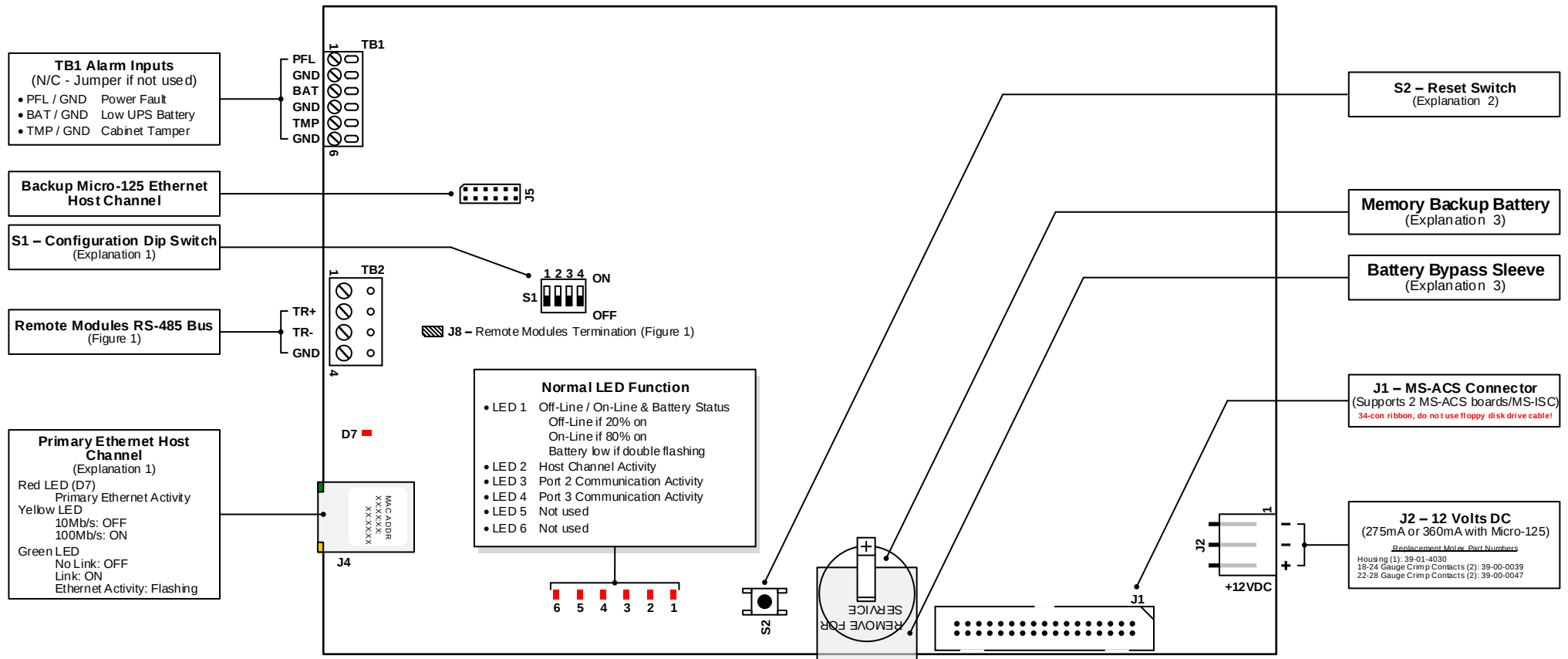


iSTAR Hardware Quick Reference

Table Of Contents

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MS-I8S	7
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**Mechanical Specifications**

- Dimensions: 8.58" (218.01mm) W x 5.83" (148.01mm) L
- Temperature: -55°C to +85°C, storage
0°C to +50°C, operating
- Humidity: 5% to 95% RHNC

Configuring Primary 10/100 Ethernet Host Channel For DHCP Enabled Networks

- Set all S1 - Configuration DIP Switch DIPs OFF
- Apply power to the MS-ICS
- Make note of the MAC address located on the side of the RJ45 jack
- Run Access It! Universal
- Create a new Channel
 - Channel Enabled: **X**
 - Protocol Type: **SCP**
 - Channel Type: **IP Server**
- Create a new SCP
 - General Tab
 - Model: **MS-ICS**
 - Device Installed: **X**
 - SCP Time Zone: **<Set accordingly>**
 - Initialization String: **<Leave blank>**
 - Address: **0**
 - SIO Port Speed
 - Port 1: **38400**
 - Port 2: **38400**
 - Comm Tab
 - Channel: **<Set to the newly created channel>**
 - TCP/IP Settings
 - IP Address: **<MACxxxxxx>**
 - If the MAC address from step 3 was 00-0F-E5-00-03-4B then the IP Address field must be entered as the Host Name of MAC00FE500034B.
 - Port Number: **3001**
 - Encryption Settings: **None**

NOTE: If unable to resolve the Host Name to an IP Address, contact your local network administrator.

