

X3.M Control Hub

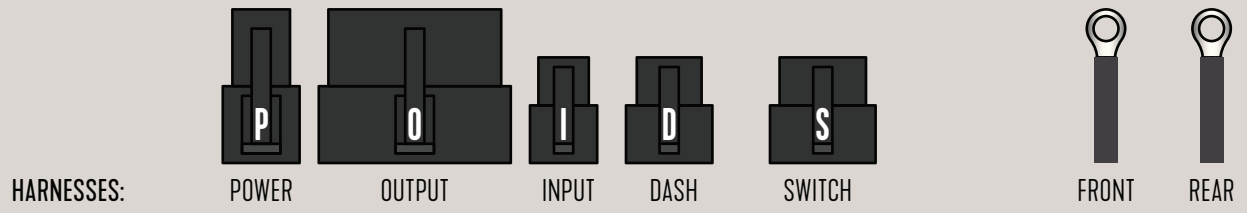
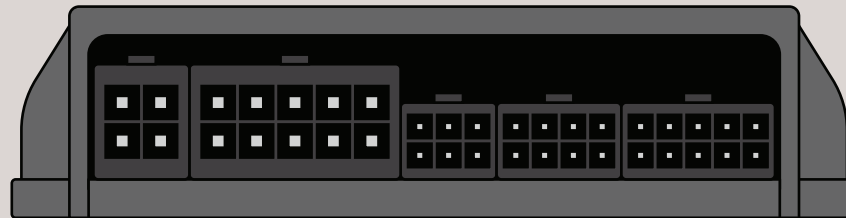
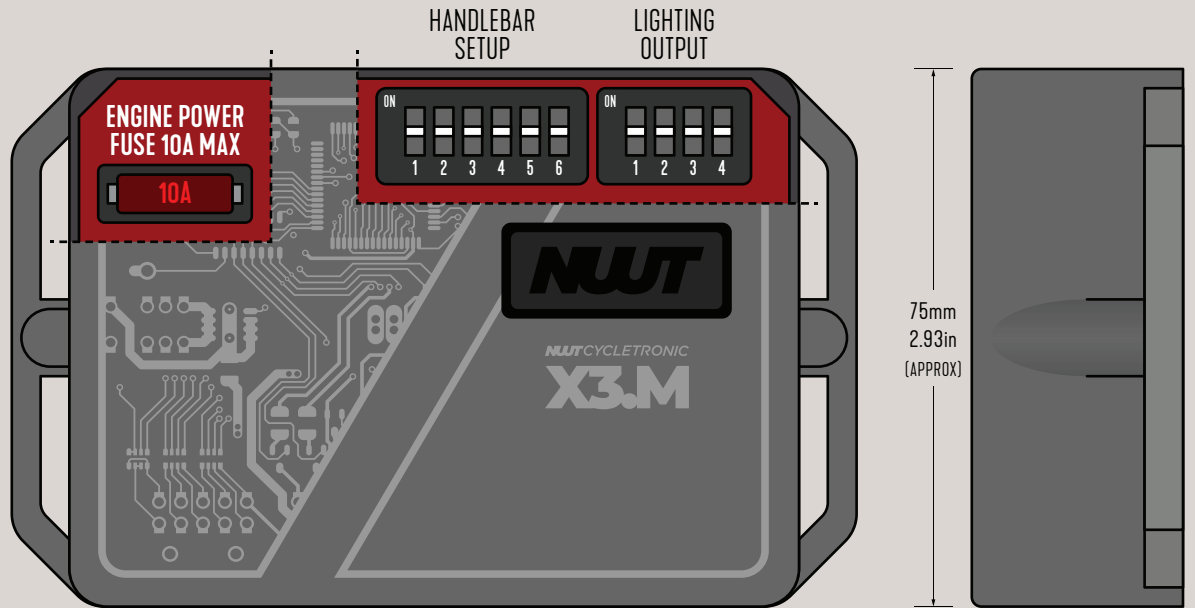
MULTIPLEX SWITCH

