

## SINGLE-PHASE THYRISTOR-DIODE BRIDGE MODULE

M20-100-16; M20-160-16; M20-200-16; M20-250-16

### DATASHEET IN BRIEF

Single-phase thyristor-diode bridge module with thyristors control, connected to “positive” output, is intended for rectifying (for use it as a control rectifier).

#### OVERALL DRAWING AND ELECTRIC CIRCUIT

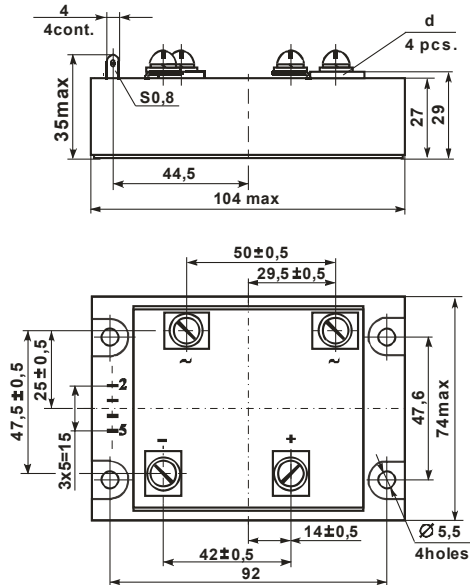


Figure 1

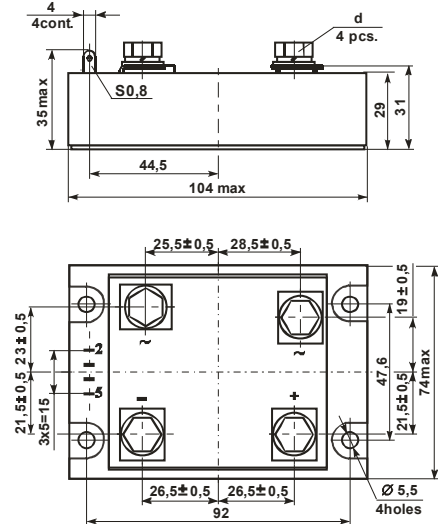
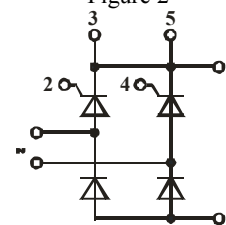


Figure 2

Product description	Figure	d
M20-100-16	1	screw M5
M20-160-16	1	screw M6
M20-200-16	2	bolt M8
M20-250-16	2	bolt M8



#### BASIC CHARACTERISTICS

T = 25 °C

Product name	Pulse voltage: open state/ direct diode, $U_{TM} / U_{FM}$	Closed state current/valve DC, $I_D / I_R$ , mA		Thyristor hold on current, $I_H$ , mA	Thyristor turn-on current, $I_b$ , mA	Thyristor gate trigger DC voltage, $U_{GT}$ , V	Thyristor gate trigger DC, $I_{GT}$ , mA	Electric isolation strength at DC between radiator and outputs,		Thyristor non-trigger DC voltage, $U_{GD}$ , V $T_j = 125\text{ °C}$	Thermal junction-radiator resistance $R_{th(j-c)}$ , °C/W		
		$I_O$ , A	$U_O$ , V					$U_{ISOL}$ , V	t, minute		thyristor	diode	
M20-100-16	1.65	$\frac{\pi}{2} \cdot I_O$ , 10 ms, 50 Hz, sinus	1.5	± 1600	200	400	3.0	200	4000	1	0.25	0.50	0.60
M20-160-16												0.35	0.40
M20-200-16												0.20	0.18
M20-250-16												0.15	0.13

#### MAXIMUM ALLOWABLE OPERATING MODES

Product name	Pulse non-repetitive voltage: Thyristor off-state/ reverse diode, $U_{DSM} / U_{RSM}$ , V	Pulse repetitive voltage: of-state / reverse diode, $U_{DRM} / U_{RRM}$ , V	Average rectified current, $I_O$ , A $T_r=75\text{ °C}$	Linear voltage (rms.), $U_{lin}$ , V	Non-repetitive surge DC, $I_{TSM} I_{FSM}$ , A	Maximum switching frequency, kHz	Critical rate of rise of reverse voltage, $(du_R / dt)_{cr}$ , V/μs	DC critical rate of rise, $(di_T / dt)_{cr}$ , A/μs	Junction temperature $T_{VJ}$ *, °C	
									min	max
M20-100-16	± 1600	± 1600	100	1150	600	3	1000	150	- 40	+125
M20-160-16			160		1200					
M20-200-16			200		1400					
M20-250-16			250		1600					

\*the modules are designed for operating in the equipment with using of coolers that support transition temperature in the prescribed ranges

Precious metals are not contained

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