

## 22mm Inrush Protection Switch

IP 69K 20Amp 120A Surge

### Features

- ▶ One channel 20 Amp max. Electrical Rating.
- ▶ Two channels 10 Amp max. /Channel Electrical Rating.
- ▶ At night every switch is backlit with Blue LED light for great visibility. Turn on a particular function and the LED turns Red letting you know the function is turned on.
- ▶ Stainless Steel SS316 Body and IP69K Waterproof Rating.
- ▶ Protection from Salt Spray (Fog) Test (EN ISO 9227-17).
- ▶ 20g Bump Shock Test Approved.
- ▶ Wires/Switch meet Flammability Rating UL 94 V2 and
- ▶ All material will be non-flammable or will be 105°C spec. When the pump is running, the LED turns red automatically
- ▶ **With Ultra Bright LEDs**

### Specification

|                                  |                                                                                         |
|----------------------------------|-----------------------------------------------------------------------------------------|
| Illuminated                      | <b>Ultra Bright LEDs</b><br>Blue, Green, Red, Yellow, White LED                         |
| Voltage Rating                   | 9VDC ~ 24 VDC                                                                           |
| Current Rating                   | 20A 12VDC, 80A Surge (200 ms)                                                           |
| Reverse Polarity Protection      | 24 VDC                                                                                  |
| Initial Contact Resistance       | ≤ 10 mΩ                                                                                 |
| Overload Protection              | ≥120A, Flashing white LED<br>Outputs do not function<br>Switch is reset by press button |
| Mechanical Life                  | 50,000 Cycles                                                                           |
| Electrical Life Contact          | 10,000 Cycles                                                                           |
| Resistance Insulation            | 50 mΩ Maximum                                                                           |
| Resistance                       | 1000mΩ Minimum                                                                          |
| Dielectric Strength              | 2,000 VAC                                                                               |
| Operate Storage Temp             | -20°C ~ +55°C                                                                           |
| Travel                           | 1.50mm                                                                                  |
| Moisture Protection              | IP69K                                                                                   |
| Contact Material                 | Silver Alloy                                                                            |
| Actuation Force                  | 4 N                                                                                     |
| Panel Thickness                  | 1-6mm                                                                                   |
| Mounting Nut Torque              | 5-14Nm                                                                                  |
| <b>Construction Material</b>     |                                                                                         |
| Body Material                    | Stainless Steel SS316                                                                   |
| Lens Material                    | PC material rated to 105°C                                                              |
| Switch Plug & Dongle             | Nylon 6 rated to 105°C                                                                  |
| <b>Deutsch Recommended Part#</b> |                                                                                         |
| Large socket                     | 0462-203-12141                                                                          |
| Small socket                     | 0462-209-16141                                                                          |
| Dummy Plug                       | 14017-ZZ                                                                                |

### Part No.

| Function                           | Parts No.  | Off<br>1st On   | 2nd On<br>3rd On | Rear Mark<br>Page |
|------------------------------------|------------|-----------------|------------------|-------------------|
| Off-On                             | 9059-1113  | (Blue)<br>Red   | X<br>X           | 3<br>Red dot      |
| Off-(On)                           | 9059-2113  | (Blue)<br>Red   | X<br>X           | 3<br>Green dot    |
| Nav/Anc                            | 9059-3114  | (Blue)<br>Green | Red<br>X         | 4<br>White dot    |
| Off-On-On                          | 9059-3113  | (Blue)<br>Green | Red<br>X         | 4<br>Blue dot     |
| Off-On-On-Both                     | 9059-3115  | (Blue)<br>Green | Red<br>Yellow    | 5<br>Yellow dot   |
| Off-(On)-(On)                      | 9059-2123  | (Blue)<br>Green | Red<br>X         | 5<br>Green dot    |
| Off-(On)                           | 9059-2213  | (Red)<br>Red    | X<br>X           | 6<br>Green dot    |
| Auto Nav<br>Photo Sensor           | 9059-3734  | (Blue)<br>Green | Red<br>Yellow    | 6<br>White dot    |
| Timer<br>ON(1min G)<br>OFF(2min Y) | 9059-1555  | (Blue)<br>Red   | Green<br>Yellow  | 7<br>Red dot      |
| Timer<br>ON(2min Red)<br>--> OFF   | 9059-1555F | (Blue)<br>Red   | X<br>X           | 7<br>Red dot      |
| Dimmer                             | 9059-3116  | (Blue)<br>Red   | X<br>X           | 8<br>Green dot    |
| 3-way Switch                       | 9059-5113  | (Blue)<br>Red   | X<br>X           | 9<br>Red dot      |
| Off-(On)<br>Ground                 | 9059-2713  | (Blue)<br>Red   | Purple<br>X      | 10<br>Purple dot  |
| Off-On<br>Ground                   | 9059-1713  | (Blue)<br>Red   | Purple<br>X      | 10<br>Purple dot  |
| Off-(On)<br>Signal                 | 9059-2118  | (Blue)<br>Red   | Purple<br>X      | 11<br>Green dot   |
| On-(Off)                           | 9059-2913  | Red<br>(Blue)   | X<br>X           | 11<br>Green dot   |

### Replaceable Push Button Actuator

| Style                           | Parts No.           |
|---------------------------------|---------------------|
| Full Translucent                | 9451-1001           |
| SS Ring                         | 9451-1002           |
| Laser Logo(Blank)               | 9451-1005           |
| BW DT Connector                 | 9053-3914           |
| Dummy Plug                      | 114017-ZZ           |
| Laser Logo(Cust)<br>Custom Text | 9451-0001~<br>-0324 |

Standard Legend Imprinting Code: 12 13

\* We reserve the right to change specifications at any time without incurring any obligations!

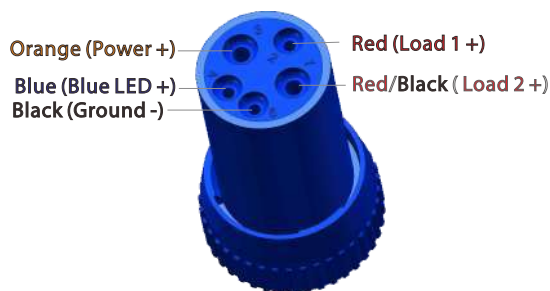
## 22mm Inrush Protection Switch

IP 69K 20Amp 120A Surge

### WARNING

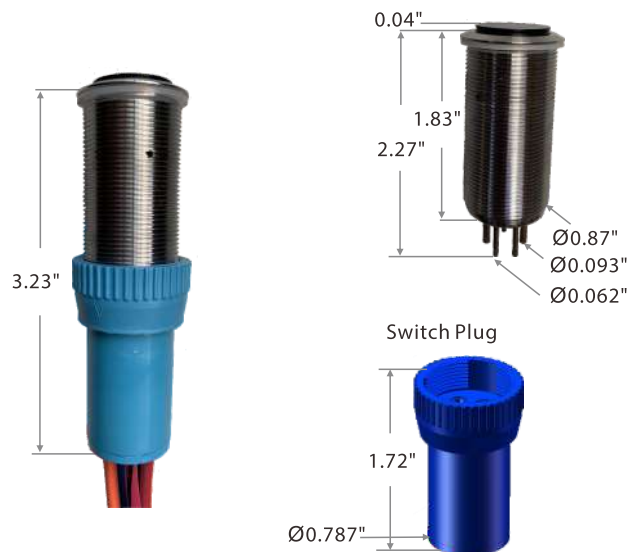
- ▶ Dummy plugs required in Bluewater DT connectors for all non-wired (empty) pin locations.
- ▶ Failure to include dummy plug in non-wired (empty) pin locations in Bluewater DT Connector voids water tight rating and warranty.
- ▶ See part number for dummy plugs on page one.
- ▶ Wire sizes must meet minimum OD requirements listed on page one. Failure to meet the OD requirements voids water-tight rating and warranty.
- ▶ Only use Bluewater DT connector, other connector will cause damage & void warranty.

