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

FIRE-LITE ALARMS by Honeywell

# ES-50X Battery Calculation

**Secondary Power Source Requirements**

| | Standby Current (amps) | | | | | Secondary Alarm Current (amps) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Device** | **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 Communicator | 1 | x | 0.040000 | = | 0.040000 | 1 | x | 0.041000 | = | 0.04100 |
| 4XTMF | 0 | x | 0.005000 | = | | 0 | x | 0.011000 | = | |
| EOLR-1 | 0 | x | 0.020000 | = | | 0 | x | 0.020000 | = | |
| CELL-MOD-FL / CELL-CAB | 0 | x | 0.055000 | = | | 0 | x | 0.100000 | = | |
| **ANN-BUS Devices** | | | | | | | | | | |
| ANN-SEC Card | 0 | x | 0.003000 | = | | 0 | x | 0.003000 | = | |
| ANN-80(-W) | 1 | x | 0.015000 | = | 0.015000 | 1 | x | 0.040000 | = | 0.040000 |
| ANN-100 | 0 | x | 0.020000 | = | | 0 | x | 0.025000 | = | |
| ANN-(R)LED | 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 | = | |
| **Addressable Devices** | | | | | | | | | | |
| BEAM355 | 0 | x | 0.002000 | = | | | | | | |
| BEAM355S | 0 | x | 0.002000 | = | | | | | | |
| CP355 | 0 | x | 0.000300 | = | | | | | | |
| SD355CO | 0 | x | 0.000300 | = | | | | | | |
| SD355 | 0 | x | 0.000300 | = | | | | | | |
| SD365 | 1 | x | 0.000300 | = | 0.000300 | | | | | |
| SD355T | 0 | x | 0.000300 | = | | | | | | |
| SD365T | 0 | x | 0.000300 | = | | | | | | |
| H355 | 0 | x | 0.000300 | = | | | | | | |
| H365 | 0 | x | 0.000300 | = | | | | | | |
| H355HT | 0 | x | 0.000300 | = | | | | | | |
| H365HT | 0 | x | 0.000300 | = | | | | | | |
| H350R | 0 | x | 0.000300 | = | | | | | | |
| H355R | 0 | x | 0.000300 | = | | | | | | |
| H365R | 0 | x | 0.000300 | = | | | | | | |
| D350RPL | 0 | x | 0.000300 | = | | | | | | |
| D355PL | 0 | x | 0.000300 | = | | | | | | |
| MMF-300 | 6 | x | 0.000400 | = | 0.002400 | | | | | |
| 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 | 4 | x | 0.000230 | = | 0.000920 | | | | | |
| CMF-300 | 0 | x | 0.000390 | = | | | | | | |
| CMF-300-6 | 0 | x | 0.002250 | = | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| CRF-300 | 0 | x | 0.000270 | = | | | | | | |
| 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 | = | | | | | | |
| W-GATE | 0 | x | 0.024000 | = | | | | | | |
| Maximum alarm draw for all Addressable devices ----------> | | | | | | | | | | 0.20000 |
| **Resettable Power** | | | | | | | | | | |
| 4-Wire Smoke Detectors | 0 | x | 0.000000 | = | | 0 | x | 0.000000 | = | |
| **SWIFT Wireless** | | | | | | | | | | |
| W-GATE | 0 | x | 0.040000 | = | | 0 | x | 0.040000 | = | |
| **Auxiliary Power** | | | | | | | | | | |
| 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 Devices** | | | | | | | | | | |
| | 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 | = | |
| **Output Circuits** | | | | | | | | | | |
| NAC/Output #1 | | | 0.000000 | = | | | | 0.532000 | = | 0.532000 |
| NAC/Output #2 | | | 0.000000 | = | | | | 0.532000 | = | 0.532000 |
| FCPS (remote Sync) | 0 | x | 0.000000 | = | | 0 | x | 0.021700 | = | |
| **Total Standby Load** | | | | | **0.199620** | **Total Alarm Load** | | | | **1.602000** |

FIRE-LITE ALARMS by Honeywell

# ES-50X Battery Calculation

**Calculation in Total Sheet**

| | | | | | |
|---|---|---|---|---|---|
| | | **Required Standby Time in Hours** | | | |
| | | 24 Hours | | | |
| **Total Standby Current** | **0.1996 Amps** | x | 24 | = | 4.791 AH |
| | | **Required Alarm Time in Minutes** | | | |
| | | 5 Minutes | | | |
| **Total Alarm Load** | **1.6020 Amps** | x | 0.084 | = | 0.135 AH |
| | | | **Total Current Load** | | **4.925 AH** |
| | Multiply by the Derating Factor | | 1.2 | = | x 1.20 |
| | | | **Total Ampere Hours Required** | | **5.91 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:<br>The required output current is within the panel's limitations |

FIRE-LITE ALARMS by Honeywell

## ES-50X Circuit Detail

**NAC/Output #1**

| Device | Qty | | Non-Alarm Draw | | Total | Qty | | Alarm Draw | | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| SCRL | 6 | x | 0.000000 | = | 0.000000 | 6 | x | 0.041000 | = | 0.246000 |
| PC2RL | 2 | x | 0.000000 | = | 0.000000 | 2 | x | 0.143000 | = | 0.286000 |
| | 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** | | | | **0.532000** |

**NAC/Output #2**

| Device | Qty | | Non-Alarm Draw | | Total | Qty | | Alarm Draw | | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| SCRL | 6 | x | 0.000000 | = | 0.000000 | 6 | x | 0.041000 | = | 0.246000 |
| PC2RL | 2 | x | 0.000000 | = | 0.000000 | 2 | x | 0.143000 | = | 0.286000 |
| | 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** | | | | **0.532000** |

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