Step Motor Controller SMC20

Step Motor Controller type SMC20 is a low-cost controller for step motors.

SMC20 has ½Kb of memory and can either be used as a stationary unit or connected to a terminal or a personal computer via an RS232C/V24 interface. Programming is very simple using JVL´s programming software, MotoWare.

The Controller includes a built-in driver which can supply up to 2.5 Amp. per motor phase. It has 3 digital inputs and 3 digital outputs as well as 6 analogue inputs. This gives the user the possibility for very flexible adaptation to applications such as control of smaller milling/drilling systems, handling machinery etc., where fast and precise movements are required, and the solution must not take up too much space or be too costly.

The motor driver is short-circuit protected. Motor current is disconnected in the event of a short-circuit.
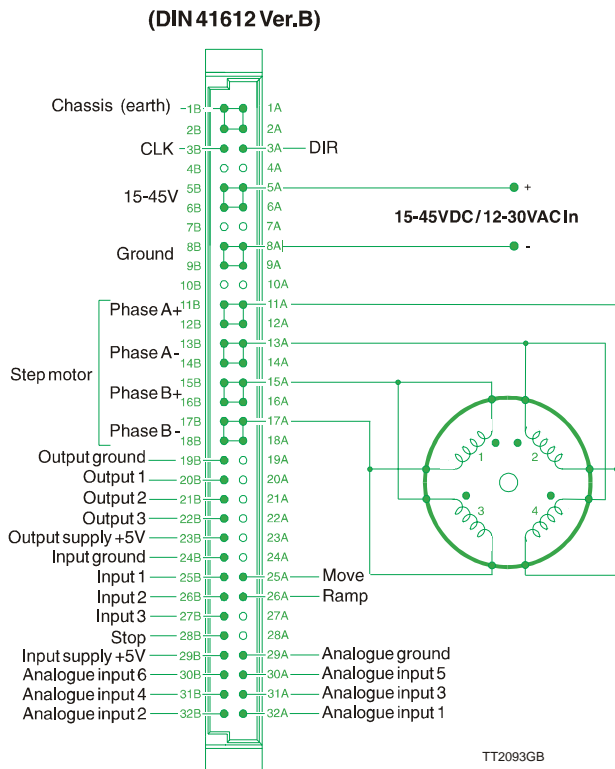
- Power supply 15-45VDC

- RS232C/V24 communication.

- Simple programming.

- Max. operating frequency 15kHz.

- RS232 interface bus.

- Connection of up to 7 controllers on the same RS232 interface bus

- Baud rate of 110 - 9600.
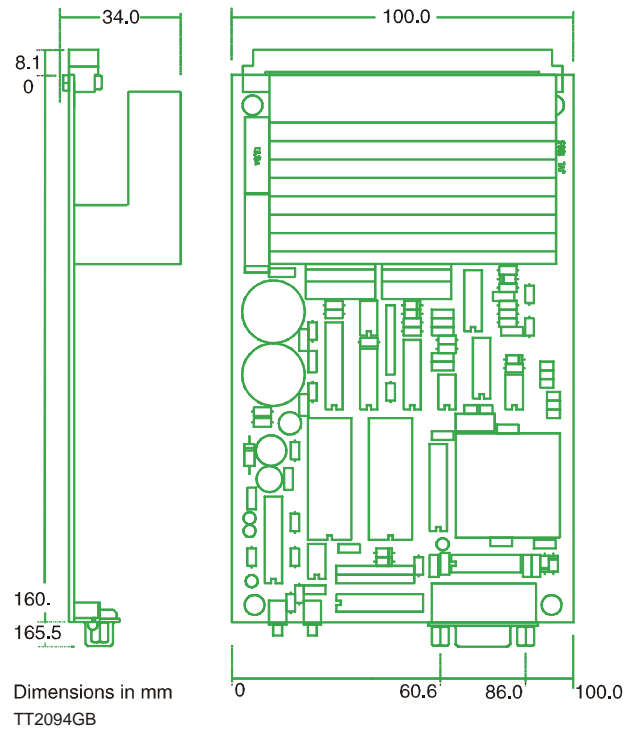
- Small physical dimensions: h34 x w100 x l160 mm

- Thermal protection.

