

Installation of the BriteSpot Fiber-Optic Temperature Sensor has been engineered to be simple and straightforward. The following manual will describe in detail the 3 steps needed for installation. No specialized knowledge of fiber optics is necessary. A basic understanding of switchgear topology and mounting methods is required.

## Required for Installation

### Tools for Fiber Mounting:

- Adjustable Wrench
- 1.5 mm Allen Key
- Guillotine Cutter

### Components for Hardware Installation:

- 35 mm DIN rail (6"-8") and mounting hardware
- CAT5 Ethernet cable (if connecting to SCADA or computer.

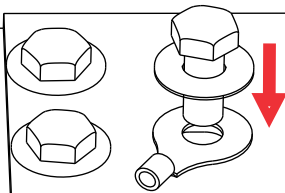
### Power Supply Requirements:

- Voltage: 12-24 VDC (0.12A@24VDC)
- Power: 3 Watts (Max)

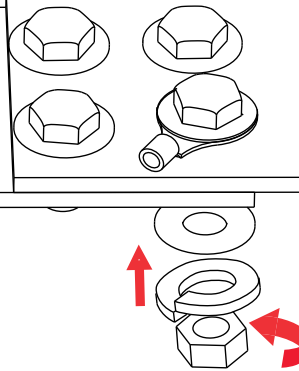
## 1- Mounting Fixture and Optical Fiber Installation

### A - Secure the Mounting Fixture to Busbar and Connect Fiber

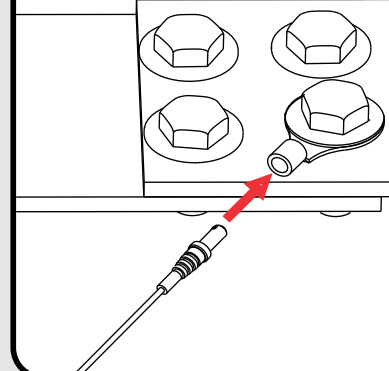
I. Insert the screw with the washer through the fixture and busbar.



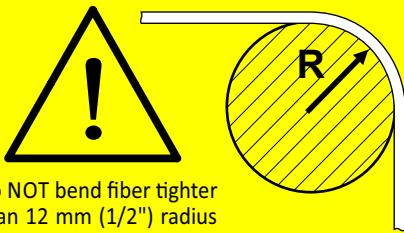
II. Insert the washers and secure it with a nut. Ensure the hole for fiber insertion is pointed in the direction of the fiber routing.



III. Insert fiber into the holding fixture and secure it with a 1.5 mm hex screwdriver.



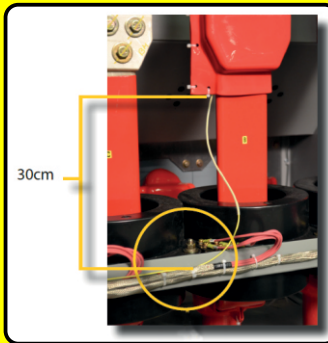
### B - Route the Fiber to Low-Voltage Cabinet



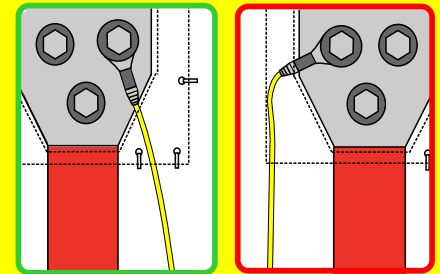
Do NOT bend fiber tighter than 12 mm (1/2") radius



Do not fasten or attach ANY mounting hardware (tie-wraps, etc.) to at least a 30 cm (12") length of fiber between the portion of the probe at high voltage and its first non-energized point of contact.



Avoid running fibers in the direction of the fold of the boot to minimize bending and damage of the fiber.

