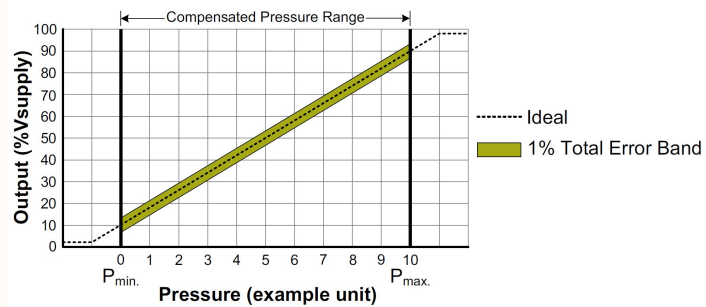
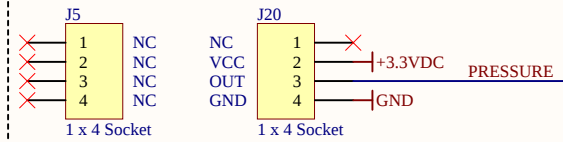


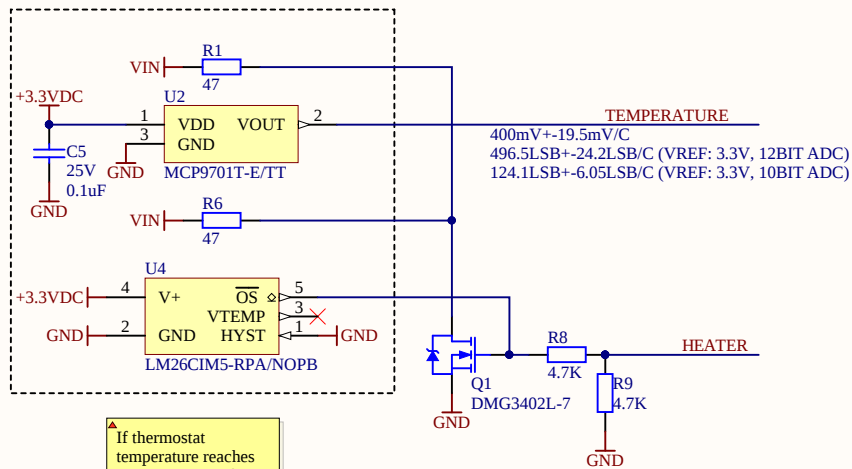
Pressure Sensor

Socket for Honeywell pressure Sensor



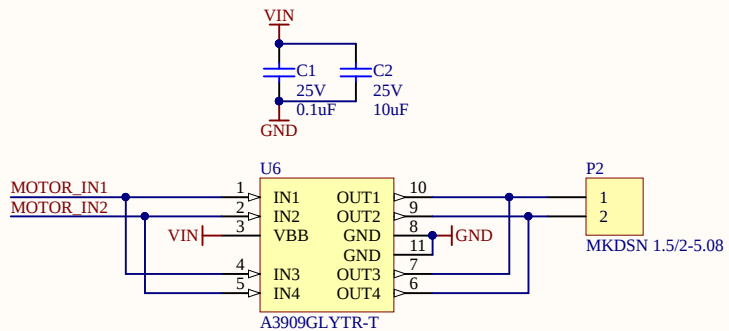
$$\text{Output (V)} = \frac{0.8 \times V_{\text{supply}}}{P_{\text{max}} - P_{\text{min}}} \times (\text{Pressure}_{\text{applied}} - P_{\text{min}}) + 0.10 \times V_{\text{supply}}$$

