

		Project			
SAMPLE FACP BATTERY BACKUP CALCULATION		Date			
FACP BATTERY BACKUP CALCULATION					
EQUIPMENT/DEVICES		Current Draw			
		STDBY	ALARM	TTL STDBY	TTL ALARM
PANEL COMPONENTS	QTY	Amps	Amps	Amps	Amps
3-CPU-3 (Central Processor Unit)	1	0.145000	0.155000	0.145000	0.155000
3-LCD (User Display - FACP)	1	0.053000	0.053000	0.053000	0.053000
3-MODCOM(P) DACT CARD	1	0.060000	0.090000	0.060000	0.090000
3-Control/LED Display (24 LED's)	1	0.002000	0.015000	0.002000	0.360000
3-RS485	1	0.055000	0.055000	0.055000	0.055000
3-ASU/FT	1	0.236000	0.210000	0.236000	0.210000
SLC'S/DATA LOOP CARDS					
3-SSDC	1	0.158000	0.177000	0.158000	0.177000
3-SDDC	1	0.242000	0.261000	0.242000	0.261000
AMPLIFIERS					
3-ZA90 90 WATT AMPLIFIER	2	0.035000	5.300000	0.070000	10.600000
REMOTE ANNUNCIATORS					
3-ANNCPU1	1	0.120000	0.140000	0.120000	0.140000
DETECTORS/MODULES					
SIGA2-PS Photoelectric Smoke Detector	42	0.000045	0.000045	0.001890	0.001890
SIGA2-HRS Rate of Rise Heat Detector	10	0.000045	0.000045	0.000450	0.000450
Signature Series Manual Fire Alarm Stations	7	0.000250	0.000400	0.001750	0.002800
SIGA-CT1 Single Input Supervisory Module	2	0.000250	0.000400	0.000500	0.000800
NOTIFICATION APPLIANCES					
WALL STROBE (15cd)	10	0.000000	0.059000	0.000000	0.590000
WALL STROBE (30cd)	3	0.000000	0.082000	0.000000	0.246000
WALL STROBE (110cd)	2	0.000000	0.191000	0.000000	0.382000
CEILING STROBE (75cd)	2	0.000000	0.168000	0.000000	0.336000
CEILING STROBE (95cd)	1	0.000000	0.194000	0.000000	0.194000
WALL SPEAKER/STROBE (15cd)	7	0.000000	0.065000	0.000000	0.455000
WALL SPEAKER/STROBE (30cd)	2	0.000000	0.086000	0.000000	0.172000
CEILING SPEAKER/STROBE (95cd)	7	0.000000	0.194000	0.000000	1.358000
RE-ENTRANT SPEAKER/STROBE (15/75cd)	1	0.000000	0.090000	0.000000	0.090000
Electromagnetic Door Holder	5	0.000000	0.015000	0.000000	0.075000
TOTAL CURRENT DRAW		A	1.145590	14.481940	
NUMBER OF STANDBY HOURS		B	24		
STANDBY CURRENT REQUIRED = A (STDBY) X B		C	27.494	AH	
ALARM SOUNDING PERIOD IN HOURS		D			0.250
ALARM CURRENT REQUIRED = A (ALARM) X E		E			3.620
TOTAL CURRENT REQUIRED = C + E		F	31.115	AH	
FACTOR OF SAFETY		G	20%		
MIN AMP HOUR BATTERIES REQUIRED = F X 1.2		H	37.338	AH	
AMP HOUR BATTERIES PROVIDED		I	38	AH	

Format shown is a sample format the contractor may format calculations as they like as long as the following information is clearly indicated in the calculation:

SEE SHADED ITEMS ABOVE FOR EXAMPLES OF EACH NUMBERED ITEM BELOW

1. Clearly indicate the panel the calculation is for.
2. Clearly indicate units for calculations.
3. Breakdown of panel parts and system devices by type, part number and quantities of each.
4. Clearly indicate individual and total currents for standby & alarm conditions for each component or system device.
5. Clearly indicate totals panel load for standby and alarm conditions.
6. Clearly indicate required time for standby and alarm in HOURS.
7. Clearly indicate Factor of Safety Value used.
8. Clearly indicate the minimum required battery backup in Amp Hours (AH)
9. Clearly indicate the amount of battery backup provided or existing in Amp Hours (AH)
10. Clearly show the progression of the calculation.

Note:

Manufacturers calculations are acceptable but they must contain the minimum information listed above.