Pin	Color	Signal
1	GRN	24VDC +
2	BLK	LV RTN

P1 DT06-2S — W1 GLV Power 14/2 Cable — P2 DT06-2S

Pin	Color	Signal
1	GRN	24VDC +
2	BLK	LV RTN

Pin	Color	Signal
1	ORG	TSV HV

3/8 Ring Conn. — W12 Tractive System HV 3/0 Battery Cable — P2 PL28W-301-70

Pin	Color	Signal
1	ORG	TSV HV
1	ORG	TSV HV
1	ORG	TSV HV

Pin	Color	Signal
1	PNK	Select button
2	BLK	Scroll button
3	BLU	Cruise button
4	ORG	BRB
5	WHT	BRB RTN
6	GRN	CPR
7	WHT/BLK	CPR RTN
8	PNK/BLK	GLV Present LED
9	GRN/BLK	SL LED
10	ORG/BLK	Fault LED
11	BLU/BLK	AIRs LED
12	BLK/WHT	GLV RTN

P1 DT06-12SA — W22 Control System 16/12 Cable — Crimp Conn.

Pin	Color	Signal
1	PNK	Select button
2	BLK	Scroll button
3	BLU	Cruise button
4	ORG	BRB
5	WHT	BRB RTN
6	GRN	CPR
7	WHT/BLK	CPR RTN
8	PNK/BLK	GLV Present LED
9	GRN/BLK	SL LED
10	ORG/BLK	Fault LED
11	BLU/BLK	AIRs LED
12	BLK/WHT	GLV RTN

Pin	Color	Signal
1	WHT	Brake Light
2	BLK	Brake Light RTN
3	WHT	TSAL Left
4	BLK	TSAL Left RTN
5	WHT	SPARE
6	BLK	SPARE
7	WHT	RTDS
8	BLK	RTDS RTN

P1 DT06-8SA — W23 Control System 16/8 Cable — Crimp Conn.

These cables come out of the same jack but go to different places

Pin	Color	Signal
1	WHT	Brake Light
2	BLK	Brake Light RTN
3	WHT	TSAL Left
4	BLK	TSAL Left RTN
5	WHT	SPARE
6	BLK	SPARE
7	WHT	RTDS
8	BLK	RTDS RTN

Pin	Color	Signal
1	YEL	CAN H
2	GRN	CAN L
3	BARE	SHIELD
4	GRN	CHGND
5	WHT	24VDC
6	BLK	24V RTN

P1 DT06-6S — W31 SCADA 20/3 CanBus Cable — P2 DT06-6S

GLV Power 12/3 Cable

Pin	Color	Signal
1	YEL	CAN H
2	GRN	CAN L
3	BARE	SHIELD
4	GRN	CH
5	WHT	24VDC
6	BLK	24V RTN

Pin	Color	Signal
1	GRN	BRBLS
2	BLK	BRBLS RTN
3		SSOK
4		SSOK RTN

P1 DT06-2S — W3 LS Panel 16/4 Cable — Crimp Conn.

Pin	Color	Signal
1	GRN	BRBLS
2	BLK	BRBLS RTN
3		SSOK
4		SSOK RTN

Pin	Color	Signal
1	PNK	Brake 24VDC +
2	BLK	Brake 24VDC +
3	BLU	Brake Pressure
4	ORG	Brake Over-Travel
5	WHT	APPS 1 10VDC+
6	GRN	APPS 1 Signal
7	WHT/BLK	APPS 1 RTN
8	PNK/BLK	APPS 2 5VDC +
9	GRN/BLK	APPS 2 Signal
10	ORG/BLK	RTN GLV
11	BLU/BLK	BOT RTN
12	BLK/WHT	Spare

P1 DT06-12S — W24 Control System 16/12 Cable — Misc. Conn.