Temperature regulation



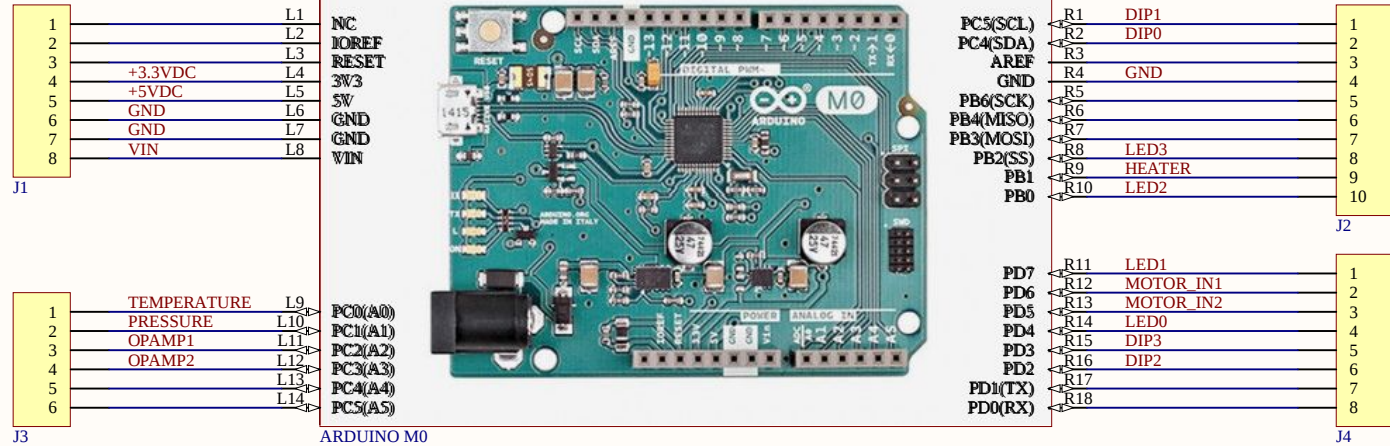
If thermostat temperature reaches above 65C, mosfet is turned off

DC Motor driver

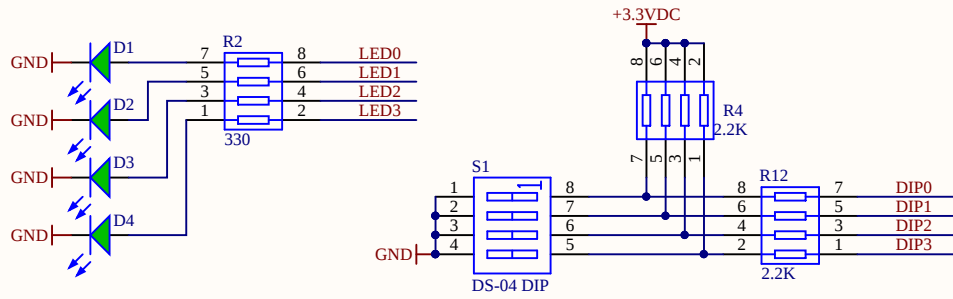


DC Motor (Single, Paralleled)		OUT1	OUT2	OUT3	OUT4	Function
IN1 or IN3	IN2 or IN4					
0	0	Off	Off	Off	Off	High Impedance (Sleep Mode) / Coast
1	0	H	L	H	L	Forward
0	1	L	H	L	H	Reverse
1	1	L	L	L	L	Brake

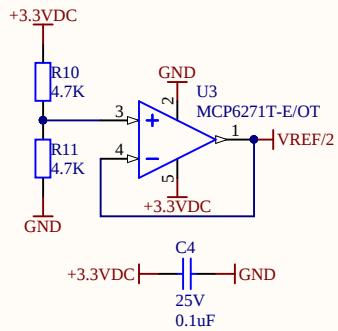
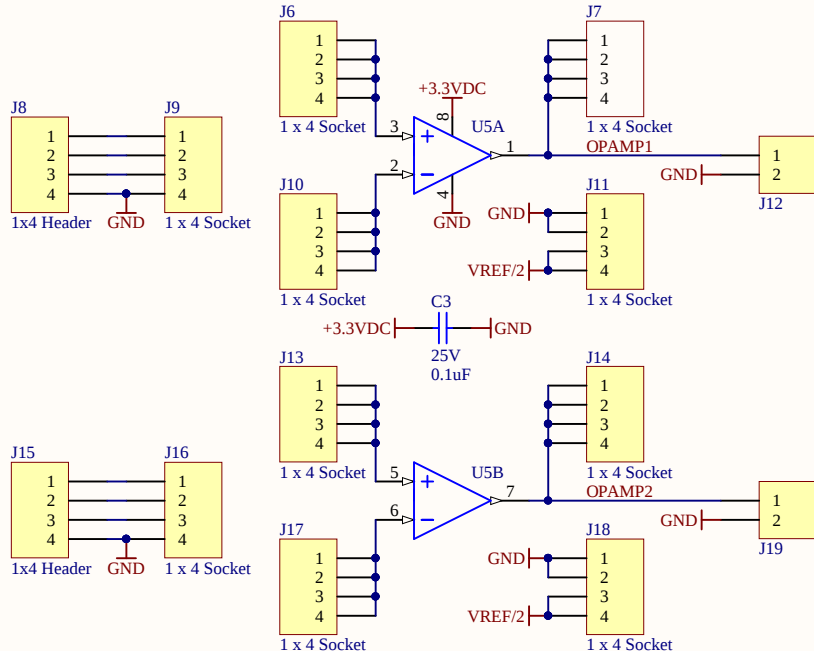
P1



