Connectivity

The evolution

HiSNMP

User MANUAL

English

code 272703 - Rev.1.7
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Information on this guide

This guide descrybes how to obtain the SNMP Protocol compatibility in:

standard HPAC units (via the special software SVM 1.60.019 or higher).
standard Chiller units (via the special software SCM 1.02.024snmp+ or higher).

To use this mechanism it is necessary to use a Hironet SNMP Adapter (HiSNMP).
Detailed information about this HiSNMP can be found in the following chapters.

This document includes the following issues:

Chapter 1: Overview	Brief overview of SNMP Protocol and task of SNMP in Standard Application
Chapter 2: Installation of the Network	Complete overview on how to build up a network
Chapter 3: Application requirements	Configuration of the Application (SVM1XX) and overview of the variables, which can be transferred via SNMP Protocol

INDEX

1. OVERVIEW

1.1. SNMP PROTOCOL

SNMP, Simple Network Management Protocol, basically consists of 5 Message types:

GetRequest
Is used to get the value of the requested Item in the Item Tree (Oid)
GetNextRequest
Is used to get the next value in the OID-tree.
SetRequest
Is used to set a value of a certain Item in the OID-tree.
Response
This message always follows an request. It contains the requested information.
Traps
Describe alarms or failure in Client PC.

Note: Requests are always sent by the management station.
Responses always and only follow requests.
Traps are sent to the Client

As this is a very short description of SNMP, if you need further details please take a look into the following documents, where the SNMP protocol is described in detail

RFC #	Argument	Reference WEB site
- RFC 1157	Description of SNMP protocol	http://www.faqs.org/rfcs/rfc1157.html
- RFC 1213	Management Iformation Base (MIB)	http://www.faqs.org/rfcs/rfc1213.html

SNMP in Standard Applications

The task of SNMP in standard applications is: on one hand to set (e.g. Setpoints in the regulation) and read values (e.g. actual temperature or humidity) and ,on the other hand, to transmit the Alarms of the standard application as ***traps*** (e.g. Room Sensor Failure).

Note: Only SNMP Version 1.0 is supported by the HiSNMP

The HiSNMP exists in two versions:
480096 - With external power supply: it means that the power supply must be plugged into the main power (see Fig.2).

480096 – With power supply from the unit: it means that the power supply must be plugged into the same voltage of the Microface E (24VAC). The cable provided needs to be plugged into the HiSNMP in one side and into the electrical panel of the unit in the 24VAC and 0VAC contacts.

2. SNMP NETWORK

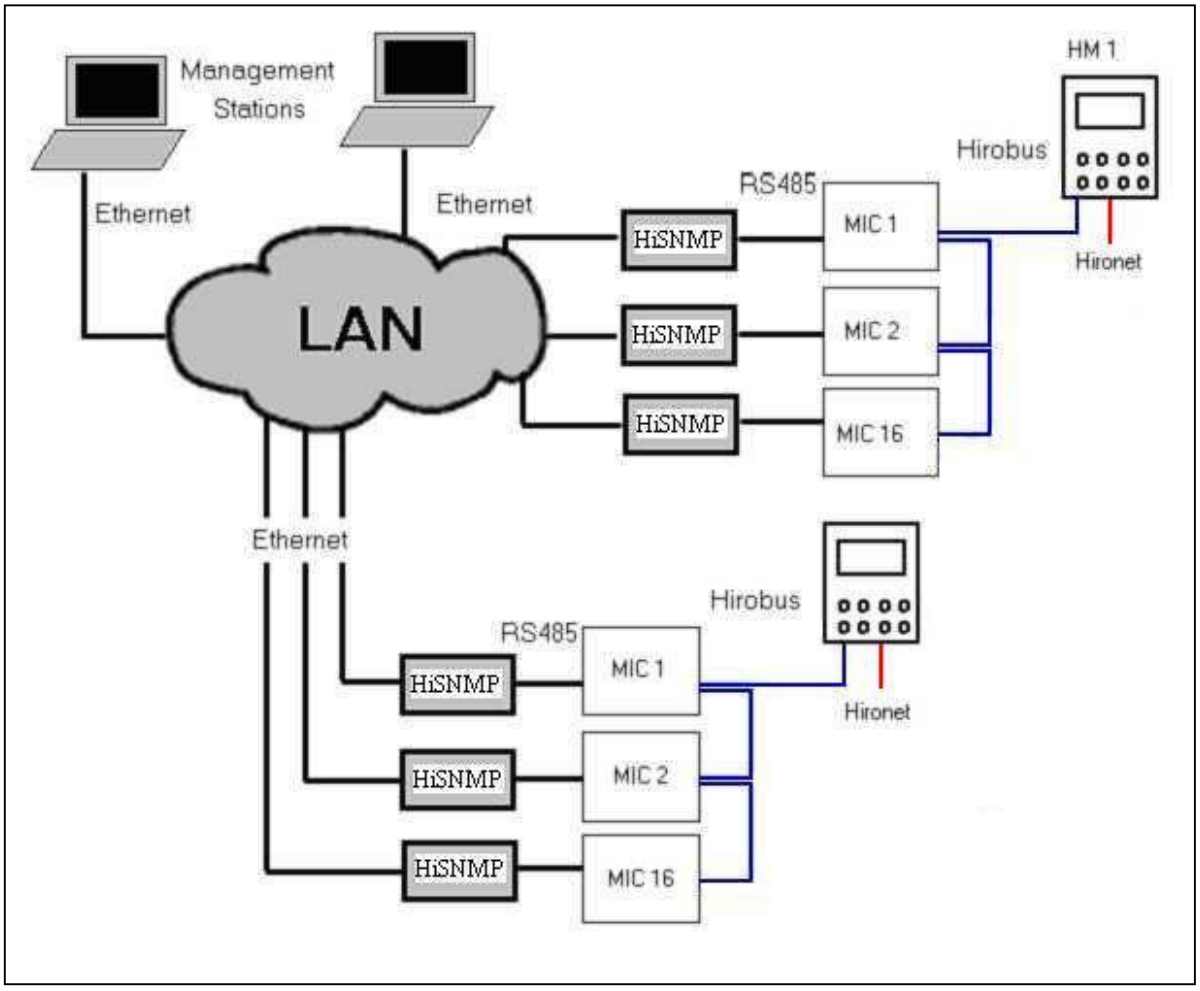


Fig. 1 Example of SNMP Networking structure

3. TECHNICAL CHARACTERISTICS

3.1. HOUSING

Fig. 2: HiSNMP overview.

3.2. POWER SUPPLY

AC Volt:	24V +/- 20 %.
Nom. current:	50mA @24V +/- 20 %.
Max Current:	350mA @Power Up for 3 sec

At the moment HiSNMP is released for 24VAC ONLY.

3.3. ETHERNET & SNMP

The ETHERNET speed supported is 10Mbps (10Base T).
The SNMP protocol version supported is V1.0

3.4. LEDS INDICATION

2 yellow LEDS:
LED on the Ethernet side – blinking:
it indicates that the Ethernet network is in activity, independently from the presence or not of requests via SNMP.

LED on the Hironet RJ9 side – blinking:
it indicates that the communication with Hironet is taking place. Such blinking is visible when the unit is exchanging data with the HiSNMP.

3.5. CONNECTIONS INTO MICROFACE E AND CABLING

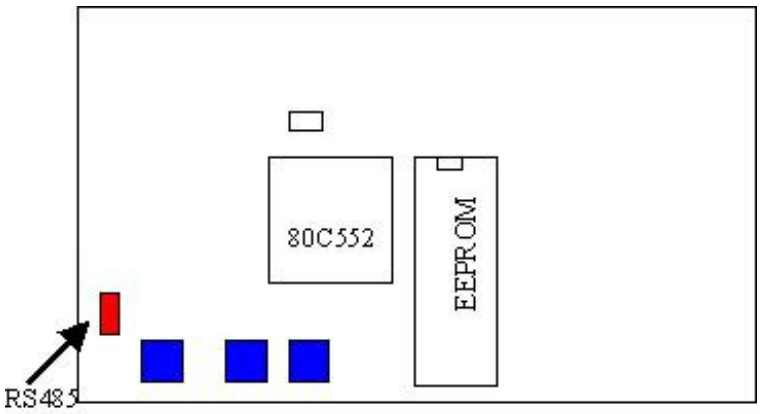


Fig. 3: SNMP connection into Microface E RS485 connector.

