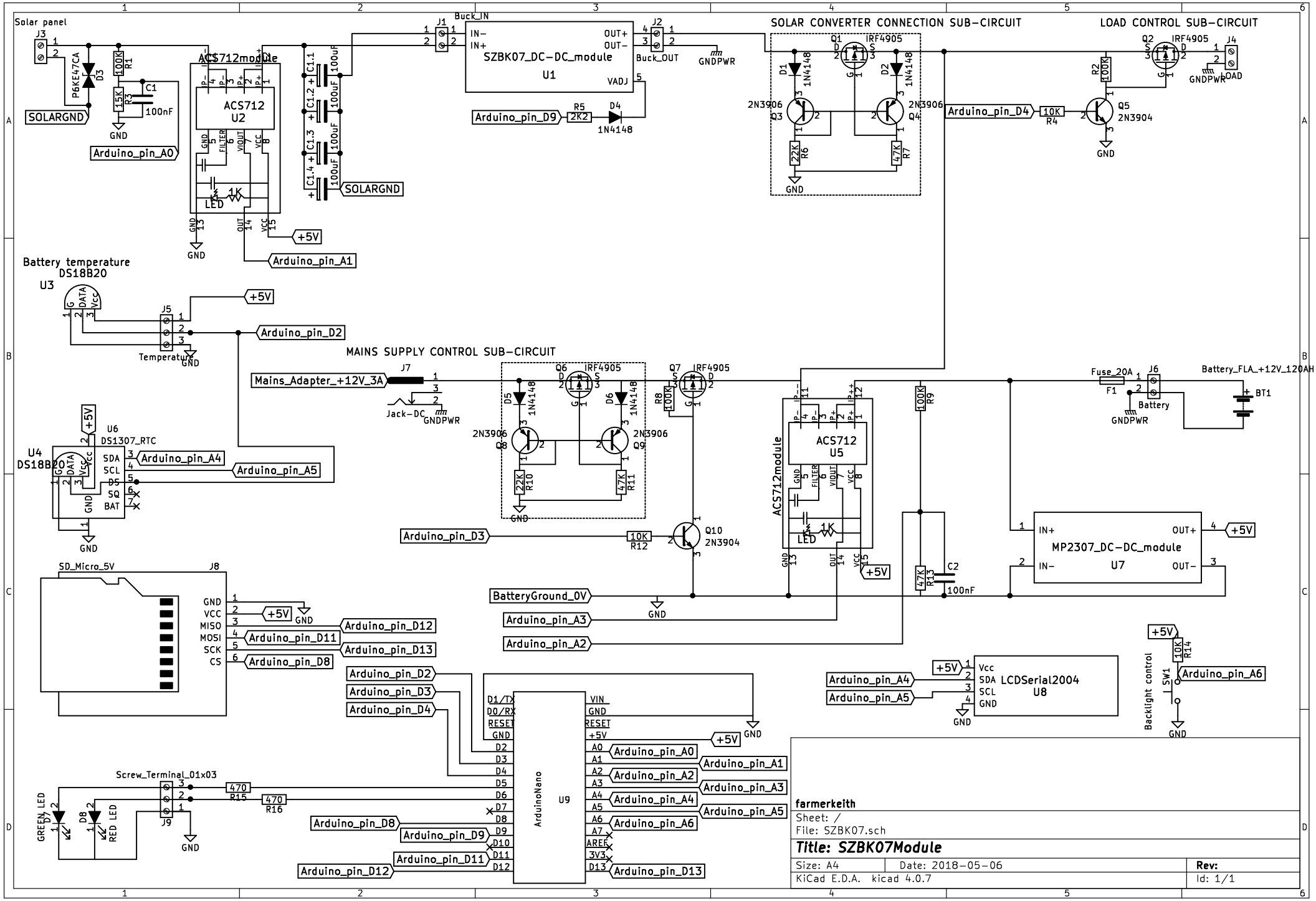
Solar panel
J3
P6KE47CA
D3
SOLARGND
R1 100K
R3 15K
C1 100nF
GND
ACS712module
ACS712
U2
Arduino_pin_A0
LED 1K
+5V
Arduino_pin_A1
C1.1 100uF
C1.2 100uF
C1.3 100uF
C1.4 100uF
SOLARGND
Buck_IN
J1
IN−
IN+
SZBK07_DC−DC_module
U1
OUT+
OUT−
VADJ
J2
Buck_OUT
GNDPWR
Arduino_pin_D9
R5 2K2
D4 1N4148
SOLAR CONVERTER CONNECTION SUB−CIRCUIT
Q1 IRF4905
D1 1N4148
D2 1N4148
Q3 2N3906
Q4 2N3906
R6 22K
R7 47K
LOAD CONTROL SUB−CIRCUIT
Q2 IRF4905
J4
LOAD
R2 100K
Arduino_pin_D4
R4 10K
Q5 2N3904
Battery temperature
DS18B20
U3
J5
Temperature
Arduino_pin_D2
MAINS SUPPLY CONTROL SUB−CIRCUIT
J7
Mains_Adapter_+12V_3A
Jack−DC
Q6 IRF4905
Q7 IRF4905
D5 1N4148
D6 1N4148
Q8 2N3906
Q9 2N3906
R8 100K
R10 22K
R11 47K
Arduino_pin_D3
R12 10K
Q10 2N3904
ACS712module
ACS712
U5
LED 1K
R9 100K
R13 47K
C2 100nF
Fuse_20A
F1
J6
Battery
Battery_FLA_+12V_120AH
BT1
U4
DS18B20
U6
DS1307_RTC
SDA
SCL
D5
SQ
BAT
Arduino_pin_A4
Arduino_pin_A5
MP2307_DC−DC_module
U7
IN+
IN−
OUT+
OUT−
BatteryGround_0V
Arduino_pin_A3
Arduino_pin_A2
SD_Micro_5V
J8
GND
VCC
MISO
MOSI
SCK
CS
Arduino_pin_D12
Arduino_pin_D11
Arduino_pin_D13
Arduino_pin_D8
LCDSerial2004
U8
Vcc
SDA
SCL
GND
Backlight control
SW1
R14 10K
Arduino_pin_A6
Screw_Terminal_01x03
J9
GREEN LED
D7
RED LED
D8
R15 470
R16 470
ArduinoNano
U9
D1/TX
D0/RX
RESET
GND
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
VIN
GND
RESET
+5V
A0
A1
A2
A3
A4
A5
A6
A7
AREF
3V3
D13
farmerkeith
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Size: A4
Date: 2018−05−06
Rev:
KiCad E.D.A. kicad 4.0.7
Id: 1/1