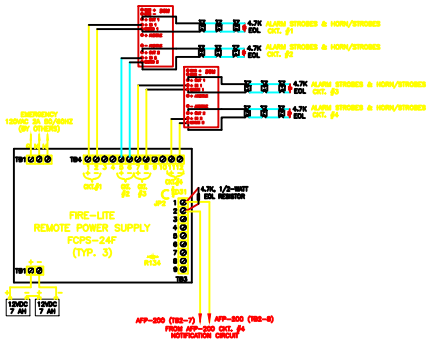

NOTIFIER MODEL AFP-200 FIRE ALARM PANEL: FACP
STANDBY BATTERY CALCULATIONS
24 HOURS STANDBY + 10 MINUTES ALARM

QTY	DESCRIPTION	SUPERVISORY CURRENT (ea.)	ALARM CURRENT (ea.)	DEVICES IN SUPERVISORY	SUPERV. CURRENT (total)	DEVICES IN ALARM	ALARM CURRENT (total)
1	AFP-200 ANALOG FIRE CONTROL PANEL	0.1000A	0.6180A	1	0.1000A	1	0.1000A
16	UMM-101 ADDRESSABLE MONITOR MODULE	0.0003	0.0004	16	0.0048	16	0.0064
1	UDACT	0.0400	0.1000	1	0.0400	1	0.1000
16	CPX-751 ION SMOKE DETECTOR	0.0002	0.0002	16	0.0032	16	0.0032
4	FDX-551 THERMAL DETECTOR	0.0002	0.0002	4	0.0008	4	0.0008
1	LCD-80	0.1000	0.1000	1	0.1000	1	0.1000
12	BGX-101L MANUAL PULL STATION	0.0003	0.0004	12	0.0036	12	0.0048
2	UMX-1 MONITOR MODULE	0.0003	0.0004	2	0.0006	2	0.0008
9	CMX-2 CONTROL MODULE	0.0004	0.0006	9	0.0036	9	0.0054
3	FCPS-24	–	0.4800	3	–	3	1.4400
1	DSM SYNC MODULE	–	0.0380	1	–	1	0.0380
8	15 CANDELA STROBE	–	0.0800	8	–	8	0.6400
3	75 CANDELA STROBE	–	0.1330	3	–	3	0.3990
3	110 CANDELA STROBE	–	0.1810	3	–	3	0.5430
8	15 CANDELA HORN/STROBE	–	0.0870	8	–	8	0.6960
8	75 CANDELA HORN/STROBE	–	0.1770	8	–	8	0.6960
11	110 CANDELA HORN/STROBE	–	0.2030	11	–	11	2.2330
4	SDX-551 PHOTO SMOKE DETECTOR, FOR DUCT	0.0002	0.0002	4	0.0008	15	0.0008
4	DNR-951 DUCT DETECTOR HOUSING	0.0380	0.0387	4	0.1040	4	0.1480
			TOTAL SUPERV. CURRENT		0.3614A	TOTAL ALARM CURRENT	6.9983 A
			STANDBY HOURS		24	ALARM HOURS	0.1670
			TOTAL STANDBY AMPHRS		8.6736	TOTAL ALARM AMPHRS	1.1634
			TOTAL AMPHRS REQUIRED		9.8370		
			TOTAL AMPHRS SUPPLIED		12.00		

STANDBY BATTERY CALCULATIONS: FCPS-24 – RSP1 : SECOND FLOOR

(24 HOURS STANDBY + 10 MINUTES ALARM)

DEVICE	SUPERVISORY CURRENT	ALARM CURRENT
1 FCPS-24 REMOTE SIGNAL PANEL	.045 AMPS	.045 AMPS
1 DSM DUAL SYNC MODULE @ .038 AMPS	------	.038
4 15 CANDELA STROBES @ .080 AMPS	------	.320
1 30 CANDELA STROBES @ .081 AMPS	------	.081
1 75 CANDELA STROBES @ .133 AMPS	------	.133
6 15 CANDELA HORN/STROBES @ .087 AMPS	------	.522
2 30 CANDELA HORN/STROBES @ .120 AMPS	------	.240
TOTAL	.045 AMPS x 24 HRS = 1.082 AMPHRS	1.365 AMPS x .167 HRS = .2108 AMPHRS

