



Manual

PDU SM-1688

PDU SW-1081

PDU SW-1681



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1 Important Information

1.1 Introduction

Thank you for buying a Coba Nitrox PDU.

PDUs are intelligent power distribution units for computers in server racks. They are offering a couple additional features, depending on the model.

Please read the following instructions carefully.

1.2 Scope of delivery

1x PDU

1x Power cord

1x CD with manual in German and English

1.3 Symbols

Symbol	Meaning
	Dangerous situation which can result in violation or death.
	Possible damage of property and other important information

2 Safety

2.1 Intended use

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2.1.1 Environmental

This product is only for indoor use and for connection with computers.

Don't use and store it inside humid rooms or near water.

Don't use it close to source of heat. The additional heat could lead to overheating and fire.

2.1.2 Disposal

Please dispose your product by using the special discharge point for electronic waste. Please ask your municipality or disposal company in case of further questions.



2.2 General information

HINWEIS

Please read this manual carefully before installing or using this product.

Keep this manual and pass it when passing the product.

Please follow the instructions and warnings of this manual before using the product.

The inobservance of this manual can effect violations and damage.

We disclaim liability for violations and damages caused by inobservance of this manual.

2.3 Danger and protection

Don't damage the cable.

Don't pull the plug by pulling the cable.

Don't use any patched or damaged cable or plug.

Don't use the cable or product close to heat source.

Don't open the housing of the product.

In case of strange noise or smell pull the power cord out of the socket.

Ensure that all cables are fixed permanently.

Keep the product away from children.

Don't remove the cables with wet hands (electric strike).

Don't use the product with wet hands (electric strike).

Keep the product free of dust (overheating and fire).

Leave service and cleaning only authorized and qualified personnel.



3 Product information

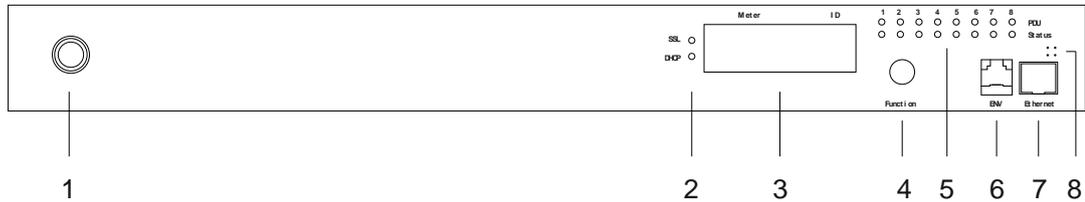
The PDU enables to power-on and –off the connected devices via a TCP/ IP network. Each of the output sockets can be switched separately. You can also read single or total power consumption as well as environmental parameters (with optional sensor), depending model.

3.1 Features

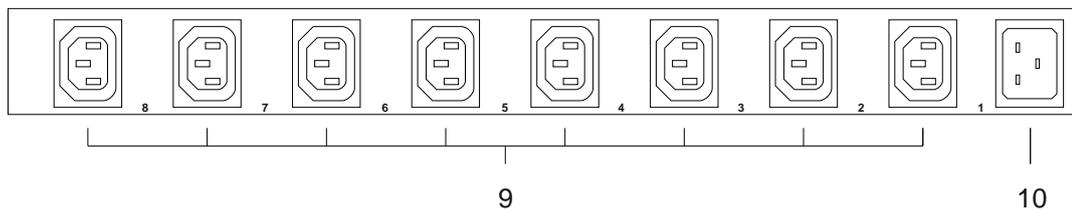
- Integrated Web Server with Realtime Current Monitoring
- Integrated True RMS Current measurement
- Indicating IP Address
- Alarm by speaker
- Alarm by E-Mail and SNMP
- Supports PDU Monitor Software for monitoring several PDUs.
- Supports SNMP and MIB for monitoring by NMS
- Supports individual protection of sockets
- Realtime switching from output
- Status display by LED
- Supports switch-on delay
- Optional Temperature-/ Humidity sensor (only SM-1688)

