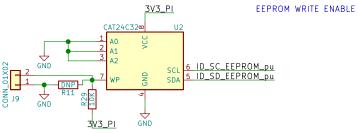
### 40-Pin HAT Connector

7\/7 DI		40HAT	J3		EV DI
<u>3V3_PI</u>	1	P3V3	P5V	2	5V_PI
I2C_SDA	3	BCM2	P5V	4	5V_PI
I2C_SCL	5	ВСМЗ	GND	6	GND
1W	7	BCM4	BCM14	8 ×	
GND	9			10 🗙	
Valve_M2	11	GND BCM17	BCM15	12	LED_PWM
Valve_M3	13	BCM17 BCM27	BCM18 GND	14	GND
Valve_M4	15	BCM27 BCM22	BCM23	16	Flow_C
3V3_PI	17	P3V3	BCM23	18	Flow_W
Pump_WC	19	BCM10	GND	20	GND
Pump_WW	21	BCM10	BCM25	22	Trigger
	. 23	BCM9 BCM11	BCM25	24×	
GND	25	GND	BCM8 BCM7	26 ×	
ID_SD_EEPROM	27	BCM0	BCM7 BCM1	28 ^	ID_SC_EEPROM
Weight_CLK	29	BCM5	GND	30	GND
Weight_D	31	BCM5	BCM12	32	Valve_M1
Pump_A	33	BCM13	GND	34	GND
Pump_M1	35	BCM19	BCM16	36	Valve_AL
Pump_M2	37	BCM26	BCM20	38	Valve_AR
GND	39	GND	BCM20	40	Valve_AO
	ા	UND	DCMZI		

# HAT EEPROM

The HAT spec requires this EEPROM with system information to be in place in order to be called a HAT. It should be set up as write protected (WP pin held high), so it may be desirable to either put a jumper as shown to enable writing, or to hook up a spare 10 pin to do so.

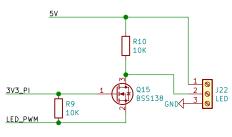


### **Pullup Resistors**

These are just pullup resistors for the I2C bus on the EEPROM. The resistor values are per the HAT spec.



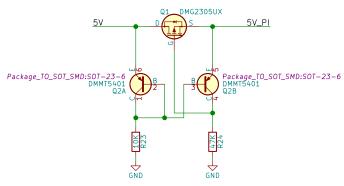
#### **LEDs**



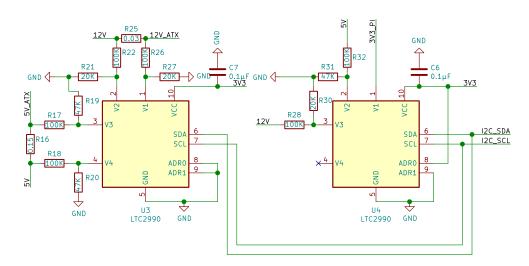
#### **5V Powered HAT Protection**

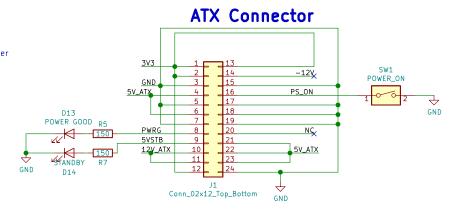
This is the recommended 5V rail protection for a HAT with power going to the Pi.

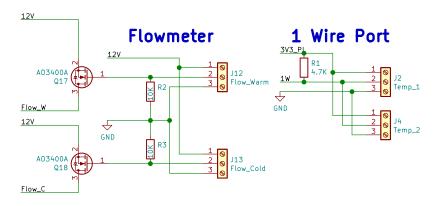
See https://github.com/raspberrypi/hats/blob/master/designguide.md#back-powering-the-pi-via-the-j8-gpio-header

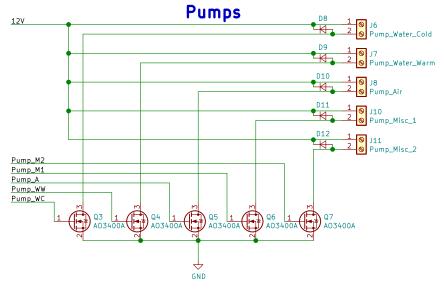


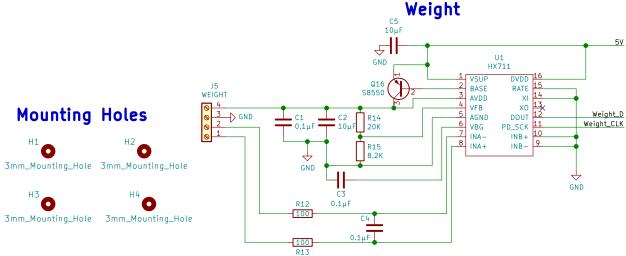
## Current/Voltage Sensor

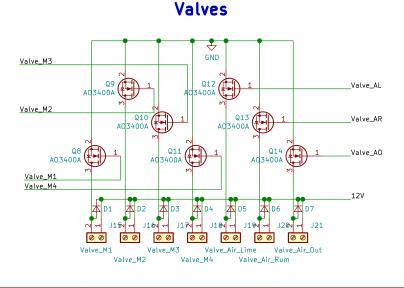














Use a seperate pull—up since the 60k built in from raspi might be insufficient for longer cables.

