NOTES:

1. GRID SIZE = 1.27MM
2. THICK ORANGE CABLES INDICATE 35MM2 CABLING ON CAR

REVISION HISTORY:

v1. INITIAL RELEASE

v2. EXAMPLE REVISION WITH ADDITION INFO

FIREWALL

REAR MONOCOQUE

DEVICE – RADIATOR FAN
FAN

DEVICE – BRAKE LIGHT
BRAKE LIGHT

DEVICE – CURRENT SENSOR
CUR_SEN

DEVICE – INVERTER
J1
J2
CASING
PHASE.A
PHASE.B
PHASE.C
DC+
DC–

DEVICE – MOTOR
PHASE.U
PHASE.V
PHASE.W
RESOLVER
TEMP

LOOM – REAR BOX
REAR BOX I/O
HV1
HV2
HV3
HV4
TSMP.HV+
TSMP.HV–

LOOM – SIDE PANEL
TSMP HV–
TSMP HV+
SIDE PANEL

LVS.MAIN.SWITCHED.EXCD
LVS.MAIN.EXC

LOOM – REAR
FAN
BRAKE LIGHT
BSPD CT
INVERTER J1
INVERTER J2
INVERTER CASING
MOTOR RESOLVER
MOTOR TEMP
REAR BOX
SIDEPANEL
FIREWALL
PUMP 1
PUMP 2
PDM A
PDM B
ACCUMULATOR
GND BOX

FINISH HV WIRES

DEVICE – PUMP1
PUMP

DEVICE – PUMP2
PUMP

DEVICE – PDM
A
B
C

LOOM – ACCUMULATOR
CAR I/O
CHARGER I/O
DC.+
DC.–

DEVICE – GROUND BOX
GND BOX
BATT GND

F?
10A

BATT?
LV BATTERY

Check complete shutdown loop

LOOM – FRONT
FIREWALL
ROLL HOOP TSAL
ROLL HOOP SHUTDOWN
PEDAL BOX I/O
INERTIA SW
COCKPIT E–STOP
UMBILICAL

LOOM – ROLL HOOP
TSAL
SHUTDOWN
E–STOP LHS
E–STOP RHS
TSAL UNIT

DEVICE – E–STOP – LHS
E–STOP

DEVICE – E–STOP – RHS
E–STOP

DEVICE – TSAL
TSAL I/O

LOOM – PEDAL BOX
PEDAL BOX I/O
APPS

DEVICE – APPS
APPS

DEVICE – BPS – FRONT
BPS

DEVICE – BPS – REAR
BPS

DEVICE – BOTS
BOTS

DEVICE – SAGL
SAGL

DEVICE – BSPD
BSPD

LOOM – DASH BOX
DASH BOX I/O
DASHBOARD

DEVICE – DASHBOARD

DASH BOX I/O
DASH LEDS

DEVICE – E–STOP – COCKPIT
E–STOP

DEVICE – INERTIA SWITCH
INERTIA SWITCH

LOOM – CHARGING CART

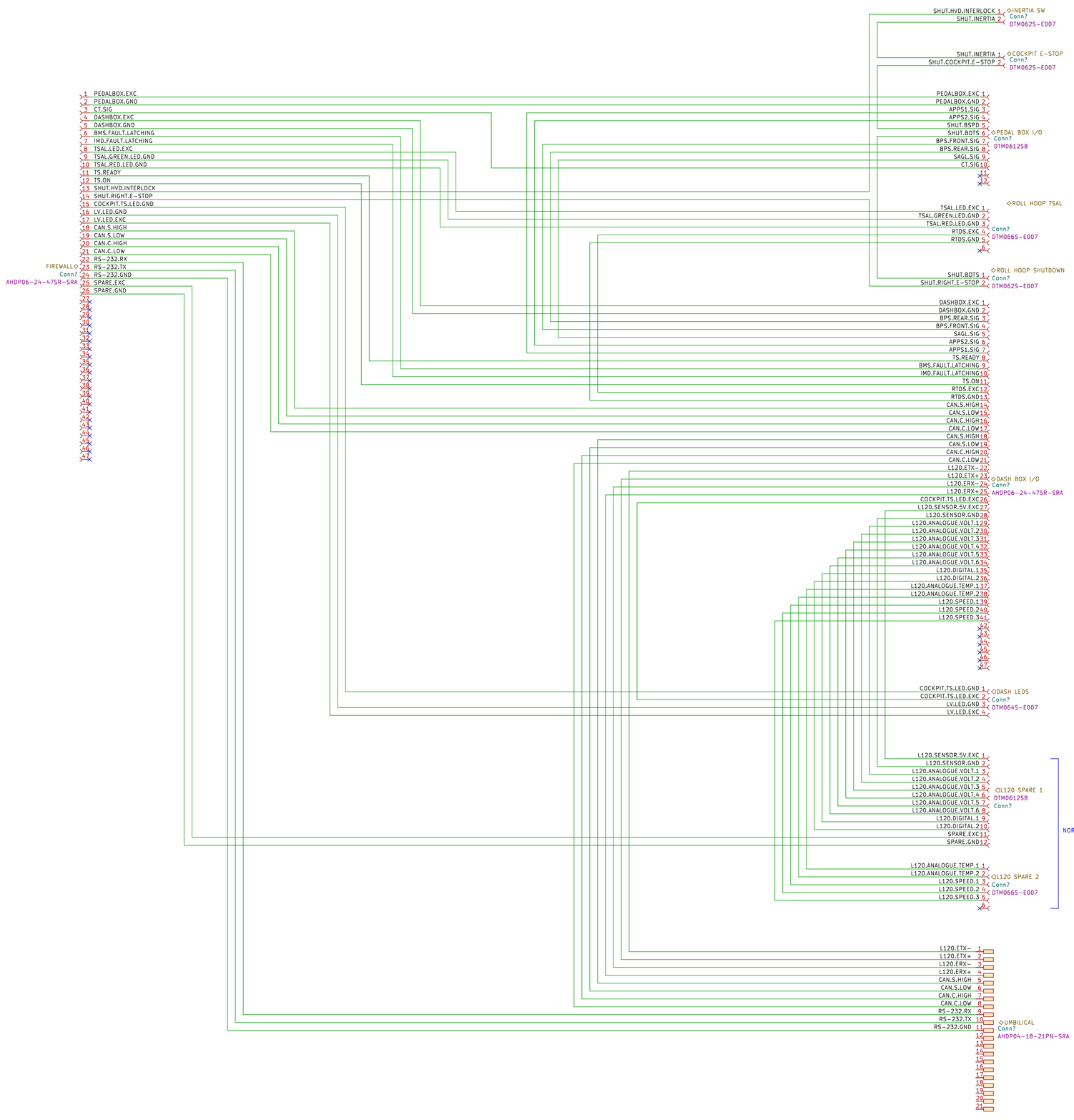
ACRONYMS

PINOUTS

Sheet: /
File: StagX.kicad_sch

Title: STAG X – TOP LEVEL

Size: A3	Date:	Rev:
KiCad E.D.A. kicad 7.0.10		Id: 1/33



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File: loom-front.kicad_sch	
Title: LOOM - FRONT	
Size: A2	Date:
KiCad E.D.A. kicad 7.0.10	Id: 2/33

Rev:

FIREWALL
Conn?
AHDP04-24-47PR-SRA

1 PEDALBOX.EXC
2 PEDALBOX.GND
3 CT.SIG
4 DASHBOX.EXC
5 DASHBOX.GND
6 BMS.FAULT.LATCHING
7 IMD.FAULT.LATCHING
8 TSAL.LED.EXC
9 TSAL.GREEN.LED.GND
10 TSAL.RED.LED.GND
11 TS.READY
12 TS.ON
13 SHUT.HVD.INTERLOCK
14 SHUT.RIGHT.E-STOP
15 COCKPIT.TS.LED.GND
16 LV.LED.GND
17 LV.LED.EXC
18 CAN.S.HIGH
19 CAN.S.LOW
20 CAN.C.HIGH
21 CAN.C.LOW
22 RS-232.RX
23 RS-232.TX
24 RS-232.GND
25 SPARE.EXC
26 SPARE.GND

RS232 GND

SHUTDOWN LOOP IS MISSING

INVERTER J1
Conn?
776164-1

1
2 MOTOR.TEMP.GND
3
4
5
6
7
8
9
10
11 CAN.C.LOW
12 RS-232.TX
13
14 MOTOR.TEMP.EXC
15 BSPD.CUR_SEN.GND
16
17
18
19
20
21
22
23
24 MOTOR.TEMP.SIG
25
26 BSPD.CUR_SEN.EXC
27
28
29
30
31
32
33 CAN.C.HIGH
34
35 RS-232.RX

R? 3k

Conn?
770680-1

INVERTER J2
1
2
3 RESOLVER.GND
4 RESOLVER.COS+
5
6 INV.GND
7 INV.CLOSE.+AIR
8
9
10
11 RESOLVER.SIN+
12 RESOLVER.COS-
13
14 INV.GND
15
16
17 RESOLVER.EXC
18 RESOLVER.SIN-
19 GND Resolver shield
20
21 INV.CLOSE.PCHG
22
23 INV.EXC

CONN?
CASING
INVERTER CASING

RING TERMINAL
ON INVERTER

MOTOR RESOLVER
Conn?
DTM06S-E007

1 RESOLVER.EXC
2 RESOLVER.GND
3 RESOLVER.COS+
4 RESOLVER.COS-
5 RESOLVER.SIN+
6 RESOLVER.SIN-

MOTOR TEMP
Conn?
DTM06S-E007

1 MOTOR.CASING.GND
2 MOTOR.TEMP.SIG
3 MOTOR.TEMP.GND

FAN
Conn?
DTM06S-E007

1 FAN.EXC
2 FAN.GND

BRAKE LIGHT
Conn?
DTM06S-E007

1 BRAKE.LIGHT.EXC
2 BRAKE.LIGHT.GND

PUMP 1
Conn?
DTM06S-E007

1 PUMP1.EXC
2 PUMP1.GND

PUMP 2
Conn?
DTM06S-E007

1 PUMP2.EXC
2 PUMP2.GND

ACCUMULATOR.GND 1
ACCUMULATOR.GND 2
ISOLATOR.EXC 3
BMS.EXC 4
IMD.EXC 5
TSAC.HVS.EXC 6
TSAC.HVS.GND 7
TS.DETECTED 8
CAN.S.HIGH 9
CAN.S.LOW 10
CAN.S.HIGH 11
CAN.S.LOW 12
SHUT.TRC 13
SHUT.DISCHARGE 14
CHASSIS.GND 15
IMD.OK 16
TS.READY 17
TS.ON 18
INV.CLOSE.+AIR 19
INV.CLOSE.PCHG 20
+AIR.INTENDED.ON 21
-AIR.INTENDED.ON 22
PCHG.INTENDED.ON 23
PCHG.AUX.EXC 24
PCHG.AUX.GND 25
-AIR.AUX.EXC 26
-AIR.AUX.GND 27
+AIR.AUX.EXC 28
+AIR.AUX.GND 29
BMS.DISCHARGE.ENABLE 30
BMS.FAULT 31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

ACCUMULATOR
Conn?
AHDP06-24-47SR-SRA

TSAL.EXC 1
TSAL.GND 2
-AIR.AUX.EXC 3
+AIR.AUX.EXC 4
PCHG.AUX.EXC 5
-AIR.AUX.GND 6
+AIR.AUX.GND 7
PCHG.AUX.GND 8
-AIR.INTENDED.ON 9
+AIR.INTENDED.ON 10
PCHG.INTENDED.ON 11
TSAL.RESET- 12
TSAL.RESET+ 13
TSAL.LED.EXC 14
TSAL.GREEN.LED.GND 15
TSAL.RED.LED.GND 16
COCKPIT.TS.LED.GND 17
TS.DETECTED 18
TSAC.HVS.EXC 19
TSAC.HVS.GND 20
IMD.FAULT.LATCHING 21
BMS.FAULT.LATCHING 22
LATCHING.RESET+ 23
LATCHING.RESET- 24
BMS.DISCHARGE.ENABLE 25
BMS.FAULT 26
IMD.OK 27
LATCHING.EXC 28
LATCHING.GND 29
BSPD.CUR_SEN.EXC 30
BSPD.CUR_SEN.SIG 31
BSPD.CUR_SEN.GND 32
SHUT.TSMS 33
SHUT.HVD.INTERLOCK 34
SHUT.DISCHARGE 35
SHUT.GND 36
37
38
39
40
41
42
43
44
45
46
47

REAR BOX
Conn?
AHDP06-24-47SR-SRA

SHUT.RIGHT.E-STOP 1
SHUT.TSMS 2
SHUT.TSAC.INTERLOCK 3
SIDE-PANEL.GND 4
TSAL.RESET+ 5
TSAL.RESET- 6
LATCHING.RESET- 7
LATCHING.RESET+ 8
9
10
11
12

SIDEPANEL
Conn?
DTM06125B

DASHBOX.EXC 1 ..... OUT 8,9
PEDALBOX.EXC 2 ..... OUT 8,10
SPARE.EXC 3 ..... OUT 8,11
4
5
6
7
8
CAN.S.LOW 9
CAN.S.HIGH 10
ISOLATOR.EXC 11 ..... OUT 8,12
BMS.EXC 12 ..... OUT 8,13
IMD.EXC 13 ..... OUT 8,14
LATCHING.EXC 14 ..... OUT 8,15
LV.LED.EXC 15 ..... OUT 8,16
16
17
18
19
20
21
22
23
24
PDM.GND 25
PDM.GND 26

PDM A
Conn?
Autosport #65040

TSAL.EXC 1 ..... OUT 20.1
FAN.EXC 2 ..... OUT 20.2
BRAKE.LIGHT.EXC 3 ..... OUT 20.3
PUMP1.EXC 4 ..... OUT 20.4
PUMP2.EXC 5 ..... OUT 20.5
INV.EXC 6 ..... OUT 20.6
7 ..... SPARE OUTPUT 20.7
8 ..... SPARE OUTPUT 20.8

PDM B
Conn?
Autosport #68092

PEDALBOX.GND
DASHBOX.GND
PDM.GND
PDM.GND
LV.LED.GND
SPARE.GND
INV.GND
INV.GND
ACCUMULATOR.GND
ACCUMULATOR.GND
TSAL.GND
LATCHING.GND
SIDE-PANEL.GND
FAN.GND
BRAKE.LIGHT.GND
PUMP1.GND
PUMP2.GND
INVERTER.GND

