

ENERFLOW II
Differential Pressure and Airflow
Signal Processor with Controller

Design/Application:

The **EnerFlow II** is a $\pm 0.25\%$ F.S. accuracy transducer with three mode (P,I,1/D) controller.

The ultra low 0.03" w.c. differential pressure (693 fpm) full scale operating range and the auto zeroing function of the **EnerFlow II** provides accurate airflow measurement down to 100 fpm.

The **EnerFlow II** accepts a temperature input signal for air temperature indication, temperature signal transmission for remote readout, and air density compensation for standard or actual airflow calculations.

A six button touch pad allows the user to configure the engineering units, process noise filtering, operating range, alarm set points, etc. A password protected tech configuration menu provides quick and simple field configuration by authorized personnel. Device monitoring and configuration can also be performed by a building management system through LonWorks®, BACnet®-MS/TP Master, or Modbus® RTU Slave communication network.

The **EnerFlow II** offers a controller that utilizes a proprietary algorithm which results in true three mode control incorporating proportional band, integral (reset) and inverse derivative (P,I,1/D) controller functionality and tuning. The controller will provide responsive modulation of a control damper or variable speed drive guaranteeing that a constant airflow or pressure is maintained.

Features:

- ± 0.25 full scale accuracy (standard)
- ± 0.10 Full scale accuracy (optional)
- Full Scale ranges as low as 0.03"w.c. (7.47 Pa) differential pressure of 693 fpm (3.52m/s) velocity
- Excellent resolution:
24 bit (16.7million steps) A/D
12 bit (4K steps) D/A.
- Lonworks®, BACnet® Master and Modbus® RTU Slave communications
- Large back lit LCD for configuration and local indication of the measured process
- Simple field configuration menus
- Controlled access to Tech configuration menus
- Capable of receiving external temperature input for standard and actual air calculations
- Outputs and displays measured value in differential pressure, velocity, or flow
- Field configurable for either English or SI engineering units
- Integral power switch
- Three-mode (P,I,1/D) controller
- Display and output hold for high pressure purge applications (optional)
- Economizer Override (optional)
- Auto zeroing function (optional)
- High and low airflow alarms with emote relays (optional)
- NEMA 4X rated enclosure (standard)



☐ **ENERFLOW II**
Differential Pressure and Airflow
Signal Processor with Controller