Configuring Primary 10/100 Ethernet Host Channel For A Static IP Address

- Set S1 - Configuration DIP Switch DIP 2 ON
- Set S1 - Configuration DIP Switch DIPs 1, 3 & 4 OFF
- Apply power to the MS-ICS
- Manually configure a computer to 192.168.0.100
- Using a crossover cable, connect computer to MS-ICS
- Open a web browser and go to 192.168.0.251
- Set S1 - Configuration DIP Switch DIP 1 ON
- Click on **'Click Here to Login'**
- Click on **'Continue to this website (not recommended).'**
- Enter a Username of **admin**
- Enter a Password of **password**
- Click **'Network'** from the left hand menu
- Select **'Use Static IP configuration:'**
 - IP Address: **<Set accordingly>**
 - Subnet Mask: **<Set accordingly>**
 - Default Gateway: **<Set accordingly>**
- Click **'OK'**
- Click **'Apply Setting'** from the left hand menu
- Click **'Apply, Reboot'** button
- Wait 60 seconds for MS-ICS to reboot
- Remove power from the MS-ICS
- Set all S1 - Configuration DIP Switch DIPs OFF
- Remove crossover cable and connect to network
- Apply power to the MS-ICS
- Run Access It! Universal
- Create a new Channel
 - Channel Enabled: **X**
 - Protocol Type: **SCP**
 - Channel Type: **IP Server**
- Create a new SCP
 - General Tab
 - Model: **MS-ICS**
 - Device Installed: **X**
 - SCP Time Zone: **<Set accordingly>**
 - Initialization String: **<Leave blank>**
 - Address: **0**
 - SIO Port Speed
 - Port 1: **38400**
 - Port 2: **38400**
 - Comm Tab
 - Channel: **<Set to the newly created channel>**
 - TCP/IP Settings
 - IP Address: **<Set accordingly>**
 - Port Number: **3001**
 - Encryption Settings: **None**

Explanation 2: S2 – Reset Switch

Pressing the S2 - Reset Switch will cause the MS-ICS to reset.
This process will NOT erase the system configuration and cardholder databases.

Explanation 3: Memory Backup Battery

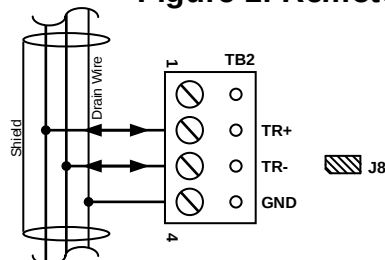
If the MS-ICS should experience a complete power loss, the 3 volt lithium memory backup battery provides power to the onboard memory which contains the card file, activity transactions and system configuration data. The MS-ICS will retain all database information during a power failure for up to 60 days. For optimum reliability, the memory backup battery should be replaced yearly using only a type BR2325, BR2330, or CR2330 lithium battery or equivalent.

NOTE: When setting up or servicing the MS-ICS, it is recommended to leave the battery bypass sleeve in place until all system testing is completed. By keeping the battery bypass sleeve in between the battery and the '+' post, you can be certain that the memory is being completely flushed during power cycles. Upon completion, be certain to remove the battery bypass sleeve and store it within the enclosure for future use.

Bulk Erasing The System Configuration And Cardholder Databases

- Set S1 - Configuration DIP Switch DIPs 1 & 2 ON
- Set S1 - Configuration DIP Switch DIPs 3 & 4 OFF
- Apply power to the MS-ICS
 - LEDs 1 & 2 and LEDs 3 & 4 flash alternately at a .5 second rate
- Within 10 seconds, switch S1 - Configuration DIP Switch DIP 1 OFF
 - LED 2 flashes at a 2 second rate as memory is being erased
 - WARNING! DO NOT CYCLE POWER**
 - Erasing memory takes approximately 60 seconds to complete.
 - LEDs 1 & 4 flash for 10 seconds after the memory has been erased, then the MS-ICS reboots
- The MS-ICS is now ready to be configured as needed

Figure 1: Remote Modules RS-485 Bus Termination



The MS-ICS has one 2 wire remote module RS-485 bus. This bus may NOT be used to connect additional MS-I8S or MSR8S SIOs to the MS-ICS.
The bus needs to be terminated at both the beginning and ending points.
J8 is the termination jumper for the Remote Module RS-485 Bus.

