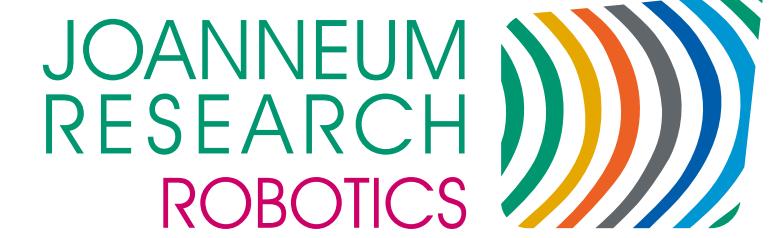


Internship Project

Conveyor Belt



Internship DIVIDER 2023

2

Project curriculum:

Fraunhofer Austria
-Assembling Conveyor Belt

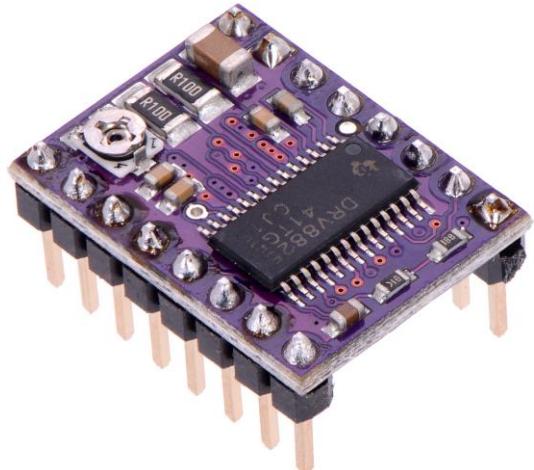
Joanneum Research
-Measurement System for Conveyor Belt



