

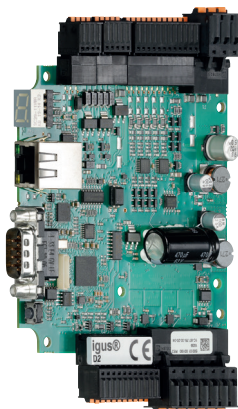
dryve® motor controllers:

Which is the right one for you?

The motor controllers that we offer are the D1, D2, D3, D5, D6, D7, D8, and D9; but what can each of them offer you? This tech talk will discuss the various features that each of the dryve® controllers offers.

Starting with the D1 and D2

The D1 and D2 controllers are functionally identical, the only difference between them being the housing that the D1 comes with. These are our most versatile dryve® controllers as not only are they available for usage with Stepper, DC, and Brushless DC (EC) motors, but they also allow for the access of a web interface via ethernet connection. This interface is a great way to integrate both the motor controller and PLC system into one easy-to-use system that has many features on it. The interface can show you all the features of your motor as well as edit parameters. The drive profile allows you to create a sort of pseudocode for easy automation of your motor. With the ability to easily adjust speed, acceleration, and velocity, you can fine tune the motor to your exact specifications. There is also a digital oscilloscope that can measure multiple motor outputs.



The D1 and D2 also allow for modbus TCP gateways and CANopen communication for higher-level PLCs. They can also be equipped with a specific IP address as well as a username and password for security.

The D3: a simpler solution

The D3 is a scale down from our D1 and D2 controllers. The D3 is meant strictly for DC motor control and has no interface. The purpose of the D3 is simple: easy control of your motor with just two buttons and a rotary element for speed and direction. The dryve® is equipped with switches on the side that allow for two different operating modes. First is tip mode, which is simple: just hold the button to move the motor, and let go to stop. Then there is start-to-end mode, which allows for one push of button to move either left or right continuously, only stopping if:

1. One of the two buttons is pressed.
2. The movement encounters a block with greater resistance than the allowed force for the motor.
3. The limit switch is triggered at the end of the movement.



The switches also control the usage of the limit switch or the “block travel” option, which stops movement when the resistance is greater than the force of the motor. They also allow for maximum acceleration or acceleration ramps. The ramps are indicated by the LED lights on the dryve®.

Cost-effective DC motor control with the D5 and D6

Just like the D1 and D2, the D5 and D6 motor controllers are functionally identical. The D5 comes with a housing for industrial use, while the D6 has no housing. Each controller ships ready to use, with no programming or parameterization needed.



The D5 and D6 are able to control left/right rotation in DC motors with a voltage supply range of 12–24V. The speed and acceleration of the motor can be set using an external PWM (pulse width modulation) signal. Like the D3, the D5 and D6 allow movements to be carried out at the press of a button. Automation tasks can be implemented by incorporating digital signals from a higher-level control system.

Wrapping up: the D7, D8 and D9



The D7, D8, and D9 all have the same features, it just depends on the type of motor you are using. These are the most simplistic and cost effective motor controllers we offer as they provide you with just the brains of the motor. There are two modes for movement, jog and pulse. Jog is a constant signal which maintains movement until blocked or stopped, and pulse is a single-step signal that gets sent to the motor. There are 8 dip switches (SW) available for configuring the motor control. These

can be used to preselect the step mode, emitted motor current during a movement and at standstill, and the fixed motor speed in jog mode as well as executing the autotuning.