

THYRISTOR-THYRISTOR MODULES

M1-25(40,63,80,100,125,160,200,250)-16

DATASHEET IN BRIEF

Thyristor-thyristor modules are intended for using in switch elements of controllable rectifiers, converters (inverters), power regulators for powerful DC and AC loads.

OVERALL DRAWINGS

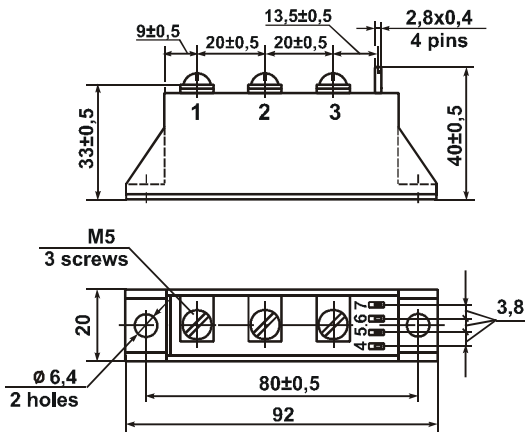


Figure 1

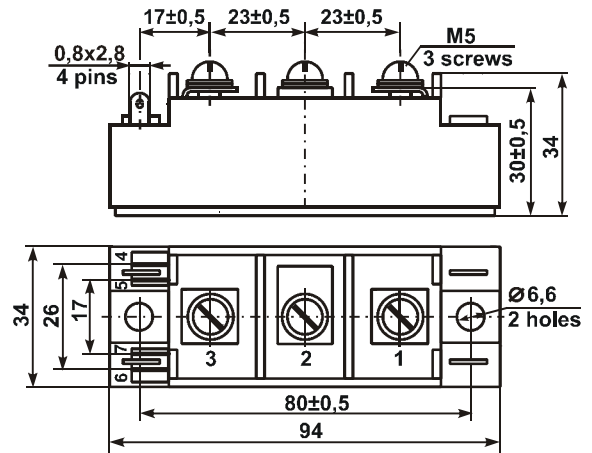


Figure 2

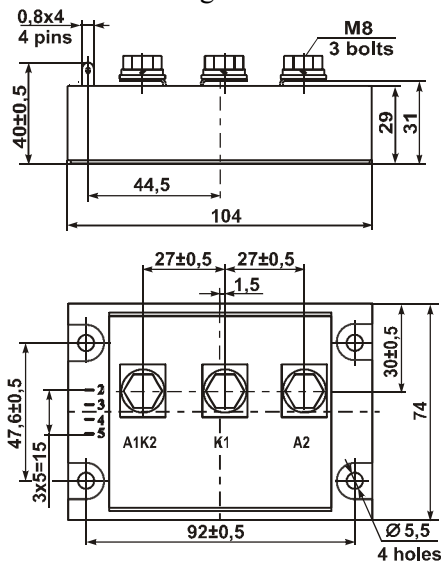


Figure 3

Product description	Figure
M1-25-16	1 or 2, 4
M1-40-16	1 or 2, 4
M1-63-16	1 or 2, 4
M1-80-16	1 or 2, 4
M1-100-16	2, 4
M1-125-16	2, 4
M1-160-16	2, 4
M1-200-16	3, 5
M1-250-16	3, 5

INTERNAL CONNECTION CIRCUITS

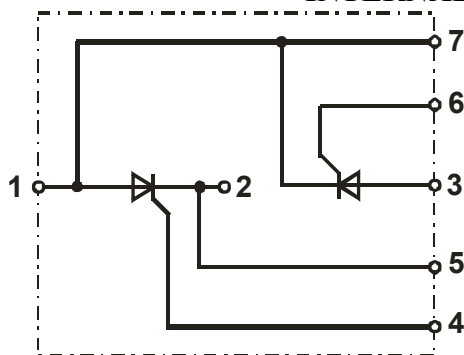


Figure 4

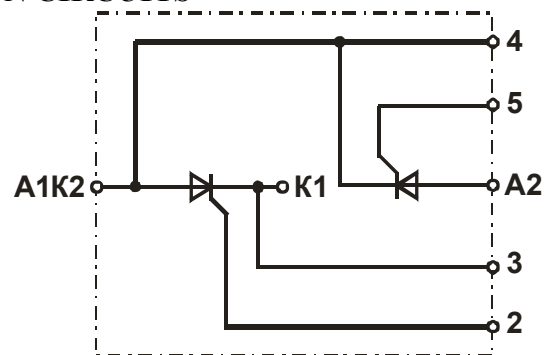


Figure 5

BASIC CHARACTERISTICS

T = 25 °C

Product name	Pulse on-state voltage, U_{TM} , V		Repetitive peak off-state current, I_{DRM} , mA		Repetitive peak reverse thyristor current, I_{RRM} , mA		Gate trigger DC voltage, U_{GT} , V	Gate trigger DC I_{GT} , mA	Electric isolation strength at DC between radiator and power outputs, U_{ISOL} , V		Gate non-trigger DC voltage, U_{GD} , (V) $T_j = 125^\circ\text{C}$	Thermal junction-cooler resistance, $R_{th(j-c)}$, ($^\circ\text{C}/\text{W}$)
	max	I_{OUT} , A ampl. value	max	U_{OUT} , V	max	U_{OUT} , V	max	max	min	t, minute	max	max
M1-25-16	1.65	$\pi \cdot I_{T(AV)}$, 10 ms, 50 Hz, sinus	1.0	± 1600	1.0	± 1600	2.0	150	4000	1	0.25	1.5
M1-40-16												0.7
M1-63-16												0.55
M1-80-16												0.45
M1-100-16												0.3
M1-125-16												0.25
M1-160-16												0.22
M1-200-16												0.22
M1-250-16												0.17

MAXIMUM ALLOWABLE OPERATING MODES

Product name	Repetitive thyristor pulse reverse voltage/ off-state, U_{RRM} / U_{DRM} , V	Average open state current with cooler $I_{T(AV)}^*$, A, $T_c=85^\circ\text{C}$	Commutation voltage, U_{com} , V	Surge on-state current, I_{TSM}^* , A		Critical speed of voltage build-up in off-state, $(du_d / dt)_{cr}$, V/ μs	Critical rate of rise of on-state current, $(di_T / dt)_{cr}$, A/ μs	Junction temperature, T_{vj}^{**} , $^\circ\text{C}$	
				max	t, ms			max	max
M1-25-16	± 1600	25	1150	200	10	1000	150	- 40	+125
M1-40-16		40		560					
M1-63-16		63		720					
M1-80-16		80		960					
M1-100-16		100		1350					
M1-125-16		125		2500					
M1-160-16		160		4000					
M1-200-16		200		5000					
M1-250-16		250		6000					

* to thyristor

** the modules are designed to operate in equipment with using of coolers that support transition temperature in the prescribed ranges

Precious metals are not contained.

5 Naugorskoe shosse, Orel, 302020, Russia Tel. +7(4862) 44-03-44, Fax +7(4862) 47-02-12

E-mail: mail@electrum-av.com