





# Ares 10/12 LTE – User manual

# Ares LTE family

Ares LTE monitors the readings of connected sensors. When a value reaches the alarm threshold, the device sends an e-mail or a text message (SMS), or dials specified numbers.

Use the SensDesk portal to configure the Ares LTE, send alarms or display graphs. Ares LTE products are ready for remote mass deployment using FOTA (Firmware Over The Air).

# Safety information

The device complies with regulations and industrial standards in force in the Czech Republic and the European Union. The device has been tested and is supplied in working order. To keep the device in this condition, it is necessary to adhere to the following safety and maintenance instructions.

Never remove the device cover if the relay terminals are connected to the electrical network!

Using the device in a manner other than prescribed by the manufacturer may cause its safeguards to fail!

The power supply outlet or disconnection point must be freely accessible.

#### The device must not be used in particular under any of the following conditions:

- The device is noticeably damaged
- The device does not function properly
- Unfastened parts can move inside the device
- The device has been exposed to moisture or rain
- The device has been serviced by unauthorized personnel

- The power adapter or power supply cable are noticeably damaged
- If the device is used in a manner other than designed for, the protection provided by the device may fail.
- The local electrical system must include a power switch or a circuit breaker and overcurrent protection.

The manufacturer warrants the device only if it is powered by the supplied power adapter or an approved power supply.

If you have any problems with installing or operating the device, please contact technical support:

HW group s.r.o. http://www.hw-group.com E-mail: support@HWg.cz Phone: +420 222 511 918

Formanská 296 Prague, 149 00 Czech Republic

When contacting technical support, please keep at hand the exact type of your device (at the type plate) and, if possible, the firmware version (see later in this manual).



#### Product information

# **Table of contents**

Safety information	2
Basic features	4
Description of connectors and connections	5
Specifications	6
First steps	7
Inputs	8
Outputs	8
Sensors	9
SMS	9
Email	10
Advanced settings	11
General	11
Inputs	13
Outputs	14
Sensors	15
Time	16
SMS	17
SMS template	18
Email	19
Email templ.	20
GPRS / Internet	21
Portal	22
Logger	24
System	25
Connecting to the Portal	26
How to reduce operating costs	30
Special functions	30
Text message commands	30
Configuration SMS	31
Troubleshooting	31
Internal memory size	32
1-Wire UNI sensors	32
Customizing user messages	33
Format and datalog description	33
Mechanical parameters	34

Table of contents

3

# **Basic features**

- Dual band GSM/GPRS modem (900/1800 MHz) with 3G (WCDMA) support and LTE
- Number of 1-Wire sensors:
  - Ares 10 LTE 3
  - Ares 12 LTE 14
- External antenna
- Support for PIN-protected SIM
- Alarm alerts
  - SMS (up to 5 phone numbers)
  - Ringing a specified number (up to 5 phone numbers)
  - E-mail (up to 5 addresses) with selectable priority
- · User templates for SMS and e-mail alarms (different for each sensor)
- Periodic reminders about active alarms
- Per-sensor hysteresis settings
- Logs periodically e-mailed to up to 5 addresses (independent from alarm addresses) with selectable priority
- · Configurable global interval for storing measured values (15 minutes by default)
- · Support for portal-based solutions with the HWg-PUSH protocol
  - Periodic data transfer
  - · Data transfer when values differ by more than the specified tolerance
- Status request
  - SMS from a predefined number
  - SMS from any number containing a password
  - Ringing the device from a predefined number
- Internal memory for measured values: 2 MB 170,000 records
- · Simple configuration with an intuitive Windows utility
- · Connects to PC over USB without special drivers (Mass Storage, HID)
- · Power failure indication through a virtual input (supports alarms)
- Battery status indication (supports alarms)\*
- Option to activate/deactivate GPRS when roaming. SMS alarms and control still 100% functional
- Wall mount, DIN rail mount options
- Firmware upgrade over USB or GPRS (On the Fly Over the Air)
  - Upgrade can be started with a SMS command
- · Logging stops when Ares LTE is connected to USB
- · Sensors are automatically detected when the device is turned on
- · Alarm information available immediately after powering up

\*Applies to Ares12 LTE only.

4 Ares LTE

**Basic features** 

## Description of connectors and connections Ares LTE

# **Description of connectors and connections**

#### LED indicators

- Alarm (red) indicates alarm status. One or more sensors read outside of the allowed range, or an alarm at one or more inputs (2× Digital Inputs or external power supply indication).
- *Modem (blue)* informs about GPRS connection.
  - Fast blinking GPRS connection is being established.
  - On connection established.
  - Slow / occassional blinking communication takes place.

#### • Status (yellow)

- Fast blinking GSM connection is being established.
- Blinking 1×/second device works normally.
- *Power (green)* power is connected. Blinks when the device runs on battery\*.

#### Inputs

 $2 \times$  Digital Input for connecting a voltage-free (dry) contact. Logic 0 (contact open) when the resistance between terminals is greater than 15 k0hm. Logic 1 (closed contact) when the resistance is less than 2.7 k0hm. Resistances between these values are undefined.

#### Power

Power supply 9-30 V / 500 mA can be connected to the power terminals or the power barrel connector. The terminals and the connector are interconnected and can NOT be used to connect two different power sources (e.g. adapter and back-up battery\*).

#### Sensors

2× independent port for connecting 1-Wire sensors, with support for 1-Wire UNI. Each port can be connected to a bus, maximum length is 60m. The total number of supported sensors is a device-wide limitation, the sensors can be connected to one port or distributed among both ports in any way.

**Caution:** Depending on the consumption of connected sensors the use of an active hub may be necessary – see chapter 1-Wire UNI Sensors.

#### Sim Card

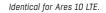
Standard Plug-in SIM.

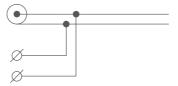
#### **GSM**

5-03-2

SMA connector for an external antenna. The external antenna needs to be QuadBand-capable and equipped with a male SMA connector. External antenna is required for proper operation of the device.

\*Applies to Ares12 LTE only.







 $\left[ \cdot \right]$ 

. (0)

# **Specifications**

Connection	
Interface	FDD LTE bands: B1/B3/B5/B7/B8/B20         WCDMA bands: B1/B5/B8         GSM bands: 900/1800       GPRS multi-slot class 12         Class 4 (33 dBm ±2 dB) for GSM900         Class 1 (30 dBm ±2 dB) for DCS1800         Class E2 (27 dBm ±3 dB) for GSM900 8-PSK         Class 52 (26 dBm ±3 dB) for DCS1800 8-PSK         Class 3 (24 dBm ±1/-3 dB) for WCDMA bands         Class 3 (23 dBm ±2 dB) for LTE FDD bands
Supported protocols	IP: TCP, UDP, HTTP, SNTP, SMTP, HWg-PUSH

Sensors	
Туре	HWg original accessories: 1-Wire & 1-Wire UNI
Connector	RJ11 (1-Wire Bus)
Sensors	Ares 10 LTE- up to 3 sensors Ares 12 LTE - up to 14 sensors
Sensor distance	Up to 60 m

Dry contact inputs	
Port	11, 12
Туре	Digital Input (supports NO/NC Dry contact)
Sensitivity	1 (On) = 0-500 $\Omega$ (Right pin on the terminal block can be connected to 12 V GND)
Max. distance	Up to 50 m

