

# Smart-Alek<sup>®</sup>

## Intelligent Flow Monitoring System

### Product Specifications

#### Static & Differential Pressure Sensors

- Ranges: 0-72 psi / 24" wc, 0-72 psi / 125" wc, 0-1450 psi / 0-125" wc, 0-1450 psi / 0-520" wc, 0-2500 psi / 0-520" wc
- Accuracy (at 25°C):
  - Static +/- 0.2% of FS, +/- 0.3% of FS for 2500psi SP
  - Diff +/- 0.2% of FS
  - Temperature Affect < 0.3% of FS drift over daily temperature fluctuation
- Materials: 316SS

#### Temperature Sensor

- Measurement Range: -40°C to +160°C
- Accuracy: +/- 0.25°C at 25°C, <1°C temperature effect over instrument ambient range
- Type: 100 Ohm platinum RTD, TCR = 0.385, 4-wire connections

#### Environmental

- Operating Temperature: -40°C to +60°C
  - Display -20°C to +60°C
  - Cellular modem -30°C to +60°C
  - Satellite modem -20°C to +60°C
- Regulatory Approvals:
  - Hazardous Location: Class I, Division 1, Groups C, D / Ex ia [ia] IIB T3 / Class I, Zone 0, Aex ia [ia] IIB T3
  - Emissions: FCC Part 15, Class B

# Smart-Alek<sup>®</sup> Product Specification Sheet

## Flow Measurement

- Flow Algorithms: AGA-3-92 (including AGA-8)
- Configurable: Local display, Alarms, Reporting period, Flow parameters (on Network)
- Data retention: Minimum 35 days on Smart-Alek<sup>®</sup>; 2 years on Network (Hourly/Daily records)

## Communication

- Serial Communication: RS-232 via internal DB-9; RS-485 (modified for intrinsic safety) via multiconductor cable
- Wireless Communication:
  - Satellite - 2400 bps
  - 1x Radio Transmission Technology (1xRTT) - 115.2 kbps
- LCD Display: Configurable scrolling of instantaneous values and last day volume

## Power

- Batteries: Sealed, air-transportable, internal lead acid batteries; 6V rechargeable pack; capable of 5 days wireless transmission at -20°C without solar panel
- Solar Panel: 12V, 5W; Smart-Alek<sup>®</sup> has nominal input range of up to 24VDC

## Mechanical (Model SA 2005)

- Weight: 10.6 Kg
- Size: 11" W x 18" H x 5" D
- Enclosure Type: Type 4
- Mounting: Universal mounting bracket for 2" pipe stand
- Cabling:
  - Solar Panel and Cellular Antenna - coaxial cable with connector; 10m standard
  - Solar Panel and Satellite Modem - multi-conductor cable with connector; 10m
  - RTD cable; 3m standard

