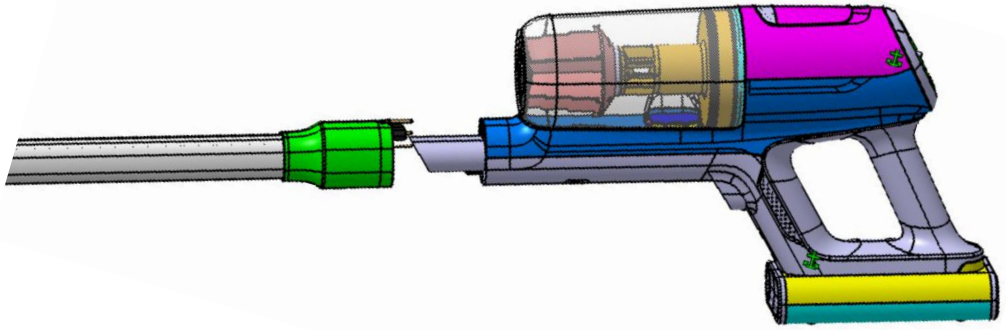
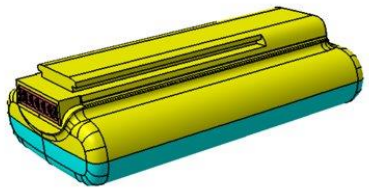
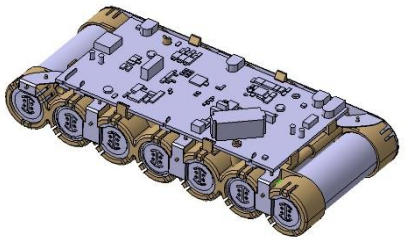
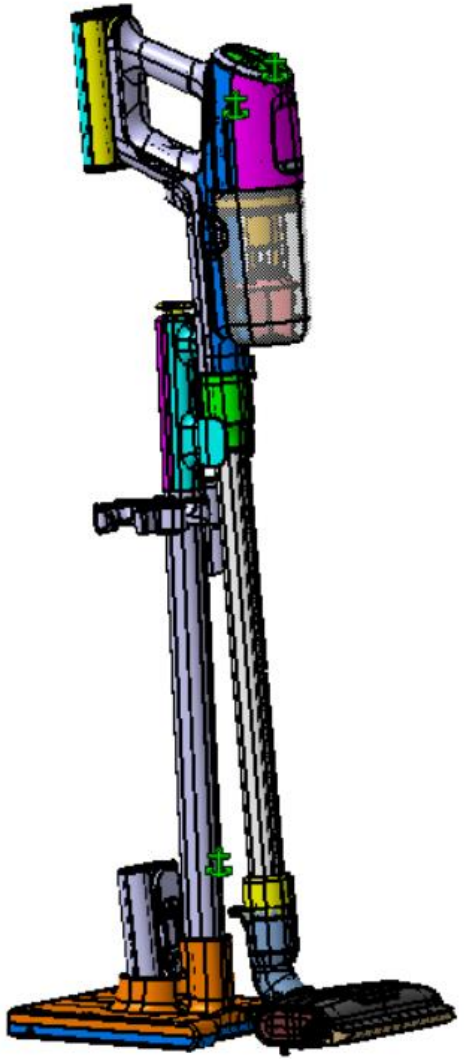
System Architecture Description (SAD)
Hippocampus pistole grip

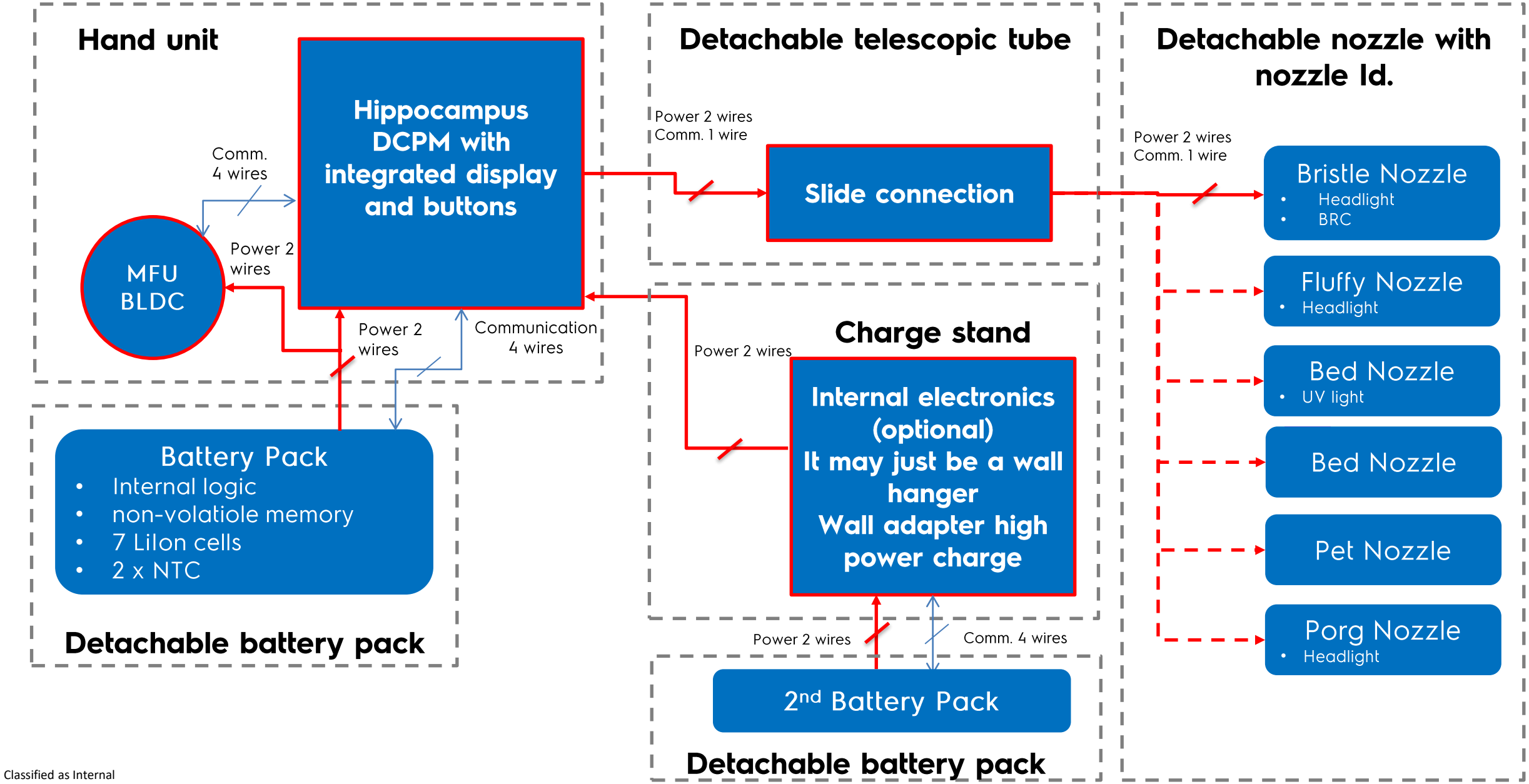








System Architecture summary



Annex 1: Hand unit

Charge connector

- Slide connectors

DCPM power

- 2 x power wires (twisted) 3A

Motor power

- 2 x power wires (twisted) 20A

Pack interface

- 2 x power (twisted)
- 4 x signal

Hand unit

Hippocampus DCPM

- 13 LEDs / 12 unique
- 2 buttons
- Charge control
- Service/production interface
- Nozzle drive

BLDC MFU

- Low power: ~60W [TBD]
- Mid power: ~200W [TBD]
- High power: 400W or ~500W (up to 20 Amps)

Tube interface

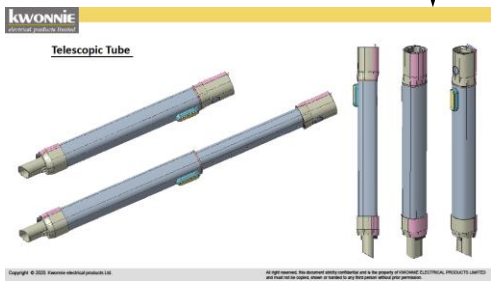
- 3 wires – Nozzle id and Auto BRC on 1 wire

(Power wires twisted)

