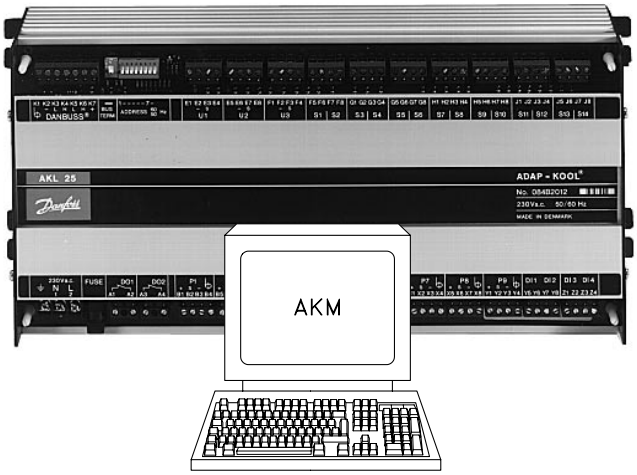
ADAP-KOOL®



Monitoring unit for monitoring refrigeration plant AKL 25

Software version 1.2x

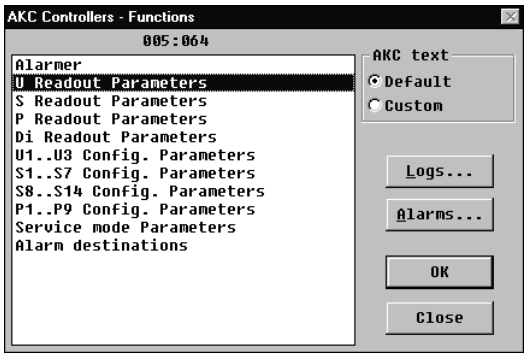
Menu list

This menu function can be used together with system software type AKM. The description is divided up into function groups that can be displayed on the PC screen. Within each group it is now possible to show the measured values, or settings.
Regarding the use of AKM, reference is made to the AKM Manual.

Validity

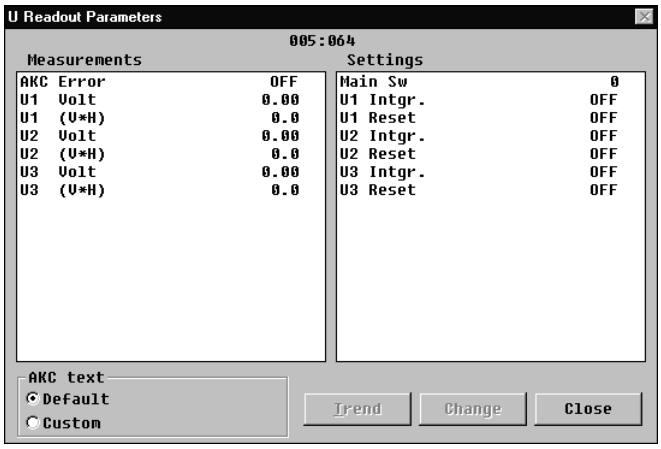
This menu operation was worked out in June 2000 and applies to AKL 25 with the code number 084B2012 and fitted with software version 1.2x.

Function groups



The operation is divided up into several function groups. When a selection has been made, push “OK”, and you may continue from the next display. By way of example, the U Readout Parameters has been selected here.

From the measure line the different values can be read. The values are constantly updated.
In the list of settings the set values can be seen. If a setting has to be changed, select the parameter and proceed via “OK”.

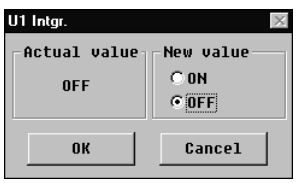


Measurements

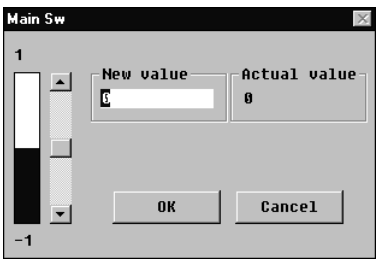
The various measurements can be read directly. If a graphic display of the measurements is required, up to eight of them can be shown. Select the required measurements and push “Trend”.

