Wakeup events

To conserve power the module spends most of its time sleeping. An on-board RTC will periodically wake the module to take a reading. The module will also wake when USB power is applied, the user presses the STATUS switch, or when an external trigger fires. All wake triggers are active high except for the RTC alarm.

Raspberry Pi Pico

As soon as the RP2040 has booted PICO_POWER_EN must be pulled high to maintain power supply to the board. Ensure copper clearance for antenna.

3V3 LDO / "always on" supply / VSYS EN

Provides the "always on" V+ rail (between 1.8V and 3.3V) needed by the system when in low power (sleep) mode. Nothing draws much power from this rail to ensure that modules are using minimal battery power when idle.

The regulator is supplied by VSYS when VBUS is present, or directly from VBAT otherwise.

Using the built in 3V3 EN signal on the Pico draws too much power in sleep mode so we have our own cut off for VSYS which can completely disconnect the Pico.
**Moisture sensor connections**

**Pump circuitry**

**Piezo buzzer**

**BME280 Environmental sensor**

**Back EMF diodes and pulldown resistors for the pumps**

**LTR-559 Light sensor**

**BME280 1.7V - 3.6V**

**LEDK**

**LDR**

**VDD**

**GND**

**CSB**

**SDI**

**SDO**

**VDDIO**

**GND2**

**VDD2**

**GND3**

**VDD3**

**I2C_SDA/1.4C**

**I2C_SCL/1.4C**

**I2C_INT/1.2C**

**BAT54CLT1G**

**D1**

**D2**

**U2**

**U3**

**MT1**

**MT2**

**J1**

**J3**

**J4**

**PO1**

**PO2**

**PO3**

**J5**

**J6**

**J7**

**PUMP1/1.1B**

**PUMP2/1.1B**

**PUMP3/1.1B**

**PUMP1**

**PUMP2**

**PUMP3**

**PUMP4**

**PIEZO/1.2B**

**BSS130**

**1.71V - 3.6V**

**1.71V**