FIRE-LITE ALARMS by Honeywell

ES-50X Battery Calculation

Secondary Power Source Requirements

	Standby Current (amps)					Secondary Alarm Current (amps)				
Device Type	Qty		Current Draw		Total	Qty		Current Draw		Total
Main Circuit Board	1	x	0.141000	=	0.141000	1	x	0.257000	=	0.257000
IPOTS-COM	1	x	0.040000	=	0.040000	1	x	0.041000	=	0.041000
4XTMF	0	x	0.005000	=		0	x	0.011000	=	
Conventional Detectors	0	x	0.000000	=		0	x	0.000000	=	
EOLR-1	0	x	0.020000	=		0	x	0.020000	=	
ANN-80	2	x	0.015000	=	0.030000	2	x	0.040000	=	0.080000
ANN-80-W	0	x	0.015000	=		0	x	0.040000	=	
ANN-100	0	x	0.020000	=		0	x	0.025000	=	
ANN-LED	0	x	0.028000	=		0	x	0.068000	=	
ANN-RLED	0	x	0.028000	=		0	x	0.068000	=	
ANN-RLY	0	x	0.015000	=		0	x	0.075000	=	
ANN-I/O	0	x	0.035000	=		0	x	0.200000	=	
ANN-I/O LED	0	x	0.000000	=		0	x	0.010000	=	
ANN-S/PG	0	x	0.045000	=		0	x	0.045000	=	
IPDACT-2	0	x	0.093000	=		0	x	0.136000	=	
IPDACT-2UD	0	x	0.098000	=		0	x	0.155000	=	
CELL-MOD	0	x	0.055000	=		0	x	0.100000	=	
CELL-CAB-FL	1	x	0.055000	=	0.055000	1	x	0.100000	=	0.10000
ECC-FFT	0	x	0.120000	=		0	x	0.230000	=	
Addressable Devices										
BEAM355	0	x	0.002000	=						
BEAM355S	0	x	0.002000	=						
CP355	0	x	0.000300	=						
SD355	23	x	0.000300	=	0.006900					
SD355T	0	x	0.000300	=						
SD355R	0	x	0.000300	=						
SD355CO	0	x	0.000300	=						
AD355	0	x	0.000300	=						
H355	3	x	0.000300	=	0.000900					
H355R	0	x	0.000300	=						
H355HT	0	x	0.000300	=						
D350P	0	x	0.000300	=						
D350RP	0	x	0.000300	=						
D350PL	0	x	0.000300	=						
D350RPL	0	x	0.000300	=						
D355PL	3	x	0.000300	=	0.00090					
MMF-300	0	x	0.000400	=						

MMF-300-10	0	x	0.003500	=	
MDF-300	0	x	0.000750	=	
MMF-301	0	x	0.000375	=	
MMF-302	0	x	0.000270	=	
MMF-302-6	0	x	0.002000	=	
BG-12LX	7	x	0.000300	=	0.002100
CMF-300	0	x	0.000390	=	
CMF-300-6	0	x	0.002250	=	
CRF-300	3	x	0.000270	=	0.000810
CRF-300-6	0	x	0.001450	=	
CDRM-300	0	x	0.001300	=	
I300	0	x	0.000400	=	
ISO-6	0	x	0.002700	=	
B501BH-2	0	x	0.001000	=	
B501BHT-2	0	x	0.001000	=	
B224RB	0	x	0.000500	=	
B224BI	0	x	0.000450	=	
SD365	0	x	0.000300	=	
SD365-IV	0	x	0.000300	=	
SD365T	0	x	0.000300	=	
SD365T-IV	0	x	0.000300	=	
SD365R	0	x	0.000300	=	
SD365R-IV	0	x	0.000300	=	
H365	0	x	0.000300	=	
H365-IV	0	x	0.000300	=	
H365R	0	x	0.000300	=	
H365R-IV	0	x	0.000300	=	
H365HT	0	x	0.000300	=	
H365HT-IV	0	x	0.000300	=	
B501	0	x	0.000000	=	
B501-IV	0	x	0.000000	=	
B300-6	0	x	0.000000	=	
B300-6-IV	0	x	0.000000	=	
TR-300	0	x	0.000000	=	
TR-300-IV	0	x	0.000000	=	