### Recommended Wiring

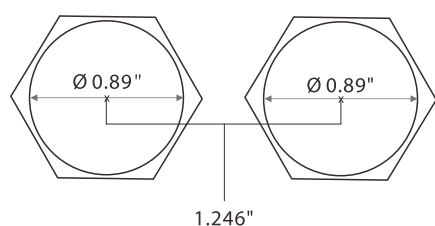


|                 |                 |
|-----------------|-----------------|
| Black 16awg     | Ground -        |
| Blue 16awg      | Blue LED +12Vdc |
| Red 14awg       | Load1 +12Vdc    |
| Orange 14awg    | Power +12Vdc    |
| Red/Black 14awg | Load2 +12Vdc    |

### Size Diagram

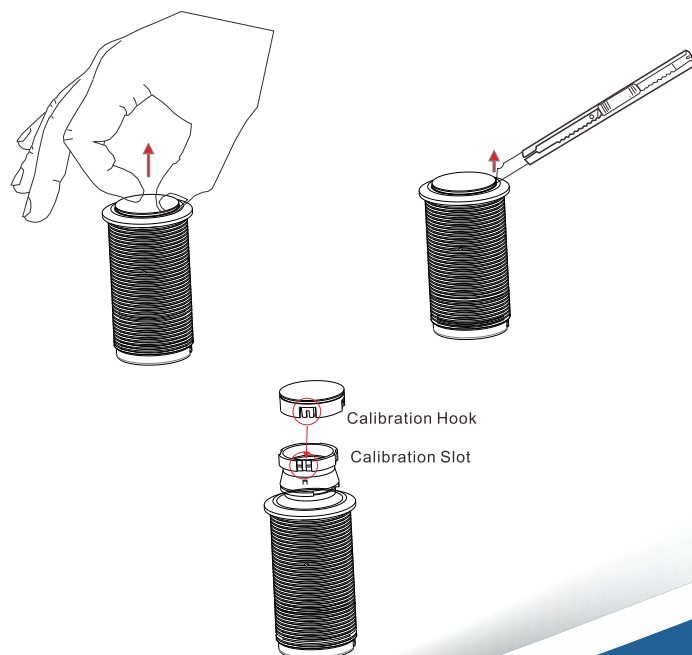


### Mounting Hole



Recommended Minimum Center Spacing to allow for point-to-point mounting nut with center removal tool clearance

### Replacing Actuator



9059-1113

Off - On

Blue LED (Off) Red LED (On)

## Operation

- ▶ Press turns on the device (LED turns Red) .
- ▶ Press turns off the device (LED turns Blue)



Laser Etched Actuator in **Daytime Mode**  
LED light is off.



Laser Etched Actuator in **Nighttime Mode**  
The Blue LED provides great visibility of the function switches and lets you know that the switches are in off position .



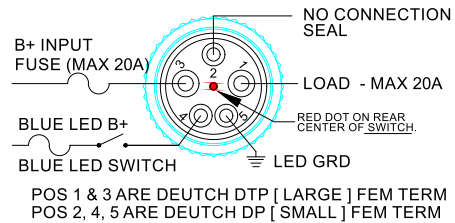
Laser Etched Actuator in **On Mode**  
The Red LED lets you know that the device is on .



Laser Etched Actuator in **Inrush Protection Mode**  
LED Flashing White.  
Inrush Load Upto 120Amp, LED Flashing White, output does not function, Switch is reset by Press Button .

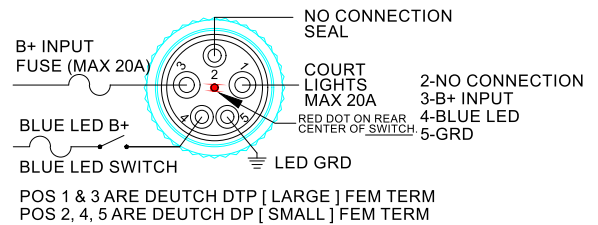
## REAR PLUG VIEW

OFF CAN BE BLUE BACKLIT - APPLY B+ TO TERM 4.  
1ST PUSH - LIGHTS RED [ LOAD 1 ON ]  
2ND PUSH - OFF



## COURTESY LIGHTS EXAMPLE

OFF CAN BE BLUE BACKLIT - APPLY B+ TO 4.  
1ST PUSH - LIGHTS RED [ COURT LTS ON ]  
2ND PUSH - OFF



9059-2113

Off - (On)

OFF-[1 M ON ON] - [OFF] BLU/RED

## Operation

- ▶ Press and hold the button to turns on the device (LED turns Red) .
- ▶ Release the button to turns off the device (LED turns Blue)



Laser Etched Actuator in **Daytime Mode**  
LED light is off.



Laser Etched Actuator in **Nighttime Mode**  
The Blue LED provides great visibility of the function switches and lets you know that the switches are in off position .



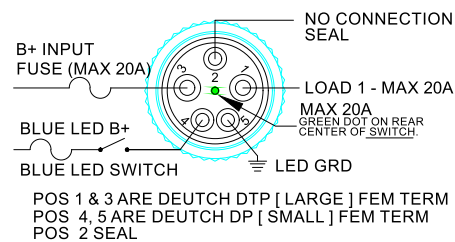
Laser Etched Actuator in **On Mode**  
The Red LED lets you know that the device is on .



Laser Etched Actuator in **Inrush Protection Mode**  
LED Flashing White.  
Inrush Load Upto 120Amp, LED Flashing White, output does not function, Switch is reset by Press Button .

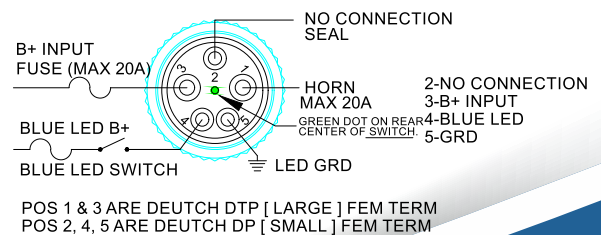
## REAR PLUG VIEW

OFF CAN BE BLUE BACKLIT - APPLY B+ TO TERM 4.  
MOM PUSH - LIGHTS RED [ LOAD 1 MOM ON ]  
RELEASE - OFF



## HORN EXAMPLE

OFF CAN BE BLUE BACKLIT - APPLY B+ TO 4.  
MOM PUSH - LIGHTS RED [ HORN ON ]  
RELEASE OFF



9059-3114

## Nav/Anc Switch

OFF-[1 & 2 ON]-[2 ON & 1 OFF]

### Operation

- ▶ Press turns on the Navigation & Anchor lights (LED turns Green).
- ▶ Press leaves Anchor light on and turns off Navigation light (LED turns Red)
- ▶ Press turns off Anchor light (LED turns Blue)



Laser Etched Actuator in **Daytime Mode**  
LED light is off.



Laser Etched Actuator in **Nighttime Mode**  
The Blue LED provides great visibility of the function switches and lets you know that the switches are in off position.



Laser Etched Actuator in **Nav/Anc Mode**  
The Green LED lets you know that the Nav and Anchor switches are in on position.



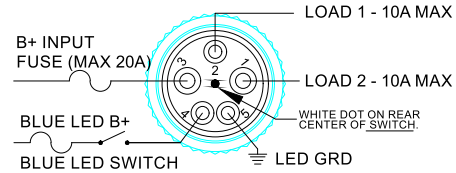
Laser Etched Actuator in **Anchor Mode**  
The Red LED lets you know that the Anchor switch is on.



Laser Etched Actuator in **Inrush Protection Mode**  
LED Flashing White.  
Inrush Load Upto 120Amp, LED Flashing White, outputs do not function, Switch is reset by Press Button.