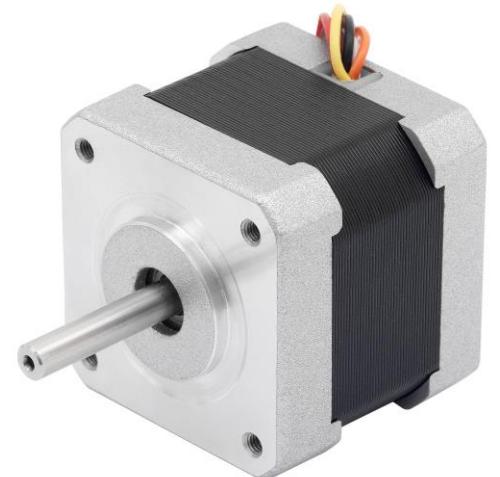
Part 1(Assembling) Components

3

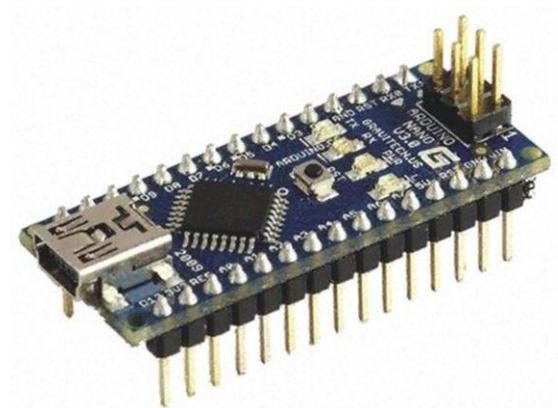
Motor driver



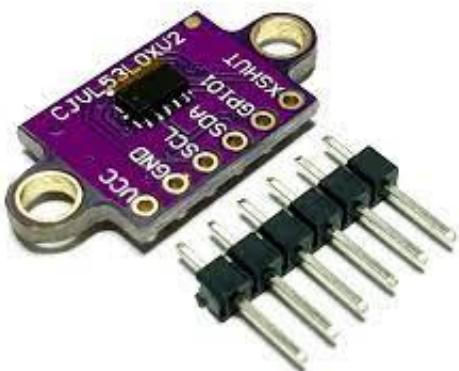
Stepper motor



Arduino Nano



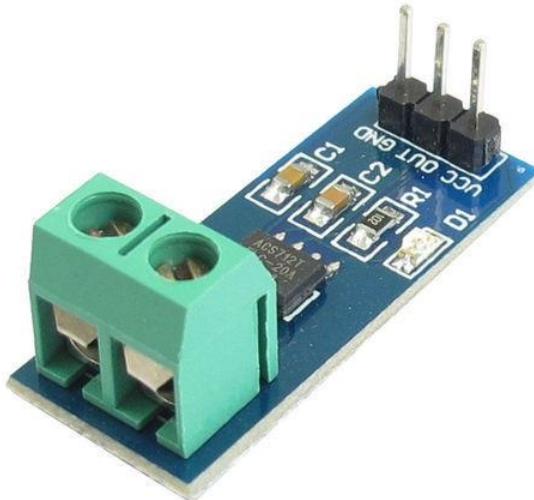
ToF sensor



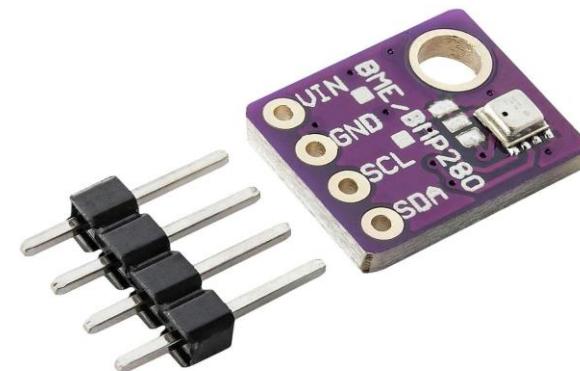
Part 2 (Measurement) Components

4

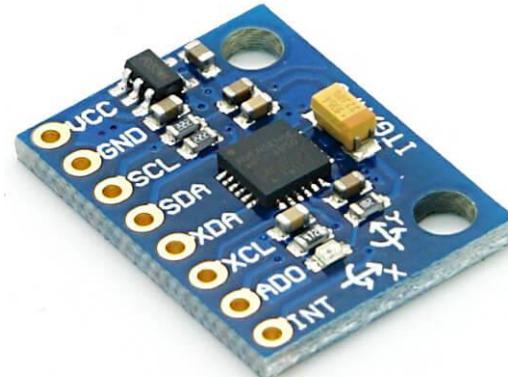
Current sensor



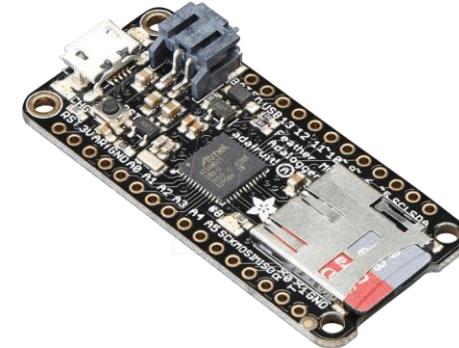
Temperature sensor



Acceleration sensor



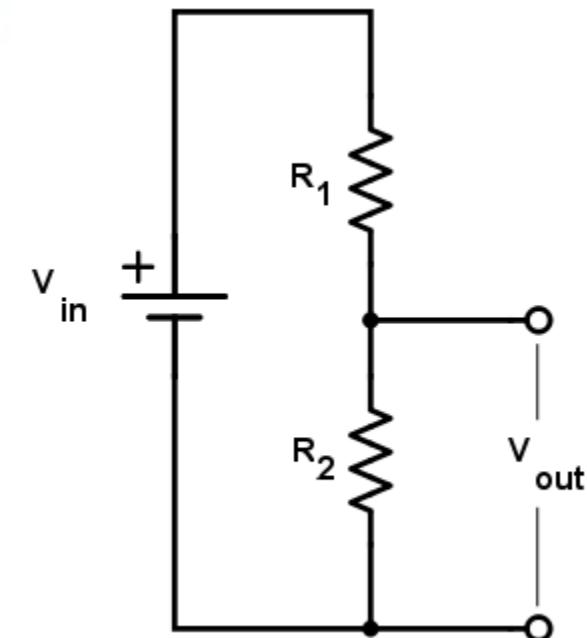
Adalogger Feather M0

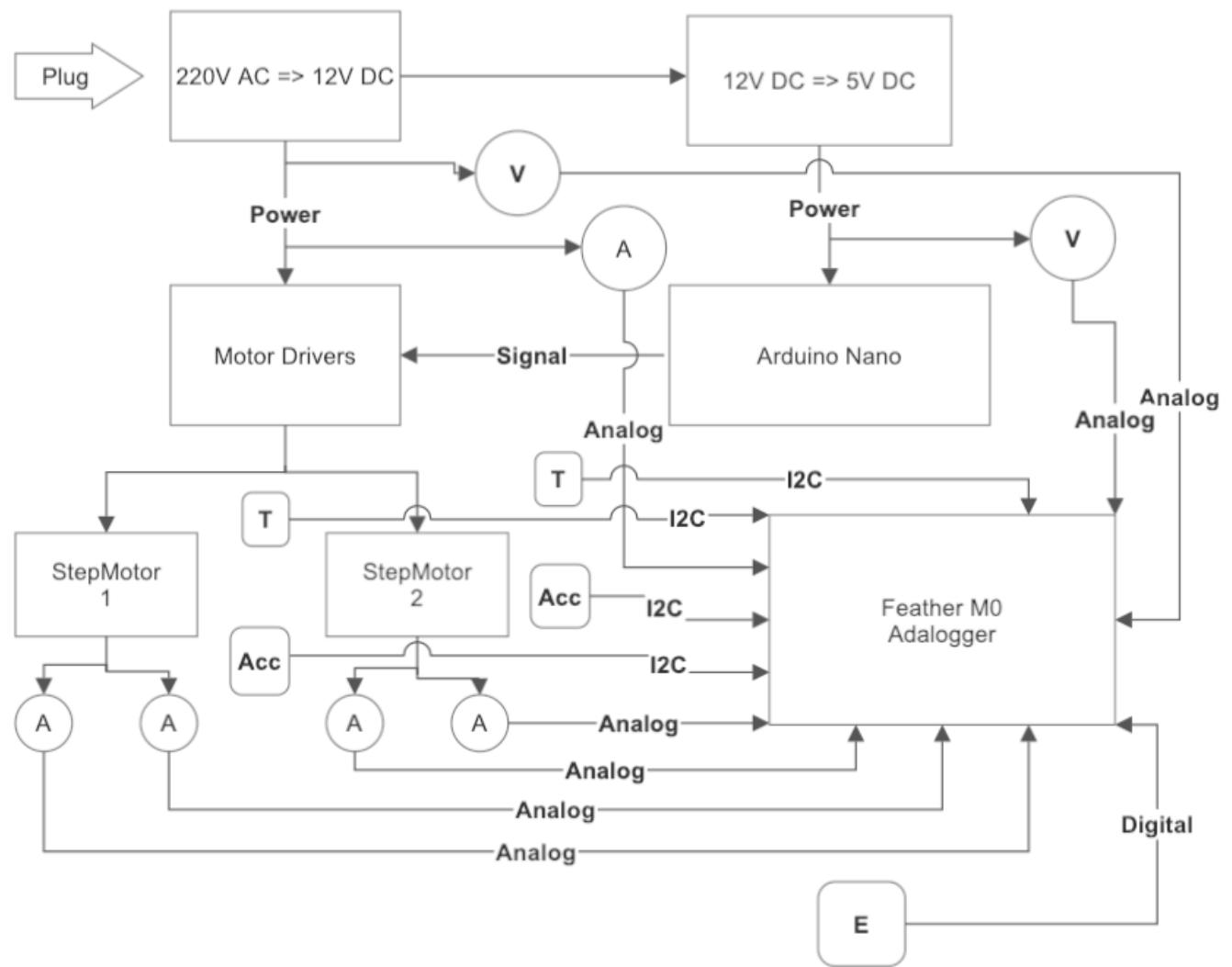


