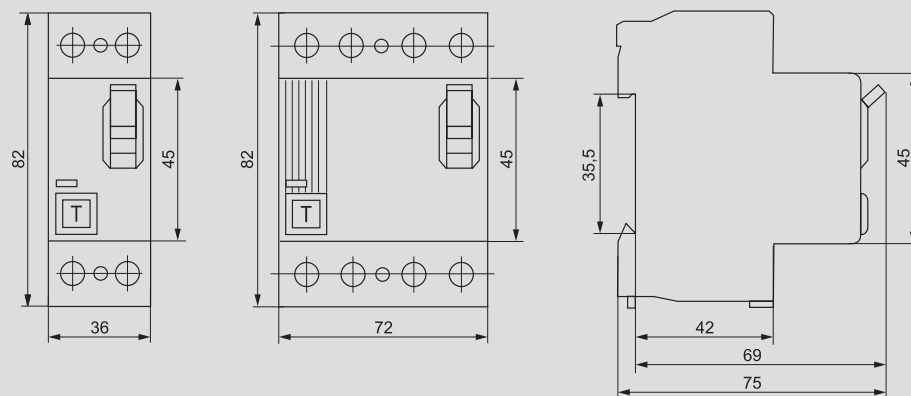
VD1-63S 4P 25 A 100 mA	25	100	50	MDV12-4-025-100
VD1-63S 4P 32 A 100 mA	32	100	50	MDV12-4-032-100
VD1-63S 4P 40 A 100 mA	40	100	50	MDV12-4-040-100
VD1-63S 4P 50 A 100 mA	50	100	50	MDV12-4-050-100
VD1-63S 4P 63 A 100 mA	63	100	50	MDV12-4-063-100
VD1-63S 4P 25 A 300 mA	25	300	50	MDV12-4-025-300
VD1-63S 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	GOST R 51326.1, GOST R 51326.2, TU 3421 034 18461115 2009
Rated voltage U_n , V (Rated frequency: 50 Hz)	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 conditional residual short-circuit current $I_{\Delta c}$, A	6000
RCD Type	AC
Tripping time, ms	$0,13 \div 0,5$
NP / No. of poles	2/4
Climate type - MRC4	boreal climate (BC) 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	$0,5 \div 1,0$
Weight (2/4 polar), kg	$0,2/0,4$
Ambient temperature, °C	$-25 \div +40$

Dimensions



Residual Current Circuit Breakers with overcurrent protection AD12, AD14

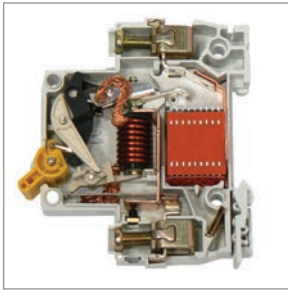
Fast safety switch responding to the residual current with an integrated overcurrent protection. Three types of protection: electric shock protection in case of accidental contact with electric equipment conducting parts, insulation damage; prevention of fire caused by earth current leakage; overload & short circuit protection. The device survives reduced voltage (down to 50 V) and is notable for its high wear-resistance ratings. Differential current triggering indication is provided. More than 50 items per 9 rated currents (6 to 63 A).



- Advantages**
- Hybrid circuit with an electronic differential protection module and an integrated VA47-29 series breaker.
 - Integrated surge overvoltage protection (D class voltage-sensitive resistor).
 - The most reliable human protection in case of direct contact with conductive parts.
 - Wide range of ambient temperature (-25 to +40°C)

- Notches on the terminal clamps reduce the heat loss and improve the mechanical stability of connection.
- “TEST” button for testing the device’s operation and correctness of connection.
- Option of installing additional devices:
 - auxiliary contact KS47;
 - auxiliary contact KSV47.

Design Features



Hybrid circuit with an electronic differential protection module, a D class voltage-sensitive resistor and an integrated VA47-29 series breaker ensures 4 types of protection: from residual current (leakage), short circuit, overload and surge (lightning overvoltage).



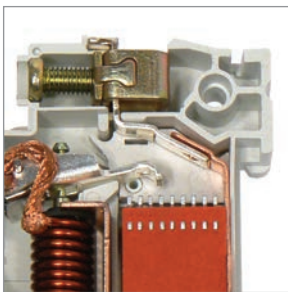
Wide range of Ambient temperature (-25 to +40°C) allows using the device in various climate zones.



“TEST” button for testing the device’s operation and correctness of connection.



Option to provide independent installation of KS47 and KSV47 auxilliary contacts.



Welding deposition of the argentiferous composite improves the contact block’s wear-resistance and reduces the transient resistance.



Notches on the terminal clamps reduce the heat loss and improve the mechanical stability of connection.



Increased screw head size with a universal crest (+, -) facilitates mounting and prevents the screws from falling out during the installation.



“RETURN” (BO3BPAT) button for residual current triggering indication.



Range



Name	Rated current, A	Rated breaking residual current, mA	PCS/PACKAGE	PCS/CTN	Article
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

Type of electromagnetic tripping characteristic is "C" for all AD12/14 units, except units which type "B" is indicated in their names.