GND BOX

Sheet: /LOOM - REAR/
File: loom-rear.kicad_sch

Title: LOOM - REAR

Size: A2	Date:	Rev:
KiCad E.D.A. kicad 7.0.10		Id: 3/33

1 ACCUMULATOR.GND GND_SPLICE
2 ACCUMULATOR.GND GND_SPLICE
3 ISOLATOR.EXC ISOLATOR.EXC_SPLICE
4 BMS.EXC BMS.EXC_SPLICE
5 IMD.EXC IMD.EXC_SPLICE
6 TSAC.HVS.EXC
7 TSAC.HVS.GND
8 TS.DETECTED
9 CAN.S.HIGH CAN.S.HIGH_SPLICE
10 CAN.S.LOW CAN.S.LOW_SPLICE
11 CAN.S.HIGH
12 CAN.S.LOW
13 SHUT.TRC SHUT.IN_SPLICE
14 SHUT.DISCHARGE
15 CHASSIS.GND
16 IMD.OK
17 TS.READY
18 TS.ON
19 INV.CLOSE.+AIR
20 INV.CLOSE.PCHG
21 +AIR.INTENDED.ON
22 −AIR.INTENDED.ON
23 PCHG.INTENDED.ON
CAR I/O
Conn?
AHDP04-24-47PR-SRA
24 PCHG.AUX.EXC
25 PCHG.AUX.GND
26 −AIR.AUX.EXC
27 −AIR.AUX.GND
28 +AIR.AUX.EXC
29 +AIR.AUX.GND
30 BMS.DISCHARGE.ENABLE
31 BMS.FAULT

1 ACCUMULATOR.GND GND_SPLICE
2 ACCUMULATOR.GND GND_SPLICE
3 ISOLATOR.EXC ISOLATOR.EXC_SPLICE
4 BMS.EXC BMS.EXC_SPLICE
5 IMD.EXC IMD.EXC_SPLICE
6 CAN.S.HIGH CAN.S.HIGH_SPLICE
7 CAN.S.LOW CAN.S.LOW_SPLICE
8 SHUT.IN SHUT.IN_SPLICE
9 BMS.CHARGER.SAFETY
CHARGER I/O
10 BMS.CHARGER.INTERLOCKED
Conn?
AHDP04-18-21PN-SRA
11
12
13
14
15
16
17
18
19
20
21

AIR+ — ALL SPLICES ARE RING TERMINALS ON AIRS

Conn1
DTM06-4S-E007
1 +AIR.AUX.GND
2 +AIR.AUX.EXC
3 +AIR.GND GND_SPLICE
4 +AIR.EXC

SP?
AIR+_SPLICE
AIR+_SPLICE

AIR− — ALL SPLICES ARE RING TERMINALS ON AIRS — RING TERMINAL ON AIR

Conn2
DTM06-4S-E007
1 −AIR.EXC
2 −AIR.GND GND_SPLICE
3 −AIR.AUX.EXC
4 −AIR.AUX.GND

SP?
AIR−_SPLICE
AIR−_SPLICE

PRECHARGE

Conn3
DTM06-4S-E007
1 PCHG.EXC
2 PCHG.GND
3 PCHG.AUX.EXC
4 PCHG.AUX.GND

TRC

Relays
Conn?
4 PCHG.GND
3 PCHG.EXC
2 −AIR.EXC
1 +AIR.EXC

States
Conn?
Molex
1 +AIR.INTENDED.ON
2 −AIR.INTENDED.ON
3 PCHG.INTENDED.ON
4

PWR
Conn?
1 SHUT.OUT GND_SPLICE
2
3
4 SHUT.IN SHUT.IN_SPLICE

Control
Conn?
1 TS.ON
2 TS.READY
3
4

Is this AIR+ or AIR−
BMS
Conn?
1 CHARGE.ENABLE.INTERLOCKED
2
3
4

Inv
Conn?
1 INV.CLOSE.PCHG
2 INV.CLOSE.+AIR
3
4

Add devices

Isolator Board

CAN.S.HIGH_SPLICE CAN.S.HIGH
CAN.S.LOW_SPLICE CAN.S.LOW
GND_SPLICE ISOLATOR.GND
ISOLATOR.EXC_SPLICE ISOLATOR.EXC
CAN.T.HIGH
CAN.T.LOW
ISOLATOR.TS.GND
ISOLATOR.TS.EXC

AIL.THERMISTOR.GND 1
AIL.THERMISTOR 2
AIL.FAN.EXC 3
AIL.FAN.GND.PWM 4
Conn?

BMS.CUR_SEN.EXC 1
BMS.CUR_SEN.HIGH 2
BMS.CUR_SEN.GND 3
BMS.CUR_SEN.LOW 4
Conn?
Current Sensor
TYCO 1-1456426-5

1 2 3 4 5 6 7 8 9 10 11
AIL.THERMISTOR 12
BMS.CUR_SEN.HIGH 13
BMS.CUR_SEN.LOW 14
CONN?
BMS − AUX
15 16 17 18
AIL.THERMISTOR.GND 19
20 21 22 23 24 25 26
BMS.CUR_SEN.GND 27
BMS.CUR_SEN.EXC 28

BMS.EXC_SPLICE BMS.EXC 1
BMS.EXC_SPLICE BMS.Charge.EXC 2
3 4 5
BMS.CHARGER.SAFETY 6
BMS.DISCHARGE.ENABLE 7
8 9 10 11
GND_SPLICE BMS.GND 12
CONN?
BMS − I/O
13 14 15 16 17
CAN.S.HIGH_SPLICE CAN.S.HIGH 18
CAN.S.LOW_SPLICE CAN.S.LOW 19
20 21 22
BMS.FAULT 23
AIL.FAN.GND.PWM 24
25 26

HV SENSE

TSAC.HVS.GND 4
TSAC.HVS.EXC 3
TS.DETECTED 2
1
LV
Conn?

AIR+_SPLICE HVS.HV+ 1
2
HV+
Conn?

1
AIR−_SPLICE HVS.HV− 2
HV−
Conn?

ACCU_ENCLOSURE.GND Ring terminal on bolt

IMD.OK
ACCU_ENCLOSURE.GND
CHASSIS.GND
IMD.EXC_SPLICE IMD.EXC
GND_SPLICE IMD.GND
AIR+_SPLICE IMD.HV+
AIR−_SPLICE IMD.HV−

Expecting new precharge to go here

DC LINK
HV+
HV−
CLOSE_PRECHARGE_IN
CLOSE_PRECHARGE_OUT
CLOSE_HIGH_AIR_IN
CLOSE_HIGH_AIR_OUT
EXC
GND

AIL.EXC 1
AIL.GND 2
CONN?
AIL LED
Soldered to LED
Check this doesn't have wires already that we need to solder to instead

AIL.EXC
AIL.GND
Molex
AIR+_SPLICE AIL.HV+
AIR−_SPLICE AIL.HV−

Change how HV splices work to be over the isolation line and physically connecting o the airs and precharge etc

