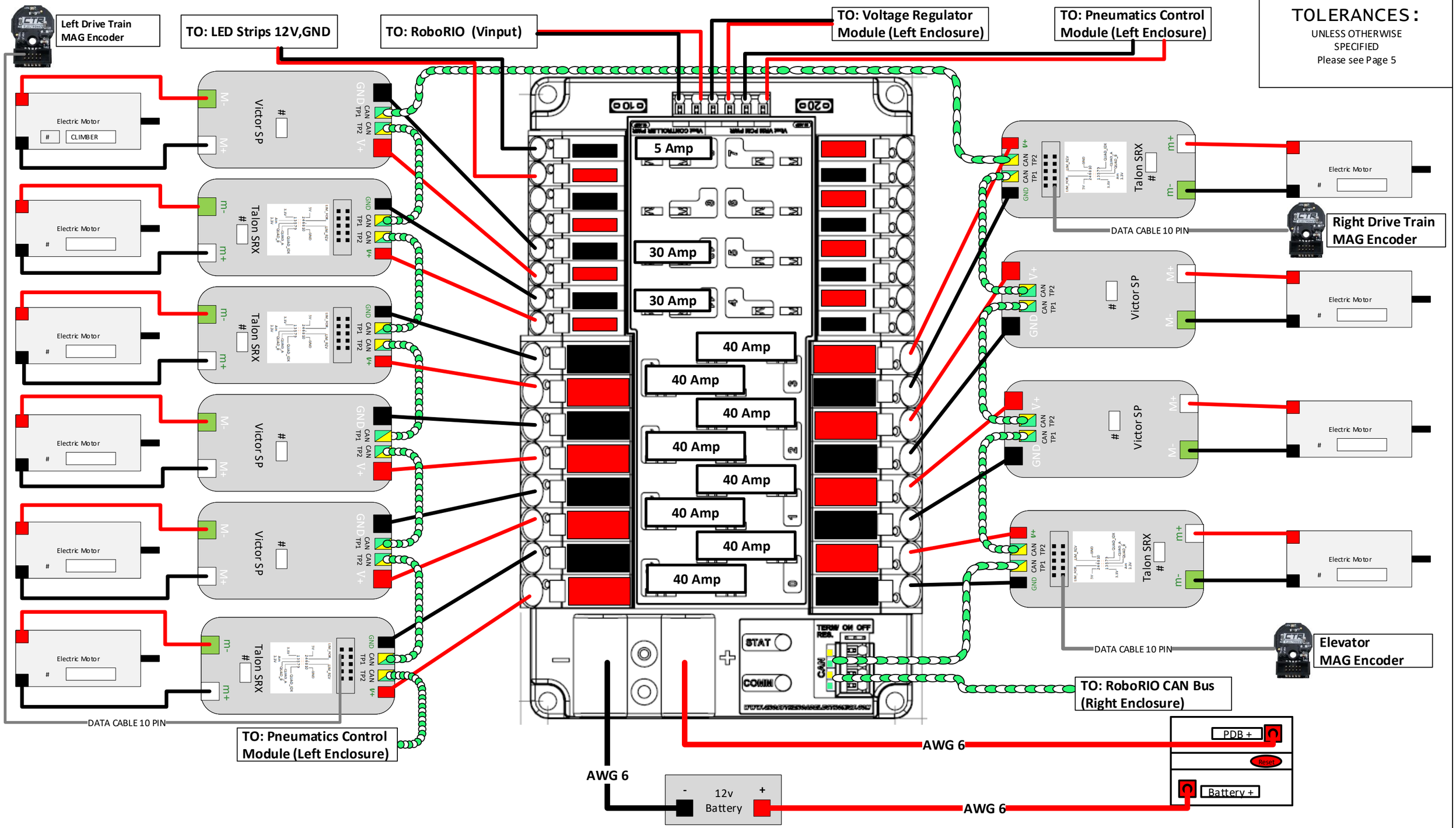


PART DESCRIPTION: MAIN ELECTRICAL BOARD (Logical/Physical)		QUANTITY/BOT: 1
DRAWN BY: CATALIN GHERCOIAS	CHECKED BY:	DATE: FEB 25, 2018
MATERIAL: N/A	FILENAME: Page 1/5	ASSEMBLY: MAIN BOARD

TO: OM5P-AN Radio (Left Enclosure)

TO: VBat Controller Power (MainBoard PDP)

TO: CAN Bus (MainBoard PDP)

TO: ArduinoNano I2C (Left Enclosure)