3.2 Description

SM-1688 Vorne

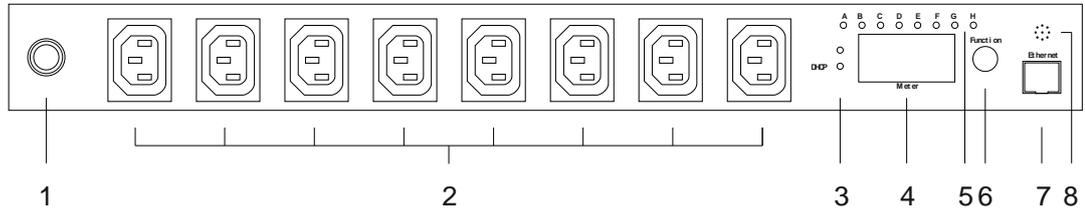


SM-1688 Hinten

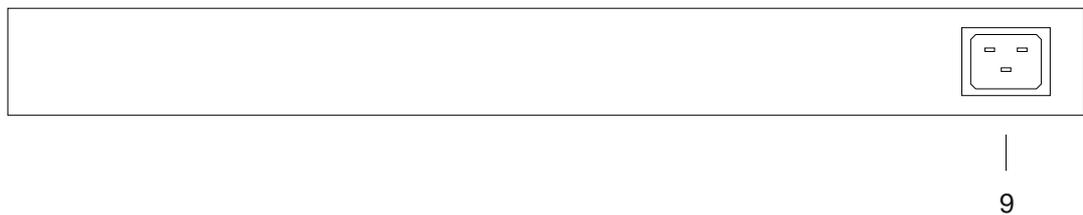


- 1 Fuse, Over Load Protection
- 2 LED DHCP: Indicates active DHCP
LED SSL: No function
- 3 Display Meter - Indicates Current and IP-Address
 ID - PDU identification
- 4 Function button
Turn-Off Alarm (Over load alarm can't be turned off)
Push and hold for 2 Sec. to show IP-Address
Push and hold for 4 Sec. for switch between DHCP and fixed IP
Push and hold for 6 Sec. for Reset
- 5 LED socket status
Green Connected device
Red Fault
- 6 Optional Sensor
- 7 Network
- 8 Speaker
Warning - 1 tone / sec.
Over load - 3 tone / sec (The alarm will sound till the current is normal again
and the real value is 0,5A lower than the critical value.)
- 9 Output
- 10 Input

SW-1081/ 1681 Vorne



SW-1081/ 1681 Hinten



- 1 Fuse, Over Load Protection
- 2 Output
- 3 LED DHCP: Indicates active DHCP
- 4 Display Meter - Indicates Current and IP-Address
ID - PDU identification
- 5 LED socket status
Green Connected device
- 6 Function button
Turn-Off Alarm (Over load alarm can't be turned off)
Push and hold for 2 Sec. to show IP-Address
Push and hold for 4 Sec. for switch between DHCP and fixed IP
Push and hold for 6 Sec. for Reset
- 7 Network
- 8 Speaker
Warning - 1 tone / sec.
Over load - 3 tone / sec.
(The alarm will sound till the current is normal again and the real value is 0,5A lower than the critical value.)
- 9 Input

3.3 Technical data

Sockets:	1x Input 230V~ AC, 10A (IEC-60320 C13), 47-63 Hz (only model SW-1081)
	1x Input 230V~ AC, 16A (IEC-60320 C20), 47-63 Hz (only model SM-1688/ SW-1681)
	8x Output 230V~ AC, 10A (IEC-60320 C13)
	1x Ethernet (RJ45)
	1x Sensor (RJ11) (only model SM-1688)
Network:	10 Mbit/s 10baseT Ethernet (RJ45)
Protocol:	TCP/IP, HTTP, DHCP, SNMP, Mail
Switched current (total):	10A (2300W) only model SW-1081
	16A (3600W) only model SM-1681/ SW-1681
Switched current (per port):	10A (2300W)
Display:	0-20A
Resolution:	0,1A
Accuracy:	+/- 2%
Temperature:	5°C - 45°C
Humidity:	0% - 95%
Dimension:	19" / 1 HU
Weight:	1,5 kgs