Power input	
Port	9-30 V DC
Туре	Main device power input (typically 500mA)
Connector	Jack (barrel, inner 2.1mm outer 5.5mm) + Terminal Block
Accumulator	Operation for approx. 24 hours (only Ares 12 LTE)

Physical parameters	
Temperature range	Operating: 5 to +50°C (+41 to +122°F) Storage: -25 to +85°C (-13 to +185°F)
Dimensions / Weight	76×93×31mm/150g
EMC	CE - EN 55022, EN 55024, EN 61000



#### Specifications

# **First steps**

Connect Ares LTE to PC with an USB cable and open the ARES disk that appears. Double-click the AresConf application to start it. The *General* tab appears and shows the device status:

## General

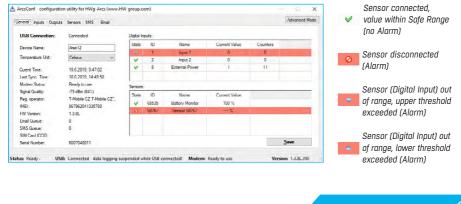
eneral Inputs Outputs	Sensors SMS Email						Advanced Mo
USB Connection:	Connected	Digital In	iputs:				
Device Name:	Ares12	State	ID	Name	Current Value	Counters	
T		<ul> <li>Image: A second s</li></ul>	1	Input 1	0	0	
Temperature Unit:	Celsius ~	<b>v</b>	2	Input 2	0	0	
Curent Time:	19.6.2019, 9:47:02	<b>v</b>	8	External Power	1	12	
Last Sync. Time:	18.6.2019, 14:49:50						
Modem Status:	Ready to use	Sensors					
Signal Quality:	-73 dBm (64%)		-				
Reg. operator:	T-Mobile CZ T-Mobile CZ",	State	ID	Name	Current Value		
IMEI:	867962041335780	<b>V</b>	65535	Battery Monitor	100 %		
FW Version:	1.3.8L	<b>V</b>	8363	Sensor 8363	27,512 °C		
Email Queue:	0						
SMS Queue:	0						
SIM Card ICCID:							
Serial Number:	6007040011						Save

This tab gives information about sensors and digital inputs, together with graphical symbols for quick overview.

You can set the *Device Name* and the unit of temperature (°C, °F, K) here. The temperature unit changes about 5 seconds after pressing *Save.* 

When starting the device for the first time, pay attention to the mobile network connection and signal strength information. If the signal is too weak, relocate the antenna. If the modem is unable to log in to the GSM network, check the PIN security code settings of the SIM. For details, see *Advanced settings*.

All deviations from normal are indicated graphically:



Ares LTE

## Inputs

State	ID	Name	Value	Cnt	Name (0)	Name (1)	Alarm A	lert	Email	SMS	
4	1	Input 1	0	0	OFF	ON	Disable	~			
8	2	Input 2	0	0	OFF	ON	Disable	~			
4	8	External Power	1	12	OFF	ON	Disable	~			
						8					

Use this tab to configure basic properties of digital inputs:

- Clear All Counters sets all counters to zero value.
- Save saves all changes.

## **Outputs**

State	ID	Name	Value	Name (0)	Name (1)	Serial Code	Condition		Set	Triger Valu
2	181	Output 181	1	OFF	ON	27000a591020309f	On if any alarm	~	Set 0	0
2	182	Output 182	0	OFF	ON	27000a591020309f	On if value equal to Trigger	~	Set 1	0
1	183	Output 183	0	OFF	ON	27000a591020309f	On if alam on	~	Set 1	0
4	184	Output 184	0	OFF	ON	27000a591020309f	Manual & Remote	×	Set 1	0
<										>

It is possible to connect the External Outputs module via the 1-Wire UNI interface to the Ares 12 LTE device.

- *Find Outputs* detects external outputs module. By default, outputs are detected only when the unit is powered up. Later connected outputs must be detected manually. Detected outputs are automatically added to the list.
- Delete All Outputs deletes all discovered outputs.
- Save saves all changes.



## Sensors

State	ID	Name	Current Value	Min.	Max.	Email	SMS	Del.		
4	65535	Battery Monitor	100 %	25	100			36		
	8363	Sensor 8363	27,762 °C	10	60			*		
						10				

Use this tab to configure basic properties of sensors:

- Del removes the sensor from the list (e.g. when the sensor is disconnected). If the sensor remains physically connected, it will be detected again when the Ares LTE unit is restarted. Sensor no. 65535 is a system entry and cannot be deleted.
- Find Sensors detects all connected sensors. By default, sensors are detected only when the unit is powered up. Sensors connected later must be discovered manually. Detected sensors are automatically added to the list.
- Delete All Sensors deletes all discovered sensors. System entry Sensor no. 65535 can't be deleted.
- Save saves all changes.

**SMS** 

eneral Inputs Ou	tputs Sensors SMS	Email		Advanced Mo
Alam SMS Settin Recipient 1: Recipient 2: Recipient 3: Recipient 4: Recipient 5:			General SMS Settings Report End of Alarm: 🗹	
Send <u>T</u> est SM	S			Save

Use this tab to configure alarm text message (SMS) recipients. Each recipient phone number is also authorized to request information from Ares 12 LTE by dialing the unit's phone number and to send SMS commands without a password (see *Advanced settings*).

05-03-21

9

Ares LTE

- Recipient 1-5 phone numbers where to send alarm text messages (SMS).
  - *Ring-out* upon alarm, dial the given number. The phone rings for 15 seconds, or until the call is refused.
- Report End of Alarm users will be also informed when an alarm ends (global setting).
- Send Test SMS sends a test SMS to all configured numbers.
- Save saves all changes.

## Email

Alarm Email Setting		Outgoing Server Settings		
Recipient 1:	recipient@domain.com	SMTP Server:	some.smtp.server	
Recipient 2:		SMTP Port:	25	
Recipient 3:		Usemame:		
Recipient 4:		Password:		
Recipient 5:		Secure Connection (SSL):		⊖ STARTTLS
		General Email Settings		
		Outgoing Email Address:	user@domain.com	
		Subject:	Ares	
		Report End of Alam:		
Send <u>T</u> est Email				Save

Use this tab to configure alarm e-mail recipients and parameters.

- Recipient 1-5 e-mail addresses of recipients for alarm e-mails.
- SMTP Server IP address or host name of the SMTP server to use for sending e-mail.\*
- SMTP Port TCP port where the SMTP server listens.\*
- Username username for authentication to the SMTP server.\*
- · Password password for authentication to the SMTP server.\*
- Secure Connection (SSL): No/STARTTLS enables encrypted authentication.\*
- Outgoing Email Address sender e-mail address. E-mails will be sent to the recipients from this address.
- Subject subject prefix. Useful for adding a keyword to the e-mail subject in order to simplify mail filtering.
- Report End of Alarm users will be also informed when an alarm ends (global setting).
- Send Test Email sends a test e-mail to all listed recipients.
- Save saves all changes.

\*Ask your network administrator or mobile carrier for this information.



# **Advanced settings**

Advanced settings are enabled by pressing the Advanced Mode button.

