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MMC HA Hardware Alarm Management Installation

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1 Overview

This document details the MMC wiring and Set-up for High Availability (HA) Alarm Management. It Includes:

- Wiring the Rack Monitor System (RMS)
- MMC Server node (MS)
- MMC Relay (MMC MR), Directory node (MMC DS), and Terminal node (TS)
- Set-up for Rack Monitor System (RMS)

RMS also provides two terminal pairs for network alarm connection.

1.1 Enclosures

No enclosures are included within this document.

Note All IP addresses used in the document are examples. True IP addresses, please refer to site-specific information.

2 Prerequisites

The following prerequisites must be met:

- IP Address
- Netmask
- Broadcast Address
- Gateway Address for RMS, MS, DS, OM, MP, MC, IW, F5, T3MS, TS, etc.

3 Procedure

- Wiring among nodes and RMS.
- Configure RMS.
- Install software LOMlite2 to nodes.
- Reboot nodes.
- Validate the installation.
- Installation Complete.

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Figure 1 Wiring Diagram for MMC Alarm and LOMlite

3.1 Wiring for MMC Alarm and LOMlite

3.1.1 Interconnection for MMC R2-HA

Refer to the following documents:

- See MMC HA AC System - Cable Interconnection, 1/193 11-APX 901 22+ Uen
- See MMC HA (DC) System Interconnection, 1/19
3 11-APX 901 23+ Uen
- See MMC SA (AC) System Interconnection
- See MMC SA (DC) System Interconnection, 1/193 11-APX 901 30+ Uen

Table 1 Digital Output for Network Alarm Connection

Alarm Group	FROM		TO Network Alarm	
1	MMC Rack Monitor (RMS00/cabinet A)	Digital OUT 3+	Cabinet A Alarm Output	MMCAmajor
		Digital OUT 3-		
		Digital OUT 4+		MMCAminor
		Digital OUT 4-		
2	MMC Rack Monitor (RMS01/cabinet C)	Digital OUT 3+	Cabinet C Alarm Output	MMCCmajor
		Digital OUT 3-		
		Digital OUT 4+		MMCCminor
		Digital OUT 4-		
3	MMC Rack Monitor (cabinet D)	Digital OUT 3+	Cabinet D Alarm Output	MMCDmajor
		Digital OUT 3-		
		Digital OUT 4+		
		Digital OUT 4-		MMCDminor

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3.2 Signal Names and IP information of RMS

Get the IP information of each RMS from Site Specification.

Table 2 IP information of each RMS

	RMS00	RMS01
IP	192.168.230.30	192.168.230.31
Netmask	255.255.255.0	255.255.255.0
Broadcast Adr	0	0
Gateway Adr	0	0

Table 3 Signal Names for RMS Inputs and Outputs

RMS00 (Cab#A)	Digital Input	Signal Name	Digital Output	Signal Name
	D/I Gr#1	MR00major		
	D/I Gr#2	MR00minor		
	D/I Gr#3	DS00major		
	D/I Gr#4	DS00minor		
	D/I Gr#5	MS00major		
	D/I Gr#6	MS00minor		
	D/I Gr#7	MC00major		
	D/I Gr#8	MC00minor		
	Alt/I Gr#1	OM00major		
	Alt/I Gr#2	OM00minor		
	Alt/I Gr#3	INVamajor		
	Alt/I Gr#4	INVaminor		
			D/O Gr#3	MMCAmajor
			D/O Gr#4	MMCAminor

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RMS01 (Cab#2C)	Digital Input	Signal Name	Digital Output	Signal Name
	D/I Gr#1	MR01major		
	D/I Gr#2	MR01minor		
	D/I Gr#3	DS01major		
	D/I Gr#4	DS01minor		
	D/I Gr#5	MS01major		
	D/I Gr#6	MS01minor		
	D/I Gr#7	MC01major		
	D/I Gr#8	MC01minor		
	Alt/I Gr#1	OM01major		
	Alt/I Gr#2	OM01minor		
	Alt/I Gr#3	INVbmajor		
	Alt/I Gr#4	INVbminor		
			D/O Gr#3	MMCCmajor
			D/O Gr#4	MMCCminor

3.3 Set up Network Parameters for RMS from Front Panel

Figure 2 Front Control Panel of Rack Monitor System (RMS)

3.3.1 For First Time Set-Up

Configure RMS00, RMS01 (see *IP information of each RMS*).

The following four network parameters must be entered via the keys before the device can be operated with the Network.