Nozzle power

- 2 x power wires (twisted) 3A

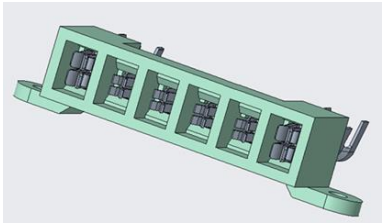
Opens one tube concept



Annex 2: Battery pack

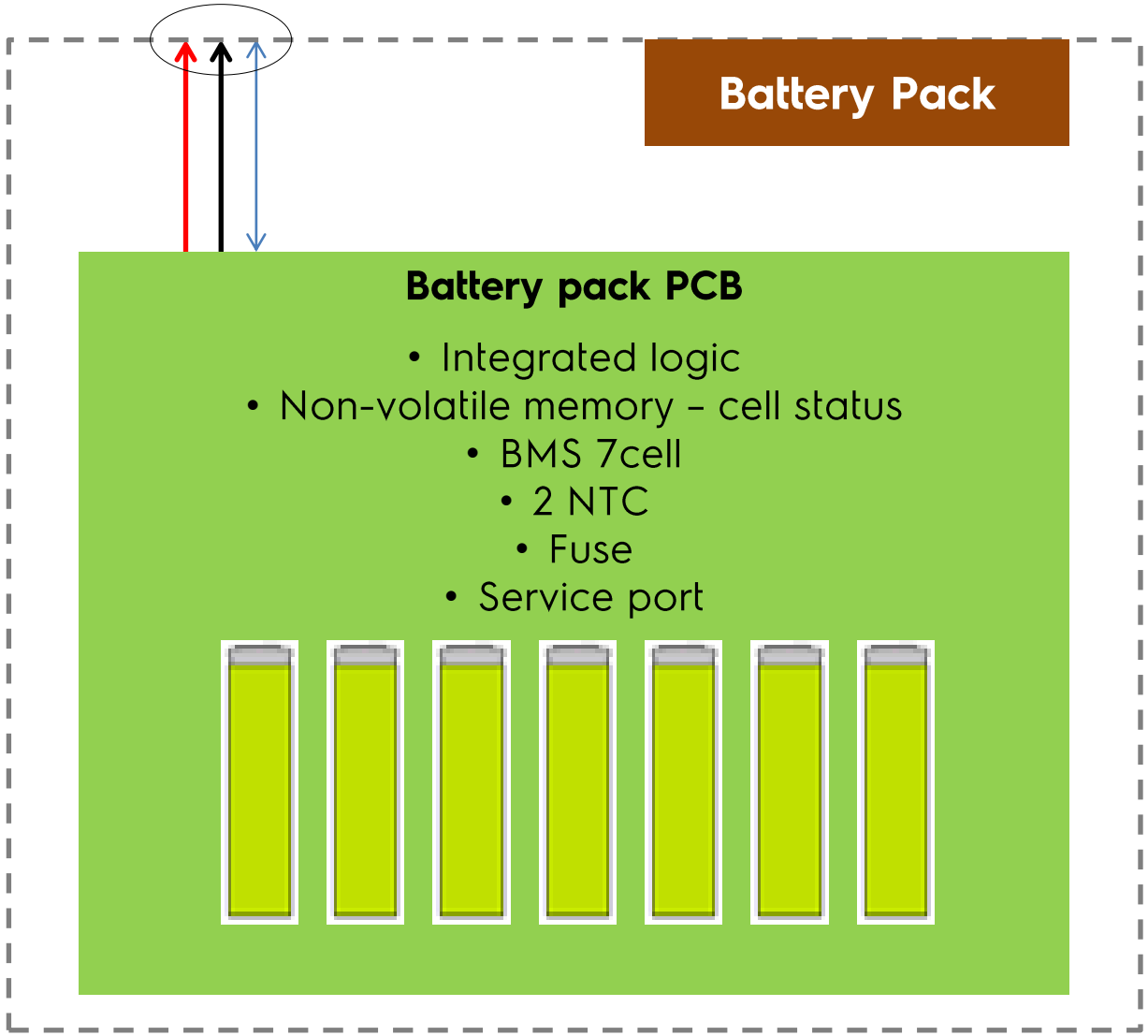
Battery pack connector

- 2 x power: <25A
- 4 x signal:

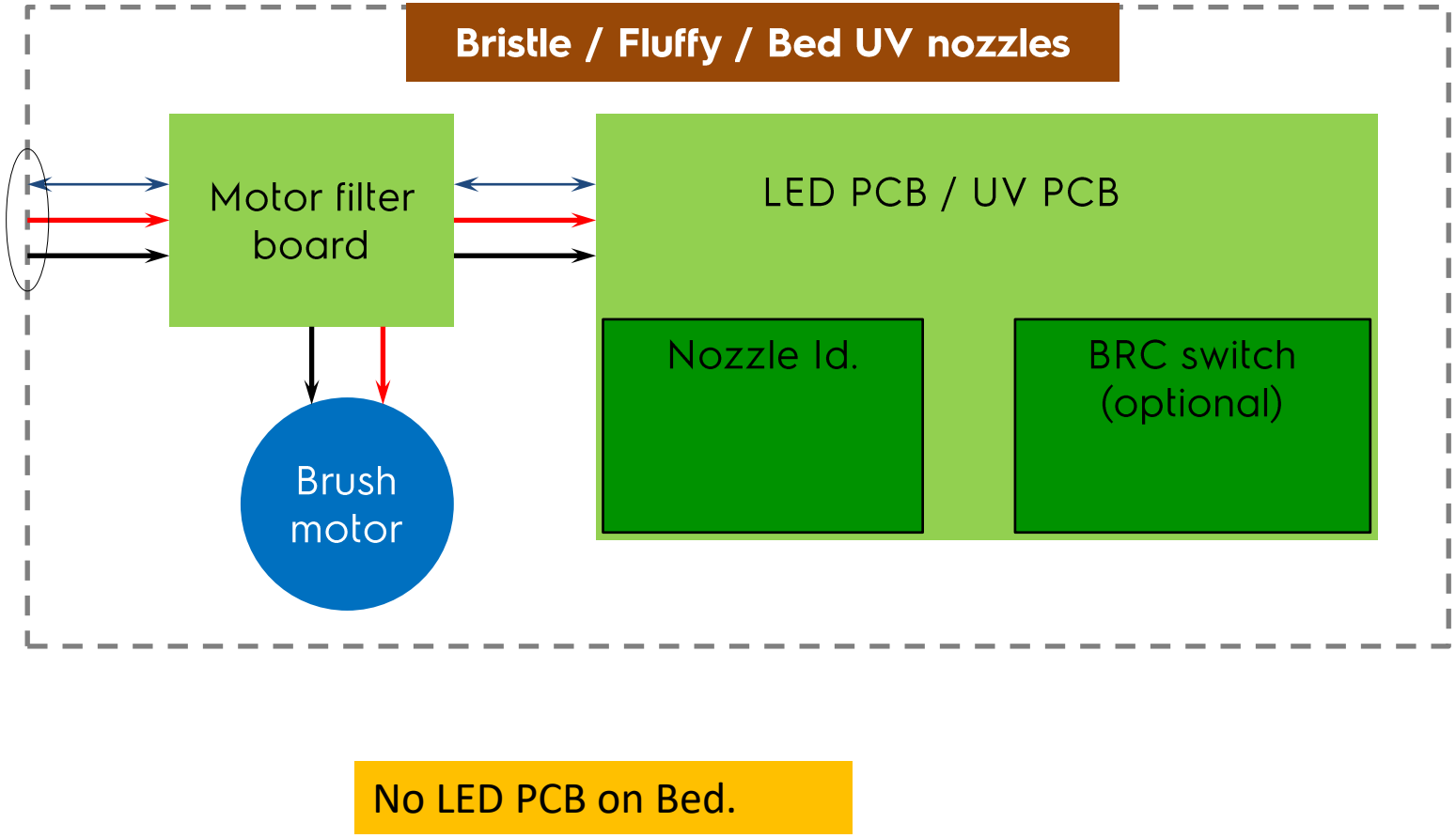


Battery cell setup (All Li-Ion 3.6V)

Cell type	Capacity	Size
Murata VTC5A	2.5 Ah	18650
Murata VTC6AM	4 Ah	21700



Annex 3a: Nozzles



No LED PCB on Bed.

