

FEATURES

- Two channel conversion
- Transformer isolation onboard
- Isolated 24VAC for velocity sensor

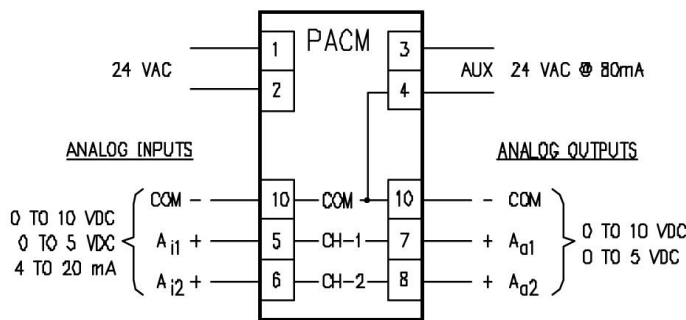
APPLICATIONS

- Velocity sensor conversions
- Velocity sensor linearization
- Square root extraction
- Air quality control for roof top units
- Multi-channel signal processing

DESCRIPTION & OPERATION

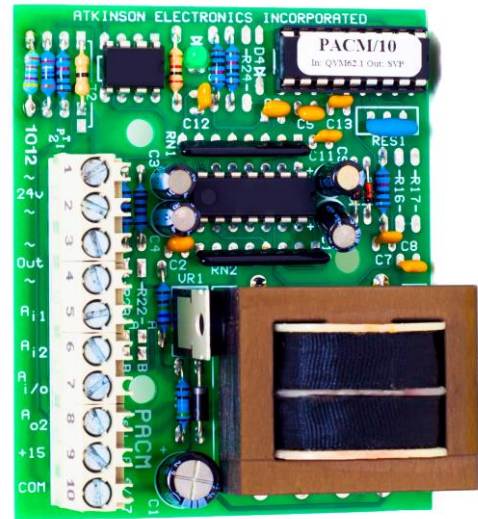
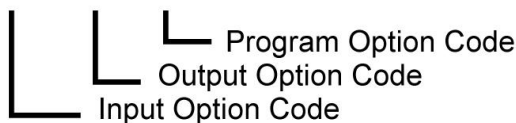
The PACM uses an on-board isolation transformer for AC power isolation and to supply an isolated 24VAC @ 90mA maximum (terminals 3 & 4) for powering a velocity sensor. The PACM also provides a 15VDC supply for referencing sensors and external potentiometers or two 4 to 20mA transmitters. Each of the PACM inputs are op-amp buffered and have over voltage protection to prevent processor rollover. The outputs are also op-amp buffered and can be configured for voltages between 0-5VDC or 0-10VDC. The microprocessor can be programmed to the needs of various applications.

2 CHANNEL WIRING CONFIGURATION



ORDERING INFORMATION

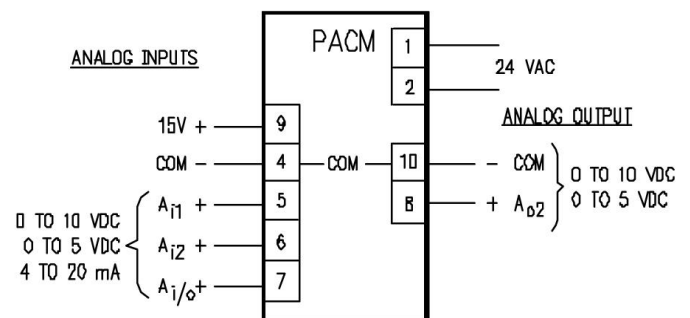
PACM/XXX/XXX/XX



SPECIFICATIONS

SIZE:	2.5" L x 3.0" W x 1.25H
MOUNTING:	3.0" W RDI SnapTrack (supplied) or can be mounted in 4" square x 1.5"H electrical box on ¼ nylon stand offs. 4" square box & 90° mounting ring
POWER:	24VAC, ± 10%, 50/60Hz, 3.5VA
INPUT:	0-5VDC, 0-10VDC, 4 to 20mA
IMPEDANCE:	0-5VDC, >100KΩ impedance 0-10VDC, =20KΩ impedance
AUX POWER:	24VAC, ± 10%, @ 90mA maximum 15VDC, @ 60mA maximum
OUTPUTS:	Standard: 0-5VDC or 0-10VDC Custom: Any other voltages Minimum output load 1KΩ
AMBIENT TEMP:	0-50°C