- IP Address
- Netmask
- Broadcast Address
- Gateway Address

3.3.2 Setting the IP Address

1. On the Front Panel, press *Menu* . It displays Network.
2. Press *Enter* , it displays Interface.

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3. Press *Enter* , it displays *I* P Address.
4. Press *Enter* , it displays *I*xxx.xxx.xxx.xxx where xxx.xxx.xxx.xxx is the current IP Address.
5. If modification is required, press *Enter* . It displays IP:xxx.xxx.xxx.xxx OK. A blinking cursor appears on the left-most digit.
6. Use the > (right) or < (left) arrow keys to shift the cursor to the position that requires modification.
7. Press *Enter* , to start the modification on the digit.
8. Use the > (right) or < (left) shift arrow to get the right number for the digit.
9. Press *Enter* , to confirm the change for the digit.
10. To confirm the IP change, use the > (right) or < (left) shift arrow to shift the cursor to the right-most OK position. Press *Enter* , to confirm the change.
11. To quit the modification process, press *Menu* at any time.

3.3.3 Setting the Broadcast Address

1. On the Front Panel, press *Menu* . It displays Network.
2. Press *Enter* , it displays Interface.
3. Press *Enter* , it displays IP Address.
4. Press *Enter* , it displays *I*xxx.xxx.xxx.xxx where xxx.xxx.xxx.xxx is the current IP Address.
5. Use the > (right) or < (left) arrow keys to display Broadcast.
6. Press *Enter* , it displays *B*xxx.xxx.xxx.xxx where xxx.xxx.xxx.xxx is the current Broadcast Address.
7. If modification is required, press *Enter* . It will display Bcast: xxx.xxx.xxx.xxx OK. The blinking cursor appears on the left-most digit.
8. Use the > (right) or < (left) arrow keys to shift the cursor to the position that requires modification.
9. Press *Enter* , to start the modification on the digit.
10. Use the > (right) or < (left) shift arrow to get the right number for the digit.
11. Press *Enter* , to confirm the change for the digit.
12. To confirm the change, use the > (right) or < (left) shift arrow to shift the cursor to the right-most OK position. Press *Enter* , to confirm the change.

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13. To quit the modification process, press *Menu* at any time.

3.3.4 Setting the Netmask Address

1. On the Front Panel, press *Menu* . It displays Network.
2. Press *Enter* , it displays Interface.
3. Press *Enter* , it displays I P Address.
4. Press *Enter* , it displays lxxx.xxx.xxx.xxx where xxx.xxx.xxx.xxx is the current IP Address
5. Use the > (right) or < (left) arrow keys to display Netmask.
6. Press *Enter* , it displays Nxxx.xxx.xxx.xxx where xxx.xxx.xxx.xxx is the current Netmask Address.
7. If modification is required, press *Enter* , It displays Nmask: xxx.xxx.xxx.xxx OK. The blinking cursor appears on the left-most digit.
8. Use the > (right) or < (left) arrow keys to shift the cursor to the position that requires modification.
9. Press *Enter* , to start the modification on the digit.
10. Use the > (right) or < (left) shift arrow to get the right number for the digit.
11. Press *Enter* , to confirm the change for the digit.
12. To confirm the change, use the > (right) or < (left) shift arrow to shift the cursor to the right-most OK position. Press *Enter* , to confirm the change.
13. To quit the modification process, press *Menu* at any time.

3.3.5 Setting the Gateway Address

1. On the Front Panel, press *Menu* . It displays Network.
2. Press *Enter* , it displays Interface.
3. Press *Enter* , it displays I P Address.
4. Press *Enter* , it displays lxxx.xxx.xxx.xxx where xxx.xxx.xxx.xxx is the current IP Address
5. Use the > (right) or < (left) arrow keys to display Gateway.
6. Press *Enter* , it displays Gxxx.xxx.xxx.xxx where xxx.xxx.xxx.xxx is the current Gateway Address.

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7. If modification is required, press *Enter* . It displays Gway: xxx.xxx.xxx.xxx OK. The blinking cursor appears on the left-most digit.
8. Use the > (right) or < (left) arrow keys to shift the cursor to the position that requires modification.
9. Press *Enter* , to start the modification on the digit.
10. Use the > (right) or < (left) shift arrow to get the right number for the digit.
11. Press *Enter* , to confirm the change for the digit.
12. To confirm the change, use the > (right) or < (left) shift arrow to shift the cursor to the right-most OK position. Press *Enter* , to confirm the change.
13. To quit the modification process, press *Menu* at any time.

