



NIMAC NETWORK MONITORING SYSTEM ("NIMAC NMS")



FIGURE 1.1 – NMS Main Page

- 1) This is the main page listing all the substations that connects with NIMAC NMS.
- 2) Station with alarming condition will be blinking with colour box changed to "pink" (as shown in *FIGURE 1.1*).





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Apps			

Nimac Monitoring System

Last Login: admin-a, Time: 2021-02-08 09:23:31

Please enter your password!	Please enter username
	 Please enter your password!
	Looin

FIGURE 1.2 – Login Page

- 1) This is the login page after clicking on the desired substation for viewing.
- 2) There will be two (2) types of logins, ie User Login & Admin Login.
 - User Login can only view the data, <u>but cannot</u> make changes;
 - Admin Login can both view the data and make changes of parameter settings or downloads.
- 3) There are up to 5 admin accounts can be created.





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kk			AC Inp	ut			Langu	1age: English	 ∧ A admin 	-a <u>Sign out</u>
AC Input	Measured data									
	Ua	235.07 V	Ub	241.21 V	Uc	234.36 V	Frequency	50.05 HZ	Active power	4.63 kW
	Ia	0 A	Ib	23.37 A	Ic	0 A	Power factor	0.82	Active energy	130.2 kWh
DC Output										
	Status									
Rectifier	Ua loss	NORM	Ia current high	NORM	Ub high	NORM 🖲	Ue low	NORM	frequency low	NORM

	Adjust											
System	AC voltage highlevel	280 V	input	set	AC phase loss level	60 V	input	set	frequency high level	52 HZ	input	set
	AC voltage low level	180 V	input	set	AC over current level	99 A	input	set	frequency low level	48 HZ	input	set

offset of Ub

Gain of Ib

offset of Ib

Gain of Uc

offset of Uc

Uc loss

NORM 🔵

0 V

1

0 A

1

0 V

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input set

input

input set

input set

set

Ic current high

NORM

Gain of Ic

offset of Ic

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AC type

1

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input

Three-phase Three-ph ∨ set

set

set

Event Record

Relay

Ua high

Calibration

Gain of Ua

offset of Ua

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offset of Ia

Gain of Ub

NORM

Ub low

1

0 V

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1

input set

input set

input

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set

NORM 🔵

Meter

Figure 1.3 –	- Page on	the AC	Input	Parameters
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kk				DC Ou	tput						Language	e: English		R a	dmi	n-a <u>S</u>	<u>Sign ou</u>	<u>it</u>
AC Input	Measured data																	
_	System voltage	53.28	V	Battery2 Curren	t	0 A	Battery temperatu	ire 2	25 °C	Reserve t	temperature	25 °C		Load2 cur	rrent		0 A	
DC Output	Load voltage	53.28	VR	lectifier output cur	rent	0 A	Ambient temperat	ure 2	25 °C	Battery	Capacity	10 %		Load3 cur	rrent		0 A	
DC Output	Battery1 Current	0 A		Load current		0 A	Ambient humidit	у	0%	Load1	current	0 A		Load4 cur	rrent		0 A	
Rectifier	Status																	Í
	Charge status	Float Charg	:	Load Fuse		NORM	Battery temp high	NOR	M 🔴	Electrolyte	e Level	NORM	L	oad3 LVD		N	IORM 🖲	
	Spare	NORM		LVD2		NORM	Battery temp low	NOR	M 🔴	SPD)	NORM	L	oad4 LVD		N	IORM 🔵	
Relay	Spare	NORM		LVD1		NORM	Ambient temp high	NOR	M 🔴	Smok	te	NORM	A	AC Alarm		N	JORM 🖲	
	Load current high	NORM	Ba	ttery current high		NORM	Ambient temp low	NOR	M 🔴	Door	r	NORM	Ι)C Alarm		N	JORM 🖲	
System	Battery charge	NORM	Ba	ttery votgage low		NORM	Crash	NOR	M 🔴	Load1 I	ND	NORM	Rea	stifer Aları	m	N	JORM 🖲	
	voltage high	NORM		Battery fuse		NORM	DC Earth Fault	NORI	M 🖲	Load2 I	ND	NORM	De	vice Alarn	n	N	IORM 🖲	
Event Record	Adjust																	Í
	system limit cur	rent	20 A	input	set	Float	Charge voltage	53 V	input	set	Battery	test stop voltage		48 V		inpu	ut se	et
Meter	load current high	level	200 A	input	set	Boost	Charge voltage	56 V	input	set	Batter	ry test duration		0 min		inpu	ut s	et
	battery current high	h level	20 A	input	set	System	Minimum voltage	43 V	input	set	Batt	ery test result		fail	t	iail	∨ s	et
	System(Rectifier) voltag	e high level	58 V	input	set	Temperature	e compensation enable	ON	ON	∽ set	Ma	nual Charge		OFF		OFF	∨ s	et
	System(Battery) voltag	e low level	47 V	input	set	Temperatur	e compensation factor	0 mV/°C	input	set	Manual	boost charge time		12 H		inpu	ut se	et
	LVD1 enable		ON	ON v	set	Period	equalize enable	ON	ON	✓ set	Load	d1 LVD delay		0		inpu	ut se	et
	LVD1 disconnect v	voltage	46 V	input	set	Period	equalize inerval	30 day	input	set	Load1 LVI) disconnect volta	ge	46 V		inpu	ut se	et
	LVD1 reconnect v	oltage	50 V	input	set	Period	equalize duration	60 min	input	set	Load1 LVI	D reconnect voltag	ge	50 V		inpu	ut se	et
	LVD2 enable	•	ON	ON ¥	set	Fast	charge Enable	OFF	OFF	✓ set	Load	d2 LVD delay		0		inpu	ut se	et