### REAR PLUG VIEW

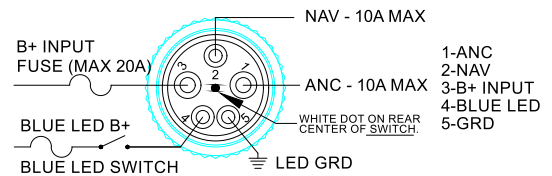
OFF CAN BE BLUE BACKLIT - APPLY B+ TO TERM 4.  
1ST PUSH - LIGHTS GREEN [ BOTH 1 & 2 LOADS ON ]  
2ND PUSH - LIGHTS RED [ ONLY LOAD 2 ON ]  
3RD PUSH - OFF



POS 1 & 3 ARE DEUTCH DTP [ LARGE ] FEM TERM  
POS 2, 4, 5 ARE DEUTCH DP [ SMALL ] FEM TERM

### NAV/ANC EXAMPLE

OFF CAN BE BLUE BACKLIT - APPLY B+ TO 4.  
1ST PUSH - LIGHTS GREEN [ BOTH NAV & ANC LOADS ON ]  
2ND PUSH LIGHTS RED [ ONLY ANC LOAD ON ]



POS 1 & 3 ARE DEUTCH DTP [ LARGE ] FEM TERM  
POS 2, 4, 5 ARE DEUTCH DP [ SMALL ] FEM TERM

9059-3113

## Off-On-On Switch

OFF-[1 ON & 2 OFF]-[2 ON & 1 OFF]

### Operation

- ▶ Press turns on Load 1 (LED turns Green).
- ▶ Press turns on Load 2 (LED turns Red)
- ▶ Press turns off Load 2 & 1 (LED turns Blue)



Laser Etched Actuator in **Daytime Mode**  
LED light is off.



Laser Etched Actuator in **Nighttime Mode**  
The Blue LED provides great visibility of the function switches and lets you know that the switches are in off position.



Laser Etched Actuator in **Load 1 Mode**  
The Green LED lets you know that the Load 1 device is in on position.



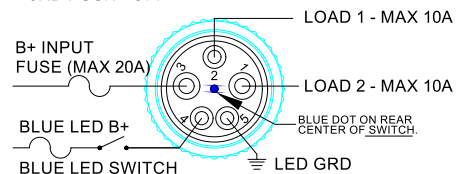
Laser Etched Actuator in **Load 2 Mode**  
The Red LED lets you know that the Load 2 device is on position.



Laser Etched Actuator in **Inrush Protection Mode**  
LED Flashing White.  
Inrush Load Upto 120Amp, LED Flashing White, outputs do not function, Switch is reset by Press Button.

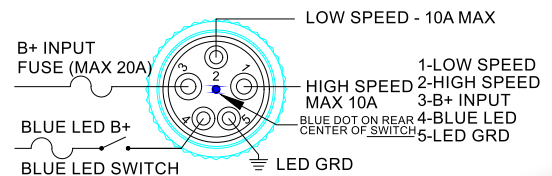
### REAR PLUG VIEW

OFF CAN BE BLUE BACKLIT - APPLY B+ TO TERM 4.  
1ST PUSH - LIGHTS GREEN [ LOAD 1 ON 2 OFF ]  
2ND PUSH - LIGHTS RED [ LOAD 2 ON 1 OFF ]  
3RD PUSH - OFF



### 2 SPEED WIPER EXAMPLE

OFF CAN BE BLUE BACKLIT - APPLY B+ TO 4.  
1ST PUSH - LIGHTS GREEN [ LOW ON, HIGH OFF ]  
2ND PUSH - LIGHTS RED [ HIGH ON, LOW OFF ]  
3RD PUSH - OFF



POS 1 & 3 ARE DEUTCH DTP [ LARGE ] FEM TERM  
POS 2, 4, 5 ARE DEUTCH DP [ SMALL ] FEM TERM

## 9059-3115 OFF-1-2-BOTH

OFF-[1 ON & 2 OFF] - [2 ON & 1 OFF]

### Operation

- ▶ Press turns on Load 1 (LED turns Green).
- ▶ Press turns on Load 2 (LED turns Red)
- ▶ Press turns on both Load 1 & Load 2 (LED turns Yellow)
- ▶ Press turns off Load 2 & 1 (LED turns Blue)



Laser Etched Actuator in **Daytime Mode**  
LED light is off.



Laser Etched Actuator in **Nighttime Mode**  
The Blue LED provides great visibility of the function switches and lets you know that the switches are in off position.



Laser Etched Actuator in **Load 1 Mode**  
The Green LED lets you know that the Load 1 device is in on position.



Laser Etched Actuator in **Load 2 Mode**  
The Red LED lets you know that the Load 2 device is on position.



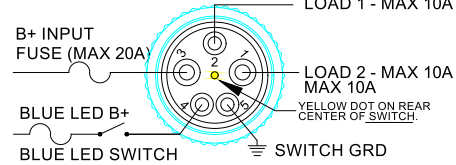
Laser Etched Actuator in **Both Mode**  
The Yellow LED lets you know that the Load 1 & Load 2 devices are both on position.



Laser Etched Actuator in **Inrush Protection Mode**  
LED Flashing White.  
Inrush Load Upto 120Amp, LED Flashing White, outputs do not function, Switch is reset by Press Button.

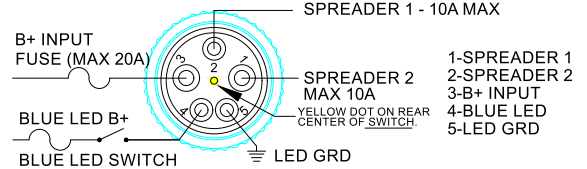
### REAR PLUG VIEW

OFF CAN BE BLUE BACKLIT - APPLY B+ TO TERM 4.  
1ST PUSH - LIGHTS GREEN [ LOAD 1 ON, LOAD 2 OFF ]  
2ND PUSH - LIGHTS RED [ LOAD 2 ON, LOAD 1 OFF ]  
3RD PUSH - LIGHTS YELLOW [ LOAD 1 & 2 ON ]  
LOAD 1 - MAX 10A



### 2 LIVWELL EXAMPLE

OFF CAN BE BLUE BACKLIT - APPLY B+ TO 4.  
1ST PUSH - LIGHTS GREEN [ LIVWELL 1 ON, LIVWELL 2 OFF ]  
2ND PUSH LIGHTS RED [ LIVWELL 2 ON, LIVWELL 1 OFF ]  
3RD PUSH LIGHTS YELLOW [ LIVWELL 1 & 2 ON ]  
SPREADER 1 - 10A MAX



POS 1 & 3 ARE DEUTCH DTP [ LARGE ] FEM TERM  
POS 2, 4, 5 ARE DEUTCH DP [ SMALL ] FEM TERM

## 9059-2123 Dual Momentary

OFF-[1 M ON] - [2 MON] GRE/RED

### Operation

- ▶ Press and hold the button turns on Load 1 (LED turns Green).
- ▶ Press and hold the button turns on Load 2 (LED turns Red).
- ▶ Release the button to turns off Load 1 & 2 (LED turns Blue)



Laser Etched Actuator in **Daytime Mode**  
LED light is off.



Laser Etched Actuator in **Nighttime Mode**  
The Blue LED provides great visibility of the function switches and lets you know that the switches are in off position.



Laser Etched Actuator in **Load 1 Mode**  
The Green LED lets you know that the Load 1 device is in on position.



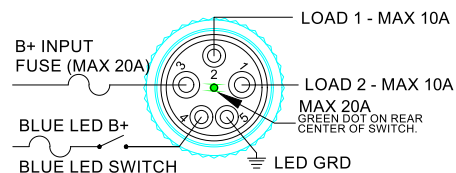
Laser Etched Actuator in **Load 2 Mode**  
The Red LED lets you know that the Load 2 device is on position.



Laser Etched Actuator in **Inrush Protection Mode**  
LED Flashing White.  
Inrush Load Upto 120Amp, LED Flashing White, outputs do not function, Switch is reset by Press Button.

### REAR PLUG VIEW

OFF CAN BE BLUE BACKLIT - APPLY B+ TO TERM 4.  
MOM 1ST PUSH - LIGHTS GREEN [ LOAD 1 MOM ON]  
MOM 2ND PUSH - LIGHTS RED [ LOAD 2 MOM ON]  
RELEASE - OFF



POS 1 & 3 ARE DEUTCH DTP [ LARGE ] FEM TERM  
POS 4, 5 ARE DEUTCH DP [ SMALL ] FEM TERM  
POS 2 SEAL

9059-2213

## HORN Switch

OFF-[1 MOM ON] - [OFF] Non/RED

### Operation

- ▶ Press and hold the button to turns on the device (LED turns Red) .
- ▶ Release the button to turns off the device (LED turns Off or Red (unchange))



LED light is off in **OFF position** !.  
While the Terminal 4 (RED LED Switch) not connect to the Battery + !