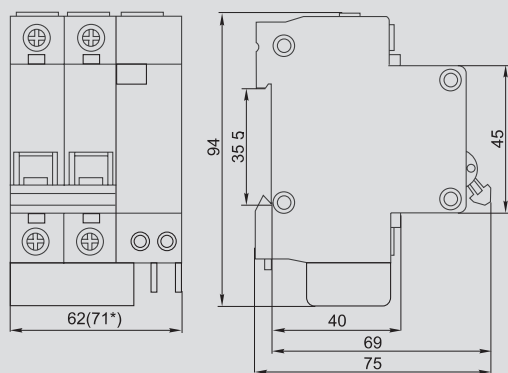


Technical features

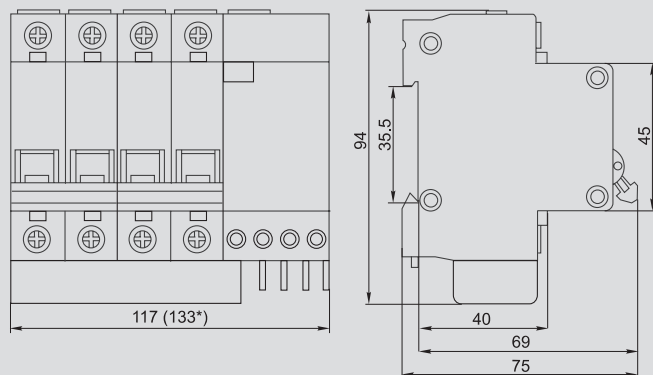
Standards	GOST R 51327.1 99, TU 99 AGIE.641243.039
Rated voltage U_n , V (Rated frequency: 50 Hz)	230/400
Rated current I_n , A	6; 10; 16; 20; 25; 32; 40; 50; 63
Tripping characteristics	B, C
Rated breaking residual current $I_{\Delta n}$, mA	10; 30; 100; 300
Rated short-circuit breaking capacity I_{cn} , A	4500
RCD Type	AC
Tripping time, ms	≤ 40
NP / No. of poles	2, 4
Climate type - MRC4	boreal climate (BC) 4
Protection degree	IP20
Wear resistance, power cycles min.	10 000
Cables max. size, mm ²	input – 25; output – 16/25*
Silver content, (Ag), g/pole	0,6±2,0
Strength (2/4 polar), kg	0,25/0,45
Ambient temperature, °C	-25÷+40

Dimensions

AD12



AD14



* For devices with rated current above 40 A

Residual current circuit breakers with overcurrent protection AD12M

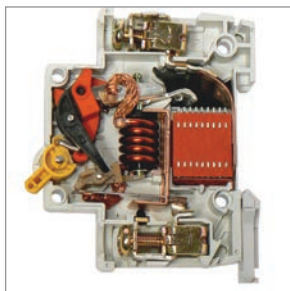
Fast safety circuit breaker responding to the residual current with an integrated overcurrent protection. Three types of protection: electric shock protection in case of accidental contact with electric equipment conducting parts, insulation damage; prevention of fire caused by earth current leakage; overload & short circuit protection. The device survives reduced voltage (down to 50 V) and possesses high mechanical wear-resistance. Differential current triggering indication is provided. Overvoltage protection function (265 ± 5 V).



Advantages

- Hybrid circuit with an electronic differential protection module and an integrated VA47-29M series breaker.
- Integrated surge overvoltage protection (D class voltage-sensitive resistor).
- The most reliable human protection in case of direct contact with the conductive parts.
- Wide range of ambient temperature (-25 to $+40^{\circ}\text{C}$).
- Notches on the terminal clamps reduce the heat loss and increase the mechanical stability of connection.
- Independent contact position indicator.
- “TEST” button for testing the device’s operation and correctness of connection.
- “RETURN” (B03BPAT) button for residual current triggering indication.
- Option to installing additional devices:
 - auxiliary contact KS47;
 - auxiliary contact KSV47.

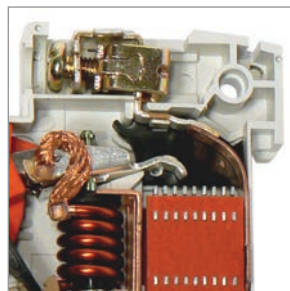
Design Features



Hybrid circuit with an electronic differential protection module, a D class voltage-sensitive resistor and an integrated VA47-29 series breaker ensures 5 types of protection: from residual current (leakage), short circuit, overload, surge lightning overvoltage and overvoltage (265 ± 5 V).



Wide range of ambient temperature (-25 to $+40^\circ\text{C}$) allows using the device in various climate zones.



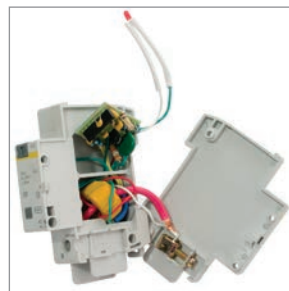
Welding deposition of the argentiferous composite improves the contact block's wear-resistance and reduces the transient resistance.



Option of independent installation of KS47 and KSV47 status contacts.



Main circuit status indicator provides exact data on the contacts' status independently from the lever position.



Integrated protection against sustained (265 V; $0,5$ s) and surge (discharge current: $8/20$ μs) overvoltages.



"TEST" button for testing the device's operation and the correctness of connection.



"RETURN" (B03BPAT) button for returning protection mechanism into operating condition and indication of the residual current triggering. LED voltage occurrence indicator at "Load" connection terminal.



Increased screw head size with a universal crest (+, -) facilitates mounting and prevents the screws from falling out during the installation.



Notches on the terminal clamps reduce the heat loss and improve mechanical stability of connection.



