

FIRE ALARM SPECIFICATIONS

- 1

THE FIRE ALARM SYSTEM SHALL BE AN ADDRESSABLE FIRE ALARM SYSTEM, MULTIPLEXED FIRE ALARM SYSTEM, NOTIFIER NFS-320. THE SYSTEM SHALL BE OF ONE (1) MANUFACTURER AND UL LISTED AS A SYSTEM, AND SHALL BE PROVIDED WITH A ONE YEAR WARRANTY.
- 2

THE SYSTEM SHALL USE SUPERVISED MULTIPLEX DATA COMMUNICATIONS CIRCUITS, CLOSED LOOP INITIATION CIRCUITS, INDIVIDUAL ZONE SUPERVISION, AND INDIVIDUAL AUDIO AND VISUAL SIGNAL CIRCUIT SUPERVISION. THE SYSTEM SHALL INCLUDE ALL CONTROL CENTER PANELS, MANUAL DOUBLE ACTION PULL STATIONS, SMOKE DETECTORS, HEAT DETECTORS, HORNS, STROBE LIGHTS, ALL WIRING, OUTLET BOXES, AND ALL OTHER NECESSARY MATERIAL FOR A COMPLETE OPERATING SYSTEM.
- 3

THE SYSTEM SHALL BE POWERED FROM THE BUILDING'S 120VAC POWER SYSTEM. THE CONTROL PANEL, THE ANNUNCIATORS AND ALL SYSTEM COMMUNICATION DEVICES SHALL BE PROVIDED WITH A MINIMUM OF 60 HOURS BATTERY STANDBY WITH 10 MINUTES OF ALARM OPERATION AT THE END OF THIS PERIOD. ALL NORMAL OPERATING, SUPERVISORY, AND BATTERY POWER AND FAULT CONDITIONS SHALL BE SUPERVISED AND ANNUNCIATED.
- 4

ALL CIRCUITS REQUIRING SYSTEM OPERATING POWER SHALL BE 24 VDC AND SHALL BE INDIVIDUALLY FUSED AT THE CONTROL PANEL. A MINIMUM OF FIVE (5) AMPS AUXILIARY FUSED POWER SHALL BE PROVIDED.
- 5

THE SYSTEM SHALL OPERATE UNDER NORMAL CONDITION DISPLAYING 'SYSTEM IS NORMAL'. WHEN AN ABNORMAL CONDITION IS DETECTED, THE APPROPRIATE LED (ALARM, SUPERVISORY OR TROUBLE) SHALL FLASH. THE PANEL AUDIBLE SIGNAL SHALL PULSE FOR ALARM CONDITIONS AND SOUND STEADILY FOR TROUBLE AND SUPERVISORY CONDITIONS, AND IDENTIFY VIA LCD DISPLAY, THE CUSTOM LOCATION LABEL, TYPE OF DEVICE, AND POINT STATUS (TROUBLE OR ALARM).
- 6

THE SYSTEM ALARM OPERATION RESULTING FROM THE ALARM ACTIVATION OF ANY MANUAL STATION, AUTOMATIC DETECTION DEVICE, OR OTHER INITIATION DEVICE SHALL BE AS FOLLOWS:

A

AUDIO/VISUAL ALARM INDICATING APPLIANCES SHALL BE ACTIVATED UNTIL SILENCED BY THE ALARM SILENCE SWITCH AT THE CONTROL PANEL.

B

'DIGITAL ALARM COMMUNICATION TRANSMITTER (DACT)' PROVIDE DACT IN FIRE ALARM CONTROL PANEL. DACT SHALL SEIZE THE CONNECTED/DEDICATED OR LEASED TELEPHONE LINE TO DIAL REPEATEDLY UNTIL REPORTED AUTOMATICALLY THE ALARM AND/OR TROUBLE CONDITIONS TO THE LOCAL/NEAREST OR DESIGNATED FIRE DEPARTMENT OR OTHER SUPERVISORY CENTRAL STATION, I.E. PRIVATE SECURITY COMPANY OR LOCAL POLICE STATION, ETC.'