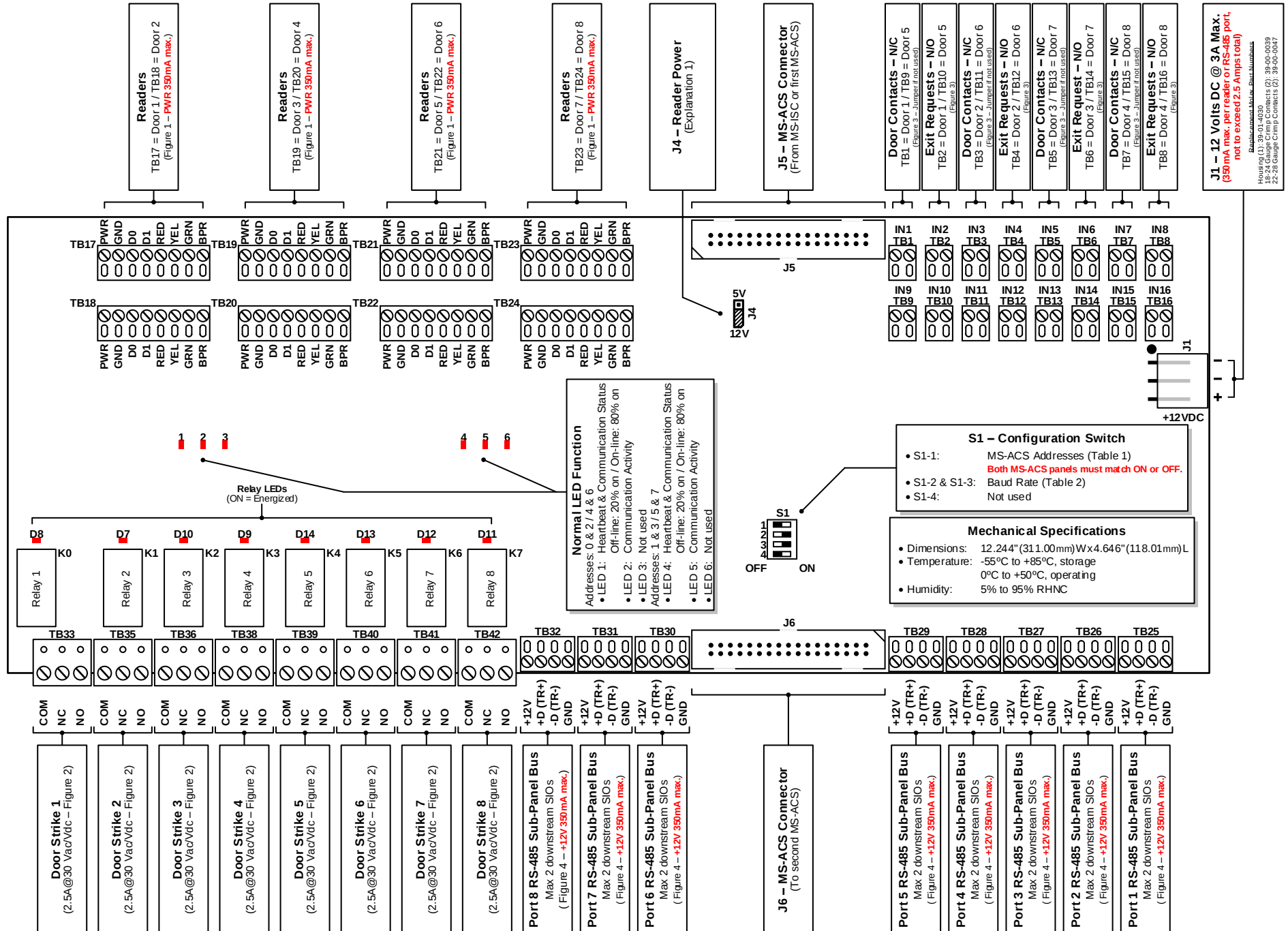


Table 1: MS-ACS Addresses

S1-1	MS-ACS #	Addresses
OFF	1 of 2	0 & 1
OFF	2 of 2	2 & 3
ON	1 of 2	4 & 5
ON	2 of 2	6 & 7

Should the first MS-ACS be configured with S1-1 to the OFF position, then the second MS-ACS must be configured with S1-1 to the OFF position as well.