3.3.6 Configure RMS2 and RMS3

Repeat the four procedures above for RMS2 and RMS3.

3.4 Program More Parameters via Telnet Connection

Refer to User's Manual for Rack Monitor System - by Infratec, <ftp://ftp.infratec-plus.de/>.

1. Create a telnet connection on the Workstation or PC.
2. Telnet to the IP address (for RMS00, RMS01 respectively) as entered in *See IP information of each RMS* . For example:

```
telnet 192.168.209.196 <enter>
```

The Login screen appears.

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4. Select N to check or review the Network Parameters just entered via the Front Panel.

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Example 3 Checking Network Configuration

Network Configuration

```
[I] IP Address   : 192.168.209.196 (192.168.209.196)
[N] Netmask     : 255.255.255.0  ( 255.255.255.0)
[B] Broadcast   : 192.168.209.255 (192.168.209.255)
[G] Gateway     : 192.168.209.1  ( 192.168.209.1)
[S] SNMP Configuration >
[L] Log Service  >

[?] Help
[Q] Quit Without Saving
[Return] Quit With Saving
```

Modifying the SNMP Configuration

1. Select S to review or modify the SNMP configuration if necessary.

Example 4 Modifying SNMP Configuration

SNMP Configuration

```
[N] Name           : Knuerr RMS00
[L] Location       : Knuerr Rack Monitoring System
[C] Contact        : Knuerr AG, D-81803 Muenchen
[R] Read Community : public
[W] Write Community : private
[T] Trap Community : Alarm
[S] Send Authtraps : yes
[M] SNMP Access    : write

      - Trap Destinations -
      1) 192.168.206.71
      2) 192.168.239.1

[A] Add new trap destination
[D] Delete trap destination

[?] Help
[Q] Quit Without Saving
[Return] Quit With Saving
```

2. Modify the SNMP parameters by selecting the letter corresponding to the parameter and changing the parameter.
3. Press *Enter* to return to the previous screen.
4. Press *Enter* to return to the *Main Menu* .

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Adding or Deleting a User

1. To add a new user or delete an existing user, select U on the *Main Menu* for User Administration.

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Example 5 Adding or Deleting a User

User Administration

```

      No Username      Password      Rights
-->  1: rms            *****      write
      2: emx            *****      write
      3: (undefined)    (undefined)    (undefined)
      4: (undefined)    (undefined)    (undefined)
      5: (undefined)    (undefined)    (undefined)
      6: (undefined)    (undefined)    (undefined)
      7: (undefined)    (undefined)    (undefined)
      8: (undefined)    (undefined)    (undefined)
      9: (undefined)    (undefined)    (undefined)
     10: (undefined)    (undefined)    (undefined)
     11: (undefined)    (undefined)    (undefined)
     12: (undefined)    (undefined)    (undefined)

```

```

[A] Add User      [L] Learn Chipcard  [-] Previous User
[D] Delete User   [U] Unlearn Chipcard  [+] Next User

```

```

[?]      Help
[Q]      Quit Without Saving
[Return] Quit With Saving

```

User Administration

```

      No Username      Password      Rights
-->  1: rms            *****      write
      2: emx            *****      write
      3: (undefined)    (undefined)    (undefined)
      4: (undefined)    (undefined)    (undefined)
      5: (undefined)    (undefined)    (undefined)
      6: (undefined)    (undefined)    (undefined)
      7: (undefined)    (undefined)    (undefined)
      8: (undefined)    (undefined)    (undefined)
      9: (undefined)    (undefined)    (undefined)
     10: (undefined)    (undefined)    (undefined)
     11: (undefined)    (undefined)    (undefined)
     12: (undefined)    (undefined)    (undefined)

```

```

[A] Add User      [L] Learn Chipcard  [-] Previous User
[D] Delete User   [U] Unlearn Chipcard  [+] Next User

```

```

[?]      Help
[Q]      Quit Without Saving
[Return] Quit With Saving

```

Setting the Digital Input

1. From the *Main Menu* , select I for I/O Configuration.

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Example 6 Setting the Digital Input

I/O Configuration

```
[O] Digital Outputs      >
[I] Digital Inputs      >
[T] Temperature Inputs  >
[H] Humidity Inputs     >
[M] Mains Monitoring    >
[A] AUX                 >

[?]      Help
[Q]      Quit Without Saving
[Return] Quit With Saving
```