Range



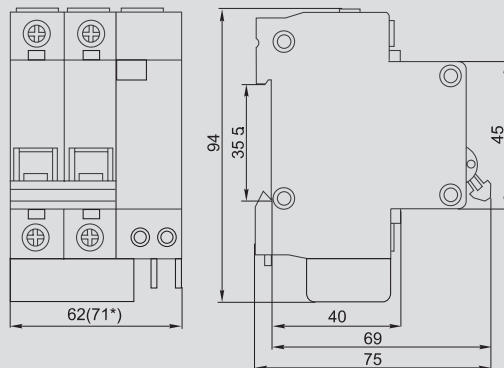
Name	Rated current In, A	Rated breaking residual current, mA	PCS/PACKAGE	PCS/CTN	Article
AD12M 2P B16 30 mA	16	30	5	40	MAD12-2-016-B-030
AD12M 2P B25 30 mA	25	30	5	40	MAD12-2-025-B-030
AD12M 2P C10 30 mA	10	30	5	40	MAD12-2-010-C-030
AD12M 2P C16 30 mA	16	30	5	40	MAD12-2-016-C-030
AD12M 2P C20 30 mA	20	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

Standards	GOST R 51327.1 99, TU 3431 012 18461115 2006
Rated voltage U_n frequency: 50 Hz, V	230/400
Rated current I_n , A	10; 16; 20; 25; 32; 40; 50; 63
Tripping characteristics	B, C
Rated breaking residual current $I_{\Delta n}$, mA	30
Rated short-circuit breaking capacity I_{cn} , A	4500
RCD Type	A
Tripping time, ms	≤ 40
NP / No. of poles	2
Climate type - MRC4	boreal climate (BC) 4
Protection degree	IP20
Wear resistance, power cycles min.	10 000
Cables max. size, mm ²	input – 25; output – 16/25*
Silver content, (Ag), g/pole	0,6÷2,0
Strength (2/4 polar), kg	0,25/0,45
Ambient temperature, °C	-25 ÷ +40

Dimensions



* For devices with rated current above 40 A.

Residual current circuit breakers with overcurrent protection AVDT32

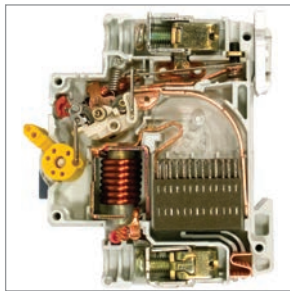
Residual current circuit breakers with overcurrent protection AVDT32 are designed for electric shock protection in case of accidental contact with electric equipment conducting parts, insulation damage; prevention of fire caused by earth current leakage; overload & short circuit protection. They are recommended for protection of branch circuits being power source of outdoor mains sockets as well as sockets in cellars and garages.



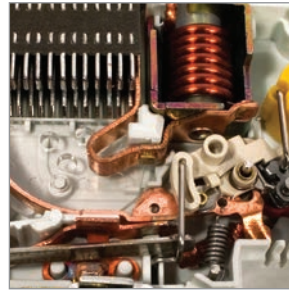
Advantages

- Hybrid circuit with an electronic differential protection module and an integrated VA47-29M series breaker.
- The most reliable human protection in case of direct contact with conductive parts.
- Independent contact position indicator.
- Notches on the terminal clamps reduce the heat loss and improve the mechanical stability of connection.
- “TEST” button for testing the device’s operation and correctness of connection.
- Wide range of ambient temperature (–25 to +40°C).
- AVDT dimensions correspond to the two-modular performance at the expense of construction units’ placement.
- Higher capacity of 6 kA allows installing AVDT as an incoming protection switch.

Design Features



Hybrid circuit with an electronic differential protection module, a D class voltage-sensitive resistor and an integrated VA47-29 series breaker ensures 5 types of protection: from residual current (leakage), short circuit, overload and surge over-voltage.



Welding deposition of the argenteriferous composite increases the contact block's wear-resistance and reduces transient resistance.



Main circuit status indicator provides exact data on the contacts' status independently from the lever position.



Wide range of ambient temperature (-25 to $+40^{\circ}\text{C}$) allows using the device in various climate zones.



"TEST" button for testing the device's operation and correctness of connection.



Notches on the terminal clamps reduce the heat loss and improve the mechanical stability of connection.



Increased screw head size with a universal crest (+, -) facilitates mounting and prevents the screws from falling out during the installation.

Range

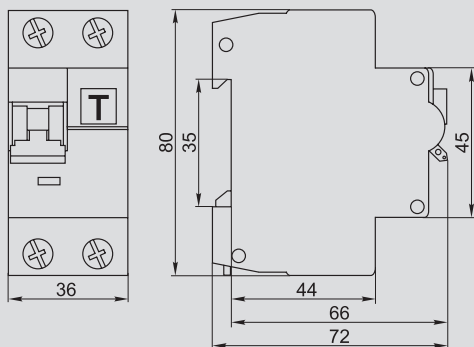
	Name	Rated current I_n , A	Rated breaking residual current, mA	PCS/PACKAGE	PCS/CTN	Article
	AVDT32 B16	16	10	6	60	MAD22-5-016-B-10
	AVDT32 B25	25	10	6	60	MAD22-5-025-B-10
	AVDT32 C6	6	30	6	60	MAD22-5-006-C-30
	AVDT32 C10	10	30	6	60	MAD22-5-010-C-30
	AVDT32 C16	16	30	6	60	MAD22-5-016-C-30
	AVDT32 C20	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



Technical features

Standards	GOST R 51327.1 99
Rated voltage U_n , V (Rated frequency: 50 Hz)	230
Rated current I_n , A	6; 10; 16; 20; 25; 32; 40; 50; 63
Tripping characteristics	B, C
NP / No. of poles	1+N
Rated breaking residual current, $I_{\Delta n}$, mA	10; 30; 100
Rated short-circuit breaking capacity I_{cn} , A	6000
RCD Type	A
Tripping time, ms	≤ 40
Wear resistance, power cycles min.	10 000
Climate type - MRC4	boreal climate (BC) 4
Protection degree	IP20
Silver content, (Ag), g/pole	0,85
Cables max. size, mm ²	25
Weight, kg	0,19
Dissipated power, max. P_v , W	6,5
Ambient temperature, °C	-25 ÷ +40

Dimensions





Auxiliary Modular Devices

Switch disconnecter VN-32

VN-32 switch disconnectors are switching devices having no protection function. Functionally, VN-32 is a double-break knife-blade switch eliminating leakage even under high humidity conditions. 100 A type items are supplied with two simultaneously operating bridge contacts to increase the contacts' reliability and reduce the heat loss at the adapters. The design of switch disconnecter has no arc chute elements and, therefore, it cannot be used for switching capacitive and inductive loads.