HV CONNECTIONS

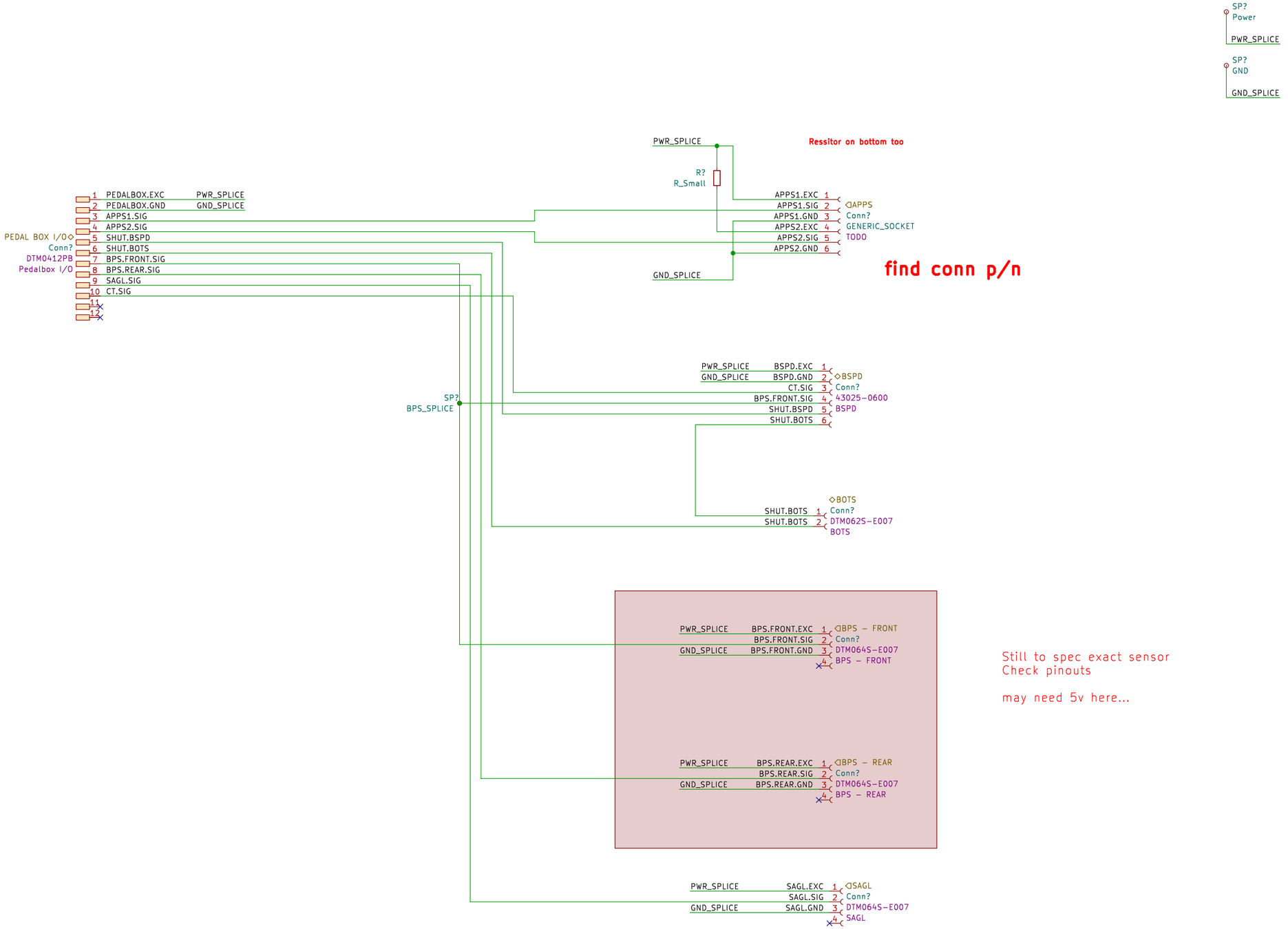
DC.+
DC.−

CHECK FUSE VALUE
F1
400A
AIR+
AIR−

NEEDS HV CONNECTOR INTERLOCK ADDED

SP?
GND
ISOLATOR.EXC_SPLICE
SP?
GND
GND_SPLICE
SP?
GND
BMS.EXC_SPLICE
SP?
GND
CAN.S.HIGH_SPLICE
SP?
GND
IMD.EXC_SPLICE
SP?
GND
CAN.S.LOW_SPLICE
SP?
GND
SHUT.IN_SPLICE

Sheet: /LOOM − ACCUMULATOR/
File: loom-accumulator.kicad_sch
Title: LOOM − ACCUMULATOR
Size: A2 | Date: | **Rev:**
KiCad E.D.A. kicad 7.0.10 | Id: 4/33



Sheet: /LOOM - PEDAL BOX/
File: loom-pedal-box.kicad_sch

Title: LOOM - PEDAL BOX

Size: A3	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 5/33

DASH BOX I/O◇

1 DASHBOX.EXC — PWR_SPLICE
2 DASHBOX.GND — GND_SPLICE
3 BPS.REAR.SIG
4 BPS.FRONT.SIG
5 SAGL.SIG
6 APPS2.SIG
7 APPS1.SIG
8 TS.READY
9 BMS.FAULT.LATCHING
10 IMD.FAULT.LATCHING
11 TS.ON
12 RTDS.EXC
13 RTDS.GND
14 CAN.S.HIGH
15 CAN.S.LOW
16 CAN.C.HIGH
17 CAN.C.LOW
18 CAN.S.HIGH
19 CAN.S.LOW
20 CAN.C.HIGH
21 CAN.C.LOW
22 L120.ETX−
23 L120.ETX+
24 L120.ERX−
25 L120.ERX+
26 COCKPIT.TS.LED.EXC — PWR_SPLICE
27 L120.SENSOR.5V.EXC
28 L120.SENSOR.GND
29 L120.ANALOGUE.VOLT.1
30 L120.ANALOGUE.VOLT.2
31 L120.ANALOGUE.VOLT.3
32 L120.ANALOGUE.VOLT.4
33 L120.ANALOGUE.VOLT.5
34 L120.ANALOGUE.VOLT.6
35 L120.DIGITAL.1
36 L120.DIGITAL.2
37 L120.ANALOGUE.TEMP.1
38 L120.ANALOGUE.TEMP.2
39 L120.SPEED.1
40 L120.SPEED.2
41 L120.SPEED.3
42
43
44
45
46
47

Conn?
AHDP04−24−47PR−SRA

25mA MAXIMUM RECOMMENDED TO USE EXTERNAL POWER

SP? CAN.S.HIGH
SP? CAN.S.LOW
SP? CAN.C.HIGH
CAN.C.LOW

VCU

BPS.SIG 1
SAGL.SIG 2
APPS2.SIG 3
APPS1.SIG 4
TS.READY 5
6
7
8
Conn? Molex_4x2S_Recepticle VCU−IN

BMS.FAULT.LATCHING 1
IMD.FAULT.LATCHING 2
Conn? Molex_2x1S_Recepticle VCU−LATCHING

1
2
TS.ON 3
4
5
6
7
8
Conn? Molex_4x2S_Recepticle VCU−OUT

RTDS.EXC 1
RTDS.GND 2
3
4
Conn? Molex_2x2S_Recepticle VCU−RTDS

CAN.S.HIGH 1
CAN.S.LOW 2
CAN.C.HIGH 3
CAN.C.LOW 4
Conn? Molex_2x2S_Recepticle VCU−CAN

1 VCU.EXC — PWR_SPLICE
2 VCU.GND — GND_SPLICE
3 VCU.EXC — PWR_SPLICE
4 VCU.GND — GND_SPLICE
Conn? Molex_2x2S_Recepticle VCU−PWR

1
2 R2D.BUTTON.GND
3 DRS.BUTTON.GND
4 TS.ON.BUTTON.GND
5
6
7 TS.ON.LED.GND
8 R2D.LED.GND
9 BMS.LED.GND
10 IMD.LED.GND
Conn? Molex_5x2S_Recepticle VCU−DASH−CONTROL

1 R2D.BUTTON.EXC
2 TS.ON.BUTTON.EXC
3 TS.ON.LED.EXC
4 R2D.LED.EXC
5 BMS.LED.EXC
6 IMD.LED.EXC
Conn? Molex_3x2S_Recepticle VCU−DASH−PWR

