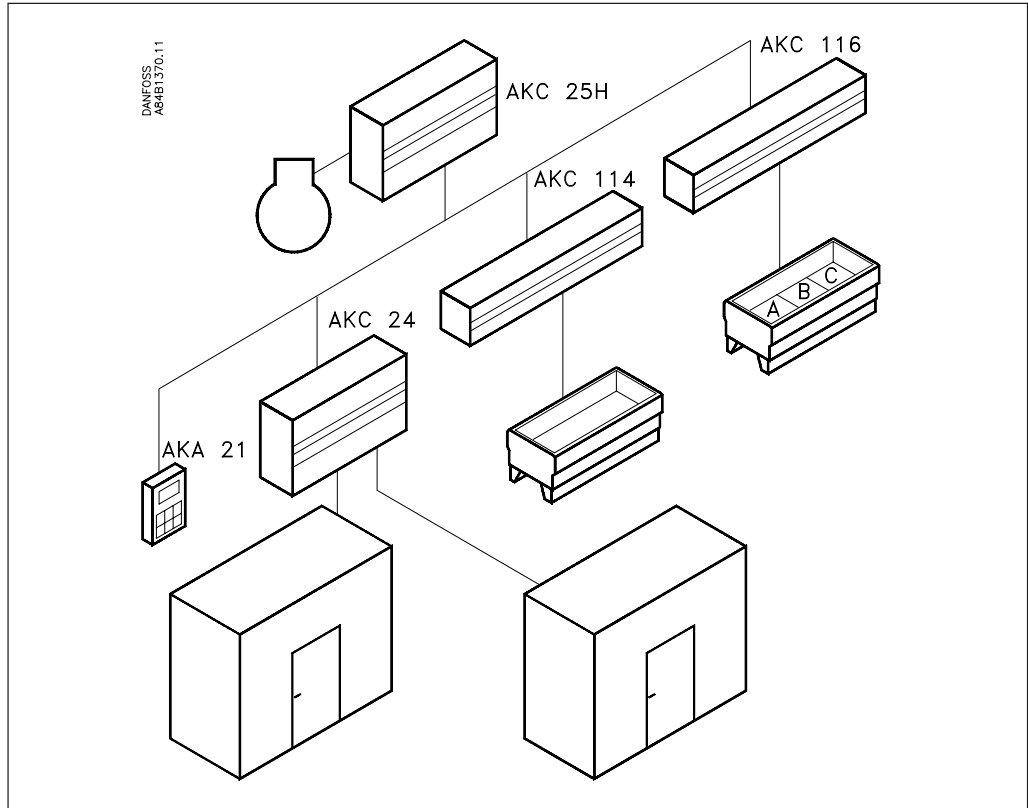


Compressor Pack Controller

AKC 25H3

Software version 1.0x

System survey



A refrigerating plant fitted with ADAP-KOOL® refrigeration controls will mostly consist of several controllers where each controller will regulate its own refrigeration appliance/cold room.

The system has been designed in such a way that contact can be made to each and every controller via a data communication system. One specific controller is selected, and it will now be possible to make settings and readouts for this unit.

Operation

- The individual controllers can be operated in two ways:
1. With control panel type AKA 21.
Use this document when operation takes place in this way.
 2. With PC and system software type AKM. Use another document with literature number RC.8A.G.



Validity

This menu operation (dated February 2000), applies to AKC 25H3 with the following code number:
084B2039 that is fitted with software version 1.0x.

Select a controller

All controllers that are connected to the same network can be operated with the control panel. There may be as many as 125 controllers, and they are shown in groups of 16 on the display.

```

1 < 1 > 16
AEAAAAAAAAEEgg A
  
```

A system is shown here which consists of more than 16 controllers. The meaning of the letters is, as follows:

- A: AKC controller
- E: Controller with active ERROR (on addresses 2, 11 and 12 in this example)
- g: Gateway (to addresses 13 and 14 in this example)
- G: Gateway with connected printer
- : A blank field indicates that there is no unit with this address.

```

1 < 4 > 16
AEAAAAAAAAEEgg A
  
```

Select the unit that is to be operated by using the "+/On" or "-/Off" key, and push "Enter". In this example you select the controller with address 4.

```

17 < 17 > 32
AAA
  
```

If the system comprises more than 16 units or units with an address code higher than 16, you may change to the next group by pushing "→".

