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**Leader in Fluid Management Control**

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# **PWM BOARD**

Solutions for Coffee Machines, Water Dispensers,  
Household Appliances, Professional Cleaning  
and Medical equipment.

**For the control of the fluids.**

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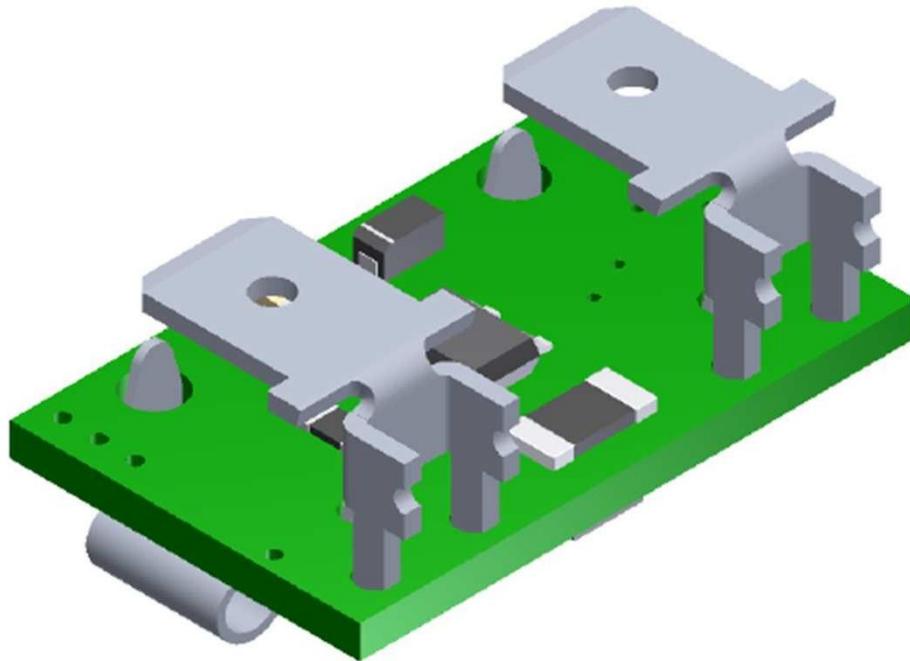


# PWM Board



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**MAXIMUM RATING  
HARDWARE  
24V DC**

- Room temperature: 0 – 80°C
- Supply voltage: 24V DC  $\pm$  20%
- Current consumption of electronic board: 16mA
- Maximum power supply: 1A
- Peak current (10ms): 3A
- Output type: Mosfet open drain
- PWM frequency: 15kHz  $\pm$  5%

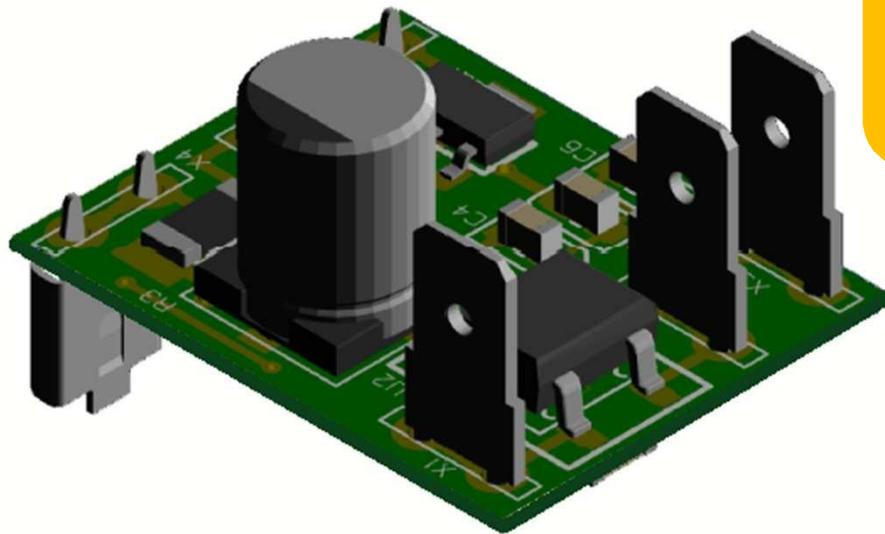


# PWM Board



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**MAXIMUM RATING  
HARDWARE  
230V AC**