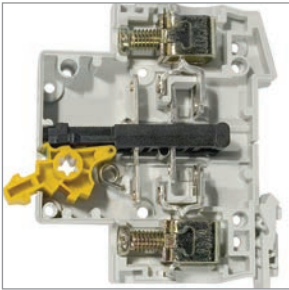


Advantages

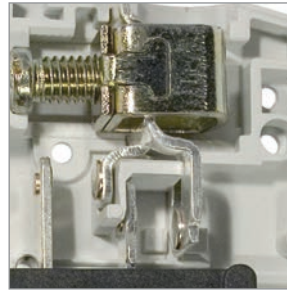
- Improved wider control lever with an increased contact area.
- Wide range of ambient temperature (-40 to +50°C).
- Notches on the terminal clamps reduce the heat loss and improve the mechanical stability of connection.



Design Features



The device has zero internal consumption and is controlled manually.



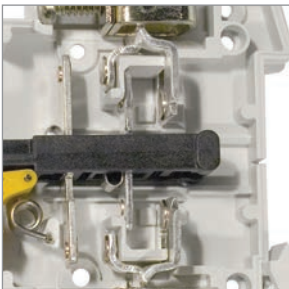
Welding deposition of the argentiferous composite increases the contact block's wear-resistance and reduces the transient resistance.



Increased screw head size with a universal crest (+, -) facilitates mounting and prevents the screws from falling out during the installation.



Notches on the terminal clamps reduce the heat loss and improve the mechanical stability of connection.



The design (double-break knife-blade switch) practically eliminates a disruptive discharge and an insulation arc-over even during continuous operation under severe contamination conditions.



Range

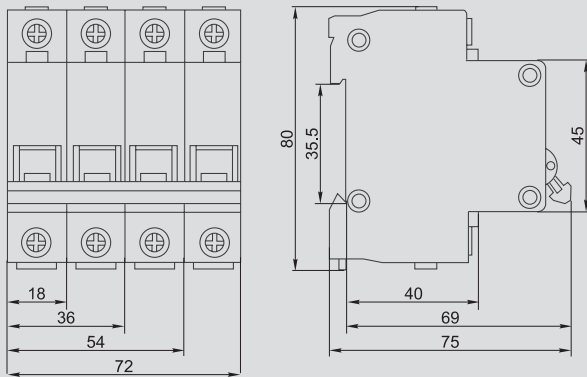
	Name	Rated current I _n , A	Number of bridge contacts	Wear resistance, power cycles	PCS/PACKAGE	PCS/CTN	Article
	VN-32 1P 20 A	20	1	30 000	12	240	MNV10-1-020
	VN-32 1P 25 A	25	1	30 000	12	240	MNV10-1-025
	VN-32 1P 32 A	32	1	30 000	12	240	MNV10-1-032
	VN-32 1P 40 A	40	1	20 000	12	240	MNV10-1-040
	VN-32 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	GOST R 50030.3 99, TU 02 AGIE.642416.020
Rated voltage U_n , V (Rated frequency: 50 Hz)	230/400
Rated operating current I_e , A	20; 25; 32; 40; 63; 100
Rated short-time current I_e (t = 1 sec.), A	15 I_e
Primary application category	AC 22 B
Number of poles	1; 2; 3; 4
Climate type - MRC4	boreal climate (BC) 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, kg max.	0,13
Ambient temperature, °C	-40 ÷ +50

Dimensions





Modular Contactors KM

KM type modular contactors are designed for usage in the AC networks (400 V, 50 Hz) for commutation of low inductance loads with nominal current up to 63 A. They are used for automating and controlling various technological processes including those of illumination, conditioning and ventilation systems and etc.



Advantages

- Wide range of contactors with 2 or 4 NO contacts.
- Compatibility of dimensions with those of the modular devices.
- Universal magnetizing coil supply: AC or DC (except KM20).
- Visual indication of the main contacts' status.
- Lower electromagnetic background due to the usage of DC magnetic system.
- High mechanical and electrical durability.
- Power saving (the holding current is 5 times lower than the starting one).
- Fast response (turn on/off: 20/30 ms).
- Bridge contacts ensure a double break at the main contacts' breaking.
- Low triggering noise level.
- GOST R 51731 2001 compliance.
- Warranty period: 5 years.

Design Features



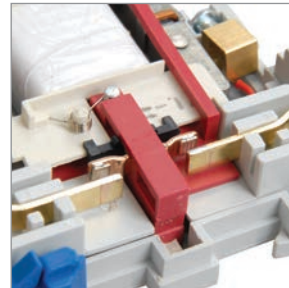
Visual indication of the main contacts' status.



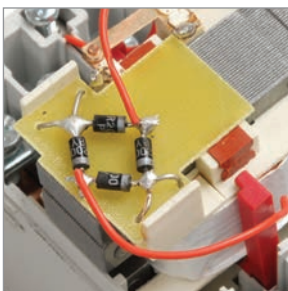
Connection terminals allow connecting conductors with the cross section ranging from 1 to 25 mm².