Encoder



Voltage divider





Ammeter



Voltage divider



Acceleration sensor

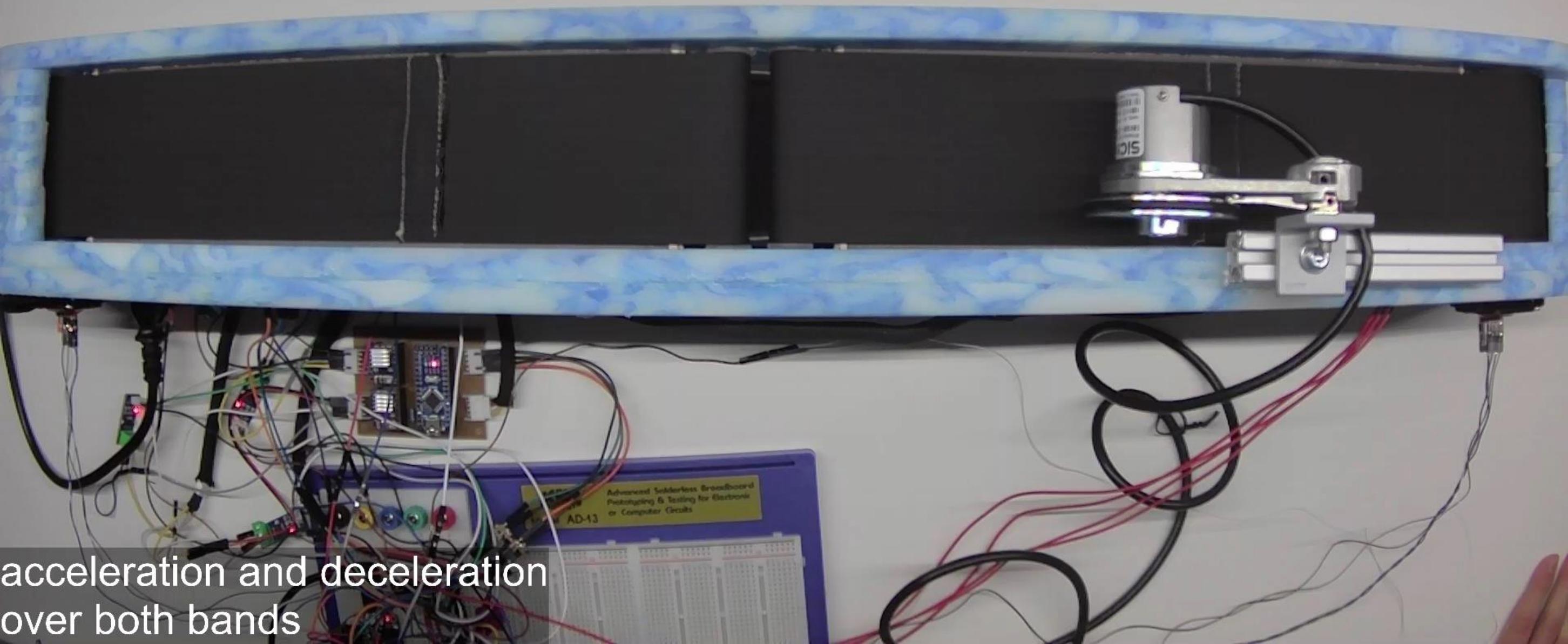


Encoder

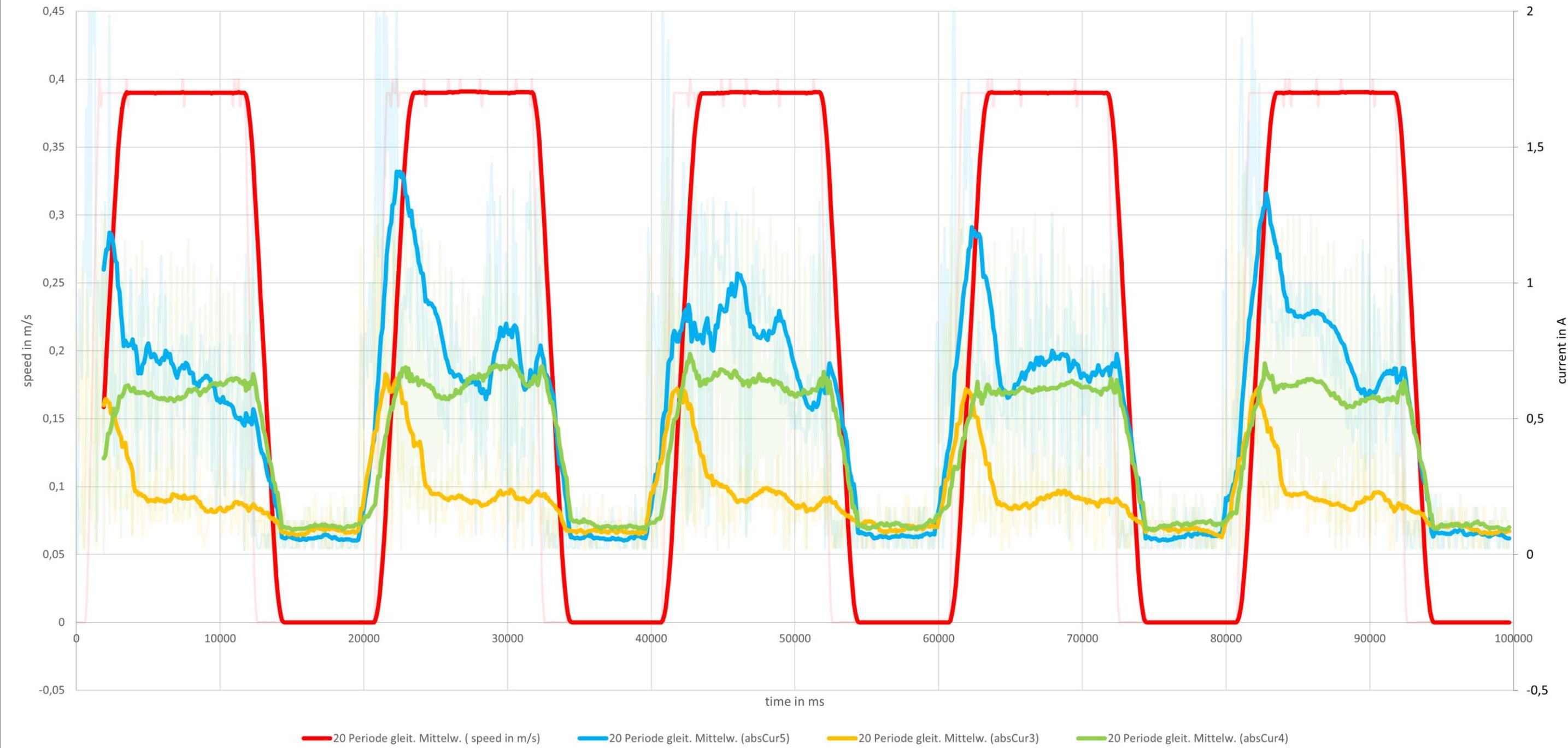


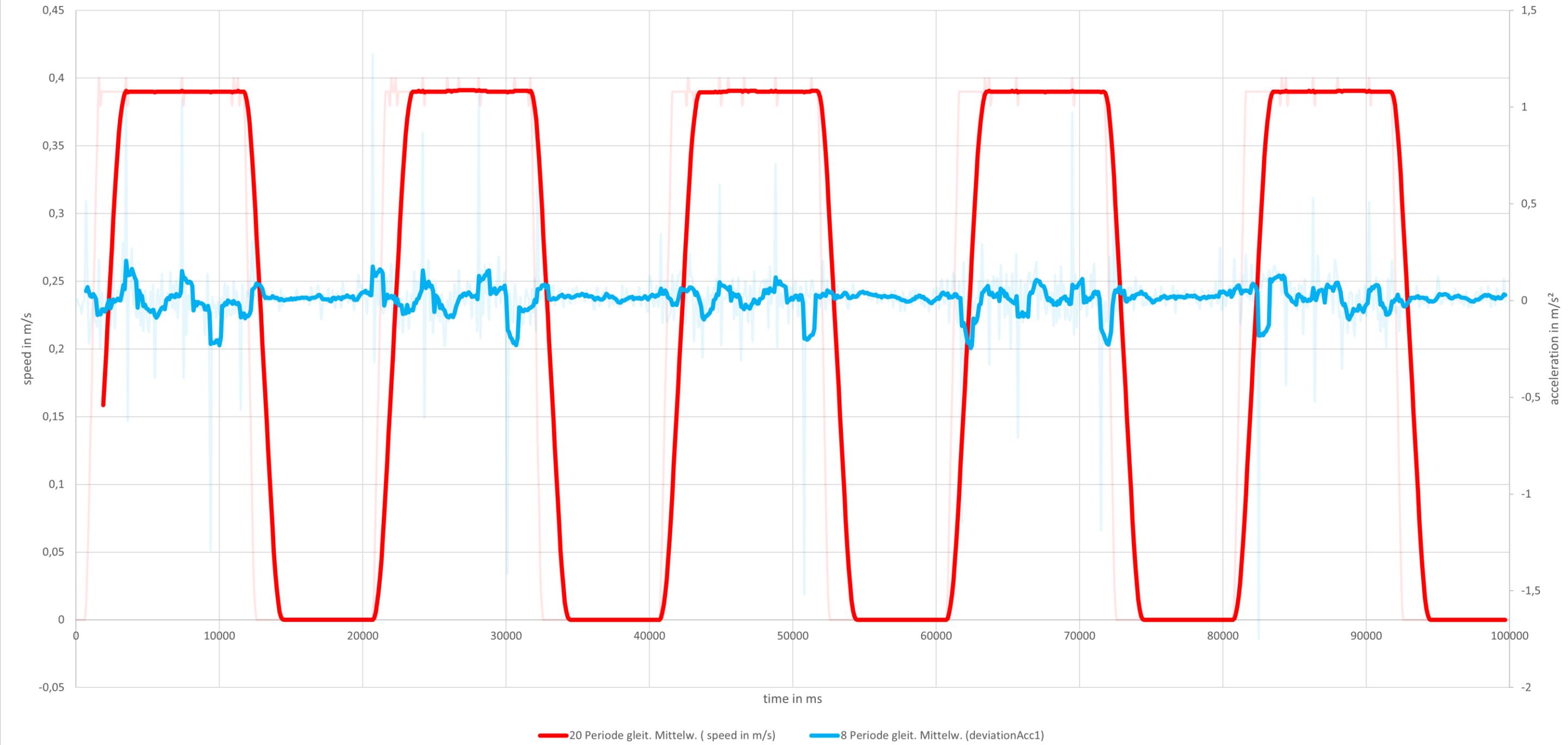
Temperature sensor

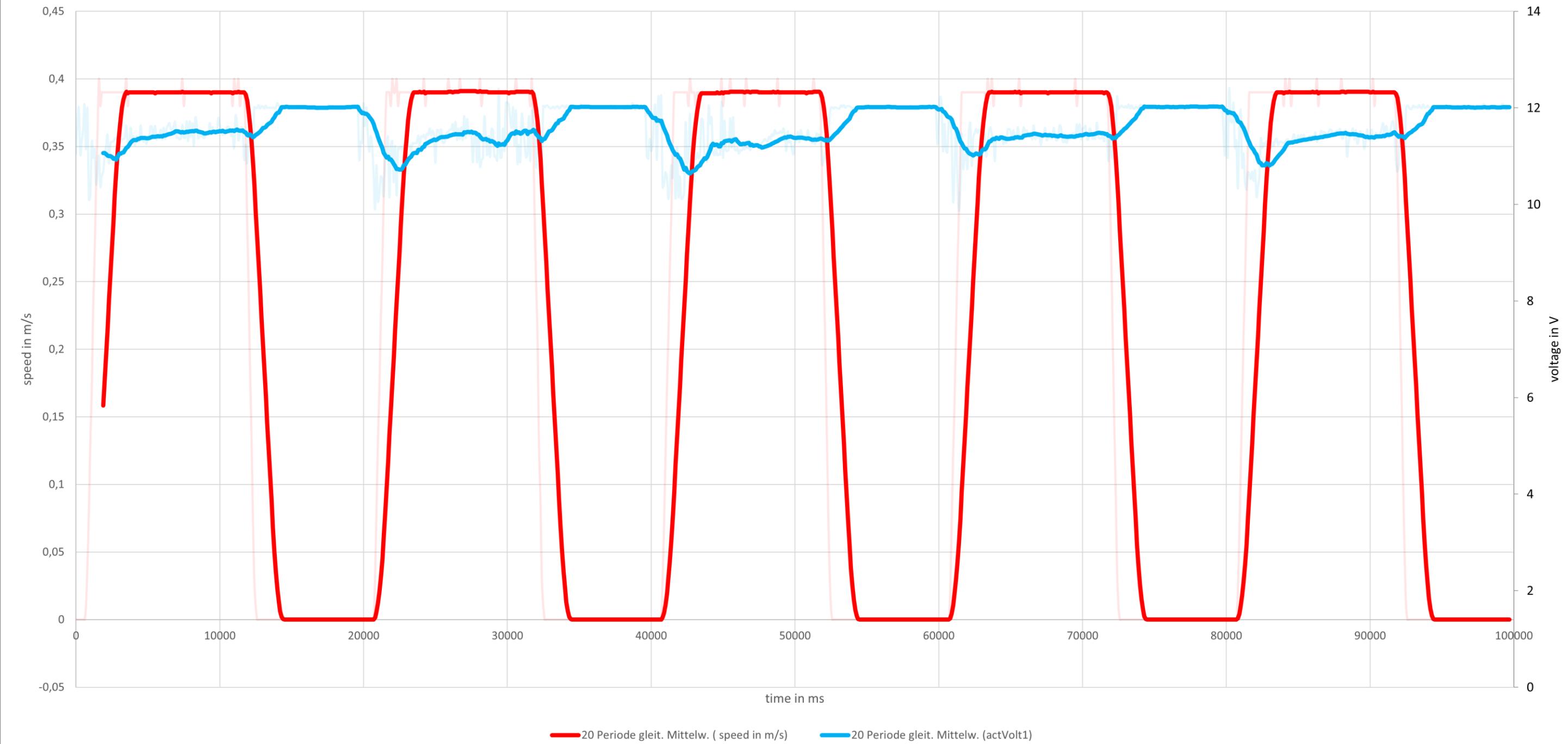
03.csv



acceleration and deceleration
over both bands

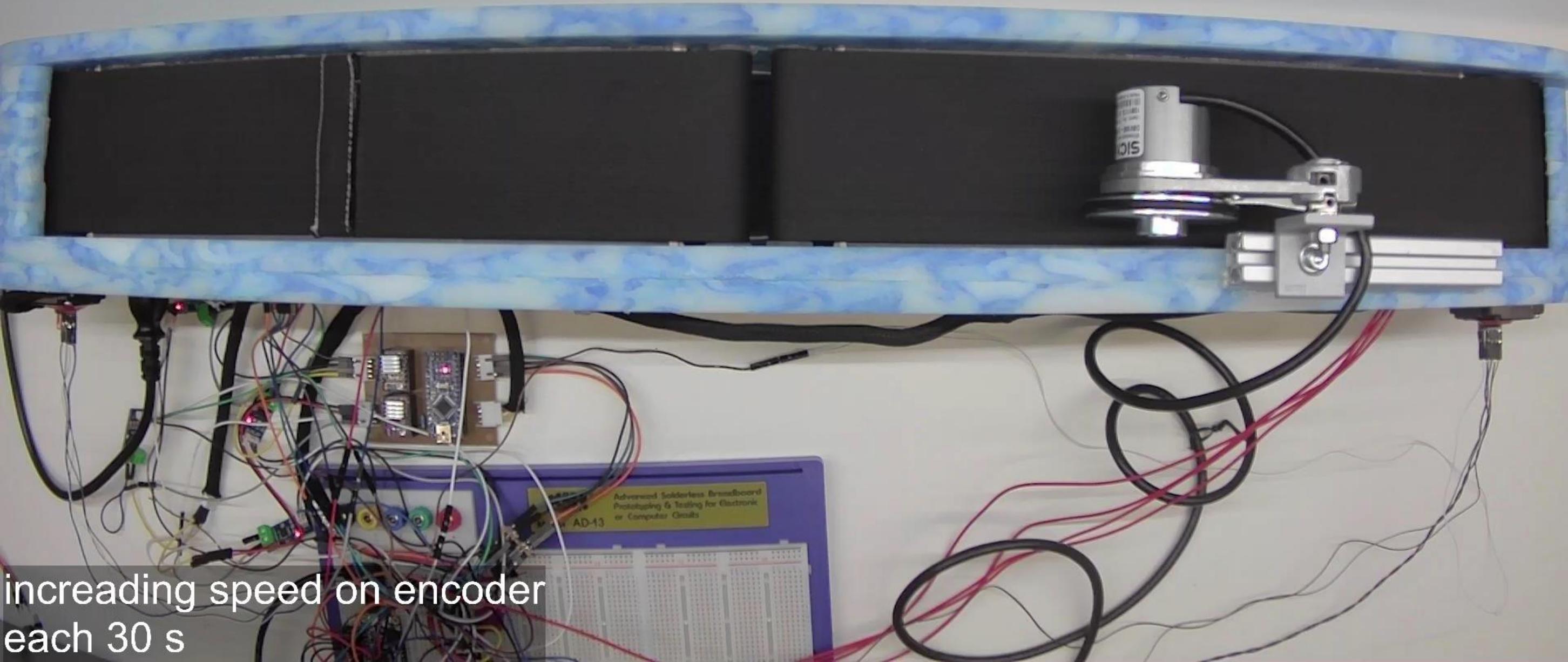




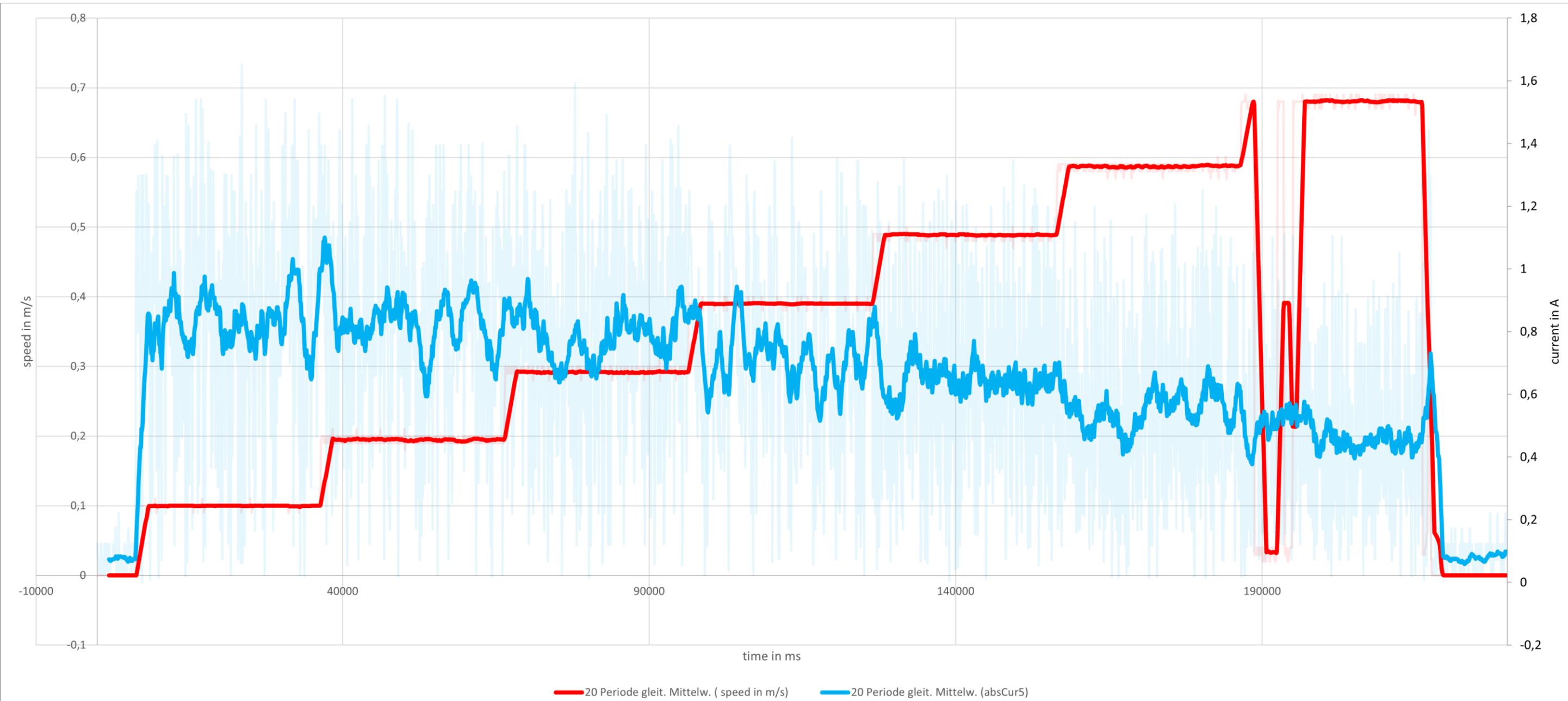


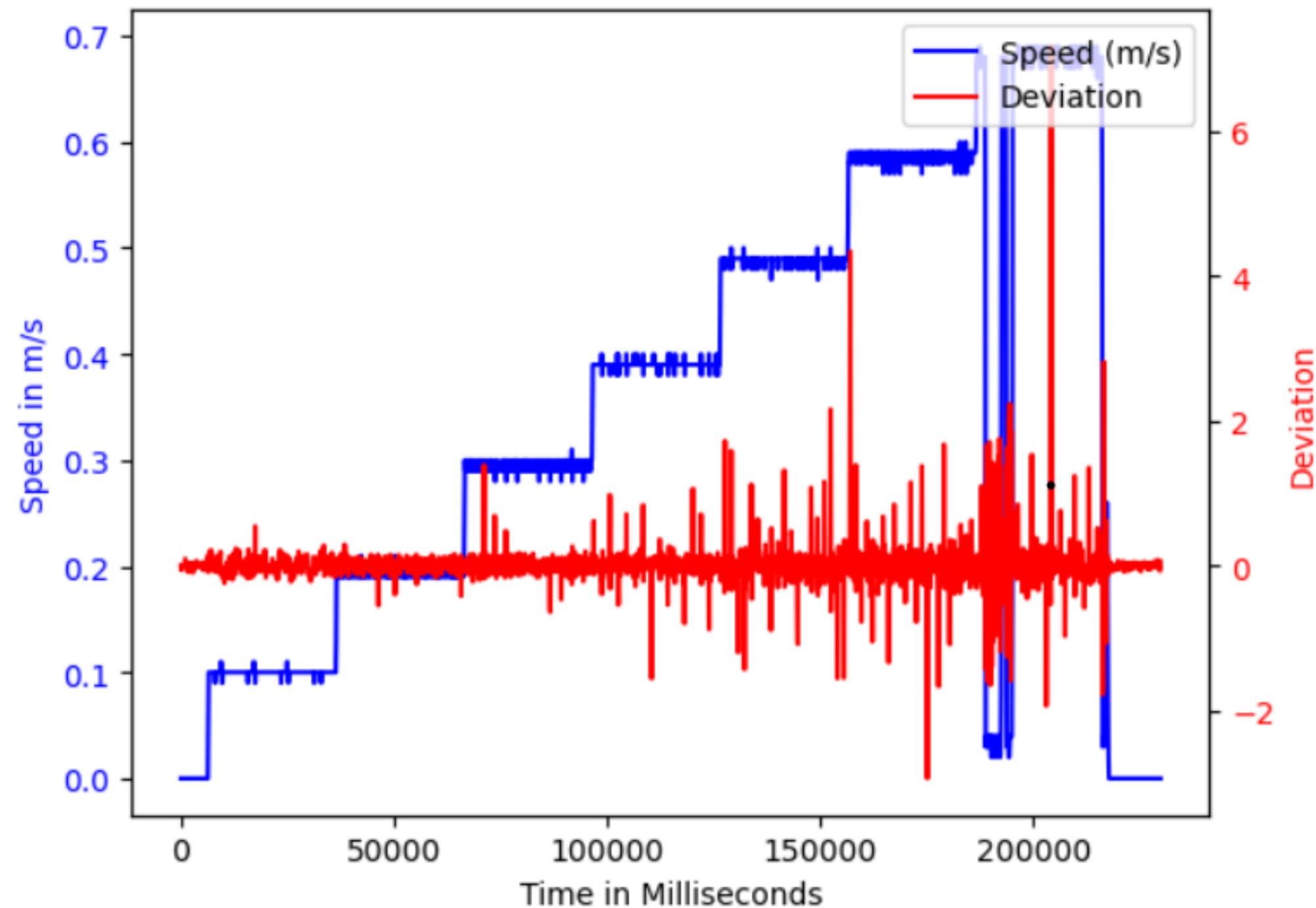
— 20 Periode gleit. Mittelw. (speed in m/s) — 20 Periode gleit. Mittelw. (actVolt1)