Table 2: Baud Rate

S1-2	S1-3	Baud Rate
ON*	ON*	38,400 bps
OFF	ON	19,200 bps
ON	OFF	9,600 bps
OFF	OFF	115,200 bps

*Access It! Universal.NET default value.

Explanation 1: J4 – Reader Power

Power to the reader ports is selectable: 5Vdc or 12Vdc.

350mA max. per reader port, not to exceed 2.5 Amps total per MS-ACS panel.

Figure 1 – Reader Port Wiring

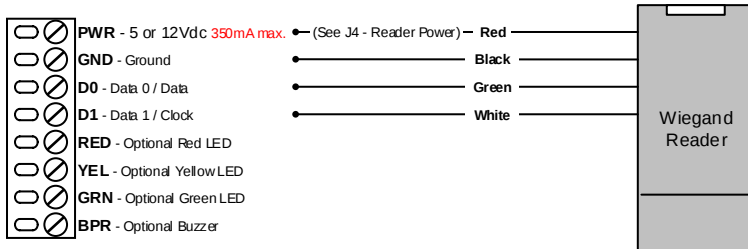
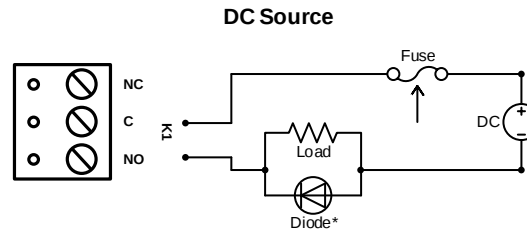


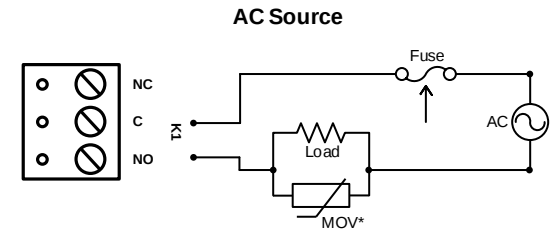
Figure 2: Output Wiring Configurations

Depending on your power source, use one of the two methods of transient clamping shown below to protect the relay contacts and to reduce electromagnetic interference (EMI emissions). Always protect against accidental overloads by wiring in an inline fuse to the C (common) side of the relay as shown below.



*Diode Selection – Inductive Load

Diode Current Rating > 1x Strike Current
Diode Break Down Voltage: 4x Strike Voltage
12Vdc or 24Vdc Strike, Diode 1N4002 (100V / 1A) Typical