Bed UV
The nozzle ID will be integrated to the UV PCB in Bed nozzle

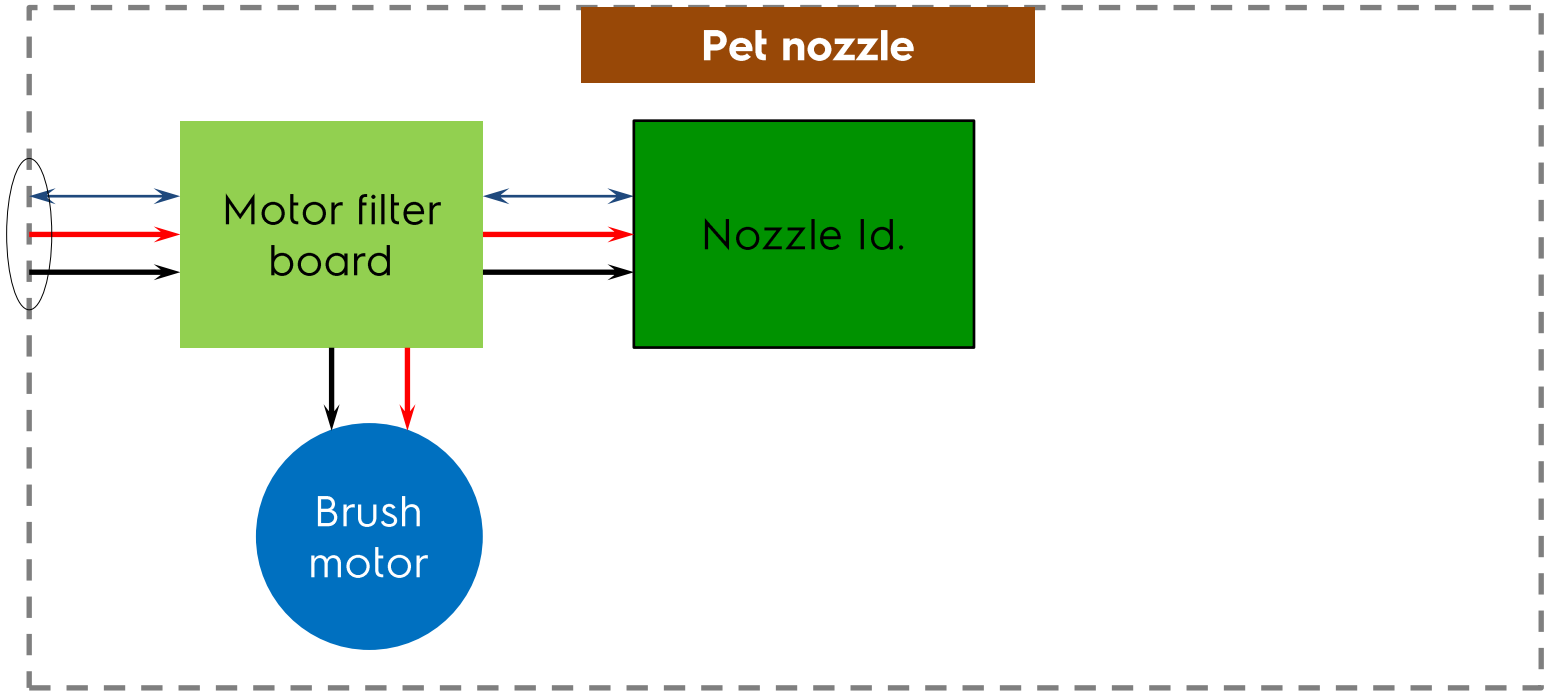
Pet nozzle without UV will have a separate ID board (see next page)

Nozzle Id

Current generator

Bristle	8 mA (to be finetuned)
Fluffy	6 mA (to be finetuned)
Bed	4 mA (to be finetuned)
Pet	4 mA (to be finetuned)
Porg	2 mA (to be finetuned)
Reserved	1 mA

Annex 3b: Pet nozzle



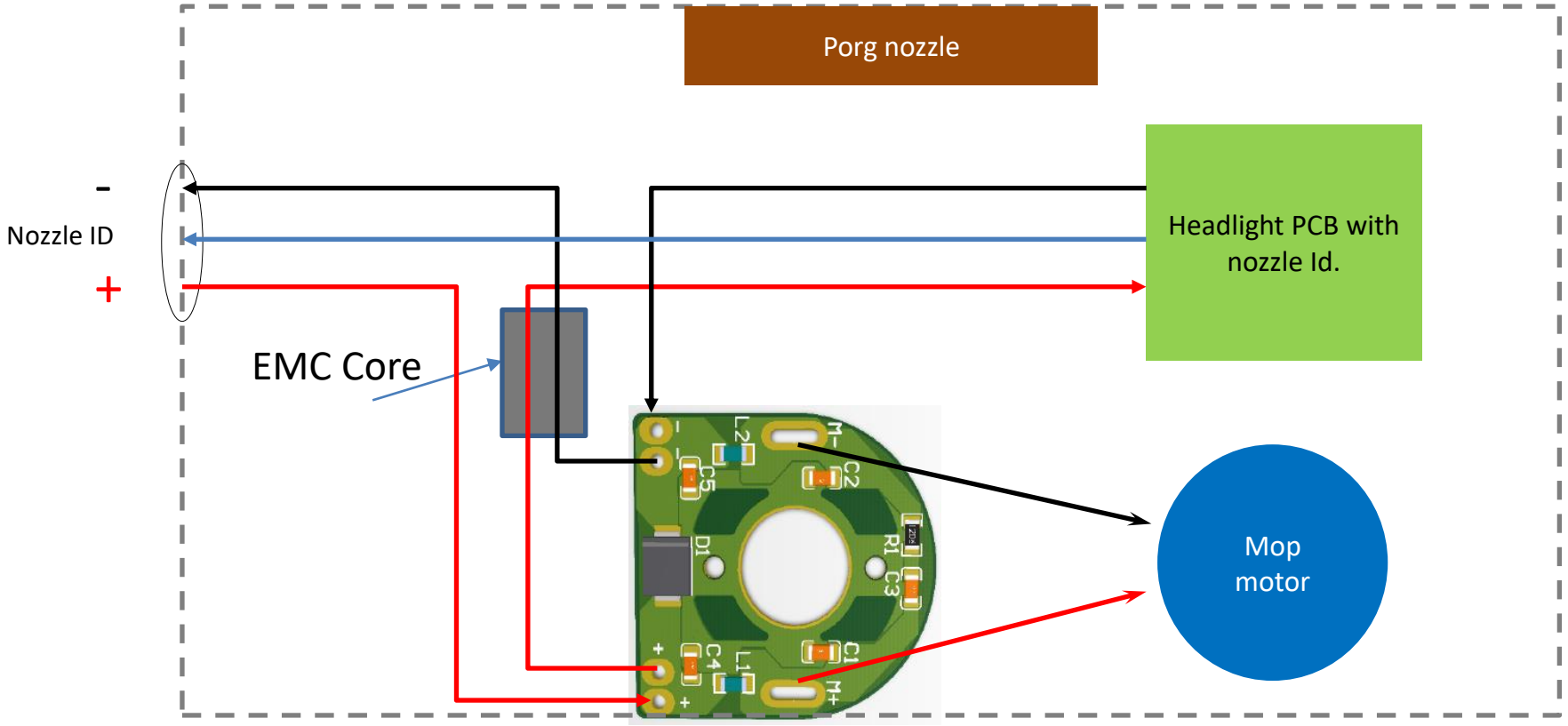
This solution can be used as a backup plan if the components cannot fit on the Bed UV PCB