R2D.BUTTON.GND 1
TS.ON.BUTTON.GND 2
TS.ON.LED.GND 3
R2D.LED.GND 4
BMS.LED.GND 5
IMD.LED.GND 6
R2D.BUTTON.EXC 7
TS.ON.BUTTON.EXC 8
TS.ON.LED.EXC 9
R2D.LED.EXC 10
BMS.LED.EXC 11
IMD.LED.EXC 12
◇DASHBOARD
Conn? Deutsch_DTM_12S_Pin DTM0612SB Dashboard

SP? Power PWR_SPLICE
SP? GND GND_SPLICE

L120.ETX− 1
L120.ETX+ 2
BPS.REAR.SIG 3
L120.ANALOGUE.VOLT.1 4
L120.ANALOGUE.VOLT.2 5
L120.ANALOGUE.VOLT.3 6
L120.ANALOGUE.VOLT.4 7
L120.SENSOR.5V.EXC 8
L120.SENSOR.GND 9
L120.ERX− 10
L120.ERX+ 11
L120.ANALOGUE.VOLT.5 12
L120.ANALOGUE.VOLT.6 13
L120.DIGITAL.1 14
L120.DIGITAL.2 15
L120.ANALOGUE.TEMP.1 16
L120.ANALOGUE.TEMP.2 17
CAN.S.LOW 18
CAN.S.HIGH 19
20
L120.SPEED.1 21
L120.SPEED.2 22
L120.SPEED.3 23
24
25
CAN.C.LOW 26
CAN.C.HIGH 27
28
29
30
31
32
PWR_SPLICE L120.EXC 33
GND_SPLICE L120.GND 34
Conn? Superseal 65044 L120

L120 box here

sensors that may need to connect to this:
− wheel speed sensors
− damper pots

Sheet: /LOOM − DASH BOX/
File: loom−dash−box.kicad_sch

Title: LOOM − DASH BOX

Size: A3 | Date: | **Rev:**
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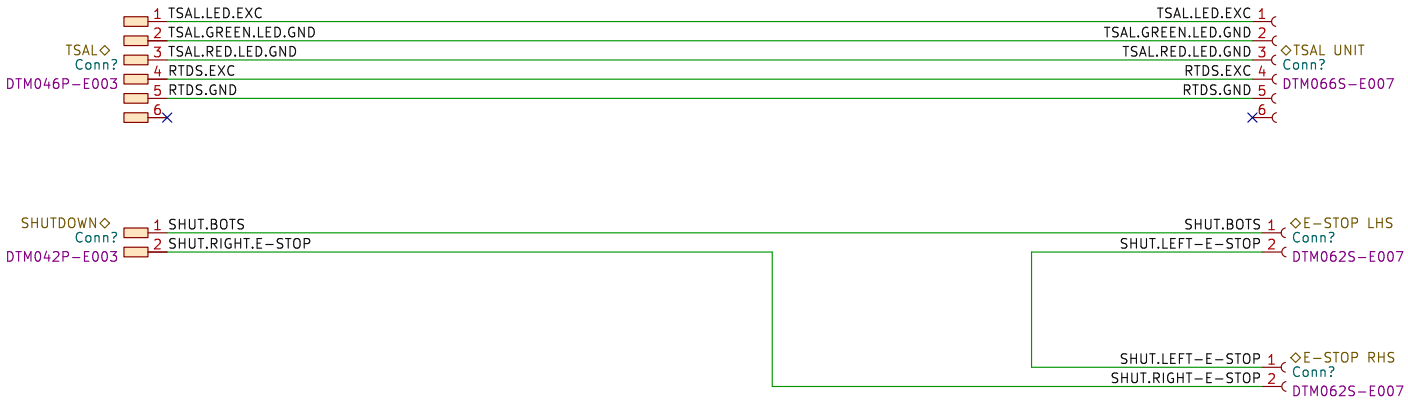
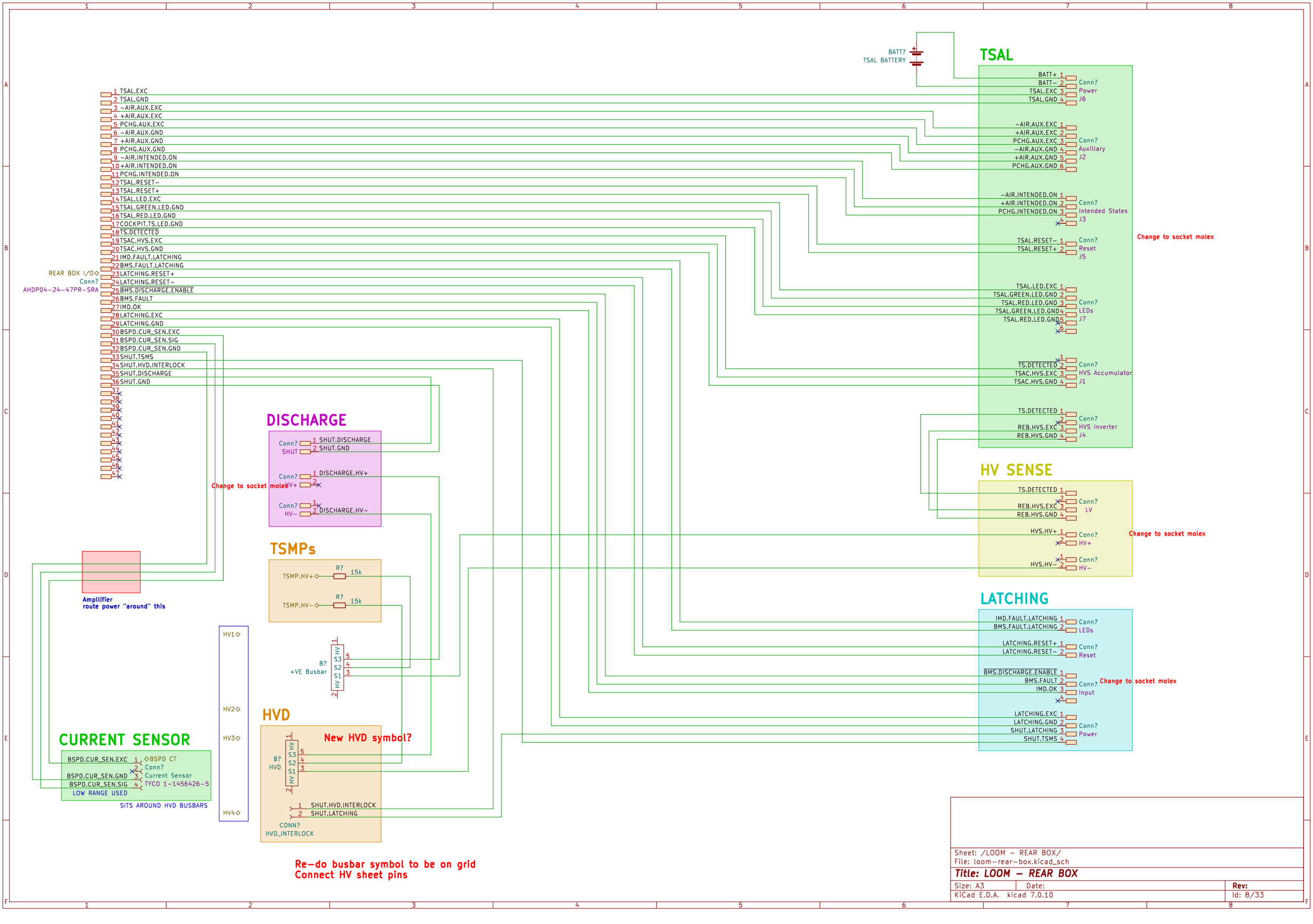