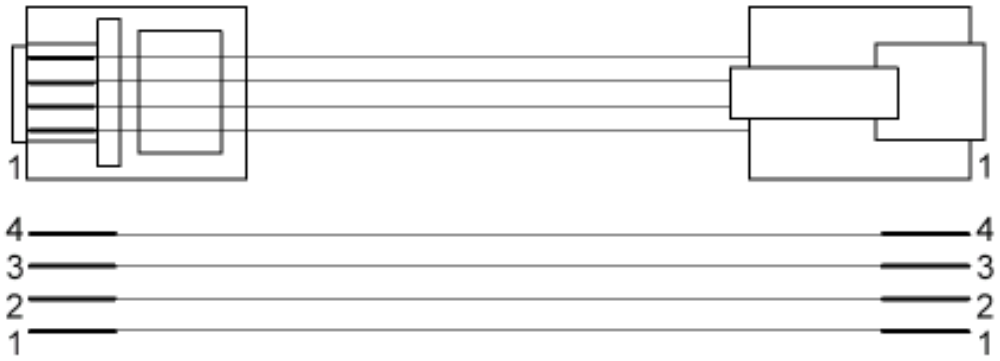


Fig. 4: 4-pole screened flat cable between HiSNMP and Microface E (type F)

To connect HiSNMP to the Microface E you have to plug a cable (described in Fig. 4) on the one hand into the RS485 plug of the Microface E (Fig. 3) and on the other hand into the Hironet connector of the HiSNMP (Fig. 2).

HiSNMP has to be connected directly to the Microface Evolution having a specific software that has to be required to Liebert Hiross. Specifically the software versions are:

HPAC units:
- EPROM for Microface E named SVM 1.60.019+

Superchiller Matrix units:
- EPROM for Microface E named SCM 1.02.023snmp+

XDFN units:
- EPROM for Microface E named XDM 1.60.046+

RACK units:
- EPROM for Microface E named RKM 1.60.045+

4. SPECIAL APPLICATION

4.1. GENERAL

Note: To use the SNMP Protocol the Applicastion must be built with the SNMP Protocol. It is not possible to use SNMP if the Application is built with the Hironet Protocol.

To get a connection between HiSNMP and Microface E you have to set the **IP-Address** and the **Listen Port into the Microface E, (using a Hiromatic G or E)**.

4.1.1. HIROMATIC SETTINGS

The Hiromatic (G or E) is useful for the set of the IP address and IP port into the Microface E, but through the Hiromatic (E or G) RS422/RS485 port the Hironet protocol is still available. This means that the Hirolink for BMS or the Hirolink Light for Hirovisor IP can be connected as well.

The IP-Address into the Microface E must be equal to the IP-Address of the HiSNMP.
Listen Port has to be set always to **161**, which means that SNMP Protocol is used.

Fig. 5 Hiromatic screen for SNMP settings.

To access the Application variables, it is necessary to use a Network Managing Software (for example SNMPc, HP OpenView) on a Management Station.

These management stations send a request (Get, GetNext, Set) to a certain IP-Address; the HiSNMP with this IP-Address passes the request on to its Microface E. The Microface E answers, and the HiSNMP sends the Response back to the requesting Management station.

Additionally the HiSNMP polls the Microface E periodically with a GetTrap Request. In case of an Alarm, the Microface E returns a trap message, which is passed on by the HiSNMP to the LAN.
Inside the HiSNMP you are able to define 5 Management Stations, where traps are sent to, if the stations have Status OK.

4.1.2. SYSTEM VARIABLES:

The HiSNMP for Superchiller first and later the HPAC units will support the general MIB-6 variables such as:

OID	Mib Description Name	Description	Range	Read / Write
1.3.6.1.2.1.1.1	sysDescr	Full name and version identification of the system's hardware type, software operating-system, and networking software.	16 chars*	Read (write from Hm only)
1.3.6.1.2.1.1.2	sysObjectID	The vendor's authoritative identification of the network management subsystem.	1.3.6.1.4.1.476.1.42.4.3.20	Read only
1.3.6.1.2.1.1.3	sysUpTime	The time (hundredths of sec) since the network management portion of the system was last re-initialized.	D:HH:MM:SS.00	Read only
1.3.6.1.2.1.1.4	sysContact	Usually the textual identification of the contact person and his contact.	16 chars*	Read (write from Hm only)
1.3.6.1.2.1.1.5	sysName	An administratively-assigned domain name for this managed node.	16 chars*	Read (write from Hm only)
1.3.6.1.2.1.1.6	sysLocation	Physical location of this node.	16 chars*	Read (write from Hm only)

***the Chars can be: [0-9] ; [A-Z] ; [a-z] ; [& * / . + - _ : @ \ ]**

4.1.3. ALARM MANAGEMENT

In the MATRIX units, starting from version SCM 1.02.023, the SNMP implementation will be based on the following assumptions for ALARM MANAGEMENT:

- All alarms will be reported to the clients by individual traps, each trap will have a fixed and unique OID. The traps will have the following values

- Alarm/warning present = different from 0 (zero)
- No Alarm/Warning absent = 0 (zero).

- Each alarm will be provided also via register with 1 byte size. This byte will have value one or zero depending on the status:

- Alarm/warning present = different from 0 (zero)
- No Alarm/Warning absent = 0 (zero).

A new variable named "**General Alarm reset**" will be included in order to permit to the BMS the reset of the alarms into the system by writing on it. In case that the alarms would be still present they will be sent again via trap. No traps would be generated in case of absence of alarms. This variable can be written as:
General Alarm reset = 2 to reset the Alarm/Warning.
General Alarm reset = 4 to acknowledge the Alarm/Warning (quite the Hiromatic bell).

TYPE OF UNIT	SW VERSION	SYSTEM VARIABLES	ALARM MGM VIA REGISTERS	ALARM MGM VIA TRAP
HPAC (Himod units)	SVM 1.60.019	NO*	NO	YES
CHILLER (Matrix units)	SCM 1.02.023	YES	YES	YES
XDFN Units	XDM 1.60.046	NO	NO	YES
RACK Units	RKM 1.60.045	NO	NO	YES

***Available in the next release**

4.1.4. WEB PAGE FOR TRAPS SETTINGS

In order to change / insert trac setting open internet explorer and in the addre type the ip address of the H:inmp the following screen will addear:

