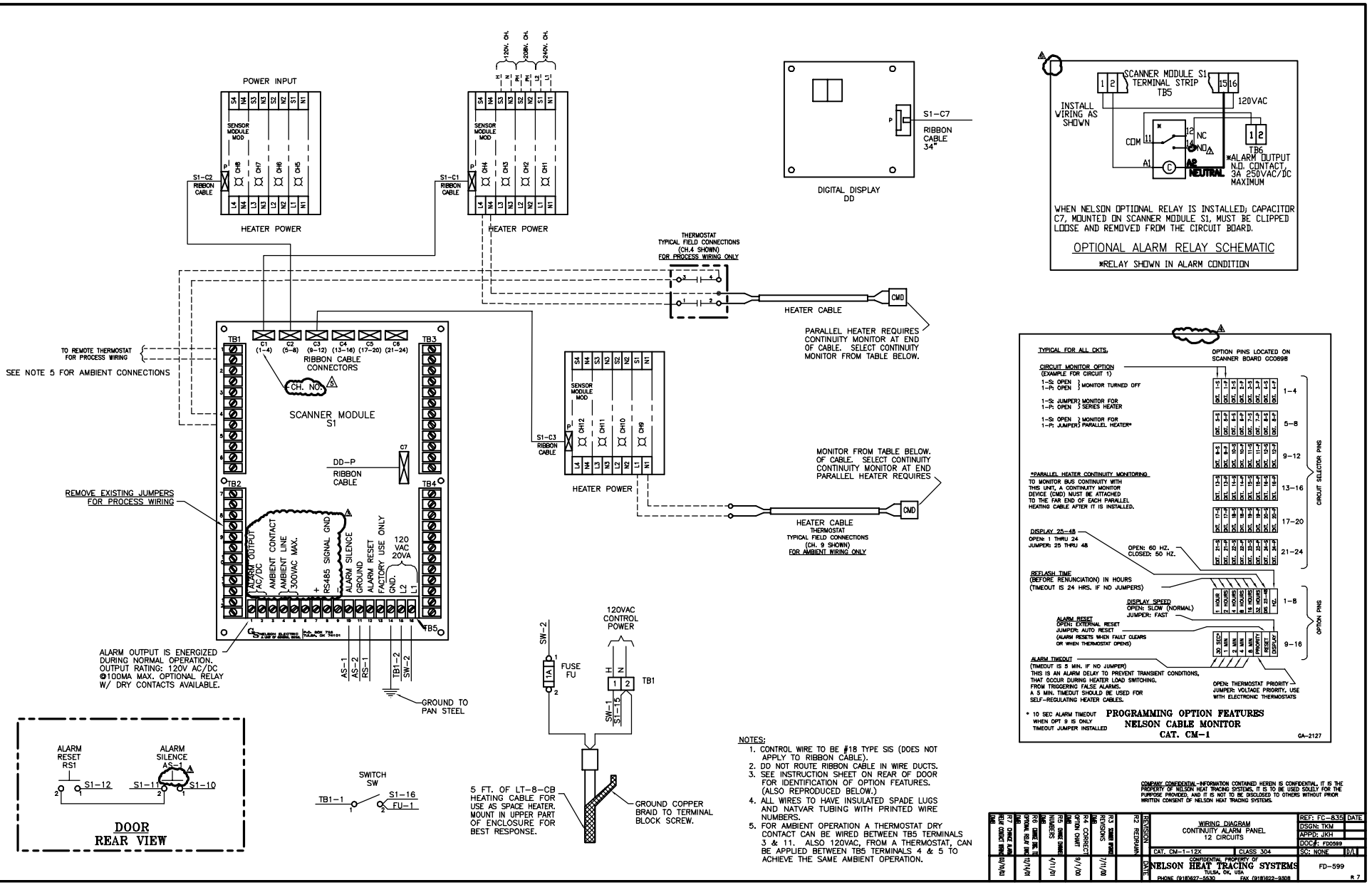
POWER INPUT
120V. CH.
208V. CH.
240V. CH.