DRAWN BY:
CLJ

DATE:
11-13-13

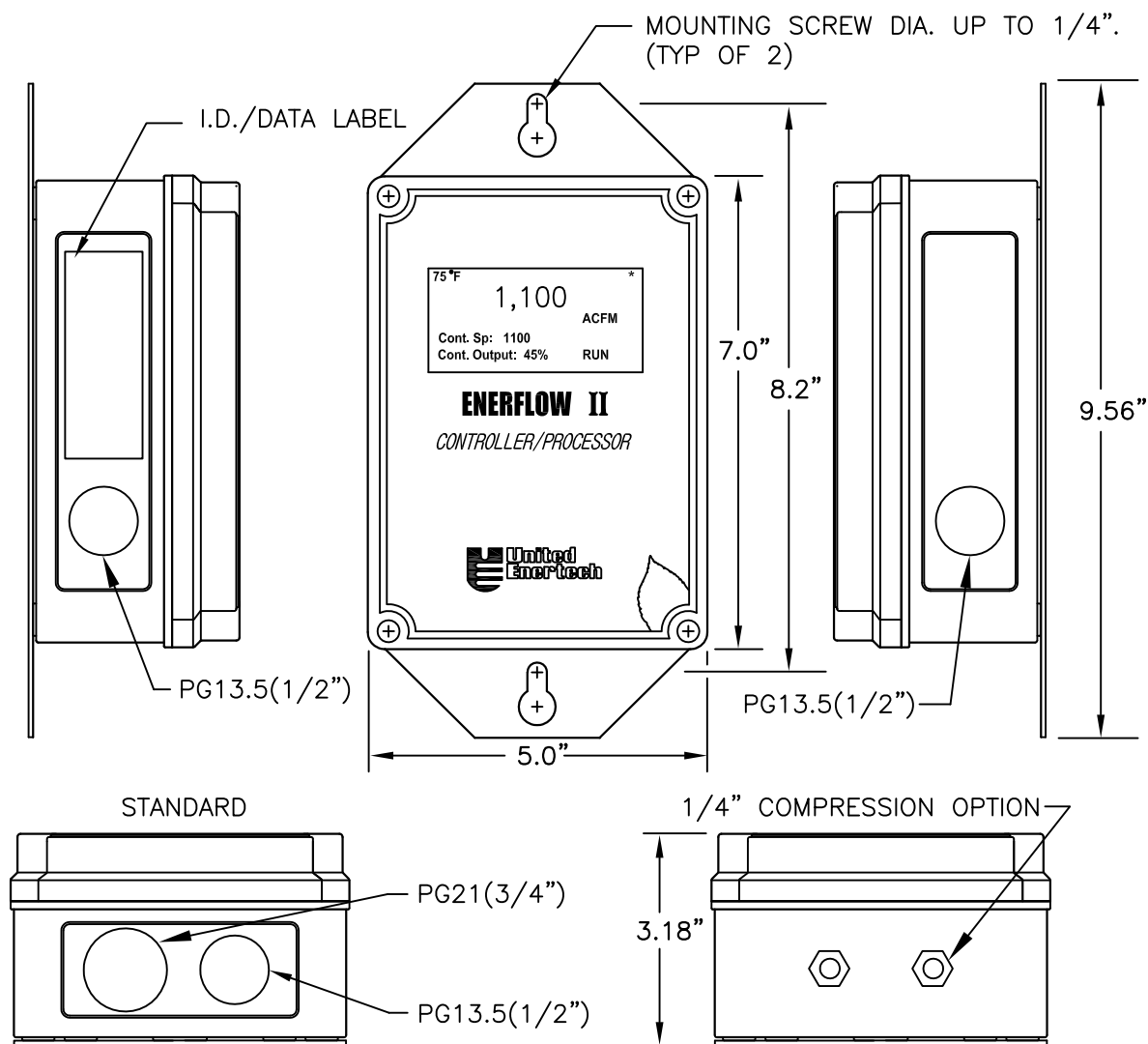
REV. DATE:
11-14-13

REV. NO.
1

APPROVED BY:
MD

DWG. NO.:
O-3

