

# Modbus Registers Map

## About these Registers:

DEVICE\_ID / REMOTE\_TERMINAL\_UNIT (RTU) / SLAVE\_ID:

Each sensor on a single multi-drop bus line must have a unique DEVICE\_ID / RTU / SLAVE\_ID:  
By Default the DEVICE\_ID / RTU / SLAVE\_ID is the **LAST 2 DIGITS OF THE SENSORS SERIAL NUMBER**

The serial number (and therefore, the RTU number) can be found on the side of the TriVibe on the white label.

## INDEXING:

Note that **the listed registers** below are considered **0-Indexed (the first value starts at 0)**

**Some Modbus masters will need to shift all the values up by one** value if their master recognized the first Modbus value at 1 (known as 1-indexed).

## SERIAL COMMUNICATION SETTINGS:

**Baudrate:** 115200

**Parity:** None

**Handshakes:** None

**Data Bits:** 8

**Stop Bits:** 1

## FUNCTION CODES:

The function codes supported by TriVibe Sensor are:

03 - (0x03) READ MULTIPLE **HOLDING** REGISTERS

16 - (0x10) WRITE MULTIPLE **HOLDING** REGISTERS

--- If you want to read or write to just a single register, you can do this by setting the length/offset/number of registers to 1 ---

# Endi

## Endianness:

The TriVibe sensor uses the **Big Endian** memory allocation paradigm.

In computing, **endianness** is the order or sequence of bytes of a word of digital data in computer memory. Endianness is primarily expressed as **big-endian (BE)** or **little-endian (LE)**. A big-endian system stores the most significant byte of a word at the smallest memory address and the least significant byte at the largest. A little-endian system, in contrast, stores the least-significant byte at the smallest address.

Address	Name	Read / Write	Type	Description / Measurand
0	SYSTEM_INFO	Read Only	16-Bit Unsigned Integer	FirmwareID + Revision

1	SYSTEM_CONTROL	Read / Write	16-Bit Unsigned Integer	<div>Command Values (Use with Caution):</div> <div>[0] - idle [1] - reset using SCB_AIRCR = 0x05FA0004 command [2] - clear alarms [3] - load data [12398] - unlock all registers asread/write [12450] - erase eeprom (necessaryto unlock allregisters and write MODBUS_ERASE_EEPRC to SECURITY register) [24576] - unlock calibration registers as read/write [24577] - save calibration registers to non-volatile memory [42074] - unlock alarm registers as read/write [42075] - save alarm registers to non-volatile memory [45555] - unlock config registers as read/write [45556] - save config registers to non-volatile memory [55555] - restart the firmware [60006] - reset DDR controller [60007] - save data from DATA registers to CLIP buffer [60008] - read DDR delay to DATA registers [60009] - write DDR delay from DATA registers and lock</div>

2	SYSTEM_STATUS	Read Only	16-bit Unsigned Integer	<ol style="list-style-type: none"> <li>1. command done</li> <li>2. command in progress</li> <li>3. command flagged</li> </ol>
3	SYSTEM_STATE1	Read Only	Bit Position	MACHINE_ON_BIT 0
4	SYSTEM_STATE2	Read Only	Bit Position	<ul style="list-style-type: none"> <li>• POWER_FLAG_BIT 0</li> <li>• DRAM_FLAG_BIT 1</li> <li>• ADC_FLAG_BIT 2</li> <li>• NVM_FLAG_BIT 3</li> <li>• TEMPERATURE_FLAG_BIT 4</li> <li>• CALIBRATION_FLAG_BIT 5</li> <li>• COLLECT_FLAG_BIT 6</li> <li>• IMPACT_FLAG_BIT 7</li> <li>• ALARM_FLAG_BIT 8</li> <li>• ALARM_LEVEL_FLAG_BIT 9</li> <li>• COLLECT2_FLAG_BIT 10</li> <li>• SIN_TABLE_FLAG_BIT 11</li> <li>• DETONATION_FLAG_BIT 12</li> <li>• BOARD_TYPE_FLAG_BIT 13</li> <li>• ONOFF_FLAG_BIT 14</li> </ul>
5	MINUTES_ON	Read Only	16-bit Unsigned Integer	
6	HOURS_ON	Read Only	16-bit Unsigned Integer	
7	DAYS_ON	Read Only	16-bit Unsigned Integer	
8	SYSTEM_DEBUG1	Read Only	16-bit Unsigned Integer	
9	SYSTEM_DEBUG2	Read Only	16-bit Unsigned Integer	

10	Last Command of SYSTEM_CONTROL	Read Only	16-bit Unsigned Integer	
11	PERIPHERAL_STATE	Read Only	Bit Position	I2C_BUS_BIT 0
12	DDR_CONTROLLER_REGISTER	Read / Write	16-bit Unsigned Integer	
13	LAST_SYSTEM_FLAG	Read Only	16-bit Unsigned Integer	
14	SYSTEM_MODE	Read Only	Bit Position	ENABLE_COLLECT_BIT _FLAG 0 ENABLE_IMPACT_BIT _FLAG 1 ENABLE_DETONATION_ _FLAG 2 ENABLE_EXT_IMPACT_B _FLAG 3
15	SYSTEM_FLAG	Read Only	16-bit Unsigned Integer	
16	SYSTEM_ECU	Read Only	16-bit Unsigned Integer	
17	SYSTEM_RTU	Read Only	16-bit Unsigned Integer	
18	HIGH_DATA_POINTER	Read/Write	32-bit Unsigned Integer	
19	LOW_DATA_POINTER	Read/Write		
20	HIGH_UIDH	Read Only	32-bit Unsigned Integer	
21	LOW_UIDH	Read Only		
22	HIGH_UIDMH	Read Only	32-bit Unsigned Integer	
23	LOW_UIDMH	Read Only		
24	HIGH_UIDML	Read Only	32-bit Unsigned Integer	
25	LOW_UIDML	Read Only		
26	HIGH_SERIAL_NUMBER (UIDL)	Read Only	32-bit Unsigned Integer	

