



IQS229EV01 module user guide (quick-start)

Single Channel Capacitive Proximity/Touch Controller for SAR Applications

Operation Characteristics

The IQS229 will work in standalone mode (STD – LED outputs) or streaming mode (STRM), depending on a resistor placement. By default the module will be configured in standalone mode.

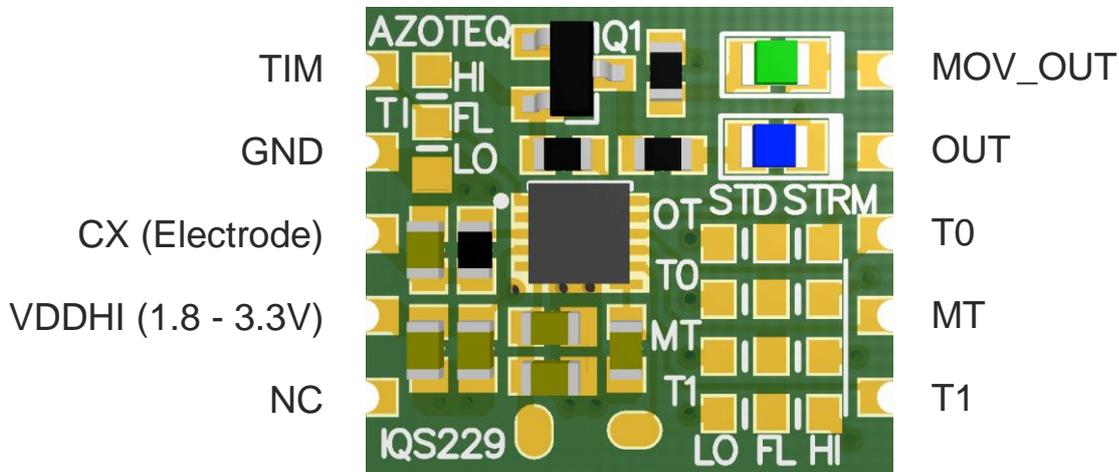
- “OUT” (BLUE) LED will indicate an activation (crossing of the threshold)
- “MOV_OUT” (GREEN) LED will indicate movement in small detectable amounts.

Integration

Start the integration of the IQS229 by wiring the following into the intended application:

1. GND
2. CX (Electrode – wire or copper pad)
3. VDDHI

On-board LEDs may be used for feedback, or the OUT and MOV_OUT pins may be taken to a microcontroller.



User Configurable Options

Four pins on the IQS229 are used for external configuration. Floating pins are the default configuration. The configuration is read at power-on or reset. To see how resistor straps are applied, see the next page.

Start off by choosing a threshold. T0 is used to set a large jump in threshold and T1 is used to set smaller offsets.

Next choose the preferred movement sensitivity by strapping MT.

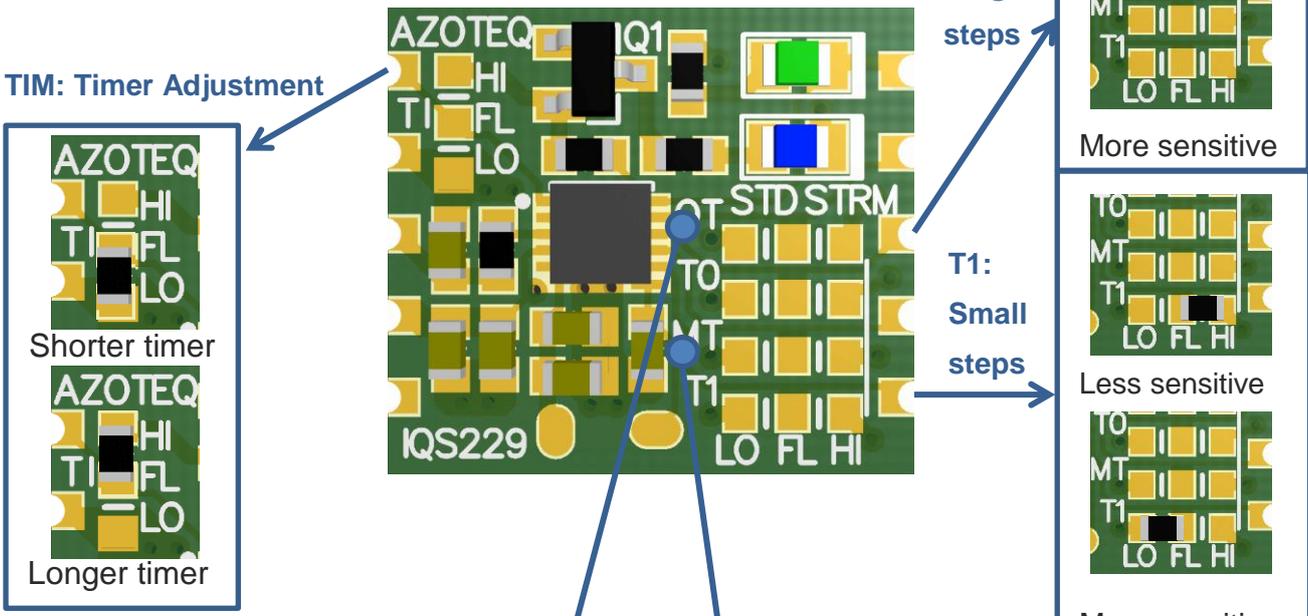
Then choose a no movement time-out. If no movement is detected in this time, the sensor will clear the activation. With each movement the IQS229 will reset the timer.

Threshold Level Selection								
L = LOGIC LOW, H = LOGIC HIGH, F = FLOAT								
T0, THR0 (pin 8)								
L	L	L	F	F	F	H	H	H
T1, THR1 (pin 6)								
L	F	H	L	F	H	L	F	H
Corresponding Threshold Level								
0	1	2	3	4	5	6	7	8
◀ More sensitive					Less sensitive ▶			



Using resistor strap options

Resistor straps are used to configure the device as shown below. It is recommended to use a 1MΩ resistor for this purpose. After power-up or reset the values will be read and each pin is written with the values that was read. This eliminates potential leakage current.



TIM (pin 1)	No Movement Time-out
Low	60sec
Float	3min
High	10min

OT/OUT Function

OT	STD	STRM
Standalone (default) 1MegΩ pull-down	1-Wire Streaming (debugging) 4.7kΩ	

MT MOV_THR (pin 7)	Movement Threshold
Low	More sensitive
Float	Default
High	Less sensitive

Please view the full IQS229 Module user guide for more details and reference schematic.