



# TSP10

## CANopen stepper motor drive with encoder feedback

### TSP10-CBE

- Compact size
- Supply voltage 24-74V<sub>DC</sub> , max. motor current 7 A<sub>rms</sub>
- Closed loop via the CANopen master
- Idle current reduction
- Noiseless at standstill, smooth operation
- Low heat losses
- Opto-isolated inputs (10) and outputs (4) - can used as I/O module
- Separated supply voltage for electronic and motor
- Programmable motion tasks with adjustable ramps, programmable with CANopen
- CAN-Bus galvanic isolated
- Set-up the CAN-Bus address with two rotary switches

## TSP10-CBE Compact stepper motor drive

The TSP10 drive is a compact microstep power module for 2-phase stepper motors with various configurations for the best possible customization to the individual application.

The units are designed for panel mounting and equipped with the mating plugs; the compact size allows installation, where only restricted mounting space is available. The heat dissipation is laterally possible over an optional heat-sink or over the bearing surface at the back.

The supply voltage plug and the motor plug are placed at the bottom side of the drive. The 25-pin Sub-D connector for the digital I/Os as well as three 9-pin Sub-D connectors for the RS232-connection for the CAN-Bus and encoder are located at the front of the drive. The Set-Up for the CAN-Bus address is made by two rotary switches at the top side of the drive.

A two colour LED indicates the status of the drive by colors and flashing signals.

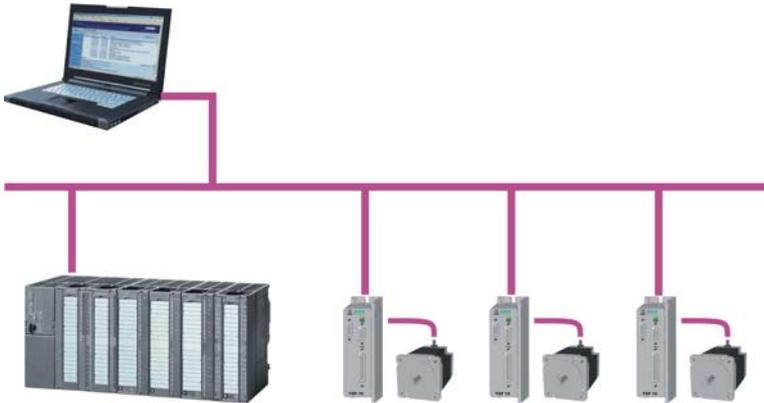
All digital inputs and outputs are opto-isolated and can be used independent of the motor drive such as a simple digital I/O module. Because only a few basic settings are required, the stepper with little effort can be integrated into any control system.

### Technical data

Supply voltage	power supply voltage 24 - 74V <sub>DC</sub>
Motor current	max. 10 A <sub>peak</sub> ; 0,2 bis 7 A <sub>rms</sub>
	adjustable in mA for 2-phase stepper motors with 4,6 or 8 leads
Power supply	for the motor power supply only an unregulated DC voltage is required.
Ambient temperature	<50°C without heat sink max 3.2A @ 25°C / 1.6A @ 45° C
Heat sink temperature	<50°C with heat sink (optional) max 7A @ 25°C/ 3.5A @45° C
Humidity	max. 60°C, forced cooling may be necessary
Fault protection	10-90%, non-condensing
Idle current reduction	Line-to-Line and line-to-neutral shorts and over temperature
Inputs	reduction delay and reduction value are free adjustable via CANopen
Input interface	10 opto-isolated inputs
Outputs	RS232, CAN-Bus
	4 opto-isolated outputs, SPS compatible Status LED : green = ready for use; red = failure; yellow = motor movement
Baud rate	Up to 1 MBaud

## CANbus settings

The TSP10 Stepper is the solution to control, several step motor axis distributed in the field via CANopen.



The CANopen Stepper is a compact positioning control with an integrated power stage. It has two limit switch inputs, a stop, and a reference switch input. The velocity mode and the position mode are easily configurable over the CANopen.

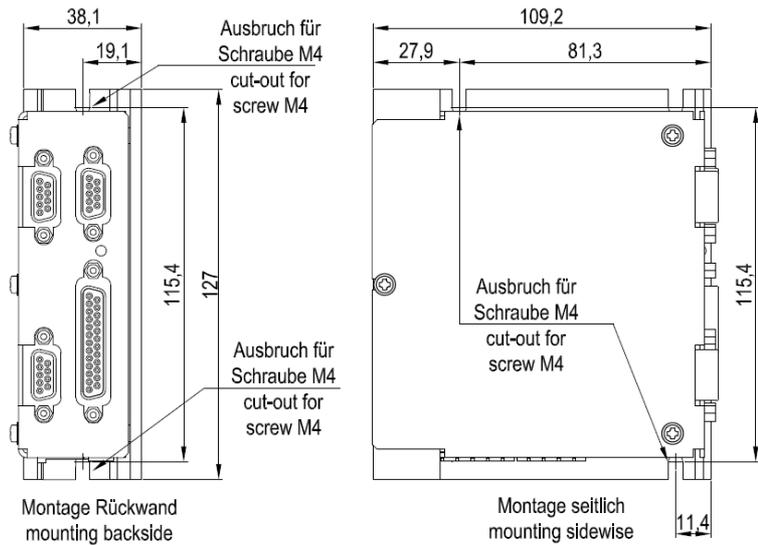
Since they are only a few presets, the CANopen Stepper can be integrated into any control system using CANopen as sensor-actuator bus, with low expenditure.