Sheet: /LOOM - ROLL HOOP/
File: loom-roll-hoop.kicad_sch

Title: LOOM - ROLL HOOP

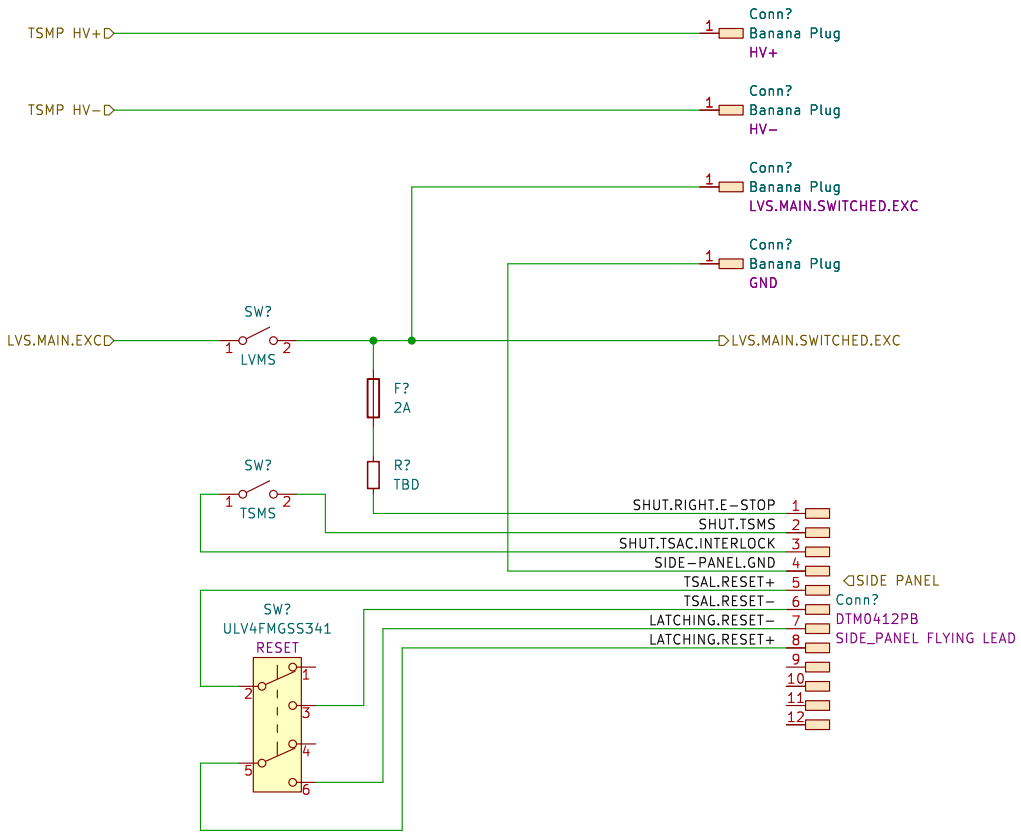
Size: A4	Date:	Rev:
KiCad E.D.A. kicad 7.0.10		Id: 7/33



Sheet: /LOOM – REAR BOX/
File: loom-rear-box.kicad_sch

Title: LOOM – REAR BOX

Size: A3	Date:	Rev:
KiCad E.D.A. kicad 7.0.10		Id: 8/33

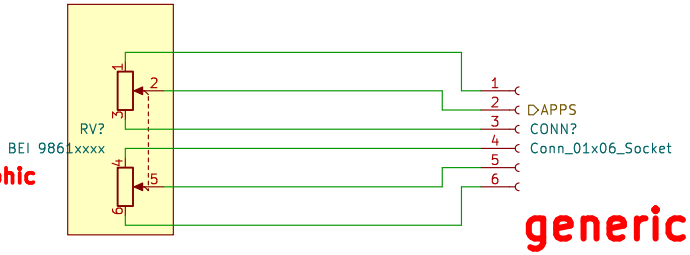


Sheet: /LOOM − SIDE PANEL/
File: loom−side−panel.kicad_sch

Title: LOOM − SIDE PANEL

Size: A4	Date:	Rev:
KiCad E.D.A. kicad 7.0.10		Id: 9/33

Find P/n
Maybe update to new graphic



generic for now

Sheet: /DEVICE – APPS/
File: device–apps.kicad_sch

Title: DEVICE – APPS

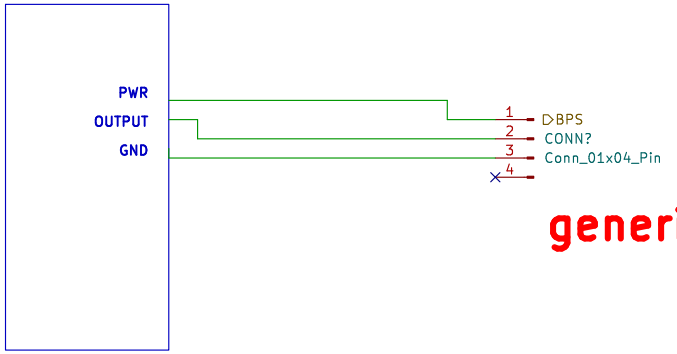
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 10/33

Sheet: /DEVICE - BOTS/
File: device-bots.kicad_sch

Title: DEVICE - BOTS

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 11/33

Add device symbol here



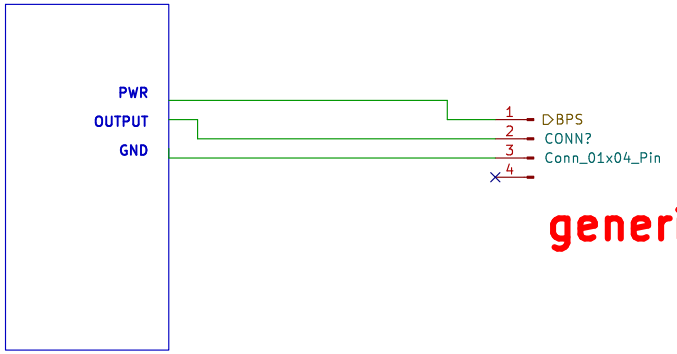
generic for now

Sheet: /DEVICE – BPS – FRONT/
File: device–bps.kicad_sch

Title: DEVICE – BPS

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 12/33

Add device symbol here

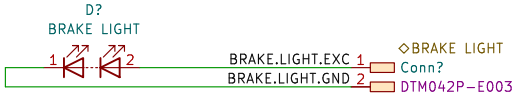


generic for now

Sheet: /DEVICE – BPS – REAR/
File: device–bps.kicad_sch

Title: DEVICE – BPS

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 13/33



Sheet: /DEVICE - BRAKE LIGHT/
File: device-brake-light.kicad_sch

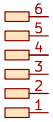
Title: LOOM - BRAKE LIGHT

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 14/33

EXC
GND
CT
BPS
SHUT.IN
SHUT.OUT

◇BSPD

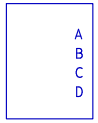
Conn4
DTM046P-E003



Sheet: /DEVICE – BSPD/
File: device–bspd.kicad_sch

Title: DEVICE – BSPD

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 15/33



◇CUR_SEN

BSPD.CUR_SEN.EXC
BSPD.CUR_SEN.HIGH
BSPD.CUR_SEN.GND
BSPD.CUR_SEN.LOW

Sheet: /DEVICE – CURRENT SENSOR/
File: device–current–sensor.kicad_sch

Title: DEVICE – CURRENT SENSOR

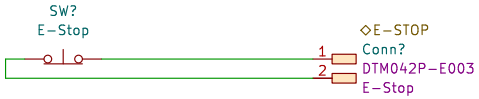
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 16/33

Need to work out what this will be in reality.
Will the PCB do some splicing for us?
Will the LEDs be soldered to PCB somehow?
Or is the PCB just a mounting board and nothing electrical?