27	LOW__SERIAL_NUMBER (UIDL)	Read Only		
28	TEMP_SENSOR_READ_STATUS	Read Only	16-bit Unsigned Integer	
29	TEMP_SENSOR_READ_FLAGS	Read Only	16-bit Unsigned Integer	
30	TEMP_SENSOR_TYPE	Read Only	Bit Position	<ul style="list-style-type: none"> <li>• MODBUS_UNKNOWN</li> <li>• MODBUS_DS1821_T 1</li> <li>• MODBUS_MAX31820 2</li> <li>• MODBUS_DS1631_T 3</li> </ul>
31	TEMPERATURE	Read Only	16-bit Signed Integer	Divide Value / 10
32	DDC_AXIS	Read / Write	16-bit Unsigned Integer	<ul style="list-style-type: none"> <li>• 0-IDLE</li> <li>• 1-A1</li> <li>• 2-A2</li> <li>• 3-A3</li> <li>• 4-virtual</li> <li>• 5-A1A2A3 Internal Accel 1</li> <li>• 6-A1A2A3 Internal Accel 2</li> </ul>
33	DDC_CONTROL_RAW	Write Only	16-bit Unsigned Integer	<ul style="list-style-type: none"> <li>• MODBUS_CAPTURE_ 1</li> <li>• MODBUS_CAPTURE_ 2</li> <li>• MODBUS_SNAPSHOT 3</li> </ul>
34	DDC_CAPTURE_ENGINE_STATUS	Read / Write	16-bit Unsigned Integer	<ul style="list-style-type: none"> <li>• IDLE 0</li> <li>• DONE 1</li> <li>• IN-PROGRESS 2</li> <li>• FLAGS 3-255</li> </ul>
35	DDC_CAPTURE_TIME_MS	Read / Write	16-bit Unsigned Integer	

36	DDC_HIGH_SAMPLES_PER_AXIS	Read/ Write	32-bit Unsigned Integer	
37	DDC_LOW_SAMPLES_PER_AXIS	Read/ Write		
38	ADC_STATUS	Read Only	Bit Position	<ul style="list-style-type: none"> <li>• MADCSR_SENSOR1_<b>_BIT</b> 0</li> <li>• MADCSR_SENSOR1_<b>_BIT</b> 1</li> <li>• MADCSR_SENSOR1_<b>_BIT</b> 2</li> <li>• MADCSR_SENSOR2_<b>_BIT</b> 3</li> <li>• MADCSR_SENSOR2_<b>_BIT</b> 4</li> <li>• MADCSR_SENSOR2_<b>_BIT</b> 5</li> <li>• MADCSR_FLAG_<b>_BIT</b> 15</li> </ul>
39	AXIS_1_SENSOR_1_DET	Read Only	16-bit Unsigned Integer	
40	AXIS_2_SENSOR_1_DET	Read Only	16-bit Unsigned Integer	
41	AXIS_3_SENSOR_1_DET	Read Only	16-bit Unsigned Integer	
42	AXIS_1_SENSOR_2_DET	Read Only	16-bit Unsigned Integer	
43	AXIS_2_SENSOR_2_DET	Read Only	16-bit Unsigned Integer	
44	AXIS_2_SENSOR_2_DET	Read Only	16-bit Unsigned Integer	
45	IMPACT_ALERT	Read Only	16-bit Unsigned Integer	
46	IMPACT_DANGER	Read Only	16-bit Unsigned Integer	
47	IMPACT_AVERAGED_ALERT	Read Only	16-bit Unsigned Integer	
48	IMPACT_AVERAGED_DANGER	Read Only	16-bit Unsigned Integer	

49	DDC_START_SAMPLE	Read / Write	16-bit Unsigned Integer	<p>This register will start by holding a 0 (indicating the 0th sample is in register 50, ready to be read). After successfully reading the data clip sample in register 171, this register should read 122 (indicating the 122nd sample is in register 50, ready to be read).</p>
50-171	DDC_SAMPLES	Read Only	16-bit Unsigned Integers	<p>Block reads of registers 49 - 171 repeatedly until your SAMPLES_PER_AXIS * 3 are collected to your Modbus Master is the recommended approach for collecting dynamic data clips.</p>



171	DDC_SAMPLES_AUTO_INCREMENT	Read Only	16-bit Unsigned Integer	Each time register 171 is successfully read by a Modbus Master. Register 49 is updated to reflect the index of the sample in register 50 and the next set of DDC Samples is loaded into registers 50 - 171.
172	HIGH_AXIS_1_ACCELERATION	Read Only	32-bit Floating Point	g_RMS
173	LOW_AXIS_1_ACCELERATION	Read Only		
174	HIGH_AXIS_2_ACCELERATION	Read Only	32-bit Floating Point	g_RMS
175	LOW_AXIS_2_ACCELERATION	Read Only		
176	HIGH_AXIS_3_ACCELERATION	Read Only	32-bit Floating Point	g_RMS
177	LOW_AXIS_3_ACCELERATION	Read Only		
178	HIGH_AXIS_1_VELOCITY	Read Only	32-bit Floating Point	in/sec <sup>2</sup> _RMS
179	LOW_AXIS_1_VELOCITY	Read Only		
180	HIGH_AXIS_2_VELOCITY	Read Only	32-bit Floating Point	in/sec <sup>2</sup> _RMS
181	LOW_AXIS_2_VELOCITY	Read Only		
182	HIGH_AXIS_3_VELOCITY	Read Only	32-bit Floating Point	in/sec <sup>2</sup> _RMS