Settings of a controller

When a controller has been selected, you can make settings in it. This setting is performed, as follows:

```

                    5
-50 to +50        5
  
```

```

                    ON
OFF / ON          ON
  
```

Shown in the upper right corner of the display is the setting with which the controller is operating. Below that value a new setting may be made. Use the three keys "+/ON", "-/OFF" and "Digit" for setting the new value. This new value will not govern the regulation until you push the key "Enter".

Access to a controller

The functions in the controller can be protected by means of an access code. Depending on the settings to be made, you may gain access in one of the following ways:

User input:

1. Push F1
2. Push F2
3. Code 1 and then F1
Code 1 and then F3
4. Code 2

Gives access to:

- Display of alarms
- Read selected pressures and capacities, stop and start the regulation
- Acknowledgement of alarms
- Setting of selected parameters
- Operation of all settings of the entire menu system (with system software type AKM there is access to additional functions).

Pages 6 and 7 contain a description of how you gain access to the system via a code.

Supporting text

A supporting text is attached to the individual functions. When such a function is shown in the control panel's display, the supporting text can be obtained by pushing the key "Help". The supporting text is intended as a help to users who no longer use these operating instructions.

How to localise an error

When an error appears in a system, it can be seen on the control panel's display which will show an "E". If the control panel shows a text from a selected controller, the LED at the word "Alarm" will furthermore flash.

1	<	2	>	16
AEAAAAAAAAAAgg A				

AKC 25H3	Adr: 2
E	Mon-11:27

High air temp

When an error has occurred, first select the controller on which the error is registered. When the controller has been found, push "F1", and the error message will appear.

At the end of the document there is a list of all the error messages and a description of how to acknowledge an alarm.

Functions of a controller

When one controller has been selected from the total system, the following display will appear (the display is the first one shown when you have selected an address from the total system):

e.g.

AKC 25H3	Adr: 2
E	Mon-11:27

From this position you can freely choose between several forms of operating levels:

1. Display of alarms - push "F1"
2. Display and setting of a few selected functions - push "F2"
3. Display and setting of several selected functions - push "F3"
The function may be protected with a code (code 1)
4. Display and setting of all allowed functions in the controller. The function may be protected with a code (code 2).

Operation of the individual levels is shown below:

1. **F1** When you push "F1" the alarm messages from the controller in question appear. Only active alarms are shown. With a push on "↓" you can see whether there are more alarm messages, and if so, their texts.
When an alarm has been localised and corrected, the alarm is acknowledged (removed from the system, so that it no longer appears). In large systems where a gateway is also connected this acknowledgement will take place automatically. In other systems it has to be done manually, cf. end of the document.
Prior to the acknowledgement of the alarm, the keying of a code is required, see page 6.

- 2. F2** Leave the F1 function by pushing "←".
 When you push "F2" a number of functions will appear where it is possible to read or set values.
 You can move to and from the individual functions by pushing "↑" or "↓". On page 3 you can see how a setting is changed.

P0A °C 3:01:01	Suction pressure in °C (measured with the pressure transmitter on the POA input)
A CompCap% 3:01:03	Cut-in compressor capacity in % (of total capacity)
PcA °C 5:01:01	Discharge pressure in °C (measured with the pressure transmitter on the PcA input)
A CondCap% 5:01:03	Cut in condenser capacity in %
P0B °C 6:01:01	Suction pressure in °C (measured with the pressure transmitter on the P0B input)
B CompCap% 6:01:03	Cut-in compressor capacity in % (of total capacity)
PcB °C 8:01:01	Discharge pressure in °C (measured with the pressure transmitter on the PcB input)
B CondCap% 8:01:03	Cut-in condenser capacity in %

Leave the F2 function by pushing "←".

3. F3 When you push “F3”, a number of functions will appear which are used when the system is serviced.

- If access code is used (code 1), key it as follows:
 - Push the “key”
 - Enter the code by using the three keys “+”, “-” and “Digit” (the code is mentioned later as code 1, and the factory setting is 40. If code 2 has been set at 0, access code 1 cannot be used).
 - Push “Enter”
 - Push “F3”

Move to and from the individual functions by pushing “↑” or “↓”.
On page 3 you can see how a setting is changed.

