

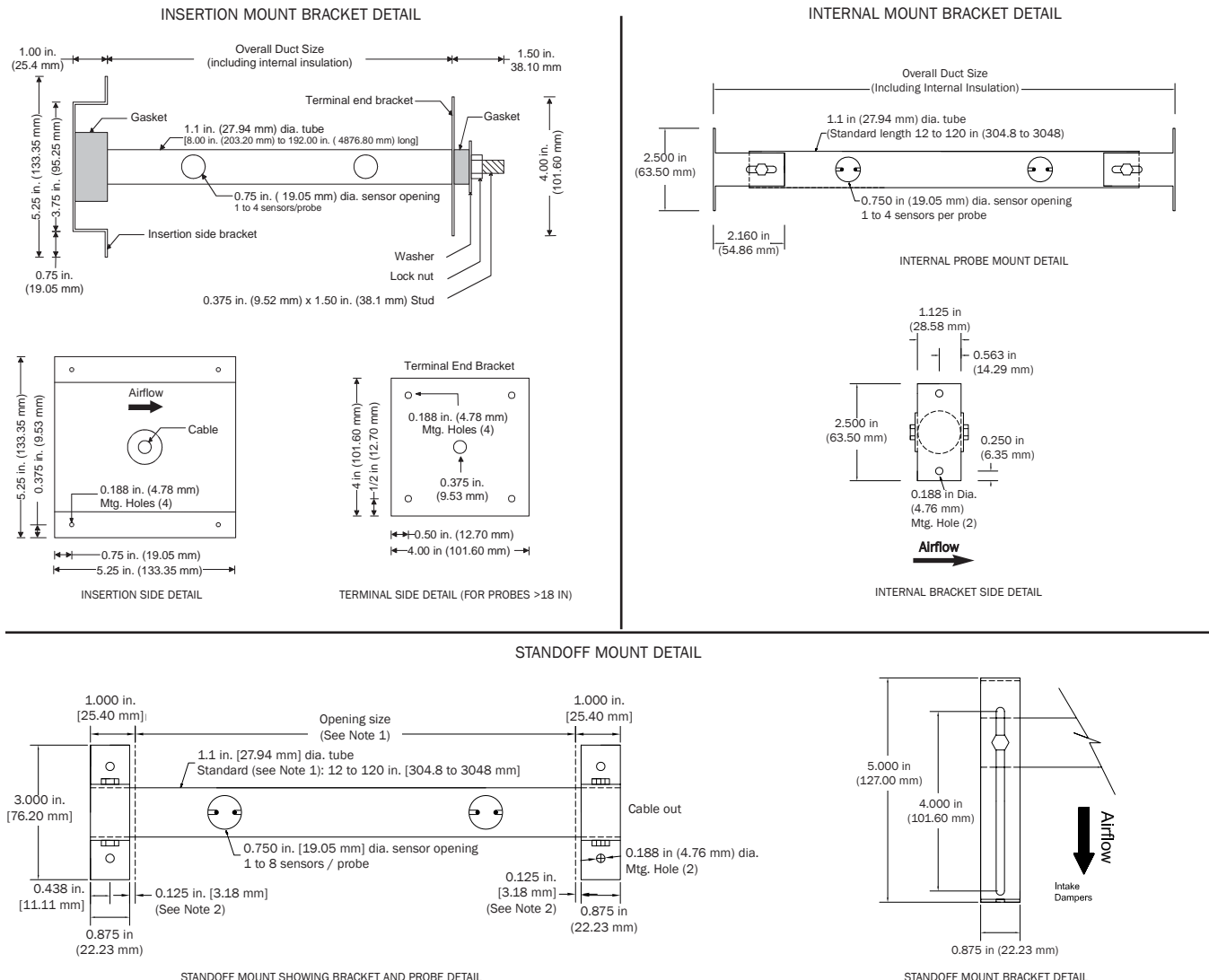


### GOLD SERIES TECHNOLOGY OVERVIEW

The GTx116 transmitter can process up to 16 individual sensing nodes and requires 24 VAC to provide airflow and temperature measurement outputs. Models are available for concurrent analog and RS-485 (GTC116), RS-485 only (GTN116 with BACnet ARCNET), ethernet (GTE116) and LonWorks (GTL116) output for BAS networks. The transmitter is independent of the sensor probes thus eliminating field matching. The transmitter includes a 16 character LCD display that indicates airflow, temperature and system status, and is also useful during configuration and diagnostic modes. Field configuration and diagnostics are accomplished through a simple push-button interface on the main circuit board for selection of units of measure, display units, output scaling, dampening filter, diagnostics and instrument status. Individual sensor airflow and temperature measurements