05.csv

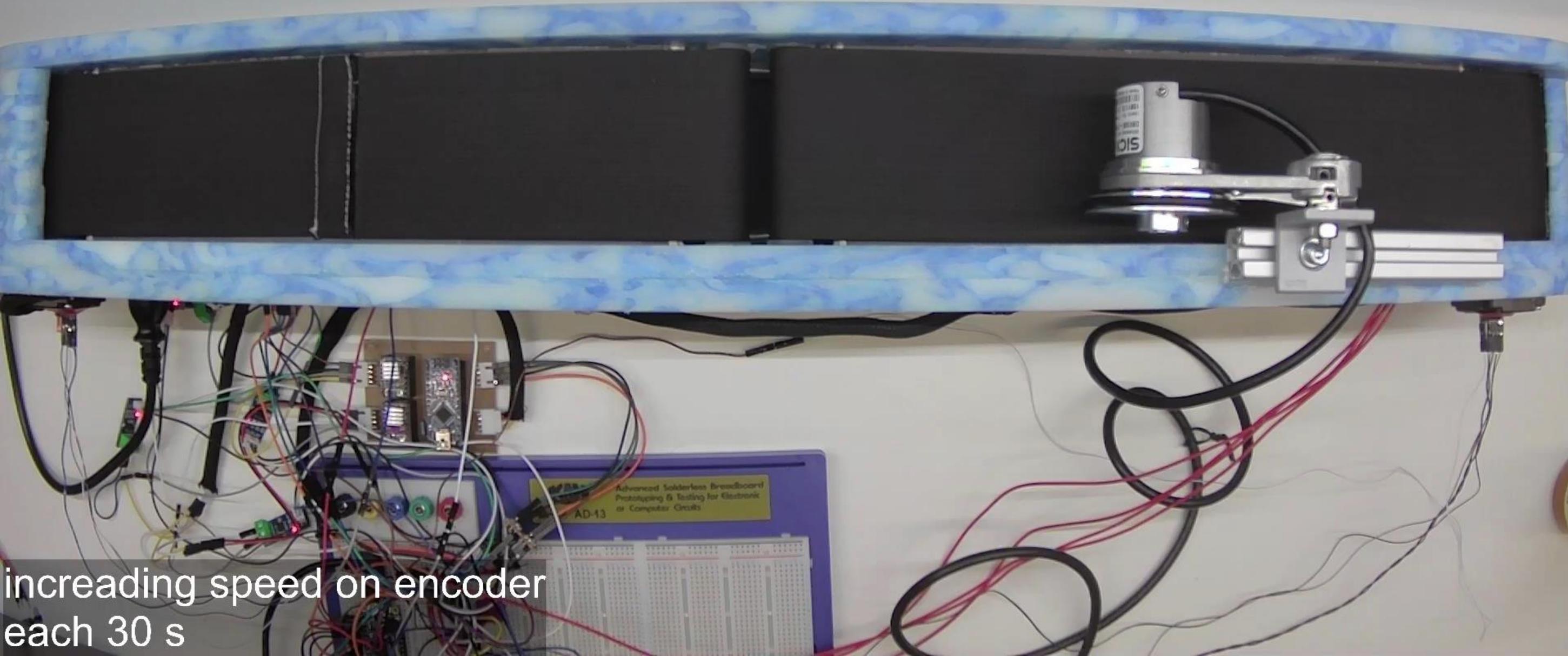


increasing speed on encoder
each 30 s

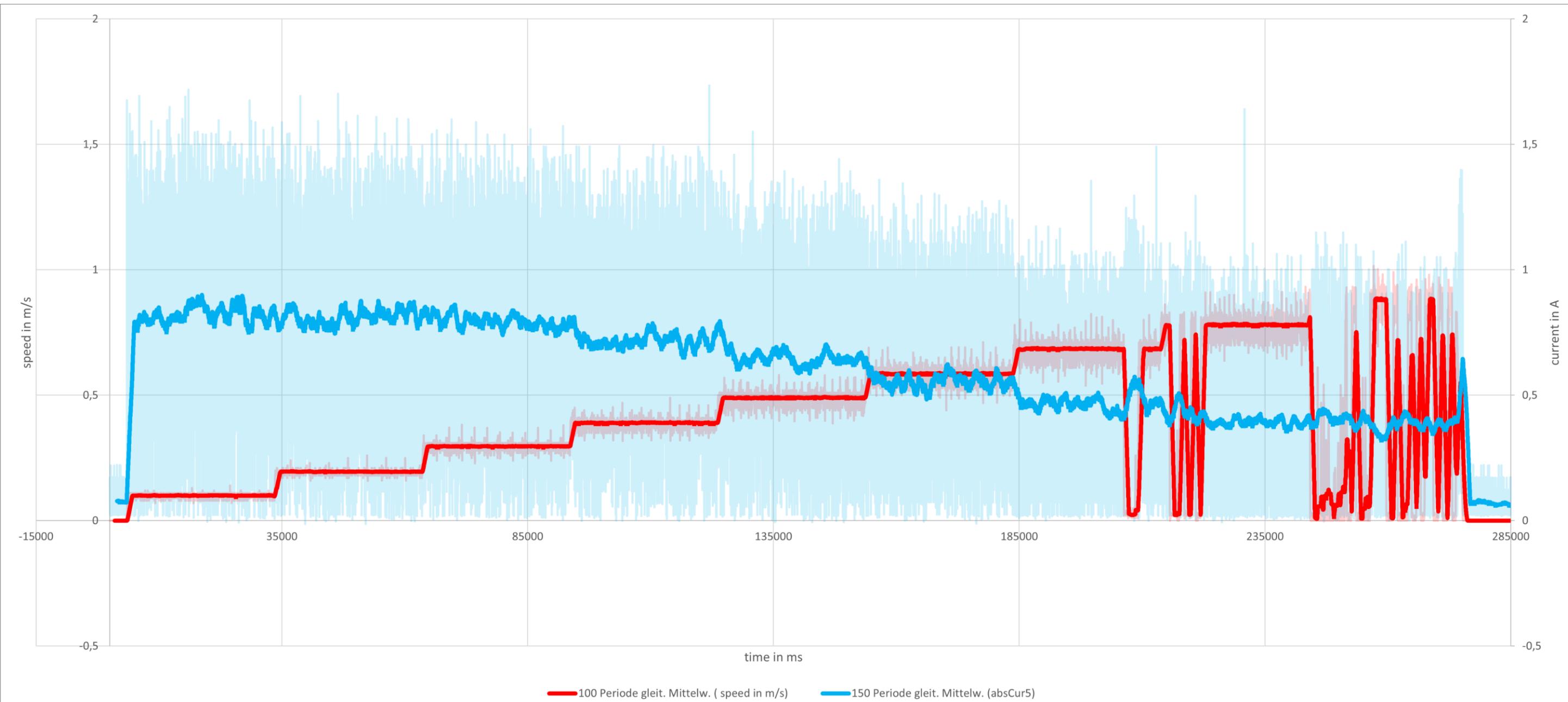


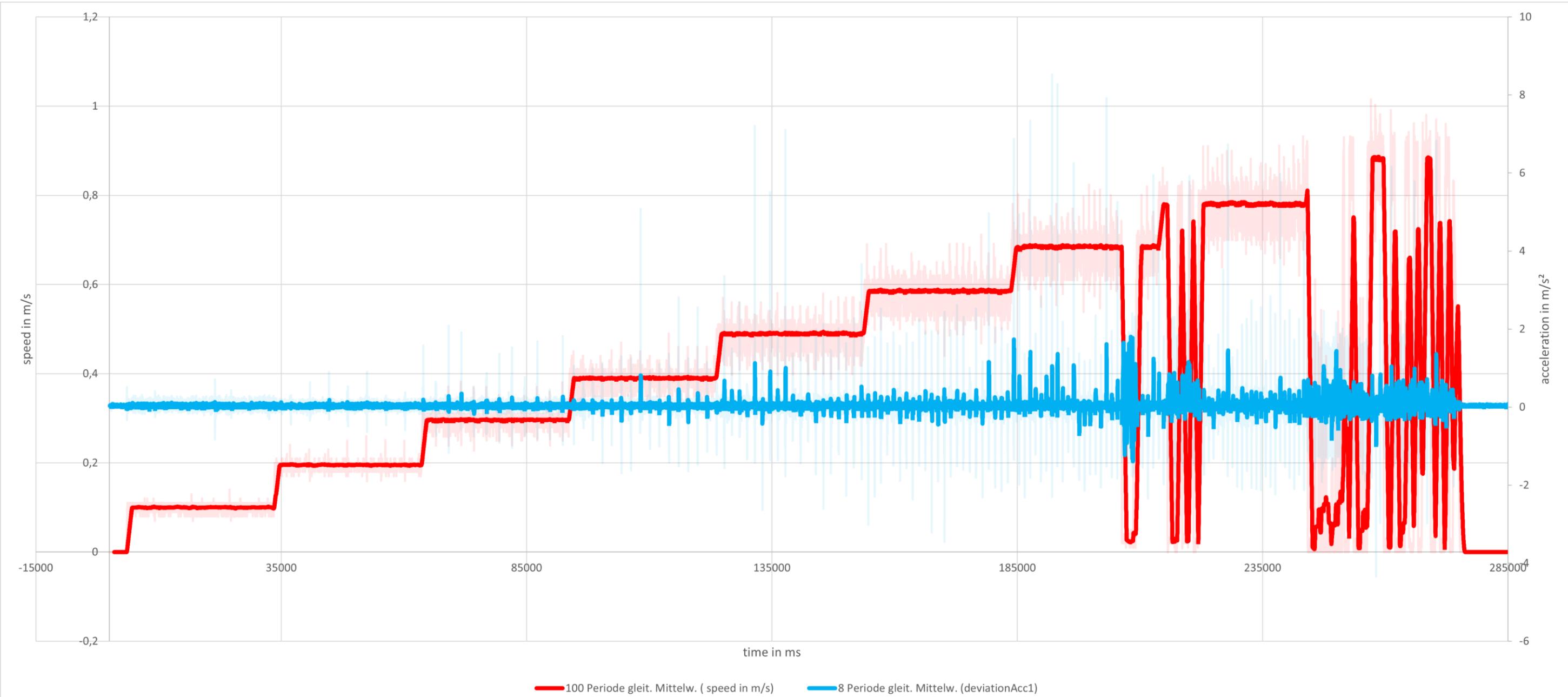


06.csv

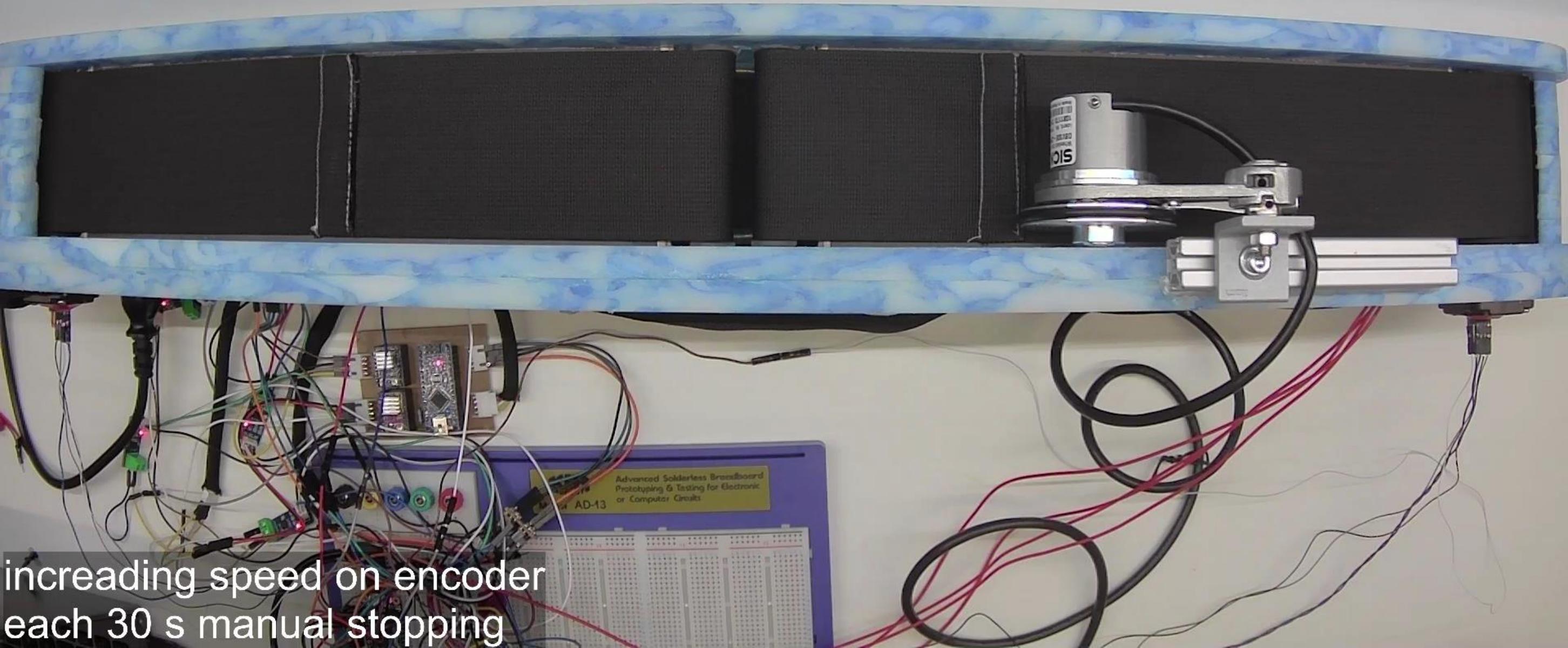


increasing speed on encoder
each 30 s

