

DEXT

user manual v0.1

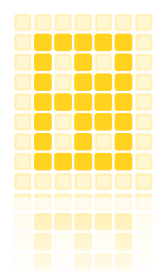
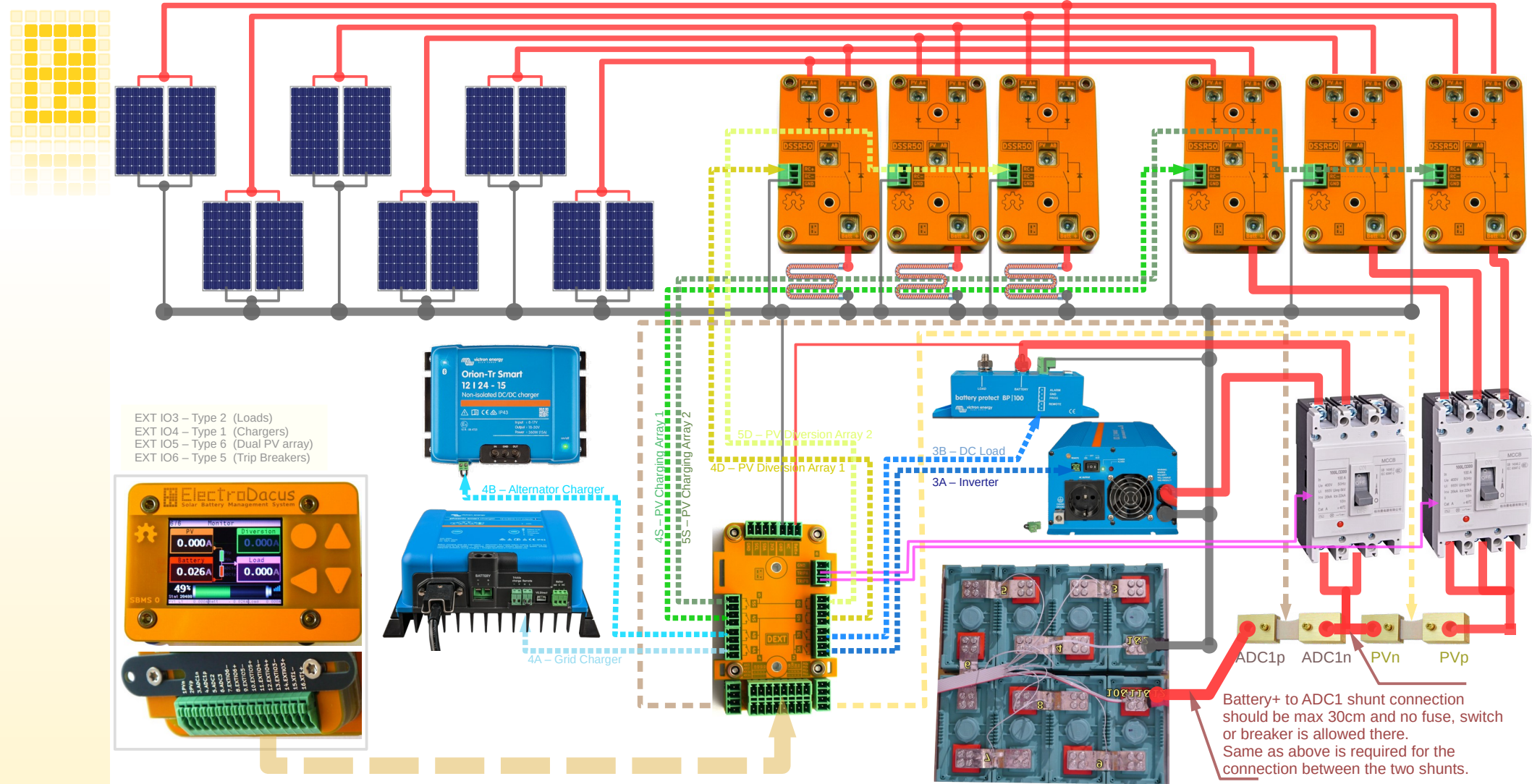
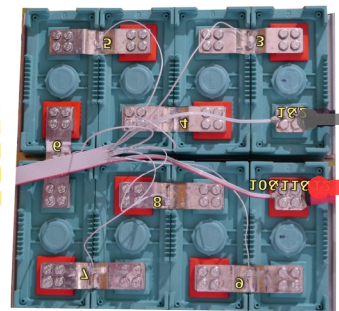
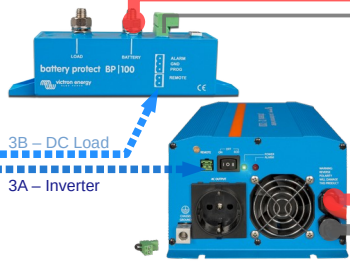
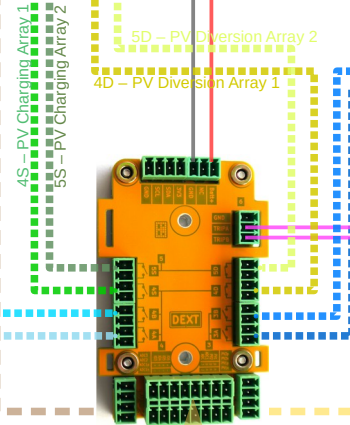
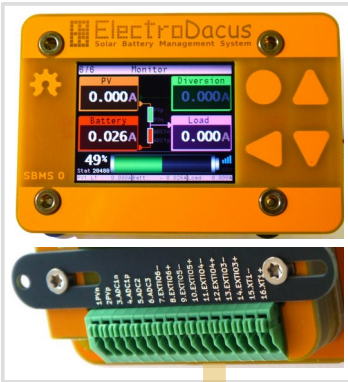