*MOV Selection – Inductive Load

Clamp Voltage > 1.5x Vac RMS
24Vac Strike, Panasonic ERZ-C07DK470 Typical

Figure 3: Input Wiring Configurations

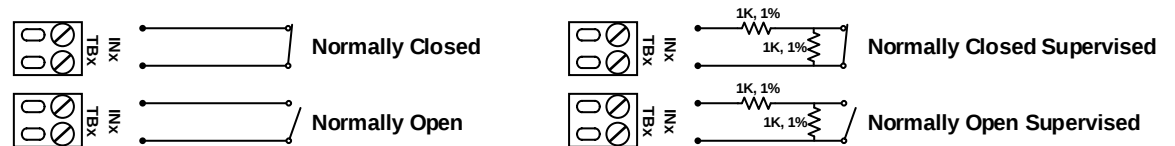
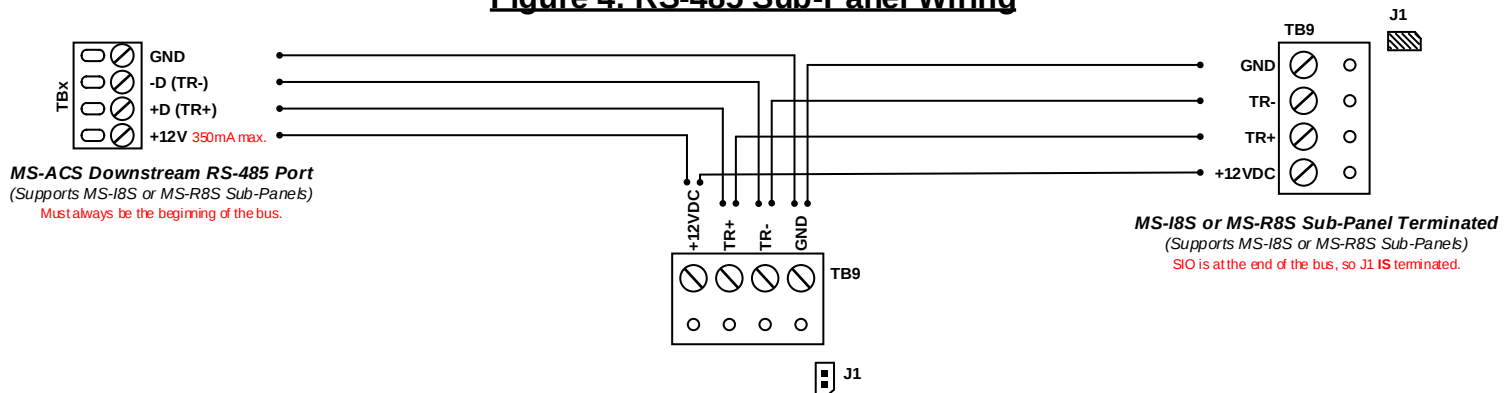
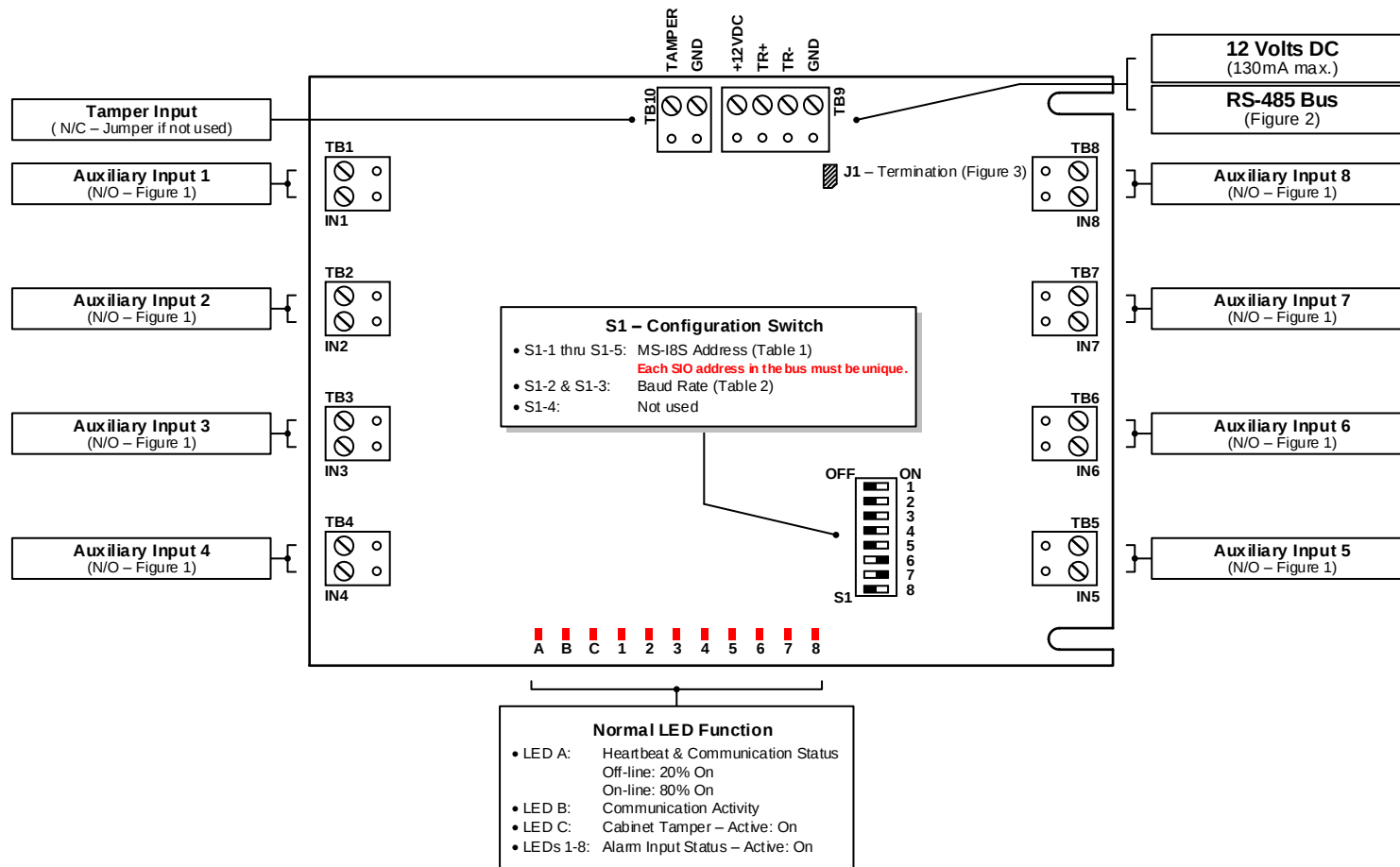


