



# Stepper Motor Controller SMCx242

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## Features

- Intuitive manual user interface
- Well readable OLED display
- Fully-featured remote interface
- Automatic motor detection
- Automatic position calibration
- Up to 2.5 A of output current
- 24 V operating voltage
- Up to 1/32 microstepping
- Selectable decay modes
- Up to three limit/home switches per channel

## Applications

Polarization adjustment  
Grating positioning  
Neutral density filter positioning

## Description

The LK-Instruments SMC2242/SMC4242 is a universal Stepper Motor Controller for two/four bipolar stepper motors. It offers a comfortable manual user interface as well as fully-featured remote interface via a virtual COM port. This allows for simultaneous remote and manual control over stepper motor driven systems.



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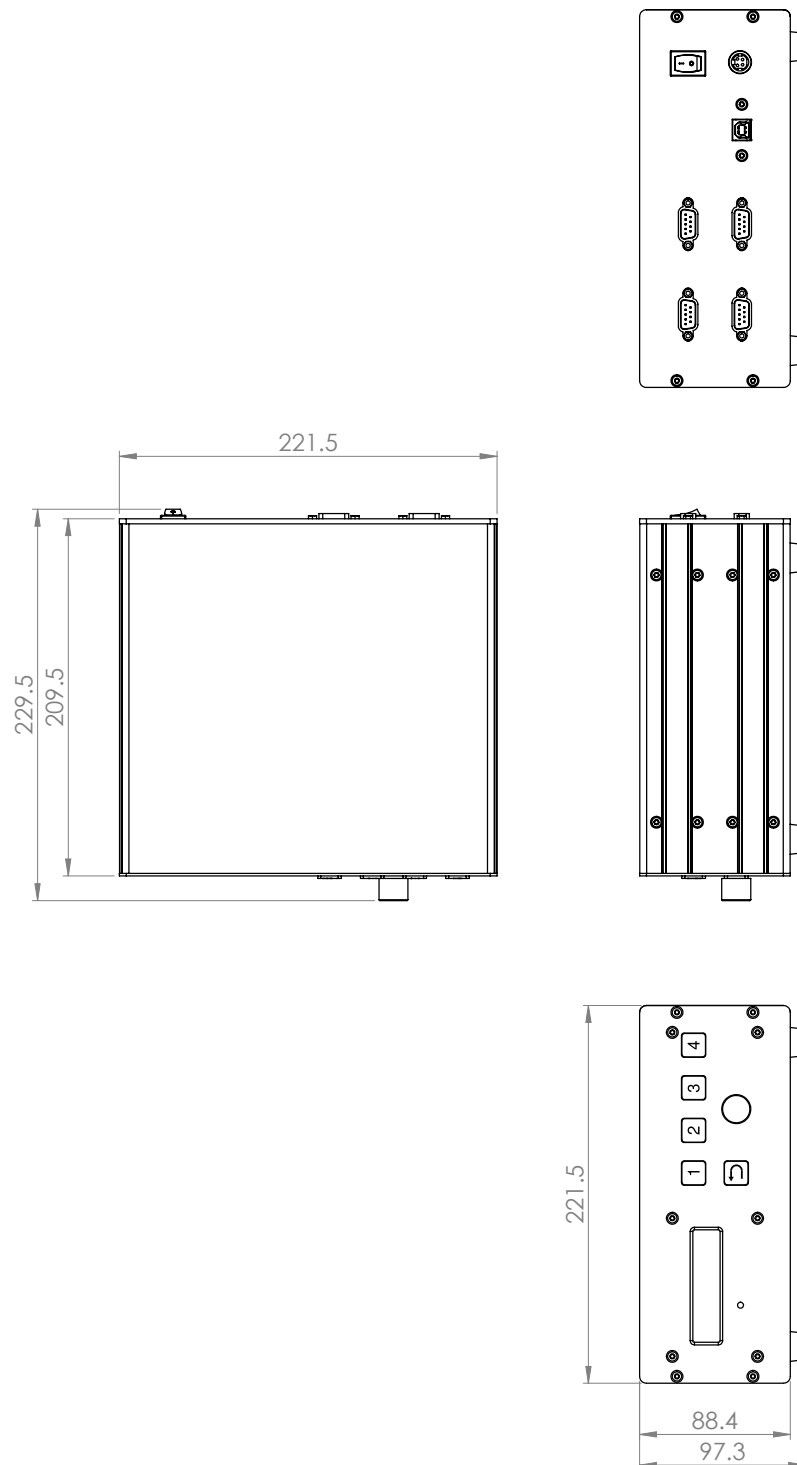
## Specifications

