

PROGRAMMABLE STEPPING MOTOR DRIVE - e.drive

This self-contained system is ideal for stand-alone applications not requiring any PLC at hand.

You can use it to easily and intuitively operate electric cylinders and electric rotary actuators driven by a two-phase four, six or eight-wire STEPPING MOTOR rated at up to 6A. An USB port connects it to the PC, which provides the user with a configuration, programming and debugging environment for motion control.

Thanks to a user-friendly language (MW DRIVE) and a set of basic instructions and functions, you can create work cycles, even complex ones, and manage both digital and analogue inputs and outputs.

It consists of two printed circuit boards housed in a metal box designed to be fixed onto a wall or on a DIN bar through an adapter, and comes with removable screw connectors for wiring.

The PCBs control the logic stage for "motion control" and the power stage, respectively.

The power stage consists of a two-pole mini-step chopper drive. It features 55VDC maximum input voltage on the power side and 24VDC on the logic side, compact design and great flexibility of use.

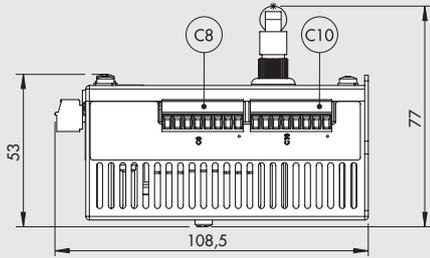
A wireless version is also available which, through the dedicated "Metal Work driveUP" App, can communicate with Ethernet networks (via MQTT protocol) and mobile devices (smartphones and tablets) via Bluetooth®.

Using this App, in addition to displaying the values measured in real time, some drive settings can be changed and motor movements can be controlled.

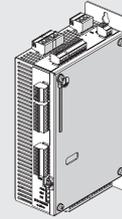


TECHNICAL DATA	Standard	Wi-Fi®
Code	37D1332002	37D1332003
Communication interface	Serial USB port for connection to PC	Serial USB port for connection to PC Bluetooth - Wireless
Configuration / programming / debug and diagnosis software	MW DRIVE in Windows® environment	MW DRIVE in Windows® environment - APP driveUP
Motion control logic power supply	VDC	24
Drive power supply	VDC	24 to 55
Motor phase peak current	A	1 to 6
Temperature range	°C	-20 to 40
Relative humidity (without condensation)	%	5 to 85
Bipolar motor inductance (1.8° angle)	mH	1 to 12
Dimensions	mm	148 x 99 x 50.5
Weight	g	790
Degree of protection		IP20
Dedicated signals	Encoder input (A + B + Z), 5V line driver or 24V Push-Pull/Open collector	
Digital inputs	14	
Digital outputs	7	
Analogue inputs	2 input (0 - 10V freely programmable)	
Analogue outputs	1 output (0 - 10V)	
Controls available	<ul style="list-style-type: none"> - Can be used with motors with a 1.8° base angle, 200 pulses/rev.; - Step Mode settable in various ways: Full Step, Half Step, 1/4, 1/8, 1/16 of step; - Integrated linear position transducer by connecting directly to the analogue output; - Automatic 60% reduction of the current supplied with motor stopped; - Possible dynamic regulation of the current supplied via cycle software instructions, for energy-saving purposes; - Home position search on limit switch, mechanical stop, encoder limit switch and zero mark, encoder mechanical stop and zero mark; - Positioning in relative or absolute mode; - Closed-loop motion control and step-loss control in the case of STEPPING motors with an encoder; - Integrated, automatic brake control via dedicated digital output in the case of motors with a brake; - Complementary and logical instructions for complex work cycles, such as: timings; variables control; test; analogue and digital I/O control 	