Settings

There are four kinds of settings, ON/OFF settings, settings with a variable value, time settings and “reset alarms”.



Set the required value and push “OK”



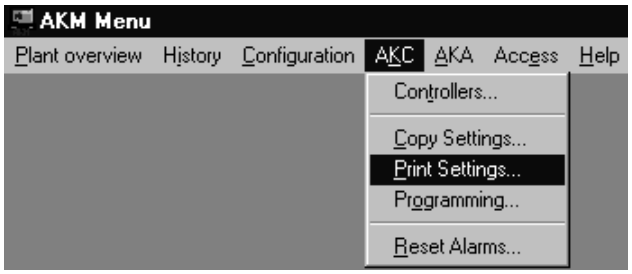
Enter the new value or move the sliding scale up or down. The new value will apply, when “OK” is pushed.

Go through the individual functions one by one and make the required settings. When settings have been made for one controller, the set values may be used as basis in the other controllers *of the same type* and *with the same software version*. Copy the settings by using the function in the AKM programme, and adjust subsequently any settings where there are deviations.

NB! If a list is required for noting down the individual settings, a printout can be made of it with a function in the AKM programme. Read the next section, "Documentation".

Documentation

Documentation of the settings of the individual controllers can be made with the print function in the AKM programme. Select the controller for which documentation of the settings is required and select the "Print Settings" function (df. also the AKM Manual).



Functions

Indicated below are function groups with corresponding measurements and settings. A printout of the given settings can be made using the AKM function "Print Settings" (see above).

Alarms

See page 8.

U Read-out Parameters

Measurements	AKC Error	When "ON", there is an alarm message. See page 8.
	U1 Volt	Voltage on U1 input (corrected according to "U1...U3 Config"). ***** will be displayed, if input is not used
	U1 (V*H)	Integrated voltage signal for U1 input (corrected according to "U1...U3 Config").
	U.....	As above for U2 and U3
Settings	Main Sw	Main Switch: 1: Measurement 0: Controller stop -1: Service function
	U1 Integr.	Switch for integrator
	U1 Reset	Reset integrator (automatically returns to OFF)
	U.....	As above for U2 and U3

S Read-out Parameters

Measurements	AKC Error	When “ON”, there is an alarm message. See page 8.	
	S1 °C/DI	S1 inlet - Temperature connection: S1 temperature (filtrered and corrected according to “S1... S14 Config”) - ON/OFF connection: Statement of S1 inlet 1= closed, 0 = open ***** will be displayed, if input is not used	
	S.....	As above for S2 to S14	
Settings	Main Sw	Main Switch:	1: Measurement 0: Controller stop -1: Service function

P Read-out Parameters

Measurements	AKC Error	When “ON”, there is an alarm message. See page 8.	
	P1 Bar	P1 pressure (filtrered and corrected according to “P1...P9 Config.”) ***** will be displayed, if input is not used	
	P.....	As above for P2 to P9	
Settings	Main Sw	Main Switch:	1: Measurement 0: Controller stop -1: Service function

Di Read-out Parameters

Measurements	AKC Error	When “ON”, there is an alarm message. See page 8.	
	Di1	Di1 input status. ON = closed, OFF = open	
	Di1 Count	Registration of number of pulses (counter)	
	Di1 Hours	Registration of ON time	
	Di.....	As above for Di2 to Di4	
Settings	Main Sw	Main Switch:	1: Measurement 0: Controller stop -1: Service function
	Di1 Func.	Switch for pulse counter and time registration. The values in the menus are frozen	
	Di1 Reset	Reset pulse counter and time registration (automatically returns to OFF)	
	Di.....	As above for Di2 to Di4	