3.4 Electric connection

Model SW-1081:	Power cord 10A
	Total current max. 10A (2300W)
Model SW-1681:	Power cord 10A
	Total current max. 16A (3600W)
Model SM-1688:	Power cord 16A
	Total current max. 16A (3600W)



4 Installation

Temperature – When mounting inside a closed cabinet the temperature inside the cabinet can be higher than outside. Ensure that the temperature is within the specification mentioned in 3.3

Air Flow – Avoid to affect the air flow inside the rack.

1. Take out the PDU and check the package content for completeness and damages.

In case of missing parts or external damages, please contact your local dealer for replacement.

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Please keep the original package for shipping in case of warranty issue.

2. Ensure to switch-off all devices before installing.
3. Fix the rack-brackets at the housing. Use the included screws.
4. Look for a suitable place in the rack and fix the PDU into the rack.
5. Connect all output cords. Then connect the input cord.
Take care of the total current (look at 3.3/ 3.4).
6. Connect the PDU with the network.
7. The PDU is ready now.

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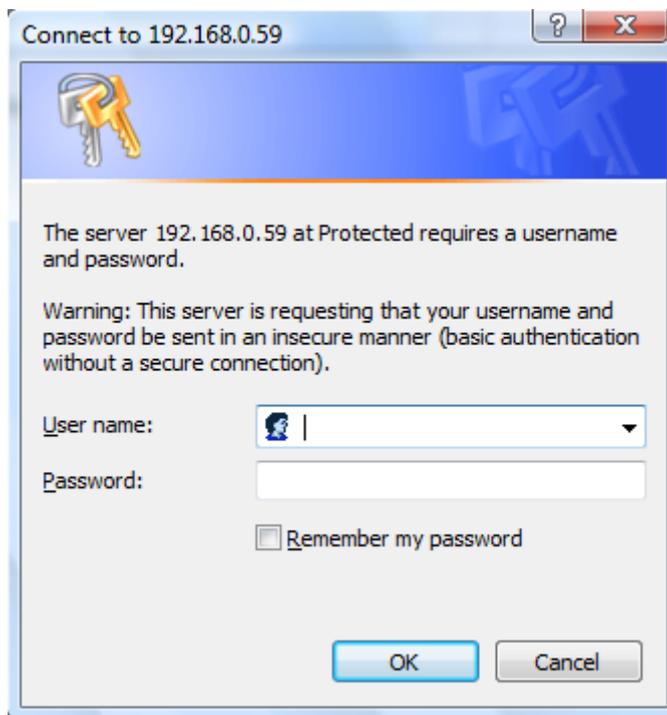
5 The Web interface

5.1 Login

Enter the IP address in a Web-Browser

The user name is „snmp“

The password is „1234“



5.2 Information - PDU

Displays the total current

If a sensor is connected (only SM-1688) also temperature and humidity will be shown.

