

ChorusIGNIT

Thyristor driver description



Hardware description

Introduction

Thyristors are controlled via the external thyristor driver ChorusIGNIT. It is preferably installed close to the thyristors, thereby greatly reducing the emission of electromagnetic disturbances.

It is digitally controlled by the ChorusCPU module (the control system's central computer) via an 8-wire cable. The digital input provides for a good resistance against external disturbances. The driver isolates the thyristors from the ChorusCPU module and supplies the switching energy.

Timing Control

The timing of the gate signals are fully and individually controlled by the ChorusCPU module.

This allows for the implementation of advanced ignition strategies via software in the central computer.

External Power Supply

The ChorusIGNIT module is powered by 24V (18–32 V) DC.

Switching of Thyristors

Thyristors are switched on by a high precision pulse burst. This burst ensures that the thyristor is switched on during the desired time.

Inputs

The input signals are TTL (5V) type and are active when low.

The delay in the module is no more than 50 microseconds.

Outputs

There are 6 outputs available.

They are well protected against over-voltage and over-current.

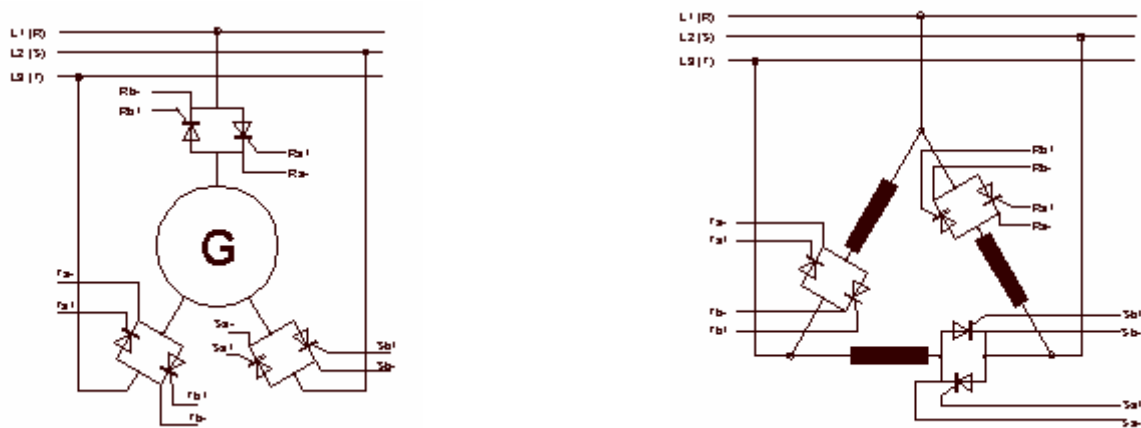
It is even possible to short-circuit the outputs without any damage or replacement of fuses.

Technical data

General	Data	Remarks
Product name	ChorusIGNIT	Thyristor driver module
Product version	3	
Power supply, nominal voltage	24V DC	18 – 32 V, external source
Power required max	36W	2A maximum
Digital inputs		
Inputs	6	TTL, 5V logic, active when low
Module delay	50 μ s	Input to output
Outputs		
Output voltage, max	690V AC	Gate-Cathode normally < 20 V
Over-voltage protection	Yes, 690V AC	Varistors
Output current, max	1.0A	
Over-current protection	Yes, at 1.5A	PTC
Over-current protection, reaction time	10s	
Mounting		
Housing	Metal housing	
Length x Width x Height	205 x 105 x 50 mm	
Weight	0.8 kg	
Mounting method	Screw hole	

Thyristors

The driver offers several possibilities for connection. These are some examples:



ChorusIGNIT Module and Thyristors