Pin	Color	Signal
1	PNK	Brake 24VDC +
2	BLK	Brake 24VDC +
3	BLU	Brake Pressure
4	ORG	Brake Over-Travel
5	WHT	APPS 1 10VDC +
6	GRN	APPS 1 Signal
7	WHT/BLK	APPS 1 RTN
8	PNK/BLK	APPS 2 5VDC +
9	GRN/BLK	APPS 2 Signal
10	ORG/BLK	RTN GLV
11	BLU/BLK	BOT RTN
12	BLK/WHT	Spare

Pin	Color	Signal
1	WHT	Safety Circuit
2	ORG	Safety Circuit RTN
3	PNK	MRESET
4	GRN	MRESET RTN
5	BLU	TSVMS
6	BLK	TSVMS RTN
7		SSOK
8		SSOK RTN

P1 DT08-8S — W33 Right side panel 16/6 Cable — Crimp Conn.

Pin	Color	Signal
1	WHT	GLVMS
2	ORG	ESTOP RTN
3	PNK	MRESET
4	GRN	MRESET RTN
5	BLU	TSVMS
6	BLK	TSVMS RTN
7		SSOK
8		SSOK RTN

Pin	Color	Signal
1	BLK	LV GND
2	PNK	IMD Fault LED
3	BLU	+5LV (Spare)
4	ORG	From Drive Button
5	WHT	Drive LED
6	GRN	HV Present LED
7	PNK/BLK	Cruise LED
8	WHT/BLK	HVPL_RTN

P1 DT06-8S — W25 Control System 16/8 Cable — Crimp Conn.

Pin	Color	Signal
1	BLK	LV GND
2	PNK	IMD Fault LED
3	BLU	+5LV (Spare)
4	ORG	From Drive Button
5	WHT	Drive LED
6	GRN	HV Present LED
7	PNK/BLK	Cruise LED
8	WHT/BLK	HVPL_RTN

Pin	Color	Signal
1	WHT	Encoder
2	ORG	Encoder
3	PNK	Encoder
4	GRN	Encoder
5	BLU	Temp
6	BLK	Temp

P1 DT06-6S — W36 Motor connector 16/6 Cable — Crimp Conn.

Pin	Color	Signal
1	WHT	Encoder
2	ORG	Encoder
3	PNK	Encoder
4	GRN	Encoder
5	BLU	Temp
6	BLK	Temp

Note the change of color TNs cable is a crossover

Pin	Color	Signal
1	YEL	24V
2	BLK	24V RTN

P1 DT02-2S — W38 Cooling power 12/2 Cable

1	24V
2	24V RTN
3	24V
4	24V RTN
5	24V
6	24V RTN
7	24V
8	24V
9	24V

Pin	Color	Signal
1	GRN	24VDC +
2	BLK	LV RTN

P1 DT06-2S — W1 Tractive System HV 2/0 Battery Cable — P2 DT06-2S

3/8 Ring Conn. — 3/8 Ring Conn.

Pin	Color	Signal
1	ORG	TSV HV

Pin	Color	Signal
1	GRN	24VDC +
2	BLK	LV RTN

Pin	Color	Signal
1	ORG	TSV HV

Pin	Color	Signal
1	WHT	SL1
2	BRN	SL2
3	RED	AIRs+
4	BLK	AIRs-

P1 DT06-4S — W6 Safety Loop 16/4 Cable — P2 DT06-4S

Pin	Color	Signal
1	WHT	SL1
2	BRN	SL2
3	RED	AIRs+
4	BLK	AIRs-

Pin	Color	Signal
1	BLK	ENB
2	WHT	RTN

P1 DT06-2S — W18 TSV power supply enable 16/2 — P2 37-Pin D Conn.

