

UDC2000 TAC Tip

REPEATING INPUT ON OUTPUT

Model Number: **DC200C-X-XXX-XXXXXX-X**

THEORY

The controller is configured as a proportional only controller with a gain of 1. The setpoint high and low limits, (SPHI and SPLO) are set to the low range of the input (IN1LO). This forces the control setpoint (SP) to be at the value of IN1LO. Therefore as the input varies from the control setpoint the percentage it varies will be applied to the output.

EXAMPLE

IN1TYP = KL ; IN1HI = 1000; IN1LO = -20

SPHI = -20; SPLO = -20

The input span = IN1HI - IN1LO = 1000 - (-20) = 1020

If the actual Temperature is 82

The deviation equals PV - SP = 82 - (-20) = 102

The percent deviation = Deviation / Input span = 102/1020 = .10 = 10%

Output (terminals 4,5) = 10% = 5.6 ma

UDC 2000 CONFIGURATION:

ALGOR

CTRALG = PDMR

OUTALG = CUR

INPUT1

IN1TYP = (InputType)

CONTRL:

Action = DIR

SP HI = IN1 LO

SP LO = IN1 LO

OUTH I = 100

OUTLO = 0

PB orGN = GN

TUNING

GAIN = 1.0

RATE T = 0

MANRST = 0