

MS-9050UD 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	0.120000	=	0.120000
4XTMF	0	x	0.005000	=	
4-Wire Smoke Detectors ¹	0	x	0.000000	=	
Power Supervision Relays ²	0	x	0.025000	=	
ANN-80	0	x	0.015000	=	
ANN-I/O	0	x	0.035000	=	
ANN-I/O LEDs	0	x	0.000000	=	
ANN-S/PG	0	x	0.045000	=	
ANN-RLY	0	x	0.015000	=	
Addressable Devices					
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 ³	0	x	0.001000	=	
B224RB Relay Base	0	x	0.000500	=	
B224BI Isolator Base	0	x	0.000450	=	
Current Draw from TB3 - EIA-485			0.000000		
⁴ Total Standby Load					0.120000

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) Total current draw listed cannot exceed 2.7 amps

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Regulated Load in ALARM

Device Type	Number of Devices		Current (Amps)		Total Current (Amps)
Main Circuit Board	1	x	0.200000	=	0.200000
4XTMF ¹	0	x	0.011000	=	
4-Wire Smoke Detectors	0	x	0.000000	=	
Power Supervision Relays	0	x	0.000000	=	
ANN-80	0	x	0.040000	=	
ANN-I/O	0	x	0.200000	=	
ANN-I/O LEDs	0	x	0.010000	=	
ANN-S/PG	0	x	0.045000	=	
ANN-RLY	0	x	0.075000	=	
ALL Addressable Devices - Maximum draw	1	x	0.400000	=	0.400000
NAC #1 ²	0	x	0.000000	=	
NAC #2	0	x	0.000000	=	
Current Draw from TB3 - EIA-485	0		0.000000	=	
³ Total Alarm Load					0.600000

Notes:

- 1) If using the Reverse Polarity Alarm output, add 0.005 amps; if using the Reverse Polarity Trouble output, add another 0.005 amps.
- 2) Current limitations for NAC circuits TB1 is 2.5 amps per circuit
- 3) Total alarm current cannot exceed 2.7 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

				Required Standby Time in Hours	
				(24 or 60 Hrs.)	
Standby Load Current (Amps)	0.120000	x	24	=	2.880 AH
				Required Alarm Time in Hours	
				(5 minutes = 0.084)	
Alarm Load Current (Amps)	0.600000	x	0.084	=	0.050 AH
Total Current Load					2.930 AH
			Multiply by the Derating Factor	1.2	=
Total Ampere Hours Required					3.516 AH

Battery Check

The MS-9050UD 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.

MS-9050UD current draw:

The required output current is within the panel's limitations