

ELECTRUM



relays

1. Type of commutated voltage

- relay of direct voltage;
- relay of alternating voltage.

2. Type of power switch

- relay based on thyristors;
- relay based on transistors.

3. Type of control circuit

- relay based on opto decoupling;
- relay based on transformer decoupling.

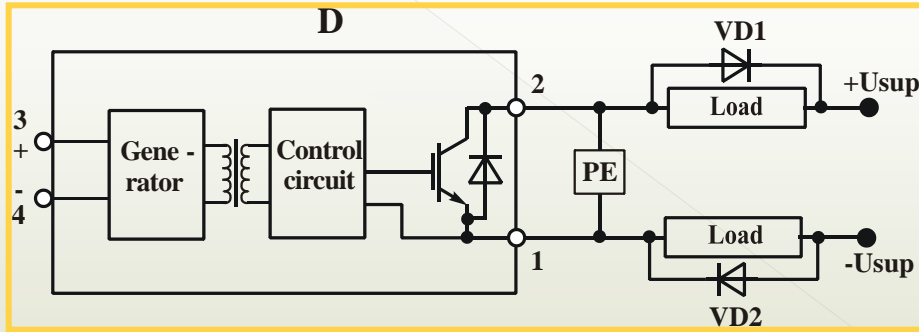
4. Peak voltage

- low-voltage relay: up to 250 V based on MOSFET-transistors;
- high-voltage relay: up to 1600 V based on IGBT-transistors or thyristors.

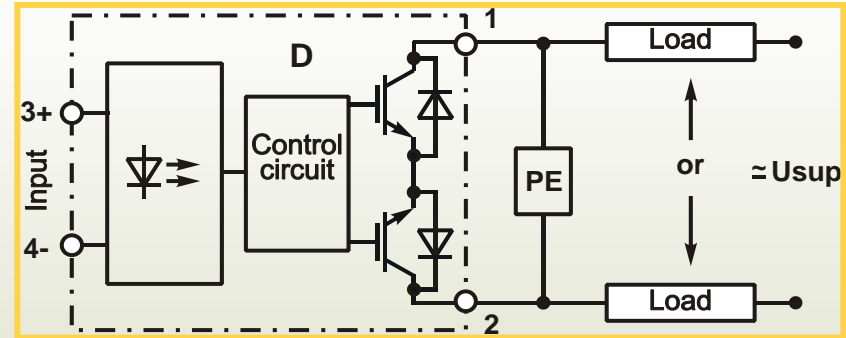
5. Maximum average current

- low power (up to 10 A);
- average power (up to 120 A);
- high power (higher than 120 A).