## General

General Inp	outs Outputs	Sensors	Time	SMS	SMS Ter	mpl. E	Email E	imail Templ.	GPRS/Interne	t Portal	Logger Sy	stem Calibrati	Simple Mode
USB Con	nection:	Connect	ed		9	)igital Ir	nputs:		_				
Device Na	me	Ares12	_			State	ID	1	lame	Curre	nt Value	Counters	
				-		4	Ì	1	nput 1		0	0	
Temperatu	re Unit:	Celsius		*		4	2	1	nput 2		0	0	
Curent Tim	e.	19.6.20	19 10-10	0.22		1	8	Exter	nal Power		1	12	
Last Sync.	Time:	18.6.20	19, 14:49	9:50									
Modem Sta	atus:	Ready to	o use			ensors							
Signal Qua	lity:	-73 dBm	(64%)		ľ	State	ID		lame	0	nt Value		
Reg. opera	ator:	T-Mobile	CZ T-N	lobile CZ"	8 1								
(MEI:		8679620	0413357	80		4	65535		ry Monitor		0%	_	
FW Version	n:	1.3.8L				4	8363	Sen	sor 8363	27.8	175 °C		
Email Queu	Je:	0											
SMS Queu	ie:	0											
SIM Card I	CCID:				1								
Serial Num	ber:	6007040	0011										Save
												-	

This tab gives information about sensors and digital inputs, together with graphical symbols for quick overview.

- Device name useful for sorting in higher-level systems, or to tell apart several Ares units.
- Temperature Unit units used to work with temperature. The temperature unit changes about 5 seconds after pressing Save.
  - Celsius °C
  - Kelvin K
  - Fahrenheit °F
- · Current Time informs about the current system time set in the device. The time appears in the log of measured values.
- · Last Sync. Time date and time of last time synchronization over the internet. Useful for checking if the time synchronization works.
- Modem status information about the current modem status and readiness:
  - SIM unplugged no SIM was found. Insert a SIM, or clean its contact pads.
  - · Modem initializing ... modem is being initialized. The device is establishing communication with the modem and making the modem ready for operation. This information should not appear for more than 10 s. Otherwise, it indicates a modem fault (see Troubleshooting).
  - Invalid PIN PIN code stored in the Ares LTE unit is incorrect.
  - PUK requested PUK code is needed (must be entered in a different kind of device).
  - Ready to use modem is registered to the carrier's network and ready for operation.

www.lucom.de

- *Dialing...* connection to the carrier is being dialed (necessary to establish GPRS connection). This information should not appear for more than 20s. Otherwise, it indicates a modem fault (see *Troubleshooting*).
- Configuring Internet... internet connection is being configured (reading IP parameters).
- Connected to Internet the modem is successfully connected to the internet.
- Terminating Internet ... internet connection is being disconnected.
- Terminated connection to the mobile network was terminated. This can appear when the device is being restarted, switched off, or when its battery is low.\*
- Hanging up... dial-up connection is being hanged up.
- "-" unknown state.
- Signal Quality GSM signal quality in dBm and as a percentage. The percentage should be as high as possible. If it is less than 50%, we strongly suggest to relocate the antenna or use a different mobile carrier.
- Reg. Operator regional GSM carrier. Indicates a successful connection to the GSM network, and the actual carrier when roaming.
- FW version current firmware version.
- Email Queue number of outgoing e-mails waiting in the queue.
- SMS Queue number of outgoing text messages waiting in the queue.

#### Digital Inputs ID 8 – External Power

System entry that indicates connected/disconnected external power supply. It is used to inform about power failures and battery-powered operation.\*

#### Sensors ID 65535 – Battery monitor

System entry that informs about the battery charge level.\*

**Note:** In case a backup power supply is needed for Ares 10 LTE we recommend the use of optional accessory "UPS 12V" (12V with 1,3 Ah capacity and power outage indication) or "UPS 12V + 5V" (12V and 5V simultaneous use possible with 1,3 Ah capacity, one 1-Wire UNI output and power outage indication).

\*Applies to Ares 12 LTE only.



#### Advanced settings

## Inputs

Digital I	nput List												
State	ID	Name	Value	Cnt	Name (0)	Name (1)	Alarm A	lert	Delay	Email	Templ.	SMS	Templ.
4	1	Input 1	0	0	OFF	ON	Disable	~			Default $\sim$		Default $\sim$
4	2	Input 2	0	0	OFF	ON	Disable	~			Default $\sim$		Default $\sim$
4	8	External Power	1	12	OFF	ON	Disable	~	Ū.		Default $\sim$		Default ~
						-							
Cle	ar All Co	unters											Save

Use this tab to configure basic and advanced properties of digital inputs:

- State graphical information about input states (same as on the General tab).
- ID unique sensor ID.
- Name sensor name, used for easier overview and for further processing in other systems.
- Value current input state:
  - 0 open (power disconnected).
  - 1 closed (power applied).
- Cnt counter of input (example: Count pulses from energy meter).
- Name (0) name of the state when the input is Off (contact open).
- Name (1) name of the state when the input is On (contact closed).
- Alarm Alert specifies when the input is in alarm:
  - Disable alarm is disabled for this input.
  - Active if ON (1) alarm when the input is On (closed).
  - Active if OFF (0) alarm when the input is Off (open).
- Delay delays the alarm status (in seconds).
- Email sends an e-mail when the input is in alarm.
- SMS sends a text message (SMS) when the input is in alarm.
- *Templ.* alarm message template. (See the *SMS Templ.* and *Email Templ.* tabs.) The template is set independently for each input.
- Clear All Counters sets all counters to zero.
- Save saves all changes.

## Outputs

Digital O	utout List								
State	ID	Name	Value	Name (0)	Name (1)	Serial Code	Condition	Set	Triger Valu
1	181	Output 181	1	OFF	ON	27000a591020309f	On if any alarm 🗸 🗸	Set 0	0
1	182	Output 182	0	OFF	ON	27000a591020309f	On if value equal to Trigger $\sim$	Set 1	0
1	183	Output 183	0	OFF	ON	27000a591020309f	On if alarm on V	Set 1	0
1	184	Output 184	0	OFF	ON	27000a591020309f	Manual & Remote ~	Set 1	0
<									>
F	ind Outpu	ts Delet	e All Output:	5					Save

It is possible to connect the External Outputs module via the 1-Wire UNI interface to the Ares 12 LTE device. This module provides 4 NO/NC relay outputs with maximum load up to 1A/30VDC or up to 0,5A/50VAC.

- State graphical information of inputs status identical as on the General tab.
- ID unique ID of the sensor.
- *Name* input name for its easier identification and for the needs its processing within superior systems.
- Value current input status:
  - 0 disconnected (power Off).
  - 1 connected (power On).
- Name (0) disconnected input status name (Off, open).
- Name (1) connected input status name (On, closed).
- Serial Code unique 1-Wire ID.
- · Condition output control method.
  - Manual & Remote controlling the input manually by the SET switch (Set 1 switch On, Set 0 switch Off) or by M2M protocols.
  - On if any alarm the output switches On when at least one of the inputs or sensors is in alarm status. Note that this condition reflects the DELAY and HYSTERESIS settings for individual active inputs and sensors.
  - On if alarm on the output switches On when there is alarm on a defined input or sensor.
  - On if value equal to Trigger the output switches On when the measured value matches the Trigger Value setting.
  - On if value higher than Trigger the output switches On when the Current Value exceeds the Trigger Value setting.
- *Trigger Value* the trigger value of a condition (for example: the output switches to On when a current value exceeds the *Trigger Value*).
- Dependent On selection of the input or sensor to which the condition is applied.
- Find Outputs detects external outputs module. By default, outputs are detected only when the unit is powered up. Later connected outputs must be detected manually. Detected outputs are automatically added to the list.