The Red LED in **OFF position** !  
While the Terminal 4 (RED LED Switch) connect to the Battery + !



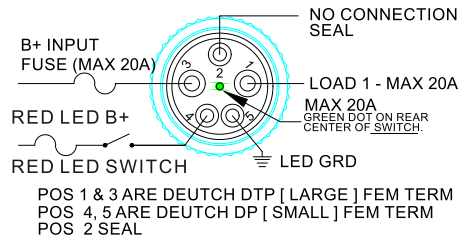
Laser Etched Actuator in **On Mode**  
The Red LED keep Light on !



Laser Etched Actuator in **Inrush Protection Mode**  
LED Flashing White.  
Inrush Load Upto 120Amp, LED Flashing White, output does not function, Switch is reset by Press Button .

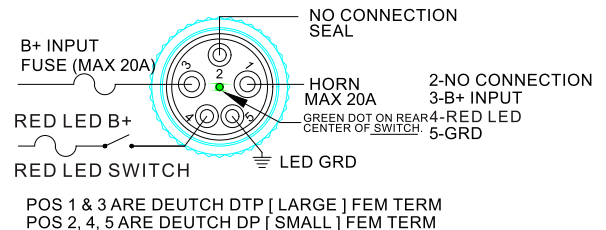
### REAR PLUG VIEW

OFF CAN BE RED BACKLIT - APPLY B+ TO TERM 4.  
MOM PUSH - LIGHTS RED [ LOAD 1 MOM ON]  
RELEASE - OFF ( LED OFF OR KEEP LIGHTS RED )



### HORN EXAMPLE

OFF CAN BE RED BACKLIT - APPLY B+ TO TERM 4.  
MOM PUSH - LIGHTS RED [ HORN ON]  
RELEASE - OFF ( LED OFF OR KEEP LIGHTS RED )

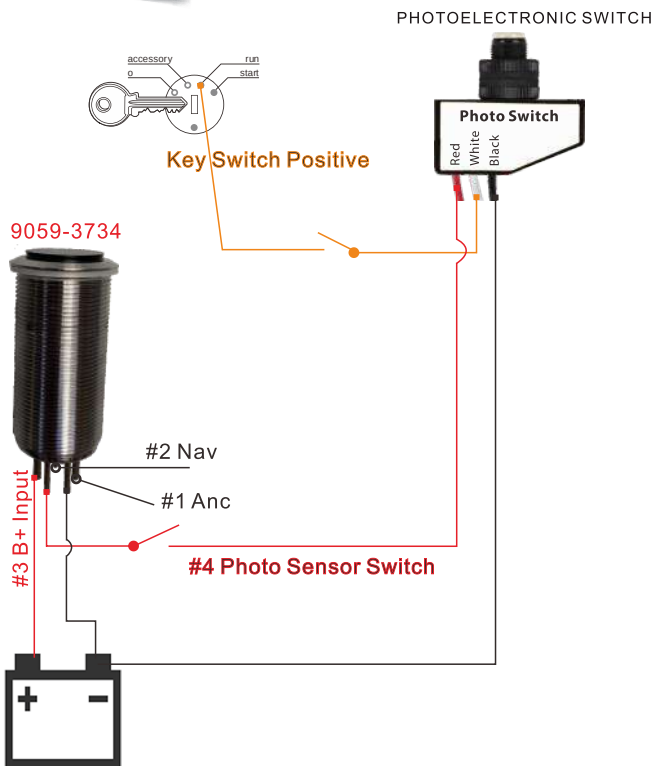


### Wiring

9059-3734

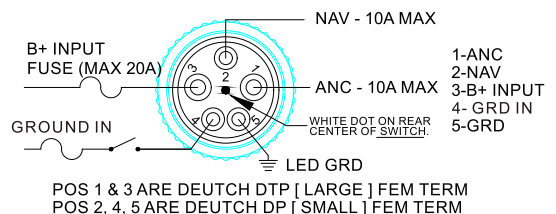
## Auto Nav Switch

Nav/Anc w/ Photoelectric switch



### NAV/ANC EXAMPLE

RED (LOAD) FROM PHOTOELECTRIC SWITCH -  
APPLY GROUND IN TO #4  
1ST PUSH - LIGHTS GREEN [ BOTH NAV & ANC LOADS ON ]  
2ND PUSH LIGHTS RED [ ONLY ANC LOAD ON ]  
3RD PUSH LIGHTS TURN YELLOW (AUTO MODE)  
OR TURN BLUE (NO OUTPUT)



### Operation

#### 2. Nighttime

- (1) 9059- : Yellow (Auto Mode)
  - Turn on both Nav and Anc light automatically
  - Key Switch Off, no power to #4, 9059- Flash Yellow 10 seconds then turn off Nav/Anc, and 9059- turn Blue
- (2) Override Auto Mode
  - 1st Press :  
9059- turn Green (Nav/Anc both Still on)
  - 2nd Press :  
9059- turn Red (Anc On, Nav Off)
  - 3rd Press
    - #4 +12 in or no input (Photo sensor not active)  
9059 turn Blue , No output
    - #4 Ground in (Photo sensor active)  
9059- turn yellow (Nav/Anc both on)  
back to Auto mode

### Operation

Engine is running the Sensor is active (Auto Mode)

#4 Photo Sensor ON

#### 1. Daytime

9059- : blue led on, no output

\* We reserve the right to change specifications at any time without incurring any obligations !

## 9059-1555

## Timer Switch

ON(1min G) OFF(2min Y)

### 9059-1555 Operation

- ▶ Press turns on the device , LED lights Red.
- ▶ Press activate the timer function. Cycle on-off below turns on the device for 1 min then cycle off , LED lights Green turns off the device for 2 min then cycle On, LED lights Yellow
- ▶ Press the button to disable the timer function, turn LED to Blue color



Laser Etched Actuator in **Daytime Mode**  
LED light is off.



Laser Etched Actuator in **Nighttime Mode**  
The Blue LED provides great visibility of the function switches and lets you know that the swithes are in off position.



Laser Etched Actuator in **On Mode**  
The Red LED lets you know that the device is on.



Laser Etched Actuator in **Timer On Mode**  
The Green LED lets you know that the device is on for 1min. then cycle to Timer Off



Laser Etched Actuator in **Timer Off Mode**  
The Yellow LED lets you know that the device is off for 2min. then cycle to Timer On

### REAR PLUG VIEW

BLUE BACK LIGHT - APPLY B+ TO TERM 4.

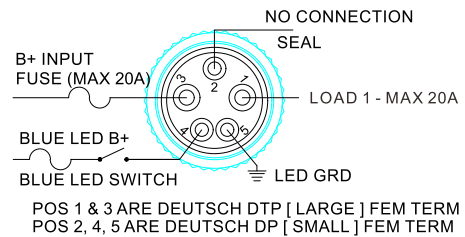
Press - turns ON the device, LED lights Red

Press 2nd - Activate the timer function, Cycle On-Off below

Turns ON the device for 1 min, LED lights Green then cycle Off

Turns OFF the device for 2 min, LED lights Yellow then cycle On

Press 3rd - Disable the timer function, LED lights Off or Blue bac klight



## 9059-1555F

## Timer Switch

ON(2min Red) --> OFF

### 9059-1555-2F Operation

- ▶ Press turns on the device , turn LED to Red color , and will automatically turn off the device after 2 minutes , No Cycle !
- ▶ Press the button during 2 minutes timer on period will turn off the device .



Laser Etched Actuator in **Daytime Mode**  
LED light is off.



Laser Etched Actuator in **Nighttime Mode**  
The Blue LED provides great visibility of the function switches and lets you know that the swithes are in off position.



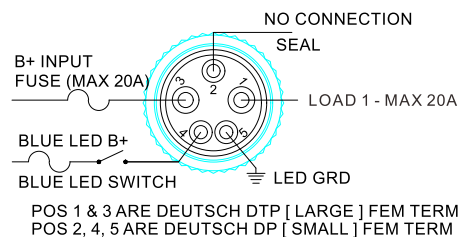
Laser Etched Actuator in **Timer On Mode**  
The Red LED lets you know that the device is on . after 2 mins will turn off automatically

### REAR PLUG VIEW

BLUE BACK LIGHT - APPLY B+ TO TERM 4.

