Pressure Sensor

BM1390GLV-EVK-001 Manual

BM1390GLV-EVK-001 is an evaluation board for BM1390GLV, which is ROHM pressure sensor. This User’s Guide is about how to use BM1390GLV-EVK-001 together with ROHM Shield for Arduino *1.

*1 ROHM Shield for Arduino is sold separately or as part of ROHM sensor evaluation kit. This User’s Guide uses Shield-EVK-001 of Shield for Arduino.

Preparation

- BM1390GLV-EVK-001 1pc
- Shield for Arduino 1pc
- Arduino Uno 1pc
- USB Cable 1pc
- Computer Installed Arduino IDE 1pc
  - Requirement: Arduino IDE 1.8.13 or higher
  - Please get Arduino IDE from the link below:
    http://www.arduino.cc/

Setting

1. Connect Arduino Uno and Shield for Arduino. (Figure 1)
2. Connect BM1390GLV-EVK-001 to the socket of I2C area on Shield for Arduino. (Figure 2)
3. Set the voltage of Shield for Arduino to 1.8V or 3.0V. (Figure 2)

5. Get BM1390GLV Software *2 from the link below:
   https://www.rohm.com/sensor-shield-support
   *2 The software is subject to change without notice.
6. Launch Arduino IDE.
7. Select [Sketch] -> [Include Library] -> [Add.ZIP library...], then BM1390GLV Software. (Figure 3)
8. Select [File] -> [Examples] -> [Examples from custom libraries], then BM1390GLV Software.
Measurement

1. Select [Tools]. Set Board to “Arduino Uno” and Port to “COMxx (Arduino Uno)”*3. (Figure 4)
   *3 COM number is different in each environment.

   ![Figure 4. Board and Port Setting](image)

2. Click the write button and wait for the message “Done uploading.”. (Figure 5)

   ![Figure 5. Done Uploading](image)

3. Select [Tools] -> [Serial Monitor]. (Figure 6)

   ![Figure 6. Selecting Serial Monitor](image)

4. Set the baudrate to 115200 baud and check log of Serial Monitor. (Figure 7)

   ![Figure 7. Example of Serial Monitor](image)

Board Information *4

*4 Board Information is subject to change without notice.

- Digital Communication Interface: I2C
- Slave Address: 0x5D
- Selectable Voltage of Shield for Arduino: 1.8V, 3V
- Supply Voltage for VDD: 1.7V - 3.6V
- Operating Temperature Range: -40℃ - +85℃

Note: BM1390GLV-EVK-001 is non-waterproof.

![Front](image)

![Back](image)

![Figure 8. Board Pictures](image)

Table 1. Parts Information

<table>
<thead>
<tr>
<th>Parts Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>U1</td>
<td>IC: BM1390GLV</td>
</tr>
<tr>
<td>C1</td>
<td>Bypass capacitor for VDD: 0.1uF</td>
</tr>
<tr>
<td>C2</td>
<td>Bypass capacitor for VREG: 0.22uF</td>
</tr>
<tr>
<td>R1</td>
<td>Pull-up register for SDA: N.M. *5</td>
</tr>
<tr>
<td>R2</td>
<td>Pull-up register for SCL: N.M. *5</td>
</tr>
<tr>
<td>JP1</td>
<td>Pull-up register for DRI: N.M. *5</td>
</tr>
<tr>
<td>CN1</td>
<td>Pin header: 2.54 mm pitch, Φ0.8</td>
</tr>
</tbody>
</table>

*5 N.M. = No Mount
Notice

Notes

1) The information contained herein is subject to change without notice.

2) Before you use our Products, please contact our sales representative and verify the latest specifications:

3) Although ROHM is continuously working to improve product reliability and quality, semiconductors can break down and malfunction due to various factors. Therefore, in order to prevent personal injury or fire arising from failure, please take safety measures such as complying with the derating characteristics, implementing redundant and fire prevention designs, and utilizing backups and fail-safe procedures. ROHM shall have no responsibility for any damages arising out of the use of our Products beyond the rating specified by ROHM.

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