

ELECTRUM



rectifier bridges

1. Quantity of phases

- single;
- three.

2. Controllability

- non-controlled bridge (diode);
- not fully controllable (thyristor-diode);
- fully controllable (thyristor).

3. Thyristors type

- thyristors;
- opto thyristors.

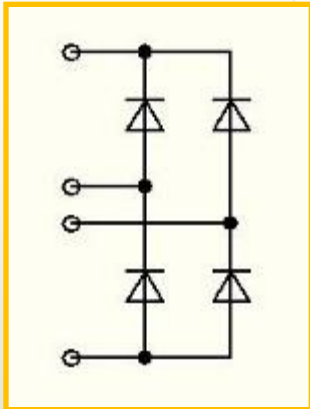
4. Maximum reverse voltage of diodes/thyristors

- low-voltage (up to 200 V);
- average voltage (1200 or 1600 V);
- high-voltage (2500...6500 V).

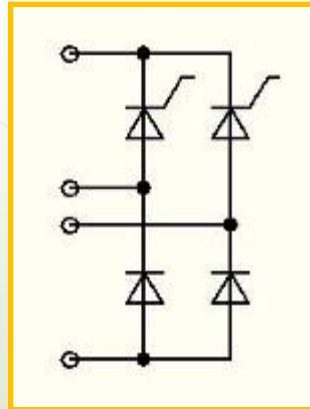
5. Maximum average rectified current

- low power (up to 25 A);
- average power (25...250 A);
- high power (higher than 250 A).

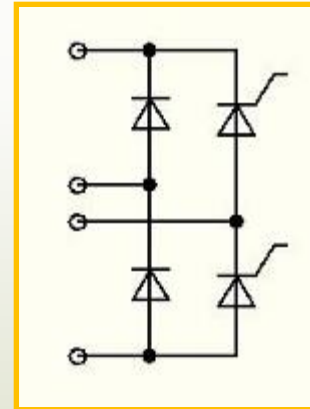
NEW SEMICONDUCTOR POWER IS COMING...



