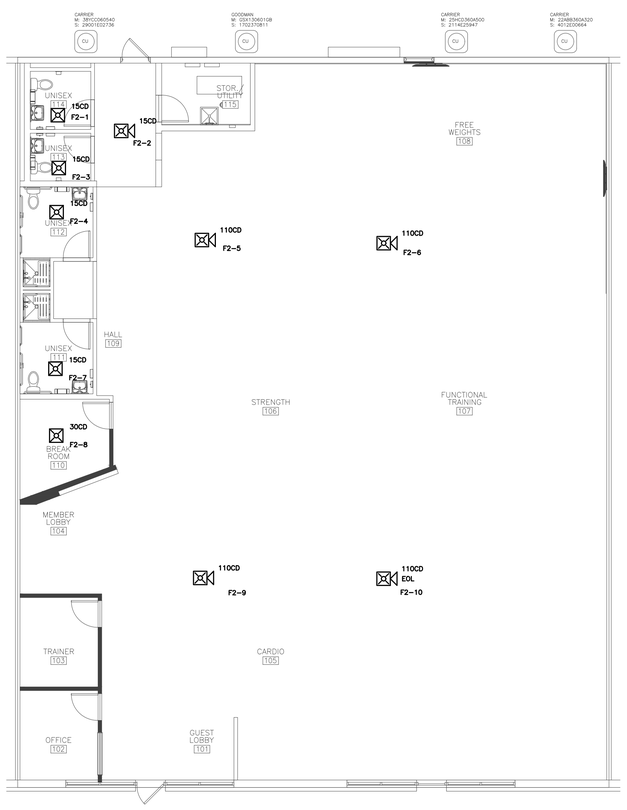


POTTER
The Symbol of Protection

PSN-64
Battery & Voltage Drop Calculations

Project Name: Anytime Fitness
Installed By:
Designed By: R. Chushuk
Date: 6/13/2022
Standby Hours: 24
Alarm Mins: 5
Batt Efficiency %: 80%
NAC Source Voltage: 20.4

Model #: PSN-64
Panel ID:
Location: Sprinkler Room
Max Panel Current (amps): 6

User assumes all responsibility to ensure the quantities and current draw values in this worksheet are accurate prior to submittal.

Panel Qty	Part #	Description	Standby (amps) Each	Standby (amps) Total	Alarm (amps) Each	Alarm (amps) Total
1	PSN-64	NAC Power Expander	0.075	0.075	0.075	0.075
			Panel Standby:	0.075	Panel Alarm:	0.075

NAC Circuits (See NAC Configuration below) Ckt	Use	Description	Class	Standby (amps) Total	Alarm (amps) Total
1	Notification	NAC 2	Class B	0.00000	0.45100
2			Class B	0.00000	0.00000
3			Class B	0.00000	0.00000
4			Class B	0.00000	0.00000
AUX				0.00000	0.00000
			NAC Standby:	0.00000	NAC Alarm: 0.45100

Battery Calculation Summary

	Standby (amps)		Alarm (amps)
Panel Current:	0.07500		0.07500
NAC Circuit Current:	0.00000		0.45100
Total Standby:	0.075000	Total Alarm:	0.52600
Standby Hours:	24	Alarm Mins:	5
AH Required:	1.80	AH Required:	0.05

Total Combined Standby & Alarm AmpHours Required: 1.85
Efficiency Factor: 80%
Required Battery AmpHours: 2.31
Battery AmpHours Provided: 7ah

NAC 1 MAX Circuit Current (amps): 3 Source Voltage Used (VDC): 20.4
Class: Class B Usage: Notification Description: NAC 2

Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd
#14 Solid	2.5	365	1.825	0.451	19.58	16

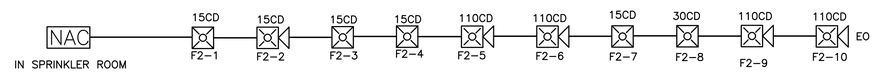
Circuit Devices Qty	Lookup Type	Description	Standby (amps) Each	Standby (amps) Total	Alarm (amps) Each	Alarm (amps) Total
1	User Defined	P2RL 15cd	0.000000	0.000000	0.054000	0.054000
4	User Defined	SRL 15cd	0.000000	0.000000	0.043000	0.172000
1	User Defined	SRL 30cd	0.000000	0.000000	0.063000	0.063000
1	User Defined	P2RL 110cd	0.000000	0.000000	0.162000	0.162000
			Total Standby:	0.00000	Total Alarm:	0.45100

tter Electric Signal (C)2011

SYSTEM OPERATION / INITIATING DEVICE		PANEL ANNUNCIATION: AUDIBLE AND VISUAL ALARM INDICATION	PANEL ANNUNCIATION: TROUBLE INDICATION	PANEL ANNUNCIATION: SUPERVISORY INDICATION	NOTIFICATION: AUDIBLE ALARM SIGNALING	NOTIFICATION: VISUAL ALARM SIGNALING	NOTIFICATION: TRANSMIT ALARM TO DIGITAL COMMUNICATOR	NOTIFICATION: TRANSMIT TROUBLE TO DIGITAL COMMUNICATOR	NOTIFICATION: TRANSMIT SUPERVISORY TO DIGITAL COMMUNICATOR
MANUAL PULL STATION		X			X	X	X		
SMOKE DETECTOR		X			X	X	X		
WATERFLOW SWITCH		X			X	X	X		
TAMPER SWITCH				X					X
FIRE ALARM CONTROL PANEL (AC POWER FAILURE)	FACP		X					X	
FIRE ALARM CONTROL PANEL (LOW BATERY)	FACP		X					X	
FIRE ALARM GND FAULT/ OPEN CCT/SHORT CCT	FACP		X					X	

FIRE ALARM OPERATION MATRIX

FIRE ALARM SYMBOL LEGEND			
SYMBOL	DESCRIPTION	MODEL	BACKBOX
NAC	FIRE ALARM NAC POWER SUPPLY	PSN-64	CUSTOM
	FIRE ALARM STROBE	SCWL	SINGLE GANG
	FIRE ALARM HORN STROBE	PC2WL	SINGLE GANG



FIRE ALARM CABLE LEGEND		
TAG	DESCRIPTION	TYPE
D	FIRE ALARM SIGNALING LINE CIRCUIT	WEST PENN 60980B
F	FIRE ALARM INDICATING CIRCUIT	WEST PENN 60993B

GENERAL FIRE ALARM NOTES

1. All conduit runs shall be 3/4" minimum unless noted otherwise.
2. All wiring and device locations shall conform to NFPA 72 and ADA as applicable.
3. All manual stations should be at 48" above finished floor. All indicating devices shall be mounted at 80" AFF or 6" below ceiling, whichever is lower.

WEST

Revisions:

ELECTRONIC SYSTEMS INTEGRATION LLC
KANSAS CITY, MISSOURI 913-626-0263

6/28/2022

KARIN T. SEIDEL LICENSED 20659 KANSAS PROFESSIONAL ENGINEER

Project: ANYTIME FITNESS
3505 SW MARKET STREET
LEE'S SUMMIT, MO 64082
System: FIRE ALARM

BC ENGINEERS INCORPORATED
5720 Reeder Shawnee, Ks. 66203 (913)262-1772

Scale: 1/8"=1'0"
Date: 6-13-2022
Drawn By: R. Chushuk
Sheet 1 of 1