

Recommended Installation Arrangement

The location of the SOLOnet thermometer should be carefully chosen, such that it is easily accessible and in a position not unnecessarily exposed to heat, fumes or liquid spray. The sight path between the SOLOnet thermometer and the target, should be as free as possible from smoke, liquid spray and from the intrusion of machinery. The axis of the thermometer should be at right angles to the target surface, however, an angle of up to 45° from the normal is acceptable. If the thermometer to be installed is a monochromatic or single wavelength variant (SN1 etc), it must be positioned such that at the chosen target distance, the field of view of the thermometer is completely filled. The target size required to fill the field of view can easily be determined, according to the lens configuration and the distance of the thermometer from the target (see 'SOLOnet Thermometer Sighting').

SoloNet Thermometer Installation

- Choose a suitable location for mounting the thermometer. The following criteria should be considered when making the choice:
 - If the installation area is not clean or free from dust, smoke or water spray, then a Land air purge system **must** be utilised to ensure that the thermometer lens is kept free from such airborne contaminants. Ensure that a suitably conditioned air supply is available.
 - If the surrounding ambient temperatures of the installation area are outside the thermometer specification, then a Land air or water cooled protective jacket **must** be utilised to ensure that the thermometer operates at the specified ambient temperature. Ensure that a suitably conditioned air or water supply is available.
- Position and mount any required thermometer mountings and/or accessories (see SOLOnet Mountings and Accessories Installation Guide - PP310).
- Configure the thermometer lens and spacers to match the application (see 'Thermometer Sighting'). Ensure that the selected ring configuration allows correct focusing of the thermometer onto the target.
- Configure the thermometer to match the application (see SOLOnet Quick Start Guide - PP305).
- Fit the thermometer to the mountings. Ensure that the services, where required, are running and are fully operational before installing a thermometer into a hostile environment. Ensure that the thermometer lens is clean, free from contaminants and unobstructed.
- Apply power to the thermometer. If the thermometer has a laser alignment facility, this can be utilised to ensure that the thermometer field of view aligns with the target area. The laser function can be operated by the following methods:
 - By the laser activation button on the rear of the thermometer
 - By the laser activation button on the front of the SN-W/E interface unit
 - From within the configuration software or web interface
 - By remote manual switch, wired into the SN-W/E interface unit (user supplied)
- Ensure that the thermometer is operating correctly. Any configuration changes can be made via the configuration software or web interface facility.
- Carry out the following recommended pre-operational checks:
 - Ensure that all relevant services are functioning correctly, with no apparent air or water leaks.
 - Ensure that the thermometer lens is clean, free from contaminants and unobstructed.
 - Ensure that all piping and cables are safely stowed, as determined by local safety procedures.
 - Ensure that any instrument cables are routed clear of any "noisy" cables. This is generally considered good practice, helping to avoid electrical interference.
- It is recommended that a local maintenance procedure should be determined, with particular attention to thermometer lens cleanliness and services integrity.



