



LIGHTNING
MOTORCYCLES

LS-218



Ride the Lightning®



Ride the Lightning®

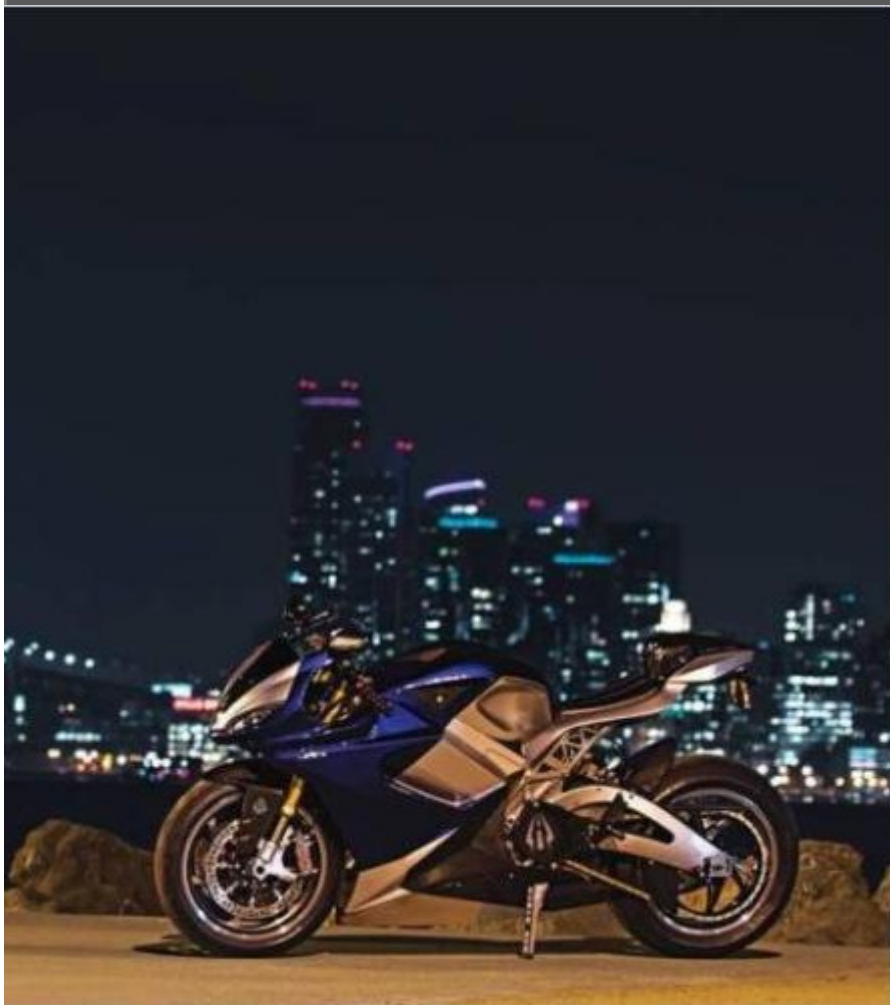
Take a few moments to imagine what owning a Lightning LS-218 would be like. Close but it's better than that!

Since 2016 the Lightning LS-218 has captured the heart and the trophies in competition. An electric motorcycle that is powerful, responsive and precise. With 263 hp and 1,100 lb ft of torque, it is eager on the road and dominant at the track.

A .54 hp/lb power to weight ratio. Top speed of over 200mph. 0 to 60 in under 2 seconds. And with the 28.3kWh XFC Xtreme Fast Charge option you can get 200 mile range at 65 mph highway speeds.

Competition proven performance. Winning Pikes Peak overall beating all gas and electrics by 20 seconds, a record that still stands...what else can we say.

The Lightning team devoted nine years of research and development, followed by more than five years of rigorous testing, validation and winning in competition.



