

MS-9200 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	0.080000	=	0.080000
IPDACT	0	x	0.100000	=	
RTM-8F (1 max.)	0	x	0.009000	=	
ACM-8RF	0	x	0.030000	=	
ACM-16ATF	0	x	0.040000	=	
ACM-32AF (1 max.)	0	x	0.040000	=	
AEM-16ATF	0	x	0.002000	=	
AEM-32AF (1 max.)	0	x	0.002000	=	
AFM-16ATF	0	x	0.040000	=	
AFM-32AF (1 max.)	0	x	0.040000	=	
AFM-16AF	0	x	0.025000	=	
411UD (1 max)	0	x	0.100000	=	
UDACT-F	0	x	0.040000	=	
LDM-32F	0	x	0.040000	=	
LDM-E32F	0	x	0.002000	=	
LCD-40	0	x	0.064000	=	
4-Wire Smoke Detectors	0	x	0.000000	=	
Power Supervision Relays	0	x	0.025000	=	
Addressable Devices					
BEAM355 and BEAM355S	0	x	0.002000	=	
BEAM 1224	0	x	0.017000	=	
CP-355	0	x	0.000300	=	
SD355	0	x	0.000300	=	
SD355T	0	x	0.000300	=	
D350P	0	x	0.000300	=	
D350RP	0	x	0.000300	=	
MMF-300	0	x	0.000400	=	
MDF-300	0	x	0.000400	=	
MMF-301	0	x	0.000375	=	
MMF-302	0	x	0.000270	=	
BG-12LX	0	x	0.000200	=	
CMF-300	0	x	0.000390	=	
CRF-300	0	x	0.000270	=	
B501BH & B501BHT	0	x	0.001000	=	
B224RB Relay Base	0	x	0.000500	=	
B224BI Isolator Base	0	x	0.000450	=	
CP300	0	x	0.000150	=	
SD300	0	x	0.000150	=	
SD300T	0	x	0.000200	=	
M300	0	x	0.000200	=	
M301	0	x	0.000200	=	
M302	0	x	0.007000	=	
BG-10LX	0	x	0.000200	=	
C304	0	x	0.000200	=	
I300	0	x	0.000400	=	
Total Standby Load					0.080000

Notes:

1. TB4, terminals 1&2; nonregulated 24VDC, 2.5 amps
2. TB4 terminals 3&4; filtered 24VDC +/-5% 120Hz ripple@10mVrms
3. TB4 terminals 5&6; filtered 24VDC +/-5% 120Hz ripple@10mVrms
4. TB4 terminals 3&4; nonresettable auxiliary power, 300mA
5. TB4 terminals 5&6 resettable smoke detector power 300mA

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Regulated Load in ALARM

Device Type	Number of Devices		Current (Amps)	=	Total Current (Amps)
Main Circuit Board	1	x	0.168000	=	0.168000
IPDACT	0	x	0.300000	=	
RTM-8F (1 max.)	0	x	0.146000	=	
ACM-8RF	0	x	0.158000	=	
ACM-16ATF	0	x	0.056000	=	
ACM-32AF (1 max.)	0	x	0.056000	=	
AEM-16ATF	0	x	0.018000	=	
AEM-32AF (1 max.)	0	x	0.018000	=	
AFM-16ATF	0	x	0.056000	=	
AFM-32AF (1 max.)	0	x	0.056000	=	
AFM-16AF	0	x	0.065000	=	
411UD (1 max.)	0	x	0.170000	=	
UDACT-F	0	x	0.075000	=	
LDM-32F	0	x	0.056000	=	
LDM-E32F	0	x	0.018000	=	
LCD-40	0	x	0.066000	=	
4-Wire Smoke Detectors	0	x	0.000000	=	
Power Supervision Relays	0	x	0.000000	=	
Addressable Devices - Maximum draw	1	x	0.200000	=	0.200000
Notification Appliances	0	x	0.000000	=	
Total Alarm Load					0.368000

Notes:

1. Current limitations for NAC circuits TB1 & TB 2 is 2.5 amps per circuit
2. RTM 8F current draw based on all relays activating
3. ACM 8RF current based on all relays activating
4. Annunciator current based on all LEDs lit
5. UDACT-F current based on unit actively making a phone call to Central Station. If the normally open contact is used, current consumption increases to 100mA
6. LDM-32F current with all LEDs on
7. MMF 302 current limited to 90mA in alarm
8. Total alarm current cannot exceed 6.6 amps

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Calculation in Total Sheet

Includes total currents draws from the Standby and Alarm Load Current tables.

			Required Standby Time in Hours		
			(24 or 60 Hrs.)		
Standby Load Current (Amps)	0.080000	x	24	=	1.920 AH
			Required Alarm Time in Hours		
			(5 minutes = 0.084)		
Alarm Load Current (Amps)	0.368000	x	0.084	=	0.031 AH
Total Current Load					1.951 AH
Multiply by the Derating Factor			1.2	=	x 1.20
Total Ampere Hours Required					2.341 AH

Battery Check

The MS 9200 can charge this size battery

The batteries can be stored in the cabinet

Current Draw Check

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

The required output current is within the panel's limitations.

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

The required output current is within the panel's limitations.