FEATURES

- Complete electrical control hub
- Atmel 8-bit AVR® RISC-based microcontroller
- Trench type MOSFET powered
- Solid State design for water-proof and shock-proof operation
- 4 layer PCB design utilizing SMD components
- PTC smart fuse protection with auto reset
- Optimized for LED lighting
- On board “fly-back” protection circuit
- AC/DC voltage runaway engine shutdown protection
- Charging system monitoring with fault audible notification
- Enhanced engine power protection with quick blow fuse
- Complete color-coded wiring harness
- No start ignition coil time-out power off
- Starter motor safety lock out with anti-grind
- Starter motor max crank time out
- Brake light flash pre-warning (Selectable)
- Automatic brake light HOLD (Selectable)
- Onboard digital flasher (Selectable)
- Intelligent directional switching signal light
- Signal light time out auto off
- DRL/Halo/Front Marker light output
with TYPE 2 switchback (Selectable)
- “PARK” position light feature (Hazard lights)
- Master light control
- Sensor inputs
- Auxiliary sensor input/output
- Dash gauge outputs (Enhanced)
- Soft start headlight ON
- Engine run monitoring
- Multi-use internally protected power output
- Single wire PWM taillight output
- Sequential/self flashing signal light capable
- DIY fully configurable handlebar switch input
- Handlebar switch size (DIY)
- 1 year replacement warranty & tech service

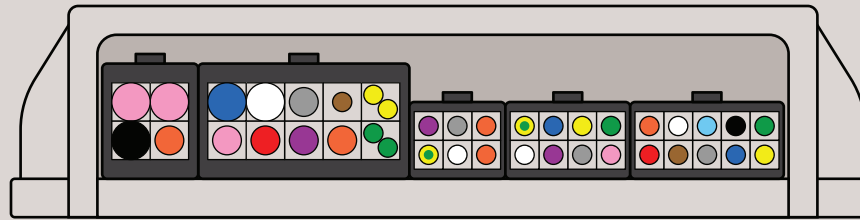
INCLUDES

- X3.M Control Hub
- Plug in wiring harness (Power, Output, Input, Dash)
- Plug&Go handlebar switch set harness (for DIY handlebar switches)
- GND harness



X3.M

Pinouts



POWER OUTPUT INPUT DASH SWITCH



FRONT GND

GND	16AWG, 0.5m	(-)	DASH/DRL/HEADLIGHT
GND	18AWG, 0.5m	(-)	HORN
GND	22AWG, 0.5m	(-)	LEFT TURN SIGNAL LIGHT
GND	22AWG, 0.5m	(-)	RIGHT TURN SIGNAL LIGHT

POWER

K+	16AWG, 1.25m	(+)	KEY SWITCH POWER IN (LONG)
GND	16AWG, 0.25m	(-)	CHASSIS GROUND IN
S+	16AWG, 0.25m	(+)	SPARE SWITCH POWER OUT (SHORT)
P+	18AWG, 1.25m	(+)	PARK LIGHT SWITCH IN

OUTPUT

HI	16AWG, 1.25m	(+)	HEADLIGHT HIGH BEAM
F+	18AWG, 0.25m	(+)	PROTECTED POWER
LO	16AWG, 1.25m	(+)	HEADLIGHT LOW BEAM
ENGINE	18AWG, 0.75m	(+)	ENGINE IGNITION POWER
HORN	18AWG, 0.75m	(+)	HORN
STARTER	18AWG, 0.5m	(+)	STARTER SOLENOID / RELAY
FRONT LIGHT	22AWG, 0.75m	(+)	DRL / HALO / FRONT MARKER
TAILLIGHT	18AWG, 0.75m	(+)	TAILLIGHT
LEFT TURN	(2) 22AWG, 1.25m, 0.75m	(+)	LEFT TURN SIGNAL LIGHTS (FRONT & REAR)
RIGHT TURN	(2) 22AWG, 1.25m, 0.75m	(+)	RIGHT TURN SIGNAL LIGHTS (FRONT & REAR)