4 x LED + 4 Dip Switches



Opamps



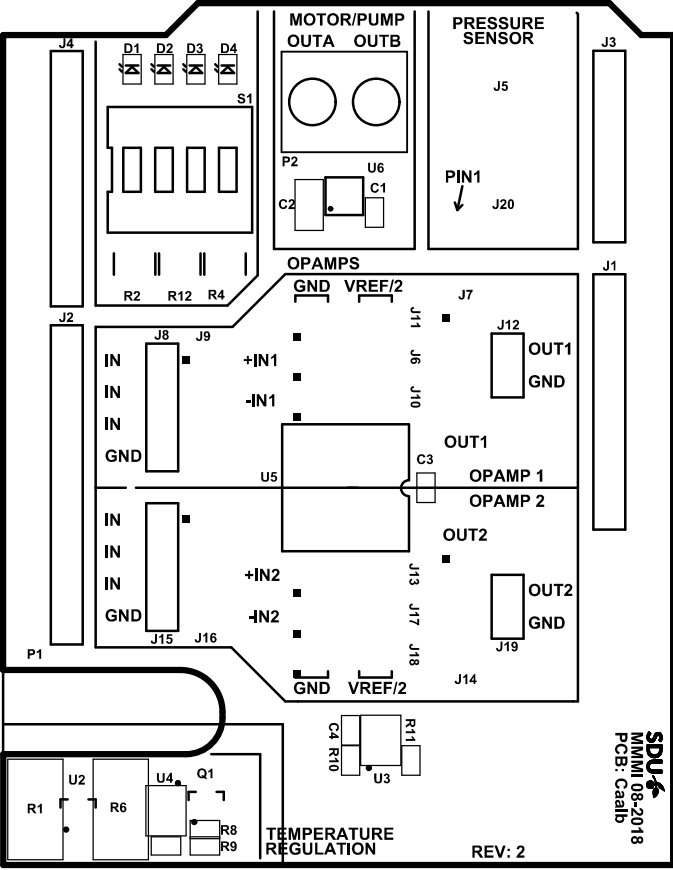
Title: Sheet2.SchDoc

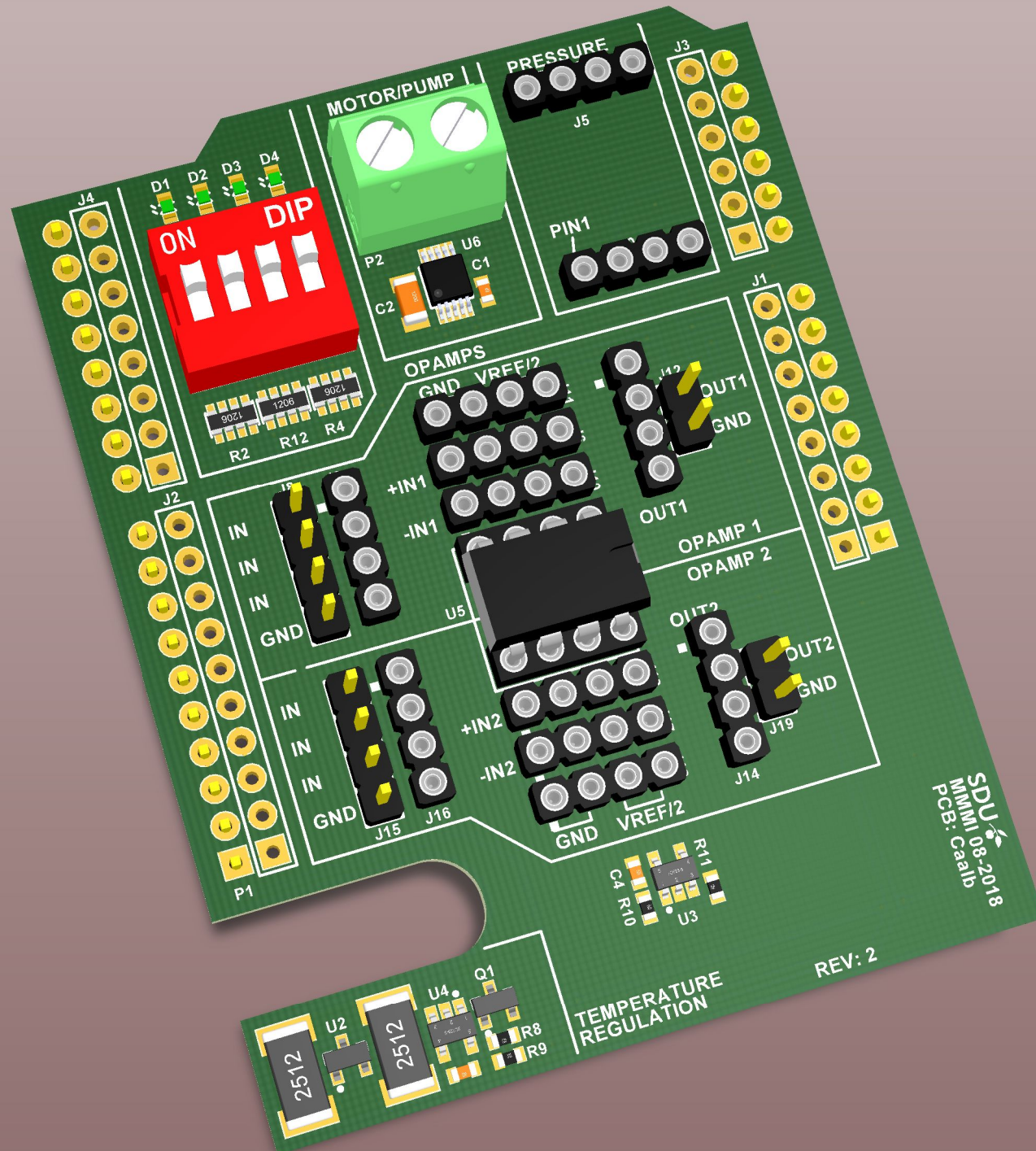
Project: Arduino Shield Veltek 2018.PrjPcb

Date: 19-03-2019

TEK Teknologi
Ø26-603-1
Campusvej 55
5230 Odense M
Odense M

SDU
Drawn by:
Carsten Albertsen





Bill of Materials

Project: Arduino Shield Veltek 2018.PrjPcb
Variant: Var1

Creation Date:	19-03-2019	10:34:24
Print Date:	19-03-2019	19-03-2019 10:34
Drawn By:	Carsten Albertsen	