U1..U3 Config. Parameters

Measurements	AKC Error	When “ON”, there is an alarm message. See page 8.
Settings	Main Sw	Main Switch: 1: Measurement 0: Controller stop -1: Service function
	U1 Filter	Time constant (seconds)
	U1 Cor C1	Correction factor C1. Display = C1 x U1 + C2
	U1 Cor C2	Correction factor C2
	U1 Alarm	0: Alarm Off 1: Activate D01 on AKL 25 and D02 on gateway 2: Activate D02 on AKL 25 3: Only alarm via DANBUSS
	U1 Hi. Al	Upper alarm limit for U1
	U1 Lo. Al	Lower alarm limit for U1
	U1 Del. m	Time delay for “U1” alarm (minutes)
	U.....	As above for U2 and U3
	U1 ON/OFF	Switch for U1 input (0 = OFF, 1 = Active)
	U.....	As above for U2 and U3
	U1 Cut off	Setting of limiting value for U1-signal (where a little U1-signal is defined to “0 Volt”. The setting refers to a corrected U1-signal)
	U.....	As above for U2 and U3

S1...S7 Config. Parameters

Measurements	AKC Error	When “ON”, there is an alarm message. See page 8.
Settings	Main Sw	Main Switch: 1: Measurement 0: Controller stop -1: Service function
	S1 °C/DI	Switch for S1 input 0: Off 1: Temperature measurement with Pt 1000 ohm (analog) 2: ON/OFF connection (digital function)
	S1 Filter	Time constant in seconds. (when temperatures are measured) At digital function (setting in "S1 °C/DI" = 2) the filter function cannot be used (factory setting = 1)
	S1 Cor C2	Correction factor C2 Display = S1 + C2 At digital function (setting in "S1 °C/DI" = 2) the correction function cannot be used (factory setting =0)
	S1 Alarm	0: No alarm 1: Activate D01 on AKL 25 and D02 on gateway 2: Activate D02 on AKL 25 3: Only via DANBUSS
	S1 Hi. Al	Analog: Upper alarm limit for S1 Digital: If alarm is required for shortcircuited input, the setting must be 1 If no alarm is required, the setting must be 2 or higher
	S1 Lo. Al	Analog: Lower alarm limit for S1 Digital: If alarm is required for open input, the setting must be 0. If no alarm is required, the setting must be negative.
	S1 Del. m	Time delay for alarm (minutes)
	S.....	As above for S2 to S7

S8...S14 Config. Parameters

Measurements	AKC Error	When “ON”, there is an alarm message. See page 8.
Settings	Main Sw	Main Switch: 1: Measurement 0: Controller stop -1: Service function
	S8 °C/DI	Switch for S8 input 0: Off 1: Temperature measurement with Pt 1000 ohm (analog) 2: ON/OFF Connection (digitalfunktion)
	S8 Filter	Time constant in seconds. (when temperatures are measured) At digital function (setting in "S8 °C/DI" = 2) the filter function cannot be used (factory setting = 1)
	S8 Cor C2	Correction factor C2 Dispaly = S8 + C2 At digital function (setting in "S8 °C/DI" = 2) the correction function cannot be used (factory setting =0)
	S8 Alarm	0: No alarm 1: Activate D01 on AKL 25 and D02 on gateway 2: Activate D02 on AKL 25 3: Only via DANBUSS
	S8 Hi. Al	Analog: upper alarm limit for S8 Digital: If alarm is required for shortcircuited input, the setting must be 1 If no alarm is required, the setting must be 2 or higher
	S8 Lo. Al	Analog: Lower alarm limit for S8 Digital: If alarm is required for open input, the setting must be 0. If no alarm is required, the setting must be negative.
	S8 Del. m	Time delay for alarm (minutes)
	S.....	As above for S9 to S14

P1..P9 Config. Parameters

Measurements	AKC Error	When “ON”, there is an alarm message. See page 8.
Settings	Main Sw	Main Switch: 1: Measurement 0: Controller stop -1: Service function
	P1 LoRange	Pressure transmitters working range. Min. value
	P1 HiRange	Pressure transmitters working range. Max. value
	P1 Filter	Time constant in seconds
	P1 Cor C2	Correction factor C2 Display = P1 + C2
	P1 Alarm	0: No alarm 1: Activate D01 on AKL 25 and D02 on gateway 2: Activate D02 on AKL 25 3: Only via DANBUSS
	P1 Hi. Al	Upper alarm limit
	P1 Lo. Al	Lower alarm limit
	P1 Del. m	Time delay for “P1” alarm (minutes)
	P.....	As above for P2 to P9

