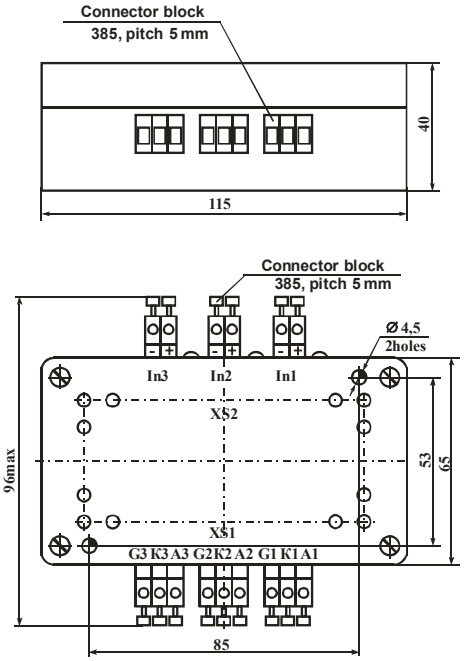
THYRISTOR DRIVER
TTMD
TICKET

Thyristor driver TTMD – three thyristor driver with independent control of three thyristors with maximum anode-cathode voltage 1800 V; it provides galvanic decoupling of control circuit of each channel and between channels. It is intended for thyristor controlling with control current not more than 1 A. It can be used for controlling of two or three different thyristors composed of half-bridges, single- and three-phase bridges (including modules M1, M2, M3, M20 – M24), which operate with frequency 50 or 400 Hz.

DRAWING AND SCHEMATICS



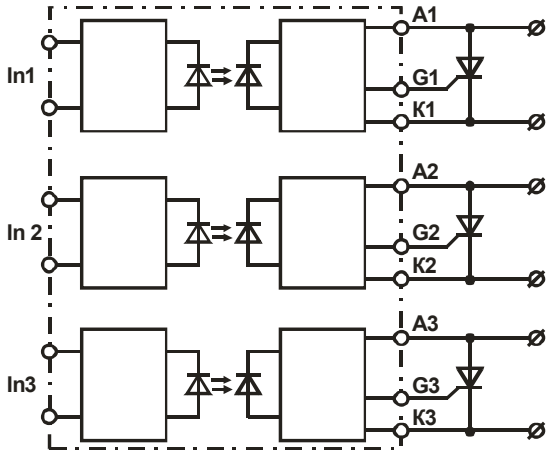


Table 1 – Function of TTMD outputs

Connector	Output number	Symbol	Function
XS1	1	A1	Contact for anode connection of first thyristor
	2	G1	Contact for controlled electrode connection of first thyristor
	3	K1	Contact for cathode connection of first thyristor
	4	A2	Contact for anode connection of second thyristor
	5	G2	Contact for controlled electrode connection of second thyristor
	6	K2	Contact for cathode connection of second thyristor
	7	A3	Contact for anode connection of third thyristor
	8	G3	Contact for controlled electrode connection of third thyristor
	9	K3	Contact for cathode connection of third thyristor
XS2	1	-In1	Contacts for control signal connection of thyristor turn-on
	2	+In1	
	3	-In2	
	4	+In2	
	5	-In3	
	6	+In3	

Table 2 – Basic electric characteristic (T = 25 °C)

Characteristic name	Unit	Characteristic	Note
1 Off state output current, Iout. off, max	mA	1	U = ±1800 V
2 On state input current, Iin. on min, when Uin = 6 V max, when Uin = 32 V	mA	 12 17	
3 DC isolation voltage, U_{isol}, min	V	4000	t = 1 min
4 open state pulse output voltage, V, max	V	1.5	
5 Input-output isolation resistance, Risol.in-out	MΩ	100	

Table 3 – Maximum permissible operating regimes

Characteristic name	Unit	Characteristic	Note
1 Off state outputs voltage «A1(A2, A3)», «G1 (G2, G3)» , Uout. off, max	V	1800	
2 Output pulse current, Iout. pul, min	A	1 10	$t_p \le 1$ ms $t_p \le 100$ µs
3 On state input voltage, Uin.on, min max	V	 6 32	
4 Off state input voltage, Uin.off, min max	V	 -3.5 0.8	
5 Commutation voltage, Ucom min max	V	 50 840	
6 Output voltage rate of rise, dU/dt	V/ µs	10	
7 Output current rate of rise, dI/dt	A/ µs	150	
8 Maximum turn-on time, ton when f = 50/400 Hz	ms	0.05/0.05	
9 Maximum turn-off time, toff when = 50/400 Hz	ms	10/1.25	
10 Operating temperature range, °C		-40... +80	
11 Storage temperature range, °C		-60... +125	

APPLICATION RECOMENDATIONS

3phPRD should be mounted as close as possible to the controlled bridge, but not to the cooler, which it is located on. When mounting it is not permitted to lay field line wires and controlled circuits in one bundle or common tube (housing). Avoid loops in connecting wires of control and supply circuits. Connecting control wires for noise immunity support should be made by twisted pairs.

5 Naugorskoe highway, Orel, 302020, Russia Tel. +7(4862) 44-03-44, Fax +7(4862) 47-02-12
E-mail: mail@electrum-av.com