Press - turns ON the device, LED lights Red and will automatically turns Off the device after 2 minutes, No Cycle!

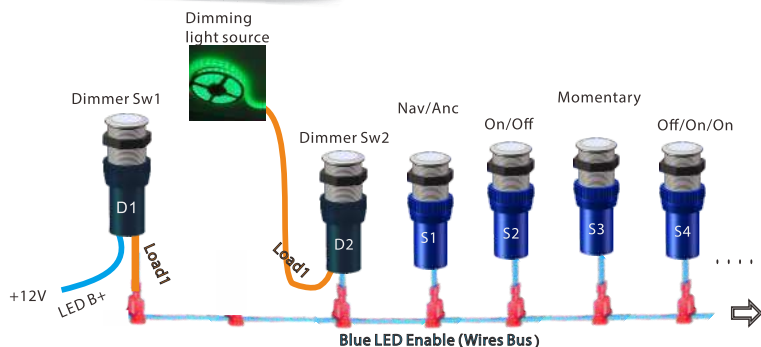
Press the button during 2 minutes timer on period will turns off the device.



## 9059-3116 Dimmer Switch

Back light / On Dimming

### Dimming Backlight 1



Dimmer Sw1 (D1) : **Backlight Dimmer Switch**

1. Load1 : Connect to Blue Wires Bus
2. LED B+ : Connect to +12VDC

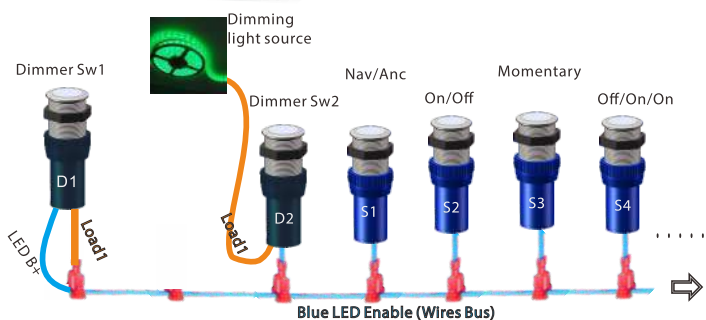
Dimmer Sw2 (D2) : **Lighting Dimmer Switch**

1. Load1: Connect to light source (**8Amp max**), ex. LED light strip (except some high inrush current light source, ex. Gas-Filled Lamps, will damage the sw)
2. LED B+ : connect to Blue Wires Bus

S1 ~ S4... : Normal E Switch : Blue back light can be controlled by Dimmer Sw1 (D1)

1. D1 Off (D1 Blue LED on) : S1~S4 no backlight turn on
2. D1 On (D1 Red LED on) : S1~S4 All Blue LED turn on AT OFF POSITION and its back light level can be controlled by D1 (PWM)

### Dimming Backlight 2



Dimmer Sw1 (D1) : **Backlight Dimmer Switch**

1. Load1 : Connect to Blue Wires Bus
2. LED B+ : Connect to Blue Wires Bus also
3. D1 Dimming: D1 Red light dim same light level as S1~S4

Dimmer Sw2 (D2) : **Lighting Dimmer Switch**

1. Load1: Connect to light source (**8Amp max**), ex. LED light strip (except some high inrush current light source, ex. Gas-Filled Lamps, will damage the sw)
2. LED B+ : connect to Blue Wires Bus

S1 ~ S4... : Normal E Switch : Blue back light can be controlled by Dimmer Sw1 (D1)

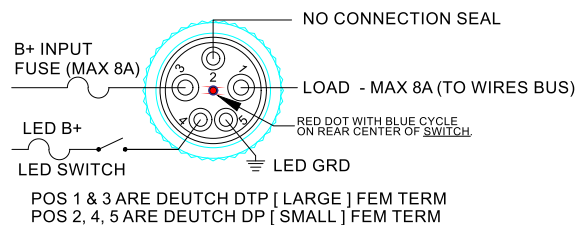
1. D1 Off (D1 Blue LED **off**) : S1~S4 no backlight turn on
2. D1 On (D1 Red LED on) : S1~S4 All Blue LED turn on AT OFF POSITION and its back light level can be controlled by D1 (PWM)

#### REAR PLUG VIEW (D1)

OFF CAN BE BLUE BACKLIT } - APPLY LED B+ TO TERM 4.  
ON CAN BE RED LIGHT

**TERM 4. NO POWER INPUT, D1 WILL BE NO LIGHT AT OFF NOR ON**

- 1ST PUSH (Red) - TURN ON ALL LAST BLUE BACK LIGHTS LEVEL (WIRES BUS)
- 2ND PRESS & HOLD (Red) - DIMMING ALL BACK LIGHTS LEVEL
- 3RD PUSH (Blue) - TURN OFF ALL BLUE BACK LIGHTS (NO LIGHT AT OFF) **AND KEEP LAST LIGHT LEVEL IN D1 MEMOERY**

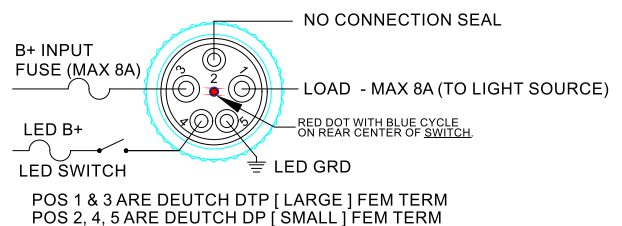


#### REAR PLUG VIEW (D2)

OFF CAN BE BLUE BACKLIT } - APPLY LED B+ TO WIRES BUS  
ON CAN BE RED LIGHT

**D1 IS OFF, D2 WILL BE NO LIGHT AT OFF NOR ON**

- 1ST PUSH (Red) - TURN ON LIGHT SOURCE ON LAST LIGHT LEVEL
- 2ND PRESS & HOLD (Red) - DIMMING LIGHT SOURCE LIGHT LEVEL
- 3RD PUSH (Blue) - TURN OFF LIGHT SOURCE **AND KEEP LAST LIGHT LEVEL IN D2 MEMORY**

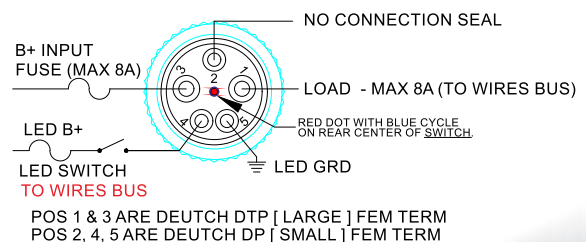


#### REAR PLUG VIEW (D1)

OFF **NO BLUE BACKLIT** } - APPLY LED B+ TO WIRES BUS  
ON CAN BE RED LIGHT

**D1 OFF (D1 LOAD1 NO POWER), D1 WILL BE NO LIGHT AT OFF**

- 1ST PUSH (Red) - TURN ON ALL LAST BLUE BACK LIGHTS LEVEL (WIRES BUS) **ALSO D1 RED LIGHT ON LAST LIGHT LEVEL**
- 2ND PRESS & HOLD (Red) - DIMMING ALL BACK LIGHTS LEVEL **INCLUDING DIMMING D1 RED LIGHT LEVEL**
- 3RD PUSH (NO LIGHT) - TURN OFF ALL BLUE BACK LIGHTS (NO LIGHT AT OFF) **ALSO TURN OFF D1 RED LIGHT (NO LIGHT), AND KEEP BLUE AND D1 RED LIGHT LEVEL IN D1 MEMORY,**