SW-1081/ 1681

 Inter-Tech Elektronik Handels GmbH D-30855 Langenhagen - Germany vertrieb@inter-tech.de www.inter-tech.de				
Total load: 0.0 A , Status: Normal				
Information	PDU			
PDU	PDU	0.0 A Normal		
System				
Control	Threshold			
Outlet	Warning	8.0 A		
Configuration	Overload	10.0 A		
PDU				
Threshold				
User				
Network				
Mail				
SNMP				

SM-1688

 Inter-Tech Elektronik Handels GmbH D-30855 Langenhagen - Germany vertrieb@inter-tech.de www.inter-tech.de				
Total load: 3.9 A , Status: Normal				
Information	PDU			
PDU	PDU1	0.0 A Normal		
System	PDU2	0.6 A Normal		
Control	PDU3	0.3 A Normal		
Outlet	PDU4	1.4 A Normal		
Group	PDU5	0.6 A Normal		
Schedule	PDU6	0.3 A Normal		
Ping Action	PDU7	0.5 A Normal		
Configuration	PDU8	0.2 A Normal		
PDU	Total Current	3.9 A Normal		
Threshold				
User	Option Device			
Network	Temperature	+29.9 C		
Mail	Humidity	06 %		
SNMP				
Time				



5.3 Information - System

Displays the system information like:

Model number

Firmware version

MAC address

System name

System contact

Location

Inter-Tech Elektronik Handels GmbH D-30855 Langenhagen - Germany vertrieb@inter-tech.de www.inter-tech.de		NitroX
Total load: 0.0 A , Status: Normal		
Information	Model No.	PDU SW-1081
PDU	Firmware Version	s4.82-091012-1cb08s
System	MAC Address	00:06:18:75:96:4B
Control	System Name	<input type="text" value="PDU"/>
Outlet	System Contact	<input type="text" value="Admin"/>
Configuration	Location	<input type="text" value="Office"/>
PDU		<input type="button" value="Apply"/>
Threshold		
User		
Network		
Mail		
SNMP		

5.4 Control - Outlet

Displays status/ Change of socket status

Choose the right output and push the relevant button

ON: Push to Turn-On

OFF: Push to Turn-Off

OFF/ON: Push for Reboot



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Total load: 0.0 A , Status: Normal

Information	PDU	Status	
PDU	OutletA	ON	<input type="checkbox"/>
System	OutletB	ON	<input type="checkbox"/>
Control	OutletC	ON	<input type="checkbox"/>
Outlet	OutletD	ON	<input type="checkbox"/>
Configuration	OutletE	ON	<input type="checkbox"/>
PDU	OutletF	ON	<input type="checkbox"/>
Threshold	OutletG	ON	<input type="checkbox"/>
User	OutletH	ON	<input type="checkbox"/>
Network	<input type="button" value="ON"/> <input type="button" value="OFF"/> <input type="button" value="OFF/ON"/>		
Mail			
SNMP			

5.5 Control – Group (only SM-1688)

You can group different outputs to switch them together.
Register the outputs as named at Configuration-PDU and separate them by comma.



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Total load: 3.9 A , Status: Normal

Information	Outlet (A,B,C)			Active
PDU	A,	<input type="button" value="ON"/>	<input type="button" value="OFF"/>	<input checked="" type="checkbox"/>
System	B,	<input type="button" value="ON"/>	<input type="button" value="OFF"/>	<input checked="" type="checkbox"/>
Control	C,	<input type="button" value="ON"/>	<input type="button" value="OFF"/>	<input checked="" type="checkbox"/>
Outlet	D,	<input type="button" value="ON"/>	<input type="button" value="OFF"/>	<input checked="" type="checkbox"/>
Group	E,	<input type="button" value="ON"/>	<input type="button" value="OFF"/>	<input checked="" type="checkbox"/>
Schedule	F,	<input type="button" value="ON"/>	<input type="button" value="OFF"/>	<input checked="" type="checkbox"/>
Ping Action	G,H,	<input type="button" value="ON"/>	<input type="button" value="OFF"/>	<input checked="" type="checkbox"/>
Configuration	H,	<input type="button" value="ON"/>	<input type="button" value="OFF"/>	<input checked="" type="checkbox"/>
PDU	<input type="button" value="Setting"/> <input type="button" value="Apply"/>			
Threshold				
User				
Network				
Mail				
SNMP				
Time				