## Parameter data

All necessary adjustments for the CANopen stepper motor drive (for example: motor current, micro step factor, etc.) is configurable via CANopen.

Connection/ Dimensions

Connectors	
Supply voltage	4-pole plug-in terminal strip
Motor	5-pole plug-in terminal strip
Serial interface	9-pin Sub-D-socket
I/Os	25-pin Sub-D-socket
CAN-Bus connector according to standard	9-pole Sub-D-connector
Encoder	9-pole Sub-D-connector



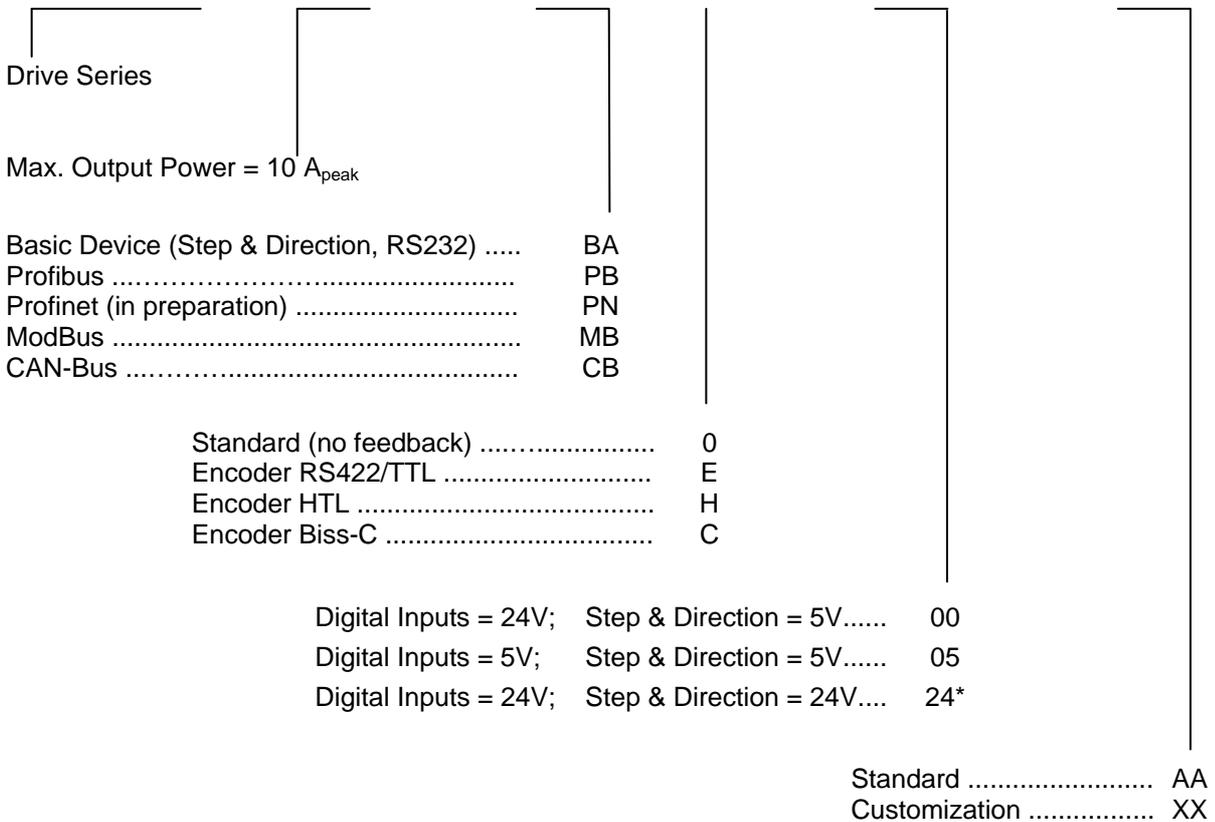
all dimensions in mm

Ordering code

TSP10-CBE-00-AA = Standard version

TSP10 Type code

T	S	P	1	0	-	B	A	0	-	0	0	-	A	A
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\*only available for the TSP10-BA

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Technische Änderungen vorbehalten / Specifications are subject to change without notice