C

THE MECHANICAL CONTROLS SHALL ACTIVATE/DE-ACTIVATE THE AIR HANDLING SYSTEMS PER CODE UPON RESET OF CONTROL PANEL. AIR HANDLING UNITS SHALL SEQUENTIALLY START UP TO REDUCE ELECTRICAL DEMAND.

D

THE ALARM SHALL BE DISPLAYED ON THE LCD DISPLAY. THE SYSTEM ALARM RED LED SHALL FLASH ON THE CONTROL PANEL AND THE REMOTE ANNUNCIATOR AND AN ALARM TONE SHALL SOUND UNTIL ACKNOWLEDGED AT THE CONTROL PANEL OR THE REMOTE ANNUNCIATOR. SUBSEQUENT ALARMS RECEIVED FROM OTHER ZONES SHALL AGAIN FLASH THE SYSTEM ALARM LED ON THE CONTROL PANEL AND REMOTE ANNUNCIATOR. THE LCD DISPLAY SHALL SHOW THE NEW ALARM INFORMATION.
- 7

THE ACTIVATION OF ANY SYSTEM SMOKE DETECTOR SHALL INITIATE AN ALARM VERIFICATION OPERATION WHEREBY THE PANEL SHALL RESET THE ACTIVATED DETECTOR AND WAIT FOR A SECOND ALARM ACTIVATION. IF, WITHIN ONE (1) MINUTE AFTER RESET, A SECOND ALARM IS REPORTED FROM THE SAME OR ANY OTHER SMOKE DETECTOR, THE SYSTEM SHALL PROCESS THE ALARM AS DESCRIBED PREVIOUSLY. IF NO SECOND ALARM OCCURS WITHIN ONE MINUTE THE SYSTEM SHALL RESUME NORMAL OPERATION. THE ALARM VERIFICATION SHALL OPERATE ONLY ON SMOKE DETECTOR ALARMS. OTHER ACTIVATED INITIATING DEVICES SHALL BE PROCESSED IMMEDIATELY. THE CONTROL PANEL SHALL HAVE THE CAPABILITY TO DISPLAY THE NUMBER OF TIMES A ZONE HAS GONE INTO A VERIFICATION MODE.
- 8

THE SYSTEM SHALL ALLOW ACKNOWLEDGEMENT OF SYSTEM ACTIVITY, SILENCE, RESET, AND SUPERVISORY SERVICE AS FOLLOWS:

A

THE SYSTEM SHALL HAVE AN ALARM LIST KEY THAT WILL ALLOW THE OPERATOR TO DISPLAY ALL ALARMS, TROUBLES AND SUPERVISORY SERVICE CONDITIONS WITH THE TIME OF OCCURRENCE. THIS SHALL ALLOW FOR THE DETERMINATION OF NOT ONLY THE MOST RECENT ALARM BUT MAY ALSO ALLOW TRACING THE PATH OF THE FIRE.

B

PRESSING THE APPROPRIATE ACKNOWLEDGE BUTTON SHALL GLOBALLY ACKNOWLEDGE EVERY POINT IN ALARM.
- C

AFTER ALL POINTS HAVE BEEN ACKNOWLEDGED, THE LEDS SHALL GLOW STEADY AND THE PANEL AUDIBLE SIGNAL SHALL BE SILENCED. THE TOTAL NUMBER OF ALARMS, SUPERVISORY AND TROUBLE CONDITIONS SHALL BE DISPLAYED ALONG WITH A PROMPT TO REVIEW EACH LIST CHRONOLOGICALLY. THE END OF THE LIST SHALL BE INDICATED.
- D