Note

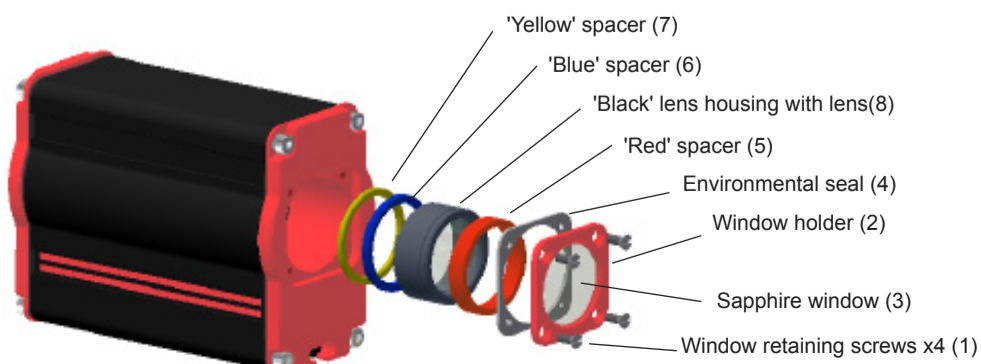
- SNR1 ratio thermometers have an internal heater that needs to warm up before a valid temperature readings can be produced, typically 2 to 3 minutes at room temperature. A further stabilisation time of 2 to 3 minutes will be required before a fully stable reading will be produced following the initial warming period.
- The instrument indicates 'Obscuration' and the temperature output is either held under range or over range whilst warming up, depending on the user's setting for either upscale or downscale drive under conditions of signal obscuration.
- At ambient temperatures of 50°C or above the instrument will produce a valid output immediately, but will still require 2 to 3 minutes settling time.
- In a cold environment, at the lower end of the ambient operating temperature range, the warm up time required may be over 10 minutes at the nominal 24V power supply voltage. A longer period may be required if the power supply voltage is below the nominal value. In cold environments and in applications where the process is frequently powered-down, e.g. overnight, or if rapid process restart is required it is recommended that the power is kept applied to SNR1 installations.

SOLOnet Thermometer lens configuration

The location of the lens of the SOLOnet thermometer can be manually configured within the thermometer housing. This allows selection of focal length to suit the diverse range of possible SOLOnet applications. The following information details the lens and spacer configuration method:

It is highly recommended that the following procedure is carried out in a clean and dry environment, eliminating the chance of thermometer contamination.

- Unscrew, remove and retain the 4xM2.5 retaining screws (1) from the thermometer window holder (2).
- Remove the window holder with sapphire window (3) and environmental seal (4).
- Remove the three coloured spacers; red (5), blue (6), yellow (7) and the black lens housing with lens (8). Ensure that the lens is not marked during this procedure.
- Configure the thermometer lens and spacers to match the application (see 'Thermometer Sighting').
- Place the spacers and lens into the housing in the relevant order, ensuring that the black lens housing is placed with the marker line facing towards the window.
- Check that the environmental seal is intact and refit to the thermometer housing.
- Ensure that the sapphire window is clean and smear free. Place the window housing with sapphire window and position in the thermometer window recess, ensuring that the seal is not trapped anywhere.
- Refit and tighten the 4x window housing retaining screws.
- Ensure that the sapphire window is clean and smear free.



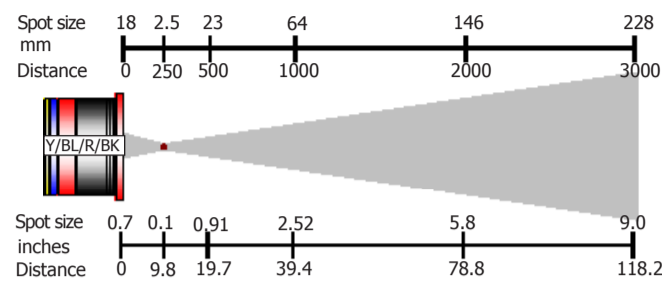
SOLOnet thermometer

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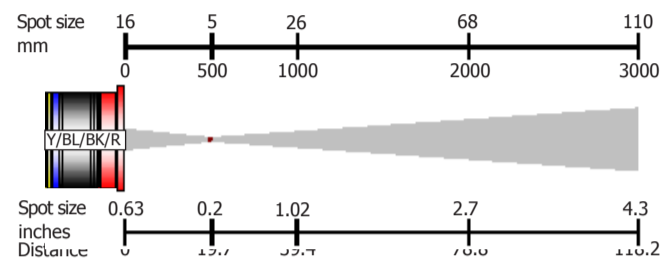
SOLOnet Thermometer Sighting