Figure 4: RS-485 Sub-Panel Wiring



**Mechanical Specifications**

- Dimensions: 5.91" (150.01mm) W x 4.33" (109.98mm) L
- Temperature: -55°C to +85°C, storage
0°C to +50°C, operating
- Humidity: 5% to 95% RHNC

Table 1: MS-I8S Addresses

Address	S1-1	S1-2	S1-3	S1-4	S1-5
0	OFF	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF
5	ON	OFF	ON	OFF	OFF
6	OFF	ON	ON	OFF	OFF
7	ON	ON	ON	OFF	OFF
8	OFF	OFF	OFF	ON	OFF
9	ON	OFF	OFF	ON	OFF
10	OFF	ON	OFF	ON	OFF
11	ON	ON	OFF	ON	OFF
12	OFF	OFF	ON	ON	OFF
13	ON	OFF	ON	ON	OFF
14	OFF	ON	ON	ON	OFF
15	ON	ON	ON	ON	OFF
16	OFF	OFF	OFF	OFF	ON
17	ON	OFF	OFF	OFF	ON
18	OFF	OFF	OFF	OFF	ON
19	ON	OFF	OFF	OFF	ON
20	OFF	OFF	ON	OFF	ON
21	ON	OFF	ON	OFF	ON
22	OFF	ON	ON	OFF	ON
23	ON	ON	ON	OFF	ON
24	OFF	OFF	OFF	ON	ON
25	ON	OFF	OFF	ON	ON
26	OFF	ON	OFF	ON	ON
27	ON	ON	OFF	ON	ON
28	OFF	OFF	ON	ON	ON
29	ON	OFF	ON	ON	ON
30	OFF	OFF	ON	ON	ON
31	ON	OFF	ON	ON	ON

Table 2: Baud Rate

S1-2	S1-3	Baud Rate
ON*	ON*	38,400 bps
OFF	ON	19,200 bps
ON	OFF	9,600 bps
OFF	OFF	115,200 bps

*Access It! Universal.NET default value.