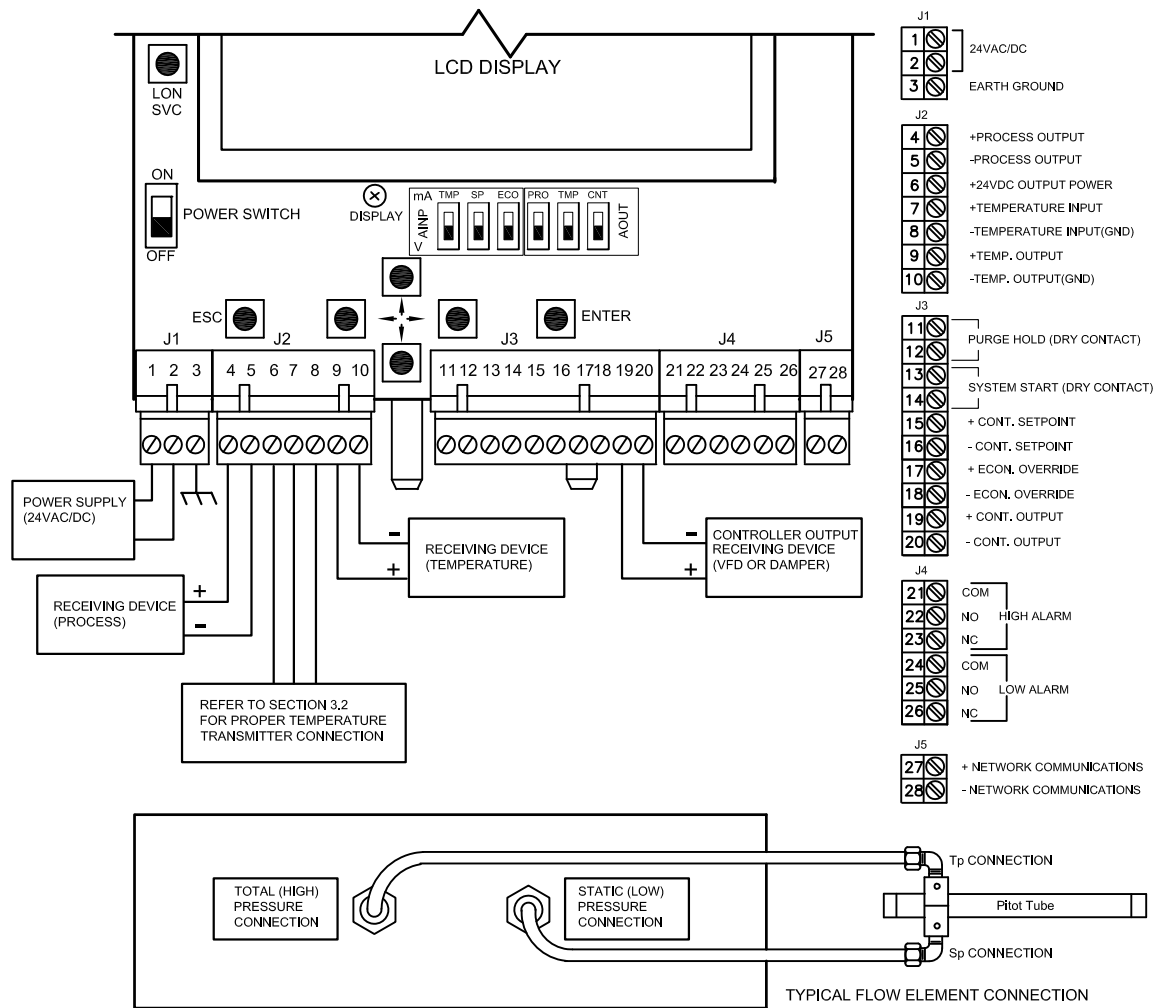
ENERFLOW II DIMENSIONAL DATA



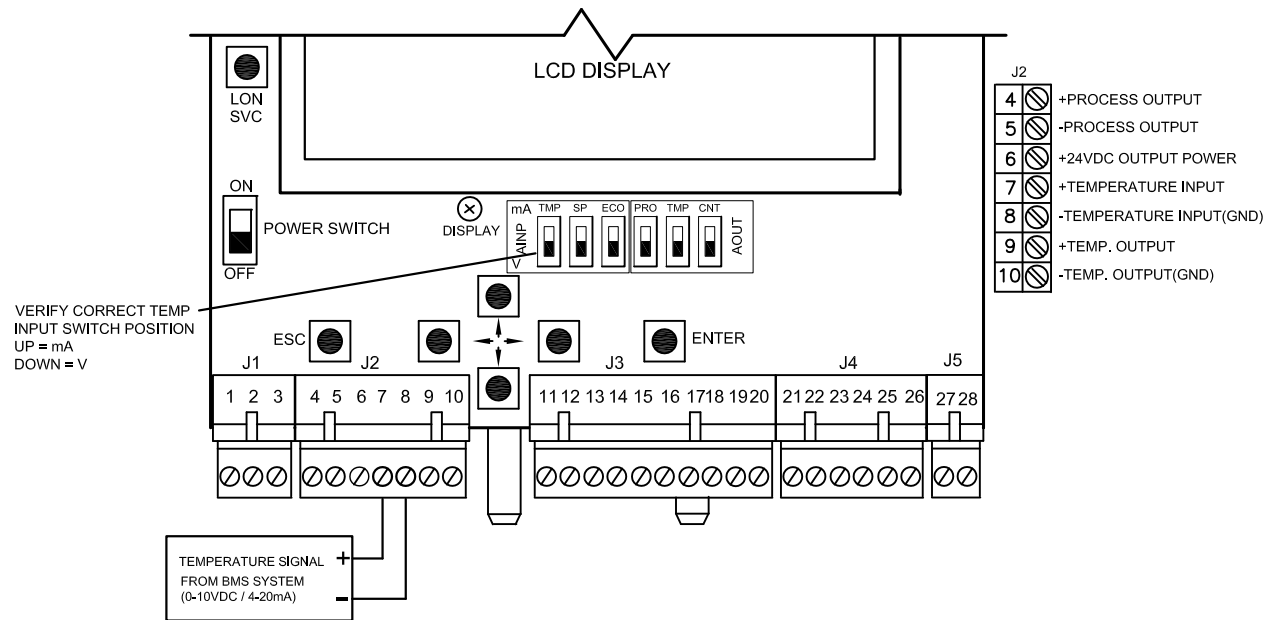
ENERFLOW II (NEMA 4X Enclosure)