can be displayed and are beneficial as an HVAC system diagnostic tool. The airflow output signal can be filtered and a process low limit can be set to force the transmitter output to zero when airflow falls below a user defined value. Both features are important for outside air intake applications that can be affected by transient wind gusts at low airflow rates. In addition, an airflow offset and a gain adjustment feature can be engaged for installations where field calibration or adjustment is necessary. **EBTRON's** GP1 sensor probes with proprietary flow loss compensation design are available in finishes of gold anodized aluminum (standard) or stainless steel (optional). Internal and Insertion duct mounting options are available, as well as an adjustable standoff mount for a wide range of damper applications.

### PROBE MOUNTING STYLES AND BRACKET DIMENSIONS



- NOTES:
- Standoff probes are ordered by specifying the opening size. The probes supplied include an additional 2 in. [50.8 mm] of tube length (which is 2 in. longer than the specified opening size) to allow for bracket installation and damper blade clearance.
  - 0.125 in. [3.175 mm] clearance (dashed line adjacent to each bracket) provided to ensure damper blade/linkage clearance.

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**'D' SENSOR DENSITY TABLES**

EBTRON 'D' sensor density is ours highest sensor density, developed for applications that do not meet the minimum placement requirements of the 'C' sensor density, for test laboratories, continuous commissioning and other applications where over-sampling of sensing points is desired or required. The 'D' sensor density is generally not required for most HVAC control applications. To maximize installed performance and accuracy, always follow minimum placement guidelines. The following tables indicate the quantity of probes and number of sensing nodes per probe provided for common rectangular and round/round-oval applications with probes from 12 to 120 inches.

**GP1 'D' Sensor Density Tables**  
 Rectangular Probe Sensor Density (# Probes / # Sensors per Probe)  
 GTx116-PD

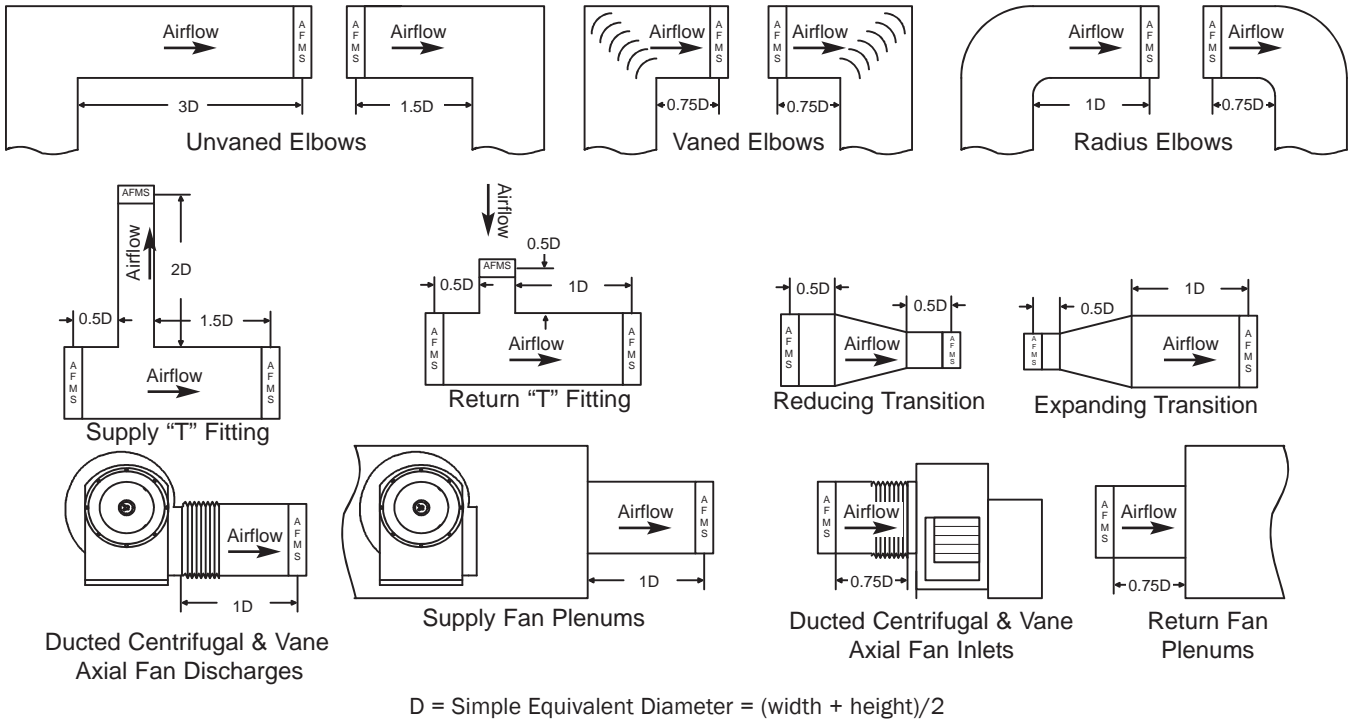
		PROBE LENGTH - RECTANGULAR DUCTS														
		12	18	24	30	36	42	48	54	60	66	72	84	96	108	120
ADJACENT SIDE LENGTH	12	2/2	2/2	2/3	2/3	1/6	1/6	1/8	1/8	1/8	1/8	1/8	1/8	2/6	2/6	2/6
	18	2/2	2/3	2/3	2/3	2/4	2/4	2/4	2/4	2/4	2/6	2/6	2/6	2/8	2/8	2/8
	24	3/2	3/2	3/3	3/3	2/4	2/4	2/6	2/6	2/6	2/6	2/8	2/8	2/8	2/8	2/8
	30	4/2	3/2	3/3	3/3	3/3	3/4	3/4	3/4	4/4	4/4	4/4	2/8	2/8	2/8	2/8
	36	4/2	4/2	3/3	3/3	3/4	3/4	4/4	4/4	4/4	4/4	4/4	4/4	2/8	2/8	2/8
	42	4/2	4/2	4/2	4/3	4/3	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	2/8	2/8
	48	4/2	4/2	4/3	4/3	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	54	4/2	4/2	4/3	4/3	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	60	4/2	4/2	4/3	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	66	4/2	4/3	4/3	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	72	4/2	4/3	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	84	4/2	4/3	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	96	4/3	4/3	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	108	4/3	4/3	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	120	4/3	4/3	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	144	4/3	4/3	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	168	4/3	4/3	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	192	4/3	4/3	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4