183	LOW_AXIS_3_VELOCITY	Read Only		
184	HIGH_AXIS_1_DISPLACEMENT	Read Only	32-bit Floating Point	mils
185	LOW_AXIS_1_DISPLACEMENT	Read Only		
186	HIGH_AXIS_2_DISPLACEMENT	Read Only	32-bit Floating Point	mils
187	LOW_AXIS_2_DISPLACEMENT	Read Only		
188	HIGH_AXIS_3_DISPLACEMENT	Read Only	32-bit Floating Point	mils
189	LOW_AXIS_3_DISPLACEMENT	Read Only		
190	INTERNAL_ACCELEROMETER_HIGH_AXIS_1_ACCELERATION	Read Only	32-bit Floating Point	g_RMS
191	INTERNAL_ACCELEROMETER_LOW_AXIS_1_ACCELERATION	Read Only		
192	INTERNAL_ACCELEROMETER_HIGH_AXIS_2_ACCELERATION	Read Only	32-bit Floating Point	g_RMS
193	INTERNAL_ACCELEROMETER_LOW_AXIS_2_ACCELERATION	Read Only		
194	INTERNAL_ACCELEROMETER_HIGH_AXIS_3_ACCELERATION	Read Only	32-bit Floating Point	g_RMS
195	INTERNAL_ACCELEROMETER_LOW_AXIS_3_ACCELERATION	Read Only		
196	INTERNAL_ACCELEROMETER_HIGH_AXIS_1_VELOCITY	Read Only	32-bit Floating Point	in/sec <sup>2</sup> _RMS
197	INTERNAL_ACCELEROMETER_LOW_AXIS_1_VELOCITY	Read Only		
198	INTERNAL_ACCELEROMETER_HIGH_AXIS_2_VELOCITY	Read Only	32-bit Floating Point	in/sec <sup>2</sup> _RMS

199	INTERNAL_ACCELEROMETER	Read Only	LOW_AXIS_2_VELOCITY	
200	INTERNAL_ACCELEROMETER	Read Only	HIGH_AXIS_3_VELOCITY	32-bit Floating Point in/sec <sup>2</sup> _RMS
201	INTERNAL_ACCELEROMETER	Read Only	LOW_AXIS_3_VELOCITY	
202	INTERNAL_ACCELEROMETER	Read Only	HIGH_AXIS_1_DISPLACEMENT	32-bit Floating Point mils
203	INTERNAL_ACCELEROMETER	Read Only	LOW_AXIS_1_DISPLACEMENT	-
204	INTERNAL_ACCELEROMETER	Read Only	HIGH_AXIS_2_DISPLACEMENT	32-bit Floating Point mils
205	INTERNAL_ACCELEROMETER	Read Only	LOW_AXIS_2_DISPLACEMENT	-
206	INTERNAL_ACCELEROMETER	Read Only	HIGH_AXIS_3_DISPLACEMENT	32-bit Floating Point mils
207	INTERNAL_ACCELEROMETER	Read Only	LOW_AXIS_3_DISPLACEMENT	-
208	INTERNAL_ACCELEROMETER	Read Only	HIGH_AXIS_1_ACCELERATION	32-bit Floating Point g_RMS
209	INTERNAL_ACCELEROMETER	Read Only	LOW_AXIS_1_ACCELERATION	
210	INTERNAL_ACCELEROMETER	Read Only	HIGH_AXIS_2_ACCELERATION	32-bit Floating Point g_RMS
211	INTERNAL_ACCELEROMETER	Read Only	LOW_AXIS_2_ACCELERATION	

212	INTERNAL_ACCELEROMETER_2019	HIGH_AXIS_3_ACCELERATION	32-bit Floating Point	g_RMS
213	INTERNAL_ACCELEROMETER_2019	LOW_AXIS_3_ACCELERATION		
214	INTERNAL_ACCELEROMETER_2019	HIGH_AXIS_1_VELOCITY	32-bit Floating Point	in/sec <sup>2</sup> _RMS
215	INTERNAL_ACCELEROMETER_2019	LOW_AXIS_1_VELOCITY		
216	INTERNAL_ACCELEROMETER_2019	HIGH_AXIS_2_VELOCITY	32-bit Floating Point	in/sec <sup>2</sup> _RMS
217	INTERNAL_ACCELEROMETER_2019	LOW_AXIS_2_VELOCITY		
218	INTERNAL_ACCELEROMETER_2019	HIGH_AXIS_3_VELOCITY	32-bit Floating Point	in/sec <sup>2</sup> _RMS
219	INTERNAL_ACCELEROMETER_2019	LOW_AXIS_3_VELOCITY		
220	INTERNAL_ACCELEROMETER_2019	HIGH_AXIS_1_DISPLACEMENT	32-bit Floating Point	mils
221	INTERNAL_ACCELEROMETER_2019	LOW_AXIS_1_DISPLACEMENT		-
222	INTERNAL_ACCELEROMETER_2019	HIGH_AXIS_2_DISPLACEMENT	32-bit Floating Point	mils
223	INTERNAL_ACCELEROMETER_2019	LOW_AXIS_2_DISPLACEMENT		-
224	INTERNAL_ACCELEROMETER_2019	HIGH_AXIS_3_DISPLACEMENT	32-bit Floating Point	mils