INPUT

OIL	22AWG, 0.75m	(-)	OIL SWITCH
RUN SENSE	22AWG, 0.75m	(~)	IGNITION COIL TRIGGER
NEUTRAL	22AWG, 0.75m	(-)	NEUTRAL SWITCH
AUX	22AWG, 0.75m	(~)	AUX SENSOR / SWITCH / INPUT
BRAKE	22AWG, 0.75m	(-)	BRAKE SWITCH IN
BRAKE	22AWG, 0.75m	(-)	BRAKE SWITCH OUT

REAR GND

GND	18AWG, 0.5m	(-)	BRAKE/TAIL LIGHT
GND	22AWG, 0.5m	(-)	RIGHT TURN SIGNAL LIGHT
GND	22AWG, 0.5m	(-)	LEFT TURN SIGNAL LIGHT

DIY HANDLEBAR SWITCH

BUTTON1	22AWG, 1.25m	(-)	BUTTON1 SWITCH
BUTTON2	22AWG, 1.25m	(-)	BUTTON2 SWITCH
BUTTON3	22AWG, 1.25m	(-)	BUTTON3 SWITCH
BUTTON4	22AWG, 1.25m	(-)	BUTTON4 SWITCH
BUTTON5	22AWG, 1.25m	(-)	BUTTON5 SWITCH
BUTTON6	22AWG, 1.25m	(-)	BUTTON6 SWITCH
TAILLIGHT	22AWG, 1.25m	(-)	TAILLIGHT SWITCH
HEADLIGHT	22AWG, 1.25m	(-)	HEADLIGHT SWITCH
CLUTCH	22AWG, 1.25m	(-)	CLUTCH SWITCH
BRAKE	22AWG, 1.25m	(-)	BRAKE SWITCH