- From the *I/O Configuration* screen, select I for Digital Inputs. For RMS1 of cabinet #1 settings, *Signal Names for RMS Inputs and Outputs*

Example 7 Digital Inputs

Digital Inputs

No	Description	State	Changes	Last Change
--> D 1	MR00major (alarm 1)	on	1	12 days 17:54:51
D 2	MR00minor (alarm 2)	on	1	12 days 17:54:51
D 3	DS00major (alarm 1)	on	1	12 days 17:54:51
D 4	DS00minor (alarm 2)	on	1	12 days 17:54:51
D 5	MS00major (alarm 1)	off	0	12 days 17:55:09
D 6	MS00minor (alarm 2)	off	0	12 days 17:55:09
D 7	MC00major (alarm 1)	off	0	12 days 17:55:09
D 8	MC00minor (alarm 2)	off	0	12 days 17:55:09
A 1	OM00major (alarm 1)	off	0	12 days 17:55:09
A 2	OM00minor (alarm 2)	off	0	12 days 17:55:09
A 3	INVamajor (alarm 1)	off	0	12 days 17:55:09
A 4	INVaminor (alarm 2)	off	0	12 days 17:55:09
U 1	(not used)	off	0	12 days 17:55:09
U 2	(not used)	off	0	12 days 17:55:09

```
[D] Description          [-] Previous Input
[R] Reset Alert In      [+] Next Input
```

```
[?] Help
[Q] Quit
```

- Use "+" or "-" to move the pointer to D1, D2, D3, D4, D5, D6, D7, D8, A1 and A2.
- Select D to modify the description as shown in *Digital Inputs* .

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5. Modify the Inputs U1 and U2 to (not used).
6. Press *Enter* twice to return to the previous screen.

Setting the Filter

1. From the *Main Menu* , select F for Filter Configuration.

Example 8 Filter Configuration

```
Filter Selection

      No  Description      State  Result  ReactTime  Confirmed  Disabled
-->  1  temperature      off   off      0 s
      2  humidity        off   off      0 s
      3  mains            off   off      0 s
      4  smoke/vibration  off   off      0 s
      5  ups              off   off      0 s
      6  infrared         off   off      0 s
      7  MMCAmajor        act   off      0 s
      8  MMCAminor        act   off      0 s
      9  unused            off   off      0 s
     10  maximum alarm duration off   off      0 s
     11  upper threshold   off   off      0 s
     12  lower threshold   off   off      0 s

[D] Disable                [-] Previous Filter
[C] Confirm Filter          [+] Next Filter
[F] Filter Configuration  >

[?] Help
[Q] Quit
```

2. Use "+" or "-" to move the pointer to 1,2,3,4,5,6,9,10,11,and 12 respectively.
3. Select F to modify the Filter Configuration.
4. Select E (Effect), until off is shown in the *Effect* section. Press *Enter* to return to the previous screen. Continue to next filter configuration.

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Example 9 Filter Configuration

```
Filter Configuration
                                Filter 1

[D] Description      : temperature
[E] Effect           : off
[S] SNMP Trap       : repeat      [P] Message Priority : critical
[L] LED Warning     : yes         [C] Confirmation   : enabled
[B] Buzzer Warning  : yes         [R] Reactivation Time : 0 s

[I] Digital/Alert/UPS Inputs (*) >
[T] Temperature Inputs      >
[H] Humidity Inputs        >
[M] Mains Inputs           >
[F] Feedback Inputs        >

[?]      Help
[Q]      Quit Without Saving
[Return] Quit With Saving
```

5. Use "+" or "-", move the pointer to 7 and 8.

6. Select F to modify the Filter Configuration.

Example 10 Filter Configuration

```
Filter Configuration
                                Filter 7

[D] Description      : MMCAmajor
[E] Effect           : thru
[S] SNMP Trap       : repeat      [P] Message Priority : critical
[L] LED Warning     : yes         [C] Confirmation   : enabled
[B] Buzzer Warning  : yes         [R] Reactivation Time : 0 s

[I] Digital/Alert/UPS Inputs (*) >
[T] Temperature Inputs      >
[H] Humidity Inputs        >
[M] Mains Inputs           >
[F] Feedback Inputs        >

[?]      Help
[Q]      Quit Without Saving
[Return] Quit With Saving
```