1.1820 AMPHOURS (STANDBY) + .2108 AMPHOURS (ALARM) = 1.3928 AMPHOURS

1.3928 AMPHOURS x 1.2 (DERATING FACTOR) = 1.6284 AMPHOURS

BATTERIES SUPPLIED WITH SYSTEM ARE RATED AT 7.0 AMPHOURS

STANDBY BATTERY CALCULATIONS: FCPS-24 – RSP2 : THIRD FLOOR

(24 HOURS STANDBY + 10 MINUTES ALARM)

DEVICE	SUPERVISORY CURRENT	ALARM CURRENT
1 FCPS-24 REMOTE SIGNAL PANEL	.045 AMPS	.045 AMPS
1 DSM DUAL SYNC MODULE @ .038 AMPS	------	.038
2 15 CANDELA STROBES @ .050 AMPS	------	.100
1 15 CANDELA HORN/STROBES @ .087 AMPS	------	.087
TOTAL	.045 AMPS x 24 HRS = 1.082 AMPHRS	.272 AMPS x .167 HRS = .0456 AMPHRS

1.1820 AMPHOURS (STANDBY) + .0456 AMPHOURS (ALARM) = 1.1976 AMPHOURS

1.1976 AMPHOURS x 1.2 (DERATING FACTOR) = 1.4371 AMPHOURS

BATTERIES SUPPLIED WITH SYSTEM ARE RATED AT 7.0 AMPHOURS

STANDBY BATTERY CALCULATIONS: FCPS-24 – RSP3 : FOURTH FLOOR

(24 HOURS STANDBY + 10 MINUTES ALARM)

DEVICE	SUPERVISORY CURRENT	ALARM CURRENT
1 FCPS-24 REMOTE SIGNAL PANEL	.045 AMPS	.045 AMPS
1 DSM DUAL SYNC MODULE @ .038 AMPS	------	.038
2 15 CANDELA STROBES @ .050 AMPS	------	.100
2 15 CANDELA HORN/STROBES @ .087 AMPS	------	.174
TOTAL	.045 AMPS x 24 HRS = 1.082 AMPHRS	.356 AMPS x .167 HRS = .0601 AMPHRS

1.1820 AMPHOURS (STANDBY) + .0601 AMPHOURS (ALARM) = 1.2121 AMPHOURS

1.2121 AMPHOURS x 1.2 (DERATING FACTOR) = 1.4546 AMPHOURS

BATTERIES SUPPLIED WITH SYSTEM ARE RATED AT 7.0 AMPHOURS

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2600 MIRA MAR AVENUE
LONG BEACH, CA. 90815
F 562 494 3967
T 562 495 6684

TYPE OF WORK
FIRE ALARM SYSTEM

OWNER
SHACO ELECTRIC
1400 SEGOVIA DRIVE
SANTA CLARA, CALIFORNIA 95050-3942

REV.	DATE	DESCRIPTION	BY
1	4-24-2020	FOR REVIEW	RCA
2	4-28-2020	FOR SUBMITTAL	RCA
3	6-2-2020	REV. PER PLAN CHECK CORRECTIONS	RCA
4	6-23-2020	REV. PER PLAN CHECK COMM. #2	RCA
5	10-12-20	AS BUILT	HH

AS BUILT BY
ELECTRICAL: SHACO SHOP BY
MECHANICAL: SHACO SHOP BY
CHECK-OUT TECHNICIAN: SHACO SHOP BY

PROJECT NAME
LAWRENCE BERKELEY
NATIONAL LABORATORY
COMPUTING CENTER
415 20th STREET
OAKLAND, CALIFORNIA 94612

SHEET CONTENTS
BATTERY CALCULATIONS OF
AFP-200 & FCPS-24 CONTROL PANELS

PROFESSIONAL STAMP
STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER
EXP. 04/30/2021
RICHARD C. ALLEN
ELECTRICAL

PROJECT NUMBER AL-00204
FILE NAME AL-00204R1.DWG
DRAWN BY BY
CHECKED BY HHR
SHEET BY RCA
SCALE N/A
DRAWING NUMBER
6111
SHEET NUMBER
FP 11.0
FILE: 00012431
4N943E049
PROJ. NO. FH0113