

# VOLTAGE TRANSDUCERS

## Models LLV & PNV

**APPLICATION:**  
3 Phase voltage measurement.

**NOMINAL INPUT VOLTAGES:**  
120V, 240V, 277V, 480V

**FREQUENCY:**  
50/60Hz

**ACCURACY:**  
±0.5% Full scale.

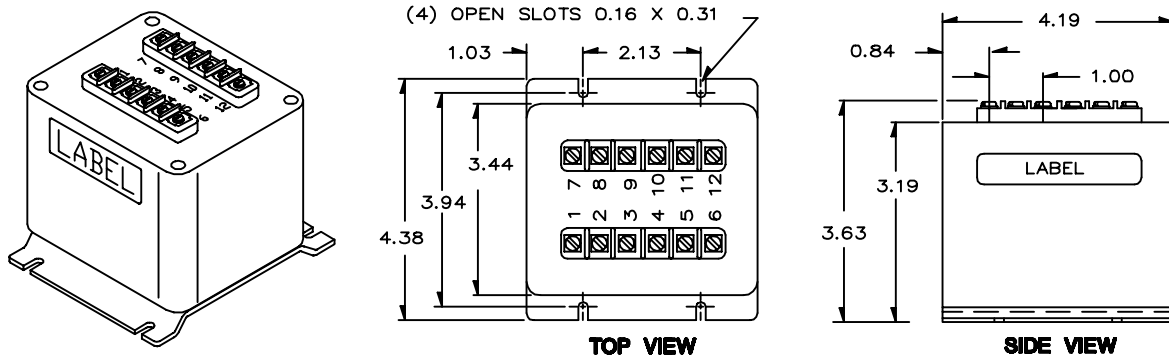
**AMBIENT TEMPERATURE RANGE:**

- Effect on accuracy : ±0.03%/°C.
- Operating : -30°C to +60°C.
- Storage : -55°C to +85°C.

- Power supply: 24 V dc ± 10%
- Max. continuous input voltage: 600V
- Output:
  - Load range: 0-600 ohms.
  - Operating range: 4 to 20mA dc.
  - Ripple: < 1%.
  - Response time: < 1.5 sec. (10% to 90%)
- Approx. shipping weight: 1.3 lbs.



The Model LLV and PNV series of voltage transducers are expanded scale instruments which are designed to accurately measure voltages on three phase systems. The LLV series is designed to meter line-to-line voltages and the PNV series is designed to meter phase-to-neutral voltages. The transducers provide three discrete 4 to 20mA outputs that are proportional to the three phase input voltages. The input voltage scale does not meter down to zero Volts, instead it is limited to the normal useful range of input voltages for a particular system. For example: The model PNV-120 has an input signal range from 90 to 150 V ac and will yield an output of 4 to 20 mA dc for that range. The output is a true constant current driver and is unaffected by resistance variations from 0-600 ohms in the output loop. An external 24V dc supply is needed to provide power for the internal solid state circuitry. The power supply input has reverse polarity protection to prevent damage from an accidental miswire. The high accuracy solid state circuitry is average responding calibrated to read RMS. This device is an ANSI/ISO 50.1 Class L3 Transmitter.