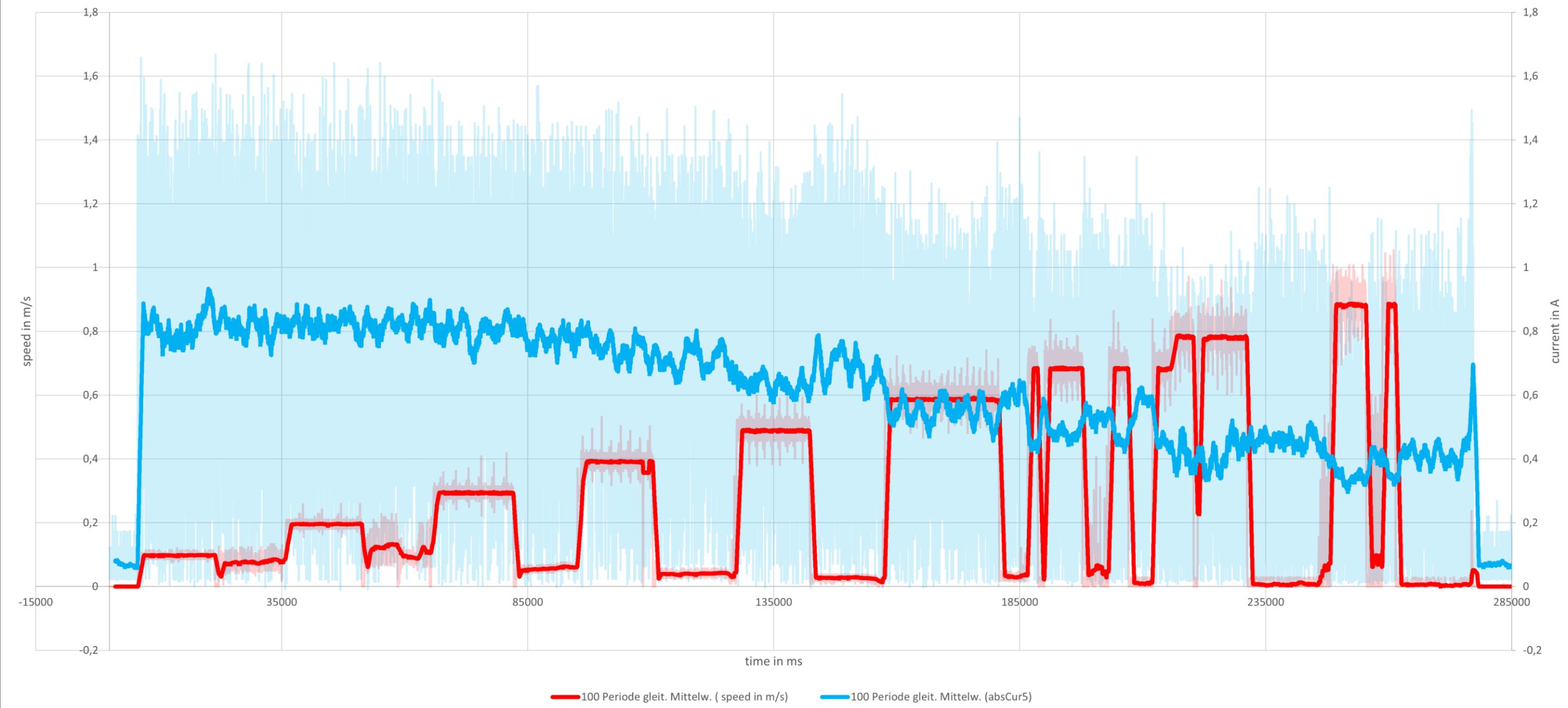


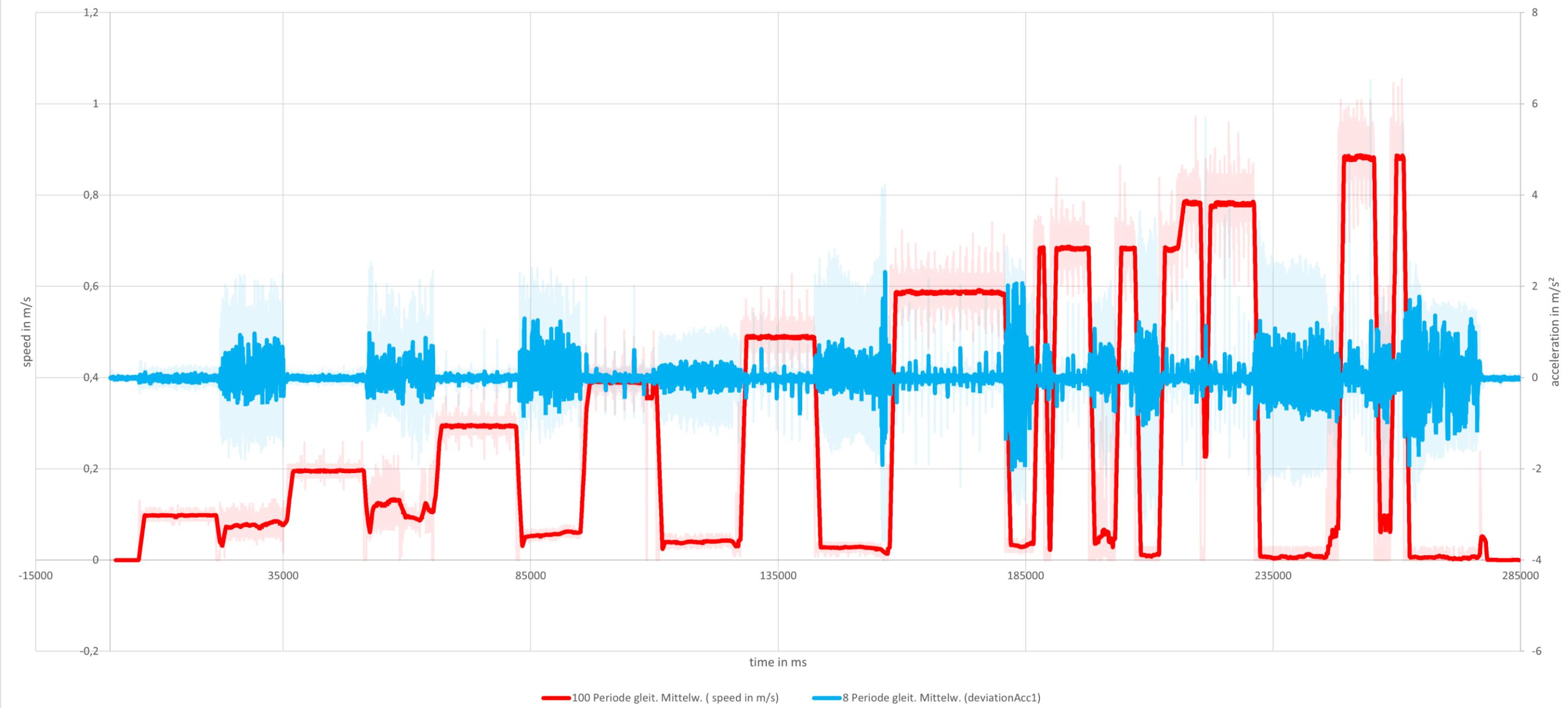


07.csv

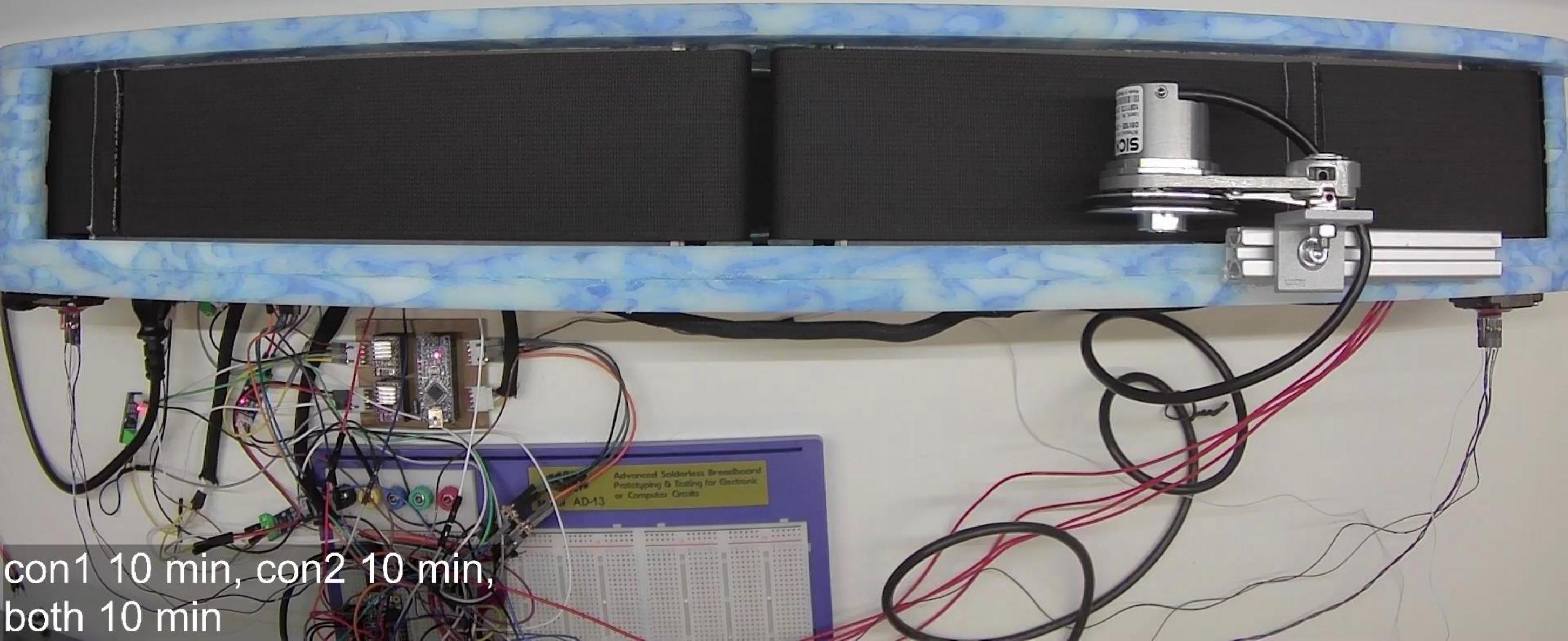


increasing speed on encoder
each 30 s manual stopping

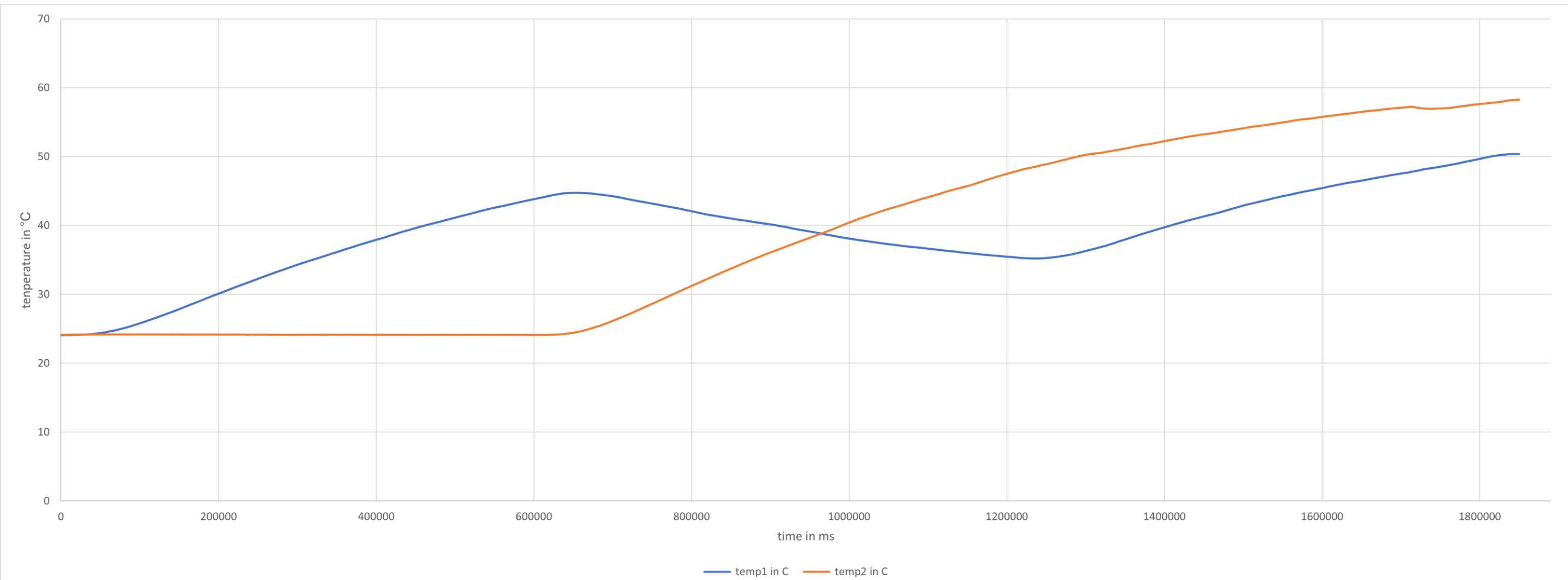


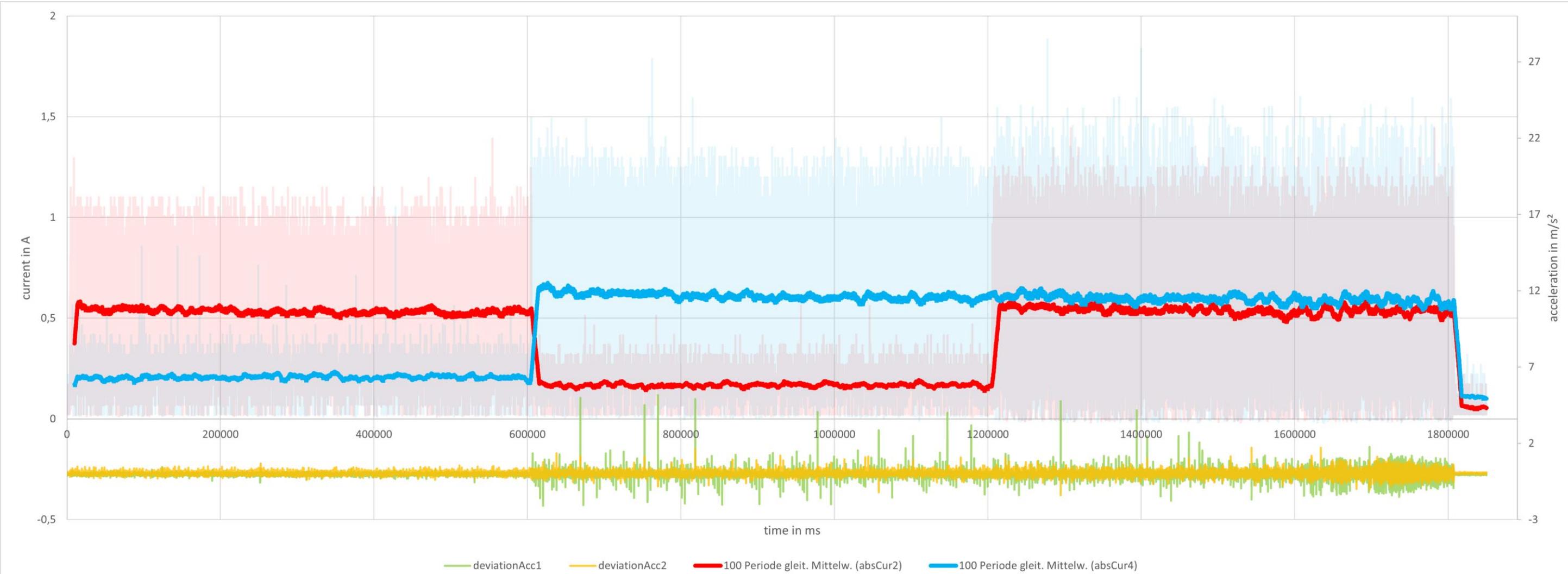


04.csv