Round-Oval Probe Sensor Density (# Probes / # Sensors per Probe)  
 GTx116-PD

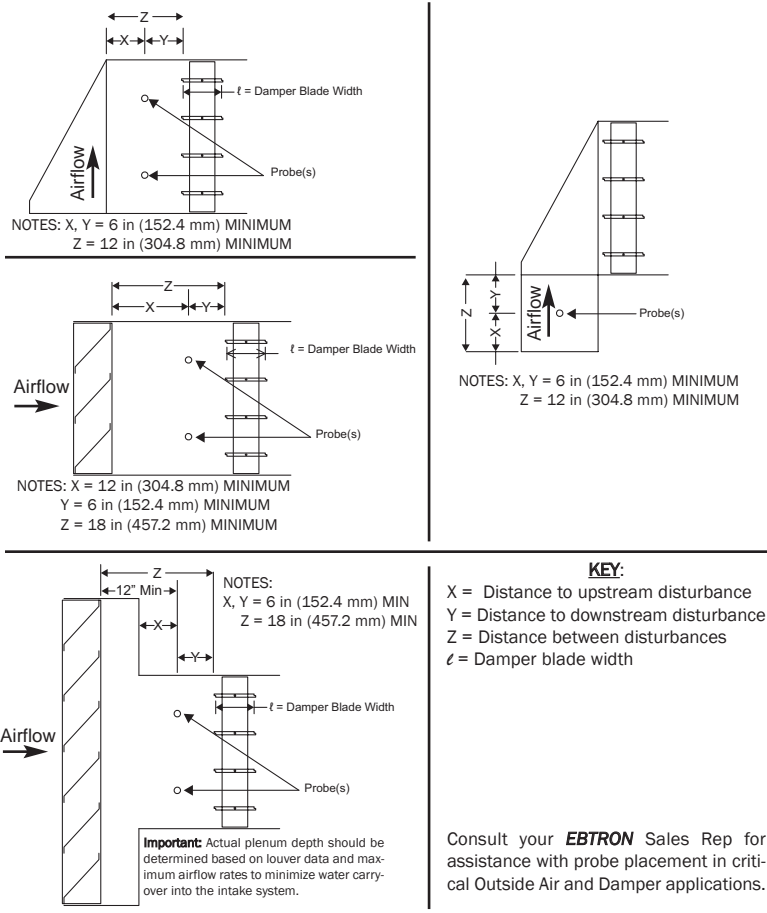
		PROBE LENGTH - ROUND-OVAL DUCTS														
		12	18	24	30	36	42	48	54	60	66	72	84	96	108	120
ADJACENT SIDE LENGTH	12	2b/2	1a/4	1a/4	2b/2	2c/3	2c/3	2c/3	3c/3	3c/3	3c/3	3c/3	3c/3	3c/3	4c/3	4c/3
	18		2b/2	2b/2	2b/2	2b/2	2b/2	2c/3	2c/3	2c/3	2c/3	3c/3	3c/3	4c/3	4c/3	4c/3
	24			2b/4	2b/4	2b/4	2b/4	2b/4	2b/4	2b/4	2b/4	2b/4	2b/4	2b/4	2b/4	4c/4
	30				2b/4	2b/4	2b/4	2b/4	2b/4	2b/4	2b/4	2b/4	2b/4	2b/4	2b/4	2b/4
	36					3b/4	2b/6	2b/6	2b/6	2b/6	2b/6	2b/6	2b/6	2b/6	2b/6	2b/6
	42						2b/6	2b/6	2b/8	2b/8	2b/8	2b/8	2b/8	2b/8	2b/8	2b/8
	48							4b/4	2b/8	2b/8	2b/8	2b/8	2b/8	2b/8	2b/8	2b/8
	54								4b/4	2b/8	2b/8	2b/8	2b/8	2b/8	2b/8	2b/8
	60									4b/4	2b/8	2b/8	2b/8	2b/8	2b/8	2b/8
	66										4b/4	2b/8	2b/8	2b/8	2b/8	2b/8
	72											4b/4	2b/8	2b/8	2b/8	2b/8
	84												4b/4	2b/8	2b/8	2b/8