Figure 1: Input Wiring Configurations

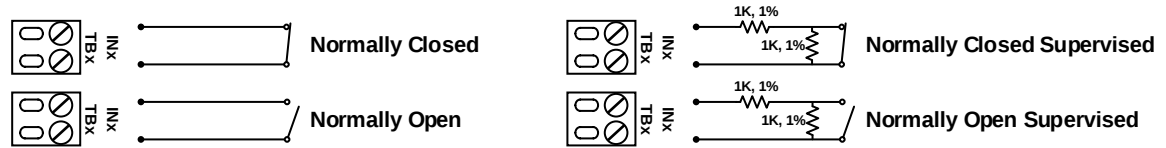
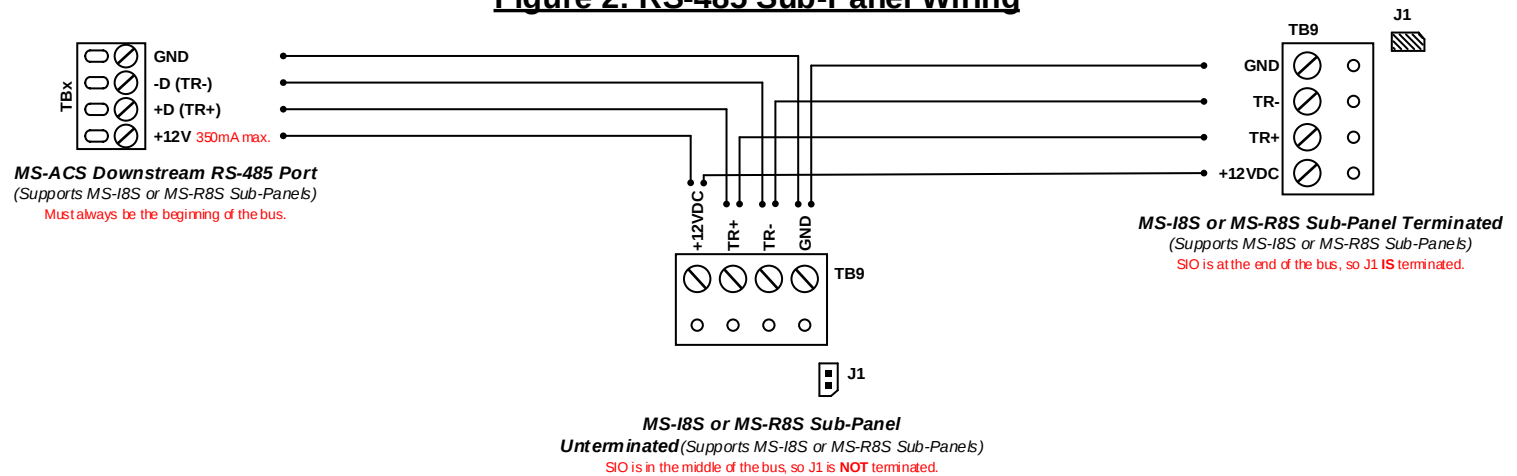