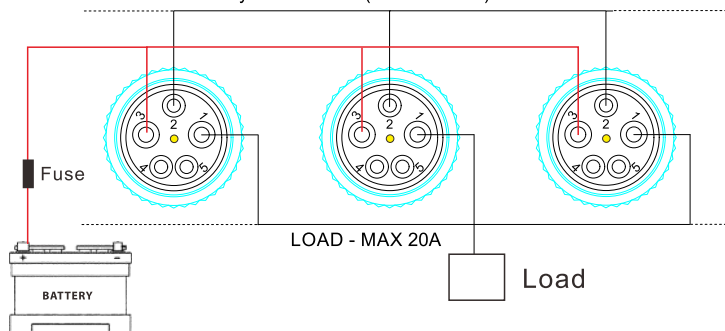
## 9059-5113 3-Way Inrush Switch

IP 69K 20Amp 600 feet

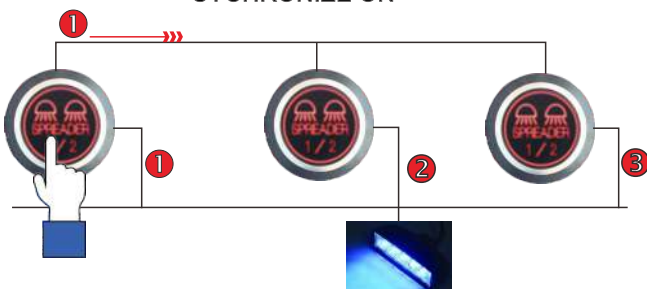
### 3-Way Switch System Diagram

#### WIRING DIAGRAM

Ground and Blue LED B+ connections are not shown in these diagram  
Synchronize Line (Max. 600 feet)



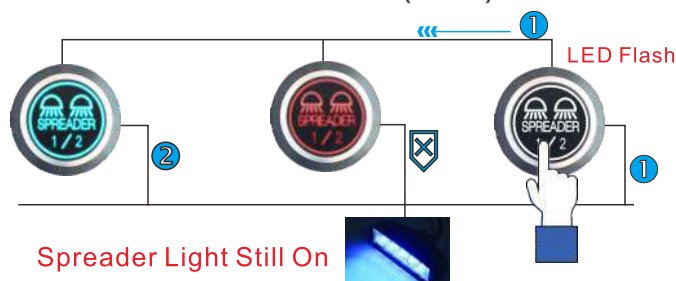
#### SYNCHRONIZE ON



#### SYNCHRONIZE OFF



#### SYNCHRONIZE OFF (FAULT)



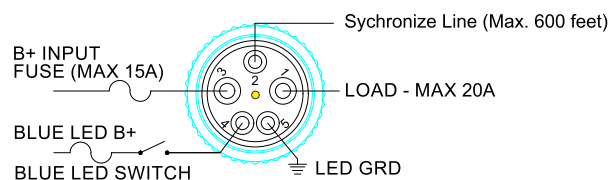
### Features

- Turn On or Off from one switch among the network will Synchronize On or Off to the other switches.
- Synchronize Network up to 6 switches (300 feet max) .
- Synchronize Line up to 600 feet max. (600' at 2 switches)
- 20 Amp Electrical Rating. 12VDC
- At night every switch is backlit with Blue LED light for great visibility. Turn on a particular function and the LED turns Red letting you know the function is turned on.
- Stainless Steel SS316 Body and IP69K Waterproof Rating.
- Protection from Salt Spray.
- 20g Bump Shock Test Approved.
- Wires/Switch meet Flammability Rating UL 94 V2 and All material will be non flammable or will be 105C spec.

### Wiring

#### REAR PLUG VIEW

OFF CAN BE BLUE BACKLIT - APPLY B+ TO TERM 4.  
1ST PUSH - LIGHTS RED [ LOAD ON ]  
2ND PUSH - OFF



- LED Keep Flashing while Turn Off the switch :  
Indicate that one switch not received the Synchronize Off signal
- Turn On and Turn Off the Switch again to Synchronize switches .

## 9059-2713 Ground Switch

Momentary / 7.5Amp

### Operation

- ▶ Press and hold the button to turns on the device .
- ▶ Release the button to turns off the device .
- ▶ Pin #4 (Blue LED+) from +12VDC to 24VDC , turn LED to Blue color
- ▶ Pin #2 (Red LED+) from +12VDC to 24VDC , turn LED to Red color
- ▶ Pin #2 & Pin #4 both from +12VDC to 24VDC , turn LED to Purple color



Pin#2 & Pin#4 without power, **LED is Off**



Pin #4 (Blue LED+) from +12VDC to 24VDC, LED color turn to **Blue**

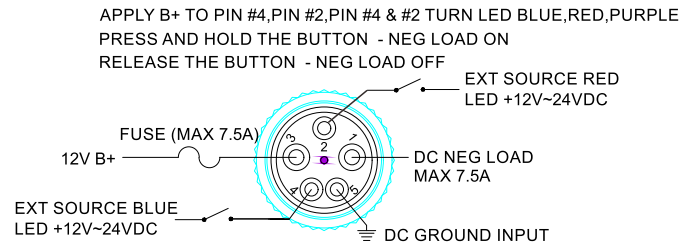


Pin #2 (Red LED+) from +12VDC to 24VDC, color turn to **Red**.



Pin #2 & Pin #4 from +12VDC to 24VDC, color turn to **Purple**.

### REAR PLUG VIEW



## 9059-1713 Ground Switch

Latching

### Operation

- ▶ First push to turn on the device , (LED no change).
- ▶ Second push to turn off the device , (LED no change)
- ▶ Pin #4 (Blue LED+) from +12VDC to 24VDC , turn LED to Blue color
- ▶ Pin #2 (Red LED+) from +12VDC to 24VDC , turn LED to Red color
- ▶ Pin #2 & Pin #4 both from +12VDC to 24VDC , turn LED to Purple color



Pin#2 & Pin#4 without power, **LED is Off**



Pin #4 (Blue LED+) from +3VDC to 24VDC, LED color turn to **Blue**

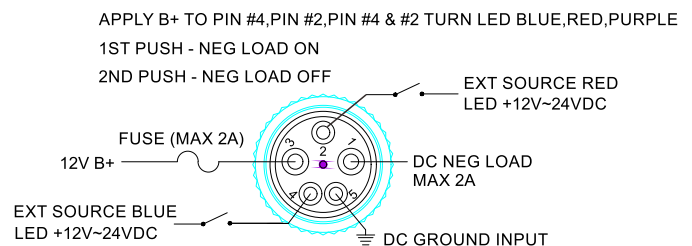


Pin #2 (Red LED+) from +3VDC to 24VDC, color turn to **Red**.



Pin #2 & Pin #4 from +3VDC to 24VDC, color turn to **Purple**.

### REAR PLUG VIEW



9059-2118

Signal Switch

OFF - MOM ON

## Operation

- ▶ Press and hold the button to Close Contact A (Pin1) & Contact B(Pin3), (LED no change).
- ▶ Release the button to Open Contact A(Pin1) & Contact B(Pin3), (LED no change)
- ▶ Pin #4 (Blue LED+) from +3VDC to 24VDC , turn LED to Blue color
- ▶ Pin #2 (Red LED+) from +3VDC to 24VDC , turn LED to Red color
- ▶ Pin #2 & Pin #4 both from +3VDC to 24VDC, turn LED to Purple color



Pin#2 & Pin#4 without power, **LED is Off**



Pin #4 (Blue LED+) from +3VDC to 24VDC, LED color turn to **Blue**



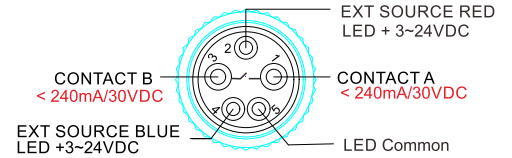
Pin #2 (Red LED+) from +3VDC to 24VDC, color turn to **Red**.



Pin #2 & Pin #4 from +3VDC to 24VDC, color turn to **Purple**.

## REAR PLUG VIEW

MOM PUSH - LIGHTS PUR [ SIGNAL OUTPUT ]  
RELEASE - OFF



9059-2913

Momentary N/C

Red LED On Blue LED (Off)

## Operation

- ▶ Press and hold the button to turns off the device (LED turns Blue).
- ▶ Release the button to turns On the device (LED turns Red)



Laser Etched Actuator in **On Mode**  
The Red LED lets you know that the device is on. Normally Close d



Laser Etched Actuator in **Nighttime Mode**  
The Blue LED provides great visibility of the function switches and lets you know that the swithes are in off position .  
Momentary Push



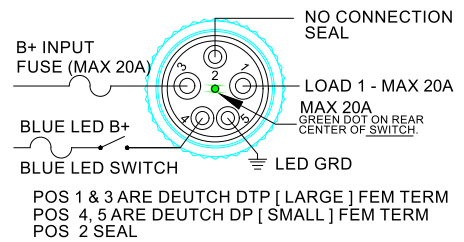
Laser Etched Actuator in **Daytime Mode**  
LED light is off. Momentary Push



Laser Etched Actuator in **Inrush Protection Mode**  
LED Flashing White.  
Inrush Load Upto 120Amp, LED Flashing White, output does not funstion, Switch is reset by Press Button .