Advanced settings

- Delete All Outputs deletes all discovered outputs.
- Save saves all changes.

## Sensors

		Outputs Sensors	Time SMS SI	MS Templ	. Email	Email	Templ.	arno/in	temet Porta	i Log	iger System	Calibration	
Sensor State	List: ID	Name	Current Value	Min.	Max.	Hyst.	Delay	Email	Email Te	SMS	SMS Tem.	Serial Code	Del.
	65535	Battery Monitor	100 %	25	100	1	0		Default ~		Default $\sim$	4141414141414141	36
	8363	Sensor 8363	26,562 °C	10	60	1	0		Default 🗸		Default 🗸	28ab200a0a000033	*
<													>
F	ind Sens	ors Delete	All Sensors									Save	

Use this tab to configure basic and advanced properties of sensors:

- State graphical information about sensor states (same as on the General tab).
- ID unique sensor ID.
- Name sensor name, used for easier overview and for further processing in other systems.
- Current Value current sensor value.
- Min. lower limit of the Safe Range. If the value is less than MIN, alarm is automatically set.
- Max. upper limit of the Safe Range. If the value is more than MAX, alarm is automatically set.
- Hyst. hysteresis for the given sensor.
- Delay delays the alarm status in case the Safe Range values have been exceeded.
- Email sends an e-mail when the sensor is in alarm.
- Email Templ. alarm message template. (See the Email Templ. tabs.).
- SMS sends a text message (SMS) when the sensor is in alarm.
- SMS Templ. alarm message template. (See the SMS Templ. tabs.).
- Serial Code unique 1-Wire ID.
- Del. removes the sensor from the list (e.g. when the sensor is disconnected). If the sensor remains physically connected, it will be detected again when the Ares LTE unit is restarted. Sensor no. 65535 is a system entry and cannot be deleted.
- Find Sensors detects all connected sensors. By default, sensors are detected only when the unit is powered up. Later connected sensors must be detected manually. Detected sensors are automatically added to the list.
- Delete All Sensors deletes all discovered sensors. Sensor no. 65535 is a system entry and cannot be deleted.
- Save saves all changes.

15

Ares LTE

www.lucom.de

## Time

SNTP Setup			Time Setup		
SNTP Server:	europe.pool.nt	p.org	New Day:	19. 6.2019	
Time Zone:	+1	✓ : 0 min	New Time:	8:57:08	+
Sync. Period:	Off	v			Set Time Manually
Daylight Saving Ti	ne				
Sync. after Device	Startup	Synchronize Time			Set PC Time

Use this tab to configure the current system time. The time can be set either manually in *Time Setup*, or automatically over the internet.

- SNTP Server URL or IP address of the time server to use.
  - List of stratum one time servers: https://support.ntp.org/bin/view/Servers/StratumOneTimeServers
  - List of stratum two time servers: https://support.ntp.org/bin/view/Servers/StratumTwoTimeServers
  - List of NIST time servers: http://tf.nist.gov/tf-cgi/servers.cgi
  - List of NTP pool servers:
     https://support.ntp.org/bin/view/Servers/NTPPoolServers and http://www.pool.ntp.org
- Time Zone time zone where Ares LTE is used.
- Sync. Period indicates how often to synchronize time over the internet (1h/24h).
- Daylight Saving Time activates automatic change to/from DST.
- Sync. after Device Startup synchronizes time over the internet whenever the device is powered on.
- Synchronize Time immediately synchronizes time. Only works when the GPRS connection is functional.
- New Day shows the current date and lets the user change it manually.
- New Time shows the current system time and lets the user change it manually.
- Set Time Manually stores the changed date and time values to memory.
- Save saves all changes.

#### Advanced settings

## SMS

eneral Inputs Outputs	Sensors Time	SMS SMS Templ	Email Er	mail Templ.	GPRS/Internet	Portal	Logger	System	Calibration	Simple Mo
Aam SMS Settings Recipient 1: Recipient 2: Recipient 3: Recipient 4: Recipient 5: Periodic Status:	+420770000000		Ring-out     Ring-out     Ring-out     Ring-out     Ring-out     Ring-out     [minutes]	Status Status numbi recipie Status Temp Status Genera	SMS Settings s SMS you can g er of your HWg- ents you have to s SMS Password	et by ser Ares. If yo send SN I:	nding SM nur phone IS with fo efault Sta m one of 1	S request number is mat PAS tus	with text STA s not one of fiv SWORD STA	e SMS
Alarm Reminder:	Period (0=disable): Template:	0 Default Reminder	[minutes]							
Send Test SMS	Clean SMS Qu	eue								<u>S</u> ave

Use this tab to configure alarm text message (SMS) recipients. Each recipient phone number is also authorized to request information from Ares LTE by dialing the unit's phone number and to send SMS commands without a password.

- Recipient 1-5 phone numbers where to send alarm text messages (SMS).
  - Ring-out upon alarm, dial the given number. The phone rings for 15 seconds (rings three times), or until the call is refused.
- Periodic Status periodical sending statuses of sensors.
  - Period period in minutes.
  - Template template to use for Periodic Status.
- Alarm reminder sends reminders about active alarms.
  - Period period of alarm reminders in minutes.
  - Template template to use for the reminder message.
- · Status SMS Settings Ares LTE can send a text message with the current sensor states as a reply to an incoming "STATUS" message. If the phone number where the status request originated is not listed among the recipients, a password needs to be specified as well.
  - Status SMS Password password required to send the status message to a number not listed among alarm recipients.
  - Template template to use for the status message.
  - · Send Status SMS if ring from one of the Alarm recipients status message is sent whenever any of the alarm recipients calls the device.
- Report End of Alarm users will be also informed when an alarm ends (global setting).
- Send Test SMS sends a test SMS to all configured numbers.
- Clean SMS Queue clears all unsent text messages from the queue.
- Save saves all changes.

Ares LTE

## **SMS template**

Ares	Conf - cor	figuration	n utility fo	r HWg-	Ares (w	ww.HW-gr	oup.com	)					-	Ŭ	×
Gener	al Inputs	Outputs	Sensors	Time	SMS	SMS Tem	pl. Emai	Email Templ	GPRS/Interne	Portal	Logger	System	Calibration	Simple M	lode
ļ	MS Templa Femplate: 1.SMS Fext: &MSG_TYI		\$SRC_N			SMS templa &SRC_VAI		C_UNIT% is (	on state %SR	C_STAT	JS%. You	ur %DEV	7_NAME%		
	Preview: Alarm A(	TIVATED	: Hi, I	nput 1	, valı	ue OFF(0)	is on	state norm	al. Your Are	s12					]
												Hel	lp - list of suppo	orted macros	
													1	<u>S</u> ave	
tatus:	Ready	USB	Connect	ted - da	ita logg	ing suspen	ded while	USB connecte	d! Modem:	Ready to	use		Versio	n: 1.3.8L.39	90

Use this tab to define the formats of individual messages, e.g. to distinguish temperature alarm messages from humidity alarm messages or to define the contents of status and reminder messages.