SENSOR MODULE MOD
HEATER POWER
S1-C2 RIBBON CABLE
S1-C1 RIBBON CABLE
DIGITAL DISPLAY DD
S1-C7 RIBBON CABLE 34"
SCANNER MODULE S1 TERMINAL STRIP TB5
120VAC
INSTALL WIRING AS SHOWN
COM
NC
NO
TB6
*ALARM OUTPUT N.O. CONTACT, 3A 250VAC/DC MAXIMUM
A2 NEUTRAL
WHEN NELSON OPTIONAL RELAY IS INSTALLED, CAPACITOR C7, MOUNTED ON SCANNER MODULE S1, MUST BE CLIPPED LOOSE AND REMOVED FROM THE CIRCUIT BOARD.
OPTIONAL ALARM RELAY SCHEMATIC
*RELAY SHOWN IN ALARM CONDITION
THERMOSTAT TYPICAL FIELD CONNECTIONS (CH.4 SHOWN) FOR PROCESS WIRING ONLY
HEATER CABLE
CMD
PARALLEL HEATER REQUIRES CONTINUITY MONITOR AT END OF CABLE. SELECT CONTINUITY MONITOR FROM TABLE BELOW.
TO REMOTE THERMOSTAT FOR PROCESS WIRING
SEE NOTE 5 FOR AMBIENT CONNECTIONS
TB1
TB2
TB3
TB4
TB5
C1 (1-4)
C2 (5-8)
C3 (9-12)
C4 (13-16)
C5 (17-20)
C6 (21-24)
RIBBON CABLE CONNECTORS
CH. NO.
SCANNER MODULE S1
C7
DD-P RIBBON CABLE
S1-C3 RIBBON CABLE
HEATER POWER
MONITOR FROM TABLE BELOW. OF CABLE. SELECT CONTINUITY CONTINUITY MONITOR AT END PARALLEL HEATER REQUIRES
HEATER CABLE
THERMOSTAT TYPICAL FIELD CONNECTIONS (CH. 9 SHOWN) FOR AMBIENT WIRING ONLY
REMOVE EXISTING JUMPERS FOR PROCESS WIRING
ALARM OUTPUT AC/DC
AMBIENT CONTACT
AMBIENT LINE 300VAC MAX.
RS485
SIGNAL GND
ALARM SILENCE
GROUND
ALARM RESET
FACTORY USE ONLY
GND.
120 VAC 20VA
L2
L1
ALARM OUTPUT IS ENERGIZED DURING NORMAL OPERATION. OUTPUT RATING: 120V AC/DC @100MA MAX. OPTIONAL RELAY W/ DRY CONTACTS AVAILABLE.
AS-1
AS-2
RS-1
TB1-2
SW-2
GROUND TO PAN STEEL
SW-2
120VAC CONTROL POWER
FUSE FU
1A
H
N
TB1
SW-1
S1-15
5 FT. OF LT-8-CB HEATING CABLE FOR USE AS SPACE HEATER. MOUNT IN UPPER PART OF ENCLOSURE FOR BEST RESPONSE.
GROUND COPPER BRAID TO TERMINAL BLOCK SCREW.
TYPICAL FOR ALL CKTS.
OPTION PINS LOCATED ON SCANNER BOARD GC0698
CIRCUIT MONITOR OPTION (EXAMPLE FOR CIRCUIT 1)
1-S: OPEN
1-P: OPEN
MONITOR TURNED OFF
1-S: JUMPER
1-P: OPEN
MONITOR FOR SERIES HEATER
1-S: OPEN
1-P: JUMPER
MONITOR FOR PARALLEL HEATER*
1-4
5-8
9-12
13-16
17-20
21-24
CIRCUIT SELECTOR PINS
*PARALLEL HEATER CONTINUITY MONITORING
TO MONITOR BUS CONTINUITY WITH THIS UNIT, A CONTINUITY MONITOR DEVICE (CMD) MUST BE ATTACHED TO THE FAR END OF EACH PARALLEL HEATING CABLE AFTER IT IS INSTALLED.