- Room temperature: 0 – 70°C
- Supply voltage: 220V AC  $\pm$  20%
- Frequency: 50Hz/60Hz
- Current consumption of electronic board: 10mA
- Maximum current supply: 0,5 A
- Peak current (10ms): 1A
- Output type: Mosfet open drain
- PWM frequency: 5kHz  $\pm$  5%



# PWM Board

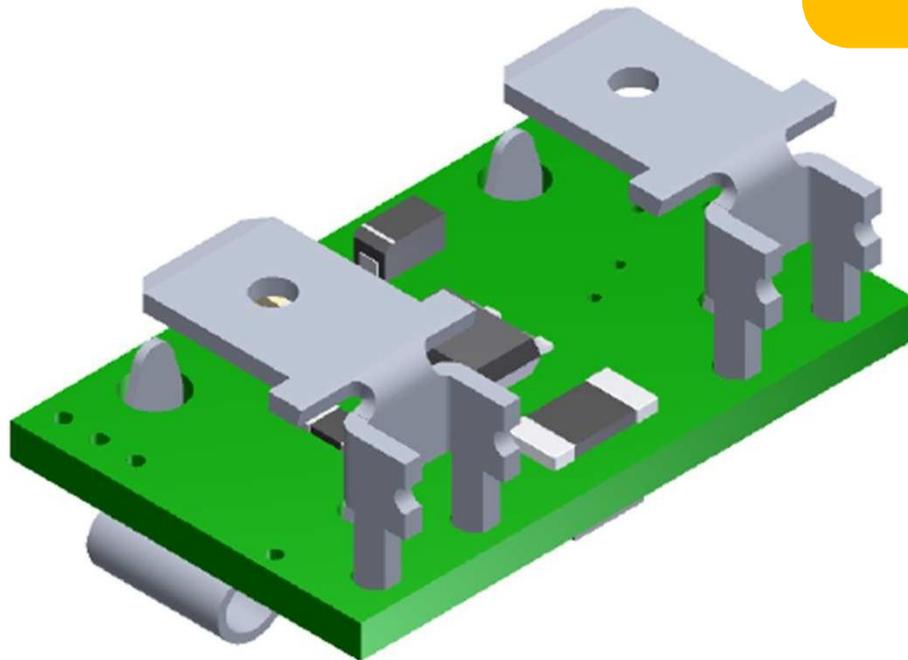


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The PWM board allows to drive the Solenoid valves in direct current through the control of rush current and the holding current.

FUNCTIONALITY  
OF SOFTWARE  
24V DC



- In rush time: 500 ms  $\pm$  5%
- In rush current: 480 mA  $\pm$  5%
- Holding current: 100 mA  $\pm$  5%
- Peak current (10 ms): 800 mA  $\pm$  5%
- Start up time: 2mS  $\pm$  5%
- Stop time (output fall time): 100  $\mu$ s  $\pm$  5%
- Load inductance: 110 mH  $\pm$  5%



# PWM Board

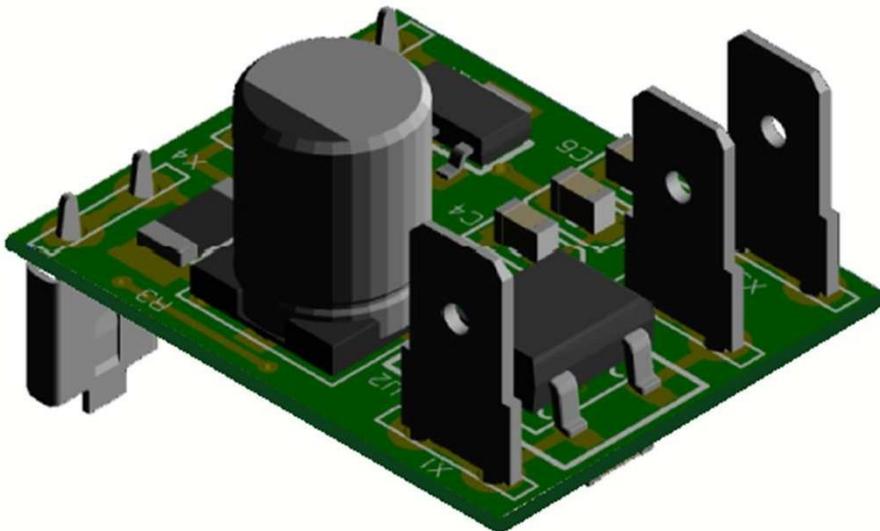


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The PWM board allows to drive the Solenoid valves in direct current through the control of rush current and the holding current.