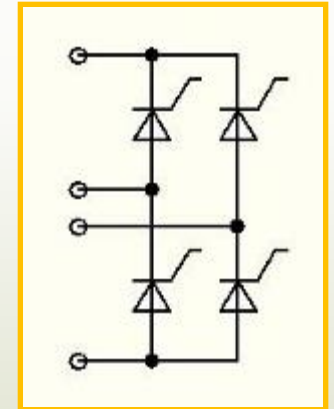
M5



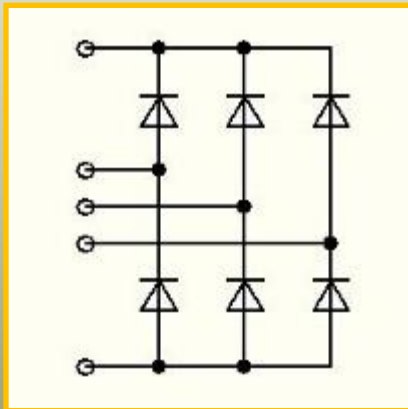
M20



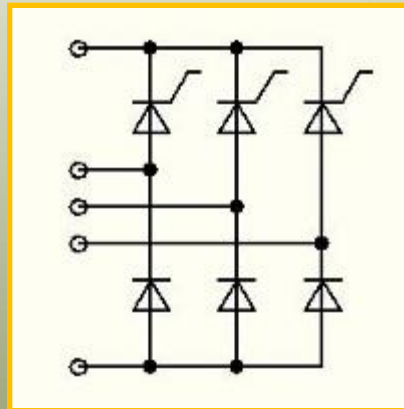
M21



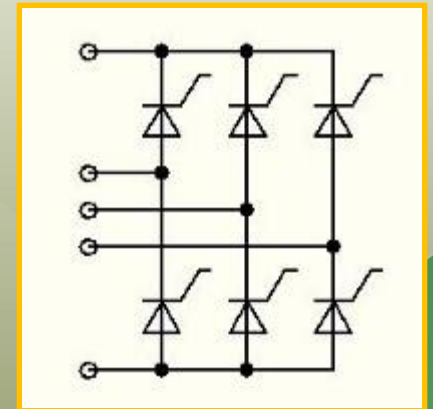
M22



M6

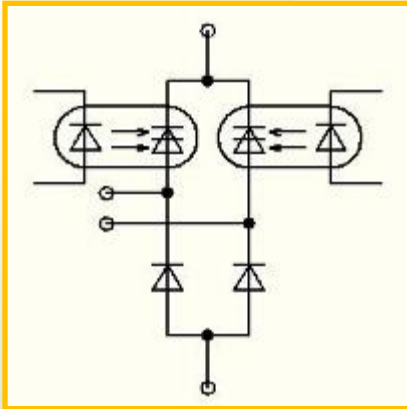


M23

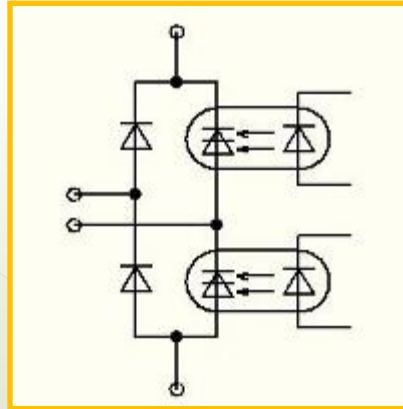


M24

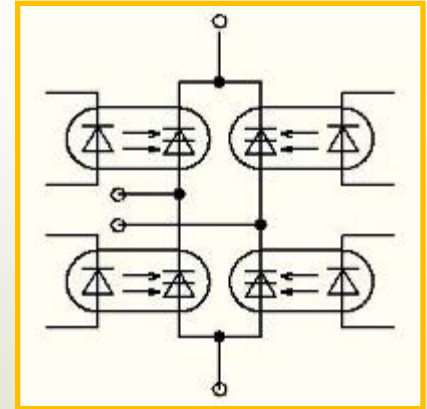
NEW SEMICONDUCTOR POWER IS COMING...