Table of contents

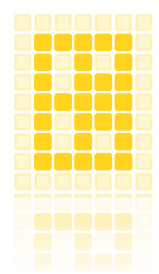
<i>Simplified diagram</i>	3
<i>Specifications</i>	4
<i>1. DEXT pinout</i>	5
<i>2. DEXT Mechanical installation</i>	6
<i>Schematic</i>	7
<i>Links to HW files</i>	8



EXT IO3 – Type 2 (Loads)
 EXT IO4 – Type 1 (Chargers)
 EXT IO5 – Type 6 (Dual PV array)
 EXT IO6 – Type 5 (Trip Breakers)



Battery+ to ADC1 shunt connection should be max 30cm and no fuse, switch or breaker is allowed there. Same as above is required for the connection between the two shunts.

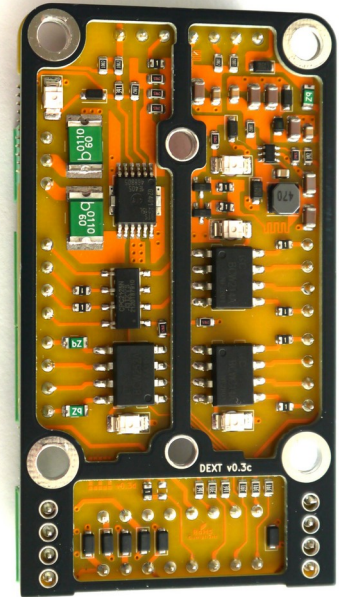
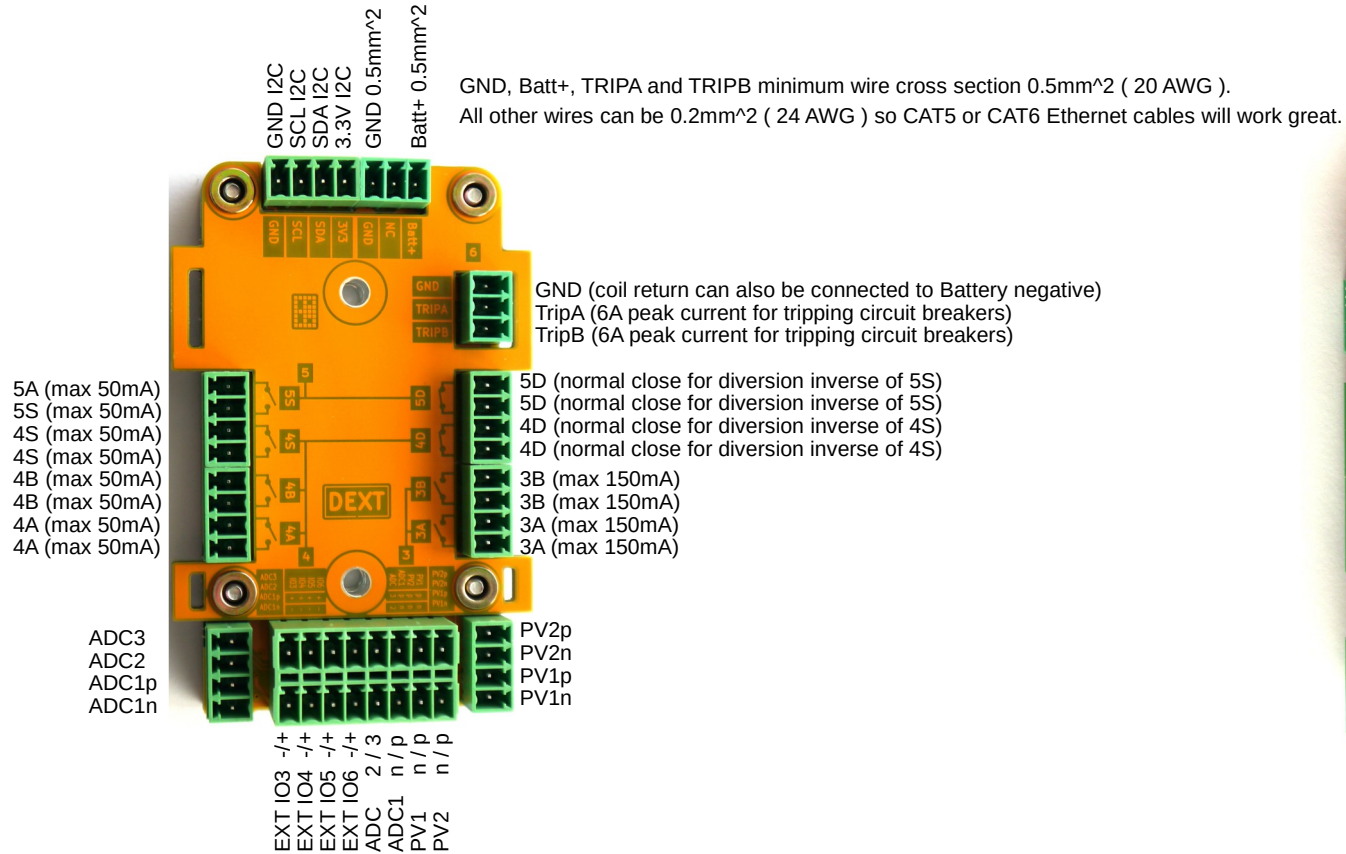


Specification

<i>DEXT</i>	<i>EXT IO extender for SBMS0 / SBMS2</i>
<i>Max circuit breaker trip current TRIPA, TRIPB</i>	<i>6A peak trip (each channel double if you parallel them)</i>
<i>Max contactor current TRIPA, TRIPB</i>	<i>2A continues (each channel double if you parallel them)</i>
<i>Max current 3A,3B</i>	<i>150mA</i>
<i>Max current 4A,4B,4S,5S</i>	<i>50mA</i>
<i>Max current 4D,5D (reverse logic for diversion)</i>	<i>50mA</i>
<i>Max output current 3.3V (I2C supply)</i>	<i>100mA</i>
<i>Connectors max torque</i>	<i>0.3Nm (2.65 in-lb)</i>
<i>Battery supply</i>	<i>8V to 32V</i>
<i>Dimensions</i>	<i>90 x 50 x 39 mm</i>

1.1 DEXT

DEXT allows SBMS0 / SBMS2 to control multiple charge sources and Loads as well as divert PV energy to things like heating elements. It also allow EXT IO6 to control one or two trip circuit breaker's or contactor for secondary level protection. All 8 Solid State Relay outputs are optically isolated from each other and from the input's 3A,3B,4A,4B,4S,5S,4D,5D