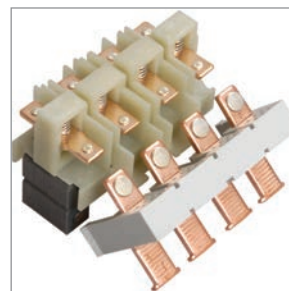
Dimensional compatibility allows installing the contactor into a standard power board together with any modular devices.



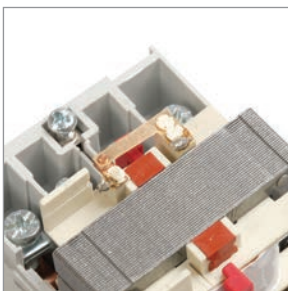
Bridge contact provides for high electrical insulation properties.



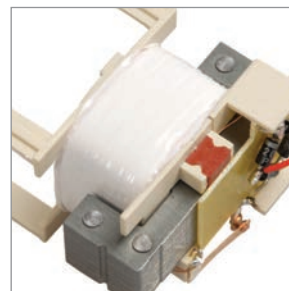
Magnetizing coil circuit is supplied with a rectified bridge allowing powering the contactor from the 220 V DC network.



Contacts are made from an argentiferous material to improve their wear-resistance and service life and to reduce transient resistance and losses.



Magnetizing coil circuit of KM25-40, KM40-40 and KM63-40 contactors is supplied with an additional NC contact reducing holding current 5% as compared to the starting current.



Higher reliability through use of a polyconductor for connecting the coil block.



Range

	Name	Rated voltage, V	Solid cables max. size, mm ²	PCS/PACKAGE	PCS/CTN	Article
	KM20-20	230	6	8	120	MKK10-20-20
	KM25-40	400	35	4	60	MKK20-25-40
	KM40-40	400	35	4	60	MKK20-40-40
	KM63-40	400	35	4	60	MKK20-63-40

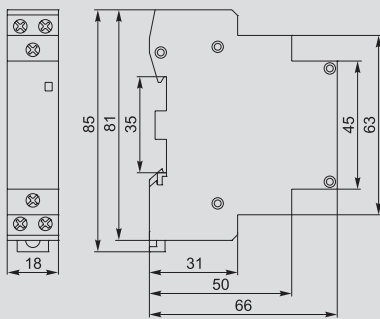
Technical features

Parameter	KM20-20	KM25-40	KM40-40	KM63-40	
Primary application category	AC-1, AC-7a, AC-7b	AC-1, AC-7a	AC-1, AC-7a	AC-1, AC-7a	
Number of poles	2	4	4	4	
Rated operating voltage U_e , V	230	400	400	400	
Rated frequency, Hz	50	50	50	50	
Rated insulation voltage U_i , V	500	500	500	500	
Rated operating current I_e , A	AC-1	20	25	40	63
	AC-7a	20	25	40	63
	AC-7b	9	–	–	–
Rated thermal current I_{th} , A	20	25	40	63	
Dissipated power per pole P_v , W/pole	1	1,2	3	6	
Rated coil voltage U_c , V	230	230 ⁽¹⁾	230 ⁽¹⁾	230 ⁽¹⁾	
Coil starting current, mA	30	60	60	94,5	
Coil holding current, mA	18	12	12	12	
Coil consumption Average pull-in value, max.	, V-A (at 230 V~)	8,5	13,8	13,8	21,7
	, W (at 220 V=)	–	13,8	13,8	21,7
Coil consumption Average holding value, max.	, V-A (at 230 V~)	4,0	3,0	3,0	3,0
	, W (at 220 V=)	–	3,0	3,0	3,0
Coil voltage range U_n , V	pull-in	195 ÷ 253	195 ÷ 253	195 ÷ 253	195 ÷ 253
	release	46 ÷ 172	46 ÷ 172	46 ÷ 172	46 ÷ 172
Rated conditional short-circuit current, A	3000	3000	3000	3000	
Solid cables max. size, mm ²	6	25	25	25	
Mechanical durability, cycles	10 ⁶	10 ⁶	10 ⁶	10 ⁶	
Electrical durability, cycles	0,15 · 10 ⁶	0,15 · 10 ⁶	0,15 · 10 ⁶	0,15 · 10 ⁶	
Protection degree	IP20	IP20	IP20	IP20	
Mounting	35 mm wide DIN-rail				

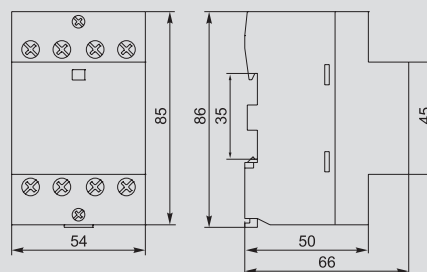
⁽¹⁾ – Magnetizing coil circuit is supplied with a rectifier bridge providing for using the contactors within the 220 VDC networks.

Dimension

KM20-20



KM25-40, KM40-40, KM63-40





Surge overvoltage protection device OPS1

SPECIALTY

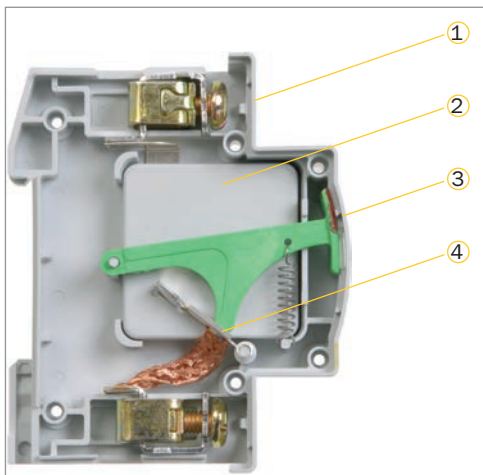
Surge overvoltage protection device OPS1 (SPD) is designed for protecting internal switching networks of residential and public buildings from lightning and surge switching overvoltages.