Main Switch -1 / 0 / 1 2:01:01	Function switch: 1: Regulation 0: Controller stopped -1: Service function
P0A SP °C -70.0 30.0 3:02:01	Setting of required suction pressure in °C
P0A Ref °C 3:01:02	Suction pressure reference (incl. external override signal, if any)
A ReqComp% 3:01:04	Reference for compressor capacity (deviations from "3:01:03" may be due to time delays)
PcA SP °C -25.0 90.0 5:02:02	Setting of required discharge pressure in °C
PcA Ref °C 5:01:02	Discharge pressure reference in °C
A ReqCond% 5:01:04	Reference for condenser capacity (deviations from "5:01:03" may be due to time delays)
P0B SP °C -70.0 30.0 6:02:01	Setting of required suction pressure in °C
P0B Ref °C 6:01:02	Suction pressure reference (incl. external override signal, if any)
B ReqComp% 6:01:04	Reference for compressor capacity (deviations from "6:01:03" may be due to time delays)
PcB SP °C -25.0 90.0 8:02:02	Setting of required discharge pressure in °C
PcB Ref °C 8:01:02	Discharge pressure reference in °C
B ReqCond% 8:01:04	Reference for condenser capacity (deviations from "8:01:03" may be due to time delays)

Leave the function by pushing “←”.

- 4. Access to all functions** The access to the functions may be protected with a code (code 2).
- If access code is used, key it as follows:
 - Push the "key"
 - Enter the code by using the three keys "+", "-" and "Digit"
 - Push "Enter"
 - Push "←"

Move to and from the individual functions by pushing the four arrow keys.
On page 3 you can see how a setting is changed.

When you wish to leave the "Access to all functions" function, push "Clear" and then "←".

List of functions on level 1:

1. Controller's access picture and access to system information
2. Controller switch, language selection, network frequency and refrigerant selection.
3. Compressor capacity regulation, group A
4. Compressor working data, group A
5. Condenser capacity regulation, group A
6. Compressor capacity regulation, group B
7. Compressor working data, group B
8. Condenser capacity regulation, group B
9. Safety limits
10. Day- /night function
11. Configuration of inputs
12. Configuration of outputs
13. Forced-control functions for service and initial setting
14. Configuration of alarm priorities

Below and on the following pages the individual functions are shown together with a brief description:

Level 1	Level 2	Level 3	Description
AKC 25H3 Adr: xxx Mon hh:mm			Controller access display If the code function is used, continue by pushing the "key" key.
	Enter Code 0 - 255 0 1:01		Entry of access code 1 or access code 2 (cf. also 1:07 and 1:08). Continue by pushing "arrow left"
AKC 25H3 Adr: xxx Mon hh:mm 1			Acces to system information If an E appears in the display, an error has been registered
	Code No. Prog.Ver. 1:02		Reading of the controller's code number and software version
	Clock: Mon-00:00 1:03		Setting of controller clock (AKC clock)
		Clock: Day (Mon)1 (Sun)7 1:03:01	Setting of day (1 = Monday, 7 = Sunday)
		Clock: Hour 0 23 1:03:02	Setting of hours
		Clock: Min. 0 59 1:03:03	Setting of minutes
	System address Addr. yyy xxx 1:04		Reading of the controller's system address yyy = network No. and xxx = address The system address can only be set via PC

