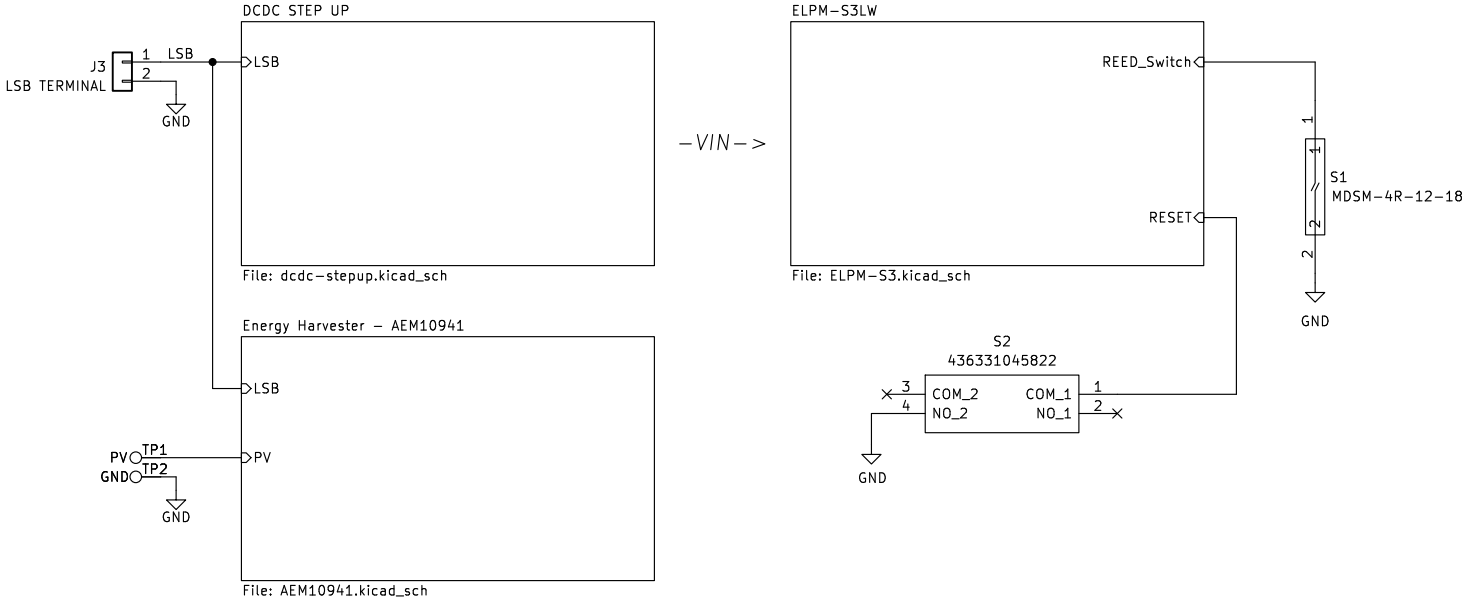
Smart Door/Window Sensor

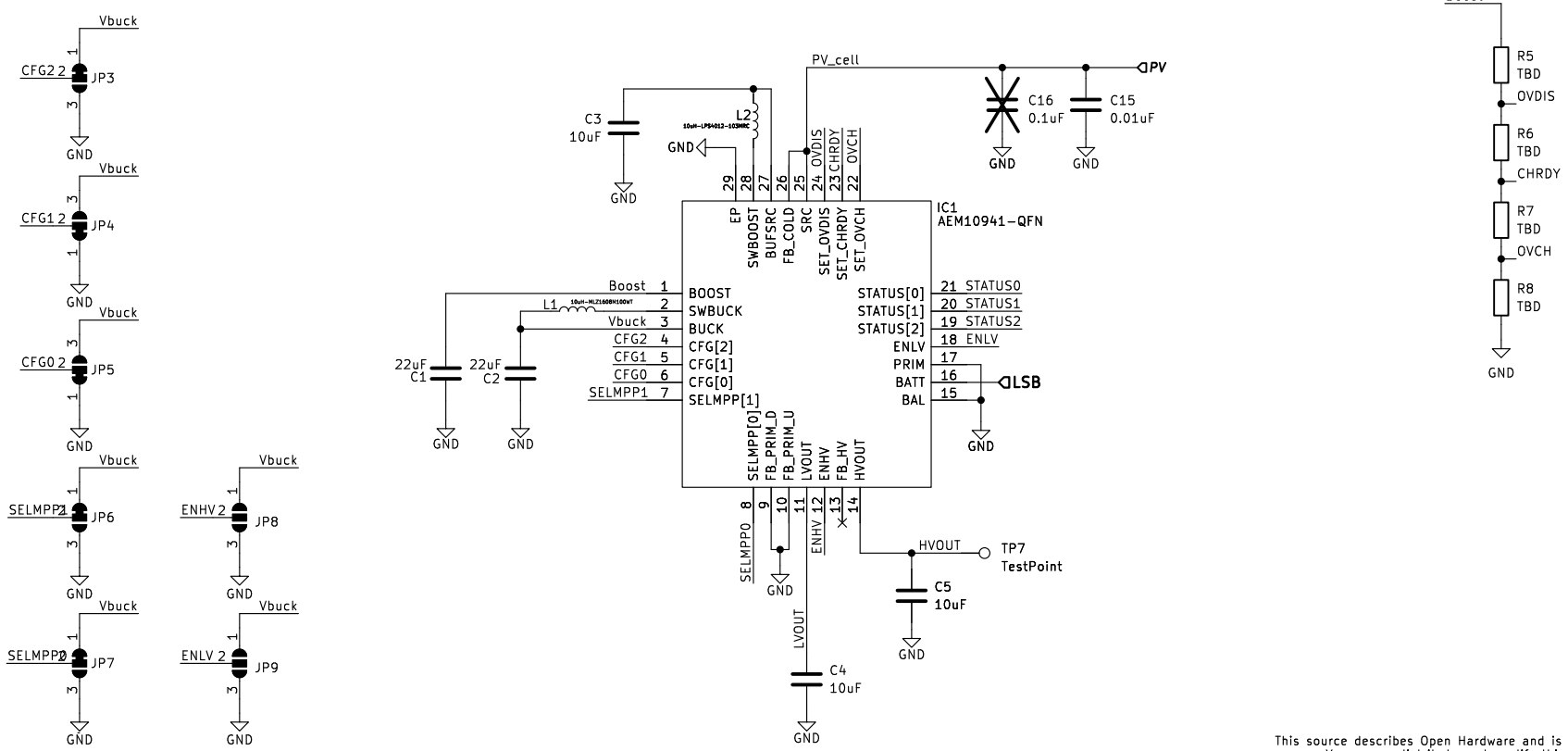
Energy harvesting version



Title: Smart Door/Window Sensor - EH version			OBJEX
OBJEX LABS			
Author: Salvatore Raccardi Rev Author: Salvatore Raccardi			
Sheet: / File: SmartDoorSensor_EH_v1.0.kicad_sch			OBJEXLABS.COM **Rev: 1.3**
Size: A4	Date: 2023-07-20	KiCad E.D.A. 8.0.2	Id: 1/5

AEM10941

Solar Energy Harvesting



ENLV	ENHV	LV output	HV output
1	1	Enabled	Enabled
1	0	Enabled	Disabled
0	1	Disabled	Enabled
0	0	Disabled	Disabled

