

## UDC 1200/1700 Alarm Setup

The UDC 1200/1700 has the ability to have any of three possible outputs, by energizing using either Alarm 1 and/or Alarm 2.

**Each Alarm has a dedicated Hysteresis value that can be .1 to 100% of Span.**

Configuration

1. Select mode is used to access the configuration and operation menu functions. It can be accessed at any time by holding down **SETUP** and pressing **▲** until **Optr** appears in the upper display and **SLCt**.

Once in select mode, press **▲** or **▼** to select the Configuration mode **Conf**. An unlock code is required to prevent accidental changes. The default value is 20.

2. Configure Alarm 1 or 2 for type (Alarm 1 **ALA1** or Alarm 2 **ALA2**). Press the **SETUP** key to access the alarms and then press **▲** or **▼** to make a change. See page 3 for explanation of each type.

3. Depending upon the Type of Alarm chosen, the corresponding Alarm value will appear. Set this value at the required Alarm Trip point.

4. Each Alarm Output has a separate Hysteresis value. This value can be 1 to 100% of Alarm type span. See page 4 for further explanation of Hysteresis.

Parameter	Lower Display	Upper Display	Adjustment range	Default
Alarm 1 Type	<b>ALA1</b>	<b>P_H1</b>	Process High Alarm	<b>P_H1</b>
		<b>P_Lo</b>	Process Low Alarm	
		<b>dE</b>	Deviation Alarm	
		<b>bAnd</b>	Band Alarm	
		<b>nonE</b>	No alarm	
High Alm 1 value*	<b>PhA1</b>	Range Min. to Range Max. in display units		Range Max.
Low Alm 1 value*	<b>PLA1</b>			Range Min.
Band Alm 1 value*	<b>bAL1</b>	1 LSD to span from setpoint in display units		<b>5</b>
Dev. Alm 1 value*	<b>dAL1</b>	+/- Span from setpoint in display units		<b>5</b>
Alm 1 Hysteresis*	<b>AHY1</b>	1 LSD to full span in display units		<b>1</b>
Alarm 2 Type*	<b>ALA2</b>	Options as for alarm 1		<b>P_Lo</b>
High Alm 2 value*	<b>PhA2</b>		Range Max.	
Low Alm 2 value*	<b>PLA2</b>		Range Min.	
Band Alm 2 value*	<b>bAL2</b>		<b>5</b>	
Dev. Alm 2 Value*	<b>dAL2</b>		<b>5</b>	
Alm 2 Hysteresis*	<b>AHY2</b>		<b>1</b>	

5. Both Alarm Relay 1 and 2 can use either Output 1, 2, or 3 as their output.

Parameter	Lower Display	Upper Display	Adjustment range	Default
Output 1 Usage	<i>USE1</i>	<i>A1_d</i>	Alarm 1, Direct	Can be set for any of the selection to the left
		<i>A1_r</i>	Alarm 1, Reverse	
		<i>A2_d</i>	Alarm 2, Direct	
		<i>A2_r</i>	Alarm 2, Reverse	
		<i>LP_d</i>	Loop Alarm, Direct	
		<i>LP_r</i>	Loop Alarm, Reverse	
		<i>OR_d</i>	Logical Alarm 1 OR 2, Direct	
		<i>OR_r</i>	Logical Alarm 1 OR 2, Reverse	
		<i>AD_d</i>	Logical Alarm 1 AND 2, Direct	
		<i>AD_r</i>	Logical Alarm 1 AND 2, Reverse	
Output 2 Usage	<i>USE2</i>		Same as output 1	<i>A2_D</i>
Output 3 Usage	<i>USE3</i>		Same as output 1	<i>A1_d</i>

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**Example:**

Alarm 1 needs to be a High alarm to trip at 1000 Degrees. Alarm Hysteresis equal to 1%. Output 2 will be used as its output.

**Configuration**

Alarm 1 Type (ALA1) = P\_Hi  
 High Alarm Value (PhA1) = 1000.  
 Alarm 1 Hysteresis (AHY1) = 1  
 Output 1 Usage (USE2) = A1\_d

**Alarm Operation:** The operation of each alarm type is shown below, together with the switching action of an output relay (if this has been configured).  
 Also refer to *Alarm Hysteresis*, *Alarm Inhibit*, *Band Alarm*, *Deviation Alarm*, *Logical Alarm Combinations*, *Loop Alarm*, *Process High Alarm* and *Process Low Alarm*.