2 DEXT Mechanical installation.

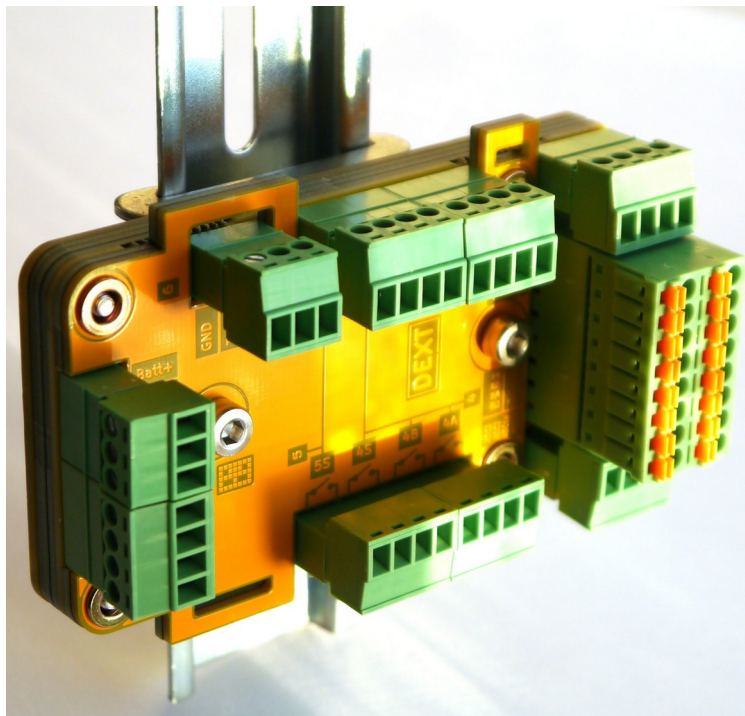
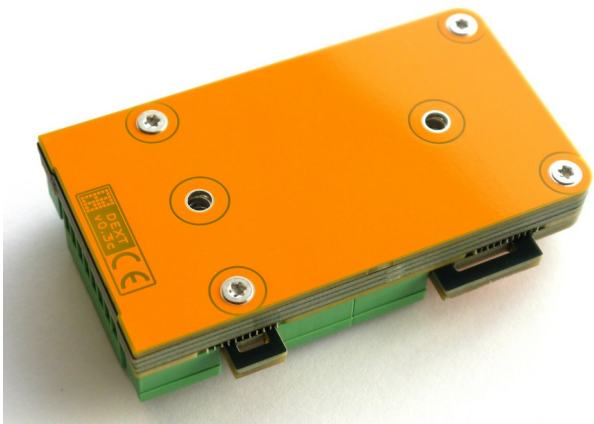
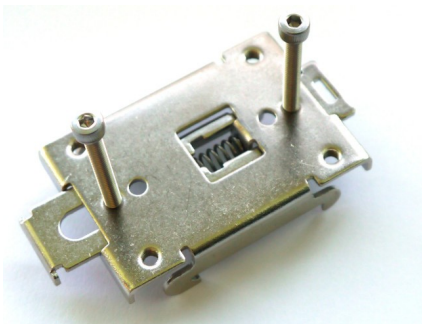
Size of the DEXT v03c is 90x50x39mm.

