

simplex motion

Motor Controller

TA100



MADE IN SWEDEN

The TA series is a motor controller designed for sensorless operation of PMSM (Permanent Magnet Synchronous Motor) and BLDC (Brushless DC) motors. The advantage of sensorless operation is that it eliminates the need for encoders or electronic components within the motor, leading to reduced cabling and fewer or no connectors.

The TA motor driver is a cost effective solution when high performance motor control is needed, but a servomotor is too advanced. The driver can be placed separate from the motor, which can be advantageous in applications that have space or weight limitations or operate in harsh environment

Typical operational speed ranges from 10% to 100% of the motor's rated speed. For applications that demand more precise low-speed control, the motor controller includes an encoder input for low-speed operation.

Technical Data

ELECTRICAL SPECIFICATION - TA100		
Power Supply voltage	Range	12 – 48VDC
Supply Current	Idle	0.01 A
	Continuous	10 A
	Peak	20 A
CONTROLLER SPECIFICATION		
Switching frequency		20 kHz
Motor commutation	Sensorless	Space vector modulation with field orientation control
Motor control	Constant speed regulator	
Analog input, up to 4	A/D range	0-10V
Digital input, up to 4		10-30V
Digital output	Open drain	30V/100mA
Interfaces	RS485	Modbus RTU
	RS232 TTL	Modbus RTU
	I2C bus	QWIIC connector
	Quadrature encoder	Encoder input for low-speed control
MOTOR REQUIREMENTS		
Motor type	PMSM or BLDC	Inrunners and outrunners
Pole pairs		4-14
Speed		Up to 10 000 rpm
Power		Up to 200W (mechanical)
MECHANICAL SPECIFICATIONS		
Dimensions	Body (L x W x H)	83 x 46 x 41 mm (with DIN rail enclosure)
Weight		50g
AMBIENT SPECIFICATIONS		
Protection class		IP00
Temperature	Operating	-20..+60°C, power derating above 40°C
	Storage	-40..+85 °C