	96													4b/4	2b/8	2b/8
	108														4b/4	2b/8
	120															4b/4

**'D' SENSOR DENSITY PLACEMENT GUIDELINES**

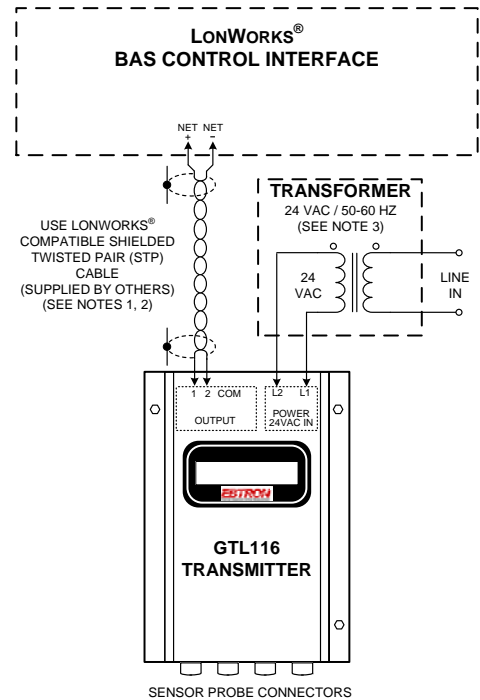
**Duct and Plenum Probe Minimum Placement Guidelines ('D' Density Probes)**



**Outside Air Intake Damper/Plenum Applications**



**TYPICAL WIRING DIAGRAM**



- NOTES:**
- REFER TO *LonWorks<sup>®</sup> FTT-10A Free Topology Transceiver User's Guide* AVAILABLE AT [www.echelon.com](http://www.echelon.com) FOR LONWORKS<sup>®</sup> NETWORK WIRING SPECIFICATIONS AND TERMINATION REQUIREMENTS.
  - GTL116 CONNECTIONS AT TERMINALS 1 AND 2 (NET + and NET -) ARE NOT POLARITY SENSITIVE, AND THE COM CONNECTION IS NOT USED.
  - ON MULTIPLE GTL116 TRANSMITTER INSTALLATIONS WITH A COMMON 24VAC SOURCE, WIRE 24 VAC CONNECTIONS IN-PHASE TO THE SAME TERMINALS ON ALL TRANSMITTERS (e.g.: L1 to L1, L2 to L2).

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