3 INPUT OPTION WIRING CONFIGURATION



INPUT OPTION CODES

QVM	Siemens QVM 62.1 velocity sensor
SVP	STAEFA's SVP velocity sensor
mA	4-20mA internal 250Ω load resistor
1-5V	1-5VDC analog signal
5V	0-5VDC analog signal
10V	0-10VDC analog signal
VDC	Custom analog input (specify voltage)

OUTPUT CODE OPTIONS

SVP	STAEFA's SVP velocity sensor
FK-V32	STAEFA's FK-V32 velocity sensor
5V	0-5VDC analog signal
10V	0-10VDC analog signal
VDC	Custom analog output (specify voltage)

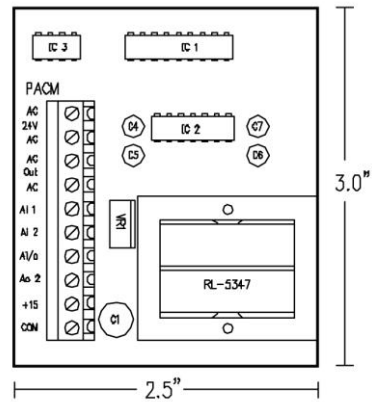
PROGRAM CODE OPTIONS

01	Convert STAEFA's SVP velocity sensor to STAEFA's FK-V32 sensor voltages
02	Linearize STAEFA's SVP velocity sensor.
05	DISCONTINUED --
06	DISCONTINUED --
07	Convert STAEFA's FK-V-32 sensor to STAEFA's SVP velocity voltages.
08	Linearize 2K Ohm NTC Thermistor.
09	Linearize STAEFA's FK-V-32 velocity sensor.
10	Convert Siemens QVM-62.1 velocity sensor to STAEFA's SVP velocity sensor voltage

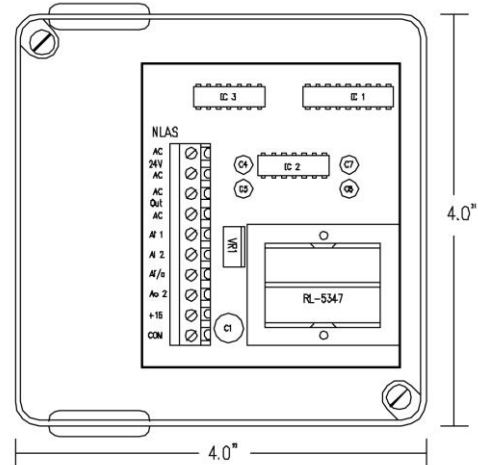
ORDERING CODE EXAMPLES

PACM/SVP/FK-V32/01	PACM programmed with SM2-SVP to FK-V32 conversion program
PACM/SVP/10V/02	PACM programmed with SM2-SVP linearization program with 0-10VDC output. Channel 1 Velocity linearization, Channel 2 temperature signal passes through (1:1)
PACM/QVM/SVP/10	PACM programmed with Siemens QVM 62.1 linear 0-3000 FPM (0-10VDC) and STAEFA's SM2-SVP non-linear voltage tables. Converts linear 0-3000 FPM 0-10V signal; to SVP voltage signal for the velocity input on the SMART 2 boards.

