

AcceleroMMA7361

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## 1 Class Index

### 1.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

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## 2 Class Documentation

### 2.1 AcceleroMMA7361 Class Reference

#### Public Member Functions

- [AcceleroMMA7361](#) ()  
*acceleroMMA7361.cpp - Library for retrieving data from the MMA7361 accelerometer.  
For more information: variable declaration, changelog,... see [AcceleroMMA7361.h](#)*
- void [begin](#) ()  
*begin function to set pins: sleepPin = 13, selfTestPin = 12, zeroGPin = 11, gSelectPin = 10, xPin = A0, yPin = A1, zPin = A2. When you use [begin\(\)](#) with an empty parameter list, these standard values are used*
- void [begin](#) (int sleepPin, int selfTestPin, int zeroGPin, int gSelectPin, int xPin, int yPin, int zPin)  
*begin variables*
- int [getXRaw](#) ()  
*[getXRaw\(\)](#): Returns the raw data from the X-axis analog I/O port of the Arduino as an integer*
- int [getYRaw](#) ()  
*[getYRaw\(\)](#): Returns the raw data from the Y-axis analog I/O port of the Arduino as an integer*
- int [getZRaw](#) ()

- getZRaw()*: Returns the raw data from the Z-axis analog I/O port of the Arduino as an integer
- int *getXVolt* ()

*getXVolt()*: Returns the voltage in mV from the X-axis analog I/O port of the Arduino as a integer
- int *getYVolt* ()

*getYVolt()*: Returns the voltage in mV from the Y-axis analog I/O port of the Arduino as a integer
- int *getZVolt* ()

*getZVolt()*: Returns the voltage in mV from the Z-axis analog I/O port of the Arduino as a integer
- int *getXAccel* ()

*getXAccel()*: Returns the acceleration of the X-axis as a int (1 G = 100.00)
- int *getYAccel* ()

*getYAccel()*: Returns the acceleration of the Y-axis as a int (1 G = 100.00)
- int *getZAccel* ()

*getZAccel()*: Returns the acceleration of the Z-axis as a int (1 G = 100.00)
- void *getAccelXYZ* (int \*\_XAxis, int \*\_YAxis, int \*\_ZAxis)

*getAccelXYZ(int \*\_XAxis, int \*\_YAxis, int \*\_ZAxis)* returns all axis at once as pointers
- int *getTotalVector* ()

*getTotalVector* returns the magnitude of the total acceleration vector as an integer
- void *setOffSets* (int xOffSet, int yOffSet, int zOffSet)

*setOffSets( int offSetX, int offSetY, int offSetZ)*: Sets the offset values for the x,y,z axis. The parameters are the offsets expressed in G-force (100 = 1 G) Offsets are added to the raw datafunctions
- void *calibrate* ()

*calibrate()*: Sets X and Y values via setOffsets to zero. The Z axis will be set to 100 = 1G WARNING WHEN CALIBRATED YOU HAVE TO MAKE SURE THE Z-AXIS IS PERPENDICULAR WITH THE EARTHS SURFACE
- void *setARefVoltage* (double \_refV)

*setARefVoltage(double \_refV)*: Sets the AREF voltage to external, (now only takes 3.3 or 5 as parameter) default is 5 when no AREF is used. When you want to use 3.3 AREF, put a wire between the AREF pin and the 3.3 V VCC pin. This increases accuracy
- void *setAveraging* (int avg)

*setAveraging(int avg)*: Sets how many samples have to be averaged in getAccel default is 10.
- int *getOrientation* ()

*getOrientation* returns which axis perpendicular with the earths surface x=1,y=2,z=3 is positive or negative depending on which side of the axis is pointing downwards
- void *setSensitivity* (boolean sensi)

*setSensitivity* sets the sensitivity to +/-6 G or +/-1.5 G by a boolean HIGH (1.5) or LOW (6)
- void *sleep* ()

*sleep* lets the device sleep (when device is sleeping already this does nothing)
- void *wake* ()

*wake* enables the device after sleep (when device is not sleeping this does nothing) there is a 2 ms delay due to enable time specifications by the datasheet

### 2.1.1 Constructor & Destructor Documentation

#### 2.1.1.1 AcceleroMMA7361::AcceleroMMA7361 ( )

acceleroMMA7361.cpp - Library for retrieving data from the MMA7361 accelerometer.  
For more information: variable declaration, changelog,... see [AcceleroMMA7361.h](#)

constructor

### 2.1.2 Member Function Documentation

#### 2.1.2.1 void AcceleroMMA7361::begin ( )

begin function to set pins: sleepPin = 13, selfTestPin = 12, zeroGPin = 11, gSelectPin = 10, xPin = A0, yPin = A1, zPin = A2. When you use [begin\(\)](#) with an empty parameter list, these standard values are used

