DRAWING NO.: 72703E28

INTERCONNECTION DIAGRAM

CPU2020

P4

COM	1	GENERAL ALARM RELAY CONNECT TO DIALER AVD-4+2 CHANNEL 1 IN ROOM H124
N.C.	2	
N.O.	3	
	4	
	5	TO CHASSIS GROUND VIA CABLE #71073
COM	6	SYSTEM TROUBLE/SUPERVISORY/SECURITY RELAY CONNECT TO DIALER AVD-4+2 CHANNEL 2 IN ROOM H1214
N.C.	7	
N.O.	8	
	9	
	10	
	11	

LIB400 (1)

TB1

A+	1	SLC LOOP (CHANNEL A) TO MODULES AND PULL STATIONS 10000 FT. MAX. 40 OHMS LOOP RESISTANCE MAX. LOOP 1
	2	
A-	3	
	4	
B+	5	SLC LOOP (CHANNEL B) - NO CONNECTION
	6	
B-	7	
	8	TO CHASSIS GROUND VIA CABLE #71073

TB2

A+	1	SLC LOOP (CHANNEL A) TO MODULES AND PULL STATIONS 10000 FT. MAX. 40 OHMS LOOP RESISTANCE MAX. LOOP 6
	2	
A-	3	
	4	
B+	5	SLC LOOP (CHANNEL B) - NO CONNECTION
	6	
B-	7	
	8	TO CHASSIS GROUND VIA CABLE #71073

LIB400 (2)

TB1

A+	1	SLC LOOP (CHANNEL A) TO MODULES AND PULL STATIONS 10000 FT. MAX. 40 OHMS LOOP RESISTANCE MAX. LOOP 2
	2	
A-	3	
	4	
B+	5	SLC LOOP (CHANNEL B) - NO CONNECTION
	6	
B-	7	
	8	TO CHASSIS GROUND VIA CABLE #71073

TB2

A+	1	SLC LOOP (CHANNEL A) TO MODULES AND PULL STATIONS 10000 FT. MAX. 40 OHMS LOOP RESISTANCE MAX. LOOP 7
	2	
A-	3	
	4	
B+	5	SLC LOOP (CHANNEL B) - NO CONNECTION
	6	
B-	7	
	8	TO CHASSIS GROUND VIA CABLE #71073

SIB2048

P5

	1	
	2	TO EARTH GROUND
	3	
	4	
+	5	EIA-485 SERIAL COMMUNICATION TO AMG-1 (P3-6)
-	6	EIA-485 SERIAL COMMUNICATION TO AMG-1 (P3-4)

DIA2020

TB1

+	1	EIA-485 SERIAL COMMUNICATION FROM LCD80(4) P2-1
+	2	EIA-485 SERIAL COMMUNICATION TO LCD80(1) P2-2
-	3	EIA-485 SERIAL COMMUNICATION FROM LCD80(4) P2-3
-	4	EIA-485 SERIAL COMMUNICATION TO LCD80(1) P2-4
	5	
	6	

ACM-16AT

TB1

1	TO EARTH GROUND
2	
3	+24 VDC IN (FROM MPS-24A TB3-3)
4	
5	COMMON IN (FROM MPS-24A TB3-4)
6	TROUBLE INPUT (NOT USED) JUMPER P4-6 TO P4-7
7	

TB2

+	1	EIA-485 SERIAL COMMUNICATION FROM AMG-1 (P3-5)
+	2	TERMINATE WITH 120 OHM 1/4W EOL RESISTOR (P/N 71244)
-	3	
-	4	EIA-485 SERIAL COMMUNICATION FROM AMG-1 (P3-3)

AMG-1

P1

1	POWER HARNESS (PROVIDED) FROM MPS-24A PLUG P2
2	
3	
4	
5	
6	

P2

1	POWER HARNESS (PROVIDED) TO FFT-7 PLUG P2
2	
3	
4	
5	
6	

P3

	1	
	2	
-	3	EIA-485 SERIAL COMMUNICATION TO ACM-16AT (TB2-4)
-	4	EIA-485 SERIAL COMMUNICATION FROM SIB2048 (P5-6)
+	5	EIA-485 SERIAL COMMUNICATION TO ACM-16AT (TB2-1)
+	6	EIA-485 SERIAL COMMUNICATION FROM SIB2048 (P5-5)