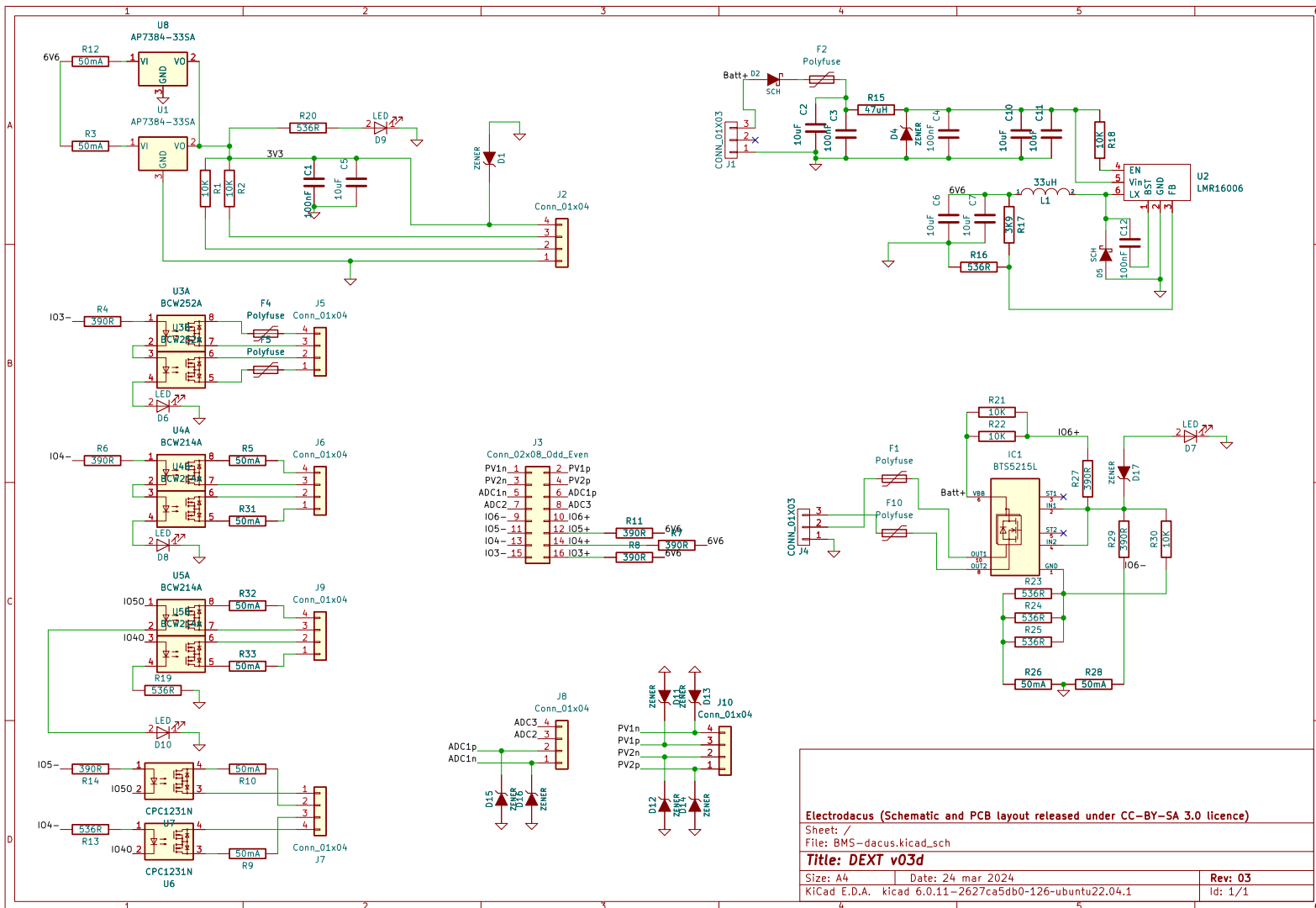
The metal bracket for installing the DEXT on 35mm DIN rail is not included. Just search for “SSR bracket 35mm DIN rail”

You will also need two M4 bolts with the ones in below photo being 15mm long.

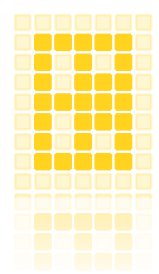
Of course you do not need to use DIN rail and bracket and you can just use M4 or #8 screws to install on any flat surface.

Distance between the two mounting screws is 47.5mm





Electrodacus (Schematic and PCB layout released under CC-BY-SA 3.0 licence)	
Sheet: /	
File: BMS-dacus.kicad_sch	
Title: DEXT v03d	
Size: A4	Date: 24 mar 2024
KiCad E.D.A. kicad 6.0.11-2627ca5db0-126-ubuntu22.04.1	Rev: 03
	Id: 1/1



HW files for DEXT (soon to be available).

HW :