PHYSICAL CONFIGURATION



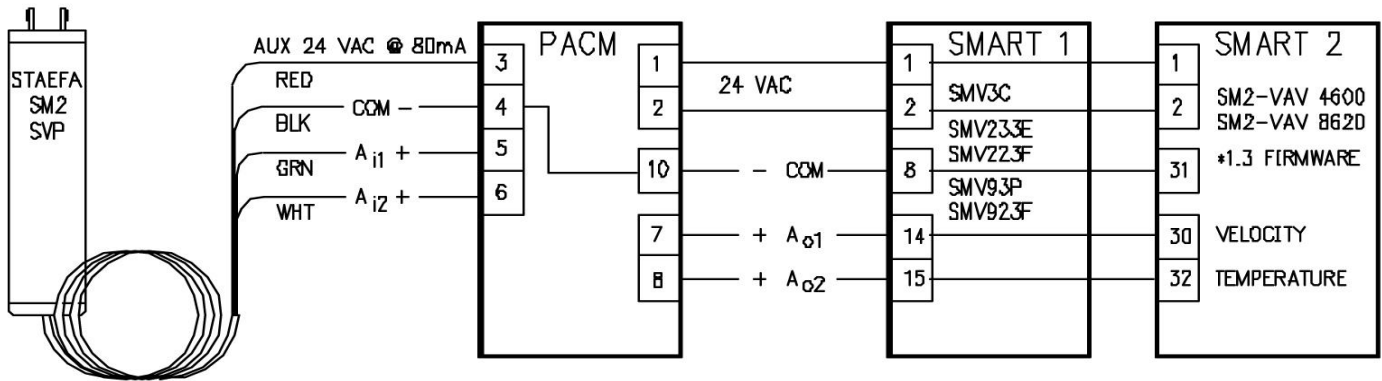
4" SQUARE ELECTRICAL BOX MOUNTING



The PACM/01 will mount inside the FK V-23 velocity probe housing on the existing circuit board mounts.

APPLICATION 1

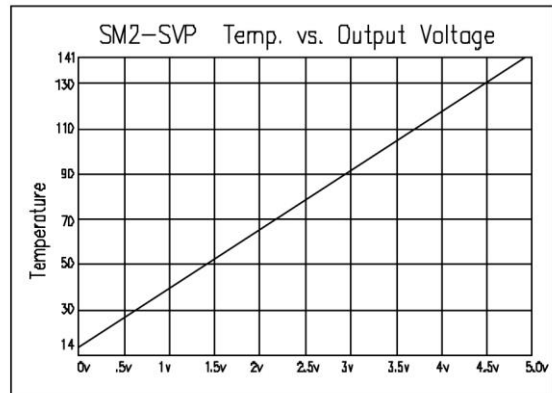
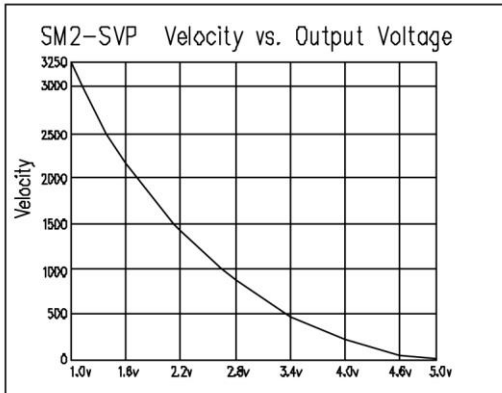
STAEFA'S SVP VELOCITY SENSOR CONVERSION TO FK-V32 SENSOR VOLTAGES



The PACM/01 is factory configured and programmed to convert the SM2-SVP velocity and temperature signals to match that of the FK-V32 sensor, see charts below. The PACM is powered from the controller's 24VAC (terminals 1, 2) and provides the isolated 24VAC for the SVP on terminals 3 & 4. The SM2-SVP velocity and temperature signals connect to terminals 5 & 6. The PACM's FK-V32 output signals and common, terminals 7, 8 & 10, connects to the Smart I controller's velocity and duct temperature inputs (terminals 14 & 15) with common connecting to terminal 8. For SMART II-VAV the PACM's outputs connects to SM2's terminals 30 (velocity), 32 (temperature) and 31 (common).