- Template selects the template to edit.
- Text message contents, with macros as variables.
- *Preview* displays a dialog with a preview of the message.
- Help list of supported macros list of macros that can be used in the message.
- Save saves all changes.

Help - list of suppor	ted macros —		×
General:			^
<pre>%DEV_NAME% %MSG_TYPE%</pre>	Device Name e.g. "Ares14" Message type [Alarm ACTIVATED   Alarm DEACTIVATED   Alarm Reminder Periodical report   Test   Status]		
Message source:			
<pre>%SRC_VALUE%</pre>	Source type [input   sensor] Name e.g. "Sensor 6214" Value e.g. "21.5" Unit e.g. "C"		
<pre>\$SRC_STATUS\$</pre>	For sensor: [invalid   normal   low out of range   hi out of range   low alarm   hi For input: [normal   alarm]	alarm]	
<pre>%SRC_MIN% %SRC_MAX% %SRC_ALARM%</pre>	Saverange min. value e.g. "10" Saverange max. value e.g. "60" For sensor: [Enabled   Disabled] For input: [Active if ON(1)   Active if OFF(0)   Disabled]		
Sensor with ID=X *NAME XXXX\$			
<pre>\$VALUE_XXXX\$ \$UNIT_XXXX\$ \$STATUS_XXXX\$ \$MIN XXXX\$</pre>			
<pre>%MAX_XXXX% %ALARM_XXXX%</pre>			
SMS			~
		C	llose

Ares LTE

18

#### Advanced settings

## **Fmail**

eneral inputs Outputs	s Sensors Time	SMS SMS Temp	I. Email Ema	il Templ. GPRS/Internet Por	tal Logger System C	Calibration Simple Mod
Alarm Email Settings				Outgoing Server Settings		
Recipient 1:	recipient@domain.	com		SMTP Server:	some.smtp.server	
Recipient 2:				SMTP Port:	25	
Recipient 3:			1	Usemame:		
Recipient 4:	(			Password:		
Recipient 5:	1			Secure Connection (SSL):	No     No	O STARTTLS
Periodic Status:	Period (0=disable):	0	[minutes]	General Email Settings		
	Template:	Default	~	Outgoing Email Address:	user@domain.com	
	rempiare.	Derduk	*	Subject:	Ares	
Alarm Reminder:	Period (0=disable):	0	[minutes]	Importance:	Normal	~
	Template:	Default	~	Report End of Alam:		
Send Test Email	Clean Email Qu	eue				Save

Use this tab to configure alarm e-mail recipients and parameters.

- Recipient 1-5 addresses of recipients for alarm e-mails.
- Periodic Status periodical sending statuses of sensors.
  - Period period in minutes.
  - Template template to use for Periodic Status.
- Alarm Reminder sends reminders about active alarms.
  - Period period of alarm reminders in minutes.
  - Template template to use for the reminder message.
- SMTP Server IP address or host name of the SMTP server to use for sending e-mail.\*
- SMTP Port TCP port where the SMTP server listens.\*
- Username username for authentication to the SMTP server.\*
- Password password for authentication to the SMTP server.\*
- Secure Connection (SSL): No/STARTTLS enables encrypted authentication.\*
- Outgoing Email Address sender e-mail address. E-mails will be sent to the recipients from this address.
- Subject subject prefix. Useful for adding a keyword to the e-mail subject in order to simplify mail filtering.
- Importance importance of the e-mail message. Useful for mail filtering in e-mail clients.
- Report End of Alarm users will be also informed when an alarm ends (global setting).
- Send Test Email sends a test e-mail to all listed recipients.
- Clean Email Queue clears all unsent e-mails from the queue.
- Save saves all changes.

\*Ask your network administrator or mobile carrier for this information.

Ares LTE

19

www.lucom.de

## **Email Template**

eneral Inputs	Outputs	Sensors	Time	SMS	SMS Templ.	Email	Email Temp	GPRS/Internet	Portal	Logger	System	Calibration	Simple M
Email Templa													
Email Templa	ates												
Template:		Subje	ct:										
1.Email	~	Subj	*DEV	NAME &	: %MSG_TYP	Es							
Body: Hi,			_	_	_	_							- 1
Hi,		C // 7	VALUE	\$\$SRC_	UNIT% is d	on sta	te %SRC_SI	NTUS≹.					
Hi, %SRC_NAM		C // 7	VALUE	\$\$SRC_	UNIT% is o	on sta	te %SRC_SI	ATUS&.			Hel	p - list of supp	orted macros

A Preview	-		Х
SUBJECT:  Subj Ares12: Alarm ACTIVATED BODY: 			^
Hi, Input 1, value OFF(0) is on state normal. Your Ares12			
		Close	~ 3

Use this tab to define the format of individual messages, e.g. to distinguish temperature alarm messages from humidity alarm messages or to define the contents of status and reminder messages.

- Template selects the template to edit.
- Subject subject of the e-mail. Macros can be used.
- Body message contents, with macros as variables.
- *Help list of supported macros list of macros that can be used in the message. See the SMS Template tab.*
- Preview displays a dialog with a preview of the message. See the SMS Template tab.
- Save saves all changes.



Advanced settings

## **GPRS/Internet**

SIM Card Settings	Local Informations	
		_
SIM Card PIN:	My Phone Number: System Note:	
Enable GPRS/Internet WARNING: SMS	trafic only available!	
GPRS Operator Settings	Show Advanced GPRS Settings	
APN Address: internet		
Dial Number: *99***1#		
Dial Number: *99***1#		
Roaming		
	stected	
Roaming	stected	

Use this tab to configure the GSM and internet connection details.

- *SIM Card PIN* specifies the security PIN code for the SIM. The SIM can remain protected with the PIN.
- Local Informations section to store information about the unit, such as its phone number, or a comment. This information does not influence the operation of the device; however, it is sent to a master system and can help to identify the device in larger installations.
  - My Phone Number intended for the phone number of the Ares LTE unit. The phone number needs to be entered manually because this piece of information is generally not provided by neither the SIM nor the network.
  - System Note for general use; it may e.g. identify the physical location of the Ares LTE unit or the department responsible for managing it.
- Enable GPRS/Internet enables internet-based services, such as sending e-mail, portal services and time synchronization. In case the services have been switched off a warning is displayed informing about limiting the communication means to SMS only.
- GPRS Operator Settings settings for accessing the GPRS network of the mobile carrier:
  - APN Address Access Point Name identifier. The default is "internet".\*
  - Dial Number phone number for accessing the internet. The default is "\*99\*\*\*1#".\*
- *Roaming* enables internet connection outside of the home carrier network, e.g. when traveling abroad.
- Show Advanced GPRS Settings displays advanced settings that are accessible directly using AT commands (for experts only).
- Username user name for the connection.\*
- Password password for the connection.\*
- Dialup String AT string.\*
- Save saves all changes.

\*Will be provided by the mobile carrier if needed.