Nozzle Id

Current generator

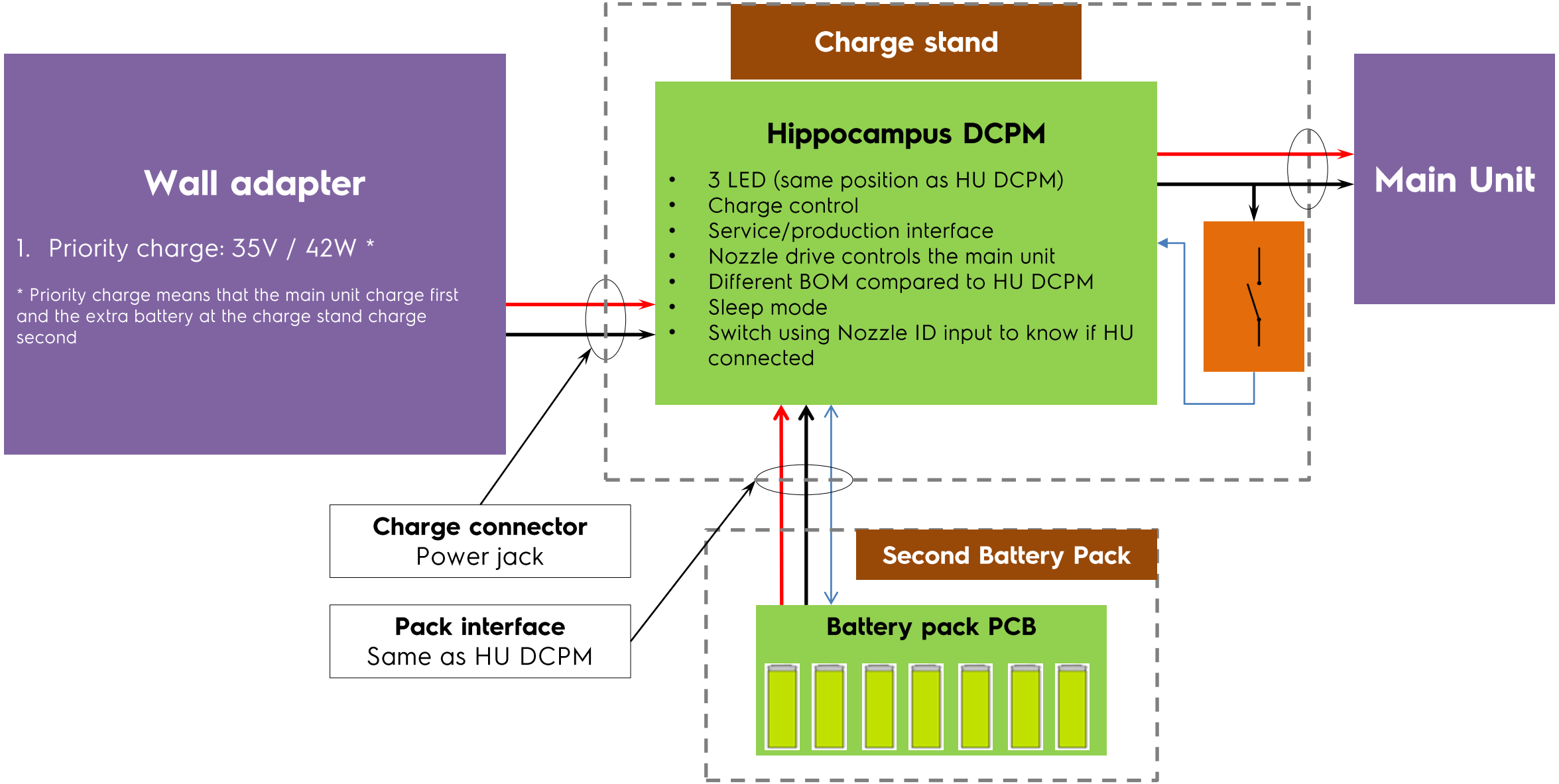
Bristle	8 mA (to be finetuned)
Fluffy	6 mA (to be finetuned)
Bed	4 mA (to be finetuned)
Pet	4 mA (to be finetuned)
Porg	2 mA (to be finetuned)
Reserved	1 mA

Annex 3c: Porg nozzle

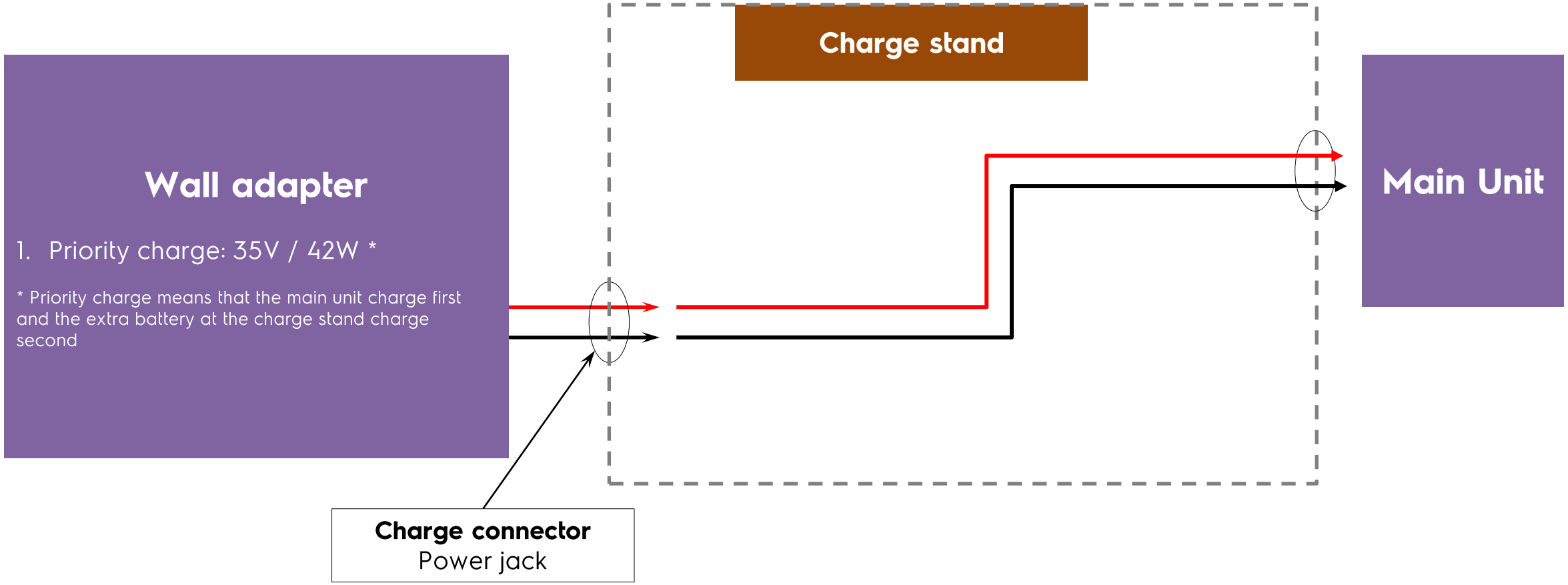


If main unit sense Porg nozzle it switch off the suction (fan motor)

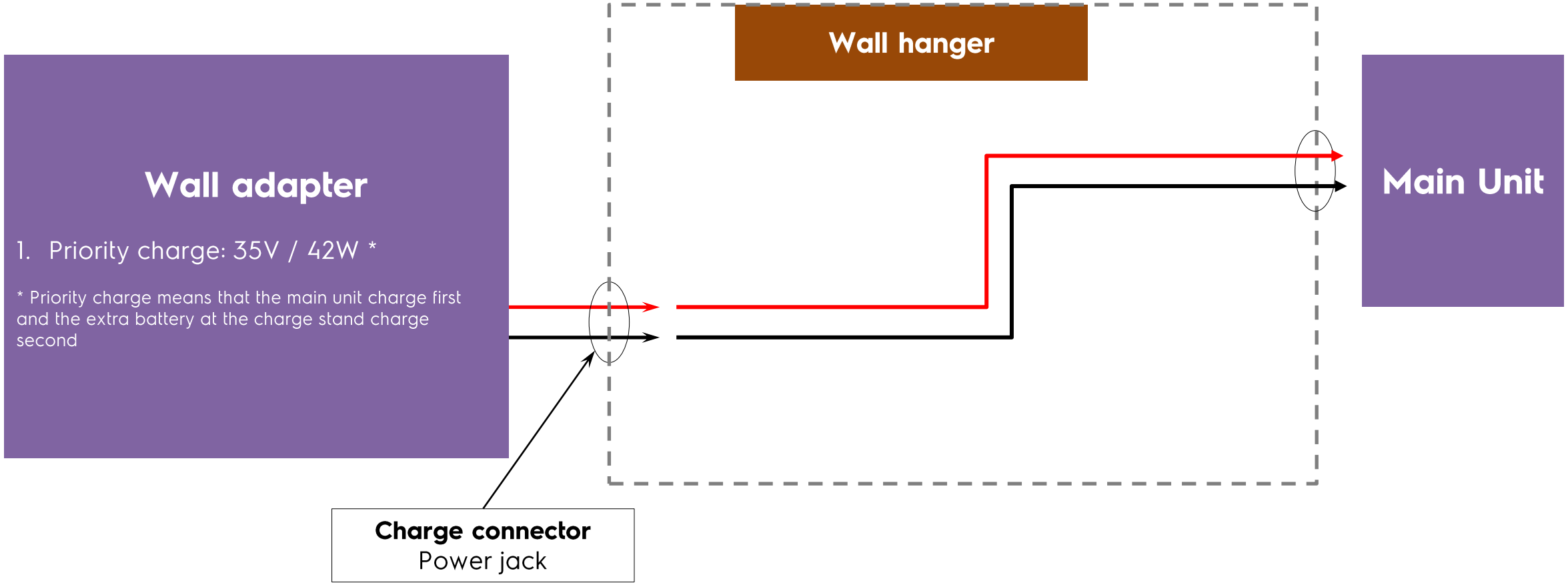
Annex 4a: Charge stand w/ extra charging



