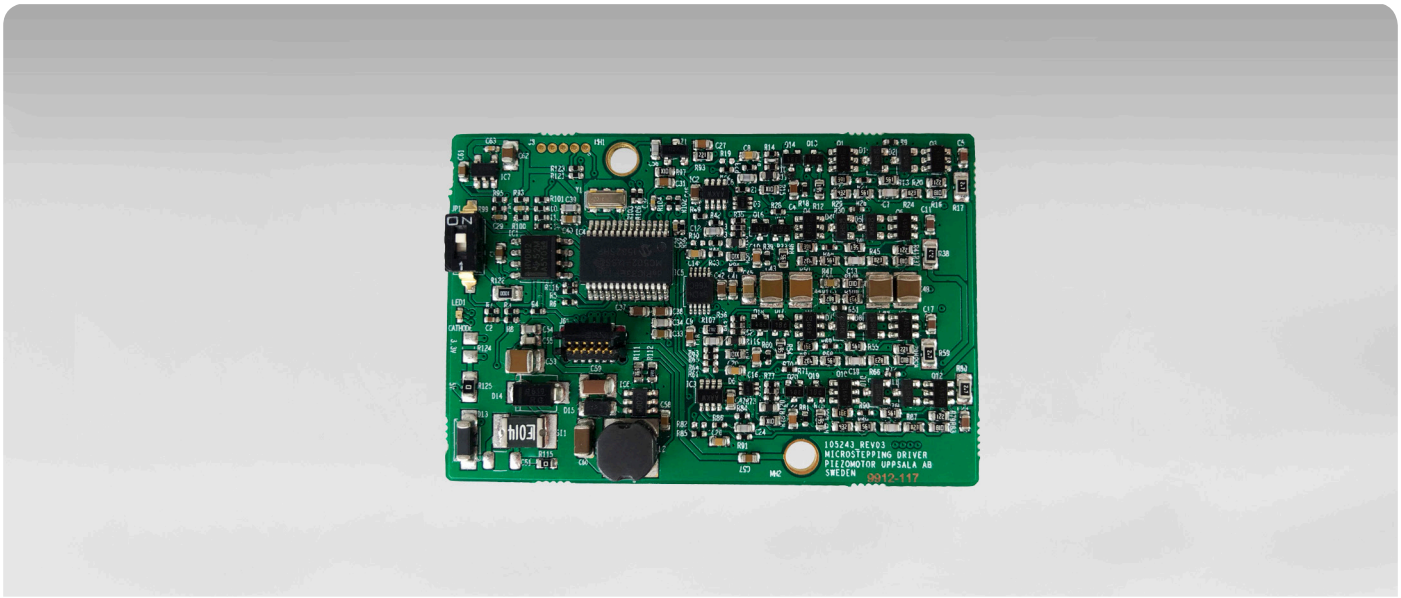
PMD401

150058-03



Technical specification PMD401		
Type	**Value**	**Note**
Number of axes	1	
Multi-axis support	Yes	Units can be RS485-chained for multi-axis
True speed control	No	Only stepping rate controlled
Resolution	8192 microsteps	Each full step of about 5 µm is divided into 8192 steps
Maximum stepping rate (Full step frequency – Hz)	1500	Depends on motor
Supported encoders	Quadrature	ABZ, 20 MHz counting
	SSI	8–30 bits, 330 or 130 kbps
	BiSS	18/26/32 bits, 330 kbps
Host communication	Two-wire RS485	Commands are sent in ASCII format, 115.2 kbps (n81)
Servo interface	SPI	16 bits (signed), max 15 Mbps
General I/O	4 in	Depending on encoder type and use of limit switches
	3 out	
Stacking connector	6-pole, ERNI MicroStac 114711	GND, 48 V, RS485
Motor connector	5-pole, JST SM05B-SRSS-TB	Two connectors, parallel connection
Encoder/servo connector	6-pole, JST SM06B-SRSS-TB	Input for sensors or SPI servo interface
Limit switch	Yes	Input for external limit switches
Communication connector	3-pole, JST SM03B-SRSS-TB	Input for RS485, or use stacking connector
Power connector	2-pole, JST SM02B-SRSS-TB	Input for 48 V supply, or use stacking connector
Power supply	48 V DC, 5 W	48 V DC ±5%
Dimensions (mm)	59 x 39 x 9.2	

a. Power and communication can be provided through either a stacking connector or through power/communication connectors.

Note: All specifications are subject to change without notice. For more information, see www.piezomotor.com.

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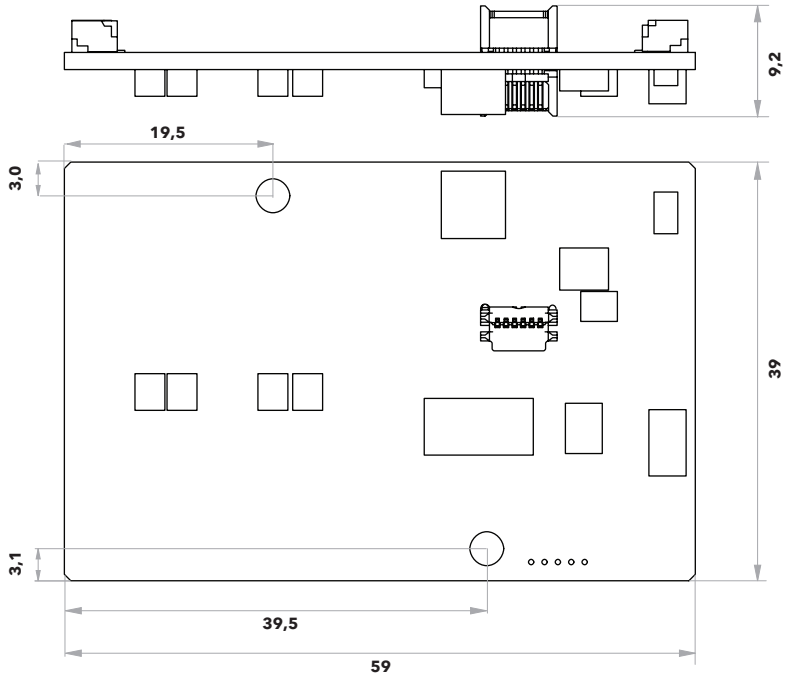
Main dimensions



Note: The connector board used for stacking has the dimensions 59 x 62,6 x 18,5 mm (the same with one attached PMD401 controller card).

Product description

The PMD401 is a fully featured miniature controller for open loop and closed loop operation that can be easily stacked to form a multi-axis controller system.

It can be connected to the customer's mainboard for integration in OEM applications. Host communication is done via 2-wire RS485 through ASCII commands. The PMD401 can also be used as a servo amplifier where the external controller regulates the speed via an SPI interface.

A breakout board with terminal blocks for easy access to power and communication is offered optionally for customers who want to get application development started straight away. It provides sub-nanometer resolution and speed in the mm/s range.

Features

- Sub-nanometer resolution
- Closed loop control
- Open loop mode
- Stackable boards for multi-axis
- Small form factor
- Slave amplifier to external motion controller via SPI interface (servo mode)
- General-purpose inputs/outputs – maximum 4 in and 3 out
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