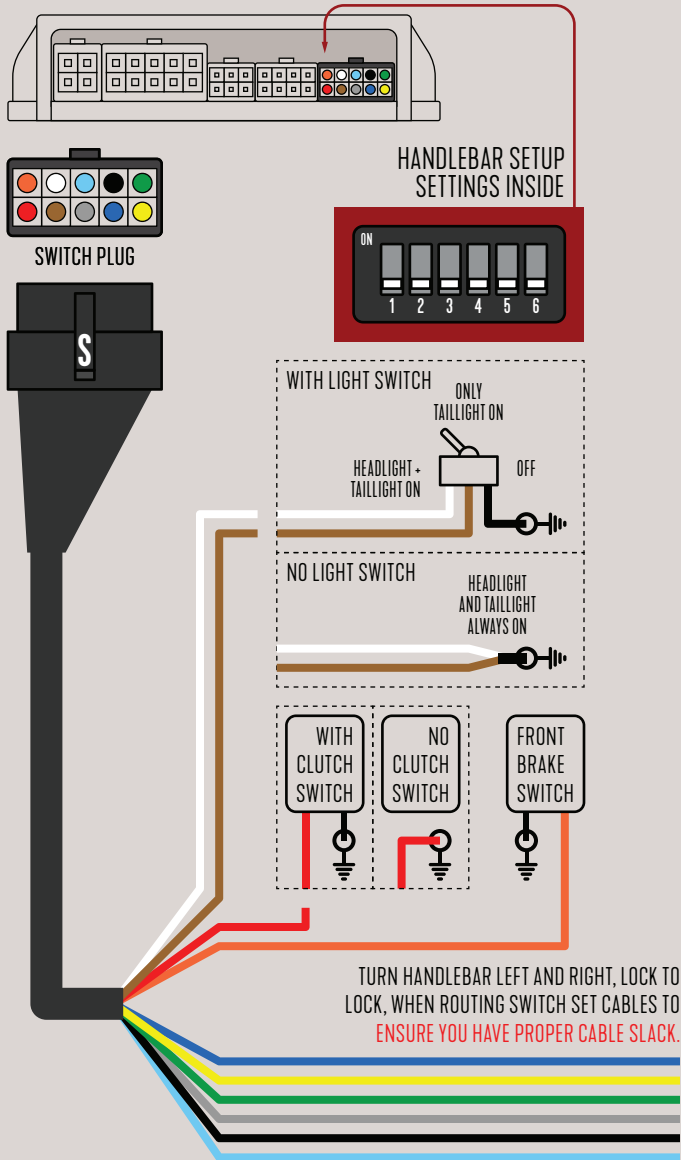
DASH

D+	22AWG, 1.25m	(+)	GAUGE POWER
RIGHT TURN	22AWG, 1.25m	(+)	RIGHT TURN INDICATOR
NEUTRAL	22AWG, 1.25m	(-)	NEUTRAL INDICATOR
LEFT TURN	22AWG, 1.25m	(+)	LEFT TURN INDICATOR
OIL	22AWG, 1.25m	(-)	OIL INDICATOR
HI	22AWG, 1.25m	(+)	HIGH BEAM INDICATOR
AUX	22AWG, 1.25m	(~)	AUX OUTPUT
TACH	22AWG, 1.25m	(~)	TACH PULSE

X3.M

Switch Harness

SELF-SUPPLIED SWITCH SET



2 BUTTON (FORMER TYPE-M)



SELF-RETURN (MOMENTARY) ONLY
FOR BOTH LEFT AND RIGHT

LEFT HANDLEBAR SWITCH



RIGHT HANDLEBAR SWITCH



4 BUTTON SETTINGS

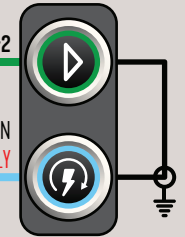


↑ SELF-RETURN (MOMENTARY) UP OR
↓ SELF-LOCKING (LATCHING) DOWN

SETTING #1



SETTING #2

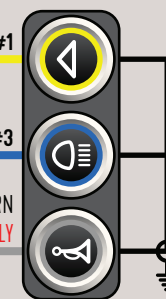


6 BUTTON SETTINGS

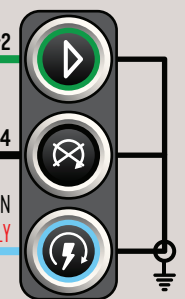


↑ SELF-RETURN (MOMENTARY) UP OR
↓ SELF-LOCKING (LATCHING) DOWN

SETTING #1



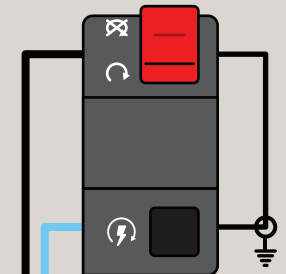
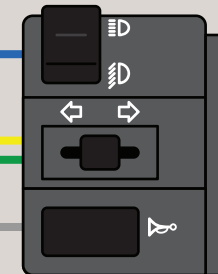
SETTING #2



STANDARD TYPE SETTINGS



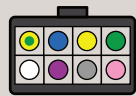
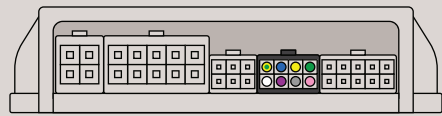
ALL DOWN FOR FACTORY STYLE



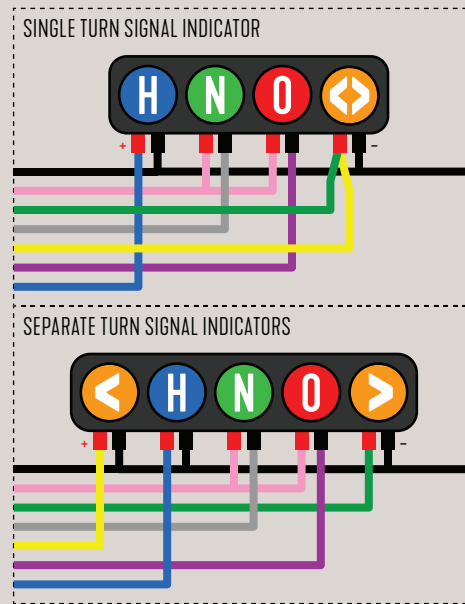
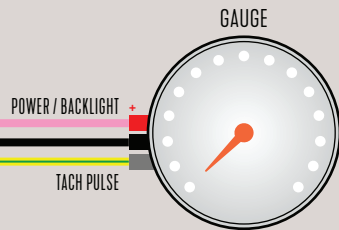
X3.M