Annex 4b: Charge stand w/o extra charging



Annex 4c: Wall hanger



Annex 5: Hand unit harness

Battery/MFU/DCPM connector
- 2 x power: Nylon closed end wire (8 or 6mm)

Motor cables
- 2 x power: AWG 16 (red and black)
- 4 x signal: AWG 24 (any color)

Motor connector
- 2 x power: Soldered by CDS
- 4 x signal: GH1.25-4Y (housing) GH1.25-Te

DCPM power cables
- 2 x power: AWG 24 (red and black)

DCPM power connector
- 2 x power FAF XH-2A (housing) XH-Te

DCPM to nozzle connector
- 2 x power + 1 x signal: FAF XH-3A(housing) XH-Te

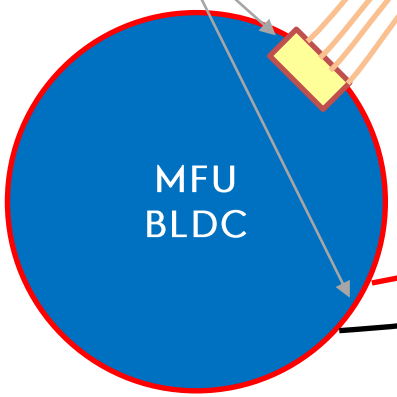
DCPM to BLDC motor connector
- 4 x signal: FAF XH-4Y (housing) XH-Te

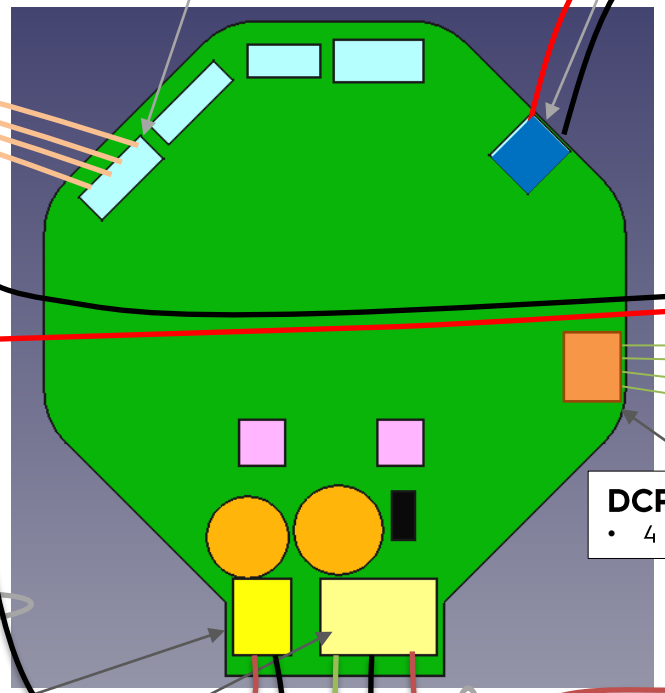
DCPM to charge connector
- 2 x power: FAF XH-2A(housing) XH-Te

Charge cables
- 2 x power: AWG 24 (red and black)

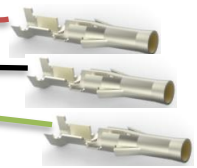
Charge connector
- Spring connector Electrolux

Battery pack cables
- 2 x power: AWG 14 (red and black)
- 4 x signal: AWG 26 (any color)





DCPM to battery signal connector
- 4 x signal Hongyi A1254LF-04A(housing)



Nozzle cables
- 2 x power: AWG 24 (red and black)
- 1 x signal: AWG 24 (any color)

Nozzle connector
- 2 x power: TBD
- 1 x signal: TBD

Battery pack connector
- 2 x power: TE 964306-1
- 4 x signal: TE 5-963860-1

Annex 6a: Charge stand harness (w/ extra pack charging)

Charge connector to hand unit
- Spring connector Electrolux

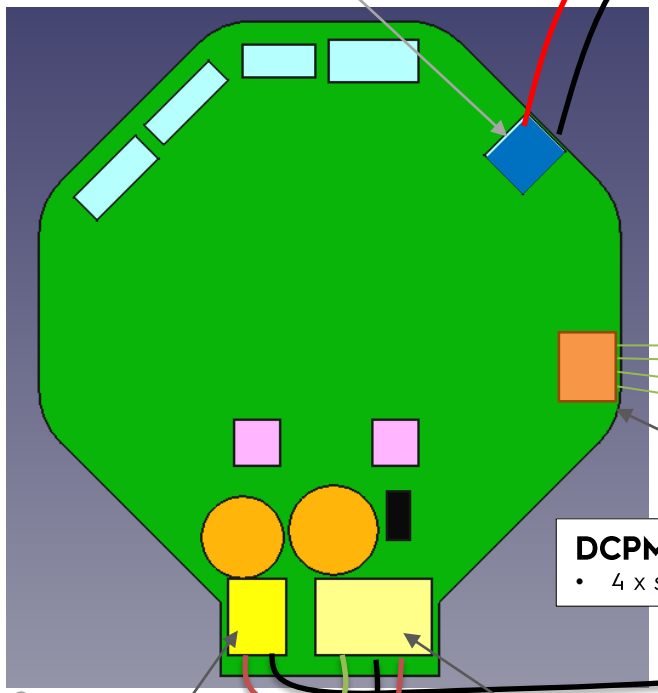
Hand unit sensor
- Limit switch

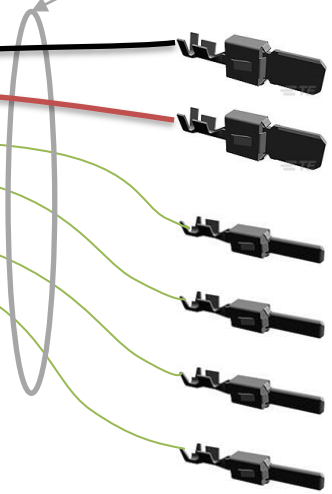
Charge connector
- 2 x power: FAF XH-2A(housing) XH-Te

Charge cables
- 2 x power: AWG 24 (red and black)

Adapter connector
- Power jack: TBD

Battery pack cables
- 2 x power: AWG 24 (red and black)
- 4 x signal: AWG 26 (any color)





DCPM to battery signal connector
- 4 x signal Hongyi A1254LF-04A(housing)

Charge connector base-tube
- Spring connector Electrolux

Charge and sensor cables
- 2 x power: AWG 24 (red and black)
- 2 x signal: AWG 24 (any color)