225	INTERNAL_ACCELEROMETER_2_LOW_AXIS_3_DISPLACEMENT	Read Only		-
226	ALARM_1_STATE	Read Only	16-bit Unsigned Integer	<ul style="list-style-type: none"><li>• MODBUS_NO_ALARM</li><li>• MODBUS_LO_ALARM 1</li><li>• MODBUS_HI_ALARM 2</li><li>• MODBUS_HIHI_ALARM 3</li><li>• MODBUS_NORMAL_ 4</li></ul>
227	ALARM_2_STATE	Read Only	16-bit Unsigned Integer	<ul style="list-style-type: none"><li>• MODBUS_NO_ALARM</li><li>• MODBUS_LO_ALARM 1</li><li>• MODBUS_HI_ALARM 2</li><li>• MODBUS_HIHI_ALARM 3</li><li>• MODBUS_NORMAL_ 4</li></ul>
228	ALARM_3_STATE	Read Only	16-bit Unsigned Integer	<ul style="list-style-type: none"><li>• MODBUS_NO_ALARM</li><li>• MODBUS_LO_ALARM 1</li><li>• MODBUS_HI_ALARM 2</li><li>• MODBUS_HIHI_ALARM 3</li><li>• MODBUS_NORMAL_ 4</li></ul>
229	ALARM_4_STATE	Read Only	16-bit Unsigned Integer	<ul style="list-style-type: none"><li>• MODBUS_NO_ALARM</li><li>• MODBUS_LO_ALARM 1</li><li>• MODBUS_HI_ALARM 2</li><li>• MODBUS_HIHI_ALARM 3</li><li>• MODBUS_NORMAL_ 4</li></ul>
230	HIGH_ALARM_1_HIGHEST_VALUE	Read Only	32-bit Floating Point	
231	LOW_ALARM_1_HIGHEST_VALUE	Read Only		

232	HIGH_ALARM_2_HIGHEST_READ_ONLY	Read Only	32-bit Floating Point	
233	LOW_ALARM_2_HIGHEST_READ_ONLY	Read Only		
234	HIGH_ALARM_3_HIGHEST_READ_ONLY	Read Only	32-bit Floating Point	
235	LOW_ALARM_3_HIGHEST_READ_ONLY	Read Only		
236	HIGH_ALARM_4_HIGHEST_READ_ONLY	Read Only	32-bit Floating Point	
237	LOW_ALARM_4_HIGHEST_READ_ONLY	Read Only		
238	ALARM_CONTROL	Read / Write	Bit Position	<ul style="list-style-type: none"><li>• RESET_ALARM1_HIG_BIT 0</li><li>• RESET_ALARM2_HIG_BIT 1</li><li>• RESET_ALARM3_HIG_BIT 2</li><li>• RESET_ALARM4_HIG_BIT 3</li></ul>
239	HIGH_ALARM_1_NORMAL	Read / Write	32-bit Floating Point	
240	LOW_ALARM_1_NORMAL	Read / Write		
241	HIGH_ALARM_2_NORMAL	Read / Write	32-bit Floating Point	
242	LOW_ALARM_2_NORMAL	Read / Write		
243	HIGH_ALARM_3_NORMAL	Read / Write	32-bit Floating Point	
244	LOW_ALARM_3_NORMAL	Read / Write		
245	HIGH_ALARM_4_NORMAL	Read / Write	32-bit Floating Point	
246	LOW_ALARM_4_NORMAL	Read / Write		

247	HIGH_ALARM_1_LO	Read / Write	32-bit Floating Point	
248	LOW_ALARM_1_LO	Read / Write		
249	HIGH_ALARM_2_LO	Read / Write	32-bit Floating Point	
250	LOW_ALARM_2_LO	Read / Write		
251	HIGH_ALARM_3_LO	Read / Write	32-bit Floating Point	
252	LOW_ALARM_3_LO	Read / Write		
253	HIGH_ALARM_4_LO	Read / Write	32-bit Floating Point	
254	LOW_ALARM_4_LO	Read / Write		
255	HIGH_ALARM_1_HI	Read / Write	32-bit Floating Point	
256	LOW_ALARM_1_HI	Read / Write		
257	HIGH_ALARM_2_HI	Read / Write	32-bit Floating Point	
258	LOW_ALARM_2_HI	Read / Write		
259	HIGH_ALARM_3_HI	Read / Write	32-bit Floating Point	
260	LOW_ALARM_3_HI	Read / Write		
261	HIGH_ALARM_4_HI	Read / Write	32-bit Floating Point	
262	LOW_ALARM_4_HI	Read / Write		
263	HIGH_ALARM_1_HIHI	Read / Write	32-bit Floating Point	
264	LOW_ALARM_1_HIHI	Read / Write		