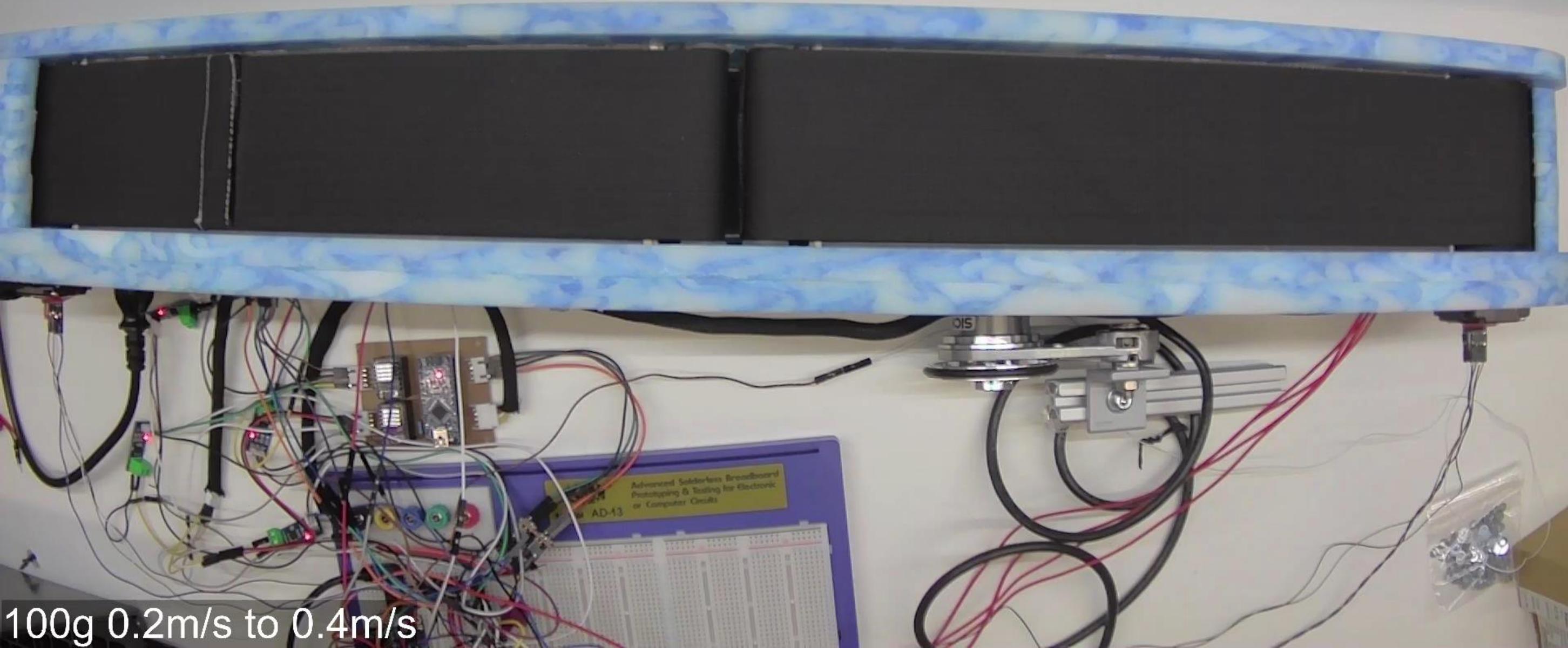


con1 10 min, con2 10 min,
both 10 min



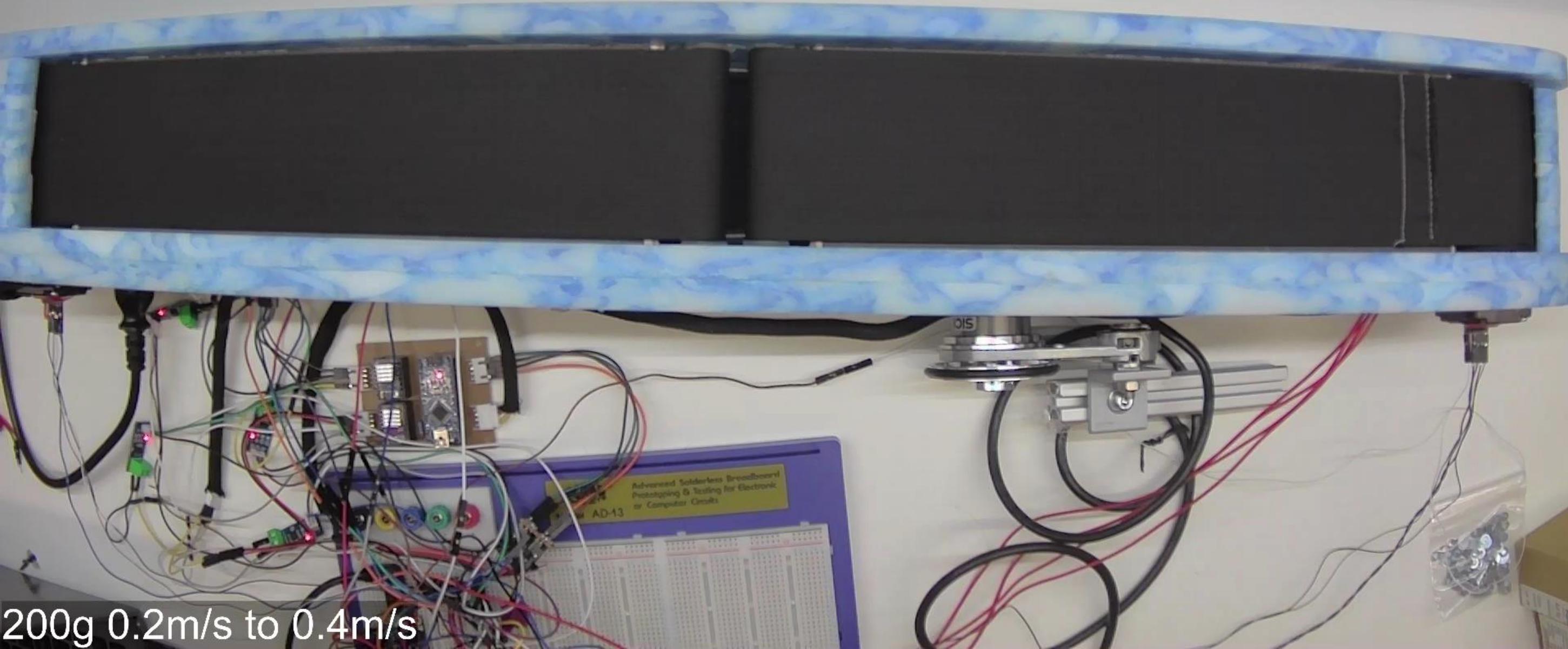


09.csv



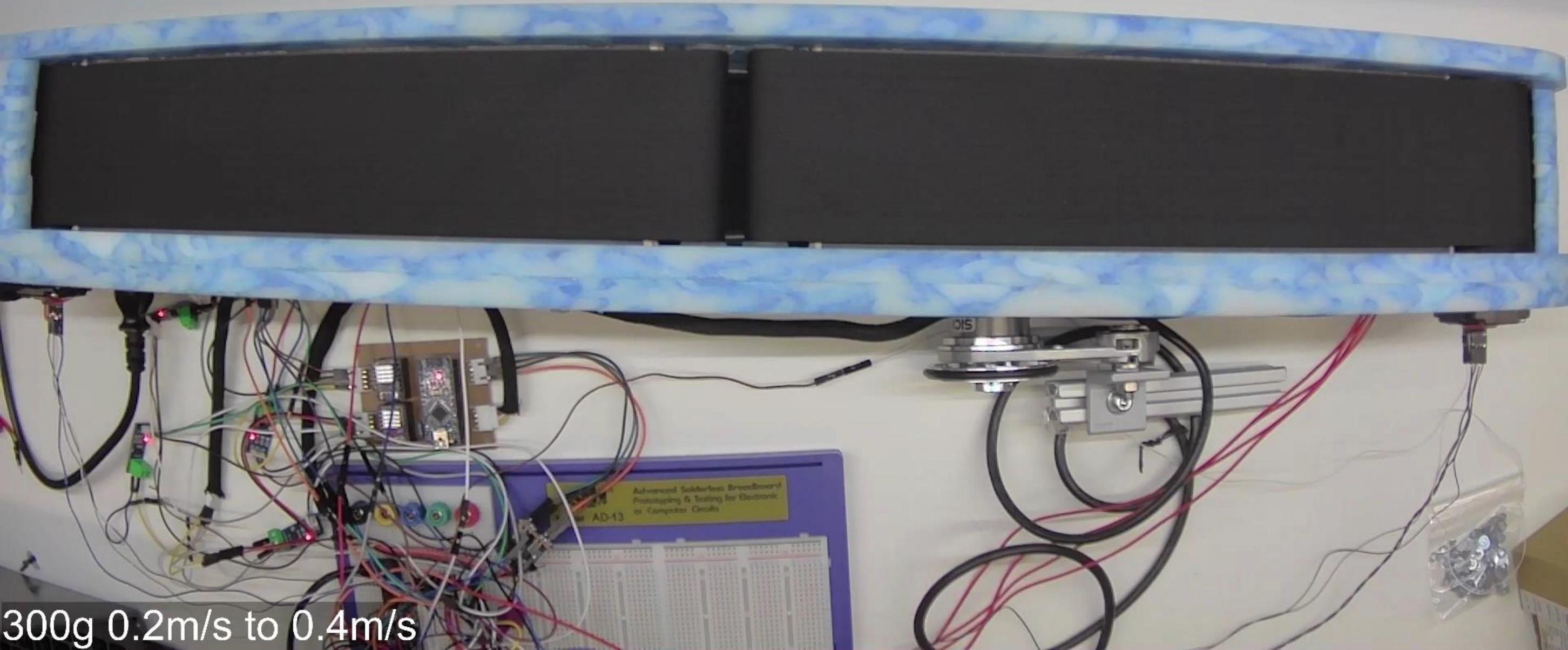
100g 0.2m/s to 0.4m/s

10.csv



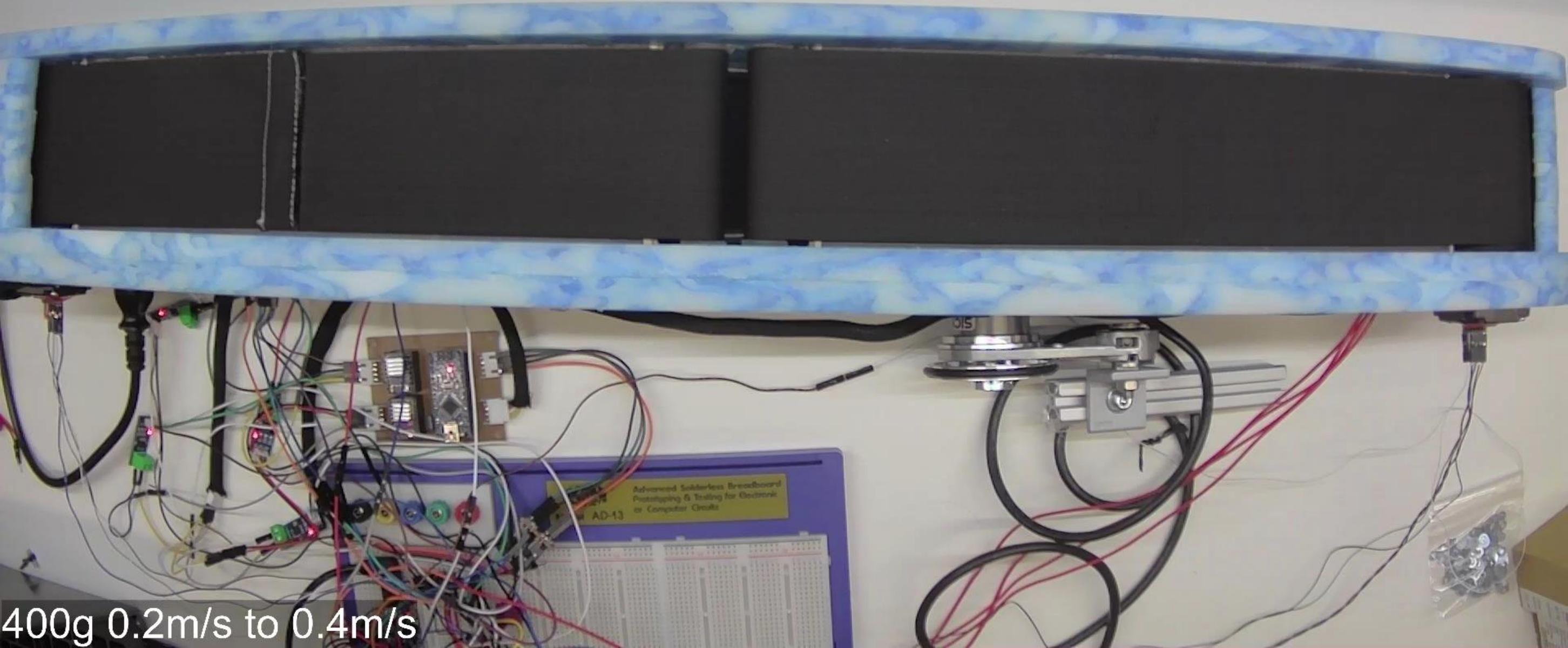
200g 0.2m/s to 0.4m/s

11.csv