- 3 User inputs.

- 6 Analogue inputs.

- 1 Stop input.

- 3 User outputs.

- Connection via DIN41612 connector

Step Motor Controller SMC20
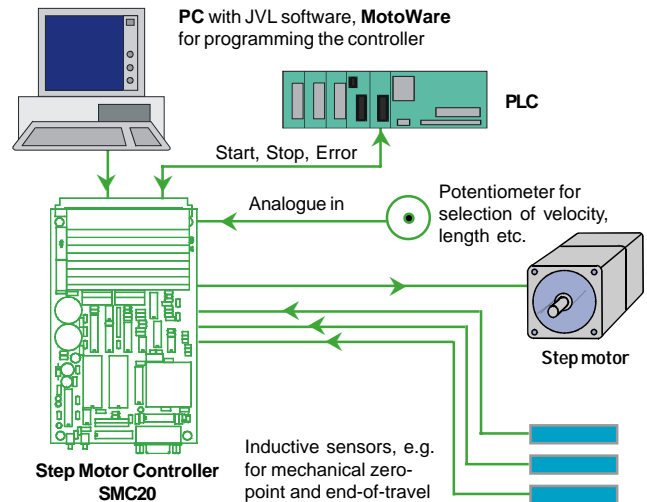
Connector Pin Designations

(DIN 41612 Ver.B)

Chassis (earth) — 1B | 1A
2B | 2A
CLK — 3B | 3A — DIR
4B | 4A
15-45V — 5B | 5A — +
6B | 6A
7B | 7A
Ground — 8B | 8A — -
9B | 9A
10B | 10A

15-45VDC / 12-30VAC In

Phase A+ — 11B | 11A
12B | 12A
Phase A- — 13B | 13A
14B | 14A
Phase B+ — 15B | 15A
16B | 16A
Phase B- — 17B | 17A
18B | 18A

Step motor

Output ground — 19B | 19A
Output 1 — 20B | 20A
Output 2 — 21B | 21A
Output 3 — 22B | 22A
Output supply +5V — 23B | 23A
Input ground — 24B | 24A
Input 1 — 25B | 25A — Move
Input 2 — 26B | 26A — Ramp
Input 3 — 27B | 27A
Stop — 28B | 28A
Input supply +5V — 29B | 29A — Analogue ground
Analogue input 6 — 30B | 30A — Analogue input 5
Analogue input 4 — 31B | 31A — Analogue input 3
Analogue input 2 — 32B | 32A — Analogue input 1

TT2093GB

Physical Dimensions

Dimensions in mm
TT2094GB

Specifications

Description	Min.	Typ.	Max.	Units
Power Supply				
Supply Voltage. (DC):	15		45	VDC
Supply Voltage. (AC):	12		30	VAC
Motor Driver				
Output current/phase	0.2		2.5	ADC
Output voltage	15		45	VDC
Chopper frequency		22		kHz
Interface				
Communication speed.	110		9600	Baud
User Inputs + Stop Input				
Logic "0"	<1.35			VDC
Logic "1"			>3.5	VDC
Analogue Inputs				
Resolution			8	Bit
Input voltage nom.	0.00		5.1	VDC
Offset Error		±½	±1	LSB
Input impedance		10		kOhm
User Outputs				
Logic "0"			0.8	VDC
Logic "1"	3.85			VDC
Current per output			10	mA
General				
Ambient temperature	0		50	°C
Weight	325			gram s

System Configuration

PC with JVL software, **MotoWare** for programming the controller

PLC

Start, Stop, Error

Analogue in

Potentiometer for selection of velocity, length etc.

Step motor

Step Motor Controller SMC20

Inductive sensors, e.g. for mechanical zero-point and end-of-travel

Accessories

Programming Software	Motoware
Connector Board w. Phoenix plug	CON10P
RS232 Interface cable	RS232-9-1
Power Supply 40V/200W	PSU40-2