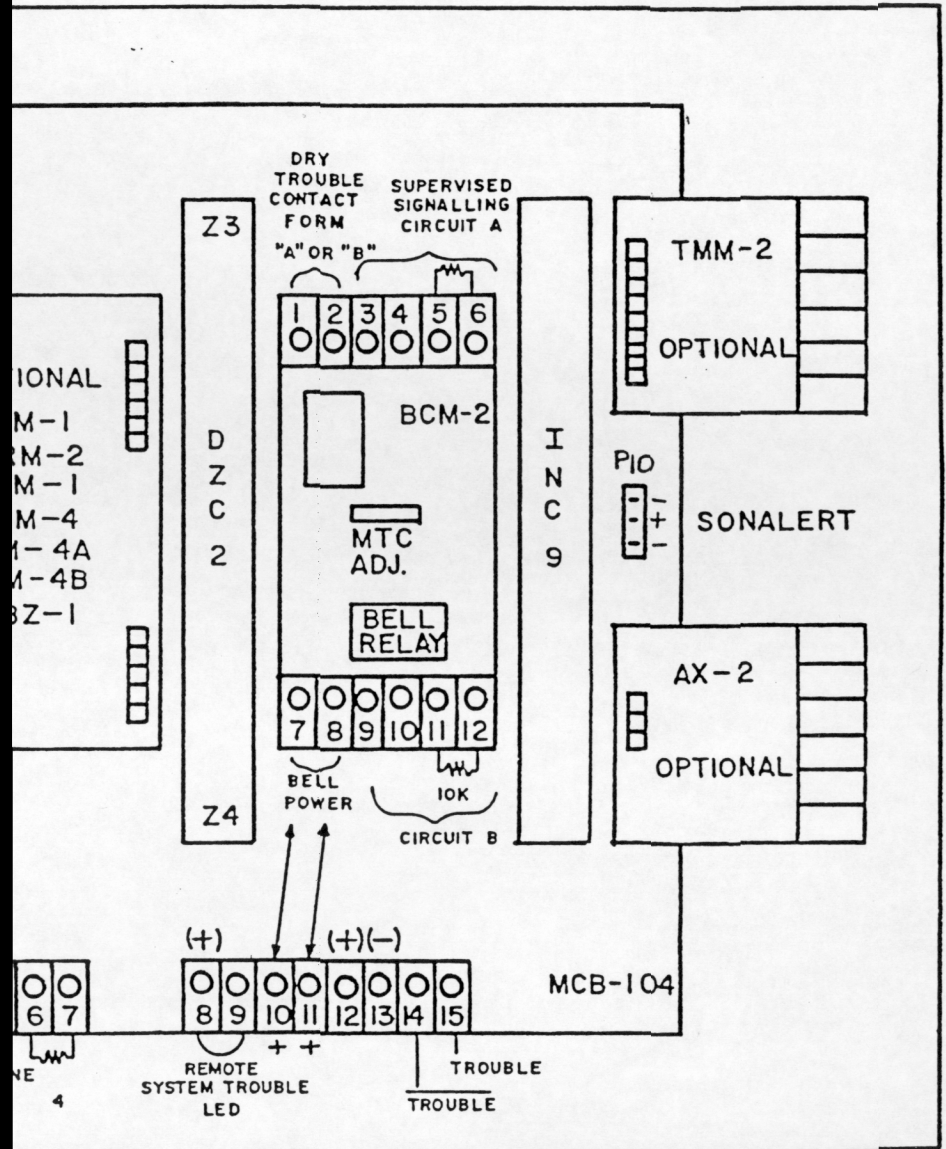
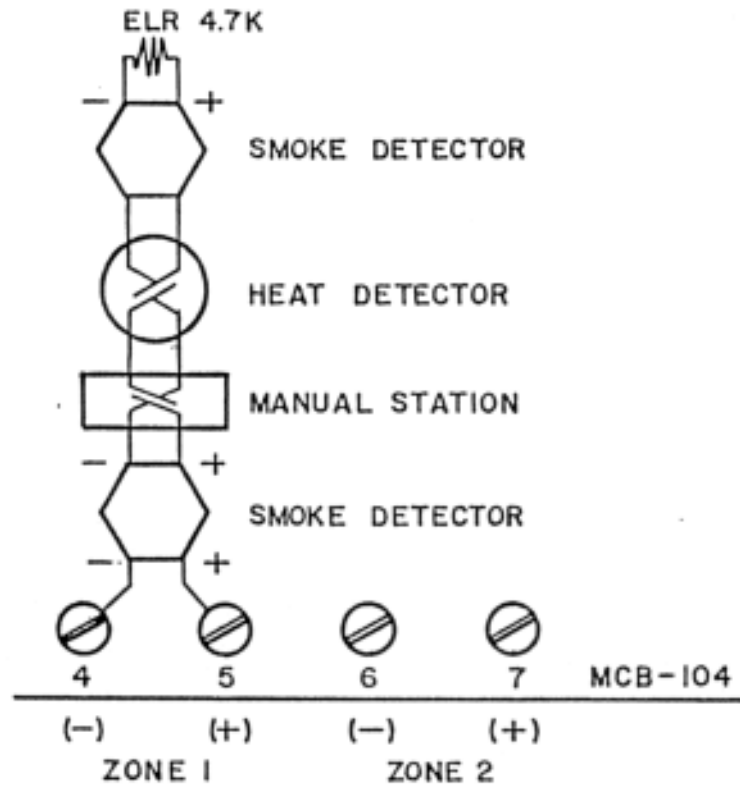