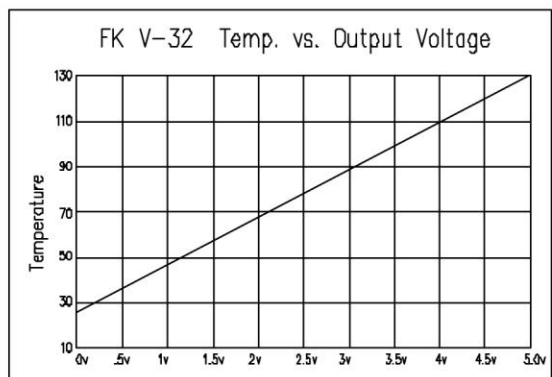
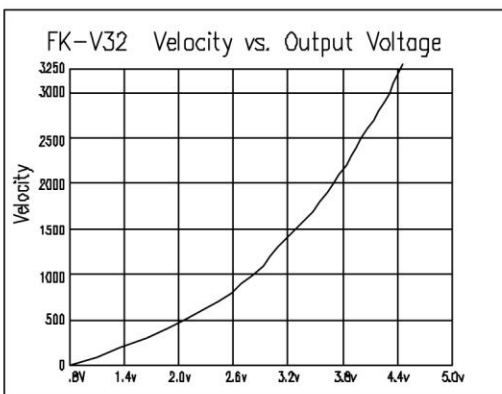
APPLICATION 1

STAEFA'S SVP VELOCITY/ TEMPERATURE SENSOR CHARTS

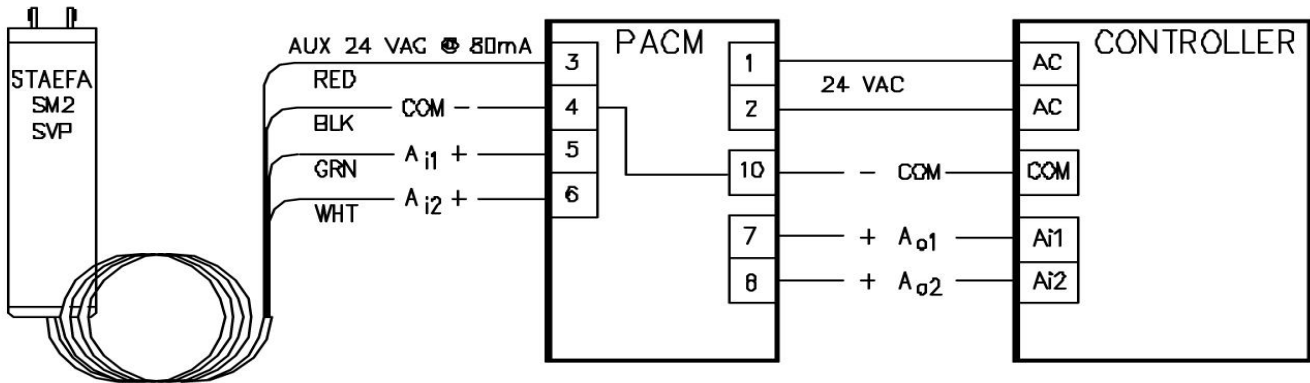


APPLICATION 1

STAEFA'S FK V-32/ TEMPERATURE SENSOR CHARTS GRAPH

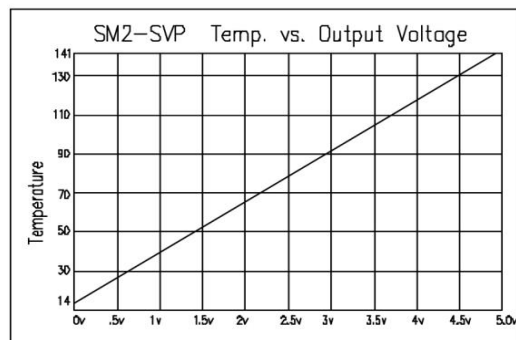
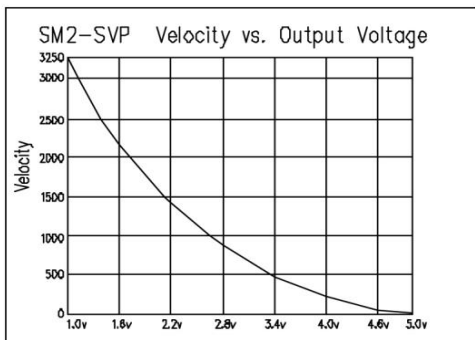


