

OPTOTHYRISTOR MODULES

MO1-25(40,63,80,100,125,160,200,250)-12; MO1A-25(40,63,80,100,125,160,200,250)-12
DATASHEET IN BRIEF

Thyristor-thyristor module with opto decoupling is designed for using in switch elements of controlled rectifiers, converters (inverters), power regulators for powerful loads of DC and AC.

OVERALL DRAWINGS

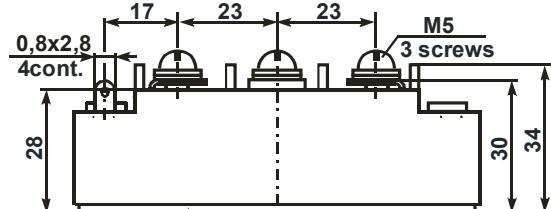


Figure 1

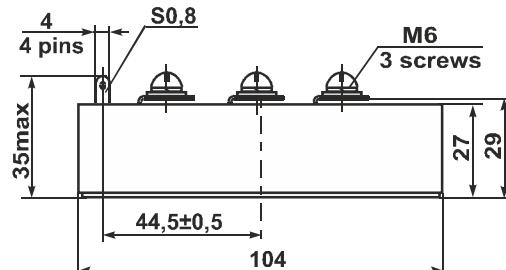
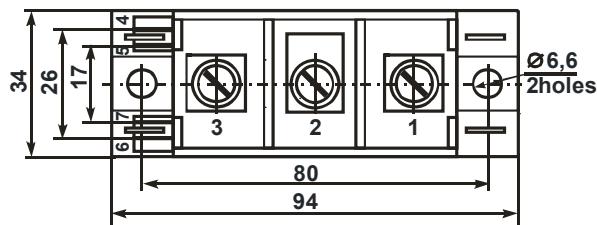


Figure 2



This technical drawing shows a rectangular component with various dimensions and features:

- Width:** The total width is 92.
- Height:** The total height is 74.
- Top Edge:** The top edge has two holes at the corners and a central slot labeled K1.
- Bottom Edge:** The bottom edge has two holes at the corners and a central slot labeled A1K2.
- Left Edge:** The left edge has three holes labeled 1, 2, and 3 from top to bottom, with a total height of 47.6 between them. The distance between hole 1 and hole 2 is 3x5=15.
- Right Edge:** The right edge has two holes labeled A2 and A1 from top to bottom, with a total height of 30±0.5 between them. The distance between hole A2 and hole A1 is 74.
- Bottom Hole:** A circular hole labeled Ø 5.5 with 4 holes is located at the bottom right corner.
- Side Holes:** There are two side holes at the top and bottom edges, each indicated by a circle with a cross.
- Central Dimensions:** Two horizontal dimensions of 27±0.5 are shown above the top edge, and one dimension of 1 is shown above the central slot K1.

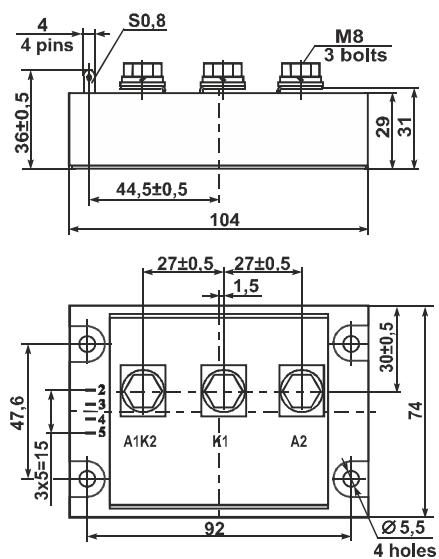


Figure 3

Product description	Figure
MO1(A)-25-12	1, 4
MO1(A)-40-12	1, 4
MO1(A)-63-12	1, 4
MO1(A)-80-12	1, 4
MO1(A)-100-12	1, 4
MO1(A)-125-12	1, 4
MO1(A)-120-12	1, 4 or 2, 5
MO1(A)-200-12	3, 5
MO1(A)-250-12	3, 5