SOLOnet SN1, SN2 and SNR

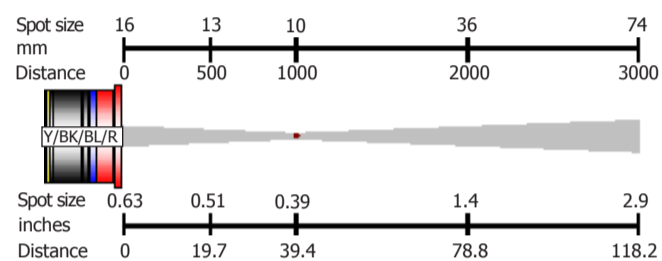
Focus at 250mm/9.8in



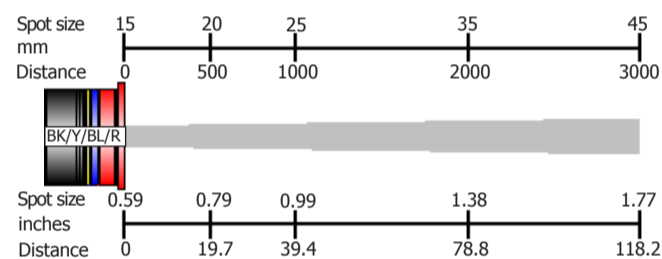
Focus at 500mm/19.7in



Focus at 1000mm/39.4in

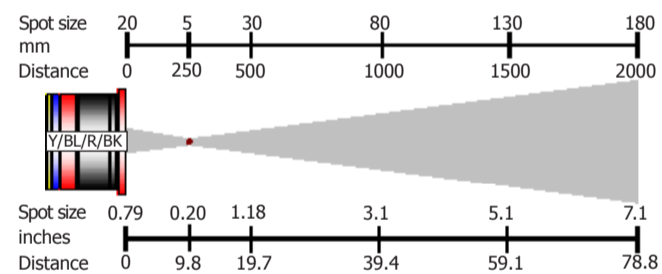


Focus at Infinity

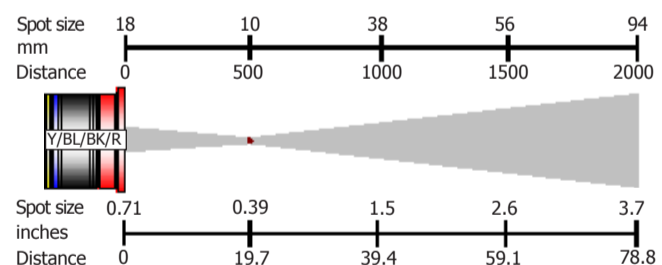


SOLOnet SN5

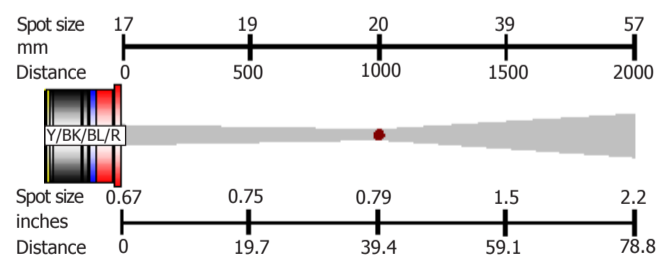
Focus at 250mm/9.8in



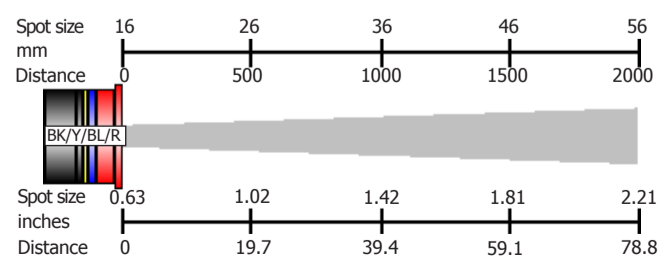
Focus at 500mm/19.7in



Focus at 1000mm/39.4in



Focus at Infinity



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