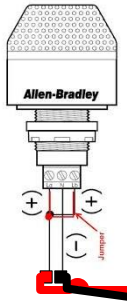
Cat6

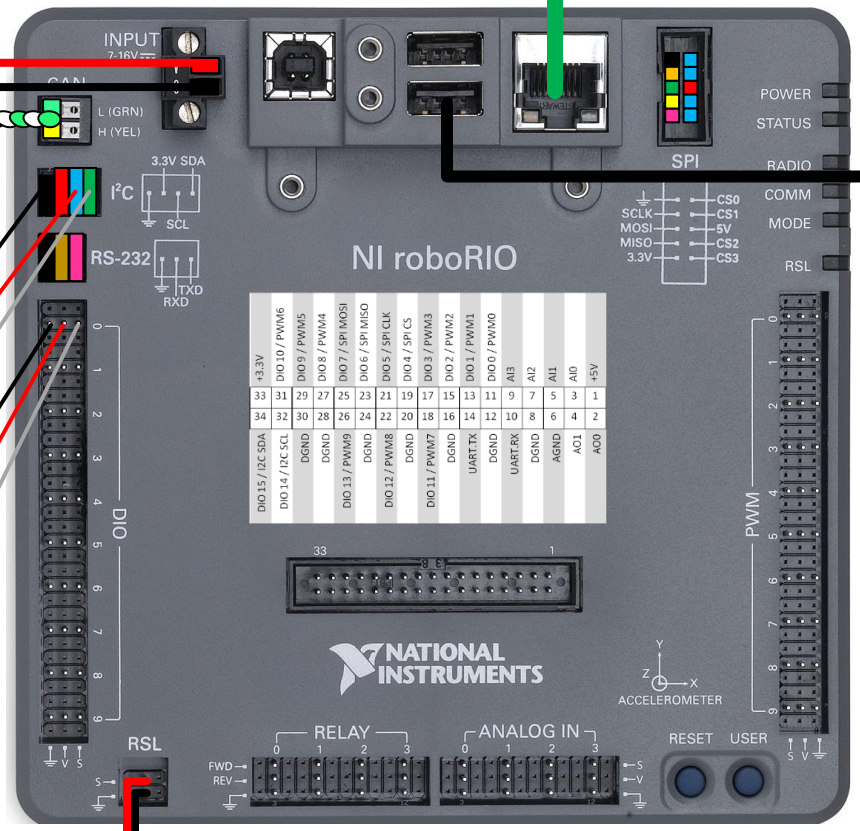
USB Camera

USB Cable

GND
SCL
SDA
GND
5V
Signal

Infrared Sensor





PART DESCRIPTION: RoboRIO Right Enclosure (Logical/Physical)		QUANTITY/BOT: 1
DRAWN BY: CATALIN GHERCOIAS	CHECKED BY:	DATE: FEB 25, 2018
MATERIAL: RoboRIO	FILENAME: Page 2/5	ASSEMBLY: RIGHT ENCLOSURE

TEAM 20

Right Angled Side Elevator 48 LEDs

Left Angled Side Elevator 48 LEDs

Right Side Elevator 60 LEDs

Left Side Elevator 60 LEDs

DATA WHITE WIRE

From:PDP 12V,GND, 5A
(MainBoard)

From:RoboRIO I2C Bus
(Right Enclosure)

SCL

SDA

Open-Mesh OM5P-AC
Dual Band 1.17 Gbps
Access Point

CAT 6

From:RoboRIO CAT 6
(Right Enclosure)
See PoE Diagram Pg.4

From:PDP 12V,GND
(MainBoard)

From: Talon SRX
(MainBoard)

TO: Pneumatics Control
Module (Back Main Board)

Pressure
Switch
1

Compressor

12V DC

Pneumatic
Solenoid
Left

Pneumatic
Solenoid
Right

Pneumatic
Solenoid
#

Pneumatic
Solenoid
#

Pneumatic
Solenoid
#

Pneumatic
Solenoid
#

Pneumatic
Solenoid
#

Pneumatic Control Module
WWW.CROSSTHEROADELECTRONICS.COM

From: PDP 12V, GND, 20A
(Main Board)