T LAYOUT



Initiating Device Connection (Typical)

Figure 3: Supervised Class B Operation

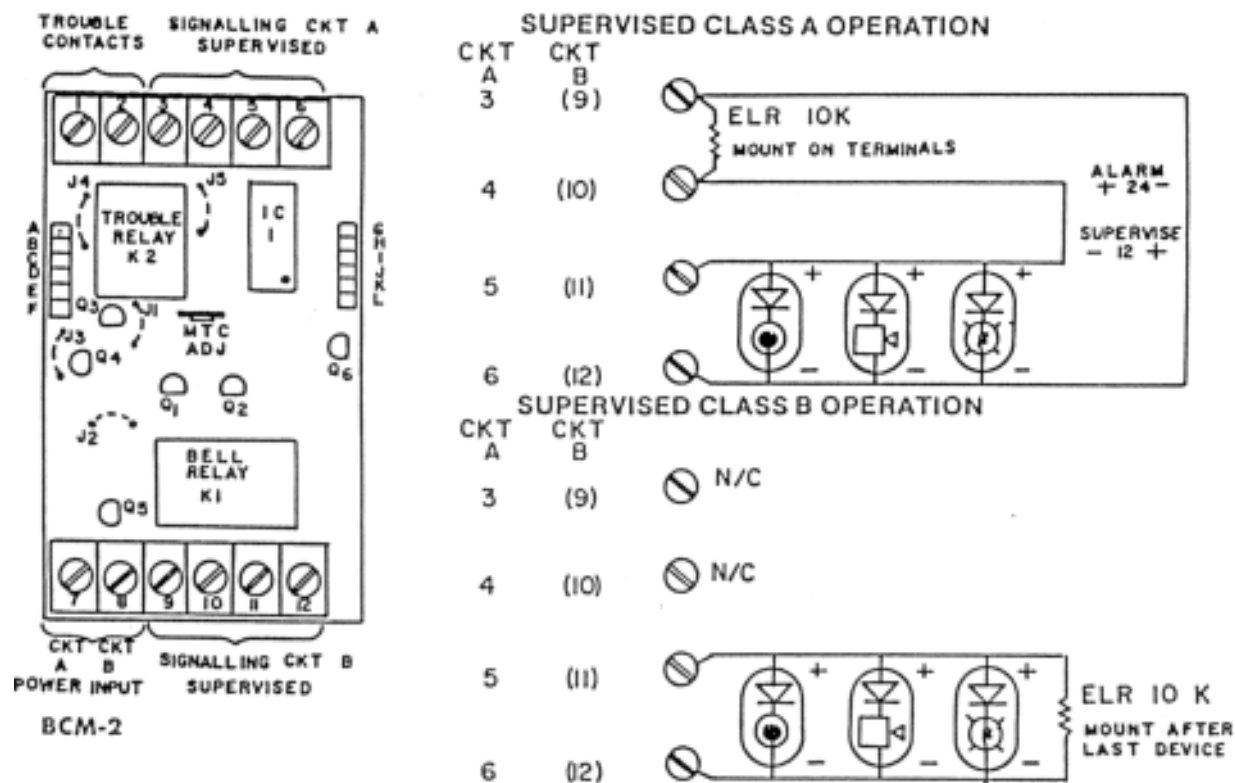


Notes:

- 1) Detection loop specifications
 - Operation: Class B
 - Voltage standby: 23VDC
 - Alarm current: 15mA
 - Short circuit current: 35mA±10mA
 - Supervision current: 5mA
 - End-of-line resistor: 4.7k, 5%
 - Maximum loop resistance: 200 ohms
 - Maximum detector current: 2.0mA/Zone
- 2) Smoke and ionization detectors requiring separate 24VDC can be powered from MCB-104 terminals 12 (+) & 13 (-). Use end-of-line relay (SDLR-B) to supervise power circuit wiring.
- 3) Detector loop current is sufficient to ensure operation of one detector per zone.
- 4) Compatible, U.L. listed, 2-wire detectors available from Fire-Lite.
- 5) Initiating devices include: Manual stations, heat detectors, smoke detectors, ionization detectors, waterflow alarm devices, coded manual stations.
- 6) Use mechanical water motor gong if waterflow alarm devices are connected to the zone.
- 7) Inhibit latching circuit by removing diode marked with a * from DZC-2 card if coded manual stations are connected.
- 8) Compatible, U.L. listed, 2-wire detector available from Fire-Lite, include the following series: CP101, CP204, CP311, CP711, CP751, SD12T and SD32T.

