

Stepper motor Driver / Kann-K17c motor driver PCB Second Generation

KannMOTION series

Product description

- Stepper motor driver for bipolar motors
- Integrated magnetic position encoder
- Motor drive up to 36V / 2.8A ¹⁾
- Capable for different motor and control voltages



Interfaces

- CANOPEN



Benefits / Software

- Closed loop operation
- Fully controllable over CANopen
- Updates, documents, tutorials and videos easy accessed at www.kannmotion.com

Technical data (Maximum ratings)

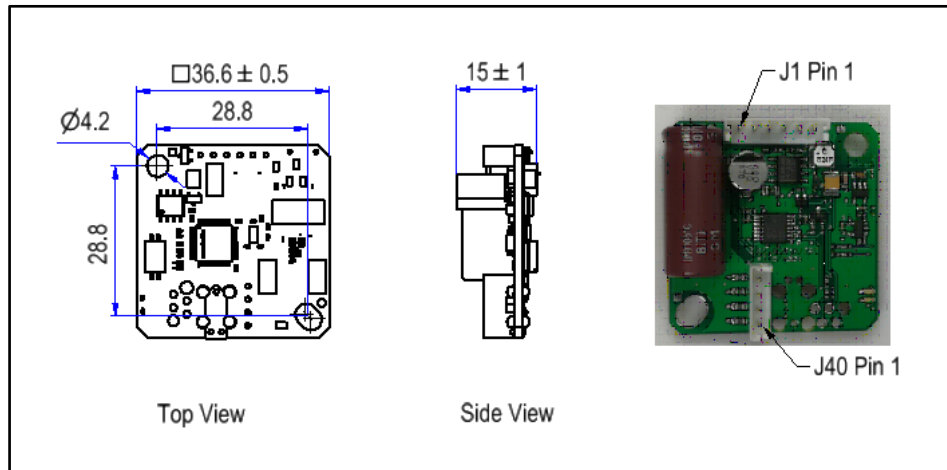
Rated supply voltage (Motor)	12 to 36 VDC
Rated supply voltage (Logic)	6 to 30 VDC
Max. motor phase current ¹⁾	2.8 A
Ambient temperature range	-10 to +40°C
Connection interface	JST 6 pole / B6B-EH
Connection motor	JST 4 pole / B4B-EH
Position control accuracy	±1° ²⁾
Motor control mode	Micro stepping

Ordering information

Part number	Description	Accessories
100 498 . xxx	Kann-K17c motor driver PCB <CANopen>	

1) Might be limited in time, restricted by losses! <Chip temperature>, take care about PCB cooling depending on application
2) Depending on mechanical positioning of the magnet

Dimensions (in mm)



Connection terminals J1

Pin	Description	Nominal	Absolute max	Comment
1	V_{motor}	24 VDC	36 VDC	Supply of motor drive (Power)
2	V_{in}	24 VDC	30 VDC	Supply of PCB logic, also for logic outputs
3	CAN-H	3.5 V	$\pm 24V$	CAN bus signal (not terminated)
4	CAN-L	1.5 V	$\pm 24V$	CAN bus signal (not terminated)
5	DIN	3.3V/ 5V / 12V / 24V	30V	Thresholds defined in firmware
6	GND	-	-	Reference

Software Configuration of Input Thresholds

Setting	V_{IH} (High level input voltage)	V_{IL} (Low level input voltage)
SPS_24V	>15.0	<5.0
SPS_12V	>7.5	<2.5
TTL_5V	>2.7	<1.5
TTL_3V3	>2.0	<1.0

Connection terminals J40

Pin	Description	Comment
1	A-	Motor phase A+
2	A+	Motor phase A-
3	B+	Motor phase B+
4	B-	Motor phase B-

Proper use



Do not connect or disconnect motor during operation!

Motor cable and motor inductivity might lead to voltage spikes when the motor is disconnected / connected while energized. These voltage spikes might exceed voltage limits of the driver MOSFETs and might permanently damage them. Therefore, always disconnect power supply before connecting / disconnecting the motor



Keep the power supply voltage below the upper limit!

Otherwise the driver electronics will seriously be damaged! Especially, when the selected operating voltage is near the upper limit a regulated power supply is highly recommended.



Check your mechanical system, is it able to drive the motor, avoid motor being used as generator

Every motor could be operated as an voltage generator, so take care about generated voltage, this might damage your electronics by overvoltage. Add some voltage limiter units to keep supply voltage in range.

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