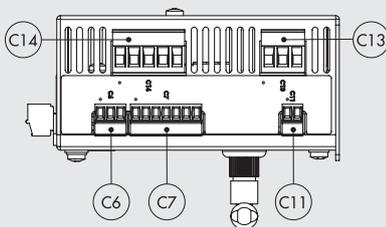
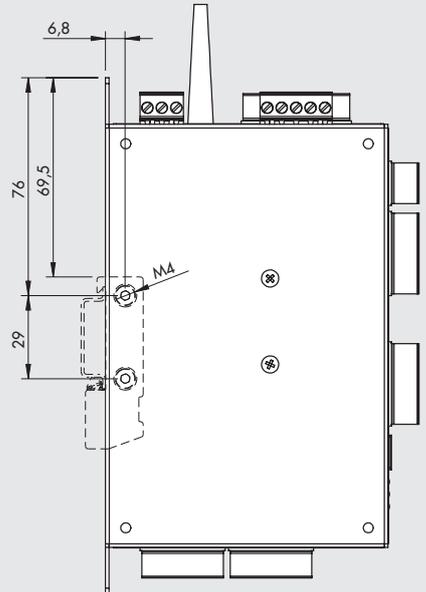
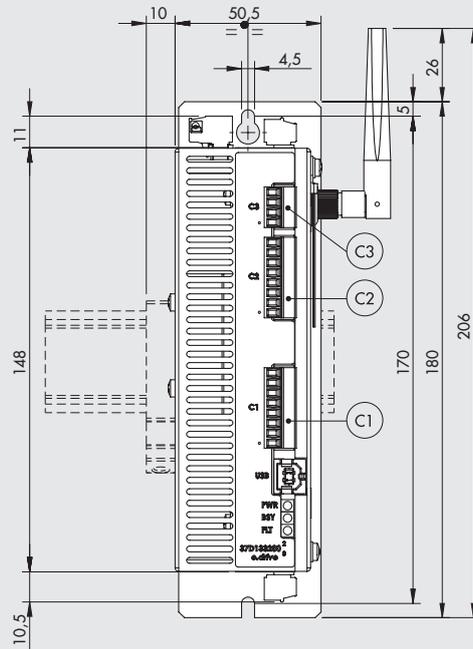
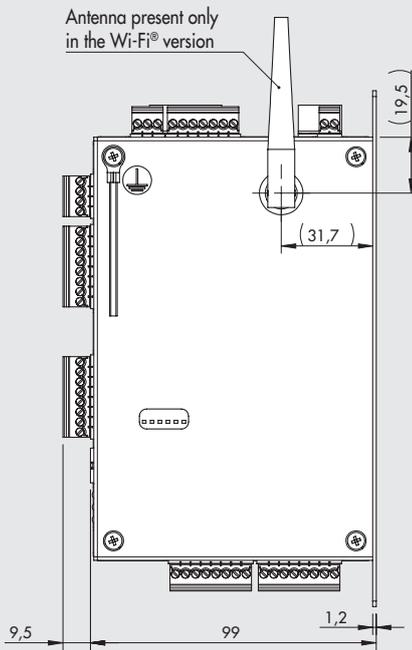
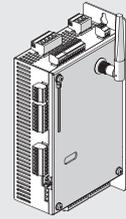
DIMENSIONS



STD version



Wi-Fi® version



Below is a list of Phoenix Contact codes for the board connectors.

Connector	Description	Code Phoenix Contact
C11	2-pin plug with screw connection, MC 1.5/2 - ST - 3.5	1840366
C6	3-pin plug with screw connection, MC 1.5/3 - ST - 3.5	1840379
C3	4-pin plug with screw connection, MC 1.5/4 - ST - 3.5	1840382
C7	7-pin plug with screw connection, MC 1.5/7 - ST - 3.5	1840418
C1, C2, C8, C10	8-pin plug with screw connection, MC 1.5/8 - ST - 3.5	1840421
C13	3-pin plug with screw connection, MSTB 2.5/3 - ST - 5	1754465
C14	5-pin plug with screw connection, MSTB 2.5/5 - ST - 5	1754504

Code	Description
37D1332002	Programmable e.drive for STEPPING motors
37D1332003	Programmable e.drive Wi-Fi® for STEPPING motors

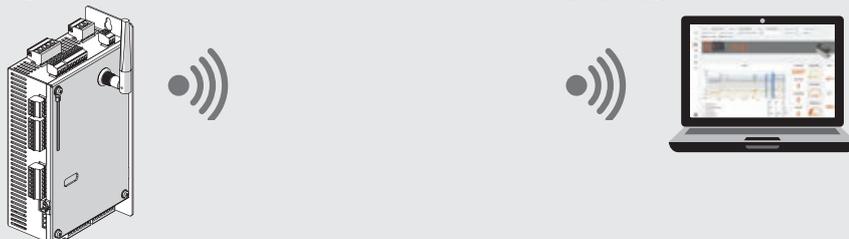
WIRELESS CONNECTION

In the Wireless version, the device connects to a Wi-Fi® network through an Access point or Gateway to monitor and acquire drive parameters.