265	HIGH_ALARM_2_HIHI	Read / Write	32-bit Floating Point	
266	LOW_ALARM_2_HIHI	Read / Write		
267	HIGH_ALARM_3_HIHI	Read / Write	32-bit Floating Point	
268	LOW_ALARM_3_HIHI	Read / Write		
269	HIGH_ALARM_4_HIHI	Read / Write	32-bit Floating Point	
270	LOW_ALARM_4_HIHI	Read / Write		
272	ALARM_MULTIPLIER	Read / Write		
273-276	RESERVED	-	-	-
277	MODBUS_RELEASE	Read Only	16-bit Unsigned Integer	
278	AXIS_1_SENSOR_1_EXT_	IMPACT Only READ Only ALERT	16-bit Unsigned Integer	
279	AXIS_2_SENSOR_1_EXT_	IMPACT Only READ Only ALERT	16-bit Unsigned Integer	
280	AXIS_3_SENSOR_1_EXT_	IMPACT Only READ Only ALERT	16-bit Unsigned Integer	
281	AXIS_1_SENSOR_2_EXT_	IMPACT Only READ Only ALERT	16-bit Unsigned Integer	
282	AXIS_2_SENSOR_2_EXT_	IMPACT Only READ Only ALERT	16-bit Unsigned Integer	
283	AXIS_3_SENSOR_2_EXT_	IMPACT Only READ Only ALERT	16-bit Unsigned Integer	



284	AXIS_1_SENSOR_1_EXT_IMPACT_ONLY	Read Only DANGER	16-bit Unsigned Integer	
285	AXIS_2_SENSOR_1_EXT_IMPACT_ONLY	Read Only DANGER	16-bit Unsigned Integer	
286	AXIS_3_SENSOR_1_EXT_IMPACT_ONLY	Read Only DANGER	16-bit Unsigned Integer	
287	AXIS_1_SENSOR_2_EXT_IMPACT_ONLY	Read Only DANGER	16-bit Unsigned Integer	
288	AXIS_2_SENSOR_2_EXT_IMPACT_ONLY	Read Only DANGER	16-bit Unsigned Integer	
289	AXIS_3_SENSOR_2_EXT_IMPACT_ONLY	Read Only DANGER	16-bit Unsigned Integer	
290	AXIS_1_SENSOR_1_EXT_IMPACT_SEVERITY	Read Only	16-bit Unsigned Integer	Returned Value = GPK*10
291	AXIS_2_SENSOR_1_EXT_IMPACT_SEVERITY	Read Only	16-bit Unsigned Integer	Returned Value = GPK*10
292	AXIS_3_SENSOR_1_EXT_IMPACT_SEVERITY	Read Only	16-bit Unsigned Integer	Returned Value = GPK*10
293	AXIS_1_SENSOR_2_EXT_IMPACT_SEVERITY	Read Only	16-bit Unsigned Integer	Returned Value = GPK*10
294	AXIS_2_SENSOR_2_EXT_IMPACT_SEVERITY	Read Only	16-bit Unsigned Integer	Returned Value = GPK*10
295	AXIS_3_SENSOR_2_EXT_IMPACT_SEVERITY	Read Only	16-bit Unsigned Integer	Returned Value = GPK*10
296	ALGORITHM_TIME	Read / Write	16-bit Unsigned Integer	Milliseconds

297	INVALID_DATA_COUNTER	Read Only	16-bit Unsigned Integer	
298	SECURITY_REGISTER	Read Only	16-bit Unsigned Integer	
299	HIGH_A1S1_SENSITIVITY_REGISTER	Read / Write	32-bit Floating Point	
300	LOW_A1S1_SENSITIVITY_REGISTER	Read / Write		
301	HIGH_A2S1_SENSITIVITY_REGISTER	Read / Write	32-bit Floating Point	
302	LOW_A2S1_SENSITIVITY_REGISTER	Read / Write		
303	HIGH_A3S1_SENSITIVITY_REGISTER	Read / Write	32-bit Floating Point	
304	LOW_A3S1_SENSITIVITY_REGISTER	Read / Write		
305	HIGH_A1S2_SENSITIVITY_REGISTER	Read / Write	32-bit Floating Point	
306	LOW_A1S2_SENSITIVITY_REGISTER	Read / Write		
307	HIGH_A2S2_SENSITIVITY_REGISTER	Read / Write	32-bit Floating Point	
308	LOW_A2S2_SENSITIVITY_REGISTER	Read / Write		
309	HIGH_A3S2_SENSITIVITY_REGISTER	Read / Write	32-bit Floating Point	
310	LOW_A3S2_SENSITIVITY_REGISTER	Read / Write		
311	ALARM_TRIP_DELAY	Read / Write	16-bit Unsigned Integer	This delay is applied to all 4 Alarm Channels

312	<b>ALARM1_AXIS</b>	Read / Write	16-bit Unsigned Integer	<ul style="list-style-type: none"><li>• ALARM_AXIS_IDLE</li><li>• ALARM_AXIS_1 1</li><li>• ALARM_AXIS_2 2</li><li>• ALARM_AXIS_3 3</li><li>• ALARM_AXIS_T 4</li><li>• ALARM_AXIS_IT 5</li><li>• ALARM_AXIS_IC 6</li><li>• ALARM_AXIS_1_D 7</li><li>• ALARM_AXIS_2_D 8</li><li>• ALARM_AXIS_3_D 9</li><li>• ALARM_AXIS_1_IT 10</li><li>• ALARM_AXIS_2_IT 11</li><li>• ALARM_AXIS_3_IT 12</li><li>• ALARM_AXIS_1_IC 13</li><li>• ALARM_AXIS_2_IC 14</li><li>• ALARM_AXIS_3_IC 15</li></ul>
313	<b>ALARM1_TYPE</b>	Read / Write	16-bit Unsigned Integer	<ul style="list-style-type: none"><li>• ALARM_TYPE_IDLE</li><li>• ALARM_TYPE_VELOC 1</li><li>• ALARM_TYPE_ACCEL 2</li><li>• ALARM_TYPE_DISPL 3</li><li>• ALARM_TYPE_TEMPE 4</li><li>• ALARM_TYPE_ALERT 5</li><li>• ALARM_TYPE_DANG 6</li><li>• ALARM_TYPE_DETOM 7</li></ul>
314	<b>ALARM1_LO_LEVEL_HIGH</b>	Read / Write	32-bit Floating Point	
315	<b>ALARM1_LO_LEVEL_LOW</b>	Read / Write		