FUNCTIONALITY  
OF SOFTWARE  
230V AC



- In rush time: 100 ms  $\pm$  5%
- In rush current: 400 mA  $\pm$  5%
- Holding current: 30 mA  $\pm$  5%
- Peak current: (10 ms): 1000 mA  $\pm$  5%

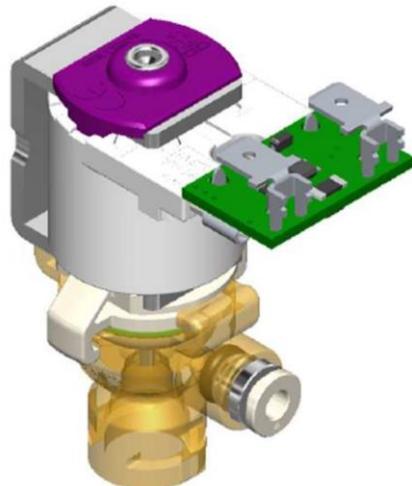
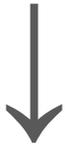
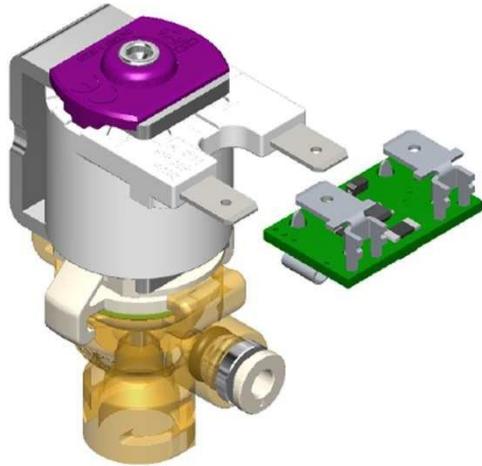


# PWM Board



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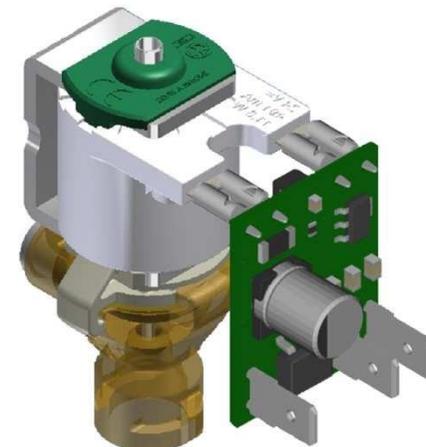
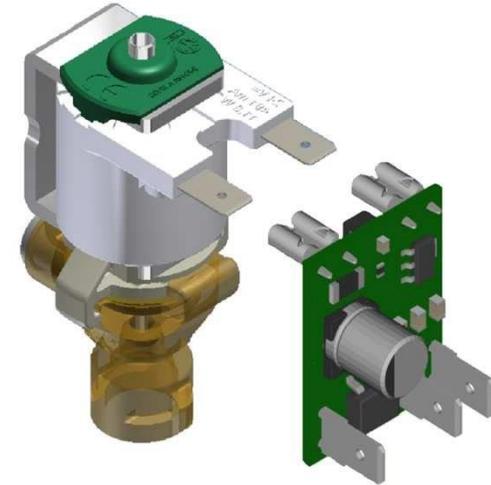
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## ALTERNATIVE SOLUTIONS

Electromechanical drivers:

- Solenoids
- Valves
- Actuators
- Protection against overheating of the solenoids