5.6 Control – Schedule (only SM-1688)

Adjust the time schedule for automatic On/ Off switch.
You can also adjust an Off-On Cycle



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Total load: 3.9 A , Status: Normal

Information Current Time: 2016/01/29 15:00:55

	Outlet (A,B,..)	Every	Date (yy/mm/dd)	Begin (hh:mm)	End (hh:mm)	Action	Active
Control	A,B,	Day	09/06/30	14:48	18:30	OFF/ON	<input type="checkbox"/>
Outlet	B,	Mon	09/06/30	07:59	18:30	ON	<input type="checkbox"/>
Group	C,	Mon	09/06/30	07:59	18:30	ON	<input type="checkbox"/>
Schedule	D,	Mon	09/06/30	07:59	18:30	ON	<input type="checkbox"/>
Ping Action	E,	Mon	09/06/30	07:59	18:30	ON	<input type="checkbox"/>
Configuration	F,	Mon	09/06/30	07:59	18:30	ON	<input type="checkbox"/>
PDU	G,	Mon	09/06/30	07:59	18:30	ON	<input type="checkbox"/>
Threshold	H,	Mon	09/06/30	07:59	18:30	ON	<input type="checkbox"/>
User							
Network							
Mail							
SNMP							
Time							

5.7 Control – Ping Action (only SM-1688)

Ping IP Address and start automatic switch if no response.



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Total load: 3.9 A , Status: Normal

Information Current Time: 2016/01/29 15:00:55

	Ping IP Address	Response 10 minutes	Outlet	Action	Active
Control	19.168.23.200	0	PDC	OFF/ON	<input type="checkbox"/>
Outlet	19.168.23.201	0	DBServ	OFF/ON	<input type="checkbox"/>
Group	19.168.23.202	0	OutletC	OFF	<input type="checkbox"/>
Schedule	19.168.23.203	0	OutletD	OFF	<input type="checkbox"/>
Ping Action	19.168.23.204	0	OutletE	OFF	<input type="checkbox"/>
Configuration	19.168.23.205	0	OutletF	OFF	<input type="checkbox"/>
PDU	19.168.23.206	0	OutletG	OFF	<input type="checkbox"/>
Threshold	19.168.23.207	0	OutletH	OFF	<input type="checkbox"/>
User					
Network					
Mail					
SNMP					
Time					

5.8 Configuration - PDU

Nomination of output sockets and adjusting of Power-On delay.

Name: Name of output socket

ON: Adjusting of Power-On delay, per socket.

OFF: Adjusting of Power-Off delay, per socket.

Max. delay time is 255 sec.

PDU			
Total load: 0.0 A , Status: Normal			
Information	Name	ON Delay (sec)	OFF Delay (sec)
PDU	OutletA	1	1
System	OutletB	2	2
Control	OutletC	3	3
Outlet	OutletD	4	4
Configuration	OutletE	5	5
PDU	OutletF	6	6
Threshold	OutletG	7	7
User	OutletH	8	8
Network			
Mail			
SNMP			
SSL			
	<input type="button" value="Apply"/>	<input type="button" value="Apply"/>	<input type="button" value="Apply"/>

Consider :

When the PDU is connected to the electric grid it will start the outputs automatically according the preset data. Factory setting will start each output with a delay of 1 second.

If the PDU will be disconnected before finishing all operations, it will recover the last status. Probably not started operations have to be started manually.

