

TWI Isolator MOD_003

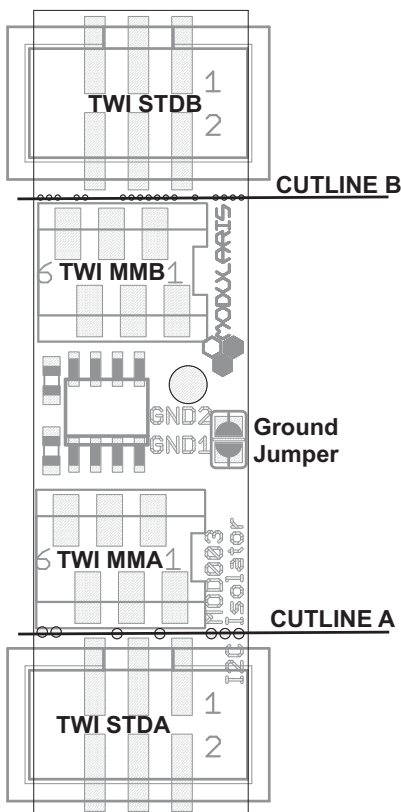
Preliminary

May 10, 2013

1 Features

- Galvanic separation for TWI bus
- Level shifter(3V0 to 5V5) capability
- Modularis TWI bus connectors
- Suitable for hot swap applications
- In-line mountable
- Cuttable PCB
- Supply voltage 3.0 V to 5.5 V
- 1000 kHz operation

2 Brief Description



The MOD_003 is the solution for galvanic separation and level shift applications for a TWI bus. Each side includes two different connectors. The outer connectors are standard 2.54 pitch flat ribbon cable pcb-connectors. The inner ones are Micromatch connectors, which are very compact and reliable in applications with vibrations, but with a reduced mating cycle rating than the standard pcb headers. If compact dimensions are preferred, the PCB is perforated to cut away the standard connectors. Due to the slim width of the module, it is in-line^a mountable e.g. using a heat shrink tube. Alternative mounting is enabled by a M2 screw hole. If needed, a solder jumper for connecting the ground potentials is included^b. Note that there are no pull-ups on board.

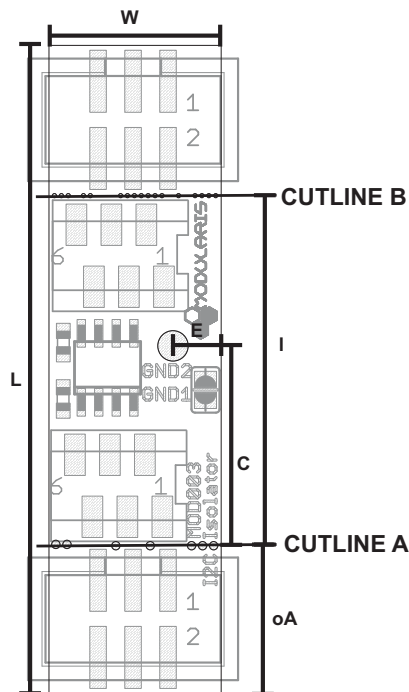
^ain-flat-ribbon-cable-line

^bClose this jumper only if you don't want to isolate the buses and your level-shifting setup has no other ground connection.

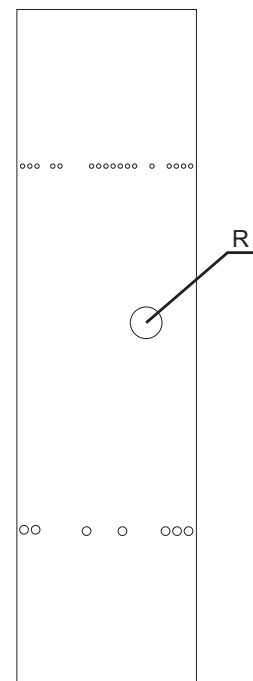
1: MOD_003 Overview

3 Mechanical Dimensions

Symbol	Unit	Value	Description
W	mm	12.5	Width of module's PCB
L	mm	47	(uncut) length of module's PCB
l	mm	25	cut length of module's PCB
R	mm	1.1	Radius of mounting hole, suitable for M2 screws
E	mm	3.5	Distance center of mounting hole to long edge of PCB
C	mm	14.5	Distance center of mounting hole to cutline A
oA	mm	10.7	Distance cutline A to next short edge of PCB



2: Topside



3: Dimension of Hole

4 Pin assignment

Pin assignment of each connector is according to the Modularis TWI-Connector standard. The four connectors are grouped in two pairs, corresponding to the two different electrical potential systems "A" and "B". Note side A is only I^2C compatible, while Side B is I^2C compliant. This means if one bus incorporates a device which does not fully conform to the I^2C Standard, connect this bus to side B of the MOD_003.

4.1 TWI_STDA and TWI MMA

1. SDAA
2. SCLA
3. Not connected
4. Not connected
5. GNDA
6. +VA

4.2 TWI_STDB and TWI MMB

1. SDAB
2. SCLB
3. Not connected
4. Not connected
5. GNDB
6. +VB

5 Support

For questions, innovations or any other support issue feel free to contact us:

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