SELMPP[1]	SELMPP[0]	Vmpp/Voc
0	0	70%
0	1	75%
1	0	85%
1	1	90%

Configuration pins			Storage element threshold voltages			LDOs output voltages		Typical use
CFG[2]	CFG[1]	CFG[0]	Vovch	Vchrdy	Vovdis	Vhv	Vlv	
1	1	1	4.12 V	3.67 V	3.60 V	3.3 V	1.8 V	Li-ion battery
1	1	0	4.12 V	4.04 V	3.60 V	3.3 V	1.8 V	Solid state battery
1	0	1	4.12 V	3.67 V	3.01 V	2.5 V	1.8 V	Li-ion/NiMH battery
1	0	0	2.70 V	2.30 V	2.20 V	1.8 V	1.2 V	Single-cell supercapacitor
0	1	1	4.50 V	3.67 V	2.80 V	2.5 V	1.8 V	Dual-cell supercapacitor
0	1	0	4.50 V	3.92 V	3.60 V	3.3 V	1.8 V	Dual-cell supercapacitor
0	0	1	3.63 V	3.10 V	2.80 V	2.5 V	1.8 V	LiFePO4 battery
0	0	0	Custom mode - Programmable through R1 to R6				1.8 V	

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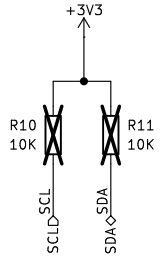
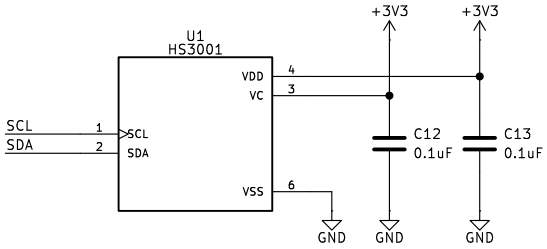
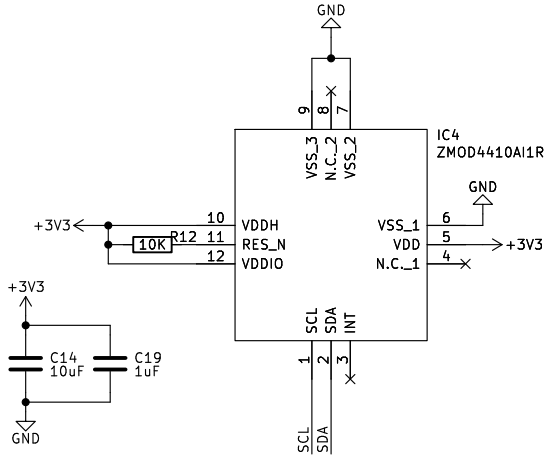
Sheet: /Energy Harvester – AEM10941/ File: AEM10941.kicad_sch		OBJEXLABS.COM **Rev: 1.3**
Size: A4	Date: 2023-07-20	KiCad E.D.A. 8.0.2	Id: 2/5