Advanced settings

Ares LTE

21

www.lucom.de

## **Portal**

eneral Inputs Outpu	ts Sensors Time SMS	SMS Templ. Email	Email Templ.	GPRS/Interne	e Portal L	ogger System	Calibration	Simple Mode
Enable Portal								
Portal Server Setti	ngs		AutoP	ush Settings, D	lebug			
Server Address:	http://sensdesk.com/	nortal aba	Digit	al Inputs Ser	sors Portal	Debug		
		poitai.prip		D Na	ime	Value	AP Ena	ble
Port:	80			1 Ing	out 1	0		
Usemame:					out 2	0		
PUSH Password:				8 Extern	al Power	1		
Portal Message Portal disab								
Manual Push	Config to SensDesk	1.0					<u>s</u>	ave

Use this tab to configure the HWg-PUSH protocol.

- Enable Portal enables transmission of data to a remote portal (HWg-PDMS etc.).
- Server Address HTTP address of the portal where the data should be sent.
- Port TCP port of the remote portal (default 80).
- Username username for authentication to the portal.
- PUSH Password password for authentication to the portal.
- · Portal Message messages from remote portal.
- Manual Push manual transmission for test purposes.
- Config to SensDesk instantly uploads the device configuration to the SensDesk portal.
- Save saves all changes.

#### AutoPush Settings, Debug

igital Inpu	uts Sensors Port	al Debug	
ID	Name	Value	AP Enable
1	Input 1	0	
2	Input 2	0	
8	External Power	1	

Digital Inputs - informations of digital inputs (AP Enable = allowed to sending to the portal).



Advanced settings

ID	Name	Value	AP Delta
65535	Battery Monitor	100 %	0
58767	Sensor 58767	23,449 °C	0

AutoPueb Settings, Debug

Sensors – informations of connected sensors (AP Delta – Difference of value to extra sending to portal).

utoPush Settings, Debug	
Digital Inputs Sensors	Portal Debug
Push Period (0=disable):	900
Log Period (0=disable):	300
Push Timer:	372
Log Timer:	218
Current Check Timer:	0
AP Block Timer:	0
Retransmit number:	0

*Portal Debug* – current setting of PUSH. Informations are provided by remote portal and Ares LTE is only reproduces.

- Push Period period of sending values to portal in seconds.
- Log Period period of logging in seconds. All values will be sended to portal in one package according of setting Push Period. Memory is for 10 values.



## Logger

eneral Inputs Outputs Se	ensors Time SMS S	SMS Templ. Email Ema	il Templ. GPRS/Internet Por	tal Logger System Calibration	Simple Mode
Logger Settings WARNING: Data logging : Actual Datalog Size: Log Period (0=disable):	28110 bytes 900	ected!	Log Email Settings Email Period (0=disable): Recipient 1: Recipient 2: Recipient 3: Recipient 4: Recipient 5: Importance: Template: Ense Log after Email	0 recipiert @domain.com 	[hours]
Send Test Email	Get CSV Log	Clear Log		1	Save

Use this tab to configure logging of measured values.

- Actual Datalog Size current size (volume) of recorded data in bytes.
- Log Period interval for storing measured values.
- Email Period interval for e-mailing recorded values.
- Recipient 1-5 addresses of recipients for e-mails with logged data.
- Importance importance of the e-mail message. Useful for mail filtering in e-mail clients.
- Template e-mail template selection (Default, 1. e-mail, 2. e-mail, 3. e-mail, 4. e-mail).
- Erase Log after Email deletes recorded values after e-mailing them.
- Send Test Email sends a test e-mail to all listed recipients.
- Get CSV Log one-time transmission of recorded data to CSV file.
- · Clear Log deletes recorded data.
- Save saves all changes.

When the device is connected to PC via USB a notification is displayed informing about data logging suspension.



#### Advanced settings

## System

eneral inputs	Outputs	Sensors	Time	SMS	SMS Templ	Email	Email Templ.	GPRS/Internet	Portal	Logger	System	Calibration	Simple Mod
System													
Build Time:		May 10 2	2019, 09:	00:50									
Uptime:		0 days 18	8 hours 4	18 min									
Periodical F	Restart:	Off			~ a	t Universa	Time (UTC)	2:00:00					
Battery shut	tdown limit:	2	%										Show debug
Upgrade								Default confi	guration				
Upgrade se	erver:							Save	as User D	efault			
http://new	hwg.cz/do	wnload/fv	v/versior	hwg-are	s12.js			Restore	to User	Default			
	k for FW Ve	rsion	GSN	A Upgrade	1	ocal Upgr	ade	Restore t	o Factory	/ Default			
Check													

Use this tab to display and set system variables, upgrade firmware, and save or restore configuration.

- Build Time date and time of the current firmware build.
- Uptime time since last restart.
- Periodical Restart automatically restart the device:
  - Off switched off.
  - · Daily once per day.
  - · Weekly (every Sunday) once every Sunday.
  - Monthly (every 1st day of month) on the first day of every month.
  - At Universal Time (UTC) time for the automatic restart (in UTC).
- Battery shutdown limit sets built-in battery capacity limit which shuts down the device.\*
- Upgrade server firmware URL, or upgrade configuration file URL.
- · Check for FW Version if the URL of the config file is specified, checks for the availability of a firmware upgrade.
- GSM Upgrade upgrades the firmware over GSM/GPRS. Correct address needs to be specified in the Uparade server field.
- · Local Upgrade uploads firmware from the local computer through a standard dialog window.
- Save as User Default saves user defined configuration.
- Restore to User Default restores settings from user defined configuration.
- Restore to Factory Default restores factory default settings of the device.
- Load Settings loads a previously stored configuration from a setup.xml file.
- Save Settings saves the current configuration into a setup.xml file.
- Device Restart restarts the device.
- Save saves all changes.

\*Applies to Ares12 LTE only.

www.lucom.de

Ares LTE

# **Connecting to the Portal**

First power on the Ares LTE and connect it with your computer via provided USB cable. Ares LTE will appear on your PC as an external drive. In its main directory, open ARESCONF.exe.

ARES (D:) Zvolte, co chcete udělat s: vyměnitelné jednotky.	
Import photos Adobe Lightroom 6.0	
Otevřit složku a zobrazit soubory Průzkumník souborů	
Neprovádět žádnou akci	~

neral Inputs Outputs	Sensors SMS Email					Advanc	ped iv
USB Connection:	Connected	Digital In	puts:				
Device Name:	Ares 12	State	ID	Name	Current Value	Counters	-
	[	4	1	Input 1	0	0	
Temperature Unit:	Celsius $\checkmark$	4	2	Input 2	0	0	
Curent Time:	17.6.2019. 10:28:08	4	8	External Power	1	7	
ast Sync. Time:	17.6.2019, 8:09:01						
Modem Status:	Ready to use	Sensors					
Signal Quality:	-67 dBm (74%)	State	ID	Name	Current Value		
Reg. operator:	T-Mobile CZ T-Mobile CZ",	e e	65535	Battery Monitor	95 %		
MEI:	867962041335780	2	8363	Sensor 8363	26.937 °C		
W Version:	1.3.8L		0000	Sensor 6363	20,337 C		
Email Queue:	0						
SMS Queue:	0						
SIM Card ICCID:		1					
Serial Number:	6007040011					Save	

In AresConf, first switch to Advanced mode by clicking the button in the top right corner of the window, then go to Portal tab.