DCPM power connector
- 2 x power FAF XH-2A (housing) XH-Te

DCPM to nozzle connector
- 2 x power + 1 x signal: FAF XH-3A(housing) XH-Te

Battery pack connector
- 2 x power: TE 969007-1
- 4 x signal: TE 5-963860-1

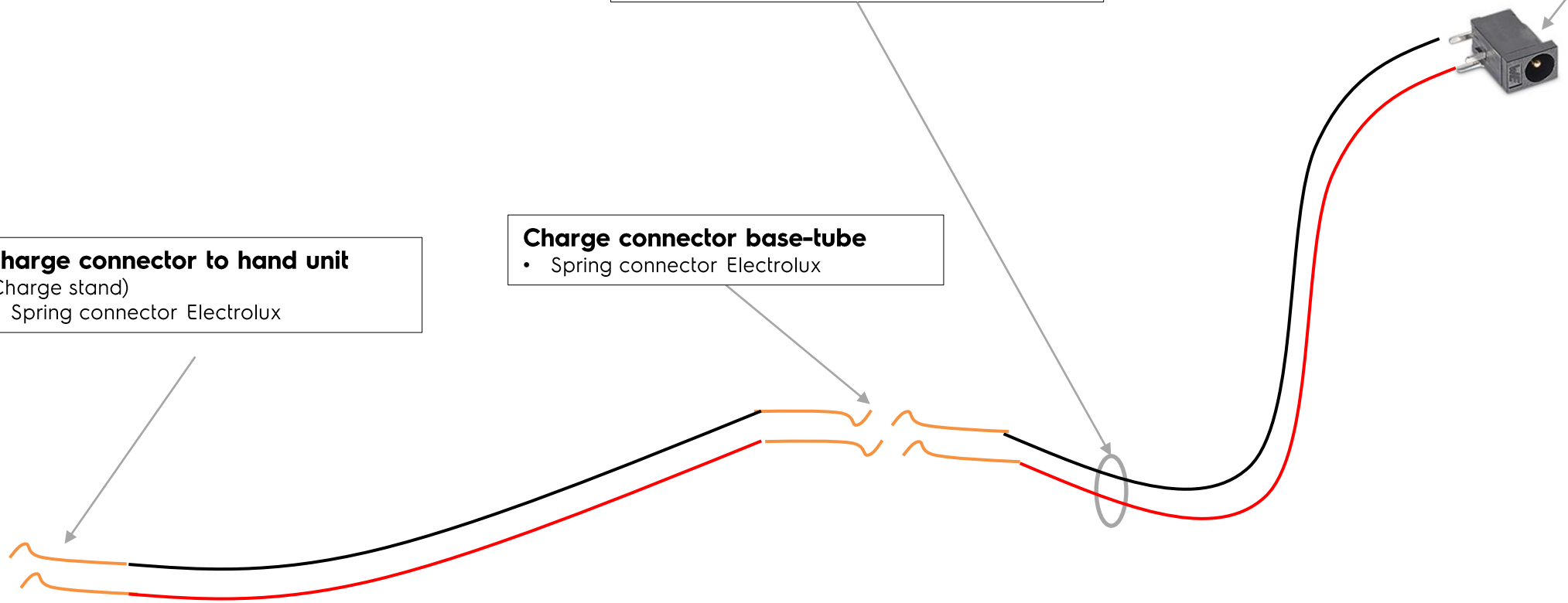
Annex 6b: Charge stand harness (w/o extra pack charging)

Adapter connector
- Power jack: TBD

Charge cables
- 2 x power: AWG 24 (red and black)

Charge connector base-tube
- Spring connector Electrolux

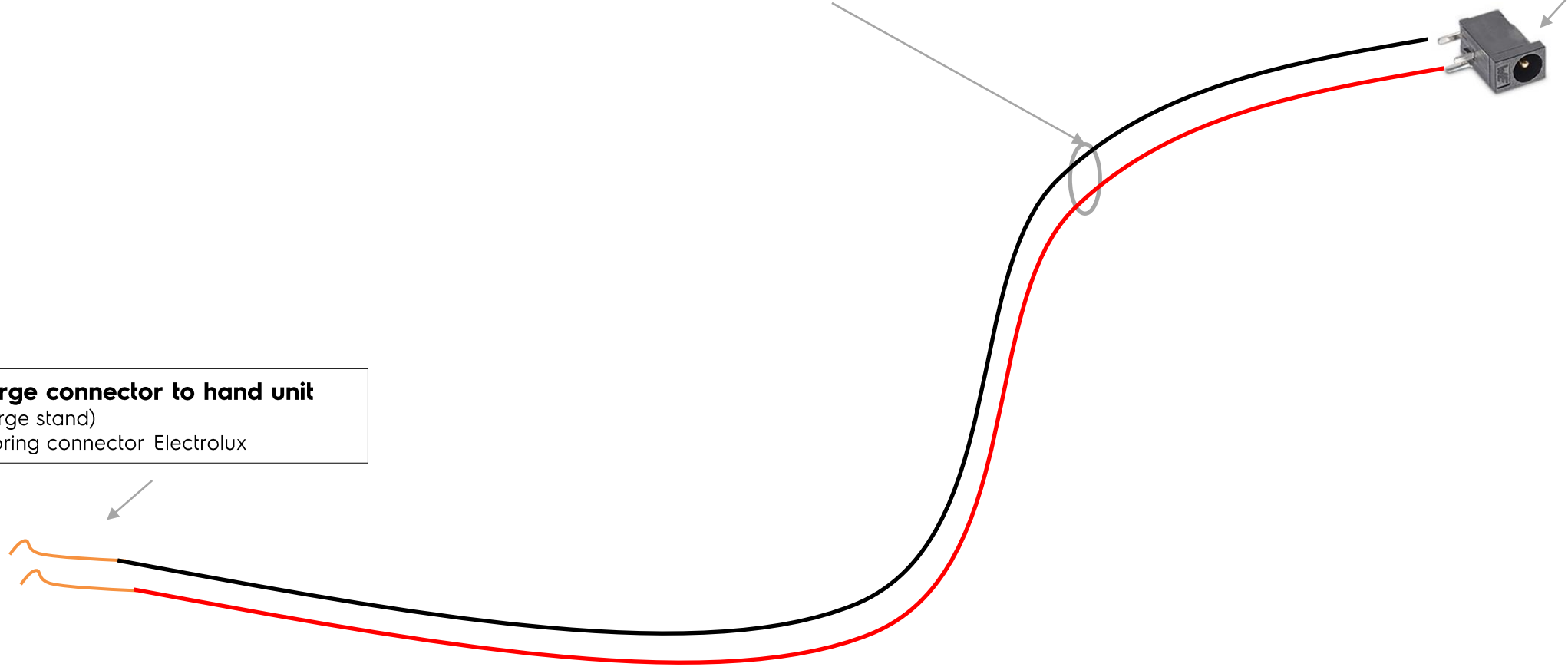
Charge connector to hand unit
(Charge stand)
- Spring connector Electrolux



Annex 6c: Wall mount harness

Adapter connector
- Power jack: TBD

Charge cables
- 2 x power: AWG 24 (red and black)