FIGURE 1.4a – Page on DC Output of SMR

- 1) Details on metering and status of the DC Output.
- 2) The changes on parameter, adjustment and calibration can be made only by **Admin**.
- 3) Alarming condition will be notified via "RED" LED and the partciular icon page wording (e.g. Rectifier) turns into RED colour





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	LVD2 enable	UN	UN Y	ક્લા	rast enarge Enable	110	UFF Y	ક્લા	Load2 LVD delay	U	Input	561
	LVD2 disconnect voltage	43.2 V	input	set	Fast charge Voltage	56 V	input	set	Load2 LVD disconnect voltage	46 V	input	set
	LVD2 reconnect voltage	50 V	input	set	Fast charge limit time	120分	input	set	Load2 LVD reconnect voltage	50 V	input	set
	Battery temp high level	60 °C	input	set	Battery rated capacity	200	input	set	Load3 LVD delay	0	input	set
	Battery temp low level	-0.1 ℃	input	set	Boost to float charge factor	3 %	input	set	Load3 LVD disconnect voltage	46 V	input	set
	Ambient temp high level	40 °C	input	set	Float to Boost charge factor	5 %	input	set	Load3 LVD reconnect voltage	50 V	input	set
	Ambient temp low level	-0.1 °C	input	set	Battery charge limit current	10 %	input	set	Load4 LVD delay	0	input	set
	Ambient humidity high level	98 %	input	set	Battery test enable	OFF	OFF 🗸	set	Load4 LVD disconnect voltage	46 V	input	set
\	Ambient humidity low level	50 %	input	set	Battery test start voltage	53 V	input	set	Load4 LVD reconnect voltage	50 V	input	set
	Calibration								1			
	Battery num	1	input	set	Battery1 current gain	1	input	set	Battery temperature gain	1	input	set
	Battery contact	LOW		set	Battery1 current offset	4.56 A	input	set	Battery temperature	-0.01 °C	input	set
	Dattery contact	DRIVE			Battery2 current gain	1	input	set	Ambient temperature gain	1	input	set
	Battery shunt current	200 A	input	set	Battery2 current offset	-0.01 A	input	set	Ambient temperature offset	-0.01 °C	input	set
	Battery shunt voltage	50 mV	input	set	Load1 current gain	1	input	set	Ambient humidity gain	1	input	set
	Load num	1	input	set	Load1 current offset	-0.01 A	input	set	Ambient humidity offset	-0.01 %	input	set
	Load contact	LOW		set	Load2 current gain	1	input	set	Reserve temperature gain	1	input	set
	Load contact	DRIVE			Load2 current offset	-0.01 A	input	set	Reserve temperature offset	-0.01 °C	input	set
	Load shunt current	100 A	input	set	Load3 current gain	1	input	set	Load current gain	1	input	set
	Load shunt voltage	75 mV	input	set	Load3 current offset	-0.01 A	input	set	Load current offset	-0.01 A	input	set
	System voltage gain	1.004	input	set	Load4 current gain	1	input	set				
	System voltage offset	0 V	input	set	Load4 current offset	-0.01 A	input	set				
	Load voltage gain	1	input	set								
	Load voltage offset	0 V	input	set								

FIGURE 1.4b – Page on DC Output of SMR

The changes on parameter, adjustment and calibration can be made only by **Admin**.