P4

1	
2	
3	
4	LOW LEVEL AUDIO OUTPUT TO ACT-1 TB1-1 (IN XPONDER #3)
5	LOW LEVEL AUDIO OUTPUT TO ACT-1 TB1-2 (IN XPONDER #3)
6	SHIELD TO ACT-1 TB1-3 (IN XPONDER #3)

P6

1	CABLE ASSEMBLY (PROVIDED) TO FFT-7 P4
2	
3	
4	
5	
6	

P7

	TROUBLE BUS OUT TO CPU P5

P9

	TROUBLE BUS IN FROM APS-6R(1) J4

LCD-80(1)

P1

1	+24 VDC IN (FROM MPS-24A (1) TB3-3)
2	+24 VDC OUT TO LCD80(2) P1-1
3	-24 VDC IN (FROM MPS-24A (1) TB3-4)
4	-24 VDC OUT TO LCD80(2) P1-3

P2 (R-120)

1	+ EIA485 OUT TO LCD80(2) P2-2
2	+ EIA485 IN (FROM DIA-2020 TB1-2)
3	- EIA485 OUT TO LCD80(2) P2-4
4	- EIA485 IN (FROM DIA-2020 TB1-4)

LCD-80(2)

P1

1	+24 VDC IN FROM LCD80(1) P1-2
2	+24 VDC OUT TO LCD80(3) P1-1
3	-24 VDC IN FROM LCD80(1) P1-4
4	-24 VDC OUT TO LCD80(3) P1-3

P2 (R-120)

1	+ EIA485 OUT TO LCD80(3) P2-2
2	+ EIA485 IN FROM LCD80(1) .P2-1
3	- EIA485 OUT TO LCD80(3) P2-4
4	- EIA485 IN FROM LCD80(1) P2-3

LCD-80(3)

P1

1	+24 VDC IN FROM LCD80(2) P1-2
2	+24 VDC OUT TO LCD80(4) P1-1
3	-24 VDC IN FROM LCD80(2) P1-4
4	-24 VDC OUT TO LCD80(4) P1-3

P2 (R-120)

1	+ EIA485 OUT TO LCD80(4) P2-2
2	+ EIA485 IN FROM LCD80(2) P2-1
3	- EIA485 OUT TO LCD80(4) P2-4
4	- EIA485 IN FROM LCD80(2) P2-3

LCD-80(4)

P1

1	+24 VDC IN FROM LCD80(3) P1-2
2	
3	-24 VDC IN FROM LCD80(3) P1-4
4	

P2 (R-120)

1	+ EIA485 OUT (RETURN TO DIA-2020 TB1-1)
2	+ EIA485 IN FROM LCD80(3) P2-1
3	- EIA485 OUT (RETURN TO DIA-2020 TB1-3)
4	- EIA485 IN FROM LCD80(3) P2-3

MPS-24A

TB1

	1	
G	2	TO ENCLOSURE CHASSIS
G	3	TO EARTH GROUND
N	4	120 VAC NEUTRAL IN
N	5	120 VAC NEUTRAL OUT TO CHG-120 TB1-N
H	6	120 VAC 50/60 Hz (1.8A MAX) HOT IN
H	7	120 VAC HOT OUT TO CHG-120 TB1-H
	8	

TB2

+	1	FROM CHG-120 TB2-(OUT 1 +)
-	2	FROM CHG-120 TB2-(OUT 1 -)

TB3

	1	
	2	
+	3	24VDC OUT TO XPC-8 (1) P3, TO ACM-16AT & LCD-80
-	4	
	5	
	6	

P2

1	POWER HARNESS (PROVIDED) TO AMG-1 PLUG P1
2	
3	
4	
5	
6	

P5

	TROUBLE BUS OUT TO CHG-120 JP5

CHG-120

TB1

N		120 VAC NEUTRAL IN FROM MPS-24A TB1-5 OUT TO APS-6R(1) TB1-N
G		TO EARTH GROUND
H		120 VAC HOT IN FROM MPS-24A TB1-7 OUT TO APS-6R(1) TB1-H

120 VAC 50/60 Hz (2.0A MAX)

TB2

OUT2	-	-24VDC OUT TO APS-6R(1) TB3-2
OUT2	+	+24VDC OUT TO APS-6R(1) TB3-1
OUT1	-	-24VDC OUT TO MPS-24A TB2-2
OUT1	+	+24VDC OUT TO MPS-24A TB2-1
BATT	-	TO STANDBY BATTERY (-)
BATT	+	TO STANDBY BATTERY (+)

TB3

	FORM-C TROUBLE CONTACT (NO CONNECTION)