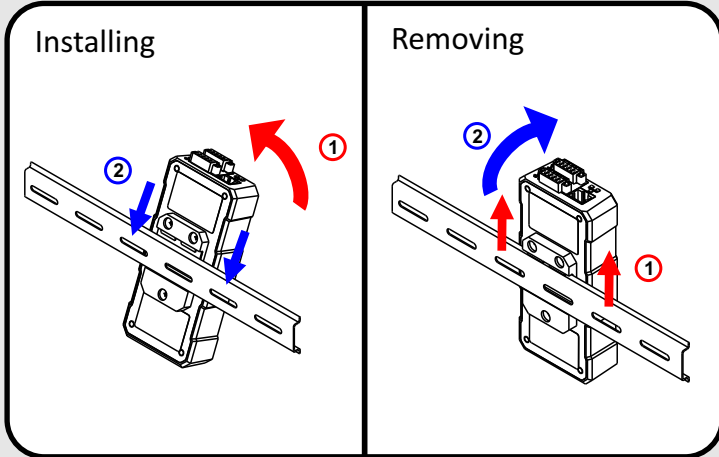


Keep away from sources of excessive heat whenever possible. Fiber probe shall not be attached to surfaces with temperatures exceeding 100°C or 200°F.

Fiber - MAX 100°C  
Sensor Tip - MAX 120°C

## 2 - Hardware Installation

### A - Mount on 35 mm DIN Rail



### B - Insert the Optical Fibers

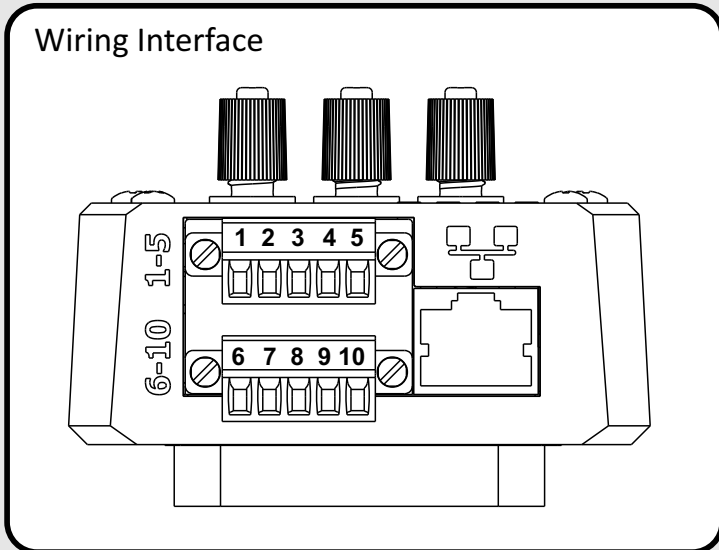
I. Loosen the connectors by screwing them counter clockwise.

II. Insert the optical fibers until they come to a hard stop. Do NOT apply excessive force.

III. Secure fiber retention nuts by screwing them clockwise.

View LEDs above the connectors to determine if a connection has been established.  
If a light remains red, ensure the probe is inserted properly and the fiber cut is clean. Recut if necessary.

### C - Connect Network and Power Wiring

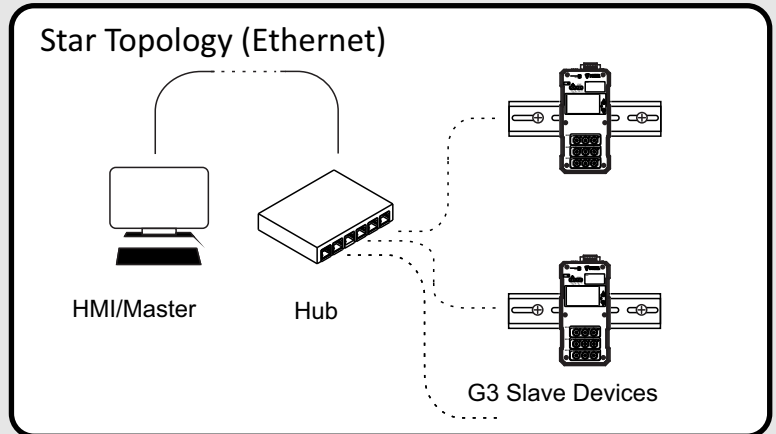
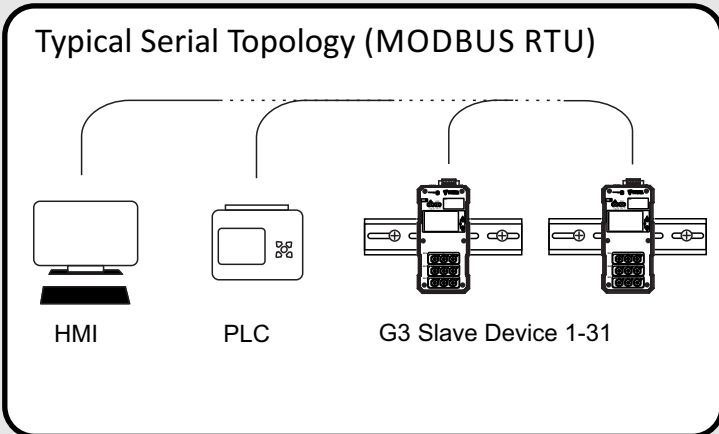


