

The **Smith Meter Model PA-6 Preamplifier** is designed to be used with Smith Meter Turbine Meters and D Transmitters to convert low voltage sinusoidal signals to square wave pulse forms that can be used to increase the transmission distance of the pulse or convert the pulse form for instruments that require a high speed, edge triggered input.

Applications

The versatility of the PA-6 Preamplifier allows it to be used in multiple applications. For use in environments where the pickup coil on a turbine meter is exposed to excessive electrical noise, it may be necessary to install a 1k ohm resistor across the pickup coil inputs.

The resistor provides a low impedance differential load to electrical noise, essentially shunting electrical noise while having minimal effect on signal integrity generated by the rotating turbine mechanism.

The preamplifier has been designed with a jumper selectable gain that can be used to either increase or decrease the sensitivity of the unit to fit the needs of the application. In the event that amplification values other than those provided by the gain jumper are required, it is possible to install a resistor between terminals 8 and 10 on the PA-6 preamplifier allowing for adjustment of gain values other than the fixed values selected by installing jumpers between terminals 8, 9 and 10 as shown in Figure 1.

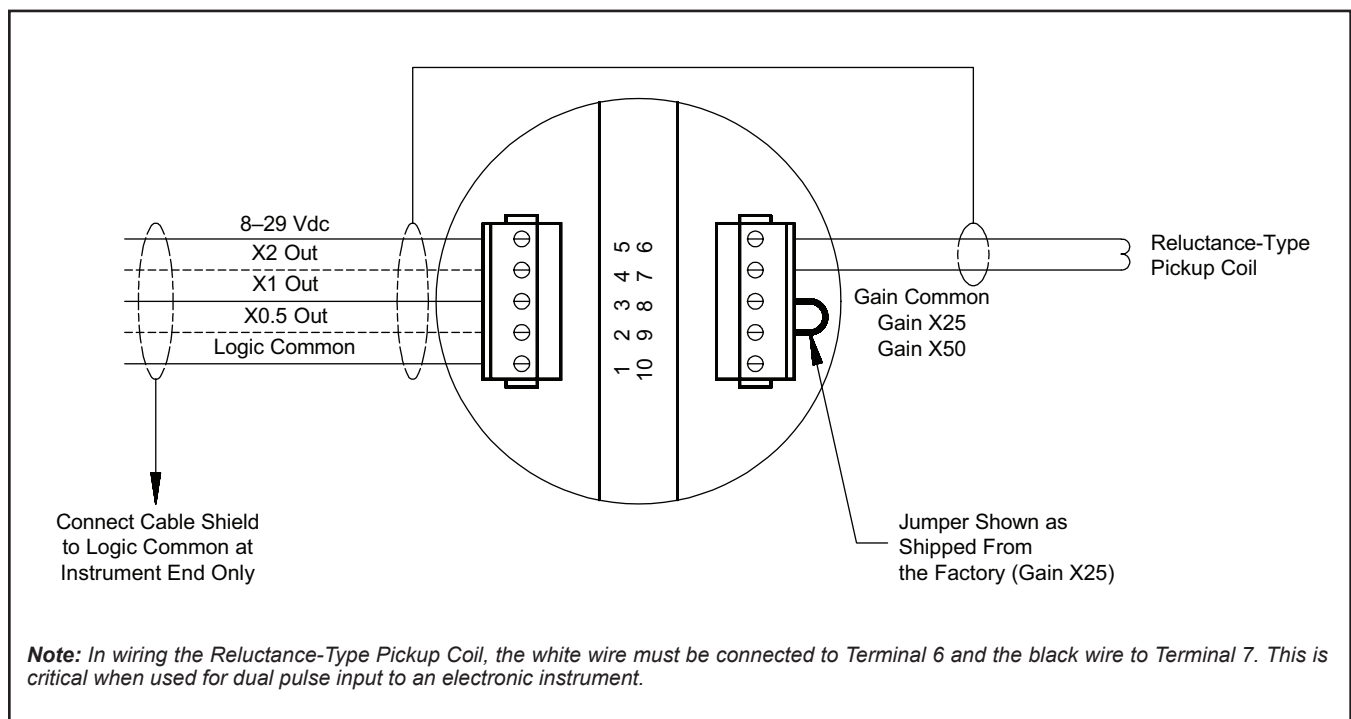


Figure 1

Resistor Values

The following chart is based on the closest standard “off the shelf” available resistor values with gain and trip points calculated and optimally rounded. Resistors may be ¼ watt, 5% tolerance (gain and trip points will vary in accuracy based on the tolerance of the resistor value).

Gain	Resistor Value in ohms	Input Signal Level Trip Point V_{p-p}
X1	Open	750 mV
X6	12 k	600 mV
X7	11 k	500 mV
X9	10 k	400 mV
X10	7.5 k	350 mV
X12	4.7 k	300 mV
X14	2.7 k	250 mV
X18	1.3 k	200 mV
X25	750	150 mV
X36	180	100 mV
X50	Short	70 mV

The specifications contained herein are subject to change without notice and any user of said specifications should verify from the manufacturer that the specifications are currently in effect. Otherwise, the manufacturer assumes no responsibility for the use of specifications which may have been changed and are no longer in effect.