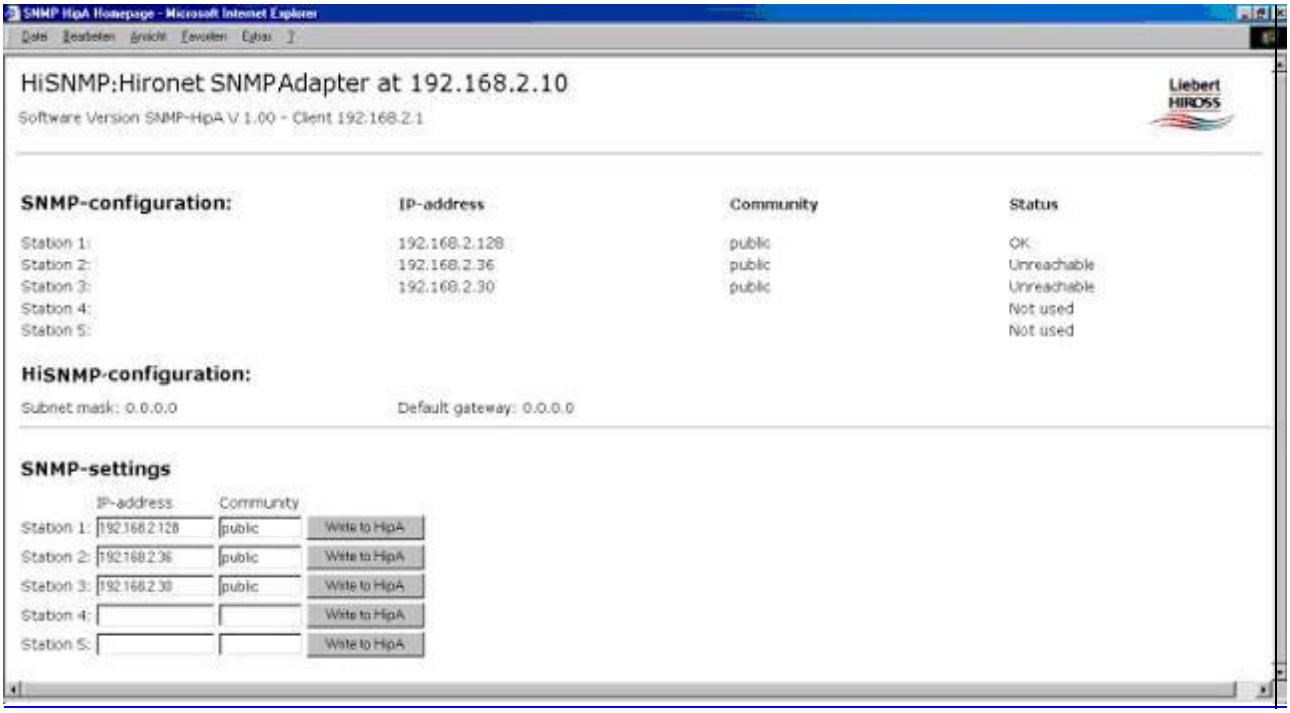


Fig. 6: HiSNMP WEB page

4.2. HISNMP IP CONFIGURATION

4.2.1. MAC ADDRESS

Each HiSNMP is given a distinctive identification, like for the Ethernet network cards: the MAC Address (Media Access Control Address). Please for the IP addresses and other OPTIONAL info refer to the System Network manager.

The MAC Address is needed to identify, at hardware level, the device in a unique way among all the devices that can get connected to an Ethernet network.
Through the MAC address it is possible to modify the IP address, an address which is also unique, at the “application” level'.

4.2.2. IP ADDRESS

The HiSNMP is recognised by the 'Hirovisor IP' application through the IP address. For this reason to make use of HiSNMP it needs a valid IP address.
To set an IP address you have to use the DOS 'SetHipAip' utility.
Before using the utility, please verify that HiSNMP is powered and is connected to the Ethernet network and that it can be reachable by the PC from which the utility is going to run.

In order to make HiSNMP reachable by the PC, both the PC and the HiSNMP must be physically resident on the same LAN (without any 'router' in between). If this is not possible, only for the use SetHipAip utility, connect the HiSNMP to the PC with a Cross Cable (see schematics below) and assign to the PC one IP address of the same segment (same first three groups of code) of the address inserted in the HiSNMP. (e.g address for HiSNMP 129.100.19.114, address to be assigned to the PC 129.100.19.112).

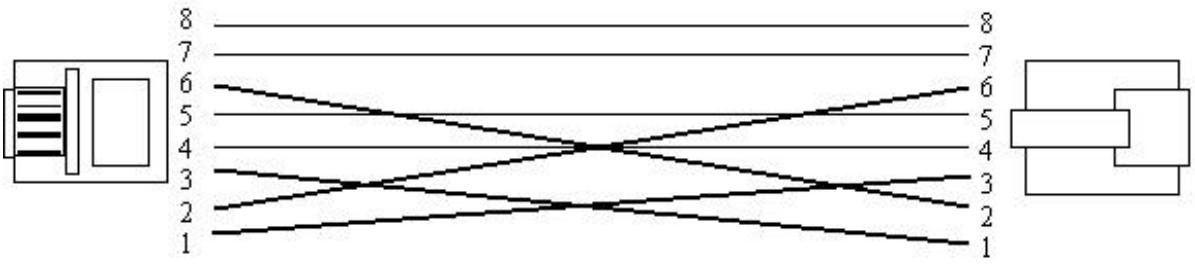


Fig. 7: Cross Cable: 8 pole screened flat cable between HiSNMP and PC.

How to use the SetHipAip [1] utility:

SetHipAip [options] MAC IP [NM GW] where:

MAC Ethernet address previously given by the Liebert-Hiross SpA production or by the Information& CONTROLS department:
Hexadecimal: xx:xx:xx:xx:xx:xx
Decimal: ddd.ddd.ddd.ddd.ddd.ddd
IP The new IP address to get connected:
Decimal: ddd.ddd.ddd.ddd
Name: host
NM New netmask, OPTIONAL:
Decimal: ddd.ddd.ddd.ddd DEFAULT VALUE 255.255.255.0
GW New default gateway, OPTIONAL:
Decimal: ddd.ddd.ddd.ddd DEFAULT VALUE EMPTY
Name: host

Where the options are:
-d prepare in debug mode
-b Ipaddr transmission to the IP address “IPaddr”
-N num repetitions number

[1] Such a utility program is inside the CD with the documentation (of HipA and Hirolink). It can also be downloaded by enabled users directly from www.connectivity.it (manuals section).

4.3. HOW TO SET & VERIFY IP ADDRESS, NETMASK, GATEWAY

From the commands prompt, launch “SetHipAip” followed by the MAC (previously assigned by the Liebert-Hiross SpA production or by the Information& CONTROLS department), the IP address you want to insert/change in HiSNMP and possible other options of netmask (NM) and gateway (GW); then press enter.

Example:
C:\>Programmi> SetHipAip **00:08:77:00:00:03** **129.100.19.114** **255.255.255.0** **129.100.19.1**

MAC previously assigned to HiSNMP

New IP address

New netmask, OPTIONAL

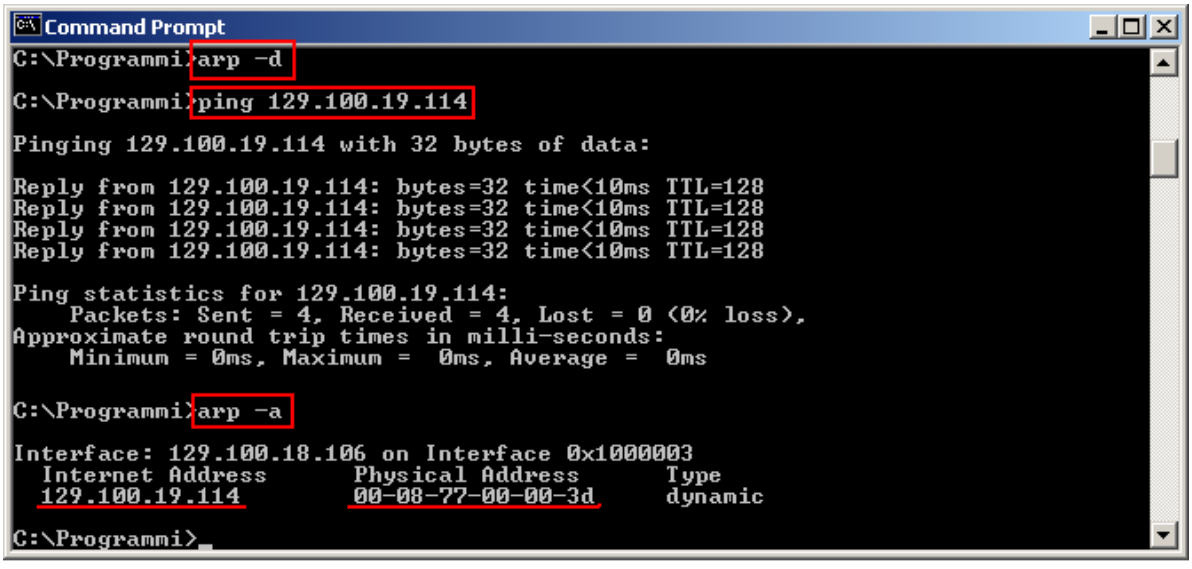
New default gateway OPTIONAL

To verify the correct settings of the IP address and MAC address inside the HiSNMP interface, use the MS-DOS commands described below[2].
Assuming that the IP address in example is 129.100.19.114 then the commands to be typed are:

arp –d	(to cancel the IP and MAC table inside your PC)
ping 129.100.19.114	(to verify the response of this HipA)
arp –a	(to verify that the MAC address and IP are linked correctly)

In order to make HiSNMP reachable by the PC, both the PC and the HiSNMP must be physically resident on the same LAN (without any 'router' in between). If this is not possible, only for the use SetHipAip utility, connect the HiSNMP to the PC with a Cross Cable (see schematics below) and assign to the PC one IP address of the same segment (same first three groups of code) of the address inserted in the HiSNMP. (e.g address for HiSNMP 129.100.19.114, address to be assigned to the PC 129.100.19.112).

