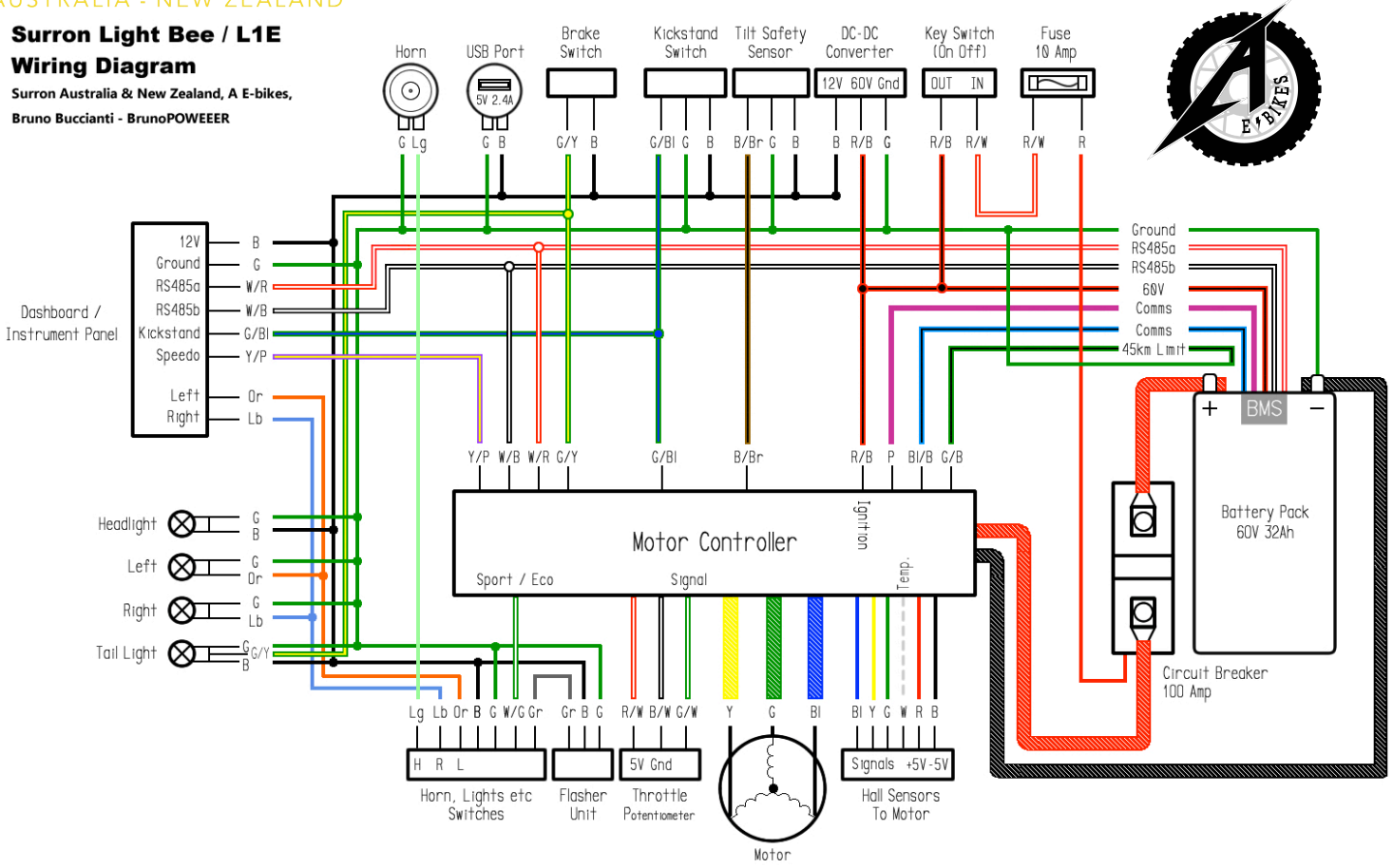
AUSTRALIA - NEW ZEALAND

Surron Light Bee / L1E
Wiring Diagram

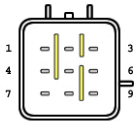
Surron Australia & New Zealand, A E-bikes,
Bruno Buccianti - BrunoPOWEEER