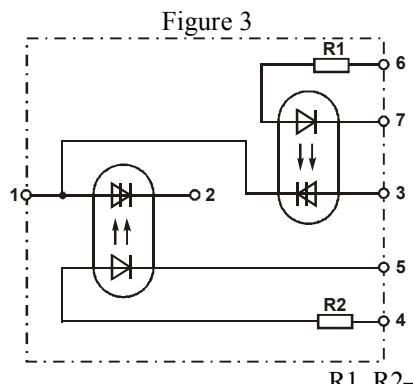
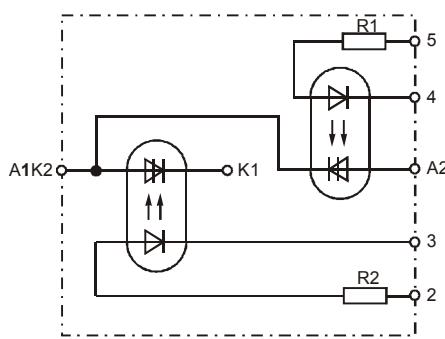


Figure 4



R1, R2 – limiting resistors $100\ \Omega$ $0.125\ \text{W}$

Figure 5

BASIC CHARACTERISTICS

$T = 25 \text{ }^{\circ}\text{C}$

Product name	Pulse open state voltage, U_{TM} , V	Closed state DC/reverse current, I_D / I_R , mA	On state voltage loss on control input , U_{Gon} , V ($I_{Gon}=10 \text{ mA}$)	Electric isolation strength at DC, U_{ISOL} , V	Isolation resistance between power and controlling outputs, R_{ISOL} , MΩ	Isolation resistance between power and controlling outputs and package radiator, $R_{ISOL \text{ in-out}}$, MΩ	Thermal resistance transition-package radiator R_{thic} , °C/W			
	I_{OUT} , A	U_{OUT} , V	min	max			U , V	max		
			max	min			min			
MO1-25-12	1.65	1	±1200	3.0	4.0	4000	1	100		
MO1-40-12										
MO1-63-12										
MO1-80-12										
MO1-100-12										
MO1-125-12										
MO1-160-12										
MO1-200-12										
MO1-250-12										
Note –module characteristics values of kind MO1A are identical to the characteristic values of corresponding modules MO1										

MAXIMUM PERMISSIBLE OPERATING MODES

Product name	Repetitive pulse reverse voltage/closed state, U_{RRM} / U_{DRM} , V	Average open state current with cooler $I_{T(AV)}$, A, $T_c=85 \text{ }^{\circ}\text{C}$	Controlling input current corresponding to on-state, I_{Gon} , mA		Controlling pulse input current corresponding to on-state, I_{GMon} , mA		Input off state voltage, U_{Goff} , V	Surge on state current*, I_{TSM} , A	Switching voltage, U_{sw} , V	Critical rate of rise of off-state voltage, $(du_d / dt)_{cr}$, V/μs	Critical rate of rise of on-state current, $(di_T / dt)_{cr}$, A/ μs	Junction temperature, T_{vj}^{***} , °C
			max	min	max	t, μs	Q	min	max	max	t, ms	min
MO1-25-12	±1200	10	25	100	100	10	- 3,5	0.8	10	50**	840	1000
MO1-40-12												
MO1-63-12												
MO1-80-12												
MO1-100-12												
MO1-125-12												
MO1-160-12												
MO1-200-12												
MO1-250-12												
* to thyristor												
**10 V – for modules of kind MO1A (the value of remaining modes of modules kinds MO1A are identical with modes values of corresponding modules MO1)												
***the modules are designed for operating in the equipment with using of coolers supporting transition temperature in the prescribed ranges												

Precious metals are not contained

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