Example:



[2] NOTE: run a DOS SHELL by pressing START button, select RUN option, type “command” and press ENTER

4.4. VARIABLES & TRAPS/REGISTERS LIST FOR HPAC (SVM 1.60.019)

4.4.1. PARAMETERS TABLE

OID	Item-Name	Event description	HM Value
VARIABLES: 1.3.6.1.4.1.476.1.42.			Min / Max
3.4.1.3.1	TempSet	Temperature Setpoint	5 / 40
3.4.1.3.2	TempProp	Temperature Prop.Band	1 / 30
3.4.1.3.3.1.3	LocTemp	Temperature	-28 / 100
3.4.1.3.3.1.4	HiTemp	High Temp. Setpoint	No=0 / 99
3.4.1.3.3.1.5	LoTemp	Low Temp. Setpoint	No=0 / 99
3.4.2.2.1	HumiSet	Humidifier Setpoint	No=19 / 80
3.4.2.2.2	HumiProp	Humidity Prop.Band	2 / 60
3.4.2.2.3.1.3	HT_Humi	Humidity	-9.9 / +9.9
3.4.2.2.3.1.4	HiHumi	High Humidity Setpoint	No=0 / 99
3.4.2.2.3.1.5	LoHumi	Low Humidity Setpoint	No=0 / 99
3.4.3.1	MIB_Fan	Fan State	On=1 / Off=0
3.4.3.2	MIB_Comp	Cooling State	On=1 / Off=0
3.4.3.3	MIB_Heat	Heating State	On=1 / Off=0
3.4.3.4	MIB_Dehum	Dehumidifying State	On=1 / Off=0
3.4.3.5	MIB_Humid	Humidifying State	On=1 / Off=0
3.4.3.6	MIB_FC_On	Econ-O-Cycle/FC State	On=1 / Off=0
3.2.1.12	Manual	Manual Mode	On=1 / Off=0

Note: Temp.Set and Temp.Prop are muliplied with 10 for easier calculation. Value 50 = 5.0°C, Value 359 = 35.9°C.

4.4.2. EVENTS TABLE

OID	Item-Name	Event description	HM Value
TRAPS: 1.3.6.1.4.1.476.1.42.			Alarm (Warning) active / Alarm (Warning) acknowledge / No Alarm (Warning)
2.3.0.1.0.34	WaNet	Network Failure	15 / 11 / 0
2.3.0.1.0.70	WaNetMast	No Connection to Unit 1	15 / 11 / 0
2.3.0.1.0.77	WaHb_Error	Network Failure	15 / 11 / 0
3.2.1.1.0.18	HRT	High Room Temperature	15 / 11 / 0
3.2.1.2.0.19	LRT	Low Room Temperature	15 / 11 / 0
3.2.1.3.0.20	HRH	High Room Humidity	15 / 11 / 0
3.2.1.4.0.21	LRH	Low Room Humidity	15 / 11 / 0
3.2.1.5.0.7	AlAF	Fan Failure	23 / 19 / 0
3.2.1.5.0.6	WaAF	Fan Failure	15 / 11 / 0
3.2.1.6.0.8	WaCF	Clogged Filters	15 / 11 / 0
3.2.1.7.1.0.1	AlHP	Comp.1 High Pressure	23 / 19 / 0
3.2.1.7.2.0.58	AlHP2	Comp.2 High Pressure	23 / 19 / 0
3.2.1.8.1.0.71	ALTH1	Comp.1 Motor Protection	23 / 19 / 0
3.2.1.8.2.0.72	ALTH2	Comp.2 Motor Protection	23 / 19 / 0
3.2.1.10.0.2	AlLP	Comp.1 Low Pressure	23 / 19 / 0
3.2.1.14.0.10	AlLE	Water Leakage	23 / 19 / 0
3.2.1.14.0.9	WaLE	Water Leakage	15 / 11 / 0
3.2.1.15.0.13	WaHFA	Humidifier Failure	15 / 11 / 0
3.2.1.15.0.14	WaHHC	Humidifier High Current	15 / 11 / 0
3.2.1.15.0.15	WaHF	Humidifier Failure	15 / 11 / 0
3.2.1.15.0.16	WaHN	Humidifier Failure	15 / 11 / 0
3.2.1.15.0.17	WaHUC	Humidifier Cylinder Worn	15 / 11 / 0
3.2.1.17.0.73	ALFire	Fire Alarm	23 / 19 / 0
3.2.1.17.0.65	WaSmoke	Smoke Alarm	15 / 11 / 0
3.2.1.18.0.4	WaLC	Low Chilled Water	15 / 11 / 0
3.2.1.19.0.41	MePowerOff	Power Off	0 / 1
3.2.1.21.1.0.12	AlUI	User Input 1 Triggered	23 / 19 / 0
3.2.1.21.1.0.11	WaUI_1_Wa1	User Input 1 Triggered	15 / 11 / 0
3.2.1.21.2.0.69	AlUI2	User Input 2 Triggered	23 / 19 / 0
3.2.1.21.2.0.68	WaUI2	User Input 2 Triggered	15 / 11 / 0
3.2.1.21.3.0.59	AlLP2	Comp.2 Low Pressure	23 / 19 / 0
3.2.1.21.4.0.30	WaRoomSen	Room Sensor Failure	15 / 11 / 0
3.2.1.21.4.0.31	AlRoomSen	Room Sensor Failure	23 / 19 / 0

4.5. VARIABLES & TRAPS/REGISTERS LIST: MATRIX(SCM 1.02.023)

4.5.1. PARAMETERS TABLE

OID	Item-Name	Event description	HM Value
VARIABLES: 1.3.6.1.4.1.476.1.42.			Min/Max
4.3.20.1.1.4.1	Rtc_Min	Time MINUTES	0 / 59
4.3.20.1.1.5.1	Rtc_Hou	Time HOURS	0 / 23
4.3.20.1.1.5.2	Rtc_Day	Time DAY	1 / 31
4.3.20.1.1.5.3	Rtc_Mon	Time MONTH	1 / 12
4.3.20.1.1.5.4	Rtc_Yea	Time YEAR	1970 / 2069
4.3.20.1.1.7.1	OuTempSet2	OUTLET SETPOINT 2	No=0 / 5 / 20
4.3.20.1.1.7.3	OuTempSet1	OUTLET SETPOINT 1	5.0 / 17.0
4.3.20.1.1.8.5	Birne_Setp	BRINE SETPOINT	No=-11 / 25
4.3.20.1.1.9.4	Stop_Co_LT	COMPRESSORS OFF AT	-25 / 8
4.3.20.1.1.11.1	HourPump1	PUMP 1 HOURS	0 / 999
4.3.20.1.1.11.2	HourPump2	PUMP 2 HOURS	0 / 999
4.3.20.1.1.11.3	HourComp1	CIRCUIT 1 Hours	0 / 999
4.3.20.1.1.11.4	HourComp2	CIRCUIT 2 Hours	0 / 999
4.3.20.1.1.11.5	HourFC	FREECOOLING Hours	0 / 999
4.3.20.1.1.11.6	HourPump1M	PUMP 1 Hours Warning At	0 / 32000
4.3.20.1.1.11.7	HourPump2M	PUMP 2 Hours Warning At	0 / 32000
4.3.20.1.1.11.8	HourComp1M	CIRCUIT 1 Hours Warning At	0 / 32000
4.3.20.1.1.11.9	HourComp2M	CIRCUIT 2 Hours Warning At	0 / 32000
4.3.20.1.1.11.10	HourFCM	FREECOOLING Hours Warning At	0 / 32000
4.3.20.1.1.12.1	HourComp3	CIRCUIT 3 Hours	0 / 999
4.3.20.1.1.12.2	HourComp4	CIRCUIT 4 Hours	0 / 999
4.3.20.1.1.12.3	HourComp3M	CIRCUIT 3 Hours Warning At	0 / 32000
4.3.20.1.1.12.4	HourComp4M	CIRCUIT 4 Hours Warning At	0 / 32000
4.3.20.1.1.13.1	HWTempInWa	HIGH INLET Warning	No=0 / 99
4.3.20.1.1.13.2	LWTempInWa	LOW INLET Warning	No=0 / 99
4.3.20.1.1.13.3	HWTempOuWa	HIGH OUTLET Warning	No=0 / 99
4.3.20.1.1.13.4	LWTempOuWa	LOW OUTLET Warning	No=0 / 99
4.3.20.1.1.13.5	HWTempInAl	HIGH INLET Alarm	No=0 / 99
4.3.20.1.1.13.6	LWTempInAl	LOW INLET Alarm	No=0 / 99
4.3.20.1.1.13.7	HWTempOuAl	HIGH OUTLET Alarm	No=0 / 99
4.3.20.1.1.13.8	LWTempOuAl	LOW OUTLET Alarm	No=0 / 99
4.3.20.1.1.16.2	Units_Mic	NUMBER OF UNITS	1 / 16
4.3.20.1.1.16.3	StdByUnits	NUMBER OF STDBY UNITS	0 / 15
4.3.20.1.1.16.4	RotationEN	ROTATION FREQUENCY	No=0 / Daily=1 / Mon=2 / Tue=3 / Wed=4 / Thu=5 / Fri=6 / Sat=7 / Sun=8
4.3.20.1.1.16.5	RotatHou	PERFORMED AT Hour	0 / 23
4.3.20.1.1.16.6	RotatMin	PERFORMED AT Minute	0 / 59