Charge connector to hand unit
(Charge stand)
- Spring connector Electrolux

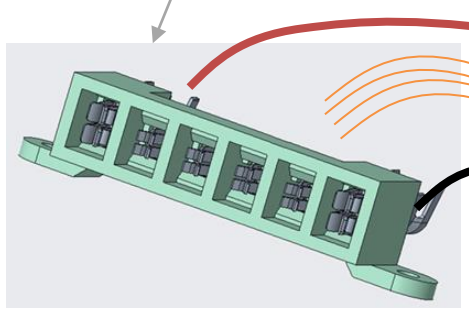
Annex 7: Battery pack cable harness

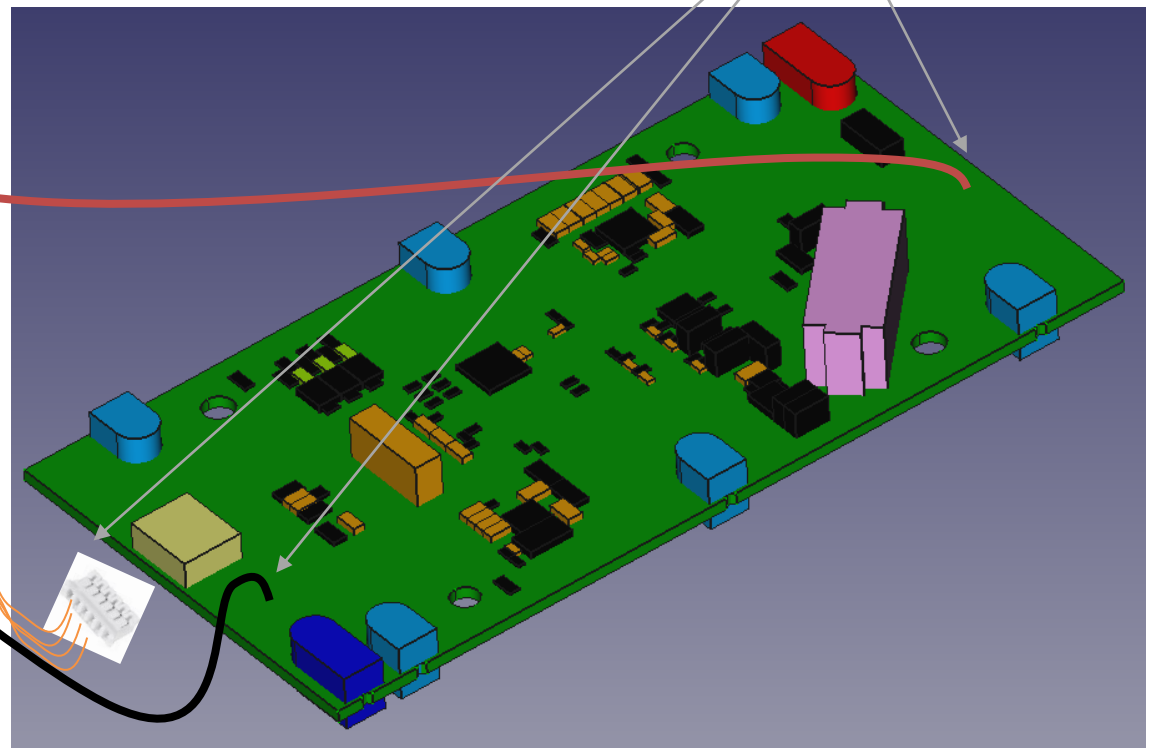
Battery pack connector

- 2 x power: TE 927833-1
- 4 x signal: TE 927871-2

Battery PCB connector

- 2 x power: direct solder
- 4 x signal: FAF PH-4A(housing)

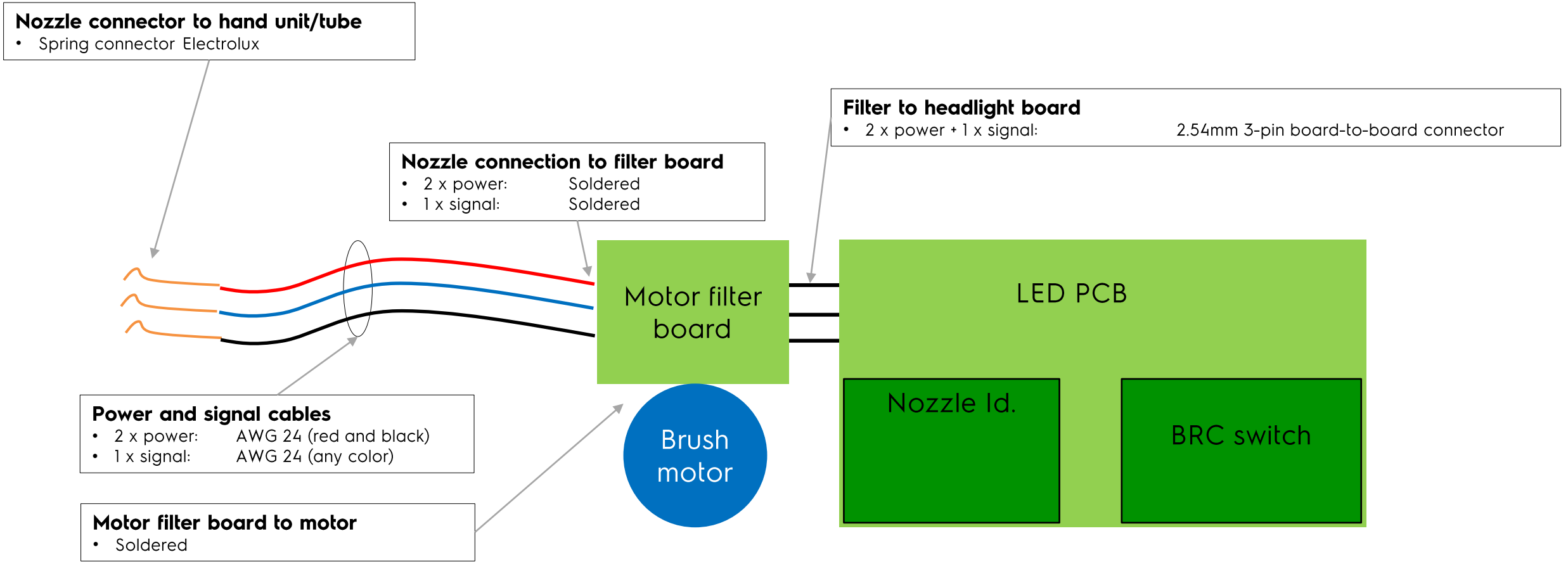




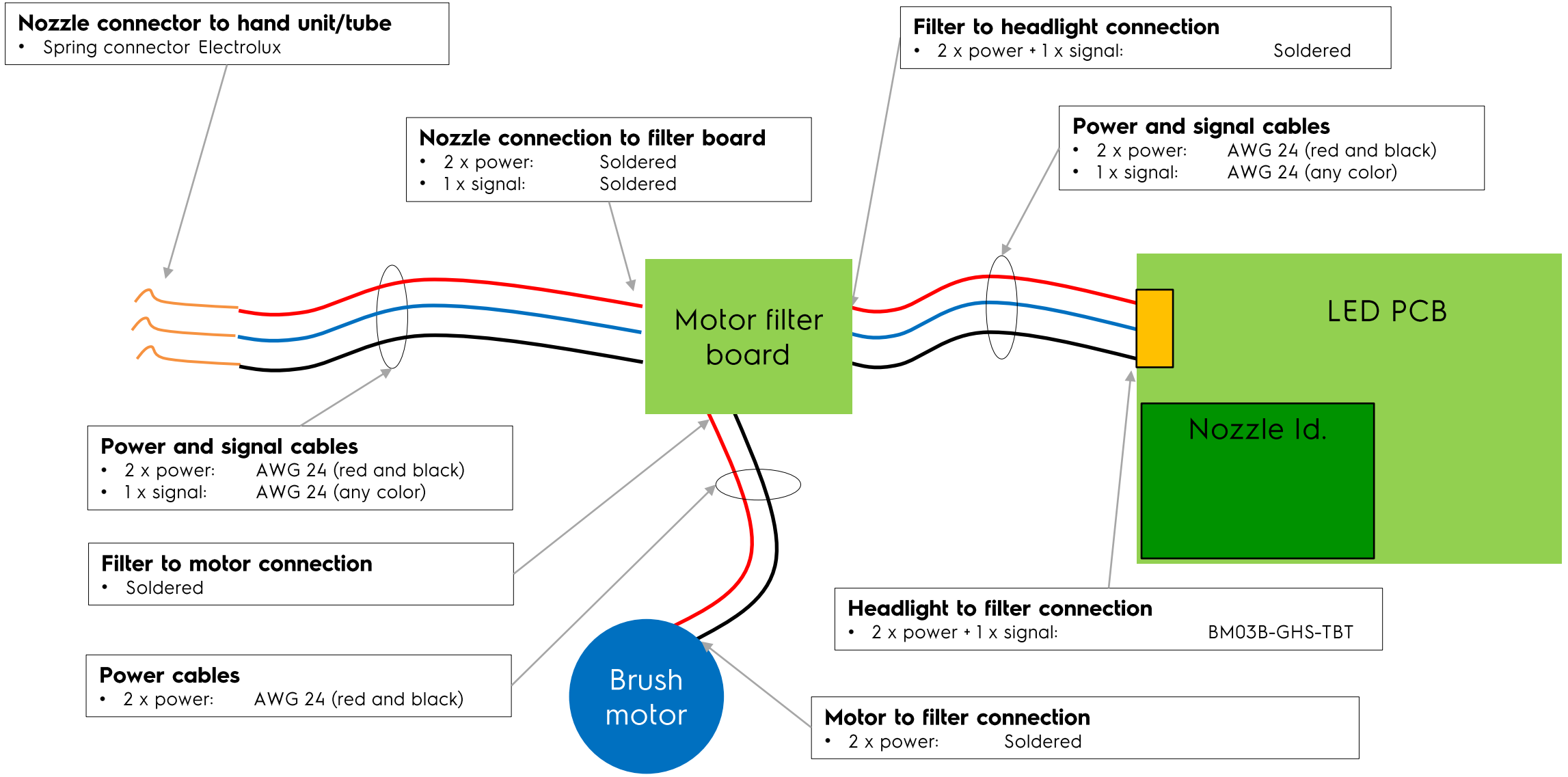
Battery cables

- 2 x power: AWG 14 (red and black)
- 4 x signal: AWG 24 (any color)