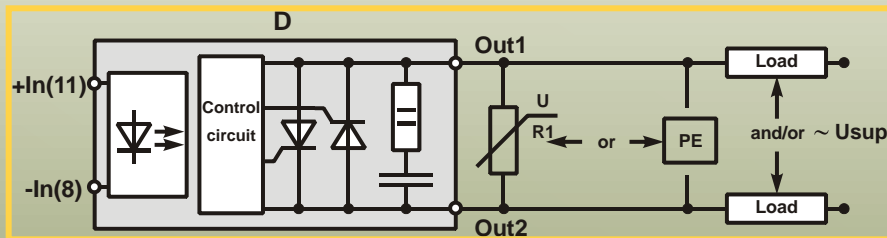
BASIC RELAYS' TYPE



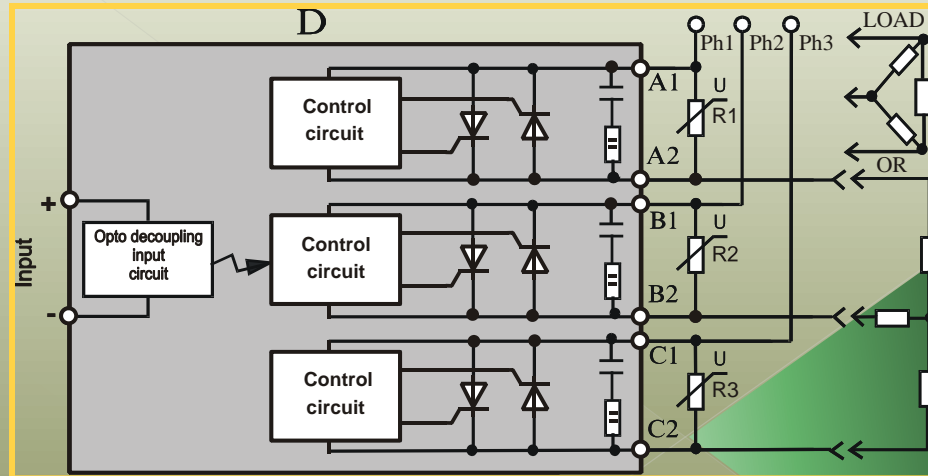
DIRECT VOLTAGE TRANSISTOR RELAY



ALTERNATING VOLTAGE TRANSISTOR RELAY



SINGLE-PHASE THYRISTOR RELAY



THREE-PHASE THYRISTOR RELAY

Relay selection of alternating voltage

Switch type	Current protection	Quantity of phases	≤250 V	600,1200,1600 V		
			≤300 A	≤10 A	25...120 A	120...320 A
Thyristor	no	1	-	1xMO8-PP	1xMO8	1xMO8
		3	-	3xMO8-PP	1xMO26	3xMO8
	yes	1	-	1xMO8-T		1xMO8-T
		3	-	1xMO26-T		3xMO8-T
Transistor	no	1	1xMT16 or 1xMO16	1xMT16 or 1xMO16		-
		3	3xMT16 or 3xMO16	3xMT16 or 3xMO16		-
	yes	1	1xMT16PT	1xMT16PT		-
		3	3xMT16PT	1xMT16PT		-

The devices MO8 and MO26 are produced in two versions: without control of phase zero transient (ver. A, B, C) and with control of phase zero transient (ver. MA, MB, MC).

RELAY NOMENCLATURE OF ALTERNATING VOLTAGE

Type	Peak voltage, V						
	60	100	200	250	600	1200	1600
MO8						25,40,63, 100,160,250	25,40,63, 100,160,250
MO8-T						25,40,63,80, 100,120,160, 200,250,320	25,40,63,80, 100,120,160, 200,250,320
MO8-PP1					4	4	
MO8-PP2					4	4	
MO8-PP3					10	10	
MO8-PP4					4	4	
MO8-PP5					10	10	
MO26						25,40, 63,100	25,40, 63,100
MO26-T						25,40, 63,100	25,40, 63,100
MO16	10,20,40,60, 80,120, 200,300	5,10,20,40, 60,80,120, 160,200,240	5,10,20,40, 60,80,120, 160,200	5,10,20,30, 40,60,80,120	5,10,20,30, 40,60,80, 120,160	5,10,20,30, 40,60,80,120	
MT16	10,20,40,60, 80,120, 200,300	5,10,20,40, 60,80,120, 160,200,240	5,10,20,40, 60,80,120, 160,200	5,10,20,30, 40,60,80,120	5,10,20,30, 40,60,80, 120,160	5,10,20,30, 40,60,80,120	
MT16-PT	5,10,20, 30,40	5,10,20,30	5,10,20, 30,40	5,10,20,30	5,10,20, 30,40	5,10,20, 30,40	