Pin	Color	Signal
26	BLK	ENB
19	WHT	RTN

Pin	Signal
1	HUFF Signals

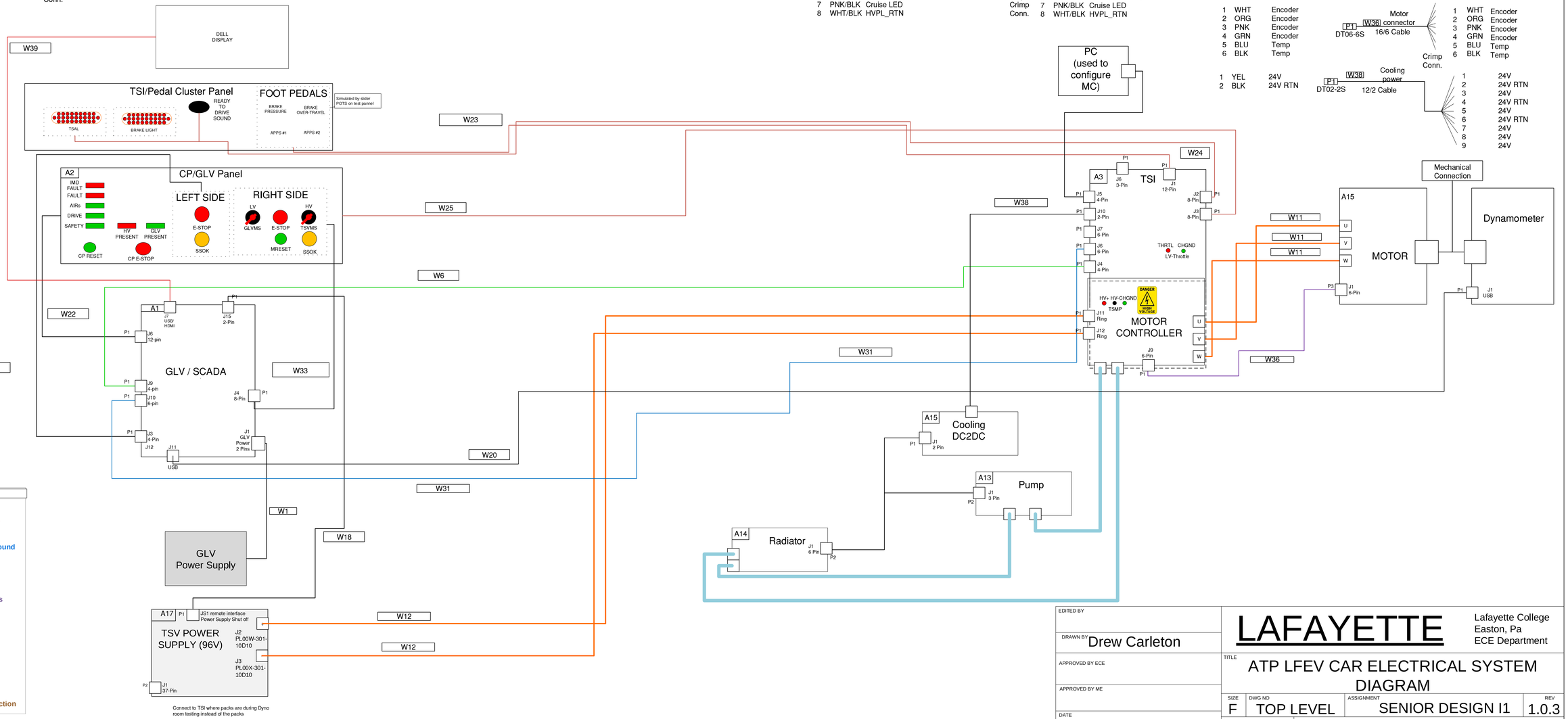
P1 — W20 USB — P2

Pin	Signal
1	HUFF Signals

Pin	Signal
1	HDMI USB

P1 — W39 USB/HDMI — P2

Pin	Signal
1	HDMI USB



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DATE	2018 - 12 – 04

LAFAYETTE

Lafayette College
Easton, Pa
ECE Department

TITLE: ATP LFEV CAR ELECTRICAL SYSTEM DIAGRAM

SIZE	DWG NO	ASSIGNMENT	REV
F	TOP LEVEL	SENIOR DESIGN I1	1.0.3

COURSE	SHEET
TOP LEVEL	1 OF 1