Address:
TEK Teknologi
Odense M
Ø26-603-1
Campusvej 55
5230 Odense M



Value	Comment	Description	Designator	Footprint	Supplier 1	Supplier Part Number 1	Supplier 2	Supplier Part Number 2	Supplier 3	Supplier Part Number 3	Supplier 4	Supplier Part Number 4	Quantity
330	Res_Array	Isolated Resistor Network	R2	8-1206	RS-Components		Farnell		Digi-Key	CAY16-3313MFACT-ND	Mouser		1
47	5%	Resistor, SMD, 2512, 3W, 352252247RJT	R1, R6	2512R	RS-Components		Farnell		Digi-Key	A121260CT-ND	Mouser		2
10uF	25V	10uF 25V Ceramic Capacitor X7R 1206 (3216 Metric) 0.126" L x 0.063" W (3.20mm x 1.60mm)	C2	1206C	RS-Components		Farnell		Digi-Key	445-12914-1-ND	Mouser		1
4.7K	1%	Resistor, SMD, 0603, 0.063W	R8, R9, R10, R11	0603R	RS-Components		Farnell		Digi-Key		Mouser		4
2.2K	Res_Array	Isolated Resistor Network	R4, R12	8-1206	RS-Components		Farnell		Digi-Key	CAY16-2223MFACT-ND	Mouser		2
0.1uF	25V	Capacitor, SMD, 0603, X7R	C1, C3, C4, C5	0603C	RS-Components		Farnell		Digi-Key		Mouser		4
	1 x 4 Socket	1 x 4 Socket	J5, J6, J7, J9, J10, J11, J13, J14, J16, J17, J18, J20	310-87-104-41-001101 - No pin1 mark, 310-87-104-41-001101, 310-87-104-41-001101, 310-87-104-41-001101, 310-87-104-41-001101, 310-87-104-41-001101, 310-87-104-41-001101, 310-87-104-41-001101, 310-87-104-41-001101, 310-87-104-41-001101, 310-87-104-41-001101, 310-87-104-41-001101 - No pin1 mark	RS-Components		Farnell		Digi-Key	1212-1092-ND	Mouser		12
	1x2 Header	Header Male 1x2, 6130021112	J12, J19	HDR1X2	RS-Components		Farnell		Digi-Key	732-5315-ND	Mouser		2
	1x4 Header	Header Male 1x4, 61300411121	J8, J15	HDR1X4	RS-Components		Farnell		Digi-Key	732-5317-ND	Mouser		2
	A3909GLYTR-T	Driver DC Motors, General Purpose, Stepper Motors DMOS 10-MSOP-EP	U6	MSOP10 - terminal pad	RS-Components		Farnell		Digi-Key	620-1499-1-ND	Mouser		1
	ARDUINO M0	ARDUINO M0	P1	Arduino M0	RS-Components		Farnell		Digi-Key	2 * 609-5805-1-ND + 1 * 732-5319-ND + 1 * 732-2670-ND	Mouser		1
	DMG3402L-7	N-Channel 30V 4A (Ta) 1.4W (Ta) Surface Mount SOT-23	Q1	SOT23	RS-Components		Farnell		Digi-Key	DMG3402L-7DICT-ND	Mouser		1
	DS-04 DIP	DIP Switch, 4 Position, SPST, PN: 1825360-3	S1	DIP SW 4	RS-Components		Farnell		Digi-Key	450-1781-ND	Mouser		1
	Dual Opamp DIP Socket	Dual Opamp DIP Socket, PN: 110-87-308-41-001101	U5	DIP SOCKET 8PQS	RS-Components		Farnell		Digi-Key	1212-1003-ND	Mouser		1
	LED Green	LED,SMD,Green, SMDL-013M8W/T86, 40mcd	D1, D2, D3, D4	LED0603G	RS-Components		Farnell		Digi-Key	846-1198-1-ND	Mouser		4
	LM26CIMS-RPA/NOPB	Thermostat 65°C Active Low Open Drain SOT-23-5	U4	sot23-5	RS-Components		Farnell		Digi-Key	LM26CIMS-RPA/NOPBCT-ND	Mouser		1
	MCP6271T-E/OT	170 uA, 2 MHz Rail-to-Rail Op Amp, 2.0V to 6.0V, 2 Mhz	U3	SOT23-5	RS-Components		Farnell		Digi-Key	MCP6271T-E/OTCT-ND	Mouser		1
	MCP9701T-E/TT	Temperature Sensor Analog, Local -10°C - 125°C 19.5mV/°C SOT-23-3	U2	sot23	RS-Components		Farnell		Digi-Key	MCP9701T-E/TTCT-ND	Mouser		1
	MKDSN 1.5/2-5.08	2-Pin, 5.08mm, 250V, 16A	P2	MKDSN 1.5/2-5.08	RS-Components	193-0586	Farnell		Digi-Key	277-1247-ND	Mouser		1