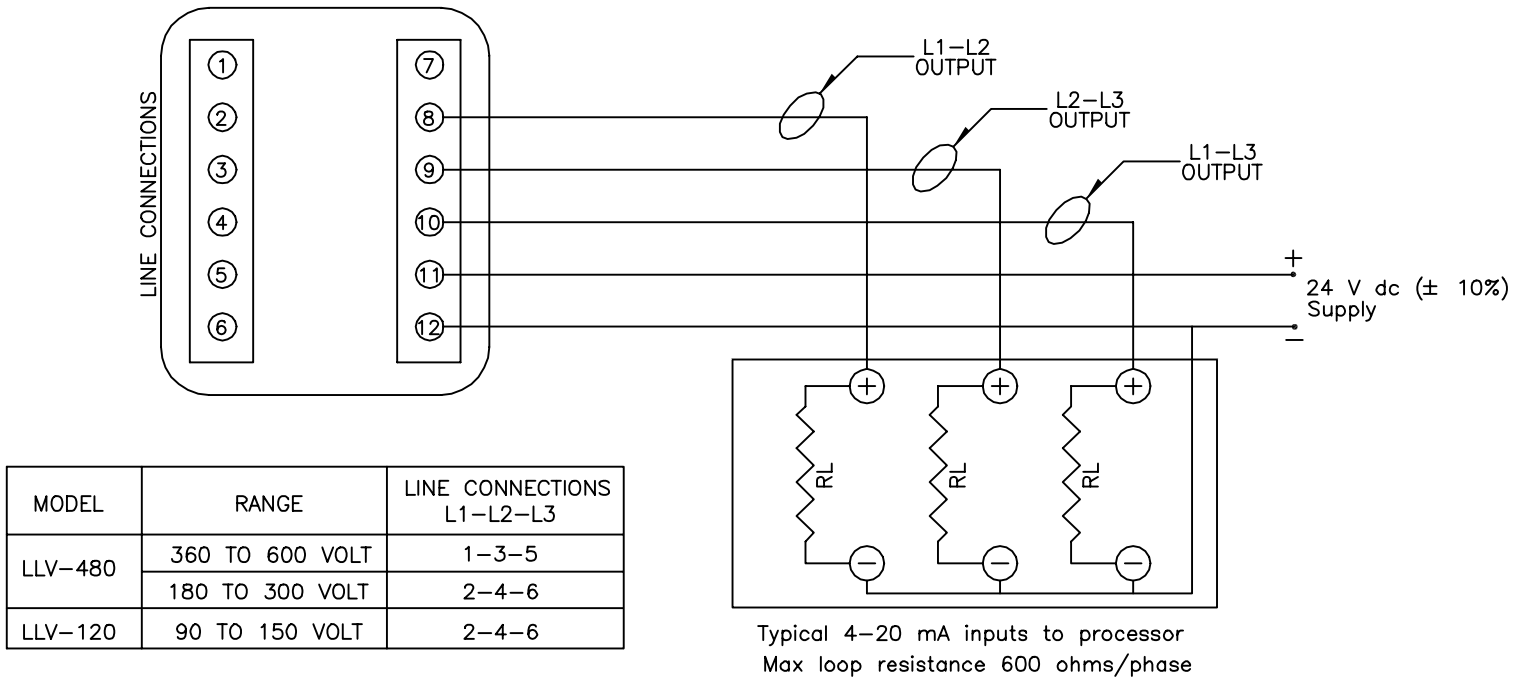


	LINE-TO-LINE VOLTAGE			PHASE-TO-NEUTRAL VOLTAGE	
	LLV	LLV (Dual Range)		PNV	
Nominal Input Voltage	120V	240V	480V	120V	277V
Voltage Input Range	90V to 150V	180V to 300V	360V to 600V	90V to 150V	180V to 300V
Burden (Max.)	0.1VA at 120V	0.1VA at 265V	0.1VA at 530V	0.1VA at 150V	0.1VA at 300V
Ripple On Output	250 $\mu$ A ac				
Dielectric Test (1 Min)	1300 Volts	1600 Volts	2200 Volts	1300 Volts	1600 Volts
Transfer function: $E_{in} =$	(3.75)(mA out)+75	(7.5)(mA out)+150	(15)(mA out)+300	(3.75)(mA out)+75	(7.5)(mA out)+150

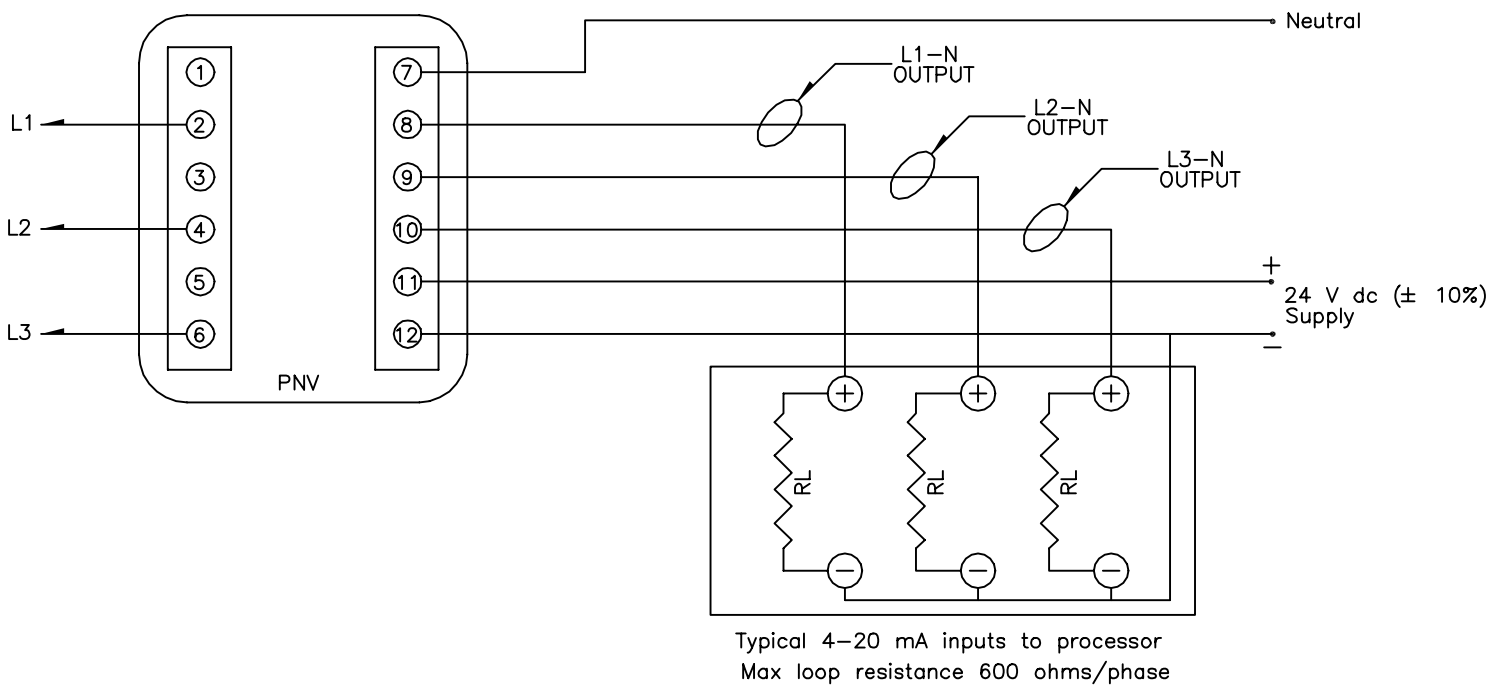
**ORDERING INFORMATION**  
 MODEL  $\rightarrow$  XXX-XXX  $\leftarrow$  NOMINAL INPUT VOLTAGE

LLV	120
PNV	277 [PNV Model only]
	480 [LLV (Dual Range) Model only]

## LLV (LINE-TO-LINE) CONNECTION DIAGRAM



## PNV (PHASE-TO-NEUTRAL) CONNECTION DIAGRAM



It is recommended that the installation conform to the NEC and any local codes.