eneral	Inputs	Outputs	Sensors	Time	SMS	SMS Templ.	Email	Email Templ.	GPF	RS/Internet	Portal	Logger	System	Calibration	Simple I	loc
	Enable F	Portal														
		ver Settings	5					Auto	Push :	Settings, De	bug					
	Server Ad	Ideana:	http	lannad	ook oom	/portal.php		Dig	ital Inp	outs Sense	ors Por	tal Debug				
		uroaa.		a di isu	oak.cum	portacprip			ID	Nan	ne	1	/alue	AP En	able	
	Port:		80						1	Inpu	it 1	1	0		1.00	
	Usemame	e:			_				2	Inpu			0			
	PUSH Pa	ssword:						1	8	External	Power		1			
			-													
	Portal N	lessage				_										
	Sens	Desk.com	n: registe	r vour	IP sens	or.										
	1.000															
	Manual I	Durala	Carl	g to Sen	- Deele	1									Save	
	Manual	Push	Com	g to sen	sDesk									3	Save	

3 Tick the Enable Portal option and save the changes using the Save button in the bottom right corner of the window. Then click the Manual Push button in order to activate the portal function. Instead of "Portal disabled", a link SensDesk.com: register your IP sensor should appear in the Portal Message field. Click this link in order to get to the SensDesk.com portal.

www.lucom.de

26 Ares LTE

5-03-21

Aves12   SensDesk	× +				- 0 ×
	🛈 🔏 sensdesk.com/ternatesk/invitation/2606367contr	1+867962041335780	120% … 🗟 🟠	Q, Vyhiedat	IN ED 45 ≣
	-		Login		
		Log in Username Log IN Pessword Begater to Puttal Crestic password			
			(8)		

In case you already have a user account, please enter your login details and the device will be automatically assigned to your account. If you do not have a SensDesk account yet, click the *Register* and a registration form will be shown.

account   SensDeak X +	- a ×			
C 🙆 🛈 🖉 sensdesk.com/user/register	IN 10 4 =	+ C & O Impaire	na geogleann ha U. C. H. Norskilligen - Des 🛛 🖄 . R. Vynsan	(D) (C)
		Compose (* Islavis Saved Sent		

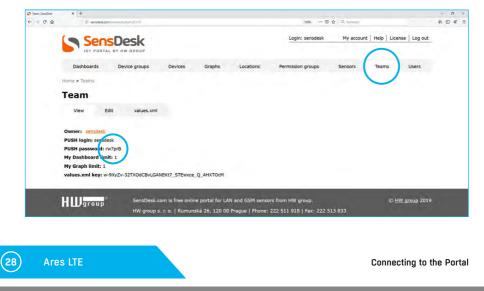
S Enter the login details for your new account and a correct e-mail address. This e-mail address has to be unique for the server (cannot be already registered by another user).

#### Connecting to the Portal

Ares LTE 27

Aves12 SensDesk	X M Account details for sensities ( ) X +		~ ø ×
< → @ @	③ sensdesk.com/sensdesk/convice/261656	1896 🖾 🎝 🔍 Vyhiedat	IN (D 40 Ξ
		Login: sensdesk My account   Help   License   Log out	
	Dashboards Device groups Devices Graphs Location	as Permission groups Sensors Teams Users	
	Dashboard Team dashboard has been automatically created.     Team Team has been automatically created.		
	SenaDesk • SenaDesk • Devices Ares12		
	View AresConf Edit Delete Edit sensors	Alarma William Assarta ut	
	Device groups: Not assigned Location: Not assigned		
	Latlog: IP Address: 19.06.2019 13:08		
- E	Dattery Monitor Sensor 0363		
	ILT SAFE RANCE: NA ILL SAFE RANCE:		
	100 100 10-60 5 100 100 10-60 5 100 10-60 70		
	Last update Ø sec app		
1	INPUTS		
	External Power Input 1 Input 2		
	ON OFF OFF		
	Last update 0 sec apo Last update 0 sec ago Last update 0 s	9C 9g0	

By activating the account, you will be redirected to the *Devices > View* page. At this moment, the data-sending period is set to 10 seconds to show the sensors functionality. This page is active only for approximately 15 minutes after the activation, then the logging period changes to 15 minutes.



05-03-21

If you check *Teams* link, you will find your *PUSH password*. This password, together with your login name, identifies the device in communication with your account and in communication of mobile applications with SensDesk. The password cannot be changed and for a security reason it is different to the login password.

Enable Portal					
Portal Server Settings		Auto Push	Settings, Debug		
Server Address: http://sensdesk.com/portal.php		Digital Inputs Sensors Portal Debug			
		ID	Name	Value	AP Enable
Port:	80	1	Input 1	0	
Usemame:	sensdesk	2	Input 2	0	
PUSH Password:		8	External Power	1	
Portal Message SensDesk.com	Check sensor online.				
Manual <u>P</u> ush	Config to SensDesk				Save

PUSH password can be used in devices to skip the logging procedure during assigning the device to your portal account, or in mobile applications:

	Sort by DEVICE	s	
ALL ALARM	ИS		
Ares 12 Online Progue	100 %	Battery Monitor	
Ares12.Online Prague	83 %	Bright in box	
vres12 Online Pragilie	1	External Power	
vies12 Online Prague	55 Pulses	External Power (Counter)	
vres12.Online Prague	0	Input 1	
Ares12 Online Prague	5 Pulses	Input 1 (Counter)	
wes12 Online Yague	0	lopia 2	
Ares 12 Online Pragite	1 Pulses	Input 2 (Counter)	
rague	31.2 %RH	Outdoor RH	
Ares12 Online Praque	16.087 °C	Outdoor Territo	

*Portal* function periodically sends the data to a remote server and the sending period is set by this server.

AutoPush is a function allowing unusual measured data sending, beside the periodical logging, in case that the value change is higher than the AutoPush delta parameter.

#### Connecting to the Portal

29

## How to reduce operating costs

Ares LTE units offer functions for reducing overhead GSM/GPRS costs, particularly in the following scenarios:

- Networks that limit the maximum volume of transferred data.
- · Subscribers without a flat-rate data plan.

#### Primary cost-saving options

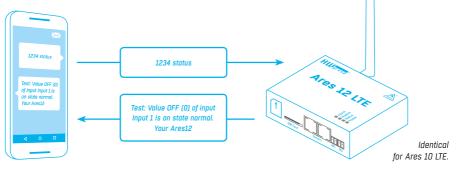
- Disabling GPRS/Internet functions.
- · Disabling data services when roaming outside of the home network.
- Terminating GPRS connection when idle for longer than 60 seconds.

# **Special functions**

#### Alarm information after power up

When any sensor or digital input is in alarm when the power is connected, all alarm messages according to Ares LTE configuration are sent as soon as the GSM/GPRS connection is established.





1234 is the default password. You have to use it if your number is not listed as one of the 5 SMS recipients. In case you are not using the default password, it has to be only one-word password (cannot contain any breaks).

- Status or Status SMS sends a text message with the current status.
- Status Email sends an e-mail with the current status.
- Reset or Reboot restarts the Ares LTE unit.
- Debug returns debugging information.
- *Upgrade* without further parameters, upgrades the firmware using the configured address. Full URL can be included in the message.
- Push sends test PUSH to the address set in AresConf. The returned value contains sent information.
- Push http://address sends test PUSH to the address set in the SMS. The returned value contains sent information.