**APPLICATION 2
LINEARIZATION OF STAEFA'S SVP VELOCITY SENSOR**

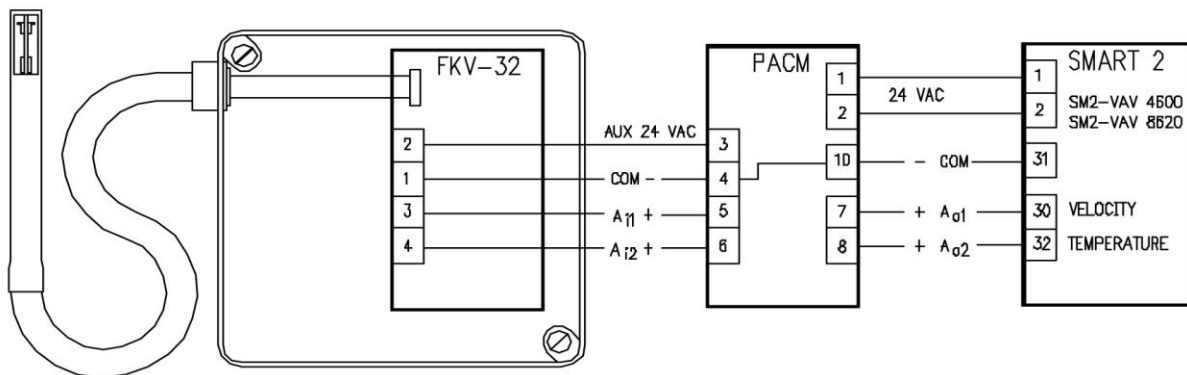


The PACM/SVP/10V/02 is factory configured and programmed to linearize the SM2-SVP velocity and temperature signals, see charts below. The PACM is powered from the controller's 24VAC. The SM2-SVP is powered from the PACM's isolated AUX 24VAC supply on terminals 3 & 4. The PACM converts the SVP signals to linear 0-10VDC outputs. PACM/5V/02 is configured for 0-5VDC outputs.

**APPLICATION 2
LINEARIZATION OF STAEFA'S SVP VELOCITY SENSOR GRAPH**



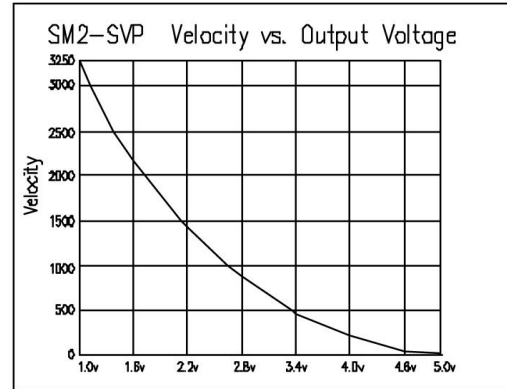
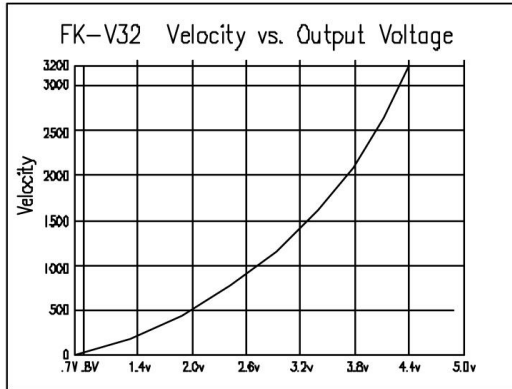
**APPLICATION 7
STAEFA'S FK-V32 SENSOR CONVERTED TO SVP VELOCITY SENSOR VOLTAGES**