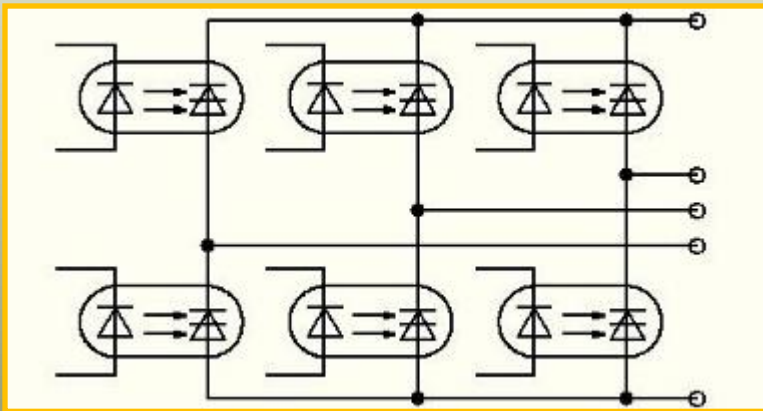
MO20



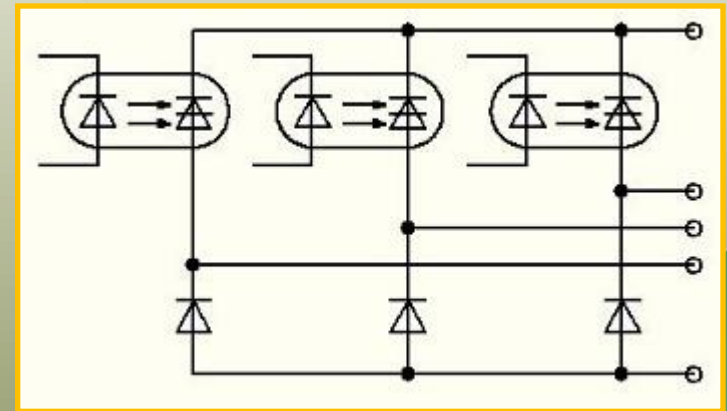
MO21



MO22

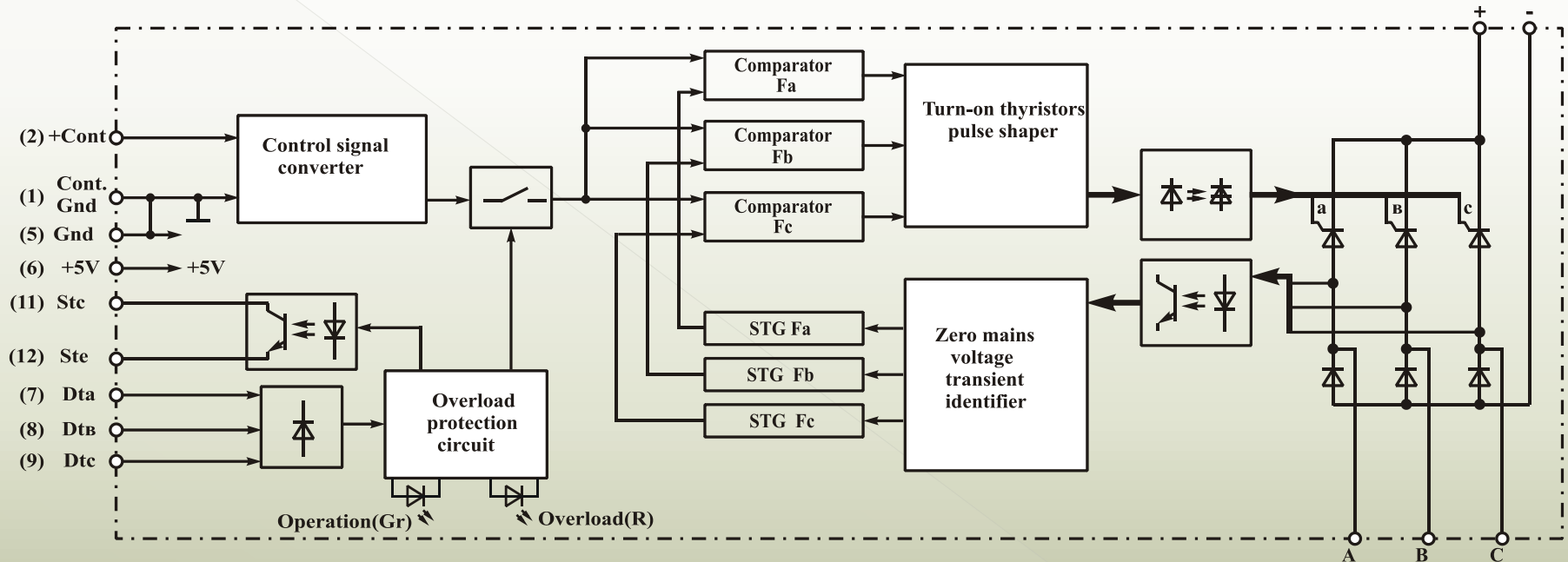


MO23



MO24

NEW SEMICONDUCTOR POWER IS COMING...



A module of three-phase MO30 and single-phase MO30.1 of regulated rectifier is intended to form rectified voltage that regulated by phase method from alternating voltage 50 or 400 Hz.

The module provides the following functions:

- rectifying of alternating voltage;
- changing of direct voltage amplitude on output by phase method;
- smooth start at switch on supply;
- protection against current overload;
- indication of supply voltage presence and current protection operation.

Assembly type selection for bridges with peak voltage 1200 V or 1600 V

Control	Quantity of phases	Rectified current, A		
		≤6	≤45	45...250
Non-controlled one (diode)	1	1xM5-PP2	1xM5-PP3 or 1xRM-5	1xM5
	3	1xM6-PP2	1xM6-PP3	1xM6
Thyristor-diode one (thyristors in cathode group)	1	1xRM-1		1xM20
	3	1xM23		
Controlled one (thyristor)	1	1xRM-3		1xM22
	3	1xM24		
Controlled opto thyristor one (thyristors in cathode group)	1	1xMO20		
	3	1xMO23		
Controlled opto thyristor one (thyristors in cathode group)	1	1xMO22		
	3	1xMO24		
Bridge with control (thyristors in cathode group)	1	1xMO30.1		
	3	1xMO30 or 3phCRD + 1xM23		
Bridge with control (fully thyristor one)	1	-		
	3	3phCRD-6-Din + 1xM24		

Single-phase bridges

Type	Maximum output average current, A							
	6,3	15	25	45	63	100	160	250
M5					+	+	+	+
M5M					+	+		
M5-PP3			+					
M5-PP2.1	+							
M20					+	+	+	+
M22					+	+	+	
RM-1		+	+	+				
RM-3		+	+	+				
RM-5		+	+	+				
MO20					+	+	+	+
MO22					+	+	+	
MO30.1					+	+	+	

Three-phase bridges

Type	Maximum output average current, A							
	6,3	15	25	45	63	100	160	250
M6					+	+	+	+
M6M					+	+		
M6-PP3			+					
M6-PP2.1	+							
M23					+	+	+	+
M23M					+	+		
M24					+	+	+	+
M24M					+	+		
MO23					+	+	+	+
MO24					+	+	+	+
MO30					+	+	+	+

Assembly type selection for high-voltage bridges

Quantity of phases	Reverse voltage, V	Rectified current, A		
		≤25	≤100	≤200
1	3300	M5FRD	2xM4FRD	2xM4FRD
3		3xM4FRD	3xM4FRD	3xM4FRD
1	6500	M5FRD	2xM4FRD	-
3		3xM4FRD	3xM4FRD	-

Modules nomenclature based on high-voltage fast-recovery diodes

Quantity of phases	Reverse voltage, V	Rectified current, A			
		25	50	100	200
M4	33			+	+
	65		+	+	
M5	33	+			



M6 (CURRENT
250 A)



M24M (CURRENT
100 A)



M6-PP3 (CURRENT
20 A)



M21 (CURRENT
63 A)



3phCRD-6 – SPECIALIZED DRIVER OF FULL THYRISTOR OF 3-ph RECTIFIER BRIDGE



3phCRD – SPECIALIZED DRIVER OF THREE THYRISTORS OF 3-ph RECTIFIER BRIDGE



NON-SPECIALIZED DRIVERS ARE INTENDED TO CONVERT INPUT LOGIC SIGNAL INTO THYRISTOR CONTROL SIGNAL

TD – SINGLE-CHANNEL DRIVER
OUTPUT CURRENT – 1 A
THYRISTOR VOLTAGE – UP TO 6500 V

TTMD – THREE-CHANNEL DRIVER
OUTPUT CURRENT – 0.2 A
THYRISTOR VOLTAGE – UP TO 1700 V

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