BCM-2 Bell Circuit

Figure 5



Notes:

- 1) Modes of operation
 - a) For non-disconnectable bells, remove jumper J3 but leave jumper J2.
 - b) For disconnectable bells remove jumper J2 but leave jumper J3.
 - c) For MTC bell signal, remove jumper J1.
 - d) Select normally open or normally closed trouble contact by removing J4 or J5 respectively. Trouble contact is provided at Terminals 1 and 2. It is rated 2 amps, 28 VDC.
- 2) a) Connect signalling circuit as shown.
 - b) Size wire for a maximum voltage drop of 2 VDC.
 - c) Use polarized, U.L. listed, signalling devices with a minimum rated voltage range of 18 to 30 VDC.
- 3) For bell power, connect terminal 7 (positive input CKT A), terminal 8 (positive input CKT B) of BCM-2 to terminal 10 & 11 of MCB-104 respectively. Maximum bell load is 1.1 amps per CKT.

Device	Number of Devices	Current per Device (amperes)	Total Device Current (amperes)
MCB-104, PSB-24, BCM-2, INC-9, DZC-2 (both zones are in alarm)		0.168	=
OR		or	=
MCB-104, PSB-24, BCM-2, INC-9, two DZC-2s (all four zones are in alarm)		0.290	=
ZRM-1*		0.010	=
ZRM-2*		0.070	=
CZM-1*		0.090	=
TMM-2 in alarm		0.0135	=
AX-2 in alarm		0.035	=
Two wire detector head - standby current (SD-12, SD-32, CP-700 Series)		0.0001	=
Four wire detector head (SD14BW, standby)		0.00015	=
Four wire detector head (SD34-24VDC)		0.025	=
End of line relay		0.025	=
ZRM-4, RM-4A, RM-4B		0.014	=
Alarm current load on regulator (add last column)			

Alarm current should not exceed 0.75 amp.
Rectified, unfiltered, unregulated bell power = 2.2 amps total.

* Remove both jumpers in DZC-2 card(s) if optional module(s) employed.

Part 2: Standby Battery Requirements

Device	Number of Devices	Current per Device (amperes)	Total Device Current (amperes)
MCB-104, PSB-24, INC-9, BCM-2, DZC-2 (Note: AC power off, visual & audible trouble signal)		0.059	=
or			or
MCB-104, PSB-24, INC-9, BCM-2, two DZC-2 (Note: AC power off, visual & audible trouble signal)		0.070	=
ZRM-1*			0.000
ZRM-2*			0.000
CZM-1*		0.025	=
TMM-2 (Remove diode "DT" if TMM-2 employed)		0.0026	=
AX-2 (Remove resistor "RAX" if AX-2 employed)			
Two-wire detector heads (maximum allowable detector current is 0.002 amp (2 mA) per zone. SD-12, SD-32, CP-700 series)		0.0001	=
Four wire detector head (SD14 BW)		0.00015	=
Four wire detector head (SD34 24 VDC)		0.005	=
End of line relay (SDLR-B)		0.025	=
RZA-4 (for Sonalert)			0.0075
Remote trouble signalling device			
ZRM-4, RM-4A, RM-4B			0.000
Battery standby current (add last column)			

* Remove both jumpers in DZC-2 card(s) if optional module(s) employed.

Part 3: Calculate Ampere-Hour

Battery standby current (line 16 of Part 2)		
Standby time in hours (generally 24 or 60 hours)*		
Multiply line 1 by line 2		
Alarm load in amperes	3.0 amps (max)	
Alarm time in hours (generally 5 minutes = 0.084 hour)		
Alarm ampere hours, multiply line 4 by line 5		
Total ampere hours, add line 3 and 6		

* NFPA 72A, 72D, 74 required 24 hours standby. NFPA 72B and 72C required 60 hours standby.

Select battery from Part 4 with amp-hour rating larger than line 7 of part 3.

Part 4: Battery Selection

Ampere-Hour Rating	Battery
5	Two (2) Gates 630
6	Two (2) Yuasa (NP6-12)
6	Four (4) Globe (GC-660)
8	Four (4) Eagle Picher (GC-680)
9	Four (4) Globe Union (GC-690)

Do not use 24VDC regulated supply for inductive loads.