The PACM/07 is factory configured and programmed to convert the FK-V32 velocity and temperature signals to match that of the SM2-SVP sensor, see the charts on the next page. The PACM is powered from the controller's 24VAC (terminals 1, 2) and provides the isolated 24VAC for the FKV-32 on terminals 3 & 4. The FKV-32 velocity and temperature signals connect to terminals 5 & 6. The PACM's SM2-SVP output signals and common, terminals 7, 8 & 10, connects to the Smart II controller's velocity and duct temperature inputs terminals 30 (velocity), 32 (temperature) and 31 (common).

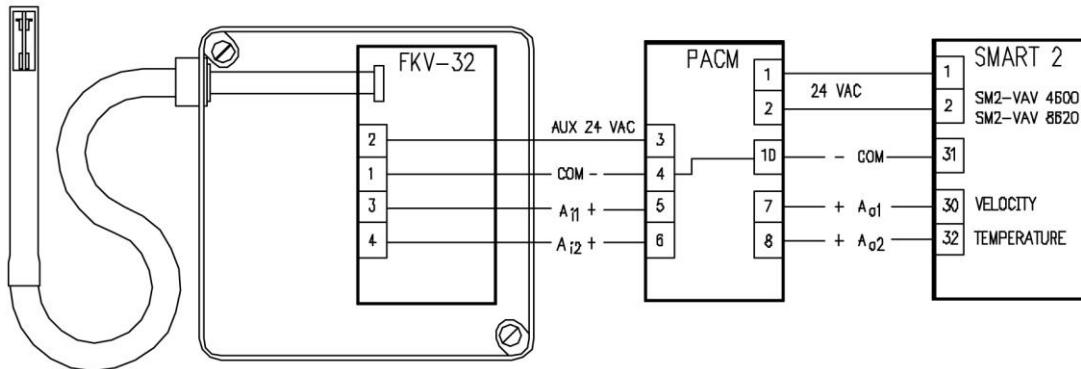
APPLICATION 7

STAEFA'S FK-V32 SENSOR CONVERTED TO SVP VELOCITY SENSOR VOLTAGES GRAPH



APPLICATION 8

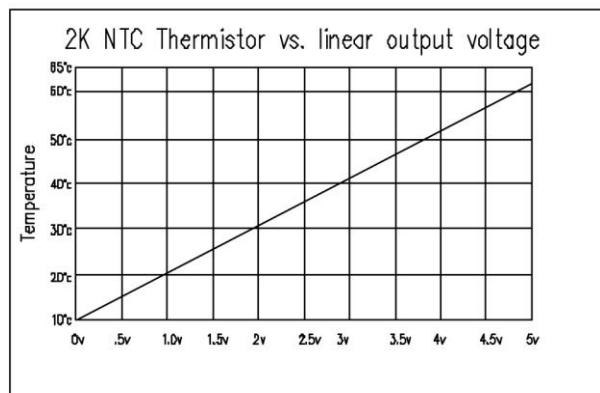
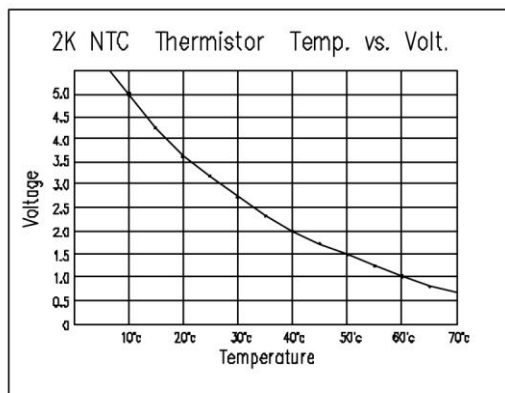
LINEARIZATION OF 2K OHM NTC THERMISTOR SENSOR