In the cells is shown an amount of maximum module average current

Relay selection of direct voltage

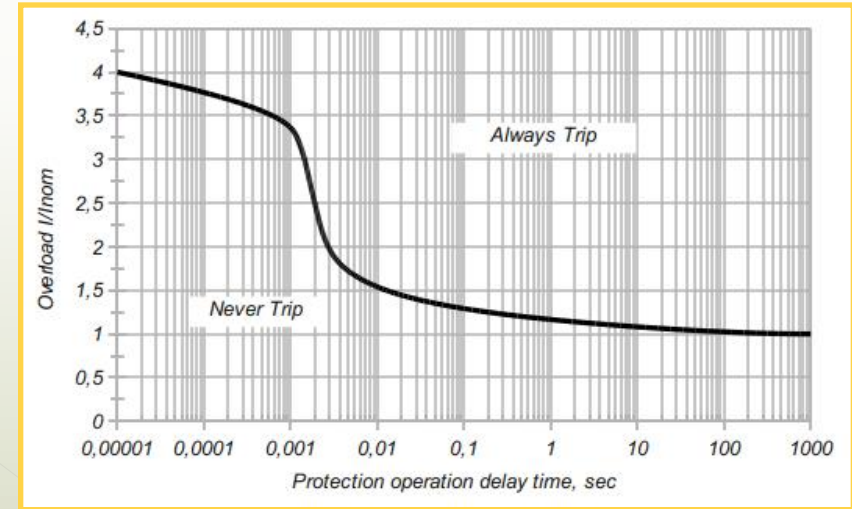
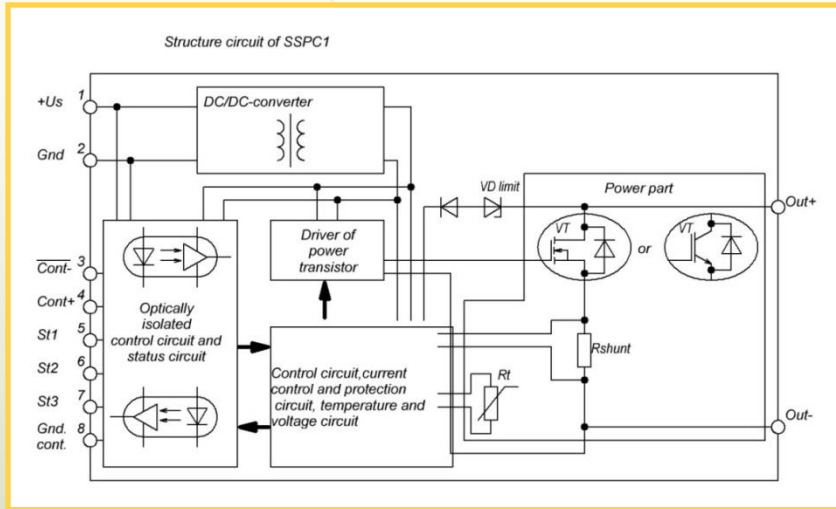
Insulation type	Current protection	≤250 V		600,1200 V	
		≤10 A	≤400 A	≤10 A	≤300 A
Transformer	no	1xMT14PP or 1xSSVC	1xMT14	1xMT15PP	1xMT15
	yes	1xMT14PP-PT	1xMT14PT	1xMT15PP-PT	1xMT15PT
Optical	no	1xMO14		1xMO15	
	yes	-	-	-	-

Peak voltage up to 250 V – relays based on MOSFET- transistors.

Peak voltage 600 V or 1200 V – relays based on IGBT- transistors.