OID	Item-Name	Event description	HM Value
VARIABLES: 1.3.6.1.4.1.476.1.42.			Min/Max
4.3.20.1.1.18.1	GenAlarm	GENERAL ALARM (RESET)	23 / 19 / 0
4.3.20.1.1.20.1	UnitAlarm	UNIT ALARM STATUS	23 / 19 / 0
4.3.20.1.1.20.2	SinglState	UNIT STATUS (UNIT ON, LOC OFF, ...)	On=1 / Off=0
4.3.20.1.1.20.3	TempSet_ac	ACTUAL SETPOINT	5.0 / 17.0
4.3.20.1.1.24.5	PTCIn_Temp	MIXTURE IN	-28 / 100
4.3.20.1.1.24.6	PTCOu_Temp	MIXTURE OUT	-28 / 100
4.3.20.1.1.24.7	PTCAmb_Tem	OUTDOOR	-28 / 100
4.3.20.1.1.24.8	PTCEva_Tem	EVAPORATOR INLET	-28 / 100
4.3.20.1.1.26.4	C1PresBar	CIRCUIT 1 pressure	-6 / 50
4.3.20.1.1.26.5	C2PresBar	CIRCUIT 2 pressure	-6 / 50
4.3.20.1.1.27.2	C3PresBar	CIRCUIT 3 pressure	-6 / 50
4.3.20.1.1.28.1	C4PresBar	CIRCUIT 4 pressure	-6 / 50
4.3.20.1.1.31.1	AnaConden1	CONDENSER FANSPEED1	0 / 100
4.3.20.1.1.31.2	AnaConden2	CONDENSER FANSPEED2	0 / 100
4.3.20.1.1.31.3	Valve3P	FREECOOLING VALVE	0 / 100
4.3.20.1.1.31.4	AnaConden3	CONDENSER FANSPEED3	0 / 100
4.3.20.1.1.31.5	AnaConden4	CONDENSER FANSPEED4	0 / 100
4.3.20.1.1.32.2	ManPump1	PUMP1	On=1 / Off=0
4.3.20.1.1.32.3	ManPump2	PUMP2	On=1 / Off=0
4.3.20.1.1.32.4	ManComp1	C1 Compressor 1	On=1 / Off=0
4.3.20.1.1.32.6	ManComp2	C2 Compressor 2	On=1 / Off=0
4.3.20.1.1.33.9	ManComp3	C3 Compressor 3	On=1 / Off=0
4.3.20.1.1.33.10	ManComp4	C4 Compressor 4	On=1 / Off=0

4.5.2. EVENTS TABLE

OID	Item-Name	Event description	HM Value
TRAPS/REGISTERS: 1.3.6.1.4.1.476.1.42.			Alarm / No Alarm
4.3.20.1.1.50.1	AlHP1	COMP. 1 HIGH PRESSURE	23 / 19 / 0
4.3.20.1.1.50.2	AlLP1	COMPRESSOR 1 LOW PRESSURE	23 / 19 / 0
4.3.20.1.1.50.3	WaFlowSwit	FLOW SWITCH WARNING	15 / 11 / 0
4.3.20.1.1.50.4	AlFlowSwit	FLOW SWITCH ALARM	23 / 19 / 0
4.3.20.1.1.50.5	WaUserInp	USER INPUT TRIGGERED	15 / 11 / 0
4.3.20.1.1.50.6	AlUserInp	USER INPUT TRIGGERED	23 / 19 / 0
4.3.20.1.1.50.7	WaHWTempIn	HIGH WATER TEMP. IN	15 / 11 / 0
4.3.20.1.1.50.8	WaHWTempOu	HIGH WATER TEMP. OUT	15 / 11 / 0
4.3.20.1.1.50.9	WaLWTempIn	LOW WATER TEMP. IN	15 / 11 / 0
4.3.20.1.1.50.10	WaLWTempOu	LOW WATER TEMP. OUT	15 / 11 / 0
4.3.20.1.1.50.11	AlHWTempIn	HIGH WATER TEMP. IN	23 / 19 / 0
4.3.20.1.1.50.12	AlHWTempOu	HIGH WATER TEMP. OUT	23 / 19 / 0
4.3.20.1.1.50.13	AlLWTempIn	LOW WATER TEMP. IN	23 / 19 / 0
4.3.20.1.1.50.14	AlLWTempOu	LOW WATER TEMP. OUT	23 / 19 / 0
4.3.20.1.1.50.15	WaPump1Hou	PUMP 1 WORKING HOURS EXCEEDED	15 / 11 / 0
4.3.20.1.1.50.16	WaPump2Hou	PUMP 2 WORKING HOURS EXCEEDED	15 / 11 / 0
4.3.20.1.1.50.17	WaComp1Hou	CIRCUIT 1 WORKING HOURS EXCEEDED	15 / 11 / 0
4.3.20.1.1.50.18	WaComp2Hou	CIRCUIT 2 WORKING HOURS EXCEEDED	15 / 11 / 0
4.3.20.1.1.50.19	WaPTCIn	INLET TEMPERATURE SENSOR FAILURE	15 / 11 / 0
4.3.20.1.1.50.20	AlPTCIn	INLET TEMPERATURE SENSOR FAILURE	23 / 19 / 0
4.3.20.1.1.50.21	Wa1PTCOut	OUTLET TEMPERATURE SENSOR 1 FAILURE	15 / 11 / 0
4.3.20.1.1.50.22	WaCondFanF	CONDENSER 1 FANS FAILURE	15 / 11 / 0
4.3.20.1.1.50.25	AlHP2	COMP. 2 HIGH PRESSURE	23 / 19 / 0
4.3.20.1.1.50.26	AlLP2	COMPRESSOR 2 LOW PRESSURE	23 / 19 / 0
4.3.20.1.1.50.27	WaNet	NETWORK FAILURE	15 / 11 / 0
4.3.20.1.1.50.28	WaOrEEPROM	OUT OF MEMORY / EEPROM FAILURE	15 / 11 / 0
4.3.20.1.1.50.29	ALCompCont	COMP. NOT STOPPING. CHECK MF OUTPUTS	23 / 19 / 0
4.3.20.1.1.50.30	AlTH1	COMPRESSOR 1 THERMAL PROTECTION	23 / 19 / 0
4.3.20.1.1.50.31	AlTH2	COMPRESSOR 2 THERMAL PROTECTION	23 / 19 / 0
4.3.20.1.1.50.32	AlOil1	COMPRESSOR 1 OIL PRESSURE	23 / 19 / 0
4.3.20.1.1.50.33	AlOil2	COMPRESSOR 2 OIL PRESSURE	23 / 19 / 0
4.3.20.1.1.50.34	Wa1Freeze	FREEZE ALARM (Auto-Reset)	23 / 19 / 0
4.3.20.1.1.50.35	Wa2Freeze	FREEZE ALARM COMP.2 (Auto-	23 / 19 / 0

