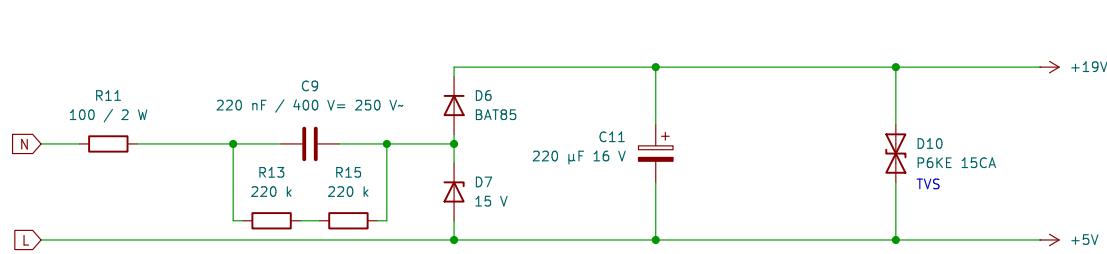


1 2 3 4 5 6

A

A

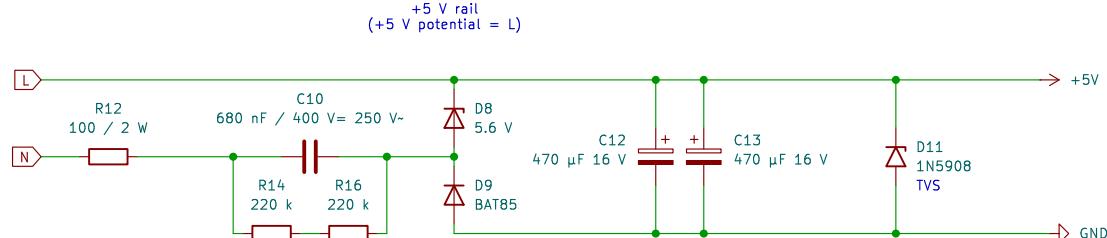
+19 V rail



B

B

+5 V rail  
(+5 V potential = L)



C

C

Michael Büsch <m@bues.ch>

Sheet: /Power supply/  
File: powersupply.kicad\_sch

Title: Motor RPM controller – Power supply

Size: A4 Date: 2025-09-01  
KiCad E.D.A. 9.0.6

Rev: 1.0  
Id: 2/6

1 2 3 4 5 6

1 2 3 4 5 6

A

A

B

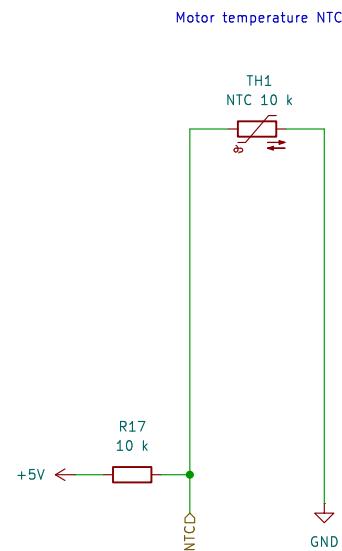
B

C

C

D

D



Michael Büsch <m@bues.ch>  
Sheet: /Motor temperature NTC/  
File: ntc.kicad\_sch

**Title: Motor RPM controller – Motor temperature**

Size: A4 Date: 2025-09-01  
KiCad E.D.A. 9.0.6

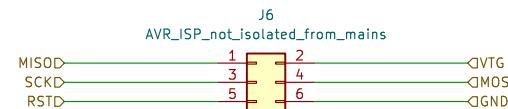
Rev: 1.0  
Id: 4/6

1 2 3 4 5 6

A WARNING WARNING WARNING

This circuit is **\*\*NOT\*\*** electrically isolated from mains L and N!  
NEVER connect an ISP programmer/computer directly!

B WARNING WARNING WARNING



D Michael Büsch <m@bues.ch>

Sheet: /ISP/  
File: isp.kicad\_sch

Title: Motor RPM controller – ISP – **WARNING not isolated**

Size: A4 Date: 2025-09-01  
KiCad E.D.A. 9.0.6

Rev: 1.0  
Id: 5/6

A

A

B

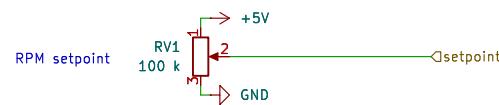
B

C

C

D

D



**WARNING:**  
Pot spindles reaching touchable surfaces  
must be non-metal  
and must be capable of insulating 400 V.

Michael Büsch <[m@bues.ch](mailto:m@bues.ch)>

Sheet: /RPM setpoint/  
File: rpm\_setpoint.kicad\_sch

**Title: Motor RPM controller – Setpoint**

Size: A4 Date: 2025–09–01  
KiCad E.D.A. 9.0.6

**Rev: 1.0**  
Id: 6/6

A

A

B

B

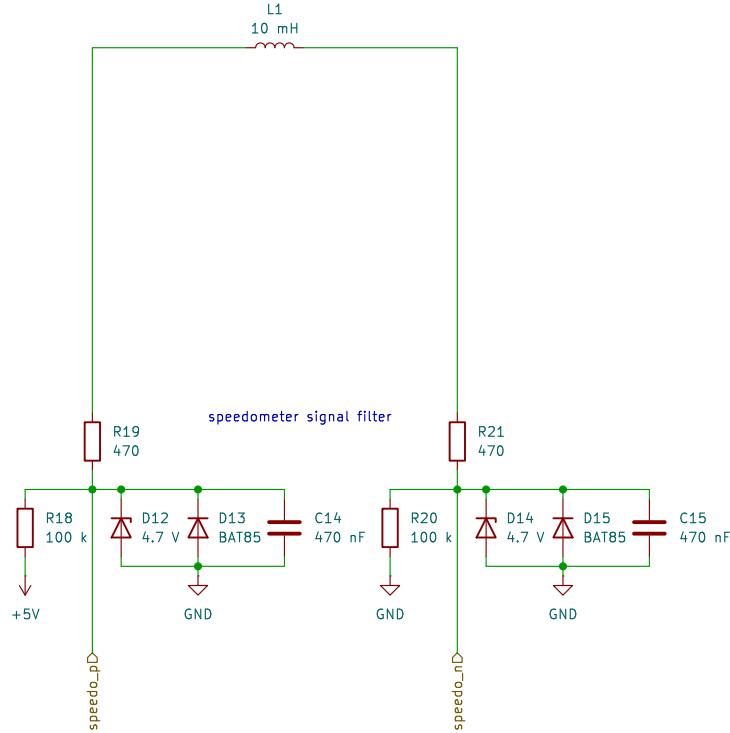
C

C

D

D

4-pole rotating magnet  
induces current into L



Michael Büsch <m@bues.ch>

Sheet: /Motor RPM speedometer/

File: speedometer.kicad\_sch

**Title: Motor RPM controller – Motor speedometer input**

Size: A4 Date: 2025–09–01

KiCad E.D.A. 9.0.6

Rev: 1.0

Id: 7/6