Sensor Board Guide for VCNL36826S-SB

INTRODUCTION

The VCNL36826S sensor board is intended to be used in conjunction with Vishay's SensorXplorer demonstration kit, or as a standalone unit, to evaluate the capabilities of the VCNL36826S proximity sensor.

SensorXplorer™

The SensorXplorer (Fig. 1) is a demonstration kit designed to help evaluate Vishay's digital sensors featured on Vishay's sensor boards. These boards, along with their respective software modules, can be used to demonstrate and test each sensor's functionalities, allowing the user to quickly understand how various settings affect the sensor's results. The SensorXplorer board includes an USB to I^2C interface chip, a 3.3 V regulator, several indicator LEDs, as well as multiple GPIOs to control the functionality of each board and allow data to be read and displayed on a PC. To get an overview of available sensor boards, as well as to download the software modules and board design files, please visit: www.vishay.com/optoelectronics/SensorXplorer. Here you will also find a link next to each board showing its availability at each of our distributors.

Complete information about the SensorXplorer kit as well as all available sensor boards is available at www.vishay.com/optoelectronics/SensorXplorer. The same page also allows you to check inventory of SensorXplorer kits and Vishay sensor boards at our distributors.

The SensorXplorer installation guide is available for download from the following link: www.vishay.com/doc?84922

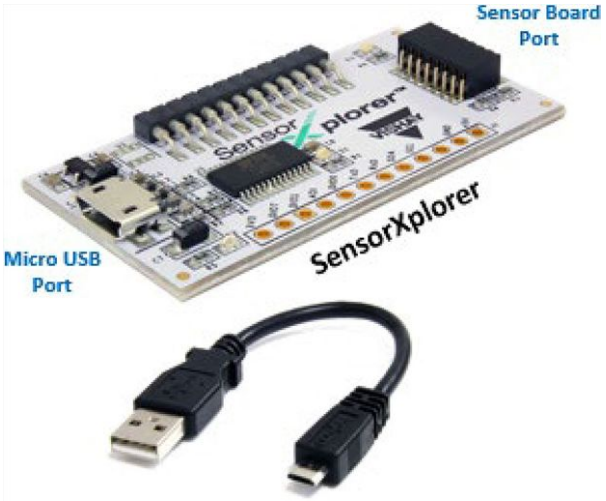


Fig. 1 - SensorXplorer

USING THE SENSOR BOARD WITH THE SensorXplorer

Following the instructions in the SensorXplorer installation guide, install the SensorXplorer software on your PC, then connect the SensorXplorer evaluation board to your PC and the Vishay sensor board. The respective demo board software module can then be downloaded from: www.vishay.com/landingpage/SensorXplorer/

Once the module is unzipped the software can be run without the need for further installation. You are now ready to explore the sensor and its different settings to see how they will work in your application.

For technical questions, contact: sensorstechsupport@vishay.com
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HOW TO USE THE DEMOSOFTWARE