OID	Item-Name	Event description	HM Value
TRAPS/REGISTERS: 1.3.6.1.4.1.476.1.42.			Alarm / No Alarm
		Reset)	
4.3.20.1.1.50.36	MeUnitOn	UNIT ON	0 --- Trap only
4.3.20.1.1.50.37	MeUnitOff	UNIT OFF	0 --- Trap only
4.3.20.1.1.50.38	MeSleepMod	TIMER MODE	0 --- Trap only
4.3.20.1.1.50.39	MeStandby	STANDBY MODE	0 --- Trap only
4.3.20.1.1.50.40	MePowerOn	POWER ON	0 --- Trap only
4.3.20.1.1.50.41	MePowerOff	POWER OFF	0 --- Trap only
4.3.20.1.1.50.64	WaNetMast	NO CONNECTION TO UNIT 1	15 / 11 / 0
4.3.20.1.1.50.65	Wa1FreezeM	FREEZE ALARM (Manual Reset)	15 / 11 / 0
4.3.20.1.1.50.66	Wa2FreezeM	FREEZE ALARM COMP.2 (Manual Reset)	15 / 11 / 0
4.3.20.1.1.50.68	AlCondFanF	CONDENSER 1 FANS FAILURE ALARM	23 / 19 / 0
4.3.20.1.1.50.69	WaPTCAmb	AMBIENT TEMP. SENSOR WARNING	15 / 11 / 0
4.3.20.1.1.50.70	Al1PTCOut	OUTLET TEMPERATURE SENSOR 1 FAILURE	23 / 19 / 0
4.3.20.1.1.50.72	WaPTCEva	EVAPORATOR INLET SENSOR WARNING (TEAM)	15 / 11 / 0
4.3.20.1.1.50.73	AlPTCEva	EVAPORATOR INLET SENSOR ALARM (TEAM)	23 / 19 / 0
4.3.20.1.1.50.77	WaHb_Error	HIROBUS ERROR	15 / 11 / 0
4.3.20.1.1.50.78	WaSubGrErr	SUBGROUP-ID NOT UNIQUE	15 / 11 / 0
4.3.20.1.1.50.79	WaSubGr1nc	SUBGROUP-UNIT 1 NOT CONNECTED	15 / 11 / 0
4.3.20.1.1.50.80	WaSubGr2nc	SUBGROUP-UNIT 2 NOT CONNECTED	15 / 11 / 0
4.3.20.1.1.50.81	WaFC_Hou	FC WORKING HOURS EXCEEDED	15 / 11 / 0
4.3.20.1.1.50.82	WaCond2Fan	CONDENSER 2 FANS FAILURE	15 / 11 / 0
4.3.20.1.1.50.83	AlCond2Fan	CONDENSER 2 FANS FAILURE ALARM	23 / 19 / 0
4.3.20.1.1.50.84	AlLoCondP1	LOW CONDENSER PRESSURE 1	23 / 19 / 0
4.3.20.1.1.50.85	AlLoCondP2	LOW CONDENSER PRESSURE 2	23 / 19 / 0
4.3.20.1.1.50.86	AlHP_TH1	COMP. 1 HIGH PRESSURE / TH. PROTECTION	23 / 19 / 0
4.3.20.1.1.50.87	AlHP_TH2	COMP. 2 HIGH PRESSURE / TH. PROTECTION	23 / 19 / 0
4.3.20.1.1.50.88	AlSubGr1nc	SUBGROUP-UNIT 1 NOT CONNECTED	23 / 19 / 0
4.3.20.1.1.50.89	AlSubGr2nc	SUBGROUP-UNIT 2 NOT CONNECTED	23 / 19 / 0
4.3.20.1.1.50.90	AlNoDifPr1	NO DIFFERENTIAL PRESSURE COMP.1	23 / 19 / 0
4.3.20.1.1.50.91	AlNoDifPr2	NO DIFFERENTIAL PRESSURE COMP.2	23 / 19 / 0
4.3.20.1.1.50.92	AlMicAsIO	SLAVE MICROFACE NOT CONNECTED	23 / 19 / 0
.4.3.20.1.1.50.93	WaHiroSen1	HIROSENSOR 1 FAILURE	15 / 11 / 0
4.3.20.1.1.50.94	WaHiroSen2	HIROSENSOR 2 FAILURE	15 / 11 / 0

OID	Item-Name	Event description	HM Value
TRAPS/REGISTERS: 1.3.6.1.4.1.476.1.42.			Alarm / No Alarm
4.3.20.1.1.50.95	AlCond3Fan	CONDENSER 3 FANS FAILURE ALARM	23 / 19 / 0
4.3.20.1.1.50.96	AlCond4Fan	CONDENSER 4 FANS FAILURE ALARM	23 / 19 / 0
4.3.20.1.1.50.97	AlHP_TH3	COMP. 3 HIGH PRESSURE / TH. PROTECTION	23 / 19 / 0
4.3.20.1.1.50.98	AlHP_TH4	COMP. 4 HIGH PRESSURE / TH. PROTECTION	23 / 19 / 0
4.3.20.1.1.50.99	AlHP3	COMP. 3 HIGH PRESSURE	23 / 19 / 0
4.3.20.1.1.50.102	AlHP4	COMP. 4 HIGH PRESSURE	23 / 19 / 0
4.3.20.1.1.50.103	AlLP3	COMPRESSOR 3 LOW PRESSURE	23 / 19 / 0
4.3.20.1.1.50.104	AlLP4	COMPRESSOR 4 LOW PRESSURE	23 / 19 / 0
4.3.20.1.1.50.105	AlOil3	COMPRESSOR 3 OIL PRESSURE	23 / 19 / 0
4.3.20.1.1.50.106	AlOil4	COMPRESSOR 4 OIL PRESSURE	23 / 19 / 0
4.3.20.1.1.50.107	AlTH3	COMPRESSOR 3 THERMAL PROTECTION	23 / 19 / 0
4.3.20.1.1.50.108	AlTH4	COMPRESSOR 4 THERMAL PROTECTION	23 / 19 / 0
4.3.20.1.1.50.109	AlLoCondP3	LOW CONDENSER PRESSURE 3	23 / 19 / 0
4.3.20.1.1.50.110	AlLoCondP4	LOW CONDENSER PRESSURE 4	23 / 19 / 0
4.3.20.1.1.50.111	AlNoDifPr3	NO DIFFERENTIAL PRESSURE COMP.3	23 / 19 / 0
4.3.20.1.1.50.112	AlNoDifPr4	NO DIFFERENTIAL PRESSURE COMP.4	23 / 19 / 0
4.3.20.1.1.50.117	AlSubGr3nc	SUBGROUP-UNIT 3 NOT CONNECTED	23 / 19 / 0
4.3.20.1.1.50.118	AlSubGr4nc	SUBGROUP-UNIT 4 NOT CONNECTED	23 / 19 / 0
4.3.20.1.1.50.119	WaSubGr3nc	SUBGROUP-UNIT 3 NOT CONNECTED	23 / 19 / 0
4.3.20.1.1.50.120	WaSubGr4nc	SUBGROUP-UNIT 4 NOT CONNECTED	23 / 19 / 0
4.3.20.1.1.50.121	WaComp3Hou	CIRCUIT 3 WORKING HOURS EXCEEDED	15 / 11 / 0
4.3.20.1.1.50.122	WaComp4Hou	CIRCUIT 4 WORKING HOURS EXCEEDED	15 / 11 / 0
4.3.20.1.1.50.123	WaCond3Fan	CONDENSER 3 FANS FAILURE	23 / 19 / 0
4.3.20.1.1.50.124	WaCond4Fan	CONDENSER 4 FANS FAILURE	23 / 19 / 0
4.3.20.1.1.50.125	AlMicAsIO2	SLAVE MICROFACE 2 NOT CONNECTED	23 / 19 / 0
4.3.20.1.1.50.126	WaUserInp2	USER INPUT 2 TRIGGERED	15 / 11 / 0
4.3.20.1.1.50.127	AlUserInp2	USER INPUT 2 TRIGGERED	23 / 19 / 0
4.3.20.1.1.50.128	MeRecovSto	MESSAGE RECOVERY STOP	0 --- Trap only
4.3.20.1.1.50.129	MeRecovOK	MESSAGE RECOVERY OK	0 --- Trap only

