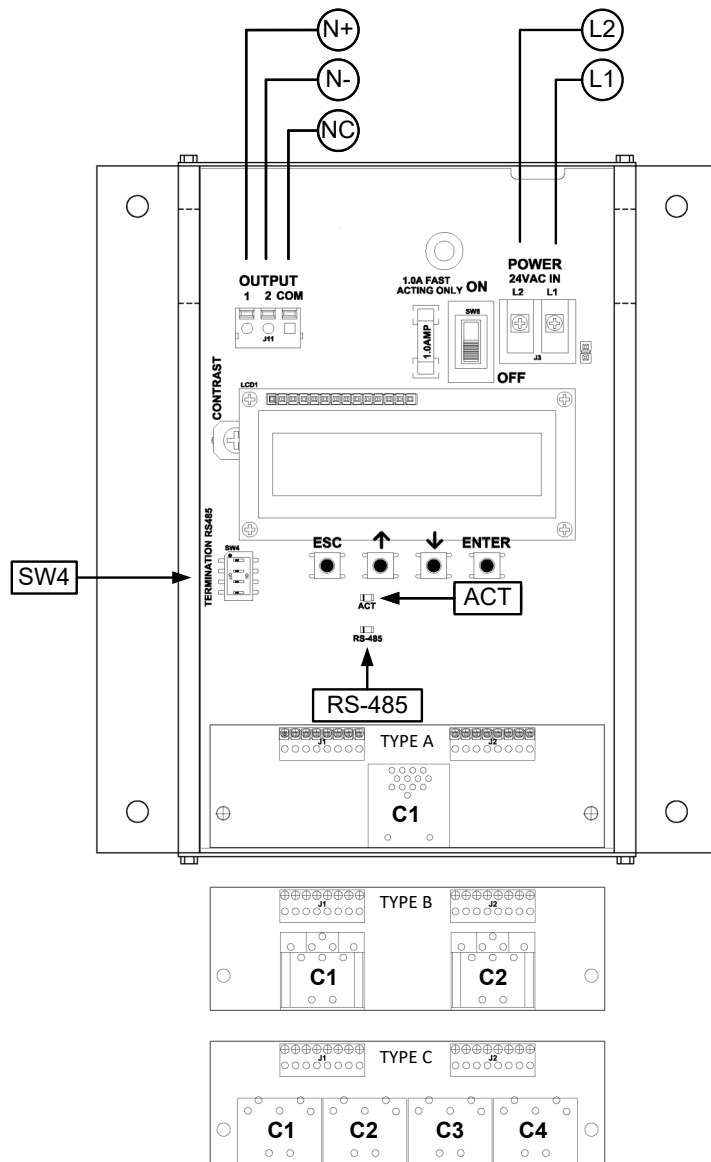


Advantage IV (A4) HTN104-F STARTUP GUIDE



HTN104-F Parameters - Factory Defaults and Optional Settings/Ranges

Description	Parameter	Default	Optional Settings/Ranges	Units
System of Units	SYS	I-P (US customary)	SI (metric)	
Airflow Calculation Method	AIRFLOW	ACT (actual)	STD (standard mass flow)	
Altitude (for actual flow correction)	ALT	0	0 to 20000 [0 to 6000]	ft [m]
Low Limit Airflow Cutoff	LLIMIT	0 FPM	0 to 500 FPM [0.0 to 2.5 m/s]	
Area	AREA	[Null] requires entry	0.00 to 9999.99 [0.000 to 999.999]	sq ft [sq m]
RS-485 Network	BACnet MS/TP or Modbus RTU (requires configuration)			

Refer to the O&M Manual for more information and/or additional parameter defaults, settings and ranges.

STARTUP INSTRUCTIONS:

- Verify that the sensor probes are properly installed and secured in the fan inlet(s).
 - !** Improperly installed probes will compromise the installed accuracy of the device and degrade system performance.
- Verify that the transmitter is installed and wired in accordance with the *HTN104-F Wiring Guide* provided with the transmitter and power is provided to the transmitter.
- Make sure the ductwork is clean and free of debris prior to fan startup.
- 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..
 - !** 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.
- The transmitter is fully functional as a factory calibrated airflow and temperature measurement device in I-P units (ft, FPM, CFM °F). Airflow (FPM) and temperature (°F) are displayed on the LCD.
 - i** Airflow is displayed in FPM in lieu of CFM because the exact area where the fan inlet probes are located is not known until installation is complete.
 - i** If SI units are required, refer to the *Operations and Maintenance Manual*.
 - i** The factory default airflow output is set to actual airflow (FPM, CFM). If standard (mass) airflow (SFPM, SCFM) is required, refer to the *Operations and Maintenance Manual*.
- It is recommended that the area of the fan inlet is entered manually or calculated using the fan area wizard tool (FAN WIZ). The total area parameter, AREA, can also be entered manually directly through the SETTINGS menu.
 - i** The area is always determined by using the diameter of the inlet at the leading (upstream) side of the sensor node housing.
 - i** Refer to the *Operations and Maintenance Manual* if manual entry of the AREA parameter is desired.
 - !** Failure to use the correct area will result in volumetric airflow (CFM) measurement error and degrade system performance.
- To use the FAN WIZ tool, press the ↑↓ arrow buttons simultaneously to enter the MAIN MENU. The SETTINGS menu is displayed. Press the ↓ button until the TOOLS menu category is visible. Press the ENT button to select the top of the TOOLS submenu category. Press the ↓ button until the FAN WIZ tool is visible. Press the ENT button to execute the tool. Select "YES" when the SAVE prompt is displayed. The display will be changed from FPM to CFM and the AREA parameter will be updated.



Refer to the *Operations and Maintenance Manual* for more information.

8. If the RS-485 network connection is required continue to step 9, otherwise skip to step 11.
9. Press the $\uparrow\downarrow$ 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 \downarrow button until the RS-485 submenu category is visible. Press the ENT button again to enter the RS-485 submenu. Set the NET OUT parameter for BACnet (MS/TP) or Modbus (RTU) and continue through the RS-485 submenu to configure the remaining network parameters. Enable network communications by setting the RS485 COM parameter to "ON". Refer to the *Operations and Maintenance Manual* for more information.
10. Refer to the *Operations and Maintenance Manual* for detailed information on the BACnet Objects and Modbus Registers supported by this device. .
11. 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*.

-  *Transmitters can be field adjusted to match a third-party measurement. Adjusted field measurements typically result in comparative readings within $\pm 3\%$ of the third-party measurement. Be advised that the third-party measurement may have uncertainties greater than or equal to $\pm 10\%$ and should only be used to adjust the airflow measurement if the discrepancy is greater than the uncertainty of the third-party source.*
-  *Variability in field mounting and fan inlet entry conditions may affect the installed accuracy of the measurement device. When airflow measurement devices are installed in the supply and return airflow paths for airflow tracking, set the system to 100% recirculation mode with no intake or relief at the air handling unit. Confirm that the intake and relief air dampers are closed and leakage is negligible. Confirm that the recirculation (return) air damper is fully open. If a return fan is installed, modulate the supply and return fan together in a manner that avoids under- or over-pressurization of the relief and intake plenums. Adjust one location to match the other using the field adjust wizard (FAW) at one or two airflow rates. This technique has been show to significantly improve tracking performance on marginal installations. Select the best measurement location as the reference. Refer to the *Operations and Maintenance Manual* for more information.*

FOR MORE INFORMATION

[Operations and Maintenance Manual](#).

The *Operations and Maintenance Manual* is a comprehensive reference document that contains information on installation, startup, custom configuration, built-in tools, diagnostics, troubleshooting and maintenance.

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.