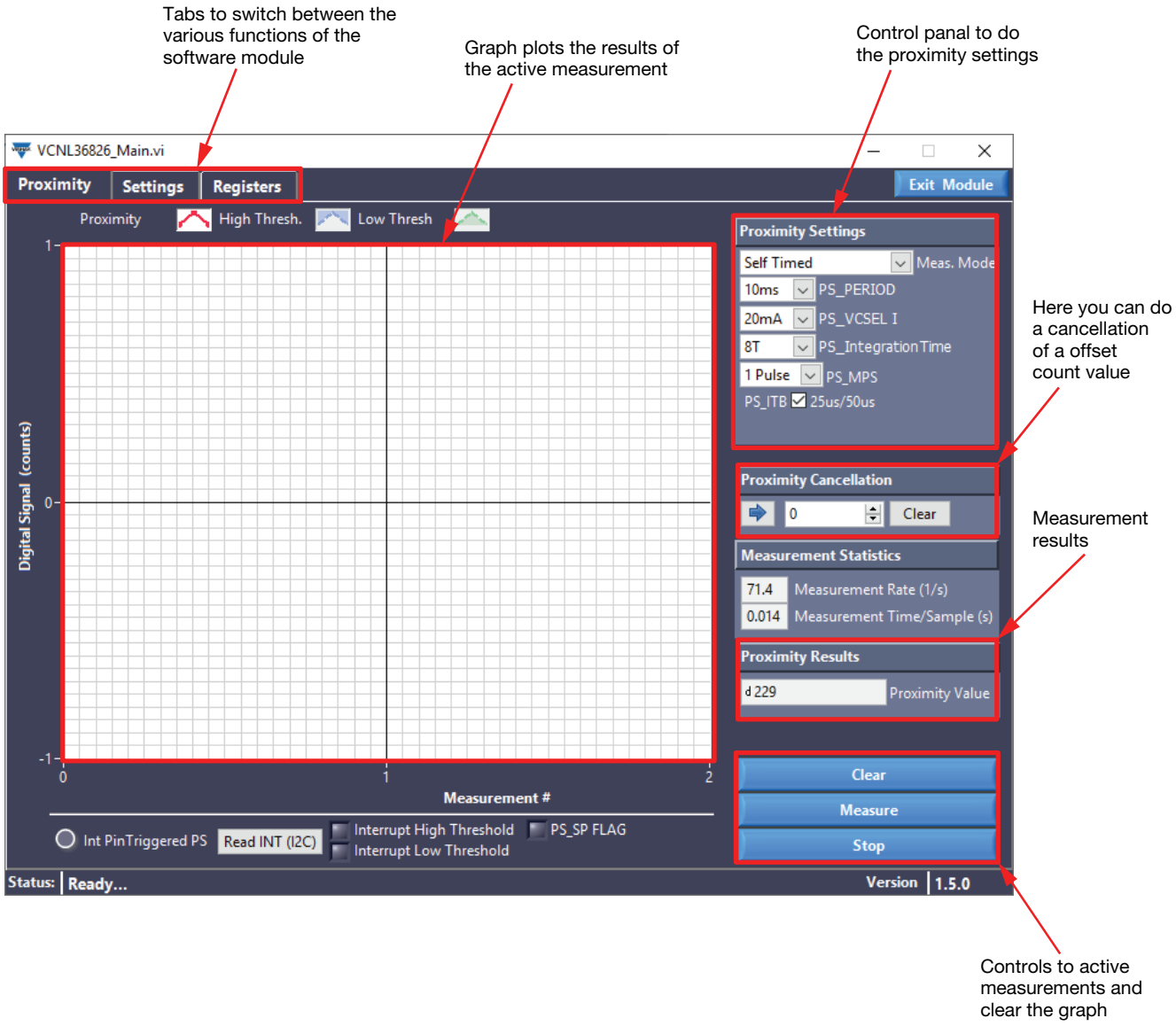


Fig. 2 - Demosoftware GUI

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USING THE SENSOR BOARD AS A STANDALONE UNIT

If you want to use the sensor board within your own application and with your own I^2C master, simply connect the board to a power supply (3.3 V, GND) and the I^2C lines (SDA, SCL) as shown in Fig. 3.

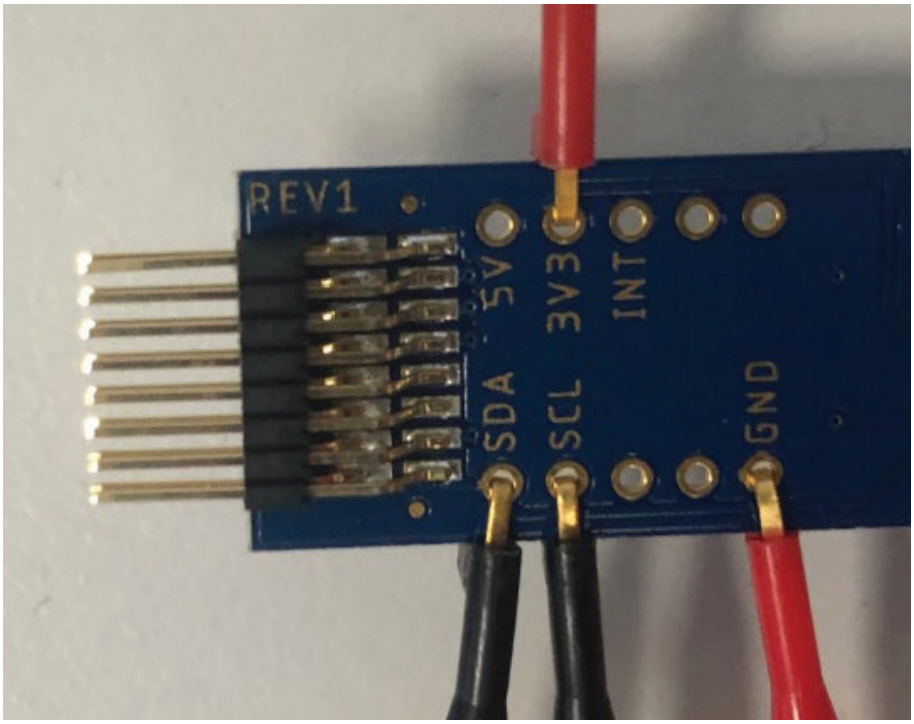
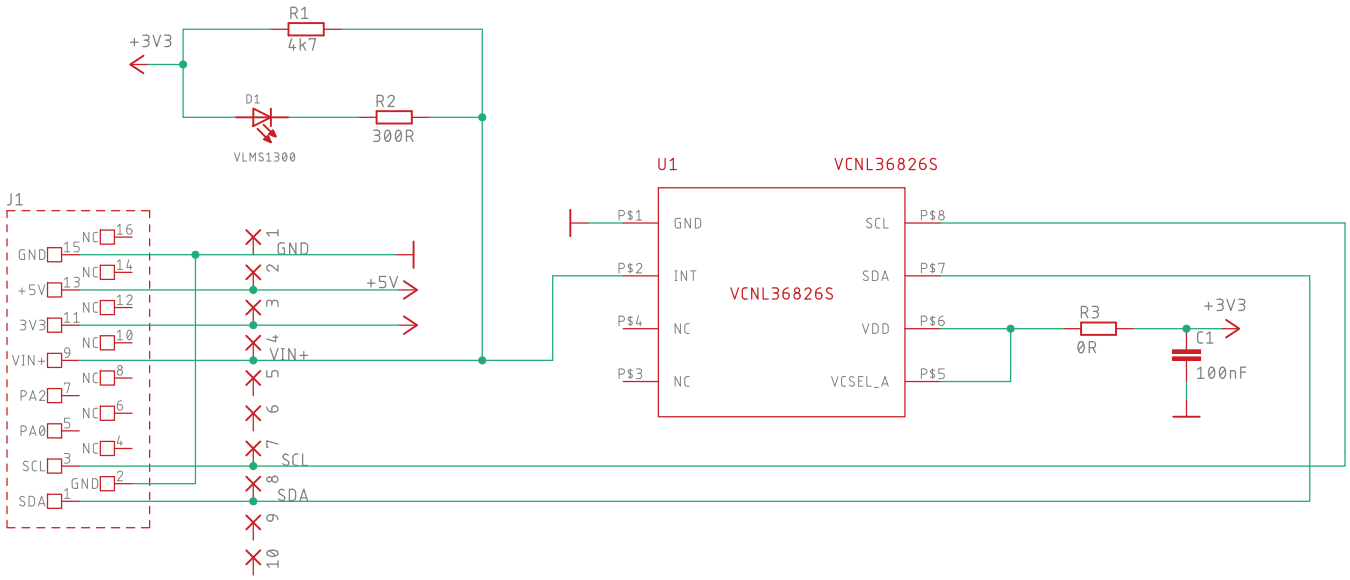


