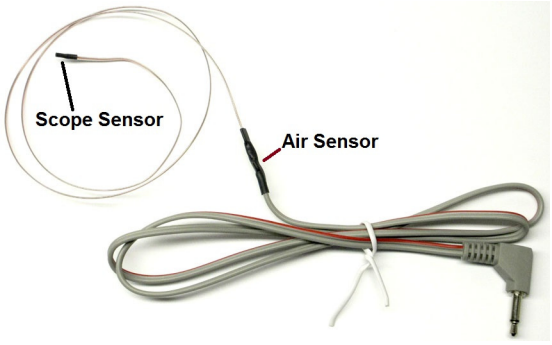
Optional Newtonian Temperature Sensor

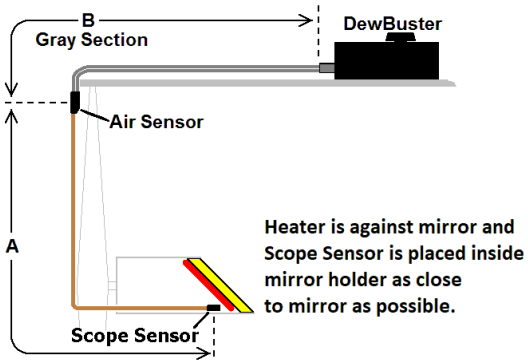
NOTE: Never heat the primary mirror as it will distort the mirror shape resulting in blurred images. Use a cooling fan to keep it at air temperature and prevent dew. Open-tube Newtonians need a shroud to serve as a dew shield.

The Newtonian Sensor measures both air and telescope temperatures. The **Scope Sensor** should be positioned as close to the mirror as possible and the **Air Sensor** should be located near the tube wall but not allowed to touch any part of the telescope. The sensors are connected by a small diameter wire (for minimal light obstruction) which can be routed along the spider vane and painted or taped over as desired. If the user wishes to add a connector at the tube wall, **DO NOT** cut the small diameter wire, only the gray cable to the DewBuster™ Controller can be cut since it is a plain copper wire.

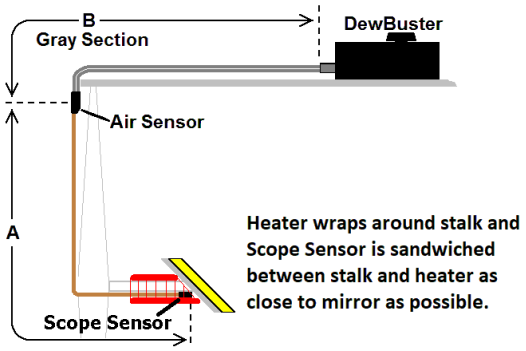


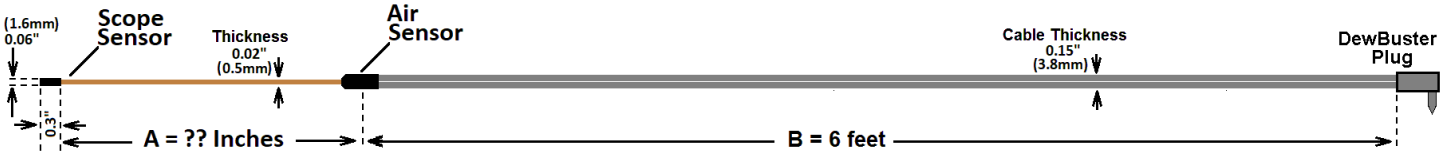
When ordering, refer to the diagram below and specify dimension "A" (distance between Air and Scope sensors) so that I may customize the sensor to fit your scope and provide for a neat installation. If in doubt, specify a slightly longer length and you can bundle any extra wire near the tube wall where it will not block the light path. The gray cable's default length is 6-feet (dimension "B") unless a shorter length is requested.

Holder Mounted Mirror



Stalk Mounted Mirror





Below are examples of Scope Sensor placement on Newtonian secondary mirrors. Ideally the sensor would be glued (Silicone RTV works well) or taped (black electrical tape works well) directly to the back of the mirror, however this is not always practical. The stalk and mirror will be close in temperature since they are glued together, so for this application the sensor may be attached to the stalk as close to the mirror center as possible. Although the diagrams show Newtonians, the principles also apply to other types of secondary mirror holders.

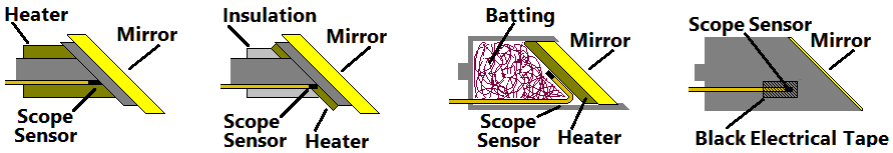


Diagram 1: Sensor placed inside wrap-around heater as close to mirror as possible.
Diagram 2: Flat heater glued to mirror mount, sensor as close to the mirror as possible and wrapped with insulation.
Diagram 3: Mirror in holder with heater glued to it. Sensor placed inside close to heater with batting acting as insulator.
Diagram 4: Same as 3, but to avoid dis-assembly sensor was taped to outside of holder (works but less accurate control).

After attaching the Scope Sensor, route the small diameter wire along the spider vane and locate the Air Sensor where it will not block the light path. Typically the Air Sensor is located inside the tube wall where it will not be warmed by accidentally touching your hands, but you may mount it wherever you wish provided you leave a small air gap between the sensor and any part of the telescope so that the sensor can accurately measure air temperature.