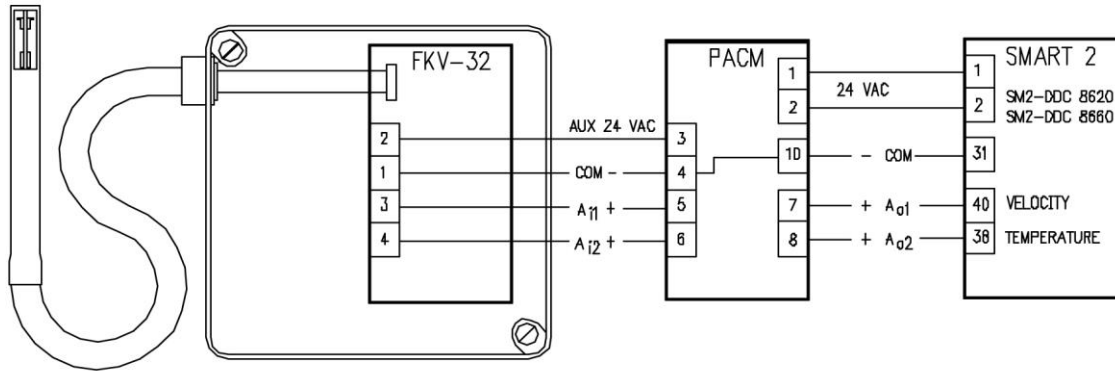
A PACM/FK-V32/10V/08 is factory configured and programmed to linearize the 2K Ohm NTC thermistor, and provides a 0-10VDC output signal for an input temperature of 10 to 61°C, see chart below. The PACM is powered from the controller's 24VAC. The 2K thermistor is connected to terminals 4 and 5 (common and signal input), the input has a 7.32K Ohm reference resistor to the 15 volt on-board supply. The PACM converts the 2K Ohm NTC thermistor to linear 0-10VDC output. PACM/5V/08 is configured for 0-5VDC outputs.

APPLICATION 8

LINEARIZATION OF 2K OHM NTC THERMISTOR SENSOR GRAPH

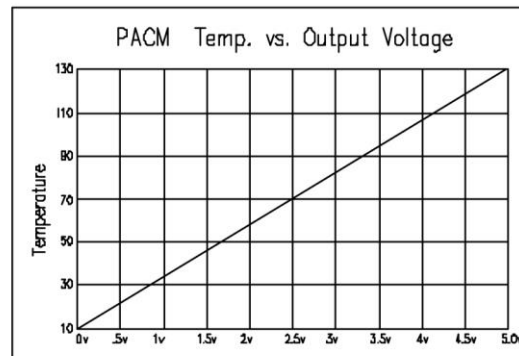
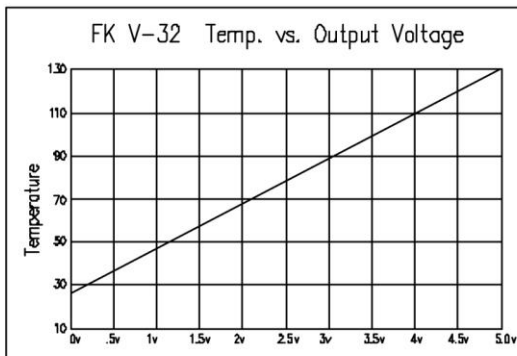
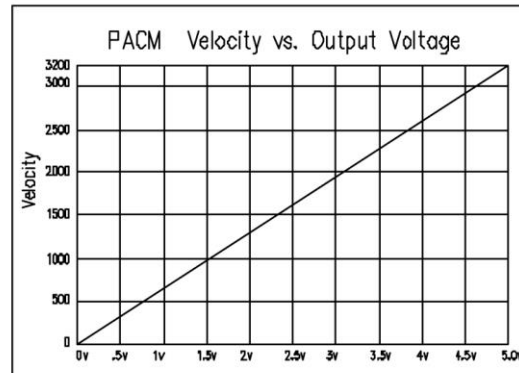
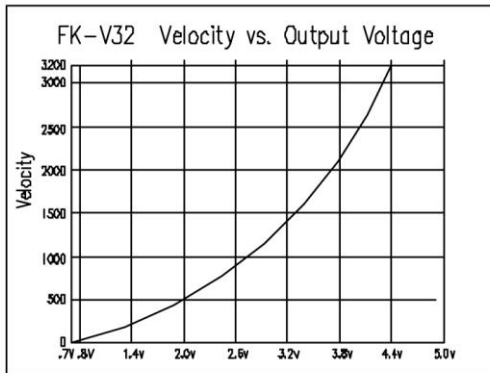