Sheet: /DEVICE – DASHBOARD/
File: device-dashboard.kicad_sch

Title: DEVICE – DASHBOARD

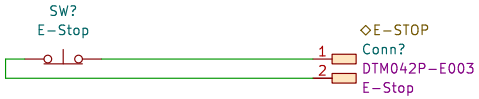
Size: A3	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 17/33



Sheet: /DEVICE - E-STOP - LHS/
File: device-e-stop.kicad_sch

Title: DEVICE - E-STOP

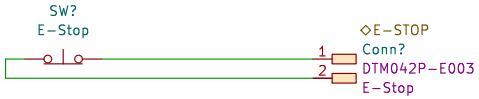
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 18/33



Sheet: /DEVICE - E-STOP - COCKPIT/
File: device-e-stop.kicad_sch

Title: DEVICE - E-STOP

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 19/33



Sheet: /DEVICE - E-STOP - RHS/
File: device-e-stop.kicad_sch

Title: DEVICE - E-STOP

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 20/33

PEDALBOX.GND
DASHBOX.GND
PDM.GND
PDM.GND
LV.LED.GND
SPARE.GND
INV.GND
INV.GND
ACCUMULATOR.GND
ACCUMULATOR.GND
TSAL.GND
LATCHING.GND
SIDE-PANEL.GND
FAN.GND
BRAKE.LIGHT.GND
PUMP1.GND
PUMP2.GND
INVERTER.GND

◇BATT GND
◇GND BOX

ADD GRAPHIC FOR BUSBAR

Sheet: /DEVICE - GROUND BOX/
File: device-ground-box.kicad_sch

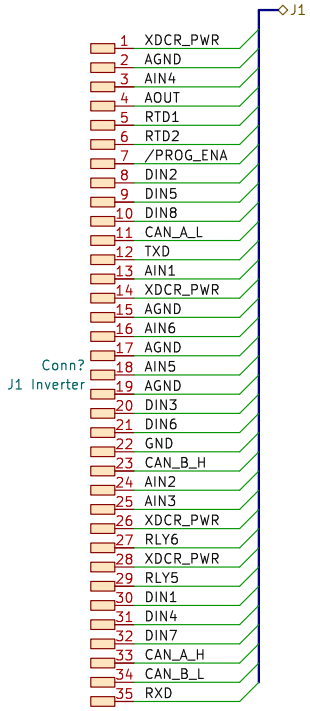
Title: DEVICE - GROUND BOX

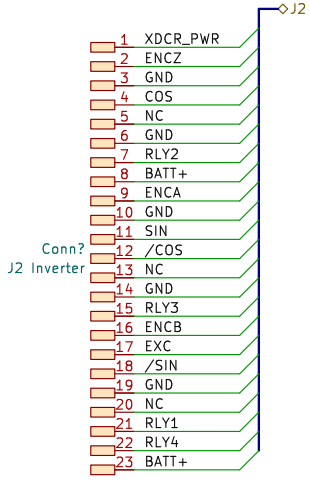
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 21/33

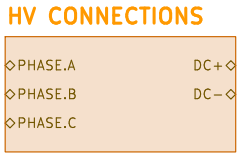
Sheet: /DEVICE - INERTIA SWITCH/
File: device-inertia-switch.kicad_sch

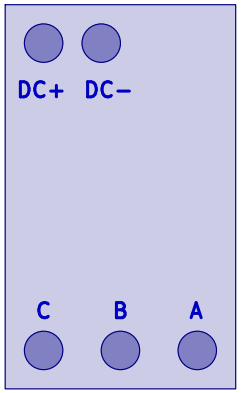
Title: DEVICE - INERTIA SWITCH

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 22/33









gen 2 or gen 3?
I've assumed gen 3 for now

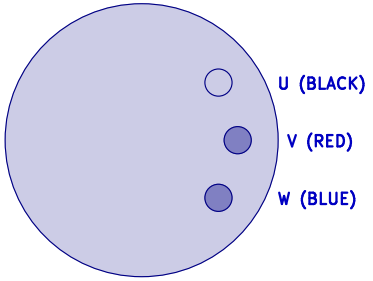
Sheet: /DEVICE – INVERTER/
File: device–inverter.kicad_sch

Title: DEVICE – INVERTER

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 23/33

PHASE CONNECTIONS

- PHASE.U
- PHASE.V
- PHASE.W



View from 3 Phase Connection Side

RESOLVER

White/Red	1	RESOLVER.EXC
White/Yellow	2	RESOLVER.GND
Red	3	RESOLVER.COS+
Black	4	RESOLVER.COS−
Yellow	5	RESOLVER.SIN+
Blue	6	RESOLVER.SIN−

DTM046P-E003
Conn?

TEMP

	1	MOTOR.CASING.GND
Conn?	2	MOTOR.TEMP.SIG
DTM043P-E003	3	MOTOR.TEMP.GND

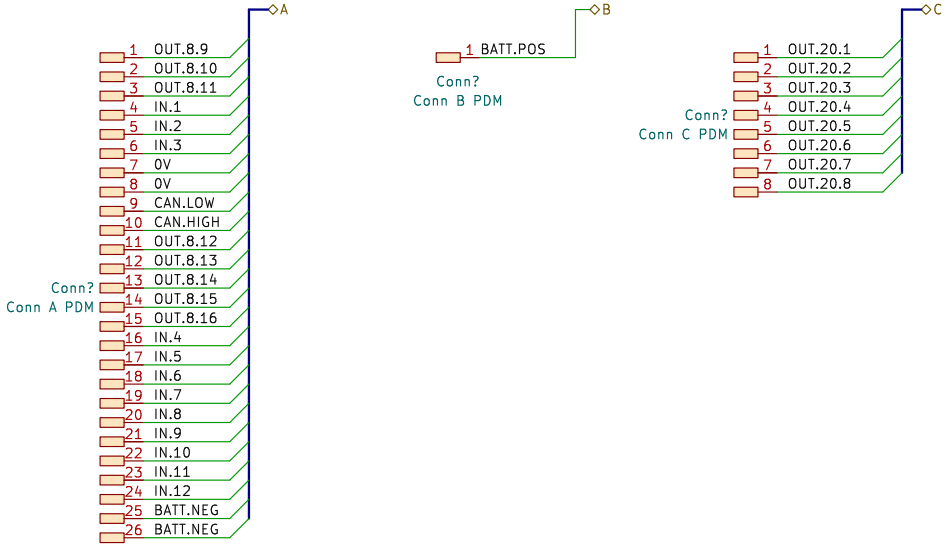
MOTOR CASING TO GROUND DIRECTLY TO INVERTER CASING THROUGH FLYING RING TERMINAL FROM BACK OF THIS CONNECTOR

RESOLVER SHIELD GROUNDED VIA MOTOR CASING

Sheet: /DEVICE – MOTOR/
File: device–motor.kicad_sch

Title: DEVICE – MOTOR

Size: A4	Date:	Rev:
KiCad E.D.A. kicad 7.0.10		Id: 24/33



Sheet: /DEVICE – PDM/		
File: device–pdm.kicad_sch		
Title: DEVICE – PDM		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 25/33