Connection to a MQTT Broker via an Access point

MQTT

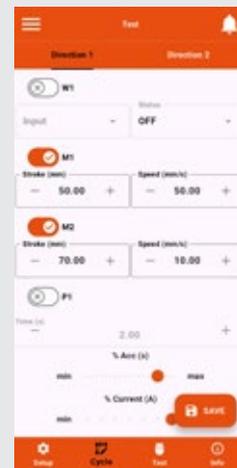
Broker MQTT



The “Metal Work driveUP” App allows you to connect, via Bluetooth, from Android® and iOS®, to the Metal Work drives of the e-drive series, equipped with a wireless interface.

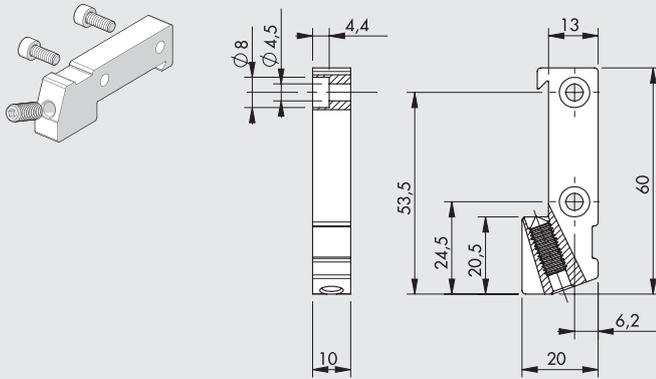
Via the “Metal Work driveUP” App, you can:

- scan nearby e.drive devices;
- login and view device diagnostic data;
- set wireless network parameters;
- to control simple movements.



ACCESSORIES

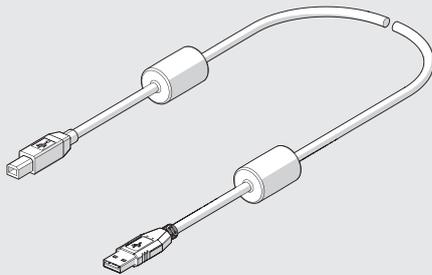
BRACKET MOUNTING ON OMEGA BAR (DIN EN 50022)



Code	Description	Weight [g]
095000M000	Bracket mounting e.motion / e.drive on Omega bar (DIN EN 50022)	30

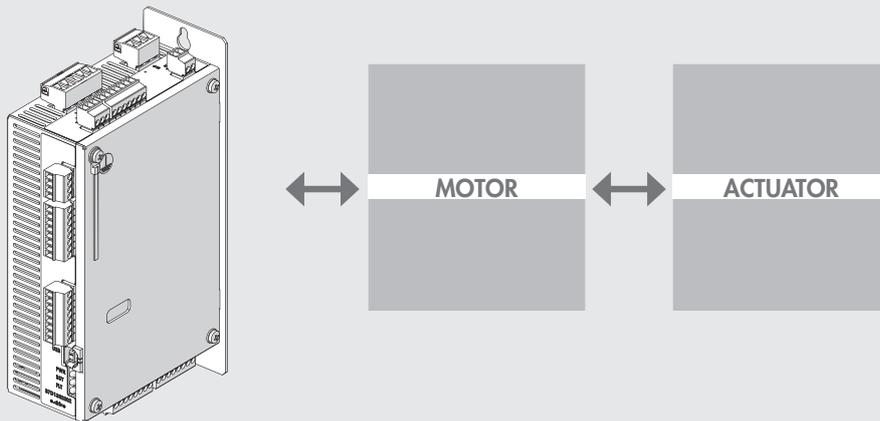
Note: Individually packed with 2 screws M4x10, 1 M6x16 grub screw

CABLE USB



Code	Description	Weight [g]
37C0030000	Cable for USB 2.0 male A-B connector with ferrite core, for connecting the e.motion / e.drive board to a PC, 3 m	150

CONNECTION SCHEME



NOTES