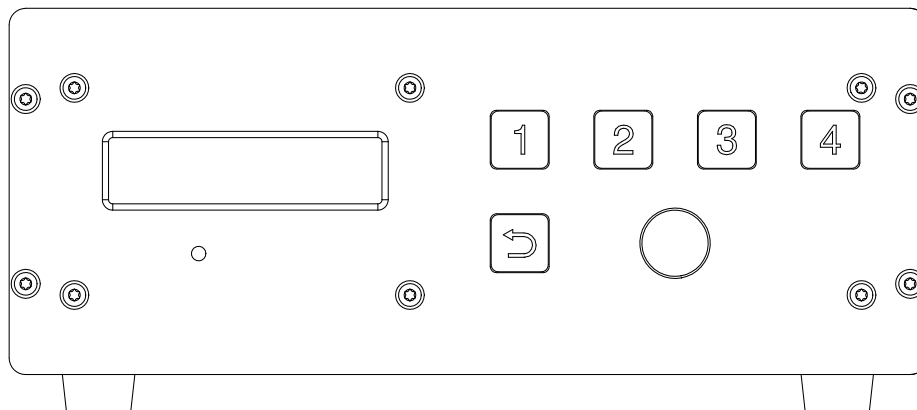
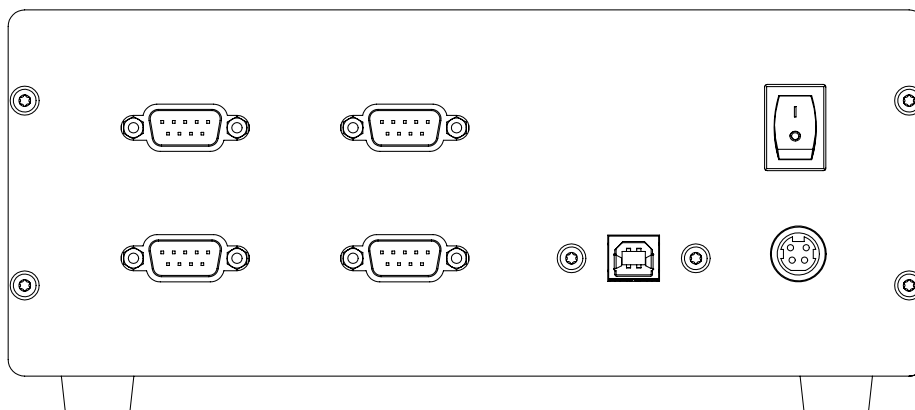
$T_A = 25^\circ\text{C}$  and 50% RH unless otherwise noted.

Parameter	Conditions	SMC2242			SMC4242			Unit
		Min	Typ	Max	Min	Typ	Max	
Number of outputs				2			4	
Output current		0		2.5	0		2.5	A/Phase
PWM frequency			30			30		kHz
Microsteps		1		32	1		32	
Step frequency				10			10	kHz
Limit/Home switches per motor				3			3	
Temperature range		0		40	0		40	$^\circ\text{C}$
Weight			???			???		kg
Supply voltage		10	24	36	10	24	36	VDC
Power consumption	24 VDC			100			200	W

## Outer Dimensions

All dimensions in millimeters.

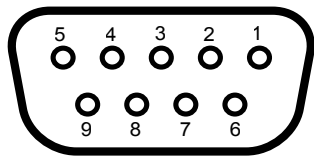


**Front view****Rear view**

Pin Configuration

Motor connectors

D-SUB-9 female connector

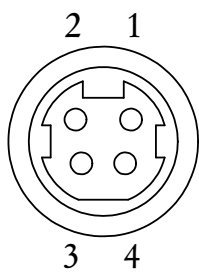


Front view

Pin	Function
1	Phase B1
2	Phase B2
3	Phase A2
4	Phase A1
5	Ground
6	+ 5V
7	Sens 1
8	Sens 2
9	Sens 3
Shield	NC

Power connector

R7B female connector



Front view

Pin	Function
1	+ 24V
2	Ground
3	Ground
4	+ 24V
Shield	NC

## Ordering Information

SMC	4	24	2	W	
				└─	OLED display color
					W - white
					R - red
					G - green
					B - blue
					Y - yellow
			└─		2 - Bipolar Stepper Motor
		└─			24 - Supply voltage
	└─				Number of channels
					2 - two channels
					4 - four channels

An optional TTL trigger input via a BNC connector is available. For version with trigger input please add "-T" to the order number, Example.: SMC4242W-T.

## Accessories

Model	Description
GS120A24	120W external desktop power supply unit
GS160A24	160W external desktop power supply unit
GS220A24	220W external desktop power supply unit
MGA12020	19"-Adapter <sup>1</sup>
MGA13020	spacer for 19" installation <sup>1</sup>

<sup>1</sup>Using the 19"-Adapter MGA12020 and a spacer MGA13020, two SMCx242 can be mounted into a 19" rack.