Ride the Lightning is a register trademark of Lightning Motors Corporation

Engineered by Enthusiasts for Enthusiasts

Specifications & Features



Power & Torque

Power: 263hp / 196kw
 @ motor shaft
 244hp / 181kw @ rear wheel

Torque: 220 lb-ft / 298nm
 @ motor shaft
1,100 lb-ft / 1,491 nm
 @ rear wheel

RPM
 Maximum 10,500

Power to Weight Ratio
.53 hp/lb / 1.17 hp/kg

Performance
 Top Speed: 218 mph* / 350 kph*
 0 to 60 mph: 2 seconds**

Weight
 495 lbs. / 224 kg
 with 15kWh battery

LS-218 is built like a
 MotoGP bike no ABS

Premium Standard Features

- CNC billet aluminum alloy chassis and swingarm
- IPM oil cooled motor
- Carbon fiber body and fenders
- Öhlins suspension developed in collaboration with Lightning engineers and manufactured exclusively for the LS-218
- Brembo Racing GP4 monoblock brakes
- Lightning design forged 7075 aluminum alloy wheels in silver or black anodized finish
- 15kWh battery pack
- 3.3kW Level 2 on-board charger
- CCS Level 3 DC Fast & J1772 Level 2 Charging / NACS J3400 compatible
- Corbin premium saddle
- Pirelli Diablo SuperCorsa tires
- Keyless remote start
- LED lights and turn signals
- Rear wheel spools

Options

- 20kWh battery pack
- 28.3kWh XFC® Xtreme Fast Charge System
- Öhlins steering stabilizer
- BST carbon fiber wheels

*Top speed with land speed record gearing & fairings

**Dependant on rider ability, weight, weather and track conditions



Charging & Finishes



LS-218 comes with
CCS Level 3 &
J1772 Level 2 Charging
NACS compatible

**Metallic Claret
Bright Silver**

LS-218 is available in the 2 tone paint scheme only. Select any 2 PPG finishes - pearl, flake or matte finishes are additional cost.



**Lightning Blue
Bright Silver**

**Metallic Black
Dark Silver**



**Metallic Purple
Bright Silver**

**Florescent Red
Dark Blue**



**Matte Black
Atlantic Matte Metallic Blue**

LS-218 CHARGE TIMES

Standard 15kWh Battery Pack

35 minutes* to 80% SoC with CCS Level 3

120 minutes* to 80% SoC with 6.6kw Level 2

Optional 28.3kWh XFC®

Xtreme Fast Charge System

12 minutes* to 80% SoC with Level 3

* NOTE: Times may vary depending on charger and environmental factors

**Dark and
Light Silver**





XFC® Xtreme Fast Charge Option



28.3kWh / 200 mile range / 65 mph highway



XFC®

Xtreme Fast Charge Emblem
Signifies Peerless Technology
and Charging Performance

The Fastest Fast Charging Available

12 minutes* = 20% to 80% SoC, 28.3kWh battery

10 minutes* = 135 more highway miles, 262 city

Charging with Level 3 DC Fast Charger / Highway 70 mph / City 30 mph

* Dependent on ambient temperature.

Lightning's XFC® Xtreme Fast Charge System consists of Proprietary Technologies and Intellectual Property for the Fastest DC Level 3 fast charging available offered on any electric motorcycle. Extra cost option.

Exclusive Xtreme Fast Charge Components

- Lightning XFC Battery Management System
- Lightning XFC Battery Monitoring System
- Lightning XFC Thermal Management System
- Lightning XFC Proprietary Software
- Lightning RSSS (Redundant System Safety Sensing)
- Robust Level 3 DC Fast Charge Conductivity Hardware
- XFC Elemental Silicon Anode Batteries
- 3 years, thousands of miles of reliability and durability validation

