

TABLE OF CONTENTS

- Part 1: General
- Part 2: Alarm Classifications
- Part 3: Alarm Priorities
- Part 4: Alarm Annuciation
- Part 5: Alarm Notification
- Part 6: Alarm Escalation
- Part 7: Point Trend Configuration
- Appendix A: Revision History
- Appendix B: Suggested Edits

PART 1 GENERAL

1.1 .DESCRIPTION

This specification is designed to explain how DDC point extensions should be configured should any specific DDC point require it. Extensions include Alarm parameters, Trend logs, and Data Archive configurations. Points requiring definition are defined elsewhere in the UW DDC points naming standard document. These classifications are designed to work with the 'priority' as defined in the UW AiM work order system.

1.2 .DEFINITIONS

- A . FACP: Fire alarm control panel
- B . DDC: Direct or Distributed Digital Control
- C . BAS: Building Automation System (see DDC)
- D . EMS: Energy Management System (see DDC)
- E . Owner: University of Washington project delivery group
- F . MDF: Main Data Frame
- G . IDF: Intermediate Data Frame
- H . AiM: Enterprise resource management software in use by UW Facilities.
- I . UWF: UW Facilities
- J . UW-IT: The grand Information Technology group for UW
- K . UW-OT: A specialized Information Technology group for UWF.

1.3 .QUALIFICATIONS

Alarm configuration must be performed by a qualified programmer for the system installed, and must be overseen by the Lead programmer as assigned by the controls contractor.

1.4 .RELATED STANDARDS

- A . University of Washington Facilities Design Specification (FDS)
- B . UW DDC Specifications
- C . UW DDC point naming standards
- D . UW DDC graphics standards
- E . UW metering and monitoring standards

N/A

1.5 .REFERENCES

See AiM work order '*priority*' for classifications.

1.6 .COORDINATION

No coordination in required

1.7 .SUBMITTALS

Alarm parameters and configuration should be included with the DDC points submittal defined elsewhere as required in the UW DDC Specifications document.

1.8 .O&M (operations and maintenance) MANUALS

N/A

1.9 .MEETINGS

N/A

PART 2 ALARM CLASSIFICATIONS

2.1. Class 100 = 'emergency'

This class is used for fire and life safety related alarms. FACP supervisory input is the only DDC point that should receive this classification.

2.2. Class 200 = 'urgent'

This class is used for critical equipment failure in the HVAC/DDC system. Examples of this are Chiller alarm, Boiler alarms, plant-level pump failures, AHU supply fan failures, and EF failures in any laboratory environment.

2.3. Class 300 = 'high'

Examples for this class include low MA temperatures, AHU SA temperatures off setpoint, critical spaces (laboratories, rare materials storage, MDF rooms, IDF rooms) off space setpoint, and high- and low- limit device trips.

2.4. Class 400 = 'low'

Class 400 alarms represent errors such as sensors out-of-range, non-lab EF failures, local bus comm. loss, packaged equipment supervisory alarms, and un-occupied space temperature alarms (storage, hallways).

2.5. Class 500 = 'scheduled'

Alarm conditions related to run-times or routine maintenance will be considered class 500. Examples include supply fan runtime alarms, filter alarms, and gas sensor out-of-calibration alarms.

PART 3 ALARM PRIORITIES

There is no intention to use priorities at this time. Any priority fields should be set to 255 by default

PART 4 ALARM ANNUNCIATION

4.1. Local alarm panel

Controllers with displays or sites with local operator terminals shall display alarm conditions for classes 100, 200, 300 with options to be acknowledged from those displays

4.2. Remote alarm panel

Remote alarm panels such as would be found at supervisory workstations, or remote client workstations, shall display all alarm classes, with options to be acknowledged or cancelled.

4.3. Master alarm database

Regardless of current alarm state, or current state of acknowledgement, alarms shall be maintained in master database for historical analysis. This database does not need to be incorporated into the DDC front end, but must have tools for viewing and maintenance.

PART 5 ALARM NOTIFICATION

5.1. Via Email

CEUO will provide email addresses that should receive contact for *each of the defined alarm classes*. Each recipient should have a user name in the DDC system for subsequent alarm acknowledgement.

5.2. Via SMS

There are no intentions to use SMS message for DDC alarms at this time

5.3. Via pager

There are no intentions to use pager communications for DDC alarms at this time

PART 6 ALARM ESCALATION

There is no intention of using alarm escalation methods for DDC at this time.

PART 7 POINT TREND CONFIGURATION

Not all points should receive trend log extensions. Critical sensors and control setpoints should be trended using the examples below.

7.1. Data Storage

- A. All trends should keep data at the building-level controller for a window of 1 week
- B. All trends should archive to their respective SQL server when local buffers are full
- C. Any buffers should "roll-over" if full, instead of stopping collection.

7.2. Analog Sensors

- A. Configure typical sensors for interval of 15 minutes
- B. Configure hydronic loop pressures for interval of 5 minutes
- C. Configure duct static pressure sensors for interval of 5 minutes
- D. Configure building static pressure sensors for interval of 5 minutes
- E. Assure trend units match the control application

7.3. Analog values

- A. Analog values from equipment, such as CFM, BTU, or Volumetric Flow should be trended at an interval of 15 minutes
- B. Assure trend units match the control application

7.4. Digital Status

- A. Configure for Change Of Value (COV).
- B. Use On/Off , Alarm/Normal, Heat/Cool as appropriate

7.5. Analog Setpoints

- A. Configure for COV.
- B. Use units appropriate to the control sequence

7.6. Digital Commands

- A. Configure for COV.
- B. Use Enable/Disable, Start/Stop, Heat/Cool as appropriate

7.7. Multi-state Commands and Status

- A. Configure for COV
- B. Use enumerations appropriate to the control sequence

END OF DOCUMENT

APPENDIX A: REVISION HISTORY
(none)

APPENDIX B: SUGGESTED EDITS
(none)