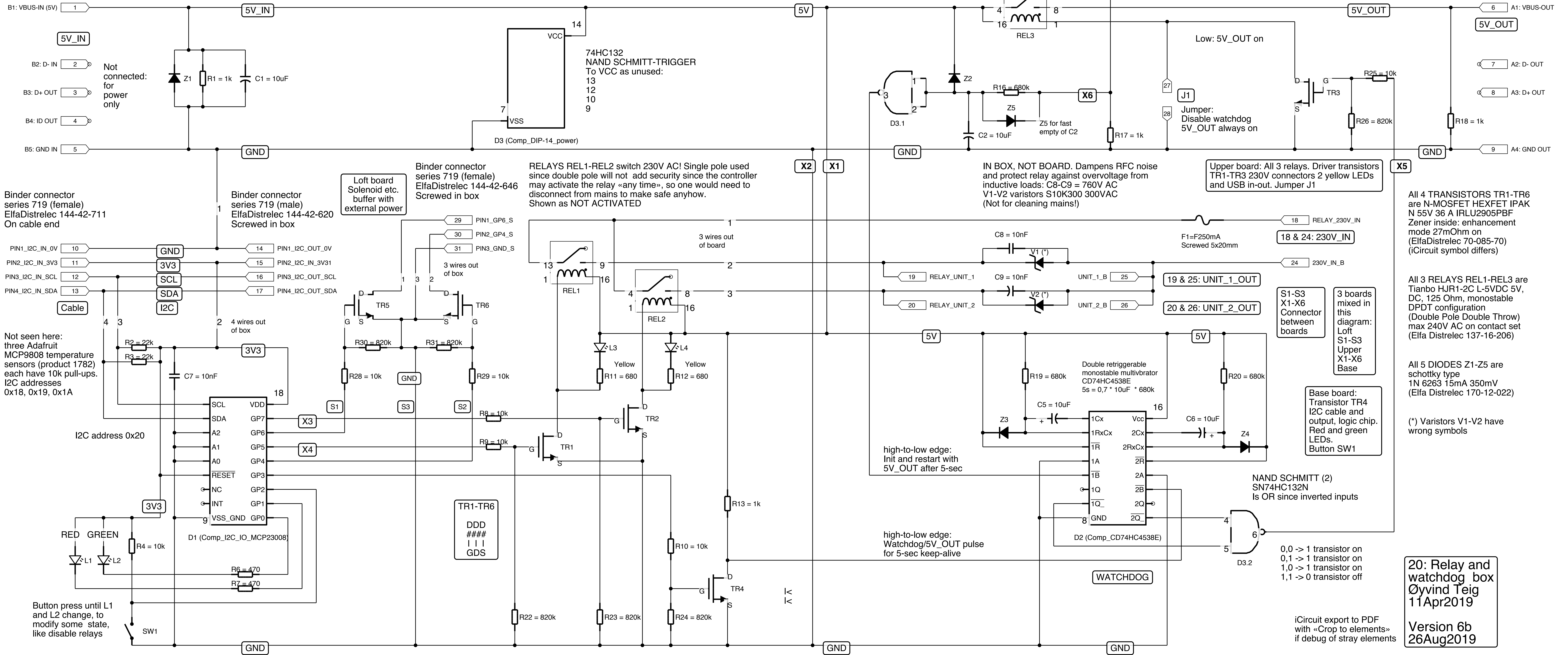


Power in:  
 USB Micro-B  
[https://en.wikipedia.org/wiki/USB\\_hardware#Connectors](https://en.wikipedia.org/wiki/USB_hardware#Connectors)



B1: VBUS-IN (5V)  
 B2: D- IN  
 B3: D+ OUT  
 B4: ID OUT  
 B5: GND IN

Power out:  
 USB A  
 A1: VBUS-OUT  
 A2: D- OUT  
 A3: D+ OUT  
 A4: GND OUT

Binder connector series 719 (female)  
 ElfaDistrelec 144-42-711  
 On cable end

PIN1\_I2C\_IN\_0V  
 PIN2\_I2C\_IN\_3V3  
 PIN3\_I2C\_IN\_SCL  
 PIN4\_I2C\_IN\_SDA

Not seen here:  
 three Adafruit MCP9808 temperature sensors (product 1782) each have 10k pull-ups. I2C addresses 0x18, 0x19, 0x1A

I2C address 0x20

Button press until L1 and L2 change, to modify some state, like disable relays

Loft board Solenoid etc. buffer with external power  
 Binder connector series 719 (female)  
 ElfaDistrelec 144-42-646  
 Screwed in box

RELAYS REL1-REL2 switch 230V AC! Single pole used since double pole will not add security since the controller may activate the relay «any time», so one would need to disconnect from mains to make safe anyhow. Shown as NOT ACTIVATED

IN BOX, NOT BOARD. Dampens RFI noise and protect relay against overvoltage from inductive loads: C8-C9 = 760V AC V1-V2 varistors S10K300 300VAC (Not for cleaning mains!)

Upper board: All 3 relays. Driver transistors TR1-TR3 230V connectors 2 yellow LEDs and USB in-out. Jumper J1

All 4 TRANSISTORS TR1-TR6 are N-MOSFET HEXFET IPAK N 55V 36 A IRLU2905PBF Zener inside: enhancement mode 27mOhm on (ElfaDistrelec 70-085-70) (iCircuit symbol differs)

All 3 RELAYS REL1-REL3 are Tianbo HJR1-2C L-5VDC 5V, DC, 125 Ohm, monostable DPDT configuration (Double Pole Double Throw) max 240V AC on contact set (Elfa Distrelec 137-16-206)

All 5 DIODES Z1-Z5 are schottky type 1N 6263 15mA 350mV (Elfa Distrelec 170-12-022)

(\*) Varistors V1-V2 have wrong symbols

S1-S3 X1-X6 Connector between boards  
 3 boards mixed in this diagram:  
 Loft S1-S3  
 Upper X1-X6  
 Base

Base board: Transistor TR4 I2C cable and output, logic chip. Red and green LEDs. Button SW1

0,0 -> 1 transistor on  
 0,1 -> 1 transistor on  
 1,0 -> 1 transistor on  
 1,1 -> 0 transistor off

20: Relay and watchdog box  
 Øyvind Teig  
 11Apr2019  
 Version 6b  
 26Aug2019

iCircuit export to PDF with «Crop to elements» if debug of stray elements