STARTUP INSTRUCTIONS:

1. Verify that the sensor probes are located where they meet EBTRON published installation guides.

2. Verify that the probes are properly spaced with the airflow arrows pointing in the direction of airflow. Improperly installed probes will compromise the installed accuracy of the device and degrade system performance.

3. Verify that the transmitter is installed and wired in accordance with the GTU116e-P Wiring Guide provided with the transmitter and power is provided to the transmitter.

4. Make sure the ductwork is clean and free of debris prior to fan startup.

5. Move the power switch to the “ON” position. Power-up faults, if detected, are displayed on the LCD. If any power up faults are detected, resolve all conflicts or contact EBTRON customer service at 1-800-232-8766 before proceeding.

6. If extension cables have been added, the extension cable length must be entered into the transmitter. Refer to the Operations and Maintenance Manual for more information.

Refer to the O&M Manual for more information and additional parameter defaults, settings and ranges.
6. The transmitter is fully functional as a factory calibrated airflow and temperature measurement device in I-P units (ft, FPM, CFM °F). Airflow (CFM) and temperature (°F) are displayed on the LCD. If the transmitter is provided with the /H humidity sensor option, relative humidity (%RH) is also displayed.

7. If the /H humidity sensor option is provided, relative humidity (%RH) is displayed on the LCD. Enthalpy or dew point can also be displayed on the LCD by changing the H CONFIG parameter to ENTH (enthalpy) or DPT (dew point). Press the ↑↓ arrow buttons simultaneously to enter the MAIN MENU. The SETTINGS menu is displayed. Press the ENT button to select the top of the SETTINGS submenu category. Press the ↓ button until the GENERAL submenu is visible. Press the ENT button to enter the GENERAL submenu. Press the ↓ button until the H CONFIG parameter is visible. Press the ENT button and set the H CONFIG parameter to ENTH (enthalpy) or DPT (dew point) using the ↑↓ buttons. Press the ENT button to save the selection. Press the ESC button twice to return to normal operation.

8. If SI units are required, refer to the Operations and Maintenance Manual.

9. The factory default airflow output is set to actual airflow (CFM). If standard (mass) airflow (SPFM, SCFM) is required, refer to the Operations and Maintenance Manual.

10. Verify that the area on the hang-tag matches the actual area of the duct or opening where the probes are located (less any internal insulation). If the area is different, modify the area parameter stored in the transmitter and use the correct area for any external conversion calculations from FPM to CFM. Failure to use the correct area will result in volumetric airflow (CFM) measurement error and degrade system performance. If the area parameter must be changed, refer to the Operations and Maintenance Manual.

11. The output signal type and range (4-20 mA, 0-5 VDC or 0-10VDC) of AO1, AO2 and AO3 is determined by the AOUT parameter. The transmitter is factory set to 4-20mA. The 4-20mA is a "4-wire type" and not loop powered. Do not apply any excitation voltage to the output of the transmitter.

12. Verify that the transmitter is configured to match the analog input requirements of the host controller. Press the ESC and ↑↓ buttons simultaneously to display the transmitter setting for the AOUT parameter. If the AOUT parameter is not correct, press the ENT button and use the ↑↓ buttons to set AOUT. Press the ENT button to execute and display the change. Press the ESC button twice to return to normal operation.

13. The analog output signal for airflow (AO1) is linear. The minimum scale reading (0% output) of the airflow signal is fixed at 0 and the full scale reading (100% output) is factory set to 5,000 FPM. Multiply the default full scale velocity (FPM) by the correct area of the measurement location to determine the full-scale or span (CFM) for the B.A.S. to avoid field configuration. EBTRON airflow measurement device accuracy is percent-of-reading. Changing the full scale reading does not affect measurement accuracy. If custom airflow scaling or unit of measure are required, refer to the Operations and Maintenance Manual.

14. The analog output signal (AO3) for the psychrometric property specified is linear. The minimum scale reading (0% output) and full scale reading (100% output) is based on the psychrometric specified by H CONFIG. The factory default ranges for each psychrometric property output are as follows:
   - Relative humidity (H CONFIG = RH): 0 to 100%
   - Enthalpy (H CONFIG = ENTH): 0 to 200 Btu/lb
   - Dew point (H CONFIG = DPT): 0 to 100 °F

If custom psychrometric property scaling is required, refer to the Operations and Maintenance Manual.

15. If USB memory device connection is required continue to step 16, otherwise skip to step 24.

16. Transmitters with a USB data logger log the average airflow, average temperature, individual sensor node airflow and the individual sensor node temperature at 5-minute intervals using Universal Time Coordinated (UTC) based on an onboard real-time clock, whenever power is applied to the transmitter. The USB port must be enabled to log data.

17. If USB memory device connection is required continue to step 16, otherwise skip to step 24.

18. Install the USB memory device into the USB connector on the option card to start logging data. It is a good practice to set the transmitter power switch to the "OFF" position before inserting the USB memory device.

19. Transmitters are shipped with the USB port parameter USB WRITE set to "ON".

20. Transmitters shipped with the USB port parameter USB WRITE set to "ON". To remove the USB memory device and stop data logging continue to step 18, otherwise skip to step 24.

21. To remove the USB memory device and stop data logging continue to step 22, otherwise skip to step 24.

22. Disable the USB WRITE parameter stop logging data. Press the ↑↓ arrow buttons simultaneously to enter the MAIN MENU. The SETTINGS menu is displayed. Press the ENT button to select the top of the SETTINGS submenu category. Press the ↓ button until the USB submenu category is visible. Press the ENT button. The USB WRITE parameter is visible. Press the ENT button and use the ↑↓ buttons to select Off. Press the ENT button to save the selection. Press the ESC button twice to return to normal operation.

23. Always set the USB WRITE parameter to "OFF" before removing the USB memory device to avoid data loss/and or damage.

24. Startup is complete! If additional customization is desired, consult the Operation and Maintenance Manual.
VERIFICATION
Many installations require third-party airflow verification. If the airflow measuring device is within the measurement uncertainty of the verification technique, EBTRON strongly recommends that no field adjustment correction is made. EBTRON airflow measurement devices are factory calibrated to NIST traceable standards. Field adjustment is not recommended when installed in accordance to published guidelines.

If field adjustment is required, refer to the Operation and Maintenance Manual.

1. If minimum placement guidelines cannot be achieved, installed accuracy may be compromised. Transmitters can be field adjusted to match a third-party measurement. Adjusted field measurements typically result in comparative readings within ±3% of the third-party measurement. Be advised that the third-party measurement may have uncertainties greater than or equal to ±10% and should only be used to adjust the airflow measurement device if the probes do not meet minimum placement requirements or the discrepancy is greater than the uncertainty of the third-party source.

NEED MORE HELP?
EBTRON Customer Service
For toll-free factory support call 1-800-2EBTRON (1-800-232-8766), Monday through Thursday 8:00 AM to 4:30 PM and Friday 8:00 AM to 2:00 PM eastern time.

Your Local EBTRON Representative
Visit EBTRON.com for the name and contact information of your local representative.