# PWM Board Schematics

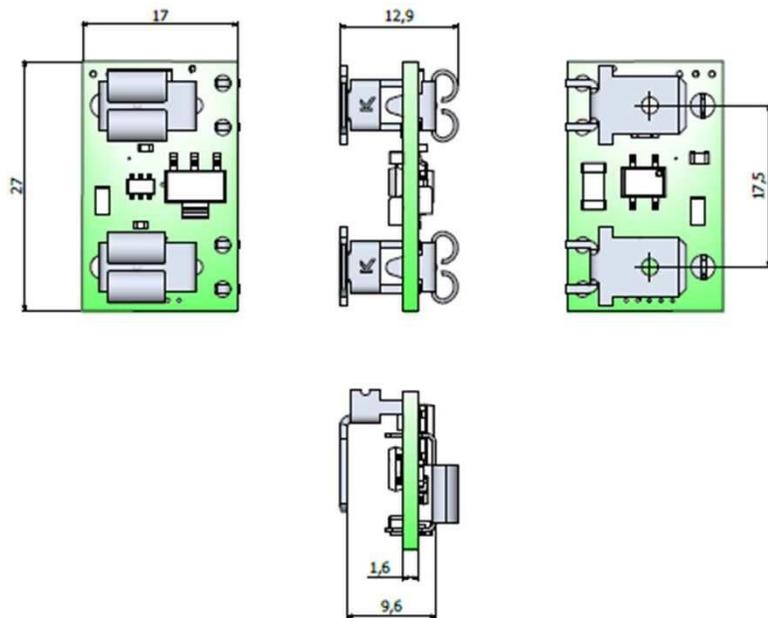


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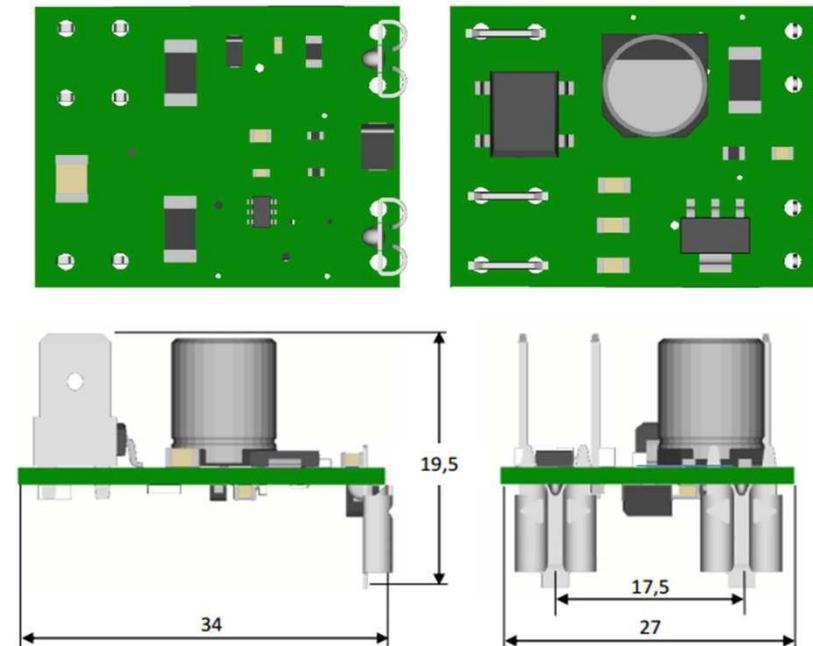
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## Schematics and board size