	Maximum alarm draw for all Addressable devices ---------->									0.20000
CMF-300 (Aux. Power)	0	x	0.001700	=		0	x	0.007000	=	
CMF-300-6 (Aux. Power)	0	x	0.008000	=		0	x	0.020000	=	
MMF-302 (Aux. Power)	0	x	0.012000	=		0	x	0.090000	=	
MMF-302-6 (Aux. Power)	0	x	0.050000	=		0	x	0.270000	=	
B200SR (Aux. Power)	0	x	0.000500	=		0	x	0.035000	=	
B200SR-LF (Aux. Power)	0	x	0.001000	=		0	x	0.125000	=	
Miscellaneous Device 1	0	x	0.000000	=		0	x	0.000000	=	

Miscellaneous Device 2	0	x	0.000000	=		0	x	0.000000	=	
Miscellaneous Device 3	0	x	0.000000	=		0	x	0.000000	=	
Miscellaneous Device 4	0	x	0.000000	=		0	x	0.000000	=	
Miscellaneous Device 5	0	x	0.000000	=		0	x	0.000000	=	
NAC 1			0.000000	=				1.671000	=	1.671000
NAC 2			0.000000	=				0.000000	=	
Non-Resettable 1			0.000000	=				0.000000	=	
Total Standby Load					**0.277610**	**Total Alarm Load**				**2.349000**

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ES-50X Battery Calculation

Note 1: You are **fully responsible for verifying these calculations**.
Note 2: Use the dropdowns in the **yellow** cells to enter values.

Calculation in Total Sheet

		Required Standby Time in Hours			
		24 Hours			
Total Standby Current	**0.1200 Amps**	x	24	=	2.880 AH
		Required Alarm Time in Minutes			
		5 Minutes			
Total Alarm Load	**2.3490 Amps**	x	0.084	=	0.197 AH
			Total Current Load		**3.077 AH**
	Multiply by the Derating Factor		1.2	=	x 1.20
			Total Ampere Hours Required		**3.69 AH**

Recommended Batteries:	**BAT-1270 - 7AH Batteries**

Battery Check
The batteries can be charged by the ES-50X Charger.
The batteries can be housed in the ES-50X Cabinet.

Current Draw Check
NAC#1 current is within the limitations of the circuit.
NAC#2 current is within the limitations of the circuit.
ES-50X current draw: The required output current is within the panel's limitations

Fire-Lite Alarms by Honeywell

ES-50X Circuit Detail

NAC 1

Device	Qty		Non-Alarm Draw		Total	Qty		Alarm Draw		Total
SCRL @ 15 Candela	9	x	0.000000	=	0.000000	9	x	0.041000	=	0.369000
P4R @ 15/75 Candela	6	x	0.000000	=	0.000000	6	x	0.146000	=	0.876000
PC2RL @ 15 Candela	6	x	0.000000	=	0.000000	6	x	0.071000	=	0.426000
	0	x	0.000000	=		0	x	0.000000	=	
	0	x	0.000000	=		0	x	0.000000	=	
	0	x	0.000000	=		0	x	0.000000	=	
	0	x	0.000000	=		0	x	0.000000	=	
	0	x	0.000000	=		0	x	0.000000	=	
	0	x	0.000000	=		0	x	0.000000	=	
	0	x	0.000000	=		0	x	0.000000	=	
			Total Standby Load		**0.000000**			**Total Alarm Load**		**1.671000**

NAC 2

Device	Qty		Non-Alarm Draw		Total	Qty		Alarm Draw		Total
	0	x	0.000000	=		0	x	0.000000	=	
	0	x	0.000000	=		0	x	0.000000	=	
	0	x	0.000000	=		0	x	0.000000	=	
	0	x	0.000000	=		0	x	0.000000	=	
	0	x	0.000000	=		0	x	0.000000	=	
	0	x	0.000000	=		0	x	0.000000	=	
	0	x	0.000000	=		0	x	0.000000	=	
	0	x	0.000000	=		0	x	0.000000	=	
	0	x	0.000000	=		0	x	0.000000	=	
	0	x	0.000000	=		0	x	0.000000	=	
			Total Standby Load		**0.000000**			**Total Alarm Load**		**0.000000**