Advantages

- Higher operation reliability due to lower power dissipation.
- Improved ratings of residual voltage in case of the surge overvoltage.
- High fire safety level ensured by the integrated thermal protection of improved reliability.

Design Features



- 1 – Casing
- 2 – Protective element (varistor module)
- 3 – Operation indicator
- 4 – Fuse link (thermal protection)

- Modular design with standard dimensions and an option of DIN-rail installation.
- Notches on the terminal clamps prevent the wires from overheating and melting through tighter contact and higher contact area.
- It ensures low transient resistance and, therefore, leakage. Besides, it improves mechanical wear-resistance of connection.
- Device operation indicator.

Range

	Name*	Number of poles	Rated discharge current 8/20 μS, kA	Rated operating voltage, V	Maximum discharge current 8/20 μS, kA	PCS/ PACKAGE	PCS/CTN	Article
	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	3	5	230	10	1	40	MOP20-3-D
	OPS1-D 4P	4	5	230	10	1	30	MOP20-4-D

*** Class I (B):**

Protection against the direct lightning strikes into the building's lightning protection system or a power transmission line. OPS1 are installed at the entryway in the lead-in distributor (IDD) or the main switchboard (DBU).

Class II (C):

Protection of power distribution networks from the switching interference or as a second lightning protection level. OPS1 are installed in DBU.

Class III (D):

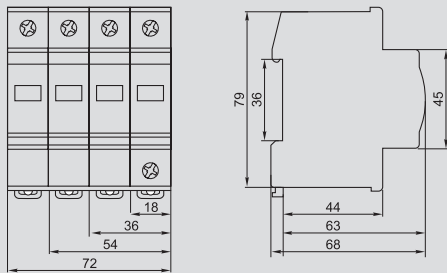
User protection against residual overvoltage surges, differential overvoltages, and serving as a high-frequency interference filter. OPS1 are installed in close proximity to the user.



Technical features

Parameter	OPS1 B (I)	OPS1 C (II)	OPS1 D (III)
Rated operation voltage, V	400	400	230
Maximum operating voltage, V	440	440	250
Rated discharge current 8/20 μ S, kA	30	20	5
Maximum discharge current 8/20 μ S, kA	60	40	10
Voltage protection level, max. U_p , kV	2,0	1,8	1,0
Classified voltage U_{ci} , V	700	650	420
Tripping time, max., ms	25	25	25
Number of poles	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4
Climate type – MRC4	BC4	BC4	BC4
Cables size, mm ²	4...25	4...25	4...25

Dimensions



Auxiliary modular devices

Auxiliary contact KS47 Signal auxiliary contact KSV47

KS47 and KSV47 are designed for receiving data on the status of VA47-29 and VA47 100 modular circuit breakers used in the industrial systems or for protecting the core objects.



KS47 fulfills a function of an additional circuit breaker contact or a RCD.

Switching of KS47 contacts is performed even if the lever is withheld in the lifted position.

KSV47 performs a function of an additional circuit breaker contact and a position indicator for the circuit breaker or RCD's triggering mechanism. After throwing KSV47 module into gear with the modular circuit breaker or RCD triggering mechanism there is a contact switching taking place at the first startup. KSV47 contacts remain closed (opened) at the manual shutoff of RCD or CB. Contacts switching will only take place at the response of the overcurrent device (overload or short circuit).

The module's upper surface is provided with a special platform. Pushing this platform triggers the compulsory reset of the mechanism and the contacts switching.


Ассортимент

	Name	Module width, mm	Rated operating voltage, V	Cables max. size, mm ²	PCS/PACKAGE	PCS/CTN	Article
	KS47	9	230	2,5	14	280	MVA00D-KS-1
	KSV47	9	230	2,5	14	280	MVA00D-AK-1

AE1031 to VA47-29 adapter

The adapter is designed for mounting the modular circuit breakers series into the old BDUs.

Range



	Name	Width, mm	PCS/PACKAGE	PCS/CTN	Article
	AE1031 to VA47-29 adapter	18	10	3600	MVA10D-AE1



Over- and undervoltage release RMM47 Shunt trip RN47

RMM47 over- and undervoltage release is designed for switching 1, 2 or 3-polar VA47 series circuit breakers off at the inadmissible rise or reduction of the circuit voltage. RN47 shunt trip is designed for a distance shutdown of 1, 2 or 3-polar VA47 series circuit breakers.

Range

	Name	Rated operating voltage, V	Cables max. size, mm ²	PCS/PACKAGE	PCS/CTN	Article
	RMM47	230	25	10	100	MVA00D-RMM
	RN47	230	25	10	100	MVA00D-RN


Auxiliary universal contacts KDU60 (for VA47-60 IEK modular circuit breaker)

SPECIALTY

KDU60 are designed for receiving data on the status of VA47-60 modular circuit breakers used in the industrial systems or for protecting the core objects. KDU60 fulfills a function of an additional circuit breaker contact or a RCD.

The device is supplied with two switching contacts: an auxiliary contact (AC) and a signal auxiliary contact (SAC). Depending on the function switch position SKIEC contact is enabled either as an auxiliary or a signal auxiliary contact.