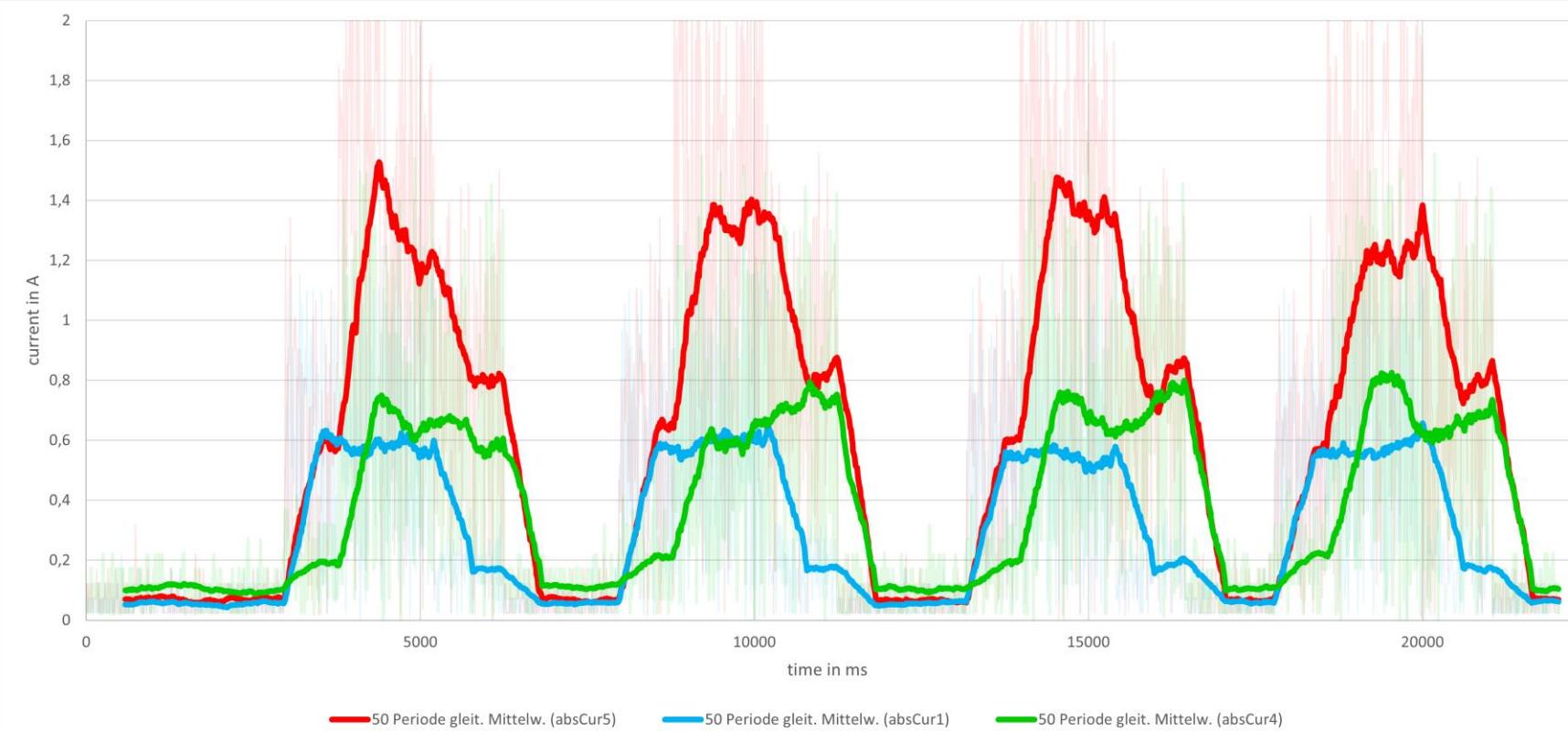


300g 0.2m/s to 0.4m/s

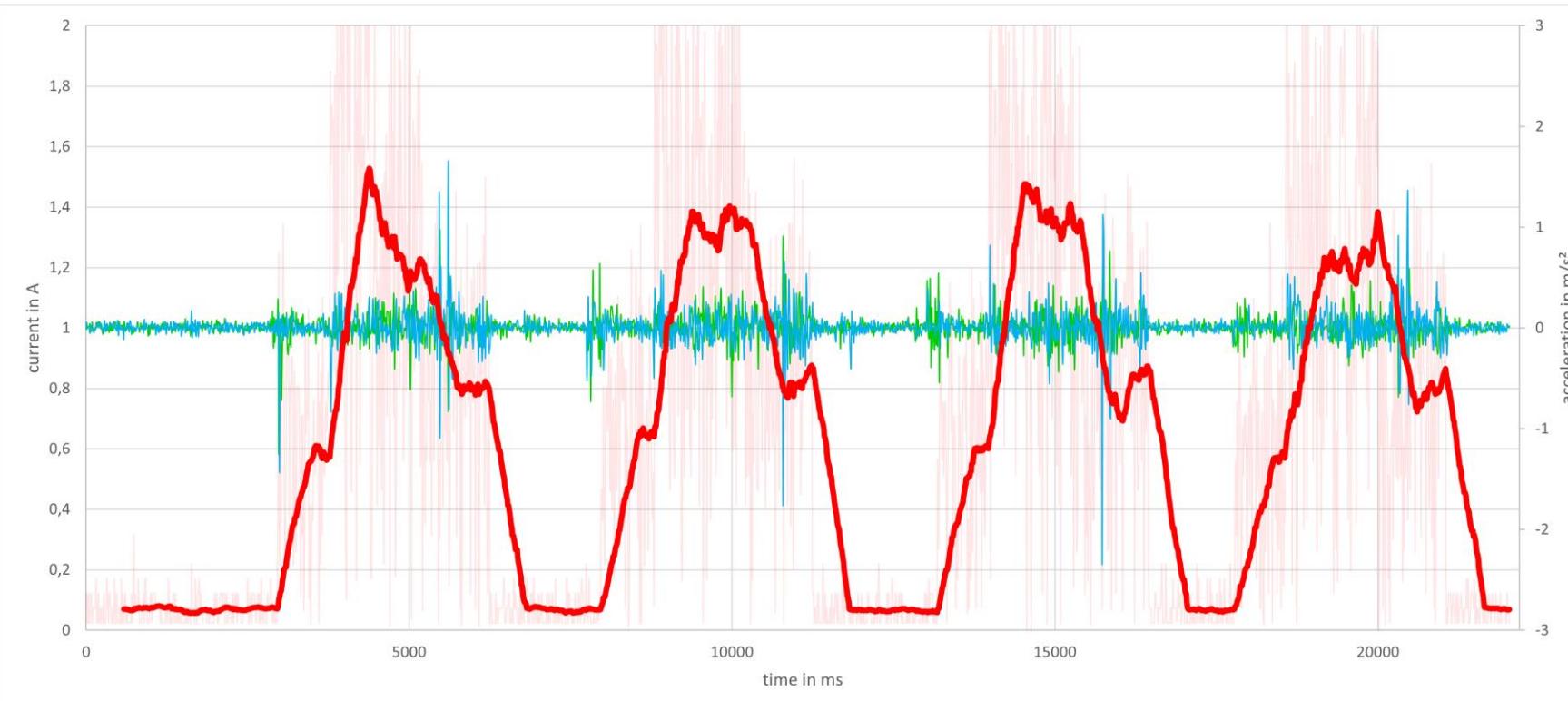
12.csv



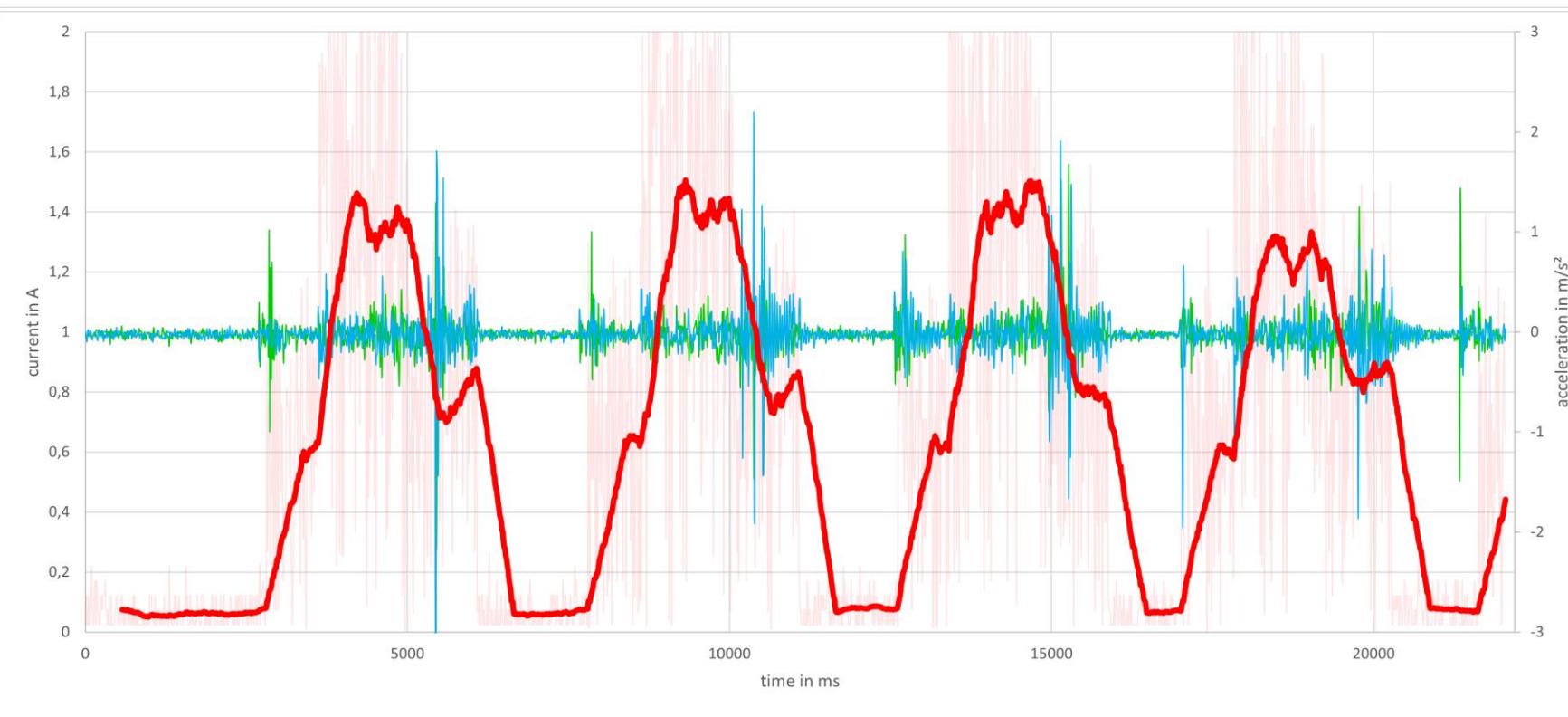
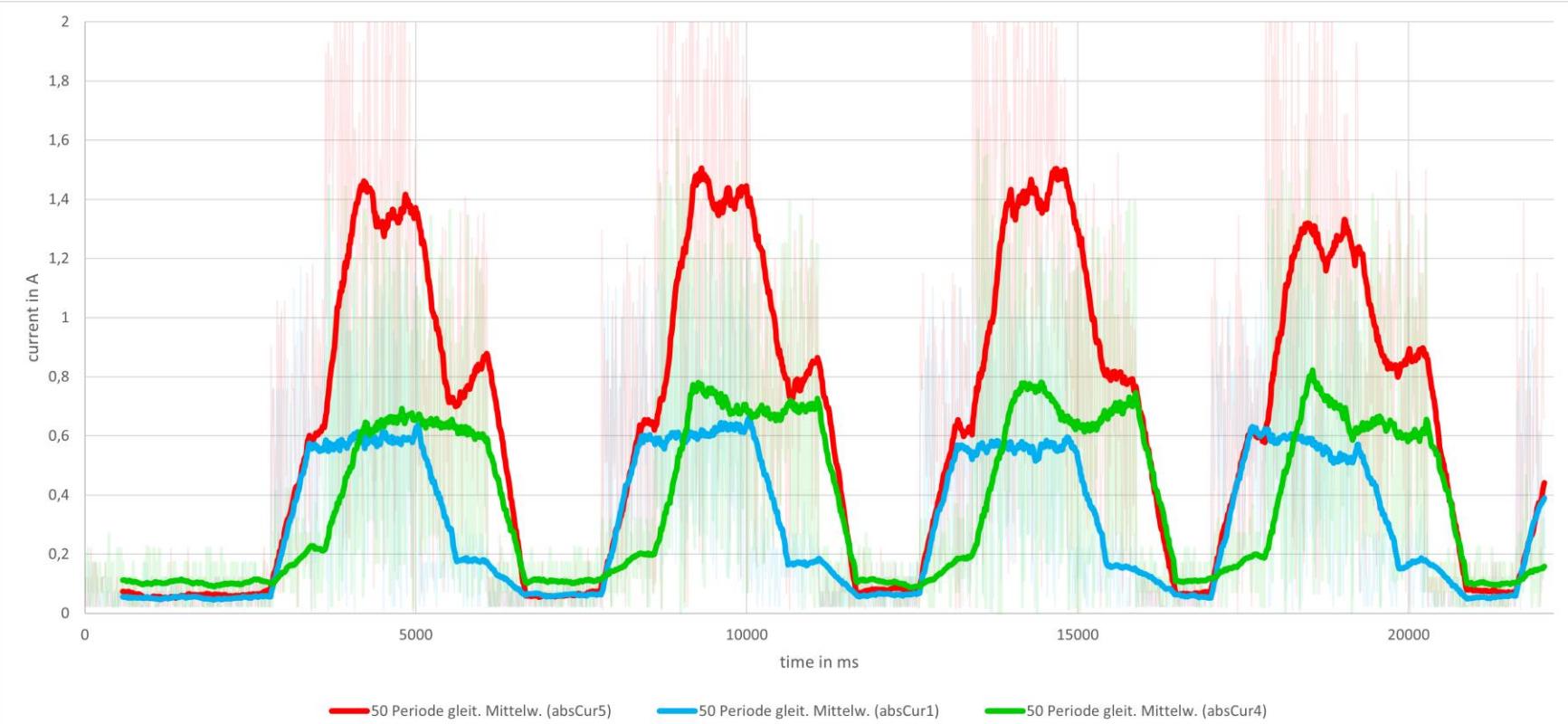
400g 0.2m/s to 0.4m/s

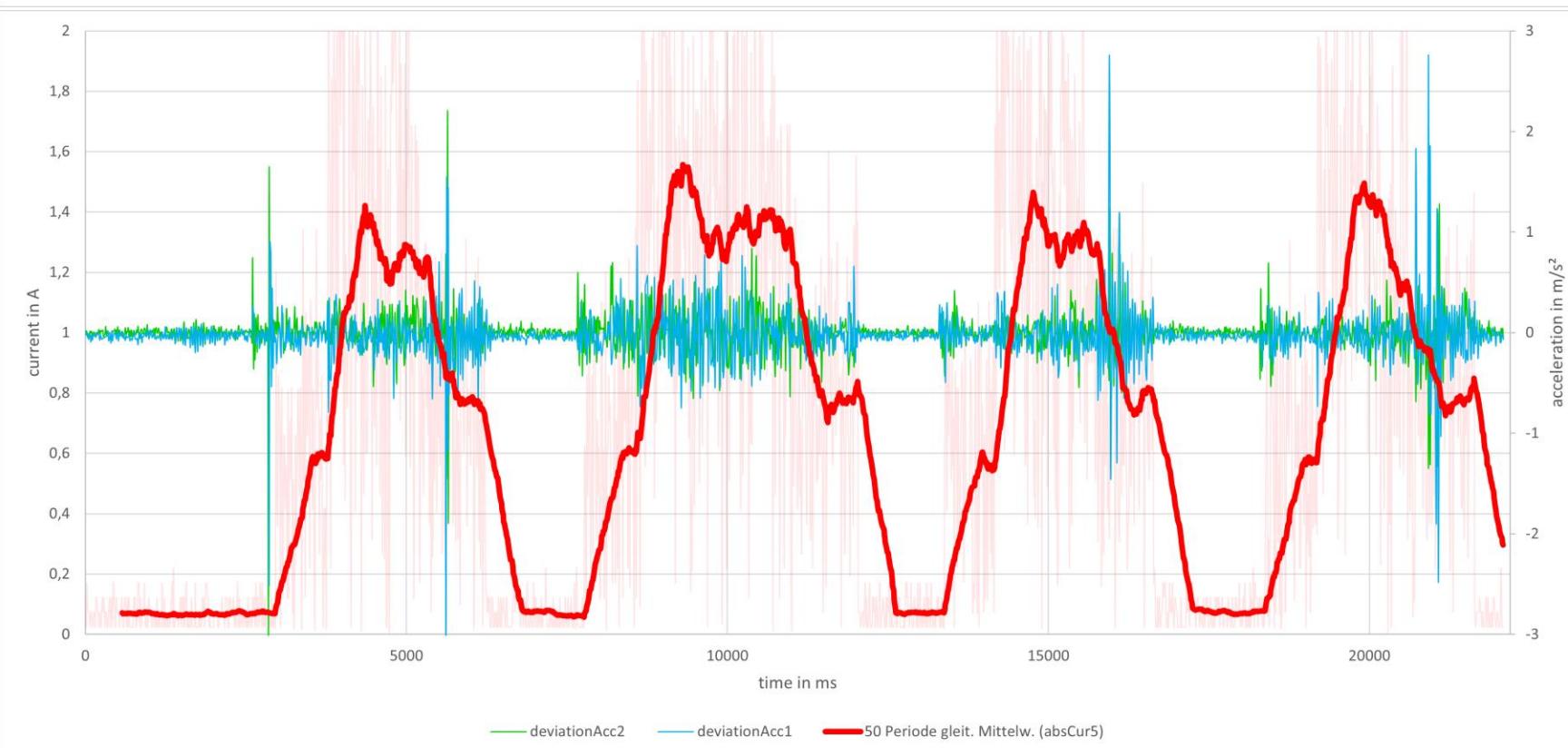
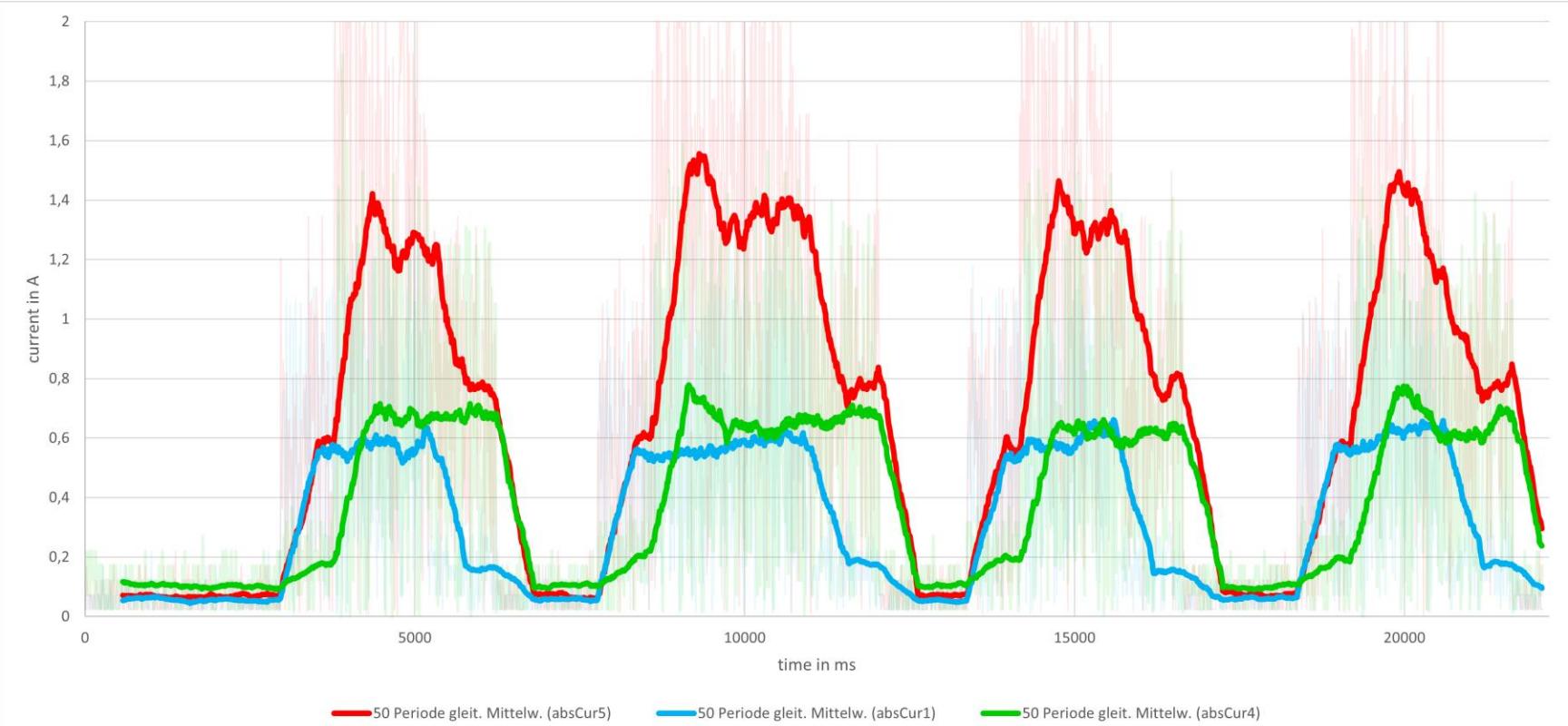