## REAR PLUG VIEW

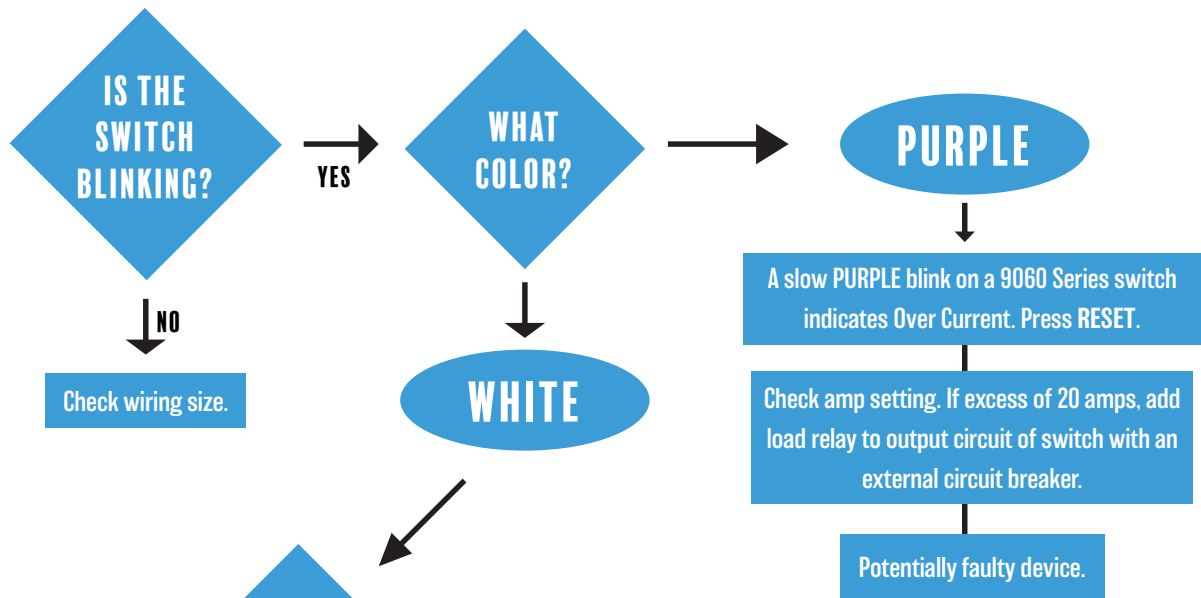
OFF CAN BE BLUE BACKLIT - APPLY B+ TO TERM 4.  
MOM PUSH - LIGHTS BLUE [ LOAD 1 MOM OFF]  
RELEASE - ON



|                                                                                            |                                                                                             |                                                                                             |                                                                                             |                                                                                             |                                                                                             |                                                                                             |                                                                                             |                                                                                               |                                                                                               |                                                                                               |                                                                                               |
|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| <br>0001   | <br>0002   | <br>0003   | <br>0004   | <br>0005   | <br>0006   | <br>0007   | <br>0008   | <br>0009   | <br>0010   | <br>0011   | <br>0012   |
| <br>0013   | <br>0014   | <br>0015   | <br>0016   | <br>0017   | <br>0018   | <br>0019   | <br>0020   | <br>0021   | <br>0022   | <br>0023   | <br>0024   |
| <br>0025   | <br>0026   | <br>0027   | <br>0028   | <br>0029   | <br>0030   | <br>0031   | <br>0032   | <br>0033   | <br>0034   | <br>0035   | <br>0036   |
| <br>0037   | <br>0038   | <br>0039   | <br>0040   | <br>0041   | <br>0042   | <br>0043   | <br>0044   | <br>0045   | <br>0046   | <br>0047   | <br>0048   |
| <br>0049   | <br>0050   | <br>0051   | <br>0052   | <br>0053   | <br>0054   | <br>0055   | <br>0056   | <br>0057   | <br>0058   | <br>0059   | <br>0060   |
| <br>0061   | <br>0062   | <br>0063   | <br>0064   | <br>0065   | <br>0066   | <br>0067   | <br>0068   | <br>0069   | <br>0070   | <br>0071   | <br>0072   |
| <br>0073  | <br>0074  | <br>0075  | <br>0076  | <br>0077  | <br>0078  | <br>0079  | <br>0080  | <br>0081  | <br>0082  | <br>0083  | <br>0084  |
| <br>0085 | <br>0086 | <br>0087 | <br>0088 | <br>0089 | <br>0090 | <br>0091 | <br>0092 | <br>0093 | <br>0094 | <br>0095 | <br>0096 |
| <br>0097 | <br>0098 | <br>0099 | <br>0100 | <br>0101 | <br>0102 | <br>0103 | <br>0104 | <br>0105 | <br>0106 | <br>0107 | <br>0108 |
| <br>0109 | <br>0110 | <br>0111 | <br>0112 | <br>0113 | <br>0114 | <br>0115 | <br>0116 | <br>0117 | <br>0118 | <br>0119 | <br>0120 |
| <br>0121 | <br>0122 | <br>0123 | <br>0124 | <br>0125 | <br>0126 | <br>0127 | <br>0128 | <br>0129 | <br>0130 | <br>0131 | <br>0132 |
| <br>0133 | <br>0134 | <br>0135 | <br>0136 | <br>0137 | <br>0138 | <br>0139 | <br>0140 | <br>0141 | <br>0142 | <br>0143 | <br>0144 |
| <br>0145 | <br>0146 | <br>0147 | <br>0148 | <br>0149 | <br>0150 | <br>0151 | <br>0152 | <br>0153 | <br>0154 | <br>0155 | <br>0156 |
| <br>0157 | <br>0158 | <br>0159 | <br>0160 | <br>0161 | <br>0162 | <br>0163 | <br>0164 | <br>0165 | <br>0166 | <br>0167 | <br>0168 |
| <br>0169 | <br>0170 | <br>0171 | <br>0172 | <br>0173 | <br>0174 | <br>0175 | <br>0176 | <br>0177 | <br>0178 | <br>0179 | <br>0180 |
| <br>0181 | <br>0182 | <br>0183 | <br>0184 | <br>0185 | <br>0186 | <br>0187 | <br>0188 | <br>0189 | <br>0190 | <br>0191 | <br>0192 |

