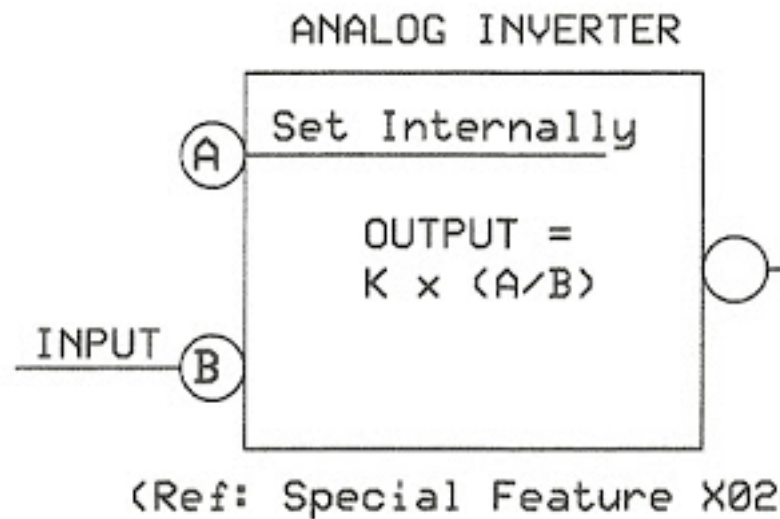Written by Administrator
Friday, 09 December 2011 04:52 -

Friday, August 19, 2011

Simple Special: Y = 1/X

Our customer needed a simple mathematical inverter: Output = (Constant) x (1/Input). Our standard product line includes analog division.

ANALOG INVERTER

(A) Set Internally

OUTPUT =
K x (A/B)

INPUT (B)

(Ref: Special Feature X02

We simply disconnected input A and tied it internally to full scale. The key requirement was that the user properly specify the input/output relationship. (Note that at 0% input the output would be 1/0 = infinity.) This application required:

 Input = 1 volt, Output = 5 volts
Input = 2 volts, Output = 2.5 volts
Input = 5 volts, Output = 1 volt
Mathematically this is: Output = 5 / Input.
We tied input A to a fixed internal voltage and set the instrument's gain appropriately.
JH Technology offers add, subtract, multiply, divide, square and square root functions in plug-in modules, DIN-rail transmitters and field mount transmitter/displays.