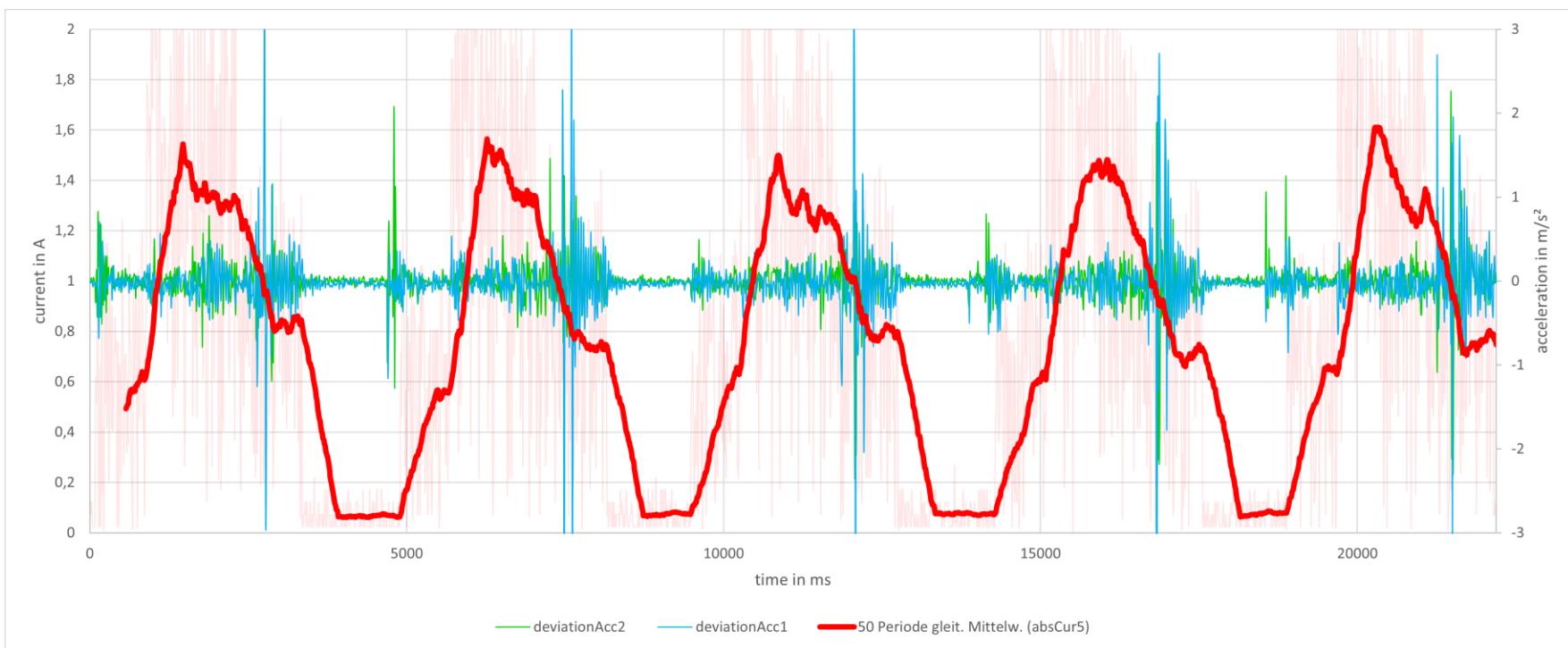
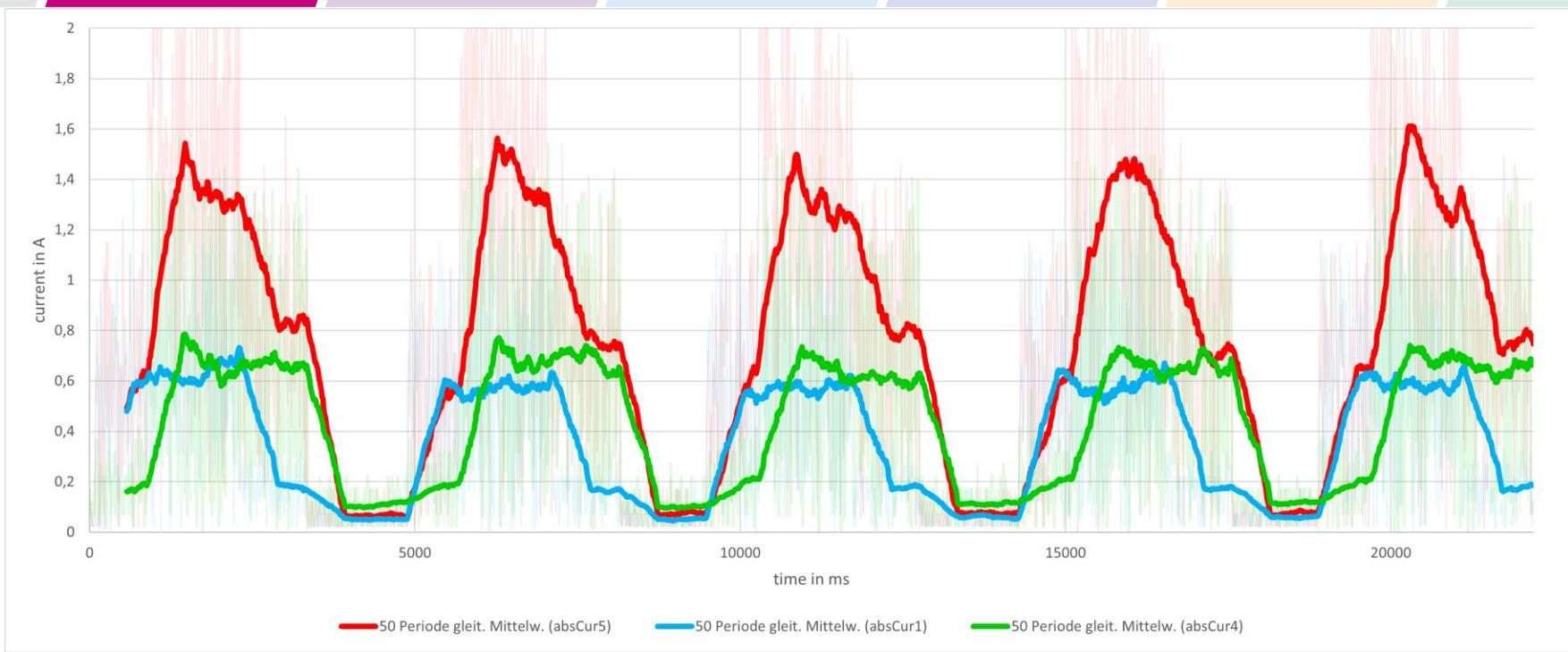
— 50 Periode gleit. Mittelw. (absCur5) — 50 Periode gleit. Mittelw. (absCur1) — 50 Periode gleit. Mittelw. (absCur4)

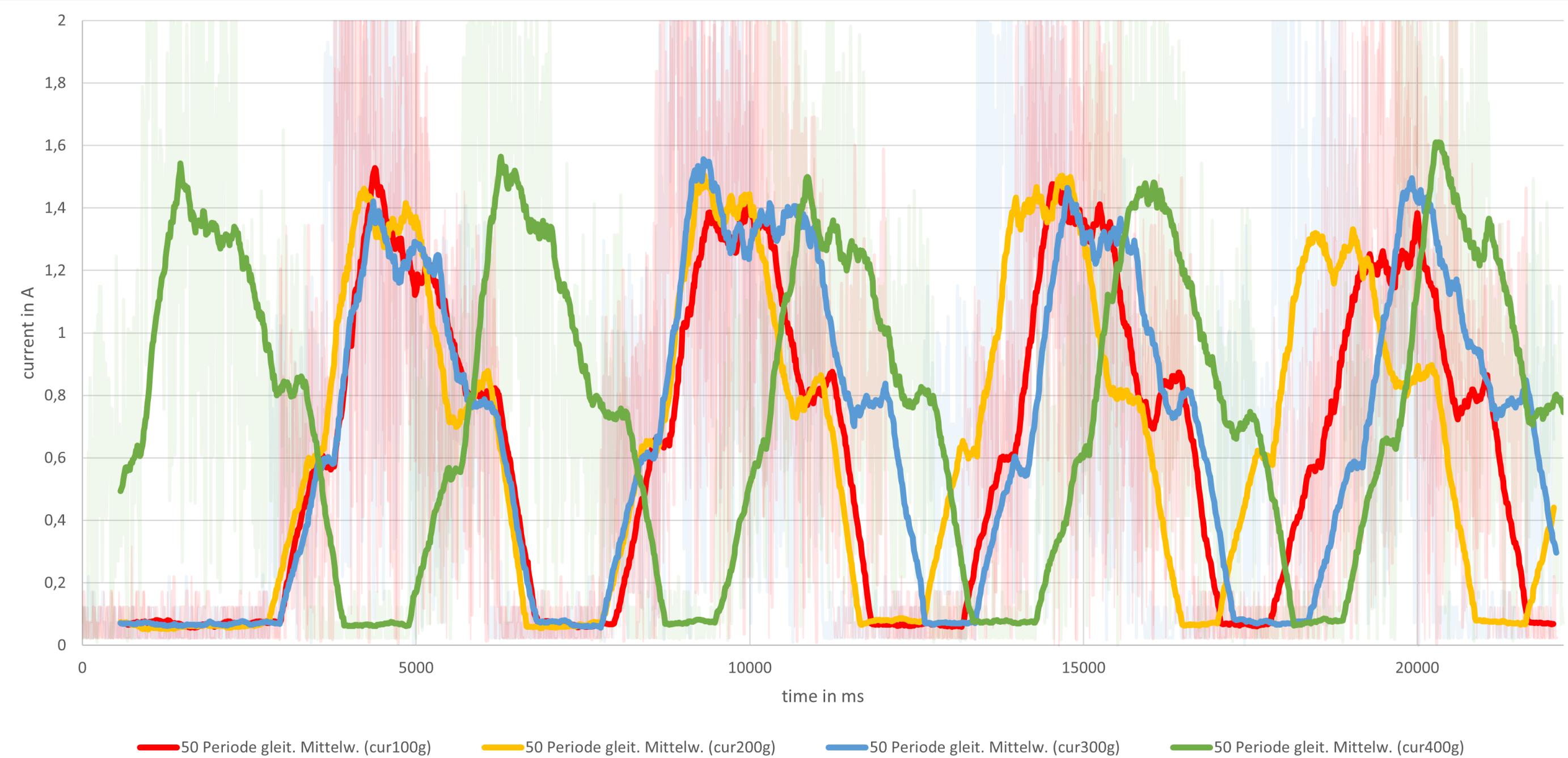


— deviationAcc2 — deviationAcc1 — 50 Periode gleit. Mittelw. (absCur5)











Danke für Ihre Aufmerksamkeit!

JOANNEUM RESEARCH
Forschungsgesellschaft mbH

ROBOTICS –
Institut für Robotik und flexible Produktion

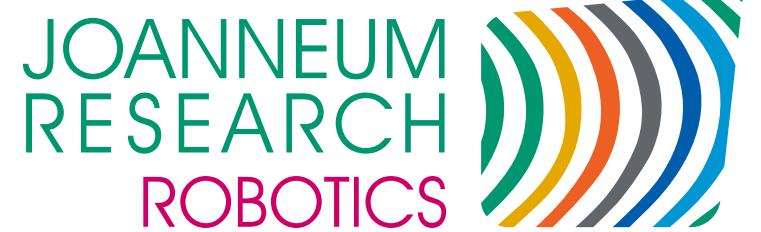
Lakeside B13b, EG,
9020 Klagenfurt am Wörthersee

Tel. +43 316 876-2000
robotics@joanneum.at

www.joanneum.at/robotics



*Shaping
the future,
together*



www.joanneum.at/robotics