DISPLAY 25-48
OPEN: 1 THRU 24
JUMPER: 25 THRU 48
OPEN: 60 HZ.
CLOSED: 50 HZ.
REFLASH TIME (BEFORE RENUNCIATION) IN HOURS (TIMEOUT IS 24 HRS. IF NO JUMPERS)
1 HOUR
2 HOURS
4 HOURS
8 HOURS
16 HOURS
60 HZ.
50 HZ.
1-8
DISPLAY SPEED
OPEN: SLOW (NORMAL)
JUMPER: FAST
ALARM RESET
OPEN: EXTERNAL RESET
JUMPER: AUTO RESET
(ALARM RESETS WHEN FAULT CLEARS OR WHEN THERMOSTAT OPENS)
NO SEC
1 MIN
2 MIN
4 MIN
8 MIN
16 MIN
RESET
DISPLAY
9-16
OPTION PINS
ALARM TIMEOUT
(TIMEOUT IS 5 MIN. IF NO JUMPER)
THIS IS AN ALARM DELAY TO PREVENT TRANSIENT CONDITIONS, THAT OCCUR DURING HEATER LOAD SWITCHING. FROM TRIGGERING FALSE ALARMS. A 5 MIN. TIMEOUT SHOULD BE USED FOR SELF-REGULATING HEATER CABLES.
OPEN: THERMOSTAT PRIORITY
JUMPER: VOLTAGE PRIORITY. USE WITH ELECTRONIC THERMOSTATS
* 10 SEC ALARM TIMEOUT WHEN OPT 9 IS ONLY TIMEOUT JUMPER INSTALLED
PROGRAMMING OPTION FEATURES
NELSON CABLE MONITOR
CAT. CM-1
GA-2127
ALARM RESET RS1
ALARM SILENCE AS-1
S1-12
S1-11
S1-10
DOOR
REAR VIEW
SWITCH SW
TB1-1
S1-16
FU-1
NOTES:
1. CONTROL WIRE TO BE #18 TYPE SIS (DOES NOT APPLY TO RIBBON CABLE).
2. DO NOT ROUTE RIBBON CABLE IN WIRE DUCTS.
3. SEE INSTRUCTION SHEET ON REAR OF DOOR FOR IDENTIFICATION OF OPTION FEATURES. (ALSO REPRODUCED BELOW.)
4. ALL WIRES TO HAVE INSULATED SPADE LUGS AND NATVAR TUBING WITH PRINTED WIRE NUMBERS.
5. FOR AMBIENT OPERATION A THERMOSTAT DRY CONTACT CAN BE WIRED BETWEEN TB5 TERMINALS 3 & 11. ALSO 120VAC, FROM A THERMOSTAT, CAN BE APPLIED BETWEEN TB5 TERMINALS 4 & 5 TO ACHIEVE THE SAME AMBIENT OPERATION.
COMPANY CONFIDENTIAL INFORMATION CONTAINED HEREIN IS CONFIDENTIAL. IT IS THE PROPERTY OF NELSON HEAT TRACING SYSTEMS. IT IS TO BE USED SOLELY FOR THE PURPOSE PROVIDED, AND IT IS NOT TO BE DISCLOSED TO OTHERS WITHOUT PRIOR WRITTEN CONSENT OF NELSON HEAT TRACING SYSTEMS.
REVISION
R12 REWRAIN
R13 SOME WORDS
R14 CORRECT
R15 SOME WORDS
R16 SOME WORDS
R17 SOME WORDS
DATE
7/1/00
8/1/00
11/1/01
10/1/04
10/1/04
WIRING DIAGRAM
CONTINUITY ALARM PANEL
12 CIRCUITS
CAT. CM-1-12X
CLASS 304
REF: FC-835
DSGN: TKM
APPD: JKH
DOC#: FD0599
SC: NONE
D/L
CONFIDENTIAL PROPERTY OF
NELSON HEAT TRACING SYSTEMS
TULSA, OK, USA
PHONE (918)627-5530 FAX (918)622-9308
FD-599
R 7