Terminals 1-5			Terminals 6-10		
Terminal Number	Name	Function	Terminal Number	Name	Function
1	V-	Input Voltage Negative	6	V-	Input Voltage Negative
2	V+	Input Voltage Positive	7	V+	Input Voltage Positive
3	Rx-	Inverting, 2-wire, RS-485	8	PE	Chassis Grounding
4	Tx+	Non-Inverting, 2-wire, RS-485	9	COM	Relay: Common Terminal
5	Shd	Shielding of Communication Pair	10	NO	Relay: Normally Open

Note that terminals 1 and 6, as well as 2 and 7, are connected internally.

### D - Typical Network Connections

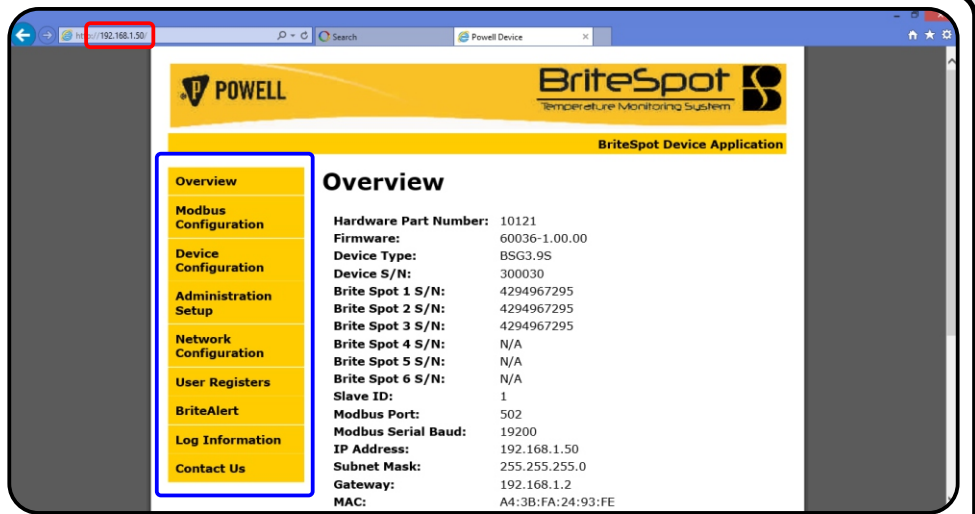
(within cabinet) or connecting with twisted pair cables (cabinet to cabinet)



### 3 - Configure the Communication Settings

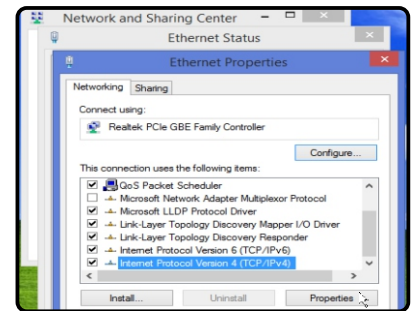
#### A - Connect to the Device

- I. Connect a CAT5 Ethernet Cable directly between the Ethernet ports on the router and G3 to be configured.
- II. Ensure the power is connected to the device and a link is established, indicated by the LEDs.
- III. Type in the **IP address in the browser** (default: 192.168.1.50). A field has been provided on the back sticker in case it has been changed.
- IV. From the home page you can navigate throughout the rest of the site by using the **navigation bar** on the left.

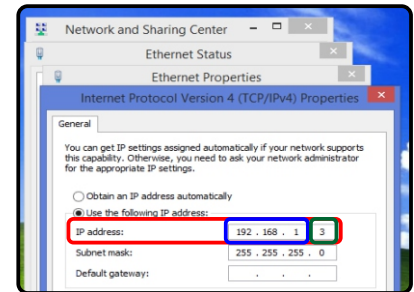


Note that if connecting via Ethernet to a computer directly, the Internet Protocol Version 4 IP address must be set in the network setting on the computer.

