BOM Electronics LibreSolarBox V.2 mobile

Partname	UPK-PartNo. Quantity	Description	Supplier
housing			
All UPKlib boxset parts		External Project	EPS1
batterymount 1c	1	Holder for LiFePo4-cells	3DP
bms-case1c	1	Housing for BMS pcb	3DP
mppt-2420lc-housing	1	Hammond Mfg 1591XXCFL housing	SP
Solarcharger:			
LibreSolar_MPPT-Charger_20A	1	MPPT-2420 LC, External Project	EPS2
BMS:			
LibreSolar_BMS-5s	1	BMS-8s50 IC, External Project	EPS3
Gateway:			
RPi-Can	1	External Project, optional	EPS4
Buck-Converter:			
Buck-Converter-12-5	1	Buck-Converter from 12V to 5V, optional	SP
Interface:			
Display	1	i2c character display or - e-paper display+cable, Optional	SP
DC_Out_Plug1	1	DC output plugs (12V car plug, 2x)	SP
USB_adapter	1	USB 5V outlet plug w/ integr. 12V→5V stepdown	SP
PV_in_MC4	2	Pair of MC4 Solar input plugs, eg. Weidmüller PV Stick	SP

SW_Push_LED	1	ON/OFF switch, pushbutton, integrated LED	SP
CAN output plug	2	RJ45 jack, optional	SP
Internal Connections and Hardware:			
Power wire	2	Power wire (6mm^2, red+blue, each 1m)	SP
Balancer cable	1	Balancing wire for Cells (2mm^2, 2m)	SP
Wire - thick - red & blue	10	to all main connection from battery to MPPT & BMS 0.25m (5 Red color & 5 Blue colour)	SP
Wire - thin - blue	6	to connect BMS to battery to check Battery status 0.4mx6 (blue colour)	SP
Wire - very thin - black	3	to connect power button to MPPT, 0.25mx2, 0.4mx1	SP
Cat5 cable	3	CAN communication wire (ethernet cable, 0,25m), Optional	SP
F1 – Fuse	1	20A	SP
wire connectors	1		SP
Battery Cell	4	CALB 72 Ah CAM, LiFePo4	SP
Battery Cell connector plates	3	for CAM72, copper	SP
Battery Cell connector screw	8	M8x10, DIN 912	SP
RasPi - CAN to wifi connection	1		SP
Screw - MPPT/BMS connection	10	5x2	SP
Screw - MPPT/BMS installation	8	4x2	SP
Ferrules	1	Set with 6mm^2 and 2mm^2	SP
Cable lugs	1	Set with flat- and ring-lugs of different hole-sizes (8, 6, 5mm)	SP

Supplier	Id	URL
Std.-Part	SP	Standard-Part, widely available from several sources
Makers-Lab	ML	http:makers-lab.de
3d-Printable	3DP	3d-printable part, see project sources
external project	EPS	Sources from an external project
external project	EPS1	https://github.com/case06/upklib_v2/tree/master/boxset
external project	EPS2	https://github.com/LibreSolar/mppt-2420-lc
external project	EPS3	https://github.com/LibreSolar/bms-8s50-ic
external project	EPS4	https://github.com/LibreSolar/rpi-can