APPLICATION 9
LINEARIZATION OF STAEFA'S FK-V32 SENSOR



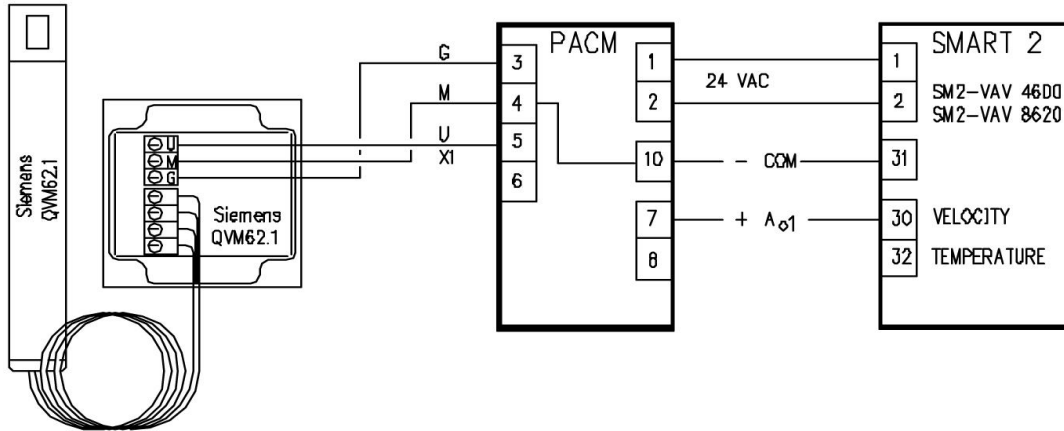
The PACM/09 is factory configured and programmed to linearize the FK-V32 velocity and temperature signals. The PACM is powered from the controller's 24VAC (terminals 1, 2) and provides the isolated 24VAC for the FKV-32 on terminals 3 & 4. The FKV-32 velocity and temperature signals connect to terminals 5 & 6. The PACM's SM2-SVP output signals and common, terminals 7, 8 & 10, connects to the Smart II controller's velocity and duct temperature inputs terminals 30 (velocity), 32 (temperature) and 31(common). FK-V-32's temperature range is 30 to 124°F for PACM's 0-5VDC output.

APPLICATION 9
LINEARIZATION OF STAEFA'S FK-V32 SENSOR GRAPH



APPLICATION 10

SIEMENS QVM-62.1 VELOCITY SENSOR CONVERSION TO STAEFA'S SVP VOLTAGES



The PACM /QVM/SVP/10 is factory configured and programed to convert the Siemens QVM62.1 velocity signal to match that of the STAEFA's SVP velocity sensor, see charts below. The PACM is powered from the controller's 24VAC (terminals 1, 2). The Siemens QVM62.1 velocity signal is connected to terminals 4 & 5. The PACM's SVP output signal and common, terminals 7 & 10, connects to the Smart II controller's velocity input terminal 30 (Velocity) and 31(common).

APPLICATION 10

SIEMENS QVM-62.1 VELOCITY SENSOR CONVERSION TO STAEFA'S SVP VOLTAGES GRAPH

