

# MS-9200UDLS Battery Calculation

Note 1: You can edit all current draws and are fully responsible for verifying these calculations.

Note 2: You only need to make entries in the yellow cells

## Regulated Load in Standby

Device Type	Number of Devices		Current (Amps)		Total Current (Amps)
Main Circuit Board	1	x	0.255000	=	0.255000
IPDACT	0	x	0.100000	=	
ACM-8RF	0	x	0.030000	=	
ACM-16ATF	0	x	0.040000	=	
ACM-32AF	0	x	0.040000	=	
AEM-16ATF	0	x	0.002000	=	
AEM-32AF	0	x	0.002000	=	
AFM-16ATF	0	x	0.040000	=	
AFM-32AF	0	x	0.040000	=	
AFM-16AF	0	x	0.025000	=	
UDACT-F	0	x	0.040000	=	
LDM-32F	0	x	0.040000	=	
LDM-E32F	0	x	0.002000	=	
LCD-80F	0	x	0.025000	=	
4XTMF	0	x	0.005000	=	
4-Wire Smoke Detectors	0	x	0.000000	=	
Power Supervision Relays	0	x	0.025000	=	
<b>Addressable Devices</b>					
BEAM355 and BEAM355S	0	x	0.002000	=	
BEAM 1224	0	x	0.017000	=	
CP355	0	x	0.000300	=	
SD355	0	x	0.000300	=	
SD355T	0	x	0.000300	=	
AD355	0	x	0.000300	=	
H355	0	x	0.000300	=	
H355R	0	x	0.000300	=	
H355HT	0	x	0.000300	=	
D350P	0	x	0.000300	=	
D350RP	0	x	0.000300	=	
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	0	x	0.000230	=	
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	=	
I300	0	x	0.000400	=	
B501BH & B501BHT (see note 3)	0	x	0.001000	=	
B224RB Relay Base	0	x	0.000500	=	
B224BI Isolator Base	0	x	0.000450	=	
Current Draw from TB3 (nonalarm)			0.000000		
<b>Total Standby Load</b>					<b>0.255000</b>

Notes:

- 1) Refer to the Device Compatibility Document for standby current
- 2) Must use compatible listed Power Supervision Relay
- 3) Maximum alarm current for each sounder base is 0.015 amps which must be supplied by aux. 24VDC source.
- 4) Current limitations of TB3 and TB4 circuits is 2.5 amps per NAC output and 0.5 amps per aux. power output
- 5) Total current draw listed cannot exceed 6.0 amps

# MS-9200UDLS Battery Calculation

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## Regulated Load in ALARM

Device Type	Number of Devices		Current (Amps)	=	Total Current (Amps)
Main Circuit Board	1	x	0.325000	=	0.325000
IPDACT	0	x	0.300000	=	
ACM-8RF	0	x	0.158000	=	
ACM-16ATF	0	x	0.056000	=	
ACM-32AF	0	x	0.056000	=	
AEM-16ATF	0	x	0.018000	=	
AEM-32AF	0	x	0.018000	=	
AFM-16ATF	0	x	0.056000	=	
AFM-32AF	0	x	0.056000	=	
AFM-16AF	0	x	0.065000	=	
UDACT-F	0	x	0.075000	=	
LDM-32F	0	x	0.056000	=	
LDM-E32F	0	x	0.018000	=	
LCD-80F	0	x	0.064000	=	
4XTMF	0	x	0.011000	=	
4-Wire Smoke Detectors	0	x	0.000000	=	
Power Supervision Relays	0	x	0.000000	=	
ALL Addressable Devices - Maximum draw	1	x	0.400000	=	0.400000
NAC #1	0	x	0.000000	=	
NAC #2	0	x	0.000000	=	
NAC #3	0	x	0.000000	=	
NAC #4	0	x	0.000000	=	
Current Draw from TB3 (nonalarm)			0.000000	=	
<b>Total Alarm Load</b>					<b>0.725000</b>

**Notes:**

- 1) Current limitations for NAC circuits TB3 & TB 4 is 2.5 amps per circuit
- 2) ACM 8RF current based on all eight relays activated on a single module
- 3) Annunciator current based on all LED's lit
- 4) LDM-32F current with all LED's on
- 5) MMF 302 current limited to 90mA in alarm
- 6) Total alarm current cannot exceed 6.0 amps

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### Calculation in Total Sheet

Use the total standby and alarm load currents calculated in tables A-2A and A-2B for the following battery calculations

				<b>Required Standby Time in Hours</b>	
				(24 or 60 Hrs.)	
<b>Standby Load Current (Amps)</b>	0.255000	x	24	=	6.120 AH
				<b>Required Alarm Time in Hours</b>	
				(5 minutes = 0.084)	
<b>Alarm Load Current (Amps)</b>	0.725000	x	0.084	=	0.061 AH
<b>Total Current Load</b>					<b>6.181 AH</b>
			Multiply by the Derating Factor	1.2	=
<b>Total Ampere Hours Required</b>					<b>7.417 AH</b>

#### Battery Check

The MS 9200UDLS can charge this size battery

The batteries can be stored in the cabinet

#### Current Draw Check

NAC#1 current is within the limitations of the circuit.

NAC#2 current is within the limitations of the circuit.

NAC#3 current is within the limitations of the circuit.

NAC#4 current is within the limitations of the circuit.

MS 9200UDLS **without XRM-24** transformer

The required output current is within the panel's limitations

MS 9200UDLS **with XRM-24** transformer

The required output current is within the panel's limitations