7. Select D, for modify Description to MMCAmajor.

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8. Select E, for effect and select thru.
9. Select S, for SNMP and select repeat.
10. Select L, for LED warning and select yes.
11. Select B, for Buzz warning and select yes.
12. Select P, for Priority and select critical.
13. Select C, for Confirmation and select enabled.
14. Select R, for Reactivation and enter the alarm re-trigger timer in seconds if previous alarm was acknowledged. The re-trigger timer will be disabled if it is set to 0 s.
15. Select I, for Digital/Alert/UPS Inputs (*).
16. Use "+" or "-" to move the cursor to Digital IN 1, 2, 3, 4 5,6,7,8 and Alt IN 1 and 2.
17. Select E at each position and select invert for IN 1, 3, 5 and Alt IN 1, and off for IN 2, 4, 6 and Alt IN 2.
18. Press *Enter* twice to return to the *Filter Selection* screen.

Example 11 Filter Configuration

Digital/Alert/UPS Inputs				Filter 7
	No	Description		Effect
-->Digital In	1	MR00major (alarm 1)		invert
Digital In	2	MR00minor (alarm 2)		off
Digital In	3	DS00major (alarm 1)		invert
Digital In	4	DS00minor (alarm 2)		off
Digital In	5	MS00major (alarm 1)		invert
Digital In	6	MS00minor (alarm 2)		off
Digital In	7	MC00major (alarm 1)		invert
Digital In	8	MC00minor (alarm 2)		off
Alert In	1	OM00major (alarm 1)		invert
Alert In	2	OM00minor (alarm 2)		off
Alert In	3	INVamajor (alarm 1)		invert
Alert In	4	INVaminor (alarm 2)		off
UPS In	1	(not used)		off
UPS In	2	(not used)		off
[-] Previous Digital/Alert/UPS Input				[E] Effect
[+] Next Digital/Alert/UPS Input				
[?] Help				
[Q] Quit				

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19. Use "+" or "-", to move the pointer to 8.

20. Select F to modify the Filter Configuration.

Example 12 Filter Configuration

```
Filter Configuration
                                Filter 8

[D] Description      : MMCAMinor
[E] Effect           : thru
[S] SNMP Trap       : repeat      [P] Message Priority : critical
[L] LED Warning     : yes         [C] Confirmation   : enabled
[B] Buzzer Warning  : yes         [R] Reactivation Time : 0 s

[I] Digital/Alert/UPS Inputs (*) >
[T] Temperature Inputs      >
[H] Humidity Inputs         >
[M] Mains Inputs            >
[F] Feedback Inputs         >

[?]      Help
[Q]      Quit Without Saving
[Return] Quit With Saving
```

21. Select D, for modify Description to MMCAMinor.

22. Select E, for effect and select thru.

23. Select S, for SNMP and select repeat.

24. Select L, for LED warning and select yes.

25. Select B, for Buzz warning and select yes.

26. Select P, for Priority and select critical.

27. Select C, for Confirmation and select enabled.

28. Select R, for Reactivation and enter the alarm re-trigger timer in seconds if previous alarm was acknowledged. The re-trigger timer will be disabled if it is set to 0 s.

29. Select I, for Digital/Alert/UPS Inputs (*).

30. Use "+" or "-" to move the cursor to Digital IN 1, 2, 3, 4, 5, 6, 7, 8 and Alt IN 1 and 2.

31. Select E at each position and select off for IN 1, 3, 5 and Alt IN1, and invert for IN 2, 4, 6 and Alt IN2.

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Example 13 Filter Configuration

Digital/Alert/UPS Inputs

Filter 8

	No	Description	Effect
-->Digital In	1	MR00major (alarm 1)	off
Digital In	2	MR00minor (alarm 2)	invert
Digital In	3	DS00major (alarm 1)	off
Digital In	4	DS00minor (alarm 2)	invert
Digital In	5	MS00major (alarm 1)	off
Digital In	6	MS00minor (alarm 2)	invert
Digital In	7	MC00major (alarm 1)	off
Digital In	8	MC00minor (alarm 2)	invert
Alert In	1	OM00major (alarm 1)	off
Alert In	2	OM00minor (alarm 2)	invert
Alert In	3	INVamajor (alarm 1)	off
Alert In	4	INVaminor (alarm 2)	invert
UPS In	1	(not used)	off
UPS In	2	(not used)	off

[-] Previous Digital/Alert/UPS Input

[E] Effect

[+] Next Digital/Alert/UPS Input

[?] Help

[Q] Quit

32. Press Enter several times to return to the Main Menu.

Setting the Digital Output

1. From the *Main Menu* , select *I* to enter I/O Configuration.

Example 14 Setting the Output Configuration

I/O Configuration

[O] Digital Outputs >
[I] Digital Inputs >
[T] Temperature Inputs >
[H] Humidity Inputs >
[M] Mains Monitoring >
[A] AUX >

[?] Help

[Q] Quit Without Saving

[Return] Quit With Saving

2. Select *O* to enter Output Configuration. Configure two terminal pairs of MMCmajor and MMC minor alarms for network connection.