Range

	Name	Module width, mm	Rated voltage, V	Cables max. size, mm ²	PCS/PACKAGE	PCS/CTN	Article
	KDU60	9	250	2,5	11	165	MVA30D-AKS

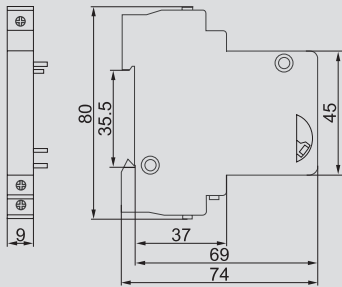


Technical features

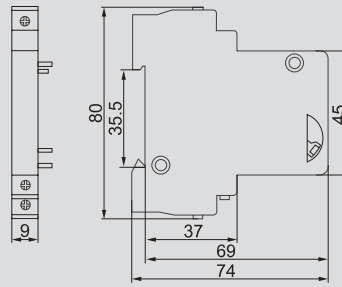
Parameter	KS47	KSB47	RMM47	RN47
Standards	GOST R 50030.2 99	GOST R 50030.2 99	TU 3429 023 18461115 2008	GOST R 50030.2 99
Rated voltage, V~	230	230	230	230
Tripping voltage, V	min. – max. –	–	165±10 265±10	–
Rated current I _n , A	4	4	–	–
Rated operating current, A	AC-13 DC-12	3 1	–	–
Power consumption, max., VA/W	–	–	3	3
Status indicator, on/off	N/A	white/red	–	–
Durability, not less than, 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
Compatibility	–	–	1-, 2-, 3-polar BA47-29, VA47-29M, VA47-100	1-, 2-, 3-polar BA47-29, VA47-29M, VA47-100
Connection to MCB	from the left	from the left	from the right	from the right
Module width, mm	9	9	18	18

Dimensions

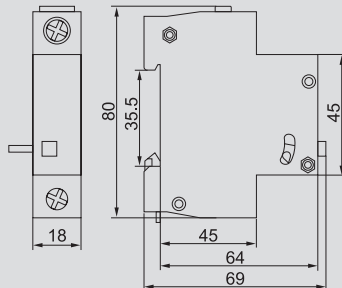
KS47



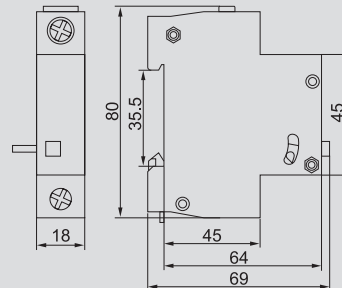
KSV47



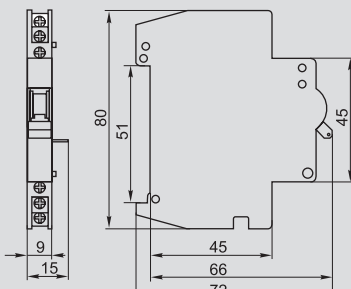
RMM47



RN47



KDU60



Digital timer switches TE15

These timer switches are designed for counting the time intervals, automatically turning the electrotechnical equipment on/off after the expiration of the preset time period during the week as well as managing various processes.


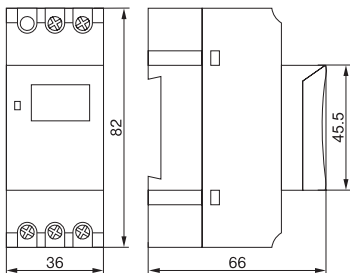
The timer can be used in industrial and domestic electric installations and should be installed in DBUs.

Preset control programs are intended for a week cycle. The timer switch supports four operating modes:

- all business days (MON-FRI);
- weekend (SAT, SUN);
- whole week (MON-SUN);
- any one day.

Manual on/off is possible any time.

Range

Dimensions	Name	Rated voltage, V	PCS/ PACKAGE	PCS/CTN	Article
 	TE15	230	1	100	MTA10-16

Technical features

Standards	GOST R 51342.2.3 99
Rated voltage, V	230
Rated frequency, Hz	50
Number of programs (on/off)	8
Minimum interval, min	1
Operating precision, max., s/day	2
Rated max. load current, A	при $\cos \varphi = 1$ 16 при $\cos \varphi = 0,5$ 8
Power consumption, max., W	5
Preset program saving, min, h	150
Ambient temperature, °C	-10÷+40
Mechanical durability, min, ops.	10 000 000
Electrical durability, min, ops.	100 000
Climatic type and location category	BC4
Protection degree	IP20
Weight, max., kg	0,15


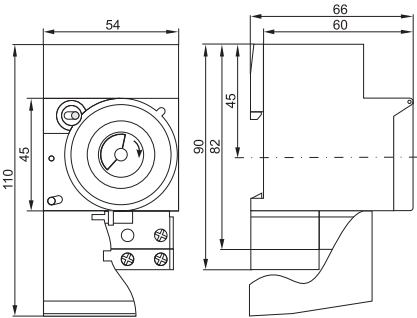


Analog timer switches TEM181

These timers are designed for counting the time intervals, automatically turning the electrotechnical equipment on/off after the lapse of preset time during the week as well as managing various processes. The timer can be used in industrial and domestic electric installations and should be installed in DBUs.

Preset control programs are intended for a day cycle. Manual on/off is possible any time.