4.6. VARIABLES & TRAPS/REGISTERS LIST: XDFN (XDM 1.60.046)

4.6.1. PARAMETERS TABLE

OID	Item-Name	Event description	HM Value
VARIABLES: 1.3.6.1.4.1.476.1.42.			Min/Max
4.3.21.1.1.5.4	Comp_TH_EN	Thermal Compressor	No=0 / Yes=1
4.3.21.1.1.6.1	AnaOutSel1	Analog Output 0	AlarmB=0, Supers=1, Cooling1=2, Cooling2=3, EC-Fan=4,Humid=5, Heating=6, FanSpeed=7, Ret.Temp=8, up.Temp=9, HT.Humi=10, HeaterB=11, RadCool=12, SupCont=13, Heat 33%,=14, 3P.Act1=15, 3P.Act2=16, Metric=17, I-Variex=18, D.Scroll=19
4.3.21.1.1.6.2	AnaOutSel2	Analog Output 1	Same Analog Output 0
4.3.21.1.1.7.5	TempSet	Temperature Set point	5.0 – 40.0
4.3.21.1.1.7.6	HumiSet	Humidity Set point	No=19, 20 – 80
4.3.21.1.1.7.8	Fanspeed	Fan Speed Standard	No, 30 – 100
4.3.21.1.1.7.9	TempProp	Temperature Proportional Band	1.0 – 30.0
4.3.21.1.1.7.10	HumiProp	Humidity Proportional Band	2 – 60
4.3.21.1.1.7.13	HumiCtrl	Humidifier Control	On/Off=0, Prop=1
4.3.21.1.1.7.14	DehumHyst	Dehumidification Hysteresys	25 – 75
4.3.21.1.1.9.6	AuRestart	Auto Restart	0 – 999
4.3.21.1.1.9.7	RemoteEN	Remote Enabled	No=0 / Yes=1
4.3.21.1.1.9.8	StdByUnit	Number of StandBy Units	0 – 1
4.3.21.1.1.9.9	RotationEN	Rotation Enabled	No=0, Daily=1, Mon=2, Tue=3, Wed=4,Thu=5, Fri=6, Sat=7, Sun=8
4.3.21.1.1.9.12	PerformRot	Perform Rotation	hh:mm
4.3.21.1.1.10.1	HiTemp	High Temperature level 1	No=0, 1 – 99
4.3.21.1.1.10.2	LoTemp	Low Temperature level 1	No=0, 1 – 99
4.3.21.1.1.10.3	HiHumi	High Humidity level 1	No=0, 1 – 99
4.3.21.1.1.10.4	LoHumi	Low Humidity level 1	No=0, 1 – 99
4.3.21.1.1.10.5	HiTempE	High Temperature level 2	No=0, 1 – 99
4.3.21.1.1.10.6	LoTempE	Low Temperature level 2	No=0, 1 – 99
4.3.21.1.1.10.7	HiHumiE	High Humidity level 2	No=0, 1 – 99
4.3.21.1.1.10.8	LoHumiE	Low Humidity level 2	No=0, 1 – 99
4.3.21.1.1.10.9	LPd	Low Pressure Delay	0 – 5
4.3.21.1.1.10.13	FanWaAl	Fan Failure	Warning=0 Alarm=1

OID	Item-Name	Event description	HM Value
VARIABLES: 1.3.6.1.4.1.476.1.42.			Min/Max
4.3.21.1.1.10.14	LiquiAl	Liquistat	No=0, Warning=1, Alarm=2
4.3.21.1.1.11.4	HeatSteps	Electrical Heating Step	0, 1
4.3.21.1.1.11.5	Heat_DeadB	Heating Dead Band	0.0 – 30.0
4.3.21.1.1.11.8	HumTyp	Humidifier Type	21L=0, 53L=1, 53H=2, 93L=3, 93H=4, d3H=5, HT2=6, HT5=7, HT9=8, EXT=9
4.3.21.1.1.11.9	HumSup	Humidifier Supply	230V=0, 400V=1, 375V=2, 475V=3
4.3.21.1.1.11.10	HumSteam	Humidifier Steam rate	No=2, 30%=3 – 100%=10
4.3.21.1.1.16.1	HumiSet_ac	Actual Humidity Set point	No=19, 20 – 80
4.3.21.1.1.18.3	TempSet_ac	Actual Temperature Set point	5.0 – 40.0
4.3.21.1.1.18.4	LocTemp	Return Temperature	-28.0 – 100.0
4.3.21.1.1.19.6	HT_Humi	Return Humidity	0 – 100
4.3.21.1.1.19.7	PTC_Temp	Supply Temperature	-28.0-100.0

4.6.2. EVENTS TABLE

OID	Item-Name	Event description	HM Value
VARIABLES: 1.3.6.1.4.1.476.1.42.			Alarm (Warning) active / Alarm (Warning) acknowledge / No Alarm (Warning)
4.3.20.1.1.50.1	AlHP	High Pressure	23 / 19 / 0
4.3.20.1.1.50.2	AlLP	Low Pressure	23 / 19 / 0
4.3.20.1.1.50.5	WaEHO	Electrical Over Heating	23 / 19 / 0
4.3.20.1.1.50.6	WaAF	Fan Failure	15 / 11 / 0
4.3.20.1.1.50.7	AlAF	Fan Failure	23 / 19 / 0
4.3.20.1.1.50.8	WaCF	Clogged Filter	15 / 11 / 0
4.3.20.1.1.50.9	WaLE	Water Leakage	15 / 11 / 0
4.3.20.1.1.50.10	AlLE	Water Leakage	23 / 19 / 0
4.3.20.1.1.50.13	WaHFA	Humidifier Failure	15 / 11 / 0
4.3.20.1.1.50.14	WaHHC	Humidifier High Current	15 / 11 / 0
4.3.20.1.1.50.15	WaHF	Humidifier failure	15 / 11 / 0
4.3.20.1.1.50.16	WaHN	Humidifier failure	15 / 11 / 0
4.3.20.1.1.50.17	WaHUC	Humidifier Cylinder Worn	15 / 11 / 0
4.3.20.1.1.50.18	Hrt	High Supply Temperature Level 1	15 / 11 / 0
4.3.20.1.1.50.19	Lrt	Low Supply Temperature Level 1	15 / 11 / 0
4.3.20.1.1.50.20	HrH	High Return Humidity Level 1	15 / 11 / 0
4.3.20.1.1.50.21	LrH	Low Return Humidity Level 1	15 / 11 / 0
4.3.20.1.1.50.22	HTE	High Supply Temperature Level 2	15 / 11 / 0
4.3.20.1.1.50.23	LTE	Low Supply Temperature Level 2	15 / 11 / 0
4.3.20.1.1.50.24	HHE	High Return Humidity Level 2	15 / 11 / 0
4.3.20.1.1.50.25	LHE	Low Return Humidity Level 2	15 / 11 / 0
4.3.20.1.1.50.26	WaCondHo	Conditioner Working Hours Exceeded	15 / 11 / 0
4.3.20.1.1.50.27	WaCompHo	Compressor Working Hours Exceeded	15 / 11 / 0
4.3.20.1.1.50.28	WaHumiHo	Humidifer Working Hours Exceeded	15 / 11 / 0
4.3.20.1.1.50.29	WaPTC	Supply Temperature Sensor Failure	15 / 11 / 0
4.3.20.1.1.50.30	WaRoomSe	Return Temperature and Humidity Sensor Failure	15 / 11 / 0
4.3.20.1.1.50.31	AlRoomSe	Sensors not Available	23 / 19 / 0
4.3.20.1.1.50.33	WaWater	Water Presence Sensor Failure	15 / 11 / 0
4.3.20.1.1.50.58	AlHP2	Pressure Transducer HP1 Sensor not Available	15 / 11 / 0
4.3.20.1.1.50.59	AlLP2	Pressure Transducer HP1 Sensor not Available	15 / 11 / 0
4.3.20.1.1.50.66	MeNoPowUI	No Power Active	15 / 11 / 0
4.3.20.1.1.50.70	WaNetMast	No Connection to Unit 1	15 / 11 / 0
4.3.20.1.1.50.71	AlTH1	Compressor Thermal Protection	23 / 19 / 0
4.3.20.1.1.50.75	WaUI_1_Wa2	Compressor Power Reduction Active	15 / 11 / 0
4.3.20.1.1.50.76	WaCond2Fan	Wrong Damper Position	23 / 19 / 0