Figure 2: RS-485 Sub-Panel Wiring



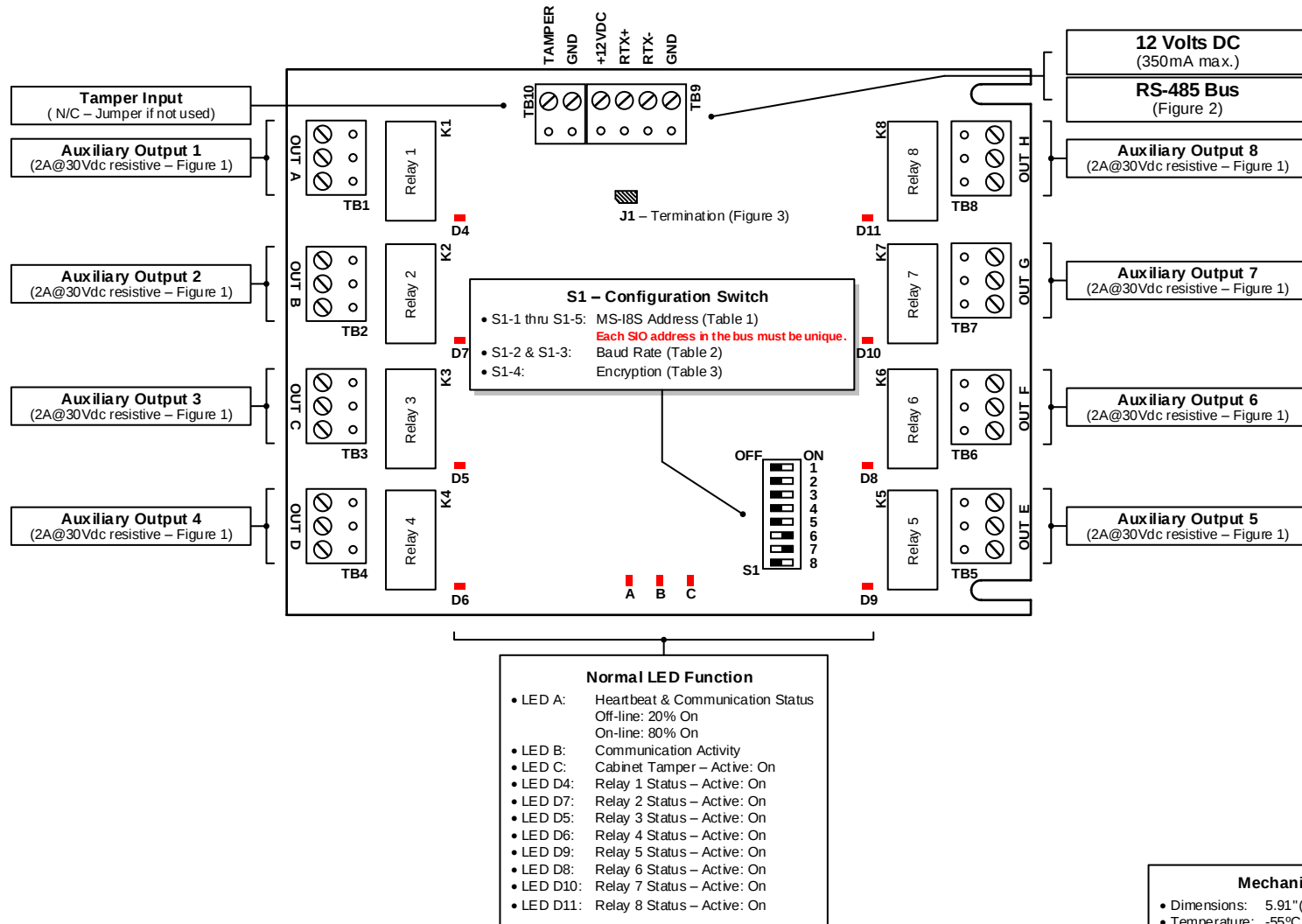


Table 1: MS-R8S Addresses

Address	S1-1	S1-2	S1-3	S1-4	S1-5
0	OFF	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF
5	ON	OFF	ON	OFF	OFF
6	OFF	ON	ON	OFF	OFF
7	ON	ON	ON	OFF	OFF
8	OFF	OFF	OFF	ON	OFF
9	ON	OFF	OFF	ON	OFF
10	OFF	ON	OFF	ON	OFF
11	ON	ON	OFF	ON	OFF
12	OFF	OFF	ON	ON	OFF
13	ON	OFF	ON	ON	OFF
14	OFF	ON	ON	ON	OFF
15	ON	ON	ON	ON	OFF
16	OFF	OFF	OFF	OFF	ON
17	ON	OFF	OFF	OFF	ON
18	OFF	OFF	OFF	OFF	ON
19	ON	OFF	OFF	OFF	ON
20	OFF	OFF	ON	OFF	ON
21	ON	OFF	ON	OFF	ON
22	OFF	ON	ON	OFF	ON
23	ON	ON	ON	OFF	ON
24	OFF	OFF	OFF	ON	ON
25	ON	OFF	OFF	ON	ON
26	OFF	ON	OFF	ON	ON
27	ON	ON	OFF	ON	ON
28	OFF	OFF	ON	ON	ON
29	ON	OFF	ON	ON	ON
30	OFF	OFF	ON	ON	ON
31	ON	OFF	ON	ON	ON

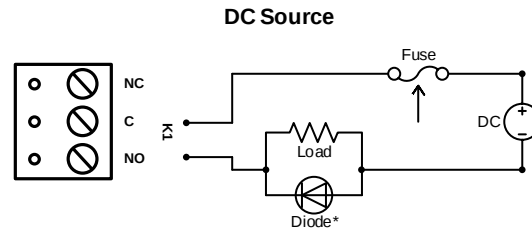
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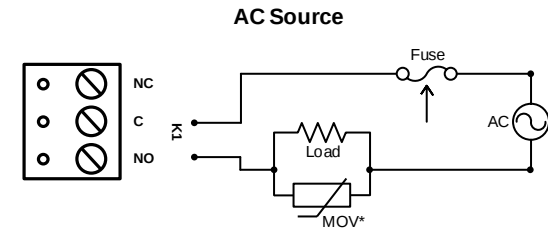
*Access It! Universal.NET default value.

Figure 1: Output Wiring Configurations

Depending on your power source, use one of the two methods of transient clamping shown below to protect the relay contacts and to reduce electromagnetic interference (EMI emissions). Always protect against accidental overloads by wiring in an inline fuse to the C (common) side of the relay as shown below.



***Diode Selection – Inductive Load**
 Diode Current Rating > 1x Strike Current
 Diode Break Down Voltage: 4x Strike Voltage
 12Vdc or 24Vdc Strike, Diode 1N4002 (100V / 1A) Typical



***MOV Selection – Inductive Load**
 Clamp Voltage > 1.5x Vac RMS
 24Vac Strike, Panasonic ERZ-C07DK470 Typical

Figure 2: RS-485 Sub-Panel Wiring