FIGURE 1.5 – Details on Rectifier Module

- No. of Rectifer Module connected will be shown as Module 1, 2, 3 etc.





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AC Input	Status															
	Relay1 alarm s	status OK		Relay3 alarm st	atus		OK 🖲	Relay5 alarm status	FT 🖲							
DC Outout	Relay2 alarm s	status OK		Relay4 alarm st	atus		OK 🖲	Relay6 alarm status	OK 🔴							
De Ottiput	Adjust															
Rectifier	Relay1 alarm	Battery Voltage	Della	Valtara Laur		oot	Rectifier Fail	Emergency alarm	Emergency alar	m v	set	Alarm23	CLOSE	CLOSE	v	set
	type	Low	Battery	voltage Low	~	Sel	Rectifier Voltag	e Non emergency	Non omorgonou	, alcon	cot	Alarm24	CLOSE	CLOSE	v	set
	Relay1 output	OPEN			v	set	High	alarm	Non emergency	dic∨	361	Alarm25	CLOSE	CLOSE	v	set
Relay	set	OTEN	UFLIN		Ŷ	001	Battery Voltage	e Non emergency	Non emergency	al: v	set	Alarm26	CLOSE	CLOSE	v	set
_	Relay2 alarm	CLOSE	CLOSE	:	~	set	Low	alarm	non emergency	ait •		Alarm27	CLOSE	CLOSE	v	set
System	type		02002				LVD1 Alarm	Emergency alarm	Emergency alar	m v	set	Alarm28	CLOSE	CLOSE	V	set
	Relay2 output	CLOSE	CLOSE		~	set	LVD2 Alarm	Emergency alarm	Emergency alar	m v	set	Alarm29	CLOSE	CLOSE	~	set
Event Decord	set					_	Battery Current	t CLOSE	CLOSE	v	set	Alarm30	CLOSE	CLOSE	~	set
Event Record	Relay3 alarm	CLOSE	CLOSE		v	set	Limit					Alarm31	CLOSE	CLOSE	~	set
	type				_	_	Rectifier Curren	t Emergency alarm	Emergency alar	m v	set	Alarm32	CLOSE	CLOSE	V	set
Meter	Relay3 output	CLOSE	CLOSE		v	set	Limit					DI1 type (Door)	OPEN	OPEN	~	set
	set				_	_	Battery MCB Tr	ip Emergency alarm	Emergency alar	m v	set	DI2 type (Smoke)	OPEN	OPEN	~	set
	Relay4 alarm	CLOSE	CLOSE		v	set	Load MCB Trip	p Emergency alarm	Emergency alar	m v	set	DI3 type (SPD)	OPEN	OPEN	~	set
	type				_		Battery Temp	CLOSE	CLOSE	V	set	DI4 type (Water)	OPEN	OPEN	~	set
	Relay4 output	CLOSE	CLOSE		v	set	Room Temp	CLOSE	CLOSE	V	set	DI5 type (DC Earth Faul)	OPEN	OPEN	~	set
	Sei Dalaus alarm	Emanane			_		Door	CLOSE	CLOSE	~	set	DI6 type (Crash)	OPEN	OPEN	V	set
	tune	alarm	Emerge	ency alarm	v	set	Smoke	CLOSE	CLOSE	~	set					
	type	didilli					SPD	CLOSE	CLUSE	V	Set					

FIGURE 1.6 – Detail/Status on Relay Status

The adjustment can be made only by **Admin**.





