

Remote Temperature Sensor

- **CommStar RS485 Network Device**
- **Temp range: -20 to +127 ° F**
- **Accuracy: +/- 1/2 ° C , +/- 1 ° F**
- **OS21 Outside Version Also**
- **CommStar WinEVM Supported**
- **Replaces RS20/OS20**



The RS21 is a wall mounted remote temperature sensor that communicates via the *CommStar* RS485 twisted pair network. The OS21 is a version mounted in an outside enclosure.

Network functions supported:

- Report Temperature: -20 to 127 degrees F
- Set Network Address: 1 to 254
- Set or report Temperature Mode: F or C
- Set or report Calibration Offset: +/- 10 degrees

Network Data

The RS21 returns the current temperature information when requested by the network host using the *CommStar* network protocol. Other data can be requested or set by network commands

This simple ASCII text protocol uses the format: A=1, R=3 to request temperature data from the RS21. The RS21 will return a data string that looks like this: A=00 O=1 T=70. A= address of requesting host (usually 0), O is the originator of the return message (the sensor address) and T is the temperature data. ("R" commands are request status commands in the RCS *CommStar* Network protocol. R=3 is a request for temperature data.)

Addressing: The sensor can be addressed from 1 to 254. The address is set or changed by a network command. Address 0 is reserved for default host address and address 255 is reserved for global commands. The default network address is 1. To change the network address, the unit is set to the addressing mode by momentary shorting of the addressing mode select terminals and a new address is sent to the unit.

Temperature Reporting Mode: The sensor can be set to report in either Fahrenheit or Centigrade mode. You can verify the mode setting or change the mode via network commands. Default setting is Fahrenheit.

Calibration Offset: The reported temperature can be offset + or - 10 degrees for calibration. The calibration offset is added to or subtracted from the sensor internal temperature data when reported on the network. This allows the sensor temperature to be adjusted as needed. The Default setting is 0. You can also request the current offset setting via the network.

Network Connection

The *CommStar* RS485 network is a four wire half duplex network. 2 power, 2 data lines. Maximum network length: 4000 Ft of twisted pair wire.

WinEVM Support

WinEVM Event Manager software used with RCS Network Control Units (NCU) has built-in support for setup and control of RS21 sensors.

Wiring: 4 wire (2 power, 2 data). Cat 3 or 5 cable is acceptable. *CommStar* network products like the RS21 are recommended to be homerun wired to a RCS star wiring hub. Daisy chain wiring is permissible, if RS485 wiring and termination requirements are complied with.

Power: 12VDC 50mA, powered from the network.

Size: 2.0 " L x 1.5" W x 1.0" H

Ordering Information:

Model	Part No:	
RS21	001-01021	Remote Temp Sensor, Wall Mount, RS485
OS21	001-01022	Remote Temp Sensor, Outside enclosure, RS485

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