Dash Harness

TURNING DUMMY TO SMART LIGHTS



DASH PLUG



FRONT GND STRAP
MOUNT ON MAIN FRAME/CHASSIS

16AWG DASH/DRL/HEADLIGHT
18AWG HORN
22AWG LEFT TURN SIGNAL LIGHT
22AWG RIGHT TURN SIGNAL LIGHT

AVOID EXTENDING GROUND WIRES
KEEP SHORT AS POSSIBLE.

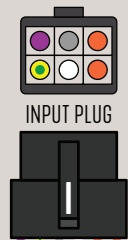
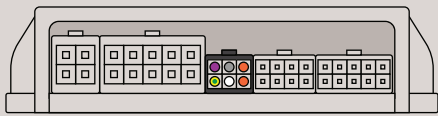
TURN HANDLEBAR LEFT AND RIGHT, LOCK TO LOCK, WHEN ROUTING DASH CABLES TO ENSURE YOU HAVE PROPER CABLE SLACK.

AUX

X3.M

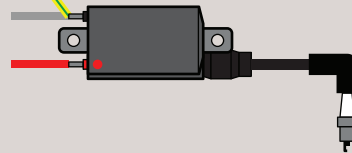
Input Harness

RUN SENSE / NEUTRAL / OIL / R-BRAKE

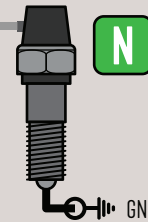


INPUT PLUG

SPARK COIL
RUN SENSE

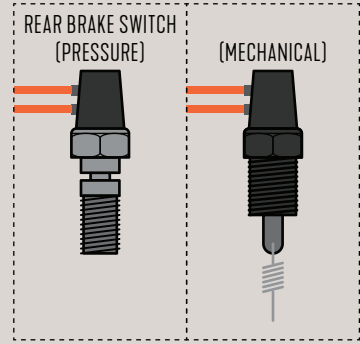


NEUTRAL
SWITCH



N

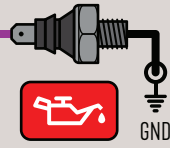
GND



REAR BRAKE SWITCH
(PRESSURE)

(MECHANICAL)

OIL PRESSURE
SWITCH



GND

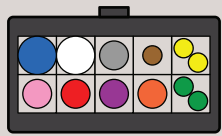
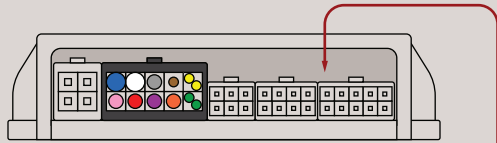
AUX SENSOR / SWITCH / INPUT

CHECK SWITCHES FOR PROPER FUNCTIONALITY
CLEAN/REBUILD/REPLACE WHEN NECESSARY

X3.M

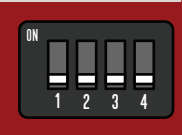
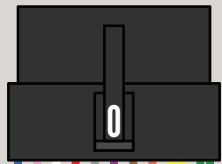
Output Harness

LIGHTING / HORN

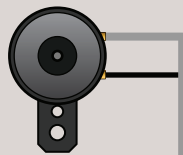


LIGHTING OUTPUT SETTINGS INSIDE

OUTPUT PLUG



HRNX.105



Output Harness:
POWER / STARTING / CHARGING PAGE

Output Harness:
ENGINE POWER / SPARK COILS PAGE

DIGITAL FLASHER OPTION



↑ REGULAR TURN SIGNALS OR
↓ SELF-FLASHING /
SEQUENTIAL (FLOWING)

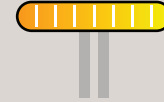
REGULAR
SINGLE
ELEMENT



REGULAR
DUAL
ELEMENT



SELF-FLASHING /
SEQUENTIAL
(FLOWING)