Less Time on the Cord, More Time on the Road



LS-218 Features & Performance

LS-218 Features

Motor	IPM (Interior Permanent Magnet) oil cooled
Bodywork / Chassis & Swingarm	Carbon fiber / CNC billet aluminum alloy (Concentric / eccentric mount for tuning weight transfer)
Transmission (none)	Chain direct drive – Front sprocket 520 / Rear sprocket aluminum 520 / 520 racing chain
Battery Pack	15kwh - Optional 20kWh or 28.3 kWh XFC® – Xtreme Fast Charge System – Air cooled
Electronics Cooling	Water / glycol cooled
Suspension	Front: Ohlins / Lightning Part Number LM-02010_A_LS – built by Ohlins exclusively for LS-218 Öhlins FGRT inverted fork – dyno tuned by Ohlins /Lightning for the LS-218 - NIX30 cartridge internals, TiN surface treatment, billet aluminum radial caliper mountings, fully adjustable for preload, ride height, high and low speed compression and rebound Rear: Ohlins / Lightning Part Number LM-08170_A_LS – built by Ohlins exclusively for LS-218 Öhlins TTX36 shock and linkage system, fully adjustable for preload, ride height, high and low speed compression and rebound.
Brakes	Front: Brembo Racing GP4-RX CNC billet radial 4-piston calipers, Dual Brembo T-Drive 320mm fully floating rotors. Rear: Brembo
Wheels	Lightning design forged 7075 aluminum alloy Front: 3.5"x17" Rear: 6.0"x17"
Tires / Lean Angle	Front: 120/70ZR17 Rear: 200/55ZR17 Pirelli Diablo SuperCorsa / Up to 60 degrees
Dash	Wi-Fi compatible - Optional - Data logger, GPS
Regenerative Braking	Programmable
Seat Height (Rider accommodation only)	32" (81cm) – adjustable from 29" (60cm) to 35" (100cm) Foot pegs have significant adjustability
Weight	495 lbs./ 224 kg with 15kWh battery pack

Performance

Power / Torque	Power: 196kw (263hp) @ shaft / 181kw (244hp) @ rear wheel Torque: 298nm (220 lb-ft) torque @ shaft / 1,491nm (1,100 lb ft) @ rear wheel
Maximum RPM /Power to weight	10,500 / .53 hp/lb
0 to 60 mph* / Top Speed*	< 2 seconds**/ 218 mph * / 350 kph*

* Top speed with LSR bodywork and gearing

** Dependant on rider ability and track conditions



15kWh Battery Range

15kWh Battery (SAE J2982 Riding Range Test vs Real-World Riding Range)

15kWh Usable	Per SAE J2982 Range Test		Real-World Riding	
Route Type	Miles per Full Charge	Calculation* SAE J2982	Miles per Full Charge	Calculation* WLTP & EPA
City Avg: 30mph Max 40mph	307	Urban Riding Stop & Go	262	Based on Real-World Tests w/WLTP & EPA Test Protocol
Highway 55mph	162	Steady State at 55mph	150	Based on Real-World Tests w/WLTP & EPA Test Protocol
Combined City & Highway at 55mph (50/50)	235	Highway at Average 55mph	206	Based on Real-World Tests w/WLTP & EPA Test Protocol
Highway 65mph	130	Steady State at 65mph	105	Based on Real-World Tests w/WLTP & EPA Test Protocol
Combined City & Highway at 65mph (50/50)	219	Highway at Average 65mph "Highway Commuting Range"	191	Based on Real-World Tests w/WLTP & EPA Test Protocol

*PLEASE NOTE - ACTUAL RESULTS WILL VARY

Range will be affected and vary by riding style (low speed vs high speed / throttle modulation / acceleration rate), weight (rider and cargo), rider position (tuck vs upright), route (city vs highway / flat vs grades / straight vs winding), weather conditions (wind, temperature, humidity and precipitation), tire pressure and proper maintenance.



20kWh Battery Range

20kWh Battery (SAE J2982 Riding Range Test vs Real-World Riding Range)

20kWh Usable	Per SAE J2982 Range Test		Real-World Riding	
Route Type	Miles per Full Charge	Calculation* SAE J2982	Miles per Full Charge	Calculation* WLTP & EPA
City Avg: 30mph Max 40mph	410	Urban Riding Stop & Go	350	Based on Real-World Tests w/WLTP & EPA Test Protocol
Highway 55mph	217	Steady State at 55mph	200	Based on Real-World Tests w/WLTP & EPA Test Protocol
Combined City & Highway at 55mph (50/50)	314	Highway at Average 55mph	275	Based on Real-World Tests w/WLTP & EPA Test Protocol
Highway 65mph	175	Steady State at 65mph	125	Based on Real-World Tests w/WLTP & EPA Test Protocol
Combined City & Highway at 65mph (50/50)	292	Highway at Average 65mph "Highway Commuting Range"	255	Based on Real-World Tests w/WLTP & EPA Test Protocol

*PLEASE NOTE - ACTUAL RESULTS WILL VARY

Range will be affected and vary by riding style (low speed vs high speed / throttle modulation / acceleration rate), weight (rider and cargo), rider position (tuck vs upright), route (city vs highway / flat vs grades / straight vs winding), weather conditions (wind, temperature, humidity and precipitation), tire pressure and proper maintenance.