ENERFLOW II WIRING DIAGRAMS

Enerflow II General Connection Code

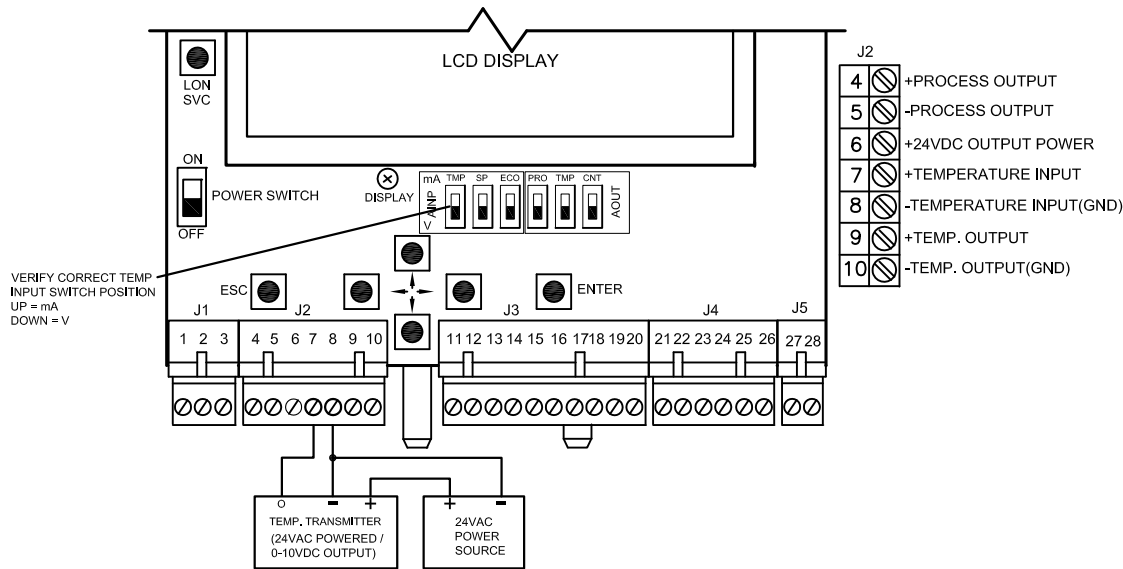


Temperature Signal Supplied by BMS System

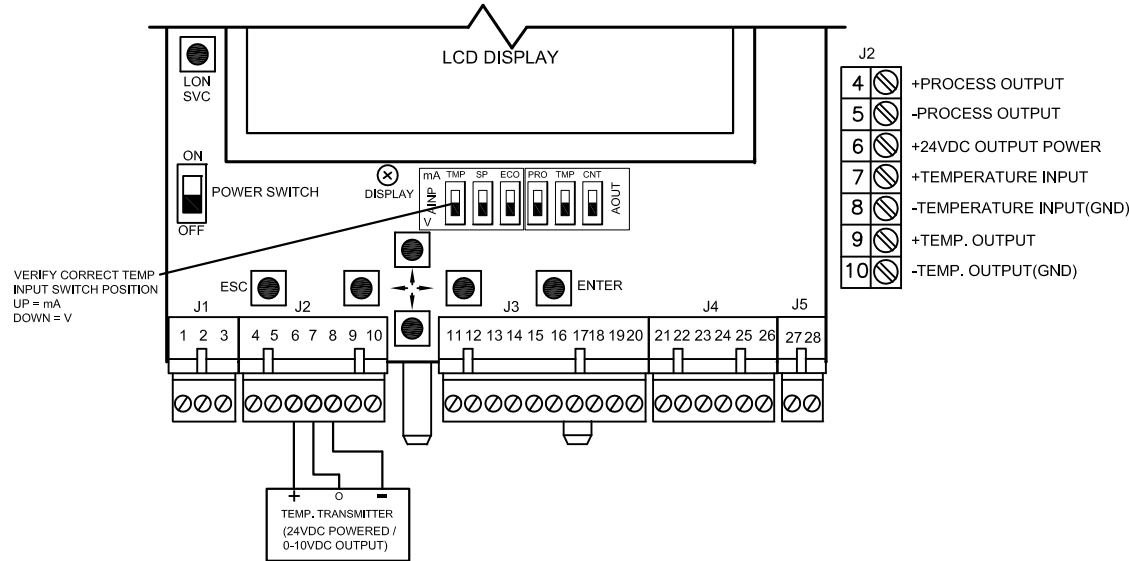


ENERFLOW II WIRING DIAGRAMS (continued)

0-10vdc Output/24vac powered 3-Wire Temperature Transmitter



0-10vdc Output/24vdc powered 3-Wire Temperature Transmitter



Loop powered 4-20mA Temperature Transmitter

