

Extending the Warm-up Time of a DX80

OVERVIEW

The warm-up time defines the length of time the switch power should be turned on before examining the sensor's input. Normally this value is set using the User Configuration Tool and has a limit of eight seconds. To extend this warm-up time past eight seconds, use the upper bits (bits 7 and 6) of the Power Supply parameter.

EXTENDED WARM-UP TIME

The lower bits of the Power Supply parameter are used to activate the various switch power outputs.



Power Supply [7:0]	Switch Power
xxxx xx00	No Switch Power
xxxx xx01	Switch Power 1
xxxx xx10	Switch Power 2
xxxx xx11	Switch Power 3
xxxx x100	Switch Power 4

By default, the warm-up time scale is set to 62.5 milliseconds. Values entered into the Warm-up Time parameter represent the number of 62.5 millisecond increments. To redefine the switch power warm-up time scale, write values to bits 7 and 6.


Power Supply [7:0]	Warm-Up Time Scale Value
00xx xxxx	62.5 ms or 250 μ sec scale (default)
01xx xxxx	125 ms scale
10xx xxxx	250 ms scale
11xx xxxx	512 ms scale

Normally, the number set in the warm-up time field is multiplied by 62.5 milliseconds to calculate the actual warm-up time in seconds. For example, using the default scale shown, setting the warm-up time to 32 results in a warm-up time of $32 \times 62.5 \text{ ms} = 2000$ milliseconds or 2 seconds.

Writing a binary 1000 0001 (0x81 or 129 in decimal) for switch power 1 changes the scale value to 250 milliseconds, resulting in the warm-up time value of 32 setting a warm-up time of $32 \times 250 \text{ ms} = 8000$ milliseconds or 8 seconds.

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Device	I/O Number	Parameter	Value
Node 5	5	Power Supply #	81

Power Supply # (bits 7:0). Turns on a local power supply to supply power to an external device. A parameter value of 0 indicates no power supply. A parameter value of 1, 2, 3, or 4 enables that particular internal supply connection. (Parameter number 0x0D).
Value range: 0 (external power supply, default), 1 (selects SP1), 2 (selects SP2), 3 (selects SP3), and 4 (selects SP4).

Three parameters define a power supply connection: power supply selection, voltage, and warm-up time. The voltage parameter defines the supply voltage. The warm-up parameter defines the time the power supply is on before evaluating the input point.

Supported in Gateway RF Firmware Version 2.7 and above.
Supported in Node RF Firmware Version 1.0 and above.

Device	I/O Number	Parameter	Value
Node 5	5	Warm-up Time	32

Warm-up Time (bits 7:0). Values 00 through 127 set the number of 62.5 millisecond increments and values 129 through 255 sets the number of 250 microsecond increments. When the device supplies power to external sensors, this parameter defines how long power is applied before the input point is examined for changes. Value range: 00 (off, default) through 255. (Parameter number 0x05).