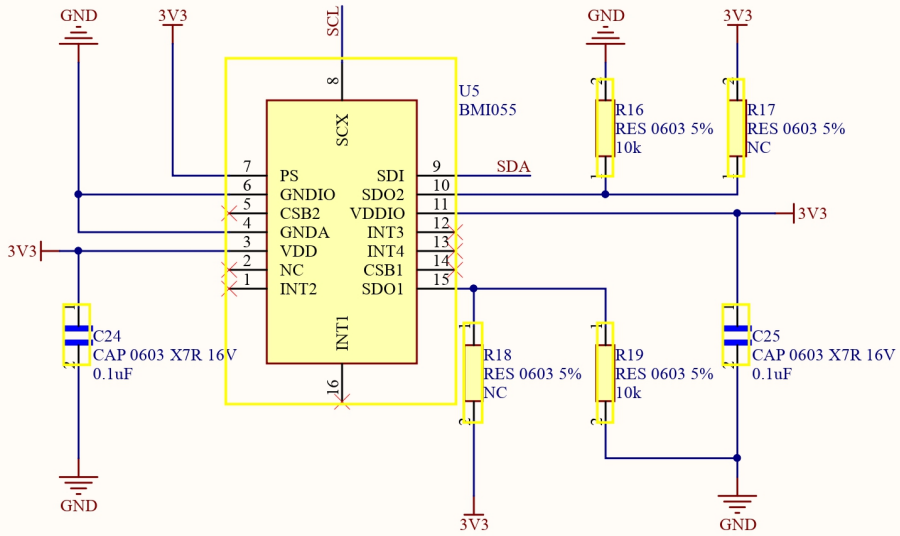

Project: ***Robot Controller v1.0.PrjPcb***		Author: *Ruchira Thilan Munasinghe*
Title:		*Orise (Pvt) Ltd* *400/B* *Galaha Road* *Peradeniya* *Sri Lanka*
Size: A4	Revision:	
Date: 27/06/2023 Time: 13:43:27 Sheet of		
File: E:\ORISE\projects\Robot Controller\Electronic design\Robot Controller v1.0\4.BMI055.SchDoc		

Explanation of the BM055 Circuit Schematic

This document explains the BM055-based circuit schematic for the "Robot Controller v1.0" project.

Key Components and Connections:

1. BM055 Sensor (U5):

- The central component in the schematic, likely used for motion or environmental sensing.
- Contains power, ground, data communication, and interrupt pins.

2. Power Connections:

- Operates on a 3.3V power supply (connected to the VDD pin).
- Includes decoupling capacitors (C24 and C25, 0.1 uF each) between the power supply and ground to reduce noise.

3. Data Communication:

- SDI (Pin 10), SDO (Pin 9), and SCK (Pin 8): Likely used for SPI communication protocol.
- SDA (Pin 11) and SCL (Pin 12): Alternatively used for I2C communication protocol.

4. Pull-up Resistors:

- R16 and R17 (10 kOhm each): Connected to the SDA and SCL lines for I2C communication.

5. Interrupt Pins:

- INT1 and INT2: Can trigger interrupts, but might be left unconnected (marked "NC").

6. Unused Pins:

- INT3 and INT4: Marked as "NC," not connected in this design.

7. Decoupling Capacitors:

- Capacitors C24 and C25: Placed close to the sensor for stability and noise filtering.

8. Additional Resistors:

- R18 and R19: Marked as NC (not connected), serving as placeholders for future design changes.

General Observations:

- The circuit is well-structured, demonstrating a professional design approach.

- This schematic, authored by Ruchira Thilan Manusinghe for Rise (Pvt) Ltd, embeds the BM055 sensor into a robot controller for sensing or environmental monitoring.

For further questions or modifications to the design, additional details can be provided upon request.