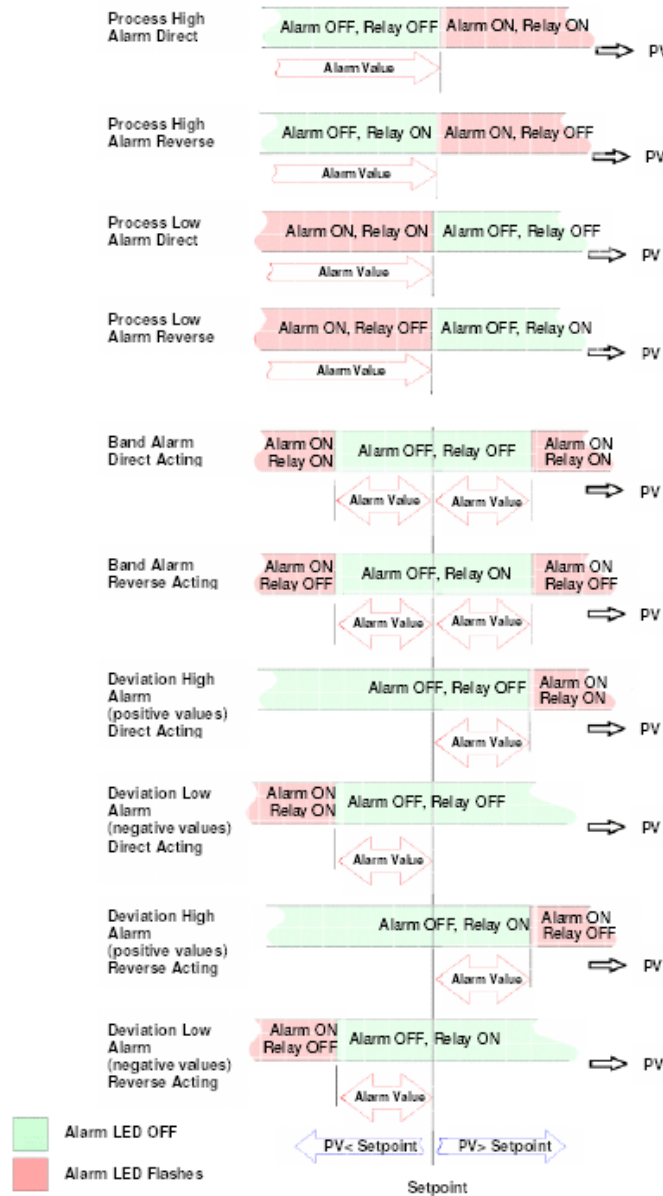


Figure 36 - Alarm Operation

**Alarm Hysteresis:** An adjustable band on the “safe” side of an alarm point, through which the process variable must pass before the alarm will change state, as shown in the diagram below. E.g. a high alarm’s hysteresis band is below the high alarm value, and a low alarm’s hysteresis is above the low alarm value. Also refer to *Alarm Operation*.

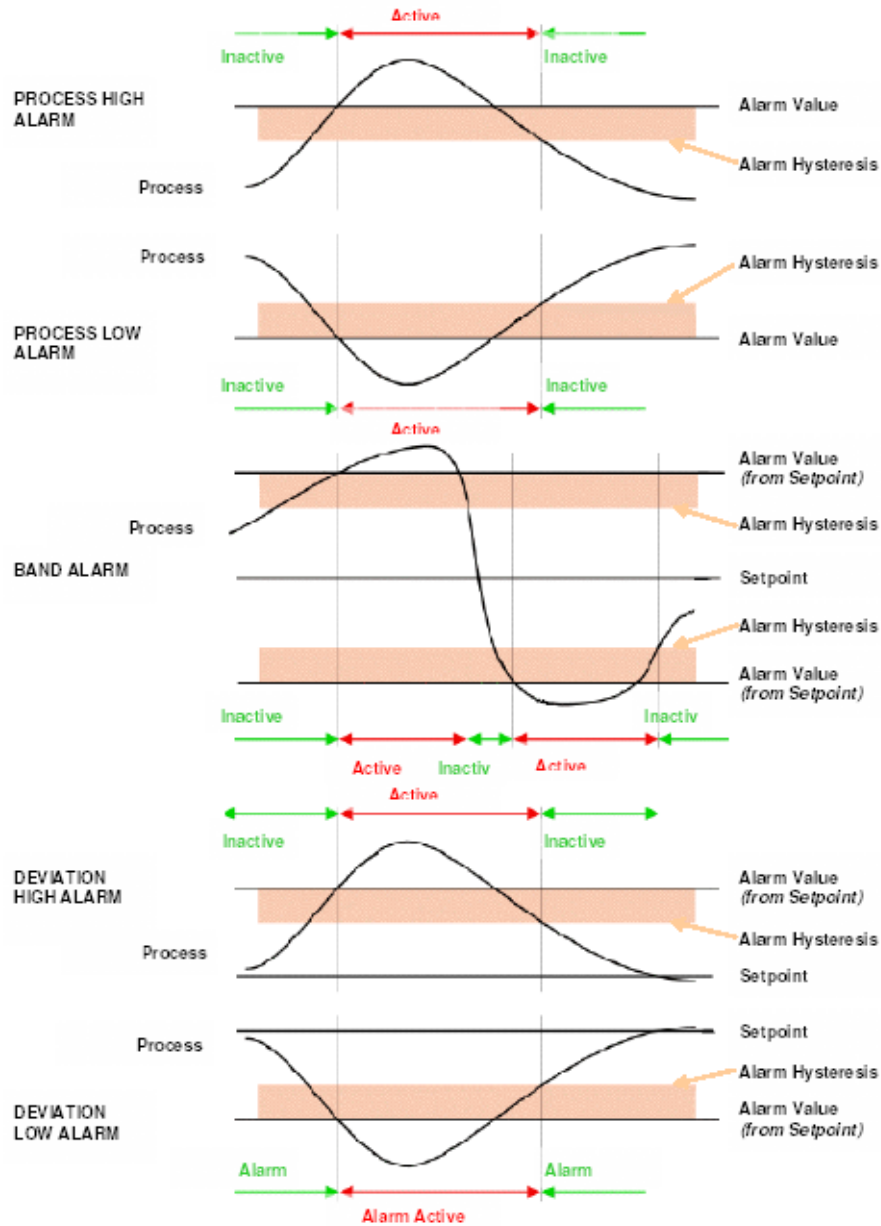


Figure 35 - Alarm Hysteresis Operation