RELAY NOMENCLATURE OF DIRECT VOLTAGE

Type	Peak voltage, V						
	60	100	200	250	400	600	1200
MO14	10,20,40,60,80,120 200,240,300,400	5,10,20,40,60,80, 120,160,200,240, 300,400	5,10,20,40,60,80, 120,160,200,240, 300,400	10,20,40,60, 80,120,160, 200,240			
MO15						5,10,20,30,40,60, 80,120,160,200, 240,300	5,10,20,30,40,60, 80,120,160,200, 240,300
MT14	10,20,40,60, 80,120,200, 240,300,400	5,10,20,40, 60,80,120,160,200, 240,300,400	5,10,20,30, 40,60,80,120,160, 200,240,320,400	5,10,20,40, 60,80,120, 160,200,240			
MT15						5,10,20,30,40,60, 80,120,160,180, 240,300	5,10,20,40,60,80, 120,160,180, 240,300
MT14-PT	10,20,60,90, 120,150,240, 320,400	5,10,20,40,60,90, 120,150,180, 240,320	5,10,20,60, 90,120,150, 180,240	5,10,20,30, 40,50,60,90, 120,150,180			
MT15-PT						5,10,20,30,40,50, 60,75,90,120,150, 180,240	5,10,20,30,40,50, 60,75,90,120,150, 180,240
MT14-PP1		5	5		2,5 , 5	5	
MT14-PP2		5	5		2,5 , 5	5	
MT14-PP6		2,5	2,5				
MT15-PP1						2,5	2,5
MT15-PP6						2,5	2,5
MT14PT-PP1	5	2,5 , 5	2,5 , 5		5		
MT14PT-PP2	5	2,5 , 5	2,5 , 5		5		
MT14PT-PP3	10	10	8		5		
2MT14PT-PP4	5	2,5 , 5	2,5 , 5		2,5		
2MT14PT-PP5	10	10	8		5		
MT15PT-PP1						2	2
MT15PT-PP2						2	2
MT15PT-PP3						4	4
SSVC		5,10	5,10				

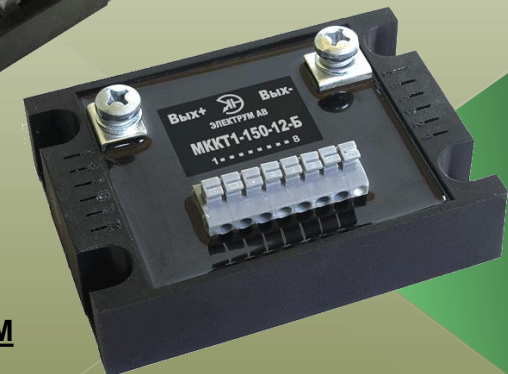


SSPC modules are also DC relays, but unlike all the above relays they have intelligent current protection circuit with non-linear characteristics and protection criteria I^2t .

Type	Peak voltage, V					
	60	100	200	400	600	1200
SSPC	2,5,10,20,30,40					
SSPC-DM	50,60,75,90,120,150,180,240,320					



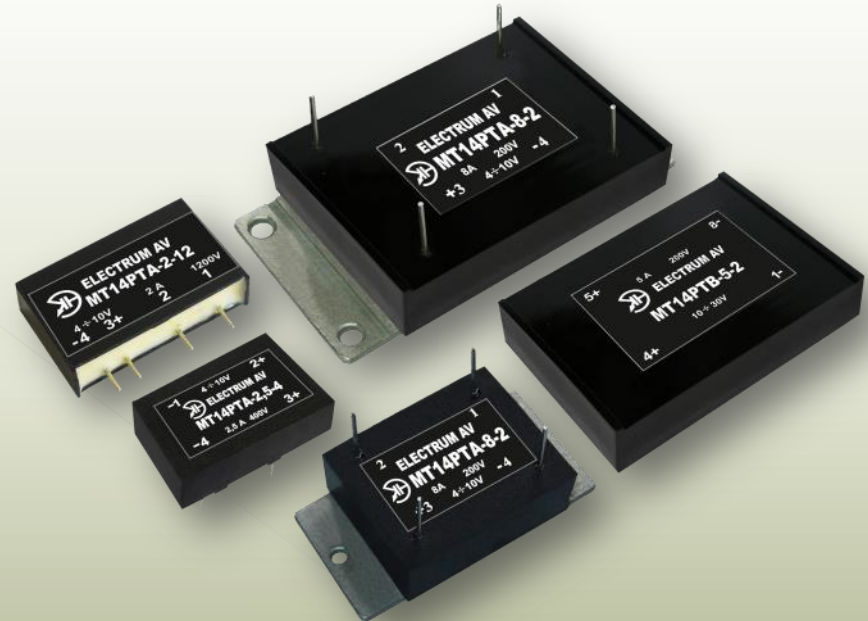
SSPC



SSPC-DM



RELAY WITH COMMUTATED CURRENT UP TO 400 A



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