5.9 Configuration - Threshold

Adjusting Threshold for warning and over load

- Only SM-1688:
 - Adjusting Treshold for temperature and humidity
 - Adjustable per port

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Total load: 0.0 A , Status: Normal

	Name	Threshold (Amp)	
		Warning	Overload
Information PDU System	PDU	<input style="width: 40px;" type="text" value="8"/>	<input style="width: 40px;" type="text" value="10"/>
<input type="button" value="Apply"/>			
Control Outlet			
Configuration PDU Threshold User Network Mail SNMP			

SM-1688

 Inter-Tech Elektronik Handels GmbH D-30855 Langenhagen - Germany vertrieb@inter-tech.de www.inter-tech.de			
Total load: 3.9 A , Status: Normal			
Information	Name A	Threshold value	
	Current	Warning value <input type="text" value="36.0"/> A	Overload value <input type="text" value="17.0"/> A
PDU	Voltage	Warning value <input type="text" value="250"/> V	Overload value <input type="text" value="300"/> V
System			
Control	Name B	Threshold value	
	Current	Warning value <input type="text" value="36.0"/> A	Overload value <input type="text" value="17.0"/> A
Outlet	Voltage	Warning value <input type="text" value="250"/> V	Overload value <input type="text" value="300"/> V
Group			
Configuration	Name C	Threshold value	
	Current	Warning value <input type="text" value="36.0"/> A	Overload value <input type="text" value="17.0"/> A
Schedule	Voltage	Warning value <input type="text" value="250"/> V	Overload value <input type="text" value="300"/> V
Ping Action			
Configuration	Name D	Threshold value	
	Current	Warning value <input type="text" value="36.0"/> A	Overload value <input type="text" value="17.0"/> A
PDU	Voltage	Warning value <input type="text" value="250"/> V	Overload value <input type="text" value="300"/> V
Threshold			
User	Name E	Threshold value	
Network	Current	Warning value <input type="text" value="36.0"/> A	Overload value <input type="text" value="17.0"/> A
Mail	Voltage	Warning value <input type="text" value="250"/> V	Overload value <input type="text" value="300"/> V
SNMP	Name F	Threshold value	
Time	Current	Warning value <input type="text" value="36.0"/> A	Overload value <input type="text" value="17.0"/> A
	Voltage	Warning value <input type="text" value="250"/> V	Overload value <input type="text" value="300"/> V
	Name G	Threshold value	
	Current	Warning value <input type="text" value="36.0"/> A	Overload value <input type="text" value="17.0"/> A
	Voltage	Warning value <input type="text" value="250"/> V	Overload value <input type="text" value="300"/> V
	Name H	Threshold value	
	Current	Warning value <input type="text" value="36.0"/> A	Overload value <input type="text" value="17.0"/> A
	Voltage	Warning value <input type="text" value="250"/> V	Overload value <input type="text" value="300"/> V
	Temperature	Under <input type="text" value="5"/> °C	Above <input type="text" value="50"/> °C
	Humidity	Warning value <input type="text" value="80"/> %	
		<input type="button" value="Apply"/>	

5.10 Configuration – User

Change of ID and password

Default for ID is „snmp“ and for password “1234”

 Inter-Tech Elektronik Handels GmbH D-30855 Langenhagen - Germany vertrieb@inter-tech.de www.inter-tech.de			
Total load: 0.0 A , Status: Normal			
Information	Original		
	ID	<input type="text"/>	
PDU	Password	<input type="text"/>	
System			
Control	New		
	ID	<input type="text"/>	
Outlet	Password	<input type="text"/>	
Configuration			
PDU			
Threshold			
User			<input type="button" value="Apply"/>
Network			
Mail			
SNMP			

5.11 Configuration – Network

Network information

Information		IP Address	
PDU	Host Name	<input type="text" value="DIGIBOARD"/>	
System	IP Address	<input type="text" value="10.0.0.52"/>	
Control	Subnet Mask	<input type="text" value="255.255.255.0"/>	
Outlet	Gateway	<input type="text" value="10.0.0.100"/>	
Configuration		<input checked="" type="checkbox"/> Enable DHCP	
PDU	DNS Server IP		
Threshold	Primary DNS IP	<input type="text" value="10.0.0.7"/>	
User	Secondary DNS IP	<input type="text" value="10.0.0.100"/>	
Network		<input type="button" value="Apply"/>	
Mail			
SNMP			

5.12 Configuration – Mail

Email Notification Setup for Alarm and Warning.