30 Ares LTE

How to reduce operating costs / Special functions

# www.lucom.de

31

Ares LTE

5-03-2

## Configuration SMS

- GETCFG variable obtains the information about the value of a variable.
- SETCFG variable sets the variable to a requested value.

#### Use

SETCFG variable = value SETCFG variable = value; variable1 = value1;... (max. 160 chars) GETCFG variable SETCFG variable; variable1;... (max. 160 chars)

#### Example

SETCFG device\_name=AresSms Test;gprs/gprs\_apn=internet1;gprs/gprs\_number=12345 SETCFG device\_name=Ares12;gprs/gprs\_apn=internet;gprs/gprs\_number=\*99\*\*\*1# GETCFG device\_name;gprs/gprs\_apn;gprs/gprs\_number

Names of variables are the same as the names in setup.xml within the <setup> section.

Example <?xml version="1.0" encoding="utf-8"?> <root> <setup> <host\_name> Ares12</host\_name> <gprs> <gprs\_apn> internet </gprs\_apn> </setup> </root>
SETCFG device\_name=Ares12 >>> SETCFG gprs/gprs\_apn=internet

# Troubleshooting

- Modem does not respond check the information in the Modem Status field on the General tab:
  - *SIM unplugged* no SIM was found. Insert a SIM, or clean its contact pads.
  - Modem initializing... modem is being initialized. This information should not appear for more than 10 s. Otherwise, it indicates a modem fault. If this message persists, check the SIM, clean its contact pads if necessary, and press *Reset* to restart the unit.
  - Invalid PIN PIN code is not entered in the Ares LTE unit, or it is incorrect. Input the correct PIN in Advanced Config Mode on the GPRS/Internet tab.
  - PUK requested PUK code is required (must be entered in a different kind of device). The SIM is blocked until the correct PUK is entered. Take the SIM out and unblock it in a mobile phone.
  - *Dialling...* connection to the carrier is being dialed (necessary to establish GPRS connection). This information should not appear for more than 20 s. Otherwise, it indicates a modem fault. Check the *Dial number* in *Advanced Config Mode* on the *GPRS/Internet* tab. When in doubt, contact your mobile carrier.

- Configuring Internet... internet connection is being configured (reading IP parameters). Check the APN in Advanced Config Mode on the GPRS/Internet tab.
- Connected sensor cannot be found make sure that the sensors are properly connected.
  - Restart Ares LTE.
  - Press Find Sensors on the Sensors tab to detect the missing sensor.
  - Press Delete All Sensors to remove all sensors, then press Find Sensors to find them again.
- I am receiving too many alarm messages check the hysteresis setting. By default, hysteresis is set to 1 without regard to the measured quantity. However, in some cases, this hysteresis is too low.

## Internal memory size

Ares LTE is equipped with 2 MB internal memory for storing measured values. The available recording time depends on the number of values being stored. One value takes up 12 bytes of memory.

Therefore,  $2048 \text{ kB} \times 1024 = 2,097,152 \text{ B}$ /12B = approximately 170,000 records (due to the internal memory organization, the actual number is slightly smaller).

#### Examples

3 values Stored once per 300 s 170,000/3 = 56,666 records = 4722 hours = 196 days 1 value Stored once per 30 s 170,000 records = 85,000 minutes = 1416 hours = 54 days 2 values

Stored once per 180 s 170,000/2 = 85,000 records = 4250 hours = 177 days

## **1-Wire UNI sensors**

1-Wire sensors are connected using RJ-12 jacks. 1-Wire UNI sensors are a special kind of 1-Wire sensors. They communicate using the same protocol over the same interface but also contain added circuitry for connecting special probes. For this reason, 1-Wire UNI sensors may require an additional power supply.

When the 1-Wire UNI sensors do not explicitly require external power, a maximum of two 1-Wire UNI sensors can be connected to one Ares LTE port. More sensors can only be connected through the 1-Wire HUB Power (active hub).

1-Wire UNI sensors strongly influence how long the internal Ares 12 LTE battery lasts. This needs to be taken into account when planning your system.

For more information about connecting 1-Wire UNI sensors, carefully read the user manual for the respective sensor.



Internal memory size / 1-Wire UNI sensors

# Customizing user messages

Ares LTE supports up to 4 user-defined custom types of e-mail and text messages. The following macro commands can be used to insert system variables, sensor names and measured values.

#### List of macro commands

Name	Description
General	General macros
%DEV_NAME%	Device name
%MSG_TYPE%	Message type (alarm, status, periodic)

Source sensor	
%SRC_TYPE%	Sensor name
%SRC_VALUE%	Current value
%SRC_UNIT%	Unit of the measured value
%SRC_STATUS%	Sensors: Invalid, Normal, Alarm, Out Of Range Digital inputs: Normal, Alarm
%SRC_MIN%	Lower limit of the Safe Range
%SRC_MAX%	Upper limit of the Safe Range
%SRC_ALARM%	Alarm begin/end

Sensor with ID=XXXX	Information about other sensors to include in the message
%NAME_XXXX%	XXXX sensor name
%VALUE_XXXX%	XXXX sensor reading
%UNIT_XXXX%	XXXX sensor unit of measurement
%STATUS_XXXX%	Sensors: Invalid, Normal, Alarm, Out Of Range Digital inputs: Normal, Alarm
%MIN_XXXX%	Lower limit of the Safe Range XXXX
%MAX_XXXX%	Upper limit of the Safe Range XXXX
%ALARM_XXXX%	Alarm begin/end

SMS	
%TABLE SENSORS%	Chart of status and values of individual sensors
%TABLE INPUTS%	Chart of status and values of individual inputs

# Format and datalog description

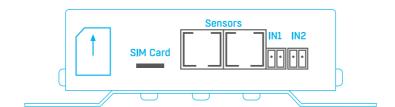
Detailed description of XML and datalog formats can be found in AN51 on HW group website.

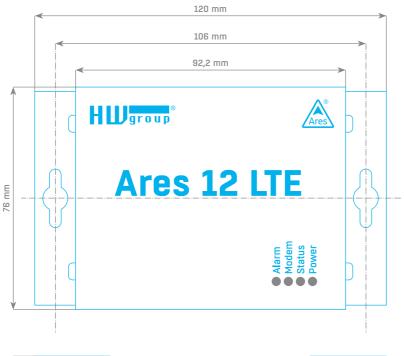
Customizing user messages / Format and datalog description

Ares LTE

33

# **Mechanical parameters**







Identical for Ares 10 LTE.

#### Mechanical parameters

# Other HW group devices from Monitoring category



## Poseidon2 3266/3268

The basic unit for monitoring temperature, humidity and other environmental conditions across LAN.



## Poseidon2 4002

Unit designed for demanding monitoring applications, e.g. in data centers and industry.



#### Poseidon2 3468

Remote monitoring of temperature, humidity and other enviromental conditions in industrial design.



## Damocles2 2404

Secure industrial I/O with PoE and telco -48V power options.



### HWg-WLD

Unit for detecting flooding with detection over the entire length of the sensing cable.



## HWg-PWR 3/12/25

Measures power consumption using external M-Bus meters.



HW group s.r.o. Formanská 296 Prague, 149 00 Czech Republic

Phone: +420 222 511 918 Fax: +420 222 513 833

www.HW-group.com