24V DC



230V AC



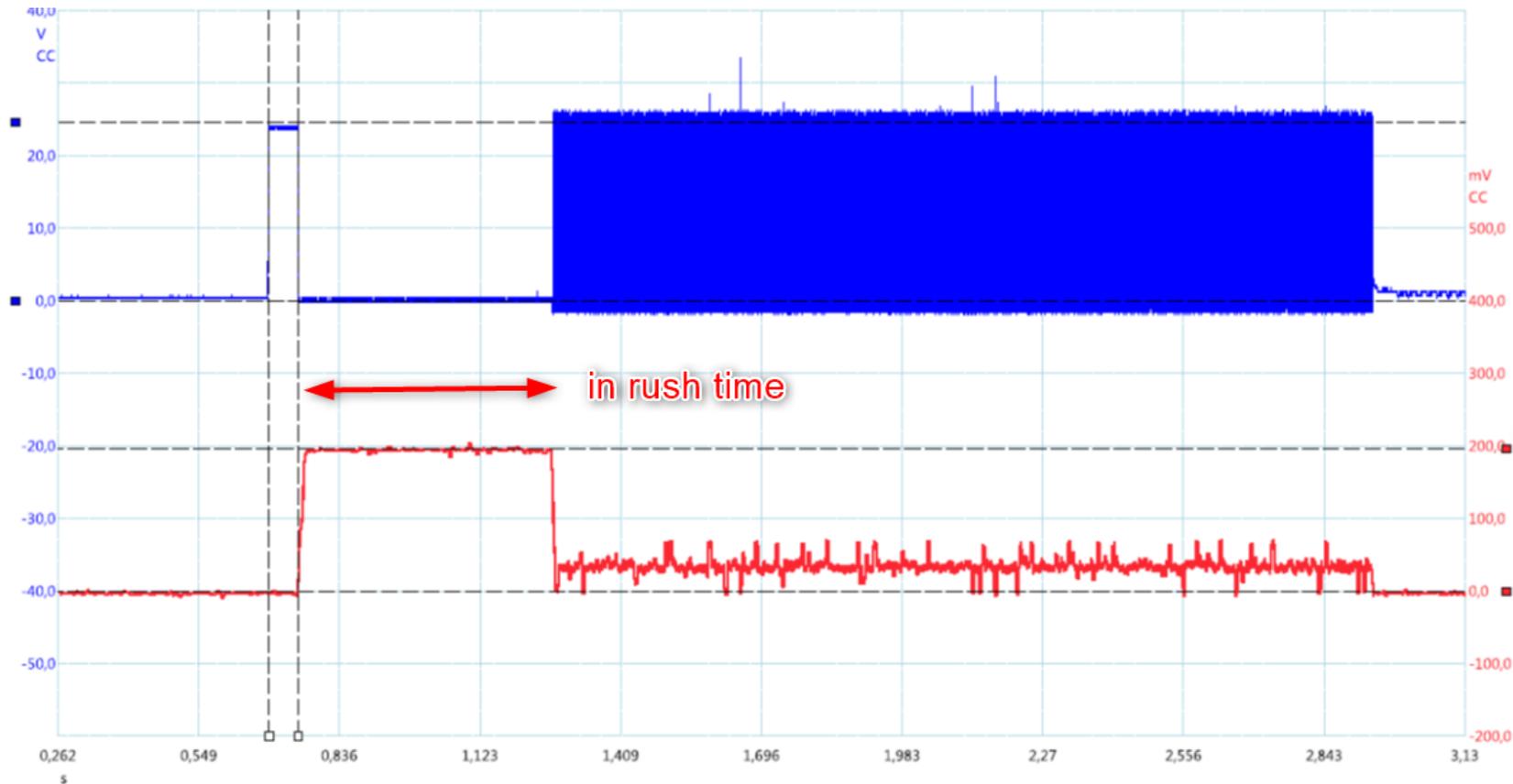


# PWM Working Scheme



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Parameters customizable by software.



# PWM Board Features

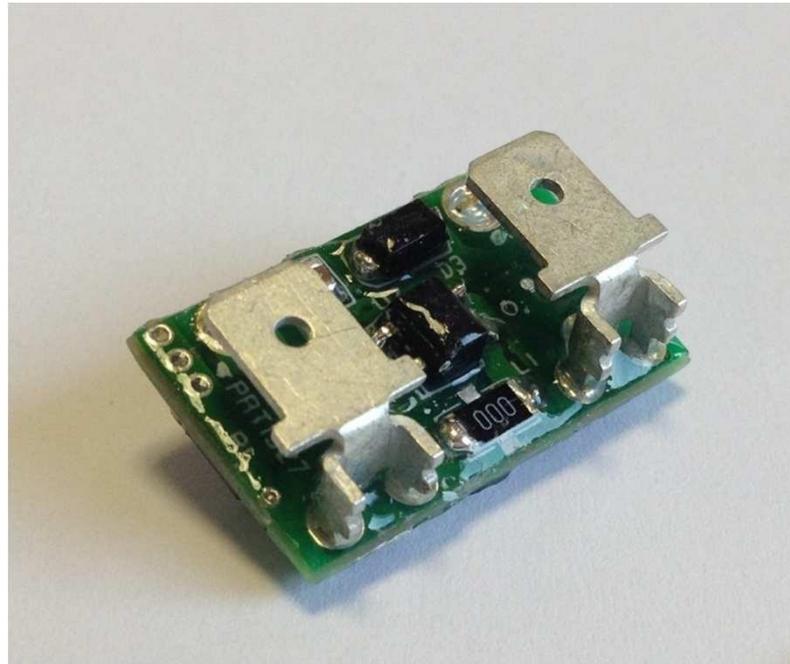


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Very compact  
dimensions

Substantial  
reduction of the  
energy consumed  
about 60%



Allows to lower the  
operating temperature  
of the solenoid

Considerably  
reduces  
electromagnetic  
pollution (EMC)