28.3kWh XFC® Battery Range

28.3kWh XFC® Xtreme Fast Charge System

28kWh Usable	Per SAE J2982 Range Test		Real-World Riding	
Route Type	Miles per Full Charge	Calculation* SAE J2982	Miles per Full Charge	Calculation* WLTP & EPA
City Avg: 30mph Max 40mph	574	Urban Riding Stop & Go	490	Based on Real-World Tests w/WLTP & EPA Test Protocol
Highway 55mph	303	Steady State at 55mph	280	Based on Real-World Tests w/WLTP & EPA Test Protocol
Combined City & Highway at 55mph (50/50)	439	Highway at Average 55mph	385	Based on Real-World Tests w/WLTP & EPA Test Protocol
Highway 65mph	238	Steady State at 65mph	190	Based on Real-World Tests w/WLTP & EPA Test Protocol
Combined City & Highway at 65mph (50/50)	408	Highway at Average 65mph "Highway Commuting Range"	357	Based on Real-World Tests w/WLTP & EPA Test Protocol

*PLEASE NOTE - ACTUAL RESULTS WILL VARY

Range will be affected and vary by riding style (low speed vs high speed / throttle modulation / acceleration rate), weight (rider and cargo), rider position (tuck vs upright), route (city vs highway / flat vs grades / straight vs winding), weather conditions (wind, temperature, humidity and precipitation), tire pressure and proper maintenance.



Proven Performance



FIM North American Champion
2010 TTXGP Zero Race Series
ridden by Michael Barnes.



Pikes Peak International Hill
Climb in 2013, Carlin Dunne
on his LS-218 First Overall -
beating every gas and
electric motorcycle by 20
seconds with a 10:00.694.
An electric record that has
not been broken.



Lightning Motors Corp. Founded in 2006



FIM World Champion
2012 TTXGP at Le Mans
ridden by Miguel Duhamel.



Lightning LS-218 SCTA
World Land Speed
Record 215.907 hitting
218mph at Bonneville
Salt Flats ridden by
Paul Thede.

■ 2006 ■

Lightning builds the 1st Lithium
Battery Sport Bike in the
World - The Lightning E1

■ 2009 ■

Lightning 1st E-Motorcycle
World Land Speed Record
173.038mph

LS prototype introduced

■ 2010 ■

Lightning FIM North American
TTXGP Series Champion

■ 2011 ■

LS-218 1st E-Motorcycle to
break 200mph at Bonneville
SCTA World Record 215.907
Top speed 218mph / 351kph
LS officially named LS-218

■ 2012 ■

Lightning crowned FIM TTXGP
World Champion after winning
final at Le Mans

1st Electric Team to use energy
from Solar Power to charge
motorcycles in competition

■ 2013 ■

LS-218 1st Overall Pike's
Peak beat the world's
best Gas and Electric
motorcycles by 20 seconds,
10:00.694 – An electric
record that still stands

■ 2016 ■

LS-218 NHTSA & USDOT
Production Certification

First production LS-218
delivered - 200hp with
900 lb ft of torque
.40 hp/lb power to weight

■ 2018 ■

LS-218RR first 800v
production motorcycle

■ 2020 ■

LS-218 power increase
to 234hp with 1,000 lb ft
of torque
.47 hp/lb power to weight

■ 2023 ■

LS-218 power increase
to 263hp with 1,100 lb ft
of torque
.53 hp/lb power to weight

Turning Skeptics Into Believers



LIGHTNING

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Ride the Lightning®

Visit us at www.lightningmotorcycle.com

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