316	<b>ALARM1_HI_LEVEL_HIGH</b>	Read / Write	32-bit Floating Point	
317	<b>ALARM1_HI_LEVEL_LOW</b>	Read / Write		
318	<b>ALARM1_HIHI_LEVEL_HIGH</b>	Read / Write	32-bit Floating Point	
319	<b>ALARM1_HIHI_LEVEL_LOW</b>	Read / Write		
320	<b>ALARM1_HYSTERESIS_HIGH</b>	Read / Write	32-bit Floating Point	
321	<b>ALARM1_HYSTERESIS_LOW</b>	Read / Write		
322	<b>ALARM2_AXIS</b>	Read / Write	16-bit Unsigned Integer	<ul style="list-style-type: none"><li>• ALARM_AXIS_IDLE</li><li>• ALARM_AXIS_1_1</li><li>• ALARM_AXIS_2_2</li><li>• ALARM_AXIS_3_3</li><li>• ALARM_AXIS_T_4</li><li>• ALARM_AXIS_IT_5</li><li>• ALARM_AXIS_IC_6</li><li>• ALARM_AXIS_1_D_7</li><li>• ALARM_AXIS_2_D_8</li><li>• ALARM_AXIS_3_D_9</li><li>• ALARM_AXIS_1_IT_10</li><li>• ALARM_AXIS_2_IT_11</li><li>• ALARM_AXIS_3_IT_12</li><li>• ALARM_AXIS_1_IC_13</li><li>• ALARM_AXIS_2_IC_14</li><li>• ALARM_AXIS_3_IC_15</li></ul>

323	<b>ALARM2_TYPE</b>	Read / Write	16-bit Unsigned Integer	<ul style="list-style-type: none"> <li>• ALARM_TYPE_IDLE</li> <li>• ALARM_TYPE_VELOC</li> <li>1</li> <li>• ALARM_TYPE_ACCEL</li> <li>2</li> <li>• ALARM_TYPE_DISPL</li> <li>3</li> <li>• ALARM_TYPE_TEMPE</li> <li>4</li> <li>• ALARM_TYPE_ALERT</li> <li>5</li> <li>• ALARM_TYPE_DANGI</li> <li>6</li> <li>• ALARM_TYPE_DETOM</li> <li>7</li> </ul>
324	<b>ALARM2_LO_LEVEL_HIGH</b>	Read / Write	32-bit Floating Point	
325	<b>ALARM2_LO_LEVEL_LOW</b>	Read / Write		
326	<b>ALARM2_HI_LEVEL_HIGH</b>	Read / Write	32-bit Floating Point	
327	<b>ALARM2_HI_LEVEL_LOW</b>	Read / Write		
328	<b>ALARM2_HIHI_LEVEL_HIGH</b>	Read / Write	32-bit Floating Point	
329	<b>ALARM2_HIHI_LEVEL_LOW</b>	Read / Write		
330	<b>ALARM2_HYSTERESIS_HIGH</b>	Read / Write	32-bit Floating Point	
331	<b>ALARM2_HYSTERESIS_LOW</b>	Read / Write		

332	<b>ALARM3_AXIS</b>	Read / Write	16-bit Unsigned Integer	<ul style="list-style-type: none"><li>• ALARM_AXIS_IDLE</li><li>• ALARM_AXIS_1 1</li><li>• ALARM_AXIS_2 2</li><li>• ALARM_AXIS_3 3</li><li>• ALARM_AXIS_T 4</li><li>• ALARM_AXIS_IT 5</li><li>• ALARM_AXIS_IC 6</li><li>• ALARM_AXIS_1_D 7</li><li>• ALARM_AXIS_2_D 8</li><li>• ALARM_AXIS_3_D 9</li><li>• ALARM_AXIS_1_IT 10</li><li>• ALARM_AXIS_2_IT 11</li><li>• ALARM_AXIS_3_IT 12</li><li>• ALARM_AXIS_1_IC 13</li><li>• ALARM_AXIS_2_IC 14</li><li>• ALARM_AXIS_3_IC 15</li></ul>
333	<b>ALARM3_TYPE</b>	Read / Write	16-bit Unsigned Integer	<ul style="list-style-type: none"><li>• ALARM_TYPE_IDLE</li><li>• ALARM_TYPE_VELOC 1</li><li>• ALARM_TYPE_ACCEL 2</li><li>• ALARM_TYPE_DISPL 3</li><li>• ALARM_TYPE_TEMPE 4</li><li>• ALARM_TYPE_ALERT 5</li><li>• ALARM_TYPE_DANG 6</li><li>• ALARM_TYPE_DETOM 7</li></ul>
334	<b>ALARM3_LO_LEVEL_HIGH</b>	Read / Write	32-bit Floating Point	
335	<b>ALARM3_LO_LEVEL_LOW</b>	Read / Write		

