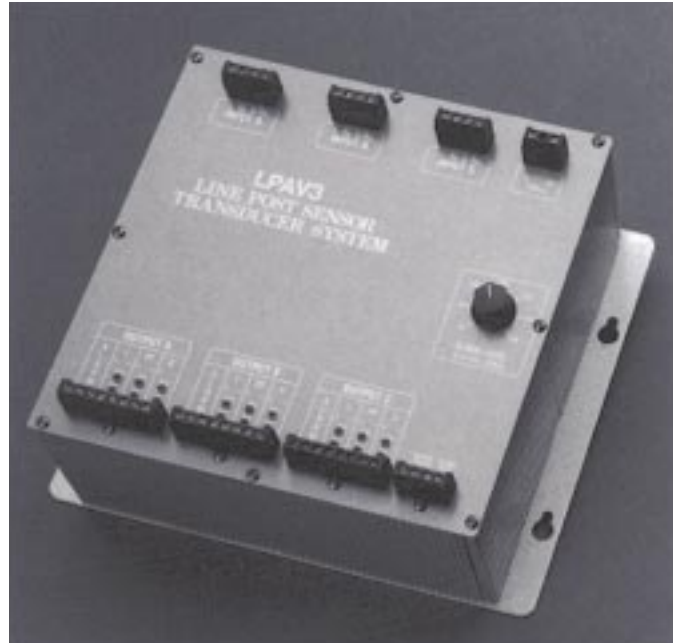


# Line Post Sensor Transducer System

mTech offers a special system for converting three-phase AC voltage and current signals from Lindsay series CMI and CVMI sensors into DC current proportional to the input AC current and AC voltage amplitude. The LPAV3 is a Line Post Sensor Transducer System that also converts the phase relationship between the current and voltage signals into a DC current proportional to the phase angle difference between the current and voltage waveforms that can be readily converted to power factor.

The system provides an alarm for each current input phase, as well as a neutral alarm. All are adjustable from 50% to 200% of rated input using a single calibrated dial. The neutral alarm (phase unbalance) level is set to trigger at 1/3 the phase level. The phase alarms are maskable and the neutral alarm is preset at the factory. The other alarms are electronically latched and are reset by contact closure at the alarm reset terminals. If momentary alarms are desired (present only while the fault exists), the alarm reset terminals can be shorted.



## Specifications

**Input:** Current, 0-15 VAC; voltage, 0-15 VAC; phase angle, 60° lead to 60° lag

**Overload Current:** 20 VAC continuous

**Overload Voltage:** 20 VAC continuous

**Operating Frequency:** 60 Hz

**Operating Humidity:** 0-95% non-condensing

**Temperature Range:** -30° to +60°C

**Maximum Temperature Effects on Accuracy:**  $\pm 0.5\%$  of rated output

**Accuracy @25°C (% RO at 60 Hz):** 0.5% of rated output

**Output:** Current, 0-1.5 mA; voltage, 0-1.5 mA; power factor, 0  $\pm$  1.5 mA

**Output @ Rated Full scale:** 1 mA

**Output Ripple:** 0.5% peak max.

**Output Load:** 0-10,000 Ohms

**Compliance Voltage (min.):** 11 VDC

**Calibration Adjustment:**  $\pm 10\%$

**Zero Adjustment:**  $\pm 2\%$

**Response Time (to 99%):** <400 msec

**Dielectric Withstand Voltage (Input to Output to Case):** 1,500 VAC for 1 min.

**Surge Withstand Capability:** ANSI C37.90A; (IEEE 472)

**Impulse Test, Uni-directional:** 1.2 x 50  $\mu$ sec 6 kV crest

**Test Voltage Across Output:** 100 Volts RMS, 2 sec

**Output Open or Short Circuit:** Protected

**Open Circuit Output at Rated Input:** <15 Vdc

**Alarm Contacts:** Normally open, SPST, form "A" contacts that will close and retain closure until fault has been cleared and alarm has been reset

**Phase Alarm Contacts:** SPST form "A", 120 VAC, 3 amp resistive; trip levels adjustable from 50 to 200% of full scale

**Neutral Alarm Contacts:** SPST form "A", 120 VAC, 3 amp resistive; neutral contact trip level adjustable from 16% to 70% of full scale

**Alarm Contact Reset:** Momentary alarms can be selected by placing a jumper across reset terminals

## Available Models – Line Post Sensor Transducer System

To Order, Specify:

<b>A. MODEL</b>			
Line Post Sensor Transducer System			LPAV3
<b>B. SENSOR INPUT CURRENT</b>			
600 A: 10 V			0
600 A: 6 V			1
Special			X
<b>C. SENSOR INPUT VOLTAGE</b>			
<b>INPUTS</b>		<b>RATIO</b>	
0-15 kV	0	1400: 1 V	0
0-25 kV	1	2200: 1 V	1
0-35 kV	2	3300: 1 V	2
Special	X	Special	X
<b>D. POWER FACTOR</b>			
±0.5			0
±0.3			1
±0.2			2
Special			X
<b>E. NEUTRAL % OF PHASE CURRENT</b>			
33%			0
10%			1
20%			2
25%			3
50%			4
75%			5
100%			6
Special			X
<b>F. OUTPUT</b>			
0-1 mA	(0-10,000 Ohms)		0
0-100 mV	(20 Ohms min.)		1
0-1 V	(200 Ohms min.)		2
0-5 V	(1,000 Ohms min.)		3
0-10 V	(2,000 Ohms min.)		4
1-5 V	(1,000 Ohms min.)		5
Special			X
<b>G. AUXILIARY POWER</b>			
120 VAC			0
240 VAC			1
12 Vdc			2
24 Vdc			3
48 Vdc			4
125 Vdc			5
Special			X
<b>H. SUFFIX</b>			
50 Hz			C
400 Hz			D
Case Ground Terminal			G
Special			X

**EXAMPLE:** LPAV3-1-22-0-4-5-3-D is the ordering code for a Line Post Sensor Transducer System in a metal surface mount case, 600 A: 6 V sensor input current, 0-35 kV sensor input voltage with a 3300: 1 V ratio, ±0.5 power factor, 50% neutral % of phase current, 1-5 V (1,000 Ohms min.) output, 24 Vdc auxiliary power, 400 Hz.

See page 38 for connections.



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