#### 2.1.2.2 void AcceleroMMA7361::begin ( int *sleepPin*, int *selfTestPin*, int *zeroGPin*, int *gSelectPin*, int *xPin*, int *yPin*, int *zPin* )

begin variables

- int sleepPin: number indicating to which pin the sleep port is attached. DIGITAL OUT
- int selfTestPin: number indicating to which pin the selftest port is attached. DIGITAL OUT
- int zeroGPin: number indicating to which pin the ZeroGpin is connected to. DIGITAL IN
- int gSelectPin: number indication to which pin the Gselect is connected to. DIGITAL OUT
- int xPin: number indicating to which pin the x-axis pin is connected to. ANALOG IN
- int yPin: number indicating to which pin the y-axis pin is connected to. ANALOG IN
- int zPin: number indicating to which pin the z-axis pin is connected to. ANALOG IN
- int offset: array indicating the G offset on the x,y and z-axis When you use [begin\(\)](#) without variables standard values are loaded: A0,A1,A2 as input for X,Y,Z and digital pins 13,12,11,10 for sleep, selftest, zeroG and gSelect

#### 2.1.2.3 void AcceleroMMA7361::calibrate ( )

[calibrate\(\)](#): Sets X and Y values via setOffsets to zero. The Z axis will be set to 100 = 1G WARNING WHEN CALIBRATED YOU HAVE TO MAKE SURE THE Z-AXIS IS PERPENDICULAR WITH THE EARTHS SURFACE

2.1.2.4 void AcceleroMMA7361::getAccelXYZ ( int \* \_XAxis, int \* \_YAxis, int \* \_ZAxis )

[getAccelXYZ\(int \\* \\_XAxis, int \\* \\_YAxis, int \\* \\_ZAxis\)](#) returns all axis at once as pointers

2.1.2.5 int AcceleroMMA7361::getOrientation ( )

getOrientation returns which axis perpendicular with the earths surface x=1,y=2,z=3 is positive or negative depending on which side of the axis is pointing downwards

2.1.2.6 int AcceleroMMA7361::getTotalVector ( )

getTotalVector returns the magnitude of the total acceleration vector as an integer

2.1.2.7 int AcceleroMMA7361::getXAccel ( )

[getXAccel\(\)](#): Returns the acceleration of the X-axis as a int (1 G = 100.00)

2.1.2.8 int AcceleroMMA7361::getXRaw ( )

[getXRaw\(\)](#): Returns the raw data from the X-axis analog I/O port of the Arduino as an integer

2.1.2.9 int AcceleroMMA7361::getXVolt ( )

[getXVolt\(\)](#): Returns the voltage in mV from the X-axis analog I/O port of the Arduino as a integer

2.1.2.10 int AcceleroMMA7361::getYAccel ( )

[getYAccel\(\)](#): Returns the acceleration of the Y-axis as a int (1 G = 100.00)

2.1.2.11 int AcceleroMMA7361::getYRaw ( )

[getYRaw\(\)](#): Returns the raw data from the Y-axis analog I/O port of the Arduino as an integer

2.1.2.12 int AcceleroMMA7361::getYVolt ( )

[getYVolt\(\)](#): Returns the voltage in mV from the Y-axis analog I/O port of the Arduino as a integer

2.1.2.13 int AcceleroMMA7361::getZAccel ( )

[getZAccel\(\)](#): Returns the acceleration of the Z-axis as a int (1 G = 100.00)

2.1.2.14 int AcceleroMMA7361::getZRaw ( )

[getZRaw\(\)](#): Returns the raw data from the Z-axis analog I/O port of the Arduino as an integer

#### 2.1.2.15 int AcceleroMMA7361::getZVolt ( )

[getZVolt\(\)](#): Returns the voltage in mV from the Z-axis analog I/O port of the Arduino as a integer

#### 2.1.2.16 void AcceleroMMA7361::setARefVoltage ( double *refV* )

[setARefVoltage\(double \\_refV\)](#): Sets the AREF voltage to external, (now only takes 3.3 or 5 as parameter) default is 5 when no AREF is used. When you want to use 3.3 AREF, put a wire between the AREF pin and the 3.3 V VCC pin. This increases accuracy

#### 2.1.2.17 void AcceleroMMA7361::setAveraging ( int *avg* )

[setAveraging\(int avg\)](#): Sets how many samples have to be averaged in getAccel default is 10.

#### 2.1.2.18 void AcceleroMMA7361::setOffSets ( int *xOffSet*, int *yOffSet*, int *zOffSet* )

[setOffSets\( int offSetX, int offSetY, int offSetZ\)](#): Sets the offset values for the x,y,z axis. The parameters are the offsets expressed in G-force (100 = 1 G) Offsets are added to the raw datafunctions

#### 2.1.2.19 void AcceleroMMA7361::setSensitivity ( boolean *sensi* )

setSensitivity sets the sensitivity to +/-6 G or +/-1.5 G by a boolean HIGH (1.5) or LOW (6)

#### 2.1.2.20 void AcceleroMMA7361::sleep ( )

sleep lets the device sleep (when device is sleeping already this does nothing)

#### 2.1.2.21 void AcceleroMMA7361::wake ( )

wake enables the device after sleep (when device is not sleeping this does nothing) there is a 2 ms delay due to enable time specifications by the datasheet

The documentation for this class was generated from the following files:

- /home/jeroen/.dropboxstorage/Dropbox/11-arduino/libraries/mma7361-library/AcceleroMMA7361/AcceleroMMA7
- /home/jeroen/.dropboxstorage/Dropbox/11-arduino/libraries/mma7361-library/AcceleroMMA7361/AcceleroMMA7

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