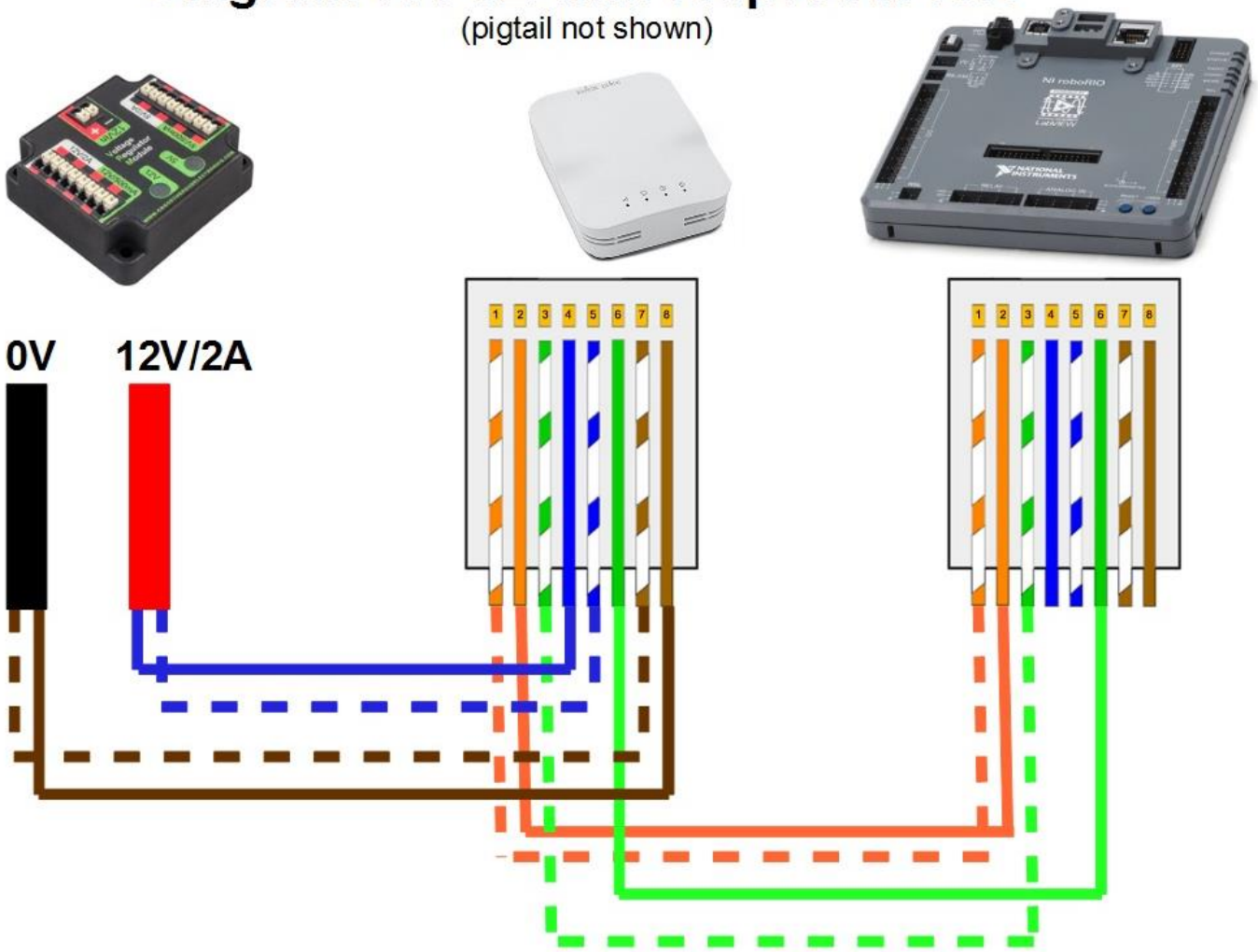
Voltage
Regulator
Module

WWW.CROSSTHEROADELECTRONICS.COM

PART DESCRIPTION: RADIO + ARDUINO + 2 VRM (Logical/Physical)			QUANTITY/BOT: 1
DRAWN BY: CATALIN GHERCOIAS		CHECKED BY:	DATE: FEB 25, 2018
MATERIAL: N/A	FILENAME: Page 3/5		ASSEMBLY: LEFT ENCLOSURE

Diagram of PoE with respect to R63

(pigtail not shown)



PART DESCRIPTION: PoE Diagram			QUANTITY/BOT: 1
DRAWN BY: CATALIN GHERCOIAS		CHECKED BY:	DATE: FEB 25, 2018
MATERIAL: CAT 6	FILENAME: Page 4/5	ASSEMBLY: PoE CAT6 4 Feet	

From 31A – 40A protected circuit use …… 12 AWG(13 SWG or 4 mm2)
From 21A – 30A protected circuit use …… 14 AWG(16 SWG or 2.5 mm2)
From 6A – 20A protected circuit between the PDP dedicated terminals,
the VRM or PCM or compressor outputs from the PCM use …… 18 AWG (19 SWG or 1 mm2)
Between the PDP and the roboRIO or ≤5A protected circuit use …… 22 AWG (22 SWG or 0.5 mm2)
VRM 2A circuits use …… 24 AWG(24 SWG or .25mm2)
roboRIO PWM port outputs …… 26 AWG (27 SWG or 0.14 mm2)
SIGNAL LEVEL circuits (i.e. circuits which draw ≤1A continuous
and have a source incapable of delivering >1A, including but not
limited to roboRIO non-PWM outputs, CAN signals, PCM
Solenoid outputs, VRM 500mA outputs and Arduino outputs) use … 28 AWG (29 SWG or .08 mm2)

PART DESCRIPTION: Wiring Tolerances			QUANTITY/BOT: 1
DRAWN BY: CATALIN GHERCOIAS		CHECKED BY:	DATE: FEB 25, 2018
MATERIAL:	FILENAME: Page 5/5	ASSEMBLY: N/A	