336	<b>ALARM3_HI_LEVEL_HIGH</b>	Read / Write	32-bit Floating Point	
337	<b>ALARM3_HI_LEVEL_LOW</b>	Read / Write		
338	<b>ALARM3_HIHI_LEVEL_HIGH</b>	Read / Write	32-bit Floating Point	
339	<b>ALARM3_HIHI_LEVEL_LOW</b>	Read / Write		
340	<b>ALARM3_HYSTERESIS_HIGH</b>	Read / Write	32-bit Floating Point	
341	<b>ALARM3_HYSTERESIS_LOW</b>	Read / Write		
342	<b>ALARM4_AXIS</b>	Read / Write	16-bit Unsigned Integer	<ul style="list-style-type: none"><li>• ALARM_AXIS_IDLE</li><li>• ALARM_AXIS_1_1</li><li>• ALARM_AXIS_2_2</li><li>• ALARM_AXIS_3_3</li><li>• ALARM_AXIS_T_4</li><li>• ALARM_AXIS_IT_5</li><li>• ALARM_AXIS_IC_6</li><li>• ALARM_AXIS_1_D_7</li><li>• ALARM_AXIS_2_D_8</li><li>• ALARM_AXIS_3_D_9</li><li>• ALARM_AXIS_1_IT_10</li><li>• ALARM_AXIS_2_IT_11</li><li>• ALARM_AXIS_3_IT_12</li><li>• ALARM_AXIS_1_IC_13</li><li>• ALARM_AXIS_2_IC_14</li><li>• ALARM_AXIS_3_IC_15</li></ul>

343	<b>ALARM4_TYPE</b>	Read / Write	16-bit Unsigned Integer	<ul style="list-style-type: none"><li>• ALARM_TYPE_IDLE</li><li>• ALARM_TYPE_VELOC</li><li>1</li><li>• ALARM_TYPE_ACCEL</li><li>2</li><li>• ALARM_TYPE_DISPL</li><li>3</li><li>• ALARM_TYPE_TEMPE</li><li>4</li><li>• ALARM_TYPE_ALERT</li><li>5</li><li>• ALARM_TYPE_DANGI</li><li>6</li><li>• ALARM_TYPE_DETON</li><li>7</li></ul>
344	<b>ALARM4_LO_LEVEL_HIGH</b>	Read / Write	32-bit Floating Point	
345	<b>ALARM4_LO_LEVEL_LOW</b>	Read / Write		
346	<b>ALARM4_HI_LEVEL_HIGH</b>	Read / Write	32-bit Floating Point	
347	<b>ALARM4_HI_LEVEL_LOW</b>	Read / Write		
348	<b>ALARM4_HIHI_LEVEL_HIGH</b>	Read / Write	32-bit Floating Point	
349	<b>ALARM4_HIHI_LEVEL_LOW</b>	Read / Write		
350	<b>ALARM4_HYSTERESIS_HIGH</b>	Read / Write	32-bit Floating Point	
351	<b>ALARM4_HYSTERESIS_LOW</b>	Read / Write		
352	<b>A1S1_ZERO</b>	Read / Write	16-bit Unsigned Integer	
353	<b>A2S1_ZERO</b>	Read / Write	16-bit Unsigned Integer	
354	<b>A3S1_ZERO</b>	Read / Write	16-bit Unsigned Integer	
355	<b>A1S2_ZERO</b>	Read / Write	16-bit Unsigned Integer	



356	<b>A2S2_ZERO</b>	Read / Write	16-bit Unsigned Integer	
357	<b>A3S2_ZERO</b>	Read / Write	16-bit Unsigned Integer	
358	<b>BUFFER_1_SECONDS</b>	Read / Write	16-bit Unsigned Integer	
359	<b>BUFFER_1_FFT_POINTS</b>	Read / Write	16-bit Unsigned Integer	
360	<b>BUFFER_1_FILTER_TYPE</b>	Read / Write	16-bit Unsigned Integer	<ul style="list-style-type: none"> <li>• HIGHPASS_FILTER</li> <li>• LOWPASS_FILTER 1</li> </ul>
361	<b>BUFFER_1_FILTER_MODE</b>	Read / Write	Bit Position	<ul style="list-style-type: none"> <li>• BUFFER_PROCESS _BIT 0</li> <li>• AXIS_PROCESS _BIT 1 --- 0- STATIC, 1- DYNAMIC</li> <li>• FIR_PROCESS _BIT 2 --- 0- FIR disabled, 1-FIR enabled</li> </ul>
362	<b>BUFFER_2_SECONDS</b>	Read / Write	16-bit Unsigned Integer	
363	<b>BUFFER_2_FFT_POINTS</b>	Read / Write	16-bit Unsigned Integer	
364	<b>BUFFER_2_FILTER_TYPE</b>	Read / Write	16-bit Unsigned Integer	<ul style="list-style-type: none"> <li>• HIGHPASS_FILTER</li> <li>• LOWPASS_FILTER 1</li> </ul>
365	<b>BUFFER_2_FILTER_MODE</b>	Read / Write	Bit Position	<ul style="list-style-type: none"> <li>• BUFFER_PROCESS _BIT 0</li> <li>• AXIS_PROCESS _BIT 1 --- 0- STATIC, 1- DYNAMIC</li> <li>• FIR_PROCESS _BIT 2 --- 0- FIR disabled, 1-FIR enabled</li> </ul>