Fig. 3 - Connection of the Sensorboard (power supply and I^2C lines)

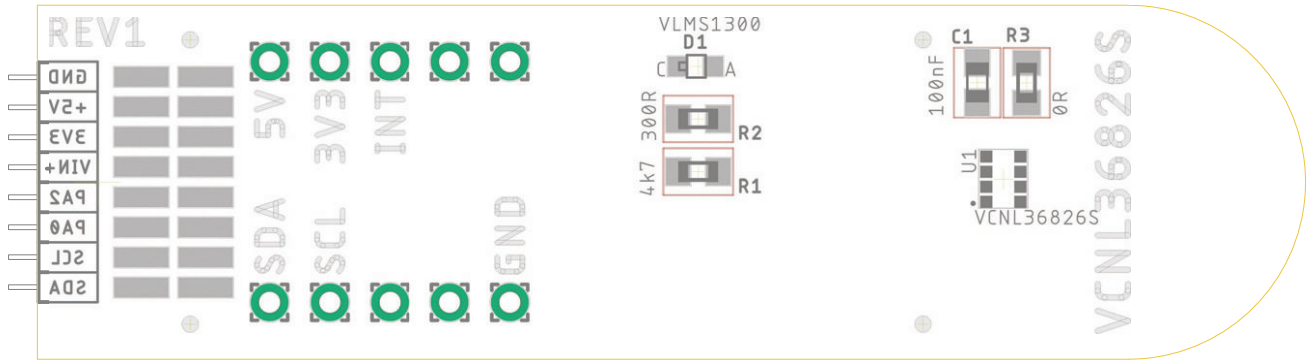
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SCHEMATIC OF THE VCNL36826S SENSOR BOARD



VCNL36826S sensor board, rev. 1.0

ASSEMBLY OF THE VCNL36826S SENSOR BOARD



Assembly top

BILL OF MATERIALS					
ITEM	QUANTITY	REFERENCE	COMPONENT CLASS	VALUE	PACKAGE
1	1	C1	Capacitor	100 nF	C0603
2	1	D1	LED	VLMS1300	VLMS1300
3	1	J1	Edge connector	2 x 8 pos.	SMD header strip
4	1	R1	Resistor	4.7 kΩ	R0603
5	1	R2	Resistor	300 Ω	R0603
6	1	R3	Resistor	0 Ω	R0603
7	1	U1	Sensor	VCNL36826S	SMD

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Global Electronic Components Distributor

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Vishay Intertechnology:

LTO100F33R00FTE3 MAL222551002E3 SMAJ10A-E3/61 SMCJ24CA-E3/57T SMCJ45CA-E3/57T VS-UFB230FA60 BFC233920473 CRCW0603100RJNEAIF IHLP4040DZER2R0M11 SIPQ32434BDN-T1E3 293D336X9025D2TE3 TR3C226K025C0425 IHLP3232CZER330M11 IHLP5050FDERR10M01 MFU0603FF00500P500 MMSZ4684-E3-08 SM6T39CAHM3_A/H SQJ138EP-T1_GE3 SQJA68EP-T1_GE3 1.5SMC36A-E3/57T 293D475X0025B2TE3 CRCW2010150KFKEF VO14642AABTR 298D107X06R3P2T 564R60GAS10 IHLP1616ABERR47M01 M63X103KB40 NTCALUG01T103FL V20PW15C-M3/I IRF644PBF-BE3