Range

Dimensions	Name	Rated voltage, V	PCS/PACKAGE	PCS/CTN	Article
 	TEM181	230	1	100	MTA20-16

Technical features

Standards	GOST R 51342.2.3 99
Rated voltage, V	230
Operating voltage range	180 ÷ 264
Rated frequency, Hz	50
Number of programs (on/off)	24
Minimum interval, min	30
Operating precision, max., s/day	5
Rated max. load current of switching contacts, A (~230 V)	16
Power consumption, max., W	1
Preset program saving, min, h	72
Ambient temperature, °C	-10 ÷ +40
Mechanical durability, min, ops.	10 000 000
Electrical durability, min, ops.	100 000
Climatic type and location category	BC4
Protection degree	IP20
Weight, max., kg	0,15


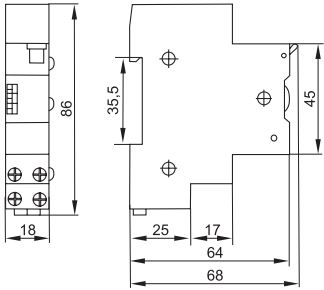


Lighting time-delay switches T0-47

Lighting time-delay switches are designed for the automated turning the stair landing's, corridor or another object's lighting on/off during the preset time interval (1 to 7 min).

The timer is used in the lighting circuits having the wattage of up to 3,5 kW and is intended for exploitation together with light bulbs and halogen tubes.

Range

	Dimensions	Name	Rated voltage, V	PCS/PACKAGE	PCS/CTN	Article
		T047	230	1	200	MTA30-16

Technical features


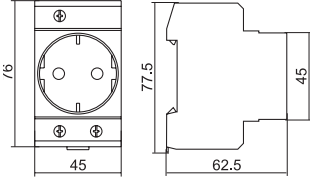
Standards	GOST R 51342.2.3 99
Rated supply voltage, V	230
Rated control voltage, V	230
Control button output current, max., mA	50
Time delay adjustment range, min	1 ÷ 7
Minimum interval, min	0,5
ON-delay, max., sec.	1
Ambient temperature, °C	-25 ÷ +50
Mechanical durability, not less than, ops.	10 000 000
Electrical durability, not less than, ops.	100 000
Climat type and placement category	BC4
Protection degree	IP20
Cables max. size, mm ²	4,0



Schuko socket RAr10-3-OP

It is designed for installing in DBUs and is intended for plugging in a lower power portable light or an electrical instrument during servicing or mending items within the electrical mating at the installation site.


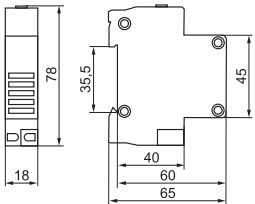
Range

	Dimensions 	Name	Rated voltage, V	Rated current, A	Module width, mm	PCS/PACKAGE PCS/CTN mult./trans.	Article
		RAr10-3-OP	250	16	45	5/100	MRD10-16

Bell alarm ZD-47

It serves as an emergency alarm indicating the occurrence of any contingency in the operated electrical circuit.

Range


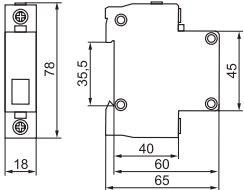

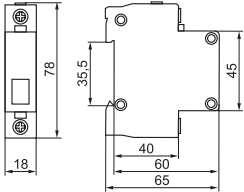
	Dimensions 	Name	Rated voltage, V	Rated current, A	Sound intensity, dB	Power rating, VA	PCS/PACKAGE PCS/CTN mult./trans.	Article
		ZD-47	230	60	60	1	12/120	MZD10-230



Indicator lamp LS-47 with a neon lamp Indicator lamp LS-47M with a LED matrix

They are designed for performing the function of warning on the status of the operating electrical circuit.


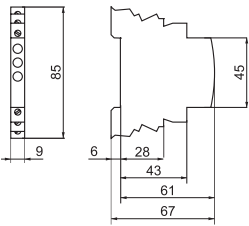
Range

	Dimensions	Name	Rated voltage, V	Power rating, W	PCS/PACKAGE PCS/CTN mult./trans.	Article
		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-K05
		LS-47M (yellow)	230		12/120	MLS20-230-K06
		LS-47M (green)	230		12/120	MLS20-230-K04
		LS-47M (blue)	230		12/120	MLS20-230-K07

Phase Indicator

It is designed for indicating the availability of voltage in each phase.

Range


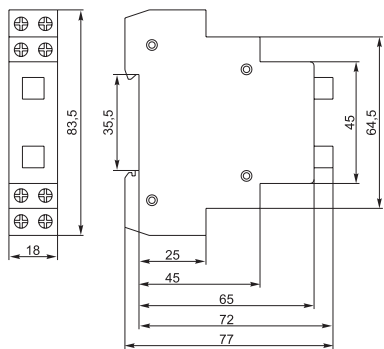
	Dimensions	Name	Rated voltage, V	Module width, mm	PCS/PACKAGE PCS/CTN mult./trans.	Article
		Phase indicator	400	9	24/480	MIF10-400



Module control button KMU11

KMU-11 type module control buttons are designed for the operational management of magnetic starters (contactors), automations relays and other technological equipment in the AC voltage circuits up to 230 V.

Range

Dimensions	Name	Rated voltage, V	Cables max. size, mm ²	PCS/PACKAGE	PCS/CTN	Article
 	KMU11	110 ~, 230 =	6	12	144	MBD10-11-K51

Technical features

Parameter	Value		
Conventional free air thermal current I _{th} , A	20		
Rated voltage, V	AC	230	
	DC	110	
Rated contact current, A	Category of application		AC-12 AC-13
	AC, V	230	10 7,5
		120	12,5 10
		48	12,5 10
	Category of application		DC-12 DC-13
	DC, V	110	2,5 0,6
48		5 1,3	
24		10 2,5	
Nominal insulating voltage U _i , V	400		
Number of contacts, pcs.	normally closed	1	
	normally opened	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, power cycles · 10 ⁶	0,6		
Electrical durability, power cycles · 10 ⁶	0,3		
Cables max. size, mm ²	6		
Tightening torque, N · m	0,4		
Protection degree	IP20		
Installation type	35 mm wide DIN-rail		