PROVISION SHALL BE MADE FOR PASS CODE PROTECTION OF ACKNOWLEDGE, ALARM SILENCE, SYSTEM RESET AND MANUAL CONTROL FUNCTIONS. FOUR (4) ACCESS LEVELS SHALL BE PROVIDED. PASS CODES SHALL CONSIST OF UP TO TEN (10) DIGITS. CHANGES TO PASS CODES SHALL ONLY BE MADE BY AUTHORIZED PERSONNEL.
- E

PRESSING THE 'ALARM SILENCE' BUTTON SHALL CAUSE ALL ALARM SIGNALS TO CEASE OPERATION.
- F

THE SYSTEM SHALL NOT PERMIT SIGNALS TO BE SILENCED DURING ALARM SILENCE INHIBIT MODE.
- G

THE 'SYSTEM RESET' BUTTON SHALL BE USED TO RETURN THE SYSTEM TO ITS NORMAL STATE AFTER AN ALARM CONDITION HAS BEEN REMEDIED. THE LCD DISPLAY SHALL STEP THE USER THROUGH THE RESET PROCESS WITH SIMPLE ENGLISH LANGUAGE MESSAGES.
- H

SHOULD AN ALARM CONDITION CONTINUE TO EXIST, THE SYSTEM SHALL REMAIN IN AN ABNORMAL STATE AND SYSTEM CONTROL RELAYS SHALL NOT RESET. THE DISPLAY SHALL INDICATE THE TOTAL NUMBER OF ALARMS AND TROUBLES PRESENT, ALONG WITH A PROMPT TO REVIEW THE POINTS.
- I

WHEN THE 'ALARM SILENCE INHIBIT' FUNCTION IS ACTIVE, THE MESSAGE, 'SYSTEM RESET INHIBITED' SHALL BE DISPLAYED.
- J

ACTIVATING THE SUPERVISORY SERVICE ACKNOWLEDGE SWITCH SHALL SILENCE THE SUPERVISORY AUDIBLE SIGNAL BUT CAUSE THE LED TO REMAIN ON.
- 9

THE SYSTEM SHALL PROVIDE INDEPENDENTLY SUPERVISED INITIATION CIRCUITS SO THAT A FAULT IN ANY ONE ZONE SHALL NOT AFFECT ANY OTHER ZONE. THE ALARM ACTIVATION OF ANY INITIATION CIRCUIT SHALL NOT PREVENT THE SUBSEQUENT ALARM OPERATION OF ANY OTHER INITIATION CIRCUIT.
- 10

THE SYSTEM SHALL PROVIDE INDEPENDENTLY SUPERVISED AND INDEPENDENTLY FUSED INDICATING APPLIANCE CIRCUITS FOR ALARM DEVICES. DISARRANGEMENT CONDITIONS OF ANY CIRCUIT SHALL NOT AFFECT THE OPERATION OF OTHER CIRCUITS.
- 11

THE SYSTEM SHALL BE CAPABLE OF OPERATING UP TO 127 ADDRESSABLE DEVICES PER SINGLE PAIR OF MAGNET WIRES.
- 12

THE SYSTEM SHALL ALLOW UP TO 2500 FEET WIRE LENGTH TO THE FURTHEST ADDRESSABLE DEVICE. T-TAPPING OF THE COMMUNICATIONS CHANNEL SHALL NOT BE ALLOWED.
- 13

ALL MAGNET COMMUNICATIONS WIRING SHALL BE TWISTED AND SHIELDED CABLES. ALL WIRING SHALL BE IN A CONDUIT SYSTEM SEPARATE FROM OTHER BUILDING WIRING. ALL JUNCTION BOXES SHALL BE SPRAYED RED AND LABELED 'FIRE ALARM'. WIRING COLOR CODE SHALL BE MAINTAINED THROUGHOUT THE SCOPE OF THE WORK.
- 14

APPROVED EQUAL SYSTEMS MAY BE CONSIDERED FROM OTHER MANUFACTURERS, IF APPROVED BY BOTH THE OWNER AND THE ARCHITECT.



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