4.7. VARIABLES & TRAPS/REGISTERS LIST: RACK (RKM 1.60.045)

4.7.1. PARAMETERS TABLE

OID	Item-Name	Event description	HM Value
VARIABLES: 1.3.6.1.4.1.476.1.42.			Min/Max
4.3.21.1.1.10.1	HiTemp	High Outlet Temperature	No, 1 – 99
4.3.21.1.1.10.5	HiTempE	High Inlet Temperature Level 1	No, 1 – 99
4.3.21.1.1.10.6	LoTempE	High Inlet Temperature Level 2	No, 1 – 99
4.3.21.1.1.19.8	PTC_TempDi	Outlet Temperature	-28.0-100.0
4.3.21.1.1.19.9	GLYC_TempD	Inlet Temperature	-28.0-100.0

4.7.2. EVENTS TABLE

OID	Item-Name	Event description	HM Value
VARIABLES: 1.3.6.1.4.1.476.1.42.			Alarm (Warning) active / Alarm (Warning) acknowledge / No Alarm (Warning)
4.3.20.1.1.50.8	WaCF	Smoke Alarm	23 / 19 / 0
4.3.20.1.1.50.9	WaLE	Rear Door Open	15 / 11 / 0
4.3.20.1.1.50.10	AlLE	Front Door Open	15 / 11 / 0
4.3.20.1.1.50.12	AlUI	Backup Cooling Active	23 / 19 / 0
4.3.20.1.1.50.15	WaHF	Fire Detection Failure	15 / 11 / 0
4.3.20.1.1.50.18	Hrt	High Outlet Temperature	15 / 11 / 0
4.3.20.1.1.50.22	HTE	High Inlet Temperature Level 1	15 / 11 / 0
4.3.20.1.1.50.23	LTE	High Inlet Temperature Level 2	23 / 19 / 0
4.3.20.1.1.50.29	WaPTC	Outlet Sensor Failure	15 / 11 / 0
4.3.20.1.1.50.61	WaOutSens	Inlet SX Sensor Failure	15 / 11 / 0
4.3.20.1.1.50.62	WaGlycolSe	Inlet DX Sensor Failure	15 / 11 / 0
4.3.20.1.1.50.65	WaSmoke	Smoke Warning	15 / 11 / 0
4.3.20.1.1.50.73	AlFire	Fire Alarm	23 / 19 / 0

4.8. VARIABLES & TRAPS/REGISTERS LIST FOR HPAC (T2MSNMP 1.60.045)

4.8.1. PARAMETERS TABLE

OID	Item-Name	Event description	HM Value
VARIABLES: 1.3.6.1.4.1.476.1.42.			Min/Max
4.3.21.1.1.7.5	TempSet	Temperature Set Point	5 / 40
4.3.21.1.1.7.6	HumiSet	Humidity Set Point	No, 19 – 80
4.3.21.1.1.7.7	SupplySet	Min. Supply Limit	No, 5 / 25
4.3.21.1.1.7.9	TempProp	Temperature Proportional band	1 / 30
4.3.21.1.1.7.10	HumiProp	Humidity Proportional Band	2 / 60
4.3.21.1.1.10.1	HiTemp	High Room Temperature Warning	No, 0 – 99
4.3.21.1.1.10.2	LoTemp	Low Room Temperature Warning	No, 0 – 99
4.3.21.1.1.10.3	HiHumi	High Room Humidity Warning	No, 0 – 99
4.3.21.1.1.10.4	LoHumi	Low Room Humidity Warning	No, 0 – 99
4.3.21.1.1.19.5	HT_Temp	Actual Return Temperature	0 – 100
4.3.21.1.1.19.6	HT_Humi	Actual Return Humidity	0 – 100
4.3.21.1.1.19.7	PTC_Temp	Actual Supply Temperature	-28.0 - 100.0
4.3.21.1.1.20.3	MIB_Fan	Fan Status	On=1 / Off=0
4.3.21.1.1.20.1	MIB_Humid	Humidifier Status	On=1 / Off=0
4.3.21.1.1.20.8	MIB_Dehum	Dehumidification Status	On=1 / Off=0
4.3.21.1.1.20.6	MIB_Heat	Heating Status	On=1 / Off=0
4.3.21.1.1.17.13	Valve3P	CW Valve Position	0 / 100

4.8.2. EVENTS TABLE

OID	Item-Name	Event description	HM Value
VARIABLES: 1.3.6.1.4.1.476.1.42.			Alarm (Warning) active / Alarm (Warning) acknowledge / No Alarm (Warning)
4.3.20.1.1.50.34	WaNet	Network Failure	15 / 11 / 0
4.3.20.1.1.50.70	WaNetmast	No Connection to Unit 1	15 / 11 / 0
4.3.20.1.1.50.77	WaHb_Error	Network Failure	15 / 11 / 0
4.3.20.1.1.50.18	HRT	High Room Temperature	15 / 11 / 0
4.3.20.1.1.50.19	LRT	Low Room Temperature	15 / 11 / 0
4.3.20.1.1.50.20	HRH	High Room Humidity	15 / 11 / 0
4.3.20.1.1.50.21	LRH	Low Roon Humidity	15 / 11 / 0
4.3.20.1.1.50.7	AlAF	Fan Failure	23 / 19 / 0
4.3.20.1.1.50.6	WaAF	Fan Failure	15 / 11 / 0
4.3.20.1.1.50.8	WaCF	Clogged Filter	15 / 11 / 0
4.3.20.1.1.50.10	AlLE	Water Leakage	23 / 19 / 0
4.3.20.1.1.50.9	WaLE	Water Leakage	15 / 11 / 0
4.3.20.1.1.50.13	WaHFA	Humidifier Failure	15 / 11 / 0
4.3.20.1.1.50.14	WaHHC	Humidifier High Current	15 / 11 / 0
4.3.20.1.1.50.15	WaHF	Humidifier Failure	15 / 11 / 0
4.3.20.1.1.50.16	WaHN	Humidifier Failure	15 / 11 / 0
4.3.20.1.1.50.17	WaHUC	Humidifier Cylinder Worn	15 / 11 / 0
4.3.20.1.1.50.73	AlFire	Fire Alarm	23 / 19 / 0
4.3.20.1.1.50.65	WaSmoke	Smoke warning	15 / 11 / 0
4.3.20.1.1.50.4	WaLC	Low Chilled Water	15 / 11 / 0
4.3.20.1.1.50.41	MePowerOff	Power Off	0 / 1
4.3.20.1.1.50.12	AlUI	User Input 1 Triggered	23 / 19 / 0
4.3.20.1.1.50.11	WaUI_1_Wa1	User Input 1 Triggered	15 / 11 / 0
4.3.20.1.1.50.69	AlUI2	User Input 2 Triggered	23 / 19 / 0
4.3.20.1.1.50.68	WaUI2	User Input 2 Triggered	15 / 11 / 0
4.3.20.1.1.50.30	WaRoomSen	Room Sensor Failure	15 / 11 / 0
4.3.20.1.1.50.31	AlRoomSen	Room Sensor Failure	23 / 19 / 0
4.3.20.1.1.50.87	AlHumOverF	Alarms Threshold	23 / 19 / 0

5. PART NUMBERS

Description	Code
HiSNMP: SNMP KIT POWERED BY EXTERNAL POWER SUPPLY	480096
HiSNMP: SNMP KIT POWERED BY UNIT ELECTRICAL PANEL	480097

Spare parts description	Code
Power supply	275675
Power cable	275678