JP4

	TROUBLE BUS OUT TO APS-6R(5) J3

JP5

	TROUBLE BUS IN FROM MPS-24A P5

JP6

	NO CONNECTION

APS-6R (1)

TB1

	H	120 VAC HOT IN FROM CHG-120 TB1-H OUT TO APS-6R(2) TB1-H
	N	120 VAC NEUTRAL IN FROM CHG-120 TB1-N OUT TO APS-6R(2) TB1-N
	G	TO EARTH GROUND

120 VAC 50/60 Hz (2.5A MAX)

TB2

+	1	OUTPUT CIRCUIT #1 (NOT USED)
-	2	
-	3	OUTPUT CIRCUIT #2 (NOT USED)
-	4	

TB3

+	1	FROM CHG-120 TB2-(OUT 2 +), TO APS-6R(2) TB3-1
-	2	FROM CHG-120 TB2-(OUT 2 -), TO APS-6R(2) TB3-2

J1

	TO XPC-8(1) P7

J2

	TO XPC-8(1) P9

J3

	TROUBLE BUS IN FROM APS-6R(2) J4

J4

	TROUBLE BUS OUT TO AMG-1 P9

APS-6R (2)

TB1

	H	120 VAC HOT IN FROM APS-6R(1) TB1-H OUT TO APS-6R(3) TB1-H
	N	120 VAC NEUTRAL IN FROM APS-6R(1) TB1-N OUT TO APS-6R(3) TB1-N
	G	TO EARTH GROUND

120 VAC 50/60 Hz (2.5A MAX)

TB2

+	1	OUTPUT CIRCUIT #1 (NOT USED)
-	2	
-	3	OUTPUT CIRCUIT #2 (NOT USED)
-	4	

TB3

+	1	FROM APS-6R(1) TB3-1, TO APS-6R(3) TB3-1
-	2	FROM APS-6R(1) TB3-2, TO APS-6R(3) TB3-2

J1

	TO XPC-8(2) P3

J2

	TO XPC-8(2) P5

J3

	TROUBLE BUS IN FROM APS-6R(3) J4

J4

	TROUBLE BUS OUT TO APS-6R(1) J3

APS-6R (3)

TB1

	H	120 VAC HOT IN FROM APS-6R(2) TB1-H OUT TO APS-6R(4) TB1-H
	N	120 VAC NEUTRAL IN FROM APS-6R(2) TB1-N OUT TO APS-6R(4) TB1-N
	G	TO EARTH GROUND

120 VAC 50/60 Hz (2.5A MAX)

TB2

+	1	OUTPUT CIRCUIT #1
-	2	
-	3	OUTPUT CIRCUIT #2
-	4	

TB3

+	1	FROM APS-6R(2) TB3-1, TO APS-6R(4) TB3-1
-	2	FROM APS-6R(2) TB3-2, TO APS-6R(4) TB3-2

J1

	TO XPC-8(2) P7

J2

	TO XPC-8(2) P9

J3

	TROUBLE BUS IN FROM APS-6R(4) J4

J4

	TROUBLE BUS OUT TO APS-6R(2) J3

APS-6R (4)

TB1

	H	120 VAC HOT IN FROM APS-6R(3) TB1-H OUT TO APS-6R(5) TB1-H
	N	120 VAC NEUTRAL IN FROM APS-6R(3) TB1-N OUT TO APS-6R(5) TB1-N
	G	TO EARTH GROUND

120 VAC 50/60 Hz (2.5A MAX)

TB2

+	1	OUTPUT CIRCUIT #1
-	2	
-	3	OUTPUT CIRCUIT #2
-	4	

TB3

+	1	FROM APS-6R(3) TB3-1, TO APS-6R(5) TB3-1
-	2	FROM APS-6R(3) TB3-2, TO APS-6R(5) TB3-2

J1

	TO XPC-8(3) P3

J2

	TO XPC-8(3) P5

J3

	TROUBLE BUS IN FROM APS-6R(5) J4

J4

	TROUBLE BUS OUT TO APS-6R(3) J3

APS-6R (5)