FRONT LIGHTING OPTION A



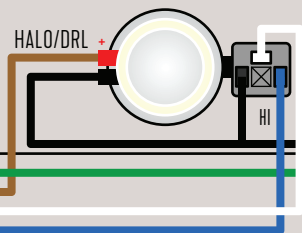
HALO/DRL ONLY
NO MARKERS

↑ 2 UP



LEFT
TURN

HEADLIGHT



RIGHT
TURN

FRONT LIGHTING OPTION B



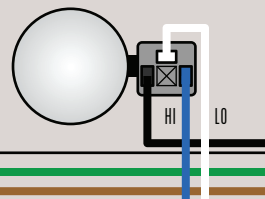
NO HALO/DRL
MARKERS ONLY

↓ 2 DOWN



LEFT
TURN

HEADLIGHT



RIGHT
TURN

TAILLIGHT FEATURES



3 | 4
BRAKE FLASH | AUTOMATIC
PRE WARNING | BRAKE HOLD

↑ ON
↓ OFF

DIM

BRIGHT



TAILLIGHT



RIGHT
TURN

FRONT GND STRAP

MOUNT ON MAIN FRAME/CHASSIS

16AWG DASH/DRL/HEADLIGHT

18AWG HORN

22AWG LEFT TURN SIGNAL LIGHT

22AWG RIGHT TURN SIGNAL LIGHT

AVOID EXTENDING GROUND WIRES
KEEP SHORT AS POSSIBLE.

YOUR NEW GENERATION CONTROL
HUB DOES NOT NEED ANY ADDITIONAL
PARTS TO RUN LED LIGHTS.
THEY PRODUCE LOW TO NO HEAT
AND ARE ENERGY EFFICIENT.

REAR GND STRAP

MOUNT ON MAIN FRAME/CHASSIS

18AWG TAIL LIGHT

22AWG LEFT TURN SIGNAL LIGHT

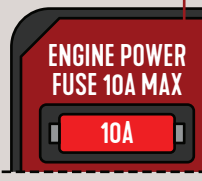
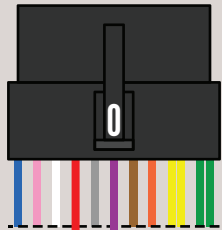
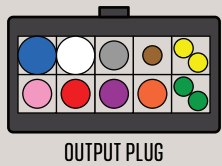
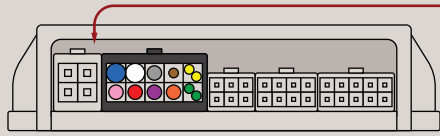
22AWG RIGHT TURN SIGNAL LIGHT

DO NOT EXTEND OR LENGTHEN GND
WIRES KEEP SHORT AS POSSIBLE.

X3.M

Output Harness

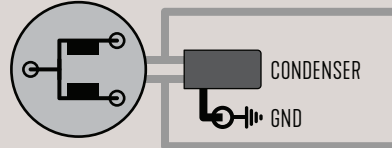
ENGINE POWER / SPARK COILS



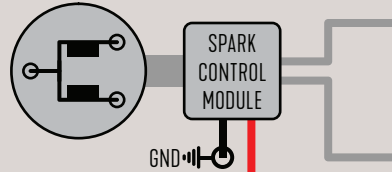
Output Harness:
LIGHTING / HORN PAGE

Output Harness:
POWER / STARTING / CHARGING PAGE

POINTS BREAKER

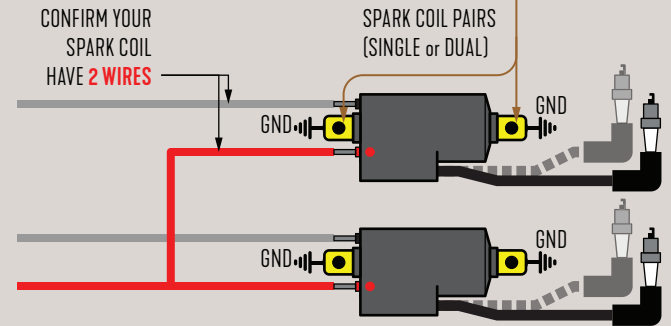


CDI (CAPACITOR DISCHARGE IGNITER) / TCI (TRANSISTOR CONTROLLED IGNITER)



CONFIRM YOUR SPARK COIL HAVE **2 WIRES**

IT IS ABSOLUTELY CRITICAL THE COIL **CENTER CORES** ARE GROUNDED SOLID, DIRECT METAL TO METAL ON THE MAIN CHASSIS.