366	<b>BOARD_TYPE</b>	Read / Write	16-bit Unsigned Integer	<ul style="list-style-type: none"><li>• UNDEFINED 0xFFFF</li><li>• 2G2G 1</li><li>• 2G4G 2</li><li>• 4G2G 3</li><li>• 2G832M 4</li><li>• 4G832M 5</li><li>• 832M2G(25G2G) 6</li><li>• 832M4G 7</li><li>• 4G10G 8</li><li>• 10G4G 9</li><li>• 100G10G 10</li></ul>
367	<b>SENSOR_RTU</b>	Read / Write	16-bit Unsigned Integer	
368	<b>IMPACT_ALERT_THRESHOLD</b>			
369				
370	<b>IMPACT_DANGER_THRESHOLD</b>			
371				
372	<b>MACHINE_SPEED_CONFIG</b>			
373	<b>CONFIG_SYSTEM_MODE</b>			
374	<b>RESET_COUNTER_CONFIG</b>			
375	<b>LOW_PASS_FREQUENCY</b>	<b>CONFIG</b> 1. Unlock: write [45555] to SYSTEM_CONTROL 2. Write New Value to LOW_PASS_FREQUENCY 3. Save: write [45556] to SYSTEM_CONTROL	16-bit Unsigned Integer	0.1 Hz per bit  Example: If wish for a lowpass filter of 2500Hz, Write value [25000]  <div>This value must be higher than your setting for <b>HIGH_PASS_FRE</b></div>

376	<b>HIGH_PASS_FREQUENCY</b>	<b>CONFIG</b> 1. Unlock: write [45555] to SYSTEM_CONTROL  2. Write New Value to HIGH_PASS_FREQUENCY  3. Save: write [45556] to SYSTEM_CONTROL	16-bit Unsigned Integer	0.1 Hz per bit  Example: If wish for a highpass filter of 25Hz, Write value [250]  <div>This value must be lower than your setting for <b>LOW_PASS_FREQ</b></div>
-----	----------------------------	--	-------------------------	---

377	LATCH_TYPE		<pre>*/ #define MODBUS_LATCH_TYPE_I (40378-40001) #define MODBUS_LATCH_TYPE_I /* Catch the "highest value clip"commands */ #define MODBUS_LATCH_TYPE_I 10 #define MODBUS_LATCH_TYPE_I 11 #define MODBUS_LATCH_TYPE_I 12 #define MODBUS_LATCH_TYPE_I 13 // #define MODBUS_LATCH_TYPE_I 20 #define MODBUS_LATCH_TYPE_I 21 #define MODBUS_LATCH_TYPE_I 22 #define MODBUS_LATCH_TYPE_I 23 // #define MODBUS_LATCH_TYPE_I 30 /* Catch the "first value clip" commands */ #define MODBUS_LATCH_TYPE_I 0x100 #define MODBUS_LATCH_TYPE_I (MODBUS_LATCH_TYPE_I #define MODBUS_LATCH_TYPE_I (MODBUS_LATCH_TYPE_I #define MODBUS_LATCH_TYPE_I (MODBUS_LATCH_TYPE_I #define MODBUS_LATCH_TYPE_I (MODBUS_LATCH_TYPE_I #define MODBUS_LATCH_TYPE_I (MODBUS_LATCH_TYPE_I // #define MODBUS_LATCH_TYPE_I (MODBUS_LATCH_TYPE_I</pre>
-----	------------	--	--

378	<b>LATCH LEVEL HIGH</b>			
379	<b>LATCH LEVEL LOW</b>			
380	<b>SENSOR CONTROL</b>		Bit Position	<ul style="list-style-type: none"> <li>• SENSOR1_AXIS1_BIT 0</li> <li>• SENSOR1_AXIS2_BIT 1</li> <li>• SENSOR1_AXIS3_BIT 2</li> <li>• SENSOR2_AXIS1_BIT 3</li> <li>• SENSOR2_AXIS2_BIT 4</li> <li>• SENSOR2_AXIS3_BIT 5</li> </ul>
381	<b>ALGORITHM_REGISTER</b>		Bit Position	<ul style="list-style-type: none"> <li>• ALGORITHM_BIT 0 --- 0-CONVENTIONAL, 1-DSP</li> </ul>
382	<b>CONFIG_ALARM_MULTIPLIER</b>			
383	<b>OFF_THRESHOLD_HIGH</b>			
384	<b>OFF_THRESHOLD_LOW</b>			
385	<b>ON_THRESHOLD_HIGH</b>			
386	<b>ON_THRESHOLD_LOW</b>			
387	<b>OFF_TIME</b>			
388	<b>ON_TIME</b>			
389	<b>RESERVED NON-VOLATILE CONFIG</b>			
390	<b>RESET COUNTER</b>			
391	<b>RESET_SOURCE</b>			<ul style="list-style-type: none"> <li>• 32 - WDT</li> <li>• 130 - POR</li> <li>• 1024 - SOFT RESET</li> </ul>
392	<b>RESET_STATUS</b>			<ul style="list-style-type: none"> <li>• RESET_IDLE_STATUS</li> <li>• RESET_REMOTE_STATUS 1</li> <li>• RESET_INVALID_DATA 2</li> <li>• RESET_INVALID_MEMORY 3</li> </ul>

393	<b>LATCH_COMMAND</b>			<ul style="list-style-type: none"><li>• COMMAND_IDLE</li><li>• COMMAND_BLOCK</li><li>1</li><li>• COMMAND_START</li><li>2</li></ul>
394	<b>LATCH_STATUS</b>			<ul style="list-style-type: none"><li>• STATUS_IDLE</li><li>• STATUS_DONE</li><li>1</li><li>• STATUS_INPROGRES</li><li>2</li><li>• STATUS_FLAGGED</li><li>3</li><li>• STATUS_BLOCKED</li><li>4</li></ul>

---

Revision #11  
Created 25 November 2021 18:38:27 by Bach\_L  
Updated 10 October 2023 15:57:51 by Bach\_L