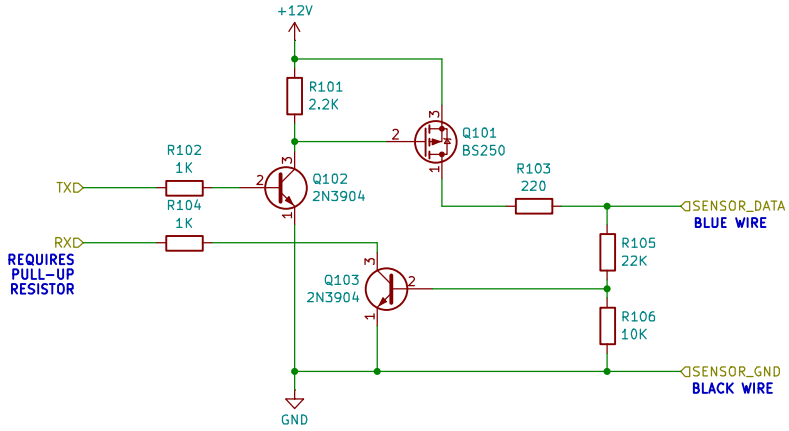

Theory of operation:

The sensors receive power and communicate bi-directionally over SENSOR_DATA.
Multiple sensors can be attached in parallel to the same SENSOR_DATA and SENSOR_GND
and each sensor responds only to the address that has been configured to use.

Sending data: To send data to a sensor, the controller sets TX high so Q102 (NPN BJT)
drives Q101 (P-Channel MOSFET) to supply +12 V to SENSOR DATA. The controller
sends the unary encoded sensor address by pulsing TX low then awaits a reply from
the sensor while holding TX high.

Receiving data: To reply to the controller, the sensor pulses SENSOR_DATA low to send
each encoded bit of data. Q102 (NPN BJT) pulls RX low whenever SENSOR_DATA is high.
It is assumed that RX is connected to a microcontroller pin with an internal pull-up resistor.

Based on reverse engineering by jgrant911
Adapted to protect receive pin from overvoltage
Forum post: https://forums.raspberrypi.com//viewtopic.php?f=29&t=119614

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File: seelevel-interface.kicad_sch

Title: Seelevel Interface

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