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Note Ratings of the dry-contact terminal: maximum load switched 1.5A at 230VAC, 2A at 30VDC.

Example 15 Setting the Output Configuration

Digital Outputs						
No	Description			Filter(s)	Logic	Effect
--> 1	(not used)	7	or	thru		
2	(not used)	8	or	thru		
3	MMCAmajor	7	or	thru		
4	MMCAminor	8	or	thru		
[D] Description						
[F] Filter						
[L] Logic [-] Previous Input						
[E] Effect [+] Next Input						
[?] Help						
[Q] Quit						

3. Select D, for modify Description to MMCmajor.
4. Select F, for filter and enter 7 for filter#7.
5. Select L, for Logic and select or.
6. Select E, for Effect and select thru.
7. Use "+" or "-" to move the cursor to Digital Output 2, 3 and 4. Modify all fields as shown above.
8. Press *Enter* several times to return to the *Main Menu* .

3.4.1

Reboot RMS

9. From the *Main Menu* , select S for System Configuration and Update.
10. Select R to Reboot.

End of RMS (Rack Monitor System) set up.

Repeat the following procedures for RMS2 and RMS3 using signal names from *Signal Names for RMS Inputs and Outputs*:

- See *Setting the Digital Input*
- See *Setting the Filter*

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- See *Setting the Digital Output*

3.5 Install Software LOMlite2 to MP, IW, MR, DS, MS, MP and OM

11. Telnet to each node (MP, IW, MR, DS, MS, MP and OM) respectively.
12. Log in as *root* .
13. Enter the password.
14. Install LOMlite2 software to each node.
15. Insert the Utility CD into the CD-ROM drive.
16. Locate the directory and path of software EMXlom.sh on the Utility CD.
17. Copy EMXlom.sh (software number CAH 109 0085 P1A) to */opt* directory.

```
cp /cdrom/cdrom0/EMXlom.sh /opt
```

18. Execute the self-extract shell script command.

```
/opt/EMXlom.sh install
```

After the installation completes, the following software packages are installed.

- SUNWlomr
- SUNWlomu
- SUNWlomm
- EMXlom

3.5.1 Verify the version number

1. Use the following command to check or verify the version number of package EMXlom:

```
/opt/EMXlom.sh version
```

The version number R1A will be shown for the current release.

2. Eject the CD from the CD-ROM drive.

```
eject <enter>
```

3. Reboot the node after packages are installed.

```
reboot -- -r <enter>
```

4. After reboot, validate the packages and patch installed. Type:

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```
Pkginfo | grep SUNWlom <enter>
```

Display as follows:

```
System    SUNWlomm  LOMlite manual pages
```

```
System    SUNWlomr  LOMlite driver (root)
```

```
System    SUNWlomu  LOMlite Utilities (usr)
```

5. Type

```
Pkginfo | grep EMXlom <enter>
```

Display as follows:

```
System    EMXlom Lights Out Management RC Scripts
```

If not shown, the package SUNWlom or EMXlom is not installed properly.

3.5.2 Remove the installed packages

The following procedures are used to remove the installed packages if necessary.

Answer *y* for yes to remove the packages when the commands are executed and prompt to answer.

Note Do not change the removal order:

- pkgrm EMXlom
- pkgrm SUNWlomm
- pkgrm SUNWlomu
- pkgrm SUNWlomr

Installation for Alarm Management is completed.

4 Termination

No further action is required to terminate this procedure.

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5 Additional Information

- [1] User's Manual for Rack Monitor System – by Infratec
<ftp://ftp.infratec-plus.de/>
- [2] Netra t 1400/1405 Service and System Reference manual – Sun Microsystems
Part# 806-0576-10
- [3] MMC R2 SA DC System Cable Interconnection
1/193 11-APX 901 30+ Uen
- [4] MMC R2 SA AC System Cable Interconnection
1/193 11-APX 901_29+ Uen