Renesas sensors







I2C ADDR 0x32

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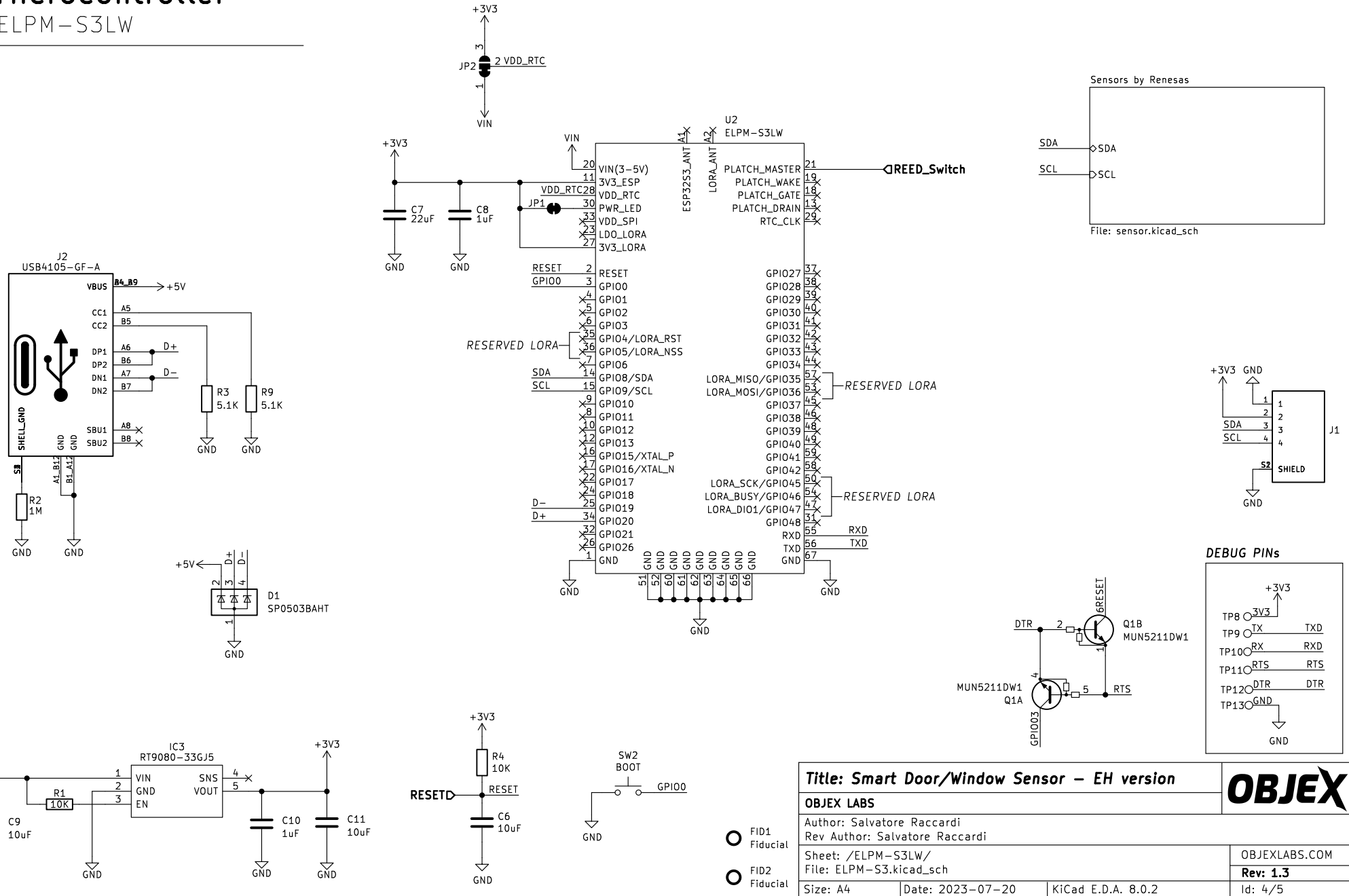
OBJEX LABS		
Author: Salvatore Raccardi Rev Author: Salvatore Raccardi		
Sheet: /ELPM-S3LW/Sensors by Renesas/ File: sensor.kicad_sch		OBJEXLABS.COM **Rev: 1.3**
Size: A4	Date: 2023-07-20	KiCad E.D.A. 8.0.2	Id: 3/5

Microcontroller

ELPM-S3LW



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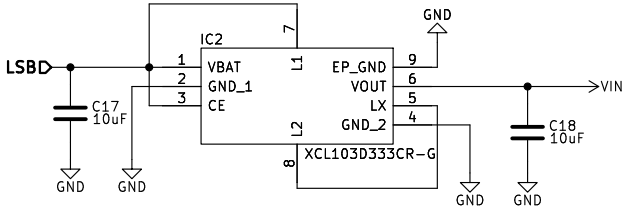
OBJEX LABS		
Author: Salvatore Raccardi Rev Author: Salvatore Raccardi		
Sheet: /ELPM-S3LW/ File: ELPM-S3.kicad_sch		OBJEXLABS.COM **Rev: 1.3**
Size: A4	Date: 2023-07-20	KiCad E.D.A. 8.0.2 — Id: 4/5

DCDC Step up

XCL103D333CR-G



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OBJEX LABS			
Author: Salvatore Raccardi Rev Author: Salvatore Raccardi			
Sheet: /DCDC STEP UP/ File: dcdc-stepup.kicad_sch			OBJEXLABS.COM **Rev: 1.3**
Size: A4	Date: 2023-07-20	KiCad E.D.A. 8.0.2	Id: 5/5