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	Н	ardware version	8	0-00-00	00:0)1:00	set									
DC Output	S	oftware version	0													J.
	Adjust															
Rectifier	I	Device SN	0	input		set	Buzzer	ON	ON v	set	RS232 parity	Even	Ever	ו	∨ S	ət
	LC	D language	English	English	v	set	Device address	33	input	set	Network protocol	-	TCP		∨ S	ət
Dalaa	LCD	oacklight delay	0 Min	input		set	RS485 baudrate	2400	2400 🗸	set	Local IP	0		input	S	et
Relay	Touch	screen language	English	English	v	set	RS485 parity	•	None 🗸	set	Subnet mask	0		input	S	et
	Touch s	creen save delay	0 Min	input		set	RS232 baudrate	2400	2400 ~	set	Defaut gateway	0		input	S	et
System	Password															
Event Record	user:	admin-a		•												
	Password:															
Meter	Confirm:															
		Set P	assword													
	Set UnitN	ame														
	UnitName:	kk														
		Set U	nitName													

FIGURE 1.7 – System page

to set up for Substation Name & Software version Installation





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KL192.168	.1.201		Event R	ecord		Language: English 🗸 🎗	admin-a <u>Sign out</u>
AC Input	Down	load csv Refres	• Offline • Non Urgent • Urgent		1	$ \text{fotal 122 items} \leftarrow \boxed{1} 2 3 4 5 6 $	$7 \rightarrow \text{Go to}$
	SN	Devie	Event	Value	Start time	End time	Alarm level
DC Output	1	DEV_DC	DC volt low	43.11V	2021-03-03 18:07:41	-	•
	2	DEV_DC	Battery over current	250.82A	2021-03-03 18:07:38	-	•
Destifier	3	DEV_DC	DC volt low	43.2V	2021-03-03 17:27:04	-	•
Rechner	4	DEV_DC	Battery over current	250.82A	2021-03-03 17:27:01	-	•
	5	DEV_DC	DC volt low	43.24V	2021-03-03 17:22:41	-	•
Relay	6	DEV_DC	Battery over current	250.82A	2021-03-03 17:22:38	-	•
	7	DEV_DC	DC volt low	42.44V	2021-03-03 17:07:48	-	•
Sustam	8	DEV_DC	Battery over current	66.94A	2021-03-03 17:06:37	-	•
system	9	DEV_DC	Battery over current	218.38A	2021-02-25 15:12:48	-	•
	10	DEV_DC	Battery over current	207.29A	2021-02-25 10:53:35	-	•
Event Record	11	DEV_DC	Battery over current	73.07A	2021-02-25 10:53:12	-	•
	12	DEV_DC	DC volt low	43.1V	2021-02-25 10:26:23	2021-02-25 10:49:31	•
Meter	13	DEV_DC	Battery over current	250.82A	2021-02-25 10:26:21	2021-02-25 10:49:25	•
Hieldi	14	DEV_DC	DC volt low	43.54V	2021-02-25 10:26:07	2021-02-25 10:26:14	•
	15	DEV_DC	Battery over current	73.19A	2021-02-25 10:26:00	2021-02-25 10:26:07	•
	16	DEV_DC	Battery over current	220.42A	2021-02-17 14:58:28	-	•
	17	DEV_DC	Battery over current	74.54A	2021-02-17 14:58:02	-	•
	18	DEV_DC	DC volt low	43.3V	2021-02-17 14:58:00	2021-02-17 14:58:05	•
	19	DEV_DC	DC volt low	46.17V	2021-02-17 14:46:43	2021-02-17 14:50:18	•
	20	DEV_AC	Mains Fail	0V	2021-02-17 14:45:43	-	•

FIGURE 1.8 – Event logs indicating the start and end time on the particular alarming event & for downloading if required





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kk				Meter				Language: E	nglish 🗸	^𝕂 admin−a <u>Sign out</u>
AC Input	Total el	ectricity consu	mption Ref	resh						
DC Outout	SN	Load	1	Loa	82	Load	3	Load	ł	Date
DC Output	1	0.0kWh	0.00%	0.0kWh	0.00%	0.0kWh	0.00%	0.0kWh	0.00%	2021-02-08
Rectifier	Monthl	y electricity co	nsumption							
	SN	Load	1	Loa	d2	Load	3	Load	1	Date
Relay	1	0.0kWh	0.00%	0.0kWh	0.00%	0.0kWh	0.00%	0.0kWh	0.00%	2000-00-00
System	Daily el	lectricity consu	mption						Total 1 items	$\leftarrow \boxed{1} \rightarrow \text{Go to}$
	SN	Load	1	Loa	d2	Load	3	Load	ł	Date
Event Record	1	0.0kWh	0.00%	0.0kWh	0.00%	0.0kWh	0.00%	0.0kWh	0.00%	2000-00-00
Meter										

FIGURE 1.9 – Details on Electricity Consumption

of the Rectifier





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