|                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|    |    |    |    |    |    |    |    |    |    |    |    |
| 0193                                                                               | 0194                                                                                | 0195                                                                                | 0196                                                                                | 0197                                                                                | 0198                                                                                | 0199                                                                                | 0200                                                                                | 0201                                                                                  | 0202                                                                                  | 0203                                                                                  | 0204                                                                                  |
|    |    |    |    |    |    |    |    |    |    |    |    |
| 0205                                                                               | 0206                                                                                | 0207                                                                                | 0208                                                                                | 0209                                                                                | 0210                                                                                | 0211                                                                                | 0212                                                                                | 0213                                                                                  | 0214                                                                                  | 0215                                                                                  | 0216                                                                                  |
|    |    |    |    |    |    |    |    |    |    |    |    |
| 0217                                                                               | 0218                                                                                | 0219                                                                                | 0220                                                                                | 0221                                                                                | 0222                                                                                | 0223                                                                                | 0224                                                                                | 0225                                                                                  | 0226                                                                                  | 0227                                                                                  | 0228                                                                                  |
|    |    |    |    |    |    |    |    |    |    |    |    |
| 0229                                                                               | 0230                                                                                | 0231                                                                                | 0232                                                                                | 0233                                                                                | 0234                                                                                | 0235                                                                                | 0236                                                                                | 0237                                                                                  | 0238                                                                                  | 0239                                                                                  | 0240                                                                                  |
|    |    |    |    |    |    |    |    |    |    |    |    |
| 0241                                                                               | 0242                                                                                | 0243                                                                                | 0244                                                                                | 0245                                                                                | 0246                                                                                | 0247                                                                                | 0248                                                                                | 0249                                                                                  | 0250                                                                                  | 0251                                                                                  | 0252                                                                                  |
|    |    |    |    |    |    |    |    |    |    |    |    |
| 0253                                                                               | 0254                                                                                | 0255                                                                                | 9451-1019                                                                           | 9060-1001                                                                           | 0258                                                                                | 0259                                                                                | 0260                                                                                | 0261                                                                                  | 0262                                                                                  | 0263                                                                                  | 0264                                                                                  |
|   |   |   |   |   |   |   |   |   |   |   |   |
| 0265                                                                               | 0266                                                                                | 0267                                                                                | 0268                                                                                | 0269                                                                                | 0270                                                                                | 0271                                                                                | 0272                                                                                | 0273                                                                                  | 0274                                                                                  | 0275                                                                                  | 0276                                                                                  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 0277                                                                               | 0278                                                                                | 0279                                                                                | 0280                                                                                | 0281                                                                                | 0282                                                                                | 0283                                                                                | 0284                                                                                | 0285                                                                                  | 0286                                                                                  | 0287                                                                                  | 0288                                                                                  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 0289                                                                               | 0290                                                                                | 0291                                                                                | 0292                                                                                | 0293                                                                                | 0294                                                                                | 0295                                                                                | 0296                                                                                | 0297                                                                                  | 0298                                                                                  | 0299                                                                                  | 0300                                                                                  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 0301                                                                               | 0302                                                                                | 0303                                                                                | 0304                                                                                | 9060-1001                                                                           | 0305                                                                                | 0306                                                                                | 0307                                                                                | 0308                                                                                  | 0309                                                                                  | 0310                                                                                  | 0311                                                                                  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 0312                                                                               | 0313                                                                                | 0314                                                                                | 0315                                                                                | 0316                                                                                | 0317                                                                                | 0318                                                                                | 0319                                                                                | 0320                                                                                  | 0321                                                                                  | 0322                                                                                  | 0323                                                                                  |
|  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| 0324                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
|                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
|                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
|                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
|                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
|                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |

## SMART SWITCH FLOW CHART



## TROUBLESHOOTING PARTS

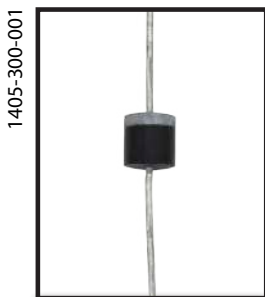
Capacitor



Choke



Diode



WASHDOWN  
PUMP

FRESHWATER  
PUMP

SEA CHEST  
PUMP

BILGE  
PUMP

Install an in-line choke (Part ID: 1400-000-001) in the wire between the switch output and the pump, as close to the pump as possible (above the waterline). This will suppress electrical noise and typically correct any pump or motor that repeatedly triggers an Over Current fault. [See Figure 1.](#)

Install an in-line choke (Part ID: 1400-000-001) in the wire between the switch output and the pump, as close to the pump as possible (above the waterline). This will suppress electrical noise and typically correct any pump or motor that repeatedly triggers an Over Current fault. [See Figure 1.](#)

Install a diode (Part ID: 1405-300-100) between the switch output and the device, with the cathode (grey part) facing the device. [See Figure 3.](#)

Install a diode (Part ID: 1405-300-100) with the cathode facing the switch to prevent back-feeding from the 24-hour auto bilge circuit. [See Figure 2.](#)

FIGURE 1

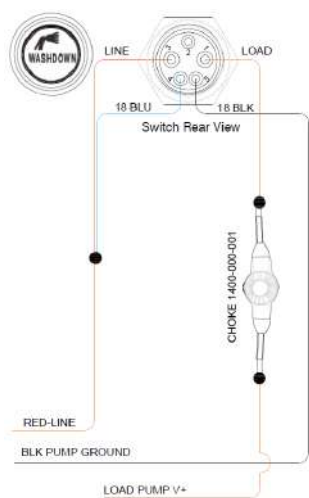


FIGURE 2

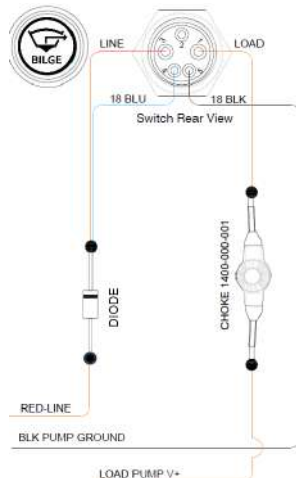
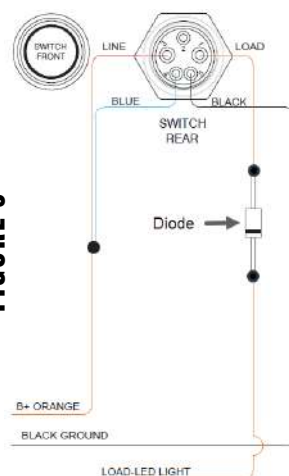


Figure 2: Designed for the 9058, 9059, 9060

FIGURE 3

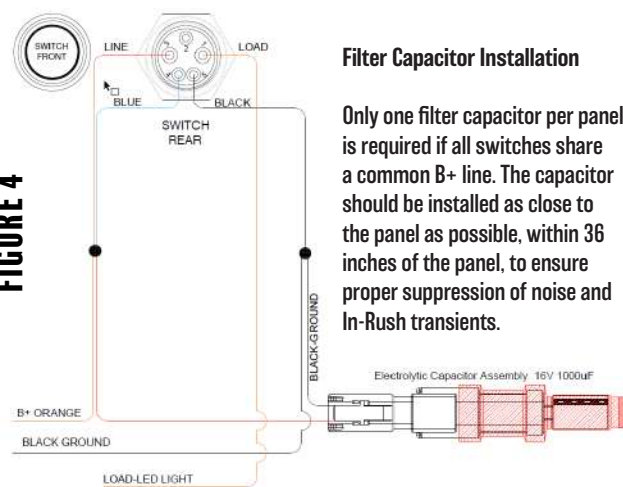


### Bilge Pump Switch Installation

A diode is required on every bilge pump switch to prevent back-feeding and ensure proper operation. A choke is not typically necessary; however, if a choke is required, it should be installed as close to the pump as possible, above the waterline, to effectively suppress noise.

Figure 3: Designed for the 9057

FIGURE 4



### Filter Capacitor Installation

Only one filter capacitor per panel is required if all switches share a common B+ line. The capacitor should be installed as close to the panel as possible, within 36 inches of the panel, to ensure proper suppression of noise and In-Rush transients.

GARMIN/  
MFDS

Install a diode (Part ID: 1405-300-100) between the switch output and the device, with the cathode (grey part) facing the device.  
See [Figure 3](#).

LED  
LIGHTS

Install a diode (Part ID: 1405-300-100) between the switch output and the device, with the cathode (grey part) facing the device.  
See [Figure 3](#).

STILL  
BLINKING

Install a 16V 1000uF electrolytic capacitor (Part ID: 1406-000-001) across Line B+ and Ground near the LED switch. This stabilizes voltage and prevents In-Rush or Over Current faults. Note that faults may not appear until after extended operation, when voltage drops or temperature rises.  
See [Figure 4](#).

RELAY/ RELAY  
STYLE  
BATTERY SWITCH

Install a diode (Part ID: 1405-300-100) between the switch output and the device, with the cathode (grey part) facing the device.  
See [Figure 3](#).

STILL  
BLINKING

Install a 16V 1000uF electrolytic capacitor (Part ID: 1406-000-001) across Line B+ and Ground near the switch. This stabilizes voltage and corrects the issue creating the fault.  
See [Figure 4](#).

EVACUATION  
BLOWER/FAN

Install a diode (Part ID: 1405-300-100) between the switch output and the device, with the cathode (grey part) facing the device.  
See [Figure 3](#).

STILL  
BLINKING

Install a 16V 1000uF electrolytic capacitor (Part ID: 1406-000-001) across Line B+ and Ground near the switch. This stabilizes voltage and corrects the issue creating the fault.  
See [Figure 4](#).