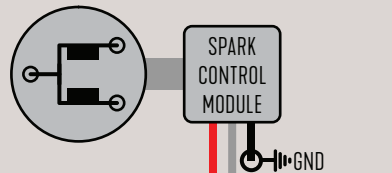


DO NOT ASSUME, CHECK!
INSPECT, CLEAN AND SECURE SPARK PLUG CAP.
HARD SPARK PLUG CABLES? INSPECT FOR BREAKS.
EVEN BRAND NEW PARTS CAN BE DEFECTIVE.

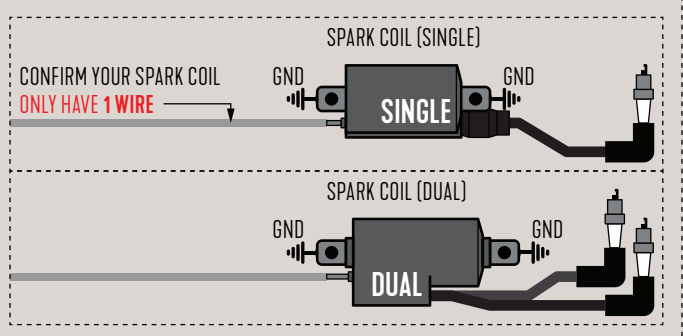
MAGNETO



REMOVE PRE INSTALLED FUSE



CONFIRM YOUR SPARK COIL **ONLY HAVE 1 WIRE**

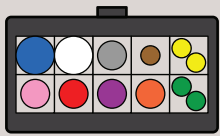
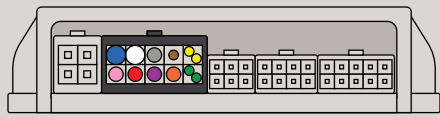


