



FLOW AVERAGING TRANSMITTER SERIES 255 FOR MULTISENSOR ARRAYS



The Kurz Series 255 Flow Averaging Transmitter used in conjunction with the Series K-BAR 2000B multipoint flow meter is a versatile system transmitter designed to continuously read and analyze flow rates and temperatures in very large ducts that have non-uniform or unstable velocity profiles and/or wide temperature ranges. It is a state-of-the-art microprocessor-based system that powers and reads up to 16 independent sensing points, providing a mass-weighted average of the flow and temperature.

The Series 255 is designed for high reliability and high availability with multiple and independent power and communication ports so that wiring issues will not bring down the entire multisensor network.



Kurz Instruments, Inc.
2411 Garden Road
Monterey, CA 93940
800-424-7356 | 831-646-5911
www.KurzInstruments.com



SPECIFICATIONS

- **Flow measurement range**
0 to 70,000 SFPM x A (0 to 325 NMPS x A)
A=pipe / duct area
- **Temperature measurement range**
-40°F to 932°F (-40°C to 500°C)
- **Measurement rate**
< 0.1 second per sensor @ 38.4 kbps
- **Optically-isolated loop powered 4-20mA outputs (+/- 48 VDC isolation)**
12-bit resolution and accuracy;
Maximum loop resistance is 300 Ohm at 18 VDC,
550 Ohm at 24 VDC, 1400 Ohm at 36 VDC
- **Display update 2 seconds**
- **Two optically isolated solid-state relays/alarms**
0.5 A, 24 VDC optically coupled solid state relays
- **Electronics operating temperature**
-20°C to 50°C
- **Input Power**
Depending on number and type of flow sensors:
Model 255A up to 4 channels — 100-240 VAC, 50/60 Hz;
Model 255B up to 9 channels — 100-240 VAC, 50/60 Hz;
Model 255C up to 16 channels — 100-240 VAC, 50/60 Hz;
Model 255DC up to 16 channels — 24 VDC, 3.6-13.5 A

CERTIFICATES & COMPLIANCES

- **Industrial Safety for Electrical Equipment**
Ordinary Locations
IEC/CSA/UL 61010-1 and 61010-2-030
Hazardous Locations ETL/cETL, ATEX, (IECEX pending)
IEC/CSA/UL 60079-0 — Explosive Atmospheres
IEC/CSA/UL 60079-7 — Increased Safety
IEC/CSA/UL 60079-15 — Type of Protection
IEC/CSA/UL 60079-31 — Equipment Dust Ignition
- **EMI Compliance**
EN 61000-6-2 — EMC Immunity
EN 61000-6-4 — EMC Emission
EN 61000-3-2 — Harmonic Current Emissions
EN 61000-3-3 — Voltage Fluctuations & Flicker
- **Environmental**
IP 65 Ingress Protection
IP 66 Ingress Protection
NEMA Type 4X
- **NAMUR Signaling Standard**
NE43-compliant 4-20mA outputs
NE107-compliant front panel indicators

FEATURES

- **Up to 16 sensors providing point velocity, temperature, and sensor fault code**
- **Polycarbonate, stainless steel, or rack mount options**
- **Flow and temperature measurement data quality indication for event logging**
- **Maintains a 30-day log of daily flow totals**
- **Velocity-dependent correction factors for flow rate calculations**
- **Optically-isolated loop powered 4-20 mA output**
- **Two digital inputs**
DI1 — external trigger to toggle Maintenance Mode
DI2 — external trigger to initiate Zero-Span Cycle
- **Six power/data ports for input channel network segmentation**
Reverse polarity, ESD, Surge, EFT, and EMI protection;
Each port current limited to 3.4 A
- **One 4-20 mA non-isolated analog input**
- **Battery backed real-time clock**
- **User-defined TAG ID and flow area**
- **Three EEPROM data areas for system configuration restore points**
- **Automatic sensor out-of-tolerance indication, alarm, and re-averaging for multipoint flow elements**
- **Isolated USB to RS-485 port for auxiliary MODBUS connection to individual channels**
Galvanic isolation up to 1000 VDC
- **User-configurable English or metric units for mass flow rate, mass velocity, and process temperature**
KGM, KGM, NCMH, NLPM, NMPS, PPH, PPM, SCFH, SCFM, SFPM, SLPM, SMPS
- **Easy-to-use interface**
Backlit Display with 4-lines of 20-characters each; 20-button keypad
- **User-configurable flow display (scrolling or static)**

OPTIONS

- **NEMA Type 4X window kits for stainless steel enclosures**
- **Startup Assistance**
Site visit by factory technicians for startup, installation verification, and commissioning
- **Field Calibration**
In-situ flow profile traversing with calibrated measuring equipment by qualified technician