◇PUMP

PUMP.EXC
PUMP.GND

Sheet: /DEVICE – PUMP1/
File: device–pump.kicad_sch

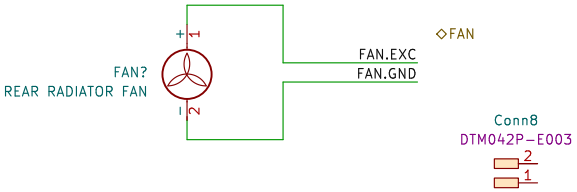
Title: DEVICE – PUMP

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 26/33

Sheet: /DEVICE – PUMP2/
File: device–pump.kicad_sch

Title: DEVICE – PUMP

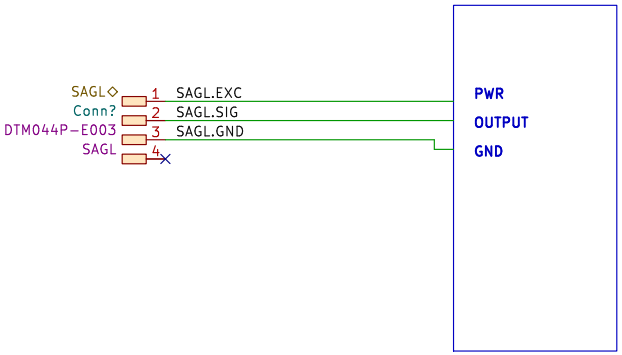
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 27/33



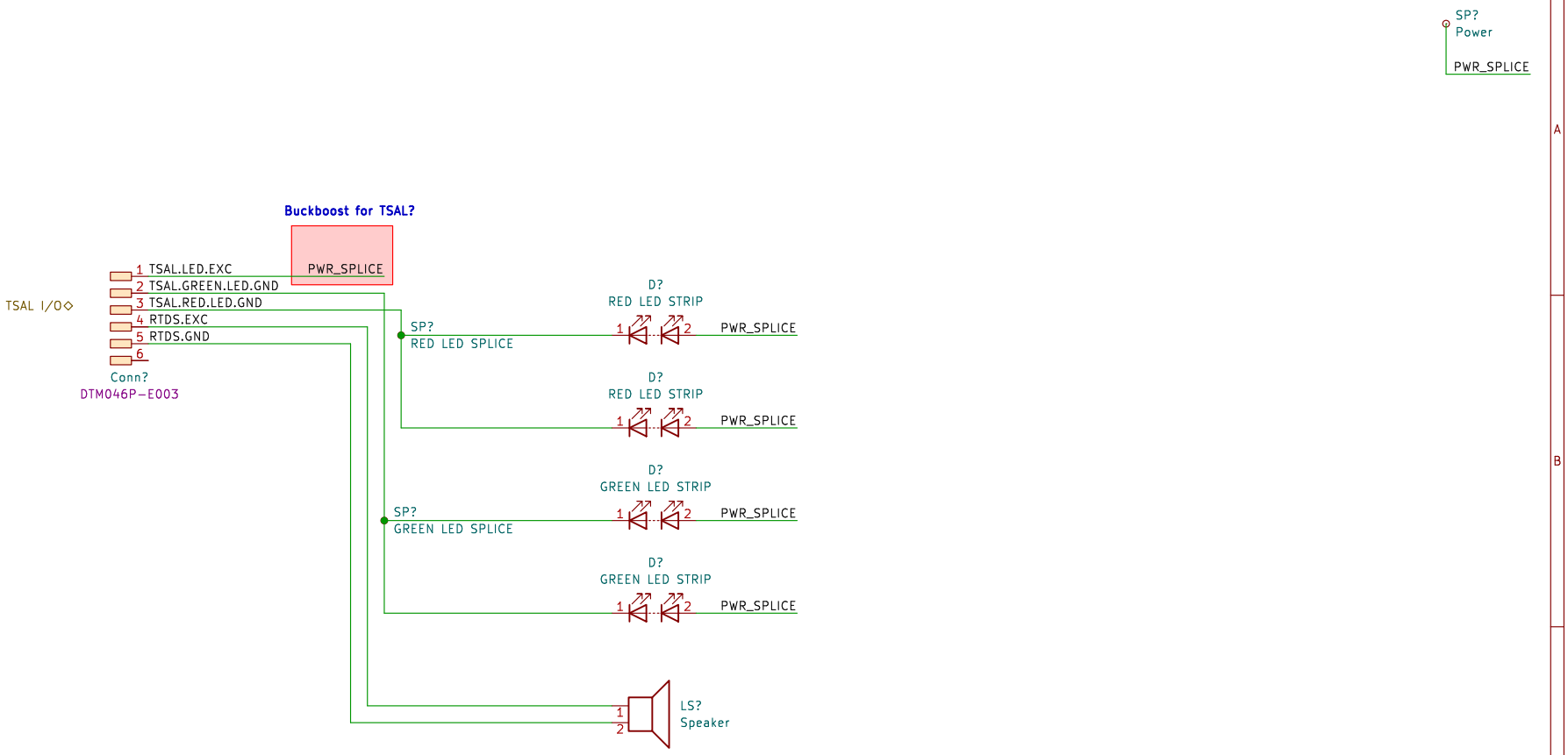
Sheet: /DEVICE - RADIATOR FAN/
File: device-radiator-fan.kicad_sch

Title: DEVICE - RADIATOR FAN

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 28/33



Sheet: /DEVICE - SAGL/		
File: device-sagl.kicad_sch		
Title: DEVICE - SAGL		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 29/33



Sheet: /DEVICE – TSAL/
File: device-tsal.kicad_sch

Title: DEVICE – TSAL

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 30/33

Charger
Umbilical
Separate "shore" power?
Charging e-stop loop
switches and LED indicators

Sheet: /LOOM - CHARGING CART/
File: loom-charging-cart.kicad_sch

Title: LOOM - CHARGING CART

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10		Id: 50/33

Put photos of connector pinouts here
Clearly labeled with P/N & Name etc

Should show if it's from the front or the back

Amphenol ATM

Type	#	Housing	Wedgelock
Plug	2	ATM06-2S	AWM-2S
	3	ATM06-3S	AWM-3S
	4	ATM06-4S	AWM-4S
	6	ATM06-6S	AWM-6S
	8	ATM06-8S	AWM-8S
	12	ATM06-12S	AWM-12S
Receptacle	2	ATM04-2P	AWM-2P
	3	ATM04-3P	AWM-3P
	4	ATM04-4P	AWM-4P
	6	ATM04-6P	AWM-6P
	8	ATM04-8P	AWM-8P
	12	ATM04-12P	AWM-12P

Size 20	Pin	AT60-202-20141
	Socket	AT62-201-20141
Size 16	Pin	AT60-202-16141
	Socket	AT62-201-16141

Sheet: /PINOUTS/
File: pinouts.kicad_sch

Title: MISC – PINOUTS

Size: A4 | Date: | **Rev:**
KiCad E.D.A. kicad 7.0.10 | Id: 98/33

APPS Accelerator Pedal Position Sensor

BPS Brake Pressure Sensor

Sheet: /ACRONYMS/	
File: acronyms.kicad_sch	
Title: MISC – ACRONYMS	
Size: A3	Date:
KiCad E.D.A. kicad 7.0.10	**Rev:** Id: 99/33