

## 1.18

**APPENDIX D Typical SmartReader Plus 3 Connection Diagram**

## Typical SmartReader Plus 3 Connection Diagram

### 1.18.1 AC Current and AC Voltage Recording

ACR Systems stocks voltage transducers. These devices connect directly to AC voltage sources, and produce a linear output of 0-5V DC directly proportional to the input voltage. They are average-sensing transducers calibrated to indicate the RMS voltage.

We stock two models: a 120V single-phase model, and a 480V 3-phase model.

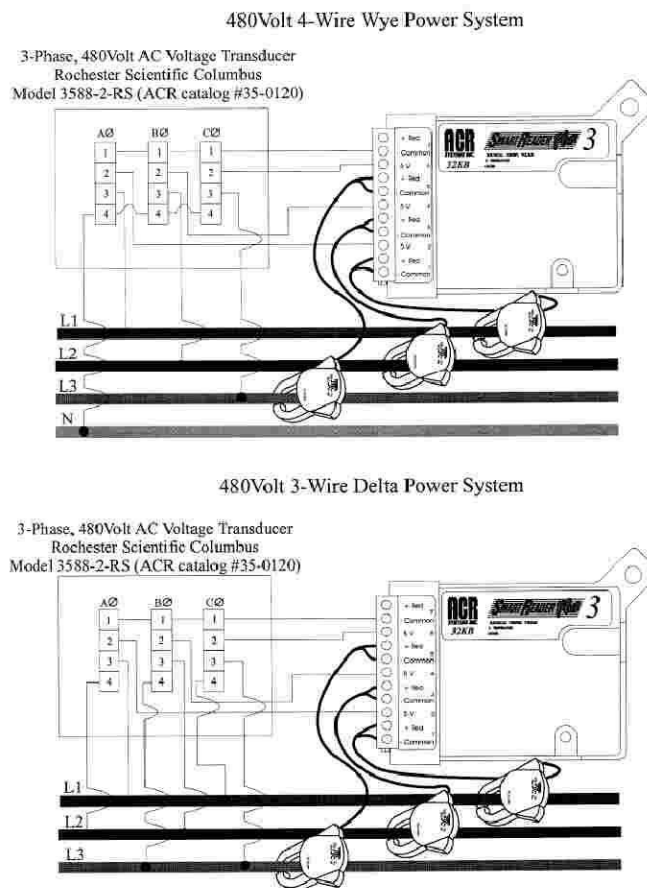


Figure D-1: 480V Power Systems

### 1.18.2 AC Voltage Transducer Specifications

Voltage Input	Single phase	3-phase
<i>Nominal:</i>	120V	480V
<i>Range:</i>	0-150V	0-600V
<i>Overload Continuous:</i>	180V	600V
<i>Burden per Element:</i>	2.5VA at 120V	2.5VA at 480V
<i>Rated Output (RO):</i>	0-5VDC Can be changed to 0-1mA by removing the 5k ohms resistor	
<i>Accuracy:</i>	$\pm(0.15\% \text{ Reading} + 0.1\% \text{ RO})$	
<i>Temp Effect on Accuracy:</i>	$\pm 0.01\% / ^\circ\text{C}$	
<i>Load with 0-1mA Output:</i>	0-10,000 ohms	
<i>Load with 0-5VDC Output:</i>	5M ohms minimum	
<i>Output Ripple Peak:</i>	< 0.25% RO	
<i>Response Time:</i>	< 400 ms to 99%	
<i>Standard Calibration Adjustments:</i>	$\pm 10\%$ of reading	
<i>Frequency Range:</i>	60Hz	
<i>Stability (per year):</i>	$\pm 0.25\%$ RO Non-Accumulative	
<i>Operating Humidity:</i>	0-95% Non-Condensing	
<i>Dielectric Withstand:</i>	1500 VRMS at 60Hz	
<i>Isolation:</i>	Complete Input/Output/Case	
<i>Surge Withstand:</i>	ANSI/IEEE C37.90.1	
<i>Maximum Net Weight:</i>		
<i>VT110A2-RS:</i>	14oz, (0.4kg)	
<i>3588-2-RS:</i>	28oz, (0.8kg)	
<i>Approximate Dimensions:</i>		
<i>VT110A2-RS:</i>	3.1"W X 2"D X 4.1"H 79 X 51 X 104mm)	