Service mode Parameters

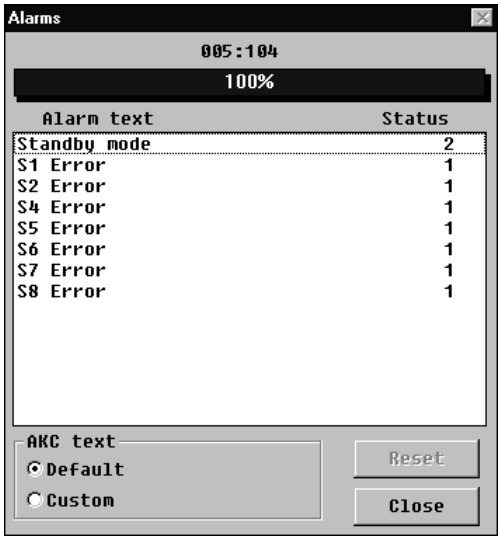
Measurements	AKC Error	When “ON”, there is an alarm message. See page 8.
	U1 Volt	Display signal prior to correction and filtration
	U.....	For U2 and U3
	S1 °C/Di	Temperature measurements or ON/OFF indication Temperature: Display signal prior to correction and filtration ON/OFF: 1 = closed, 0 = open
	S.....	For S2 to S14
	P1 Bar	Display signal prior to correction and filtration
	P.....	For P2 to P9
	Di1	Display ON/OFF status
	Di.....	For Di2 to Di4
Settings	Main Sw	Main Switch: 1: Measurement 0: Controller stop -1: Service function
	Man. Ctrl.	ON: Manual setting allowed When manual setting has been completed, setting must be changed to OFF
	Alarm 1	Forced control of alarm output 1 (terminals A1-A2)
	Alarm 2	Forced control of alarm output 2 (terminals A3-A4)

Alarm destinations

Measurements	AKC Error	When “ON”, there is an alarm message. See page 8.
Settings	Main Sw	Main Switch: 1: Measurement 0: Controller stop -1: Service function
	Network	ON: When alarms are registrated via PC or Gateway printer OFF: When alarms are registrated via AKA 21, only
	Set the priority for the following alarm texts (choose between 1, 2 or 0. They have the following meaning:)	1: Alarm at relay output + DANBUSS message 2: DANBUSS message only 0: No alarm and no DANBUSS message
	StandbyMod	(Control stopped) (Standby mode)
	Px Sensor AL	ON: Normal operation OFF: All"Px" alarms will be suppressed.

Alarms

The menu display for alarms shows the active alarms. Dots will appear at the top of the menu for as long as data is being obtained.



Alarms may be acknowledged one by one selecting one, and then pushing “OK”. An alarm message will now appear. e.g.:

Push "OK" to acknowledge.
The following alarm messages may occur:

Alarm message	Meaning	Action/Cause
Sx error	S1...14 Sensor error	Check sensor connection/ sensor resistance
Low Sx temp.	Too low S1...14 temperature and time delay lapsed	
High Sx temp.	Too high S1...14 temperature and time delay lapsed	
Low Sx Di=0	S1...14 input OFF	
High Sx Di=1	S1..14 input closed	
Px error	P1...9 sensor error	Check sensor signal
Low Px press.	Too low P1...9 pressure and time delay lapsed	
High Px press.	Too high P1...9 pressure and time delay lapsed	
Ux error	U1...3 error	Check voltage signal
Low Ux voltage	Too low U1...3 voltage and time delay lapsed	
High Ux voltage	Too high U1...3 voltage and time delay lapsed	
Standby mode	Control stopped	Function switch (Main switch) is either in pos. “Controller stopped” or “Service mode”.

AC-RDT