TB1

	H	120 VAC HOT IN FROM APS-6R(4) TB1-H
	N	120 VAC NEUTRAL IN FROM APS-6R(4) TB1-N
	G	TO EARTH GROUND

120 VAC 50/60 Hz (2.5A MAX)

TB2

+	1	OUTPUT CIRCUIT #1 (NOT USED)
-	2	
-	3	OUTPUT CIRCUIT #2 (NOT USED)
-	4	

TB3

+	1	FROM APS-6R(4) TB3-1
-	2	FROM APS-6R(4) TB3-2

J1

	TO XPC-8(3) P7

J2

	TO XPC-8(3) P9

J3

	TROUBLE BUS IN FROM CHG-120 JP4

J4

	TROUBLE BUS OUT TO APS-6R(4) J3

XPP-1 (1)

P5

1	SLC LOOP (+) IN FROM LIB-400(1) TB1-1
2	
3	SLC LOOP (-) IN FROM LIB-400(1) TB1-3
4	
5	SLC LOOP (+) OUT TO OTHER DEVICES ON LOOP 1
6	
7	SLC LOOP (-) OUT TO OTHER DEVICES ON LOOP 1
8	

P2

1	POWER HARNESS (PROVIDED) FROM AMG-1 P2
2	
3	
4	
5	
6	

XPC-8 (1)

P2

1	HORN CIRCUIT #1
2	
3	HORN CIRCUIT #2
4	
5	HORN CIRCUIT #3
6	
7	HORN CIRCUIT #4
8	
9	STROBE CIRCUIT #1
10	
11	STROBE CIRCUIT #2
12	
13	STROBE CIRCUIT #3
14	
15	STROBE CIRCUIT #4
16	

P3

	FROM MPS-24A TB3-3,4

P5

	FROM XPC-8(1) P4 (NOT SHOWN)

P7

	FROM APS-6R(1) J1

P9

	FROM APS-6R(1) J2

XPC-8 (2)

P2

1	STROBE CIRCUIT #5
2	
3	STROBE CIRCUIT #6
4	
5	STROBE CIRCUIT #7
6	
7	STROBE CIRCUIT #8
8	
9	STROBE CIRCUIT #9
10	
11	STROBE CIRCUIT #10
12	
13	STROBE CIRCUIT #11
14	
15	STROBE CIRCUIT #12
16	

P3

	FROM APS-6R(2) J1

P5

	FROM APS-6R(2) J2

P7

	FROM APS-6R(3) J1

P9

	FROM APS-6R(3) J2

XPC-8 (3)

P2

1	STROBE CIRCUIT #13
2	
3	STROBE CIRCUIT #14
4	
5	STROBE CIRCUIT #15
6	
7	STROBE CIRCUIT #16
8	
9	STROBE CIRCUIT #17
10	
11	STROBE CIRCUIT #18
12	
13	TELEPHONE CIRCUIT #1
14	
15	
16	

P3

	FROM APS-6R(4) J1

P5

	FROM APS-6R(4) J2

P7

	FROM APS-6R(5) J1

P9

	FROM FFT-7 P3-5,6

P10

	TO XPONDER 3 XPC-8(3) P7

FFT-7

P1

1	POWER HARNESS (PROVIDED) TO XPP-1 PLUG P2
2	
3	
4	
5	
6	

P2

1	POWER HARNESS (PROVIDED) FROM AMG-1 PLUG P2
2	
3	
4	
5	
6	

P3

	1	
	2	
	3	
	4	
-	5	TELEPHONE OUTPUT TO XPC-8 (3) PLUG P9
+	6	
	7	
	8	

P4

1	CABLE ASSEMBLY (PROVIDED) FROM AMG-1 P6
2	
3	
4	
5	
6	

REFERENCE DRAWINGS	
DWG. NO.	DESCRIPTION
72703E27	FIRE ALARM PANEL MECHANICAL OUTLINE

MCDANIEL FIRE SYSTEMS
1055 W.JOLIET RD. • P.O.BOX 70
VALPARAISO, INDIANA 46385
(219)-462-0571

M'F'S JOB NO.	72703
INSURANCE	
SCALE	NONE
SPECIFICATION	95067.00
DESIGNED BY	K. A. LINDSTEDT
CHECKED BY	T.E. POPE
DATE	7/16/98

86-FP-30

NO.	DATE	BY	REVISIONS
C	11/11/98	KAL	ISSUED FOR CONSTRUCTION
A	7/16/98	KAL	ISSUED FOR REVIEW

CHESTERTON HIGH SCHOOL
2125 S. 11TH STREET
CHESTERTON, INDIANA

FIRE ALARM & DETECTION SYSTEM
FIRE ALARM PANEL
INTERCONNECTION DIAGRAM

DRAWING NO.: 72703E28 | REV. 0 | SHEET NO. 1 OF 1