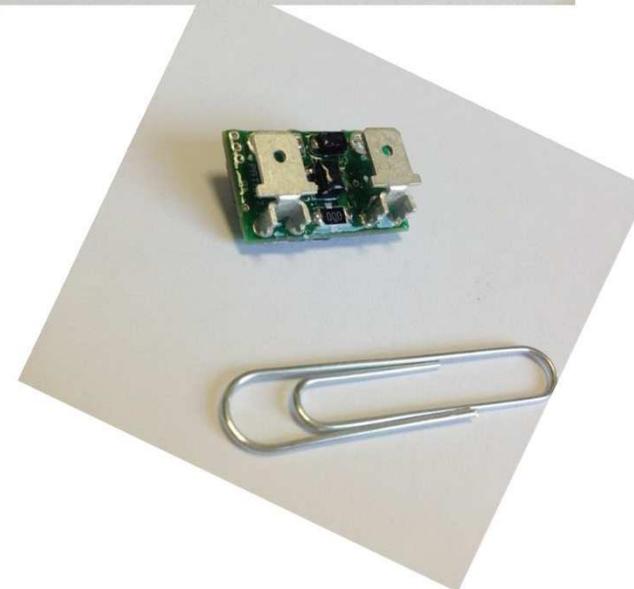
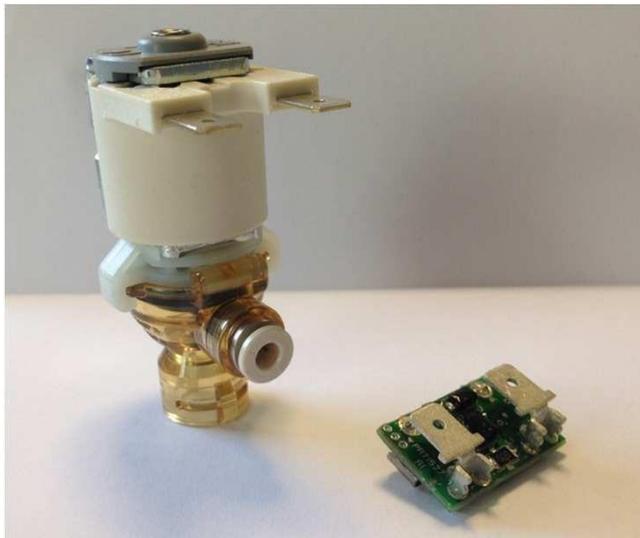
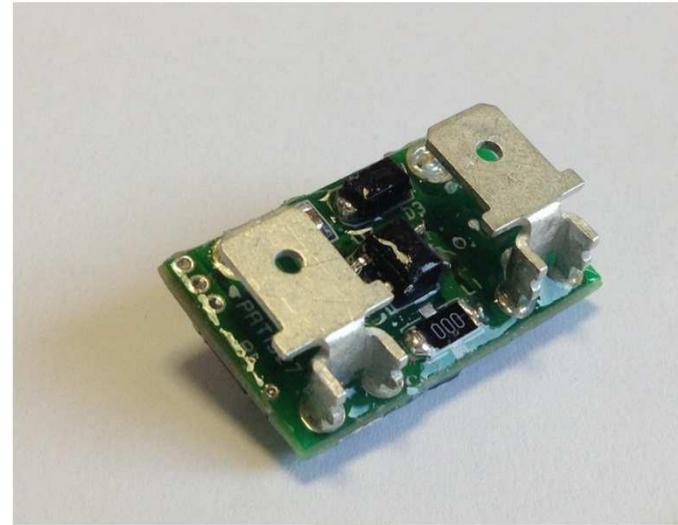
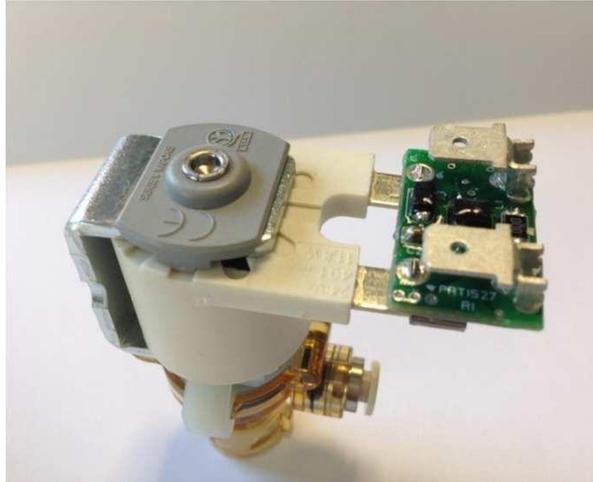


# PWM Board Images



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# Applications

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# NOTHING GREAT HAS EVER BEEN DONE WITHOUT PASSION

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