Email Server: Mail server name

Sender's Email:

Email Address: Recipient email address

The email will contain the following information:

Output A-H XXXXXXXXX

X=0 : Off

X=1 : On

 Inter-Tech Elektronik Handels GmbH D-30855 Langenhagen - Germany vertrieb@inter-tech.de www.inter-tech.de		
Total load: 0.0 A , Status: Normal		
Information PDU System Control Outlet Configuration PDU Threshold User Network Mail SNMP	Email Setting Email Server <input type="text" value="mail.your.com"/> Sender's Email <input type="text" value="sender@yourcom.com"/> Recipient's Email Address Email Address <input type="text"/> <input type="button" value="Apply"/>	

5.13 Configuration – SNMP

Email Notification Setup for Alarm and Warning by SNMP

Trap Notification: Recipient IP-Adresse

Community: Adjust SNMP area

Read: is fixed to “public”

Write: Default is “public”, can be changed individually.

 Inter-Tech Elektronik Handels GmbH D-30855 Langenhagen - Germany vertrieb@inter-tech.de www.inter-tech.de		
Total load: 0.0 A , Status: Normal		
Information PDU System Control Outlet Configuration PDU Threshold User Network Mail SNMP	Trap Notification Receiver IP <input type="text" value="192.168.0.1"/> <input type="button" value="Apply"/> Community Read public Write <input type="text" value="public"/> <input type="button" value="Apply"/>	

5.14 Configuration – Time (only SM-1688)

Preset of time and time server

Inter-Tech Elektronik Handels GmbH D-30855 Langenhagen - Germany vertrieb@inter-tech.de www.inter-tech.de			
Information	Internet Time Setting	Time Between Updates	<input type="text" value="NO"/>
System	Primary Time Server	Secondary Time Server	<input type="text" value="pool.ntp.org"/>
Control	Time Zone		<input type="text" value="asia.pool.ntp.org"/>
Outlet			<input type="text" value="GMT+8:00"/>
Schedule			<input type="button" value="Apply"/>
Ping Action			
Configuration	System Time 2007/01/01 00:04:50		
PDU	System Time		<input type="text" value="2007/01/01 00:04:50"/>
User	(yyyy/mm/dd hh:mm:ss)		<input type="button" value="Apply"/>
Network			
Mail			
SNMP			
Time			

6 Using SNMP

The PDU is working with SNMP v1 and v2.

The attached CD includes the file PDUMIB.mib for import into your SNMP software in the folder MIB.

You can see all parameters when you open the file with a normal text editor.

Please look for further instructions into the manual of your SNMP software.

If you want to program scripts by yourself, please look into the specifications of SNMP.

7 Using PDU Utility

The PDU Utility software as well as the manual for that software is onto the attached CD.

8 Maintenance

This product needs no maintenance which requires an opening of the housing.

You can remove dust outside with a dry duster.

Don't clean the device with a damp cloth. Danger of an electric strike.

Check power cords from time to time.

Replace damaged power cords immediately.

HINWEIS



9 Disposal

Please dispose your product by using the special discharge point for electronic waste. Please ask your municipality or disposal company in case of further questions.





10 Warranty terms

Inter-Tech grants 24 months warranty by proper use up from the date of purchase.

In case of warranty issue please contact your local dealer or the dealer from which you bought the product.

We will grant no warranty by:

- Missing or damaged warranty seal,
- Negligent behavior,
- Improper use,
- Nonobservance of the manual,
- External violence,
- Acts of god,
- Damages caused by manipulation, upgrading, updating or reconstruction of hardware or software
- Damages caused by other harm,

In case of data loss Inter-Tech will only be liable at wanton negligence or deliberate intention or, in all other cases, only for the recovery of data from a continuous, daily backup. Inter-Tech does not assume liability for all other matters.

Please look also at our complete warranty terms on our website.

11 Contact

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