	Alarms Report to Addr. yyy xxx 1:05	Reading of the alarm address (end receiver) the alarms are to be sent to The alarm address can only be set via PC
	Gateway Address 125 1:06	Reading of address of nearest gateway which has to effect alarms The address can only be set via PC
	Chg. Code1 0 255 1:07	Change of code 1. The code gives access to acknowledgement of active alarm by means of the F1 key. Also access to the selected settings/readouts via the F3 key. (Factory setting = 40) (See also code 2)
	Chg. Code2 0 255 1:08	Change of code 2. The code gives access to the whole menu system. (Factory setting = 0. Setting = 0 offers free access where neither code 1 not code 2 is required)
	Main Functions 2	Main functions
	Main Function Settings 2:01	Access to function switch
	Main Switch -1 / 0 / 1 2:01:01	Function switch: 1: Regulation 0: Controller stopped -1: Service function
	RfgTypeA R 2:01:02	Reading of set refrigerant type. Group A
	RfgTypeB R 2:01:03	Reading of set refrigerant type. Group B
	Language 0 4 2:01:04	Selection of language. Five languages have been entered in the controller 0: English 1: German 2: French 3: Danish 4: Spanish NB! This function must be set prior to any uploading to system software type AKM. When the language code has been changed, push "ENTER" and then "Clear".
	Mains freq 50 60 2:01:05	Set the network frequency to 50 or 60 Hz
	Rfg. Type A 0 23 2:01:06	Refrigerant selection: 0: No refrigerant selection. 12: R142b 1: R12 13: User defined 2: R22 14: R32 3: R134a 15: R227 4: R502 16: R401A 5: R717 (ammonia) 17: R507 6: R13 18: R402A 7: R13b1 19: R404A 8: R23 20: R407C 9: R500 21: R407A 10: R503 22: R407B 11: R114 23: R410A
	Rfg. Type B 0 23 2:01:07	
	A Compressor Capacity Ctrl. 3	Compressor capacity regulation. Group A
	Compressor A Measurements 3:01	Read-out of measured values with relation to capacity regulation
	POA °C 3:01:01	Suction pressure in °C (measured with the pressure transmitter on the POA input)

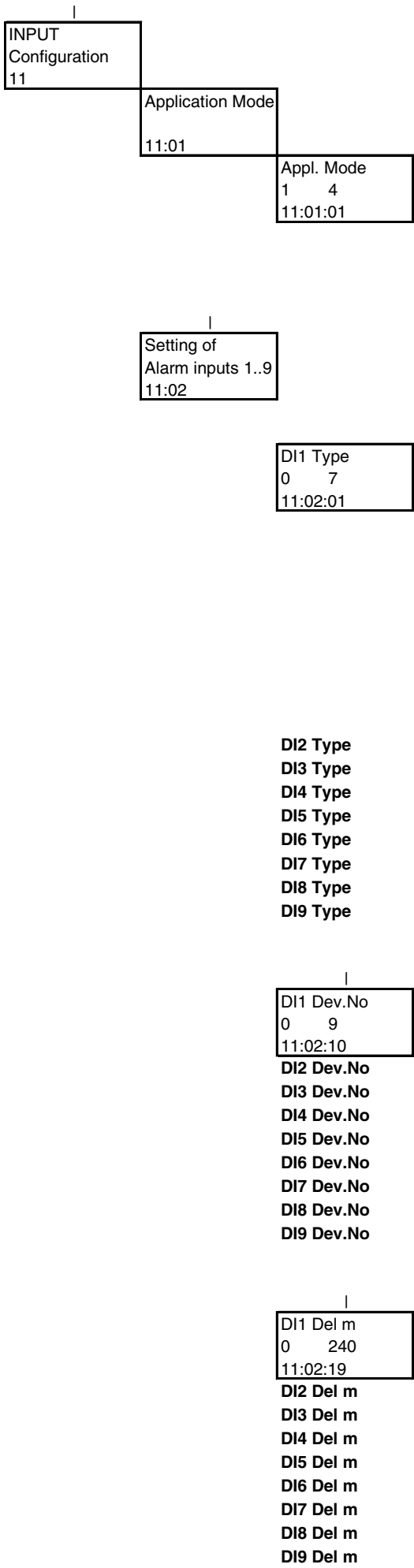
P0A Ref °C 3:01:02	Suction pressure reference (incl. external override signal, if any)
A CompCap% 3:01:03	Cut-in compressor capacity in % (of total capacity)
A ReqComp% 3:01:04	Reference for compressor capacity (deviations from "3:01:03" may be due to time delays)
SdA °C 3:01:05	Discharge gas temperature measured with the temperature sensor on the SdA input
Night Cond. 3:01:06	Status of night setback function ON: an increase of the evaporating pressure is permitted (see also 3:02:09) OFF: Normal situation
Compressor A Settings 3:02	Settings for the compressor function
P0A SP °C -70.0 30.0 3:02:01	Setting of required suction pressure in °C
++ Zone s 5 300 3:02:02	Time delay between step cut ins in the regulation band over the "+Zone band" Set in