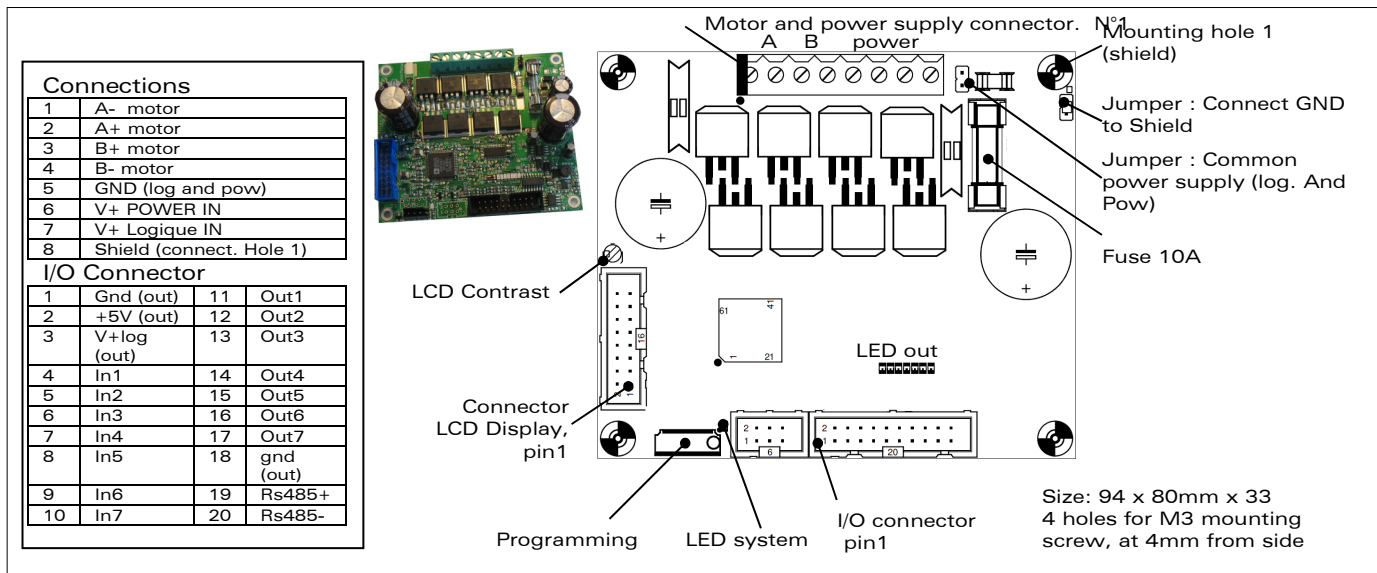


Tinaxis+ STP400, microstep 48 V, 7.5 A



Stepper motor intelligent controller, with microstepping, 2 phases current control (PWM)

Driver and controller integrated: steps generation, ramps, movement sequence, I/O management
 Typical use: measuring instruments, factory automation, handlers, laboratory machines, precise positioning
 Adapted to motors technology: hybrid, disc magnet and tin-can

Specification	unit	value
a) General		
1 Motor types	Stepper, 2 phases at 90°, 4, 6 or 8 terminals	
2 Integrated software: DM-BASIC, DM-REMOTE, DM-MOTION		
3 Memory for BASIC software	kilo octets	25
b) Electrical specifications		
4 Supply voltage (logic / power)	V	12 – 50V
5 Output current (motor phase)	A	1 to 7.5A continuous / peak
6 Input current (logic supply)	A	0.04 typical
7 PWM Frequency	kHz	N.A.
8 Microsteps, software selectable		1/2/4/16 or automatic
c) Inputs Outputs (I/O)		
9 6 general purpose analog inputs 0-25V with ~7mV resolution and 1ms scan rate 1 general purpose digital input, 10 to 24V (threshold at ~5V)		
10 Unconnected input voltage (pulled down)		0V ±20mV
11 7 General use outputs: NPN open collector to GND, max 100mA 35V for all together, with control LEDs		
12 Encoder optional input, counting frequency	kHz	10 max
13 Response time after input change	ms	<2.5
14 1 LCD display port (HD44780 compatible)		2 x 16 characters. (see option below)
14 Communication		RS485, optional MODBUS RTU
d) Mechanical characteristics		
19 Temperature, recommended (ambient / board)	°C	0 to 65 / 85
20 Integrated protections: temperature, motor current, ESD in I/O, moderate over-voltage, under-voltage		
21 Without housing, I/O connectors with screws, pitch 5mm for wires section from 0.25 to 2.5mm ² I/O connector: Quickie 20pins (DIN 41651)		
22 Compliance RoHS: Yes / REACH: data not available		

Designation	Reference
1 Tinaxis+ STP400.01 Standard version	P010-E191
2 Tinaxis+ STP400.05 Option: Software for display up to 20x4	P010-E191

Customization possible at relatively low volume (connectors, shape, features)

preferred version

Remark

- The logic power input should not be supplied when the option "single supply" is chosen. A regulated 12V voltage is available at the same pin, in the condition that the regulator temperature is kept below 80°C.

Required tools: Cable RS232 to Tinaxis (P000-016), soft PC "Dynamic Motion programming suite" (free download)

Required documentation: Hardware data sheet, Software manual version 1.x

Notes

- (*) When the continuous current exceed 4A, the power transistors generate some heat, temperature must be tested and if necessary take the appropriate measures (forced air, thermal conductive pad and cooler). Manufacturer is available for assistance.
 - (*) When current setup is set below 1A, the real current will be around 1A.
 - IN7 has special features options (frequency counter, timer)
- Common power supply jumper: default setting=separate power/logic supply.