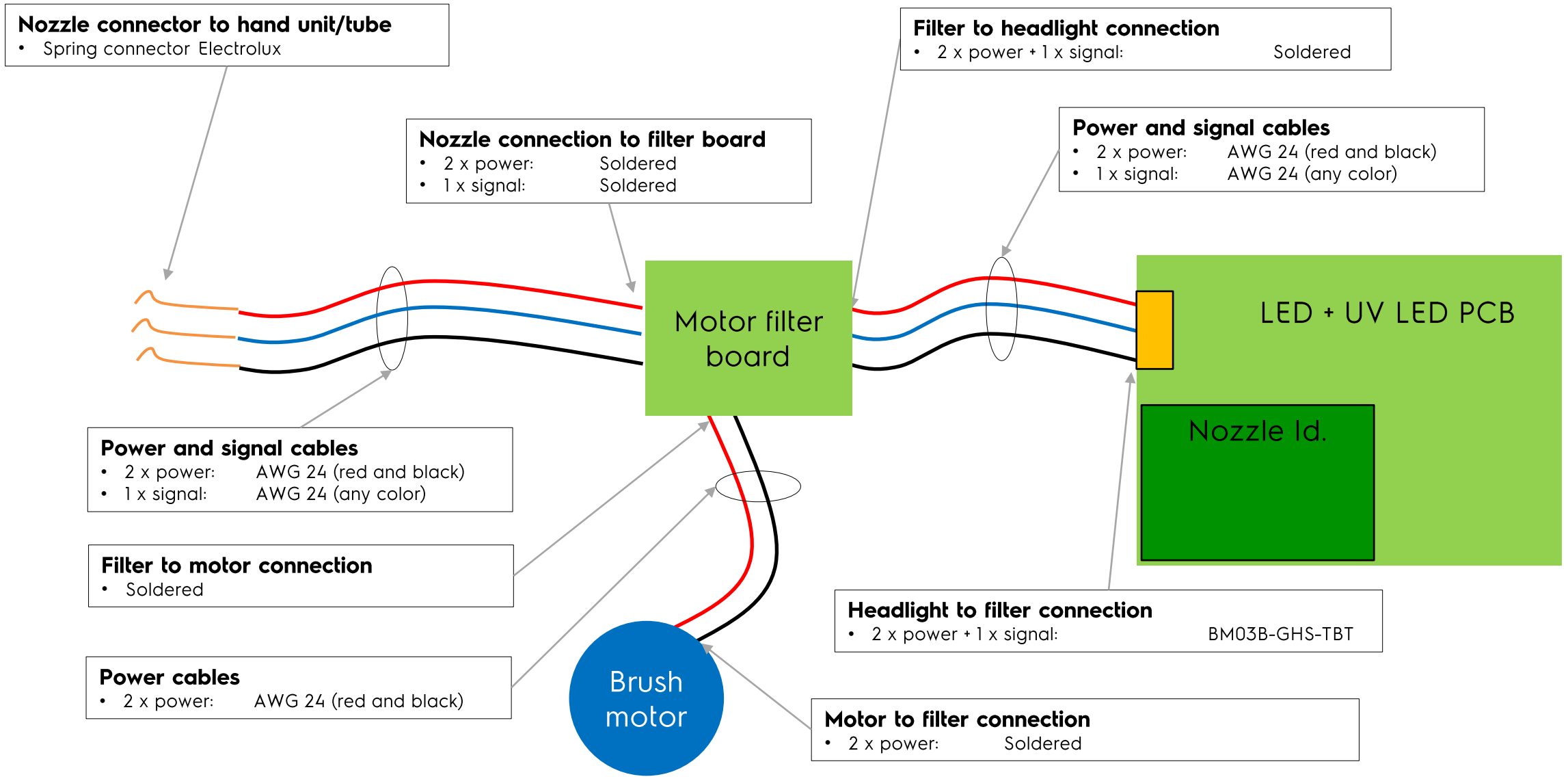
Annex 8: Bristle nozzle harness



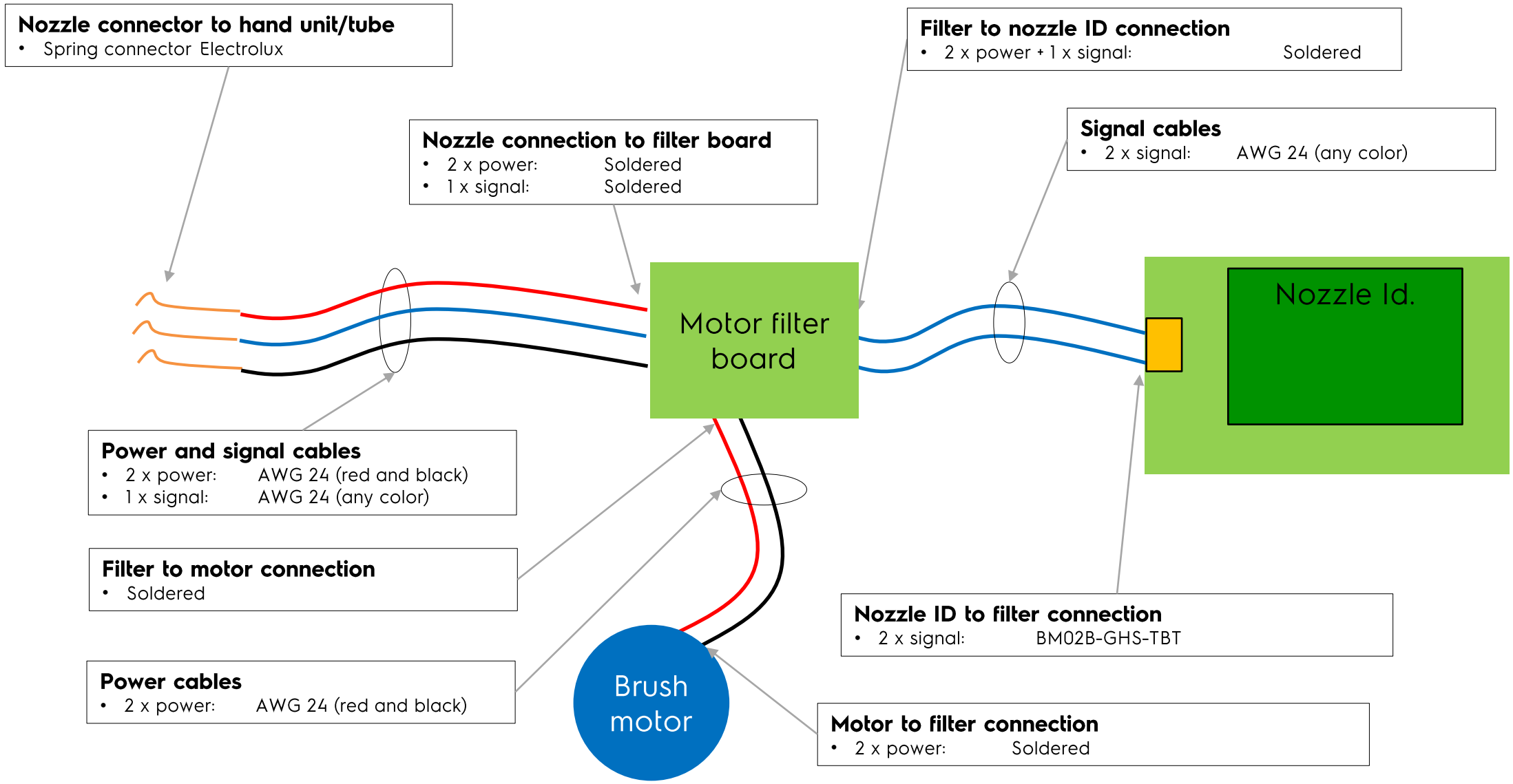
Annex 9: Fluffy nozzle harness



Annex 10: Bed w/ UV nozzle harness



Annex 11: Bed w/o UV & Pet nozzle harness



Annex 12: Adapter

Model: ADC-42FMG-35 35042EPG

Ratings:

- Input 100-240VAC @ 50/60Hz
- Output 35VDC
  1.2A
  42W

Annex 13: DCPM Board edge connector diagram