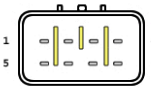
Legend

B	Black
Bl	Blue
Br	Brown
G	Green
Gr	Grey
Lb	Light Blue
Lg	Light Green
Or	Orange
P	Purple
R	Red
W	White
Y	Yellow
B/Bl	Black-Blue
B/Br	Black-Brown
B/W	Black-White
G/B	Green-Blue
G/W	Green-White
G/Y	Green-Yellow
R/B	Red-Black
R/W	Red-White
W/B	White-Black
W/R	White-Red
Y/P	Yellow-Pink

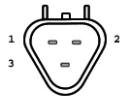
Motor Controller Connector Pinouts



Throttle, Temperature, Hall Sensors
1. R/W +5V Throttle
2. G/W Throttle Signal
3. B/W Ground Throttle
4. R +5V Hall Sensors
5. W Thermistor
6. B -5V Hall Sensors
7. Y Hall Signal
8. G Hall Signal
9. Bl Hall Signal



Speed, Ignition, Safety, Comms
1. W/G Sport / Eco Mode
2. R/B 60V Ignition
3. Y/P Speedometer
4. B/Br Tilt Safety Sensor
5. G/Y Brake Cut Off
6. G/Bl Kickstand Signal
7. G/B Elelectronic Speed Limiter
8. B/Bl Comms



Communications
1. W/R RS485a
2. W/B RS485b
3. P Comms

Battery Power

Red	+60VDC (battery positive)
Black	-60VDC (battery negative)

60V to Wiring Harness

Red	+60VDC (battery positive)
Green	-60VDC (battery negative)

Ignition key-switch (fused)

Red-White(IN)	+60VDC
Red-Black(OUT)	+60VDC activates motor controller, 12VDC

Motor

Yellow	Motor Phase
Green	Motor Phase
Blue	Motor Phase

Motor Hall Sensors

Red	+5VDC (powers the sensors)
Black	-5VDC (powers the sensors)
Blue	Hall sensor signal output (pulsing 5V)
Yellow	Hall sensor signal output (pulsing 5V)
Green	Hall sensor signal output (pulsing 5V)

Motor Temperature Sensor

White	thermistor (temperature-sensitive resistor)

Throttle / Accelerator

Red-White	+5VDC
Black-White	Negative
Green-White	Throttle Output/Signal (0.83 to 3.62V)

DC-DC Converter (60VDC down to 12VDC)

Red	+60VDC Battery Positive
Green	Ground / Battery Negative
Black	+12VDC output

Display / Dashboard

Yellow-Pink	Signal Speedo (yellow hall pulses)
Black	+12V
Green	Ground / Negative
White-Red	RS485a data (voltage/SoC%/error codes)
White-Black	RS485b data (voltage/SoC%/error codes)
Green-Blue	Kickstand sensor
Blue	Right Indicator Lights
Orange	Left Indicator Lights

Comms / Data (Battery-Controller-Display)

White-Red	RS485a (data/programming/diagnostics)
White-Black	RS485b (data/programming/diagnostics)

Comms / Data (Battery-Controller)

Purple	Comms/data between controller and battery
Black-Blue	Comms/data between controller and battery

E-Brake Cut-Off

Green-Yellow	Normally open (0V) or 12V brakes engaged

Tilt Safety Sensor

Black-Brown	Normally +12V output / Error 0.36V output
Black	+12V
Green	Ground / Negative

Kickstand

Green-Blue	+6V Output signal
Black	+12V
Green	Ground / Negative

Sport / Economy Modes

White-Green	open switch Eco / closed Sport mode

Electronic Speed Limiter (45km/h max)

Green-Black	5V signal, cut or join the loop wire to disable
Loop Wire(Green)	Ground / Negative

Front Light / Headlight

Headlight Harness

Black	+12V
Green	Ground / Negative

Headlight (3 possible circuits, not shown in diagram)

Green	Ground / Negative
White	Top light / High Beam
Blue	Bottom light / Low Beam
Brown	6 small LEDs

Indicators / Flashers / Blinkers

Grey	+12V Blinker/flasher output
Green	Ground / Negative
Blue	Right Indicator Lights
Orange	Left Indicator Lights

Rear / Tail Brake Light

Green-Yellow	+12V brake light (e-brake)
Black	+12V red tail light
Green	Ground / Negative

Horn

Light-Green	+12v
Green	Ground / Negative

USB charger (5V 2.4A output)

Black	+12V
Green	Ground / Negative