X3.M

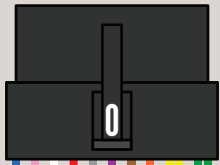
Output Harness

POWER / STARTING / CHARGING

MODERNIZE YOUR CHARGING SYSTEM
WITH A **DIGITAL TYPE** RECTIFIER+REGULATOR
FOR SAFER AND MORE EFFICIENT CHARGING SOURCE



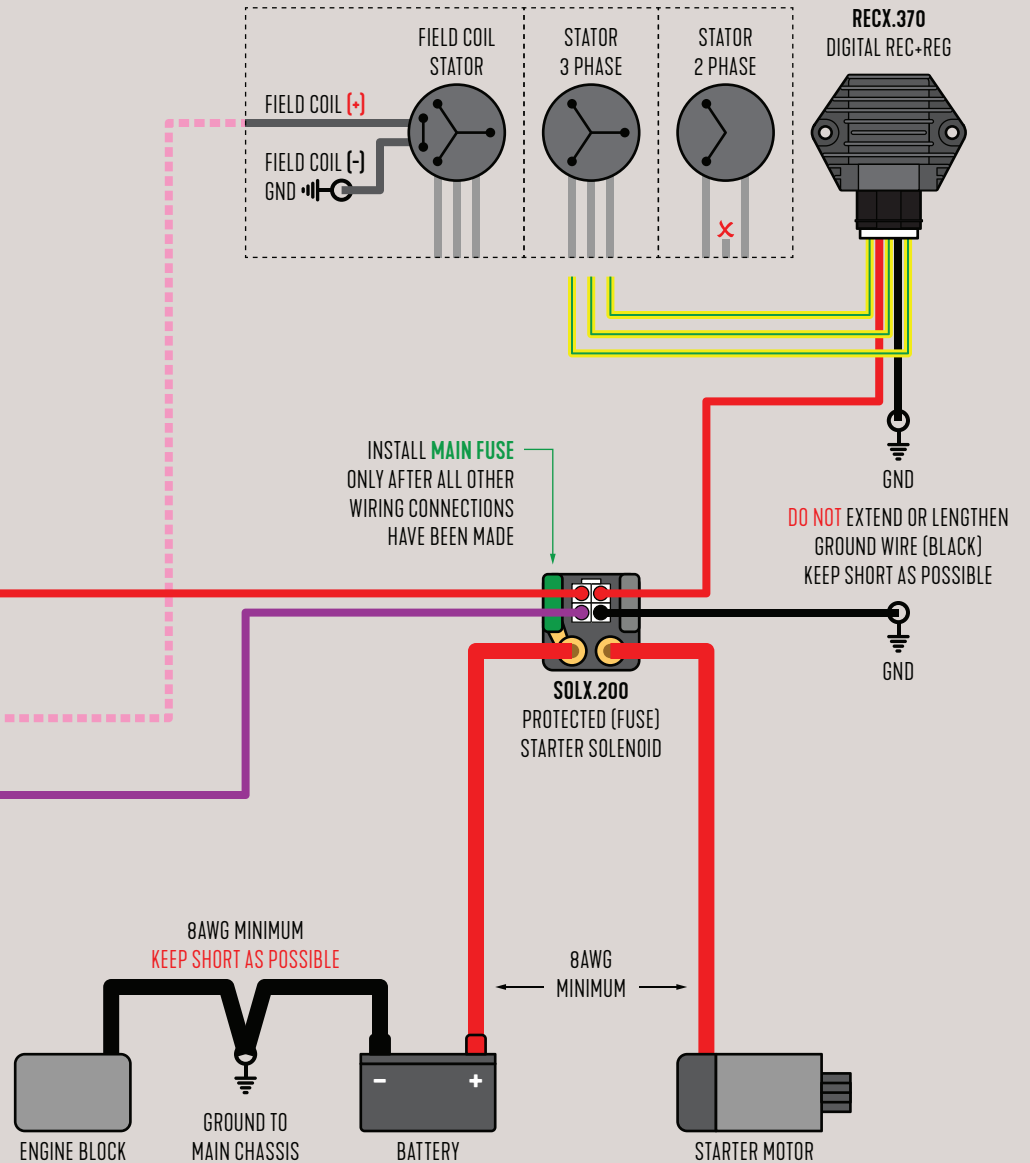
OUTPUT PLUG



Output Harness:
LIGHTING / HORN PAGE

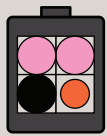
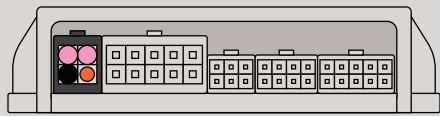
Output Harness:
ENGINE POWER / SPARK COILS PAGE

Power Harness
PAGE



X3.M

Power Harness KEY SWITCH



POWER PLUG



KEY SWITCH (GENERIC 3-POSITION)

DO NOT EXTEND / LENGTHEN
GROUND WIRE (BLACK)
KEEP SHORT AS POSSIBLE

GND

KEY-ON SPARE POWER

YOUR WIRE COLORS

SOURCE _____

IGNITION _____

PARK _____



KEY SWITCH

KEYX.S

DO NOT EXTEND / LENGTHEN
GROUND WIRE (BLACK)
KEEP SHORT AS POSSIBLE

GND

KEY-ON SPARE POWER

DO NOT EXTEND / LENGTHEN
GROUND WIRE (BLACK)
KEEP SHORT AS POSSIBLE

GND



KEY SWITCH

KEYX.R

DO NOT EXTEND / LENGTHEN
GROUND WIRE (BLACK)
KEEP SHORT AS POSSIBLE

GND

KEY-ON SPARE POWER



ROTARY SWITCH

INSTALL MAIN FUSE
ONLY AFTER ALL OTHER
WIRING CONNECTIONS
HAVE BEEN MADE



SOLX.200
PROTECTED (FUSE)
STARTER SOLENOID