To do this, open Network and Sharing Center on the computer. Open the Ethernet Connection (or Local Area Connection) labelled "Unidentified network", then open Properties. From the List, select Internet Protocol Version 4 and then click Properties, where the IP address can be set.



The **first 3 numbers** (separated by periods) of the **Internet Protocol Version 4 IP address** should match that of the BSG3 being used, while the **last number** remains different. For example, if the BSG3 IP address is the default 192.168.1.50, the Internet Protocol Version 4 IP address can be set to 192.168.1.3.



#### B - Factory Reset




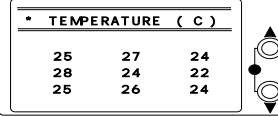
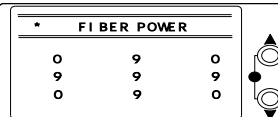
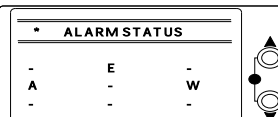
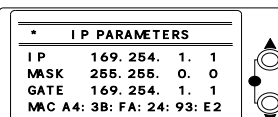
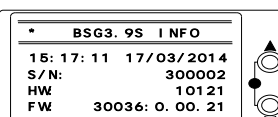
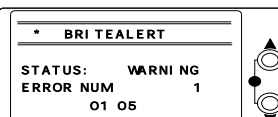
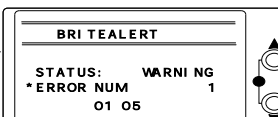
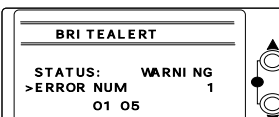
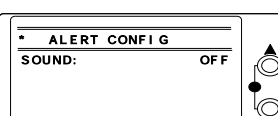
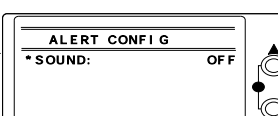
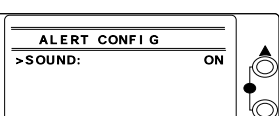
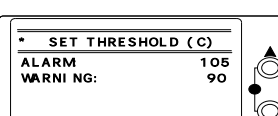
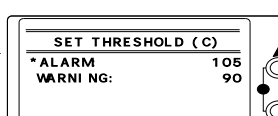
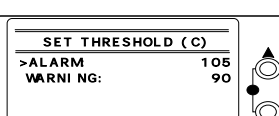
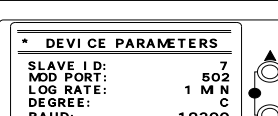
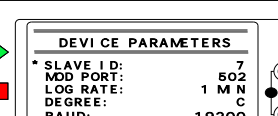
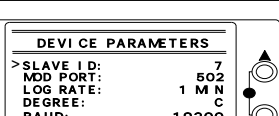
To perform a factory reset:

- I. Insert an object, such as the end of a probe, into the hole labelled **"RST"** in the top left corner of the device and depress the concealed button while applying power to the device. Keep the button depressed until both the **"SYS"** and **"COM"** LEDs stay green (about 5 seconds).
- II. Release the button and the device will restart with its default values.

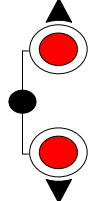


## Navigation Map

The BSG3 is equipped with a simple LCD display and a set of buttons which allow for navigation as well as basic data display and configuration as shown below.

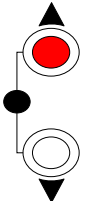
UPPER LEVEL MENU	SUBMENU	PARAMETER MODIFICATION
 <p>USE UP AND DOWN BUTTONS TO SCROLL UP AND DOWN THROUGH THE DIFFERENT SCREENS</p>	 <p>USE UP AND DOWN BUTTONS TO SCROLL UP AND DOWN THROUGH THE DIFFERENT SCREEN PARAMETERS</p>	 <p>USE UP AND DOWN BUTTONS TO MODIFY THE SELECTED PARAMETER</p>
		
		
		
		
		
		
		
		
		

1



PRESS BOTH BUTTONS AT THE SAME TIME

2



SCROLL UP UNTIL THE STAR IS PLACED ON THE LEFT SIDE OF THE UPPER TITLE