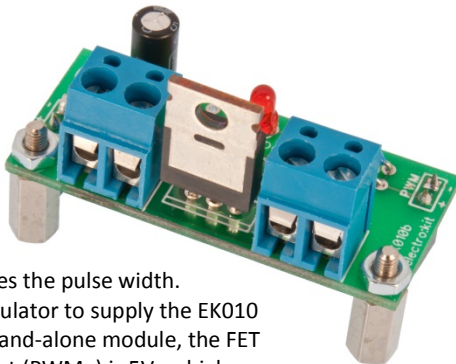


# EK010b – MOSFET Driver Board

## Kit description:

EK010b is a small board with a powerful N-channel MOSFET for driving heavy loads such as motors, solenoids, LEDs and more. This kit mounts on top of EK010 to provide PWM speed regulation for a connected DC-motor or dimming for LEDs, but can be used as a stand-alone module as well. The onboard LED is connected to the PWM input and indicates the pulse width. The board has a pattern for a 78L12 voltage regulator to supply the EK010 with a regulated 12V source. When used as a stand-alone module, the FET will connect Vdrv- to ground when the gate input (PWM+) is 5V or higher.



- \* Max drive voltage: 24VDC
- \* Max drive current: 5A (heatsink required!)
- \* Min gate voltage: 5V
- \* Dimensions: 45.72 x 20.32mm
- \* Mounting holes: c-c 40.64,  $\varnothing$ 2.54mm

## Assembly guide:

Before you begin mounting components, make sure the board is free from damage and scratches. Make sure all the components are included and are of correct value. Compare with the component list!

Begin mounting the lowest components and work your way up to the largest. IC sockets, resistors, ceramic capacitors and diodes go first. Electrolytic capacitors, connectors and potentiometers go last. Some components are polarized and must be mounted in the right way. Please observe the markings on the board!

## Component list:

RefDes	Value	Qty.	Part.no.	
HDR	2.54mm	2	41001166	
CON1, CON2	CON 3P 5mm	2	41010753	
C6	10 $\mu$ F	1	40520003	
D1	1N4004	1	40310004	
D4	LED 3mm	1	41004448	
R1	100 ohm	1	40811210	
R2	1.8 kohm	1	40811318	
T1	IRL520 N-ch	1	41010672	
VREG	78L12	1	40350012	
SCREW	M2.5x6mm	2	41010778	
SPACER	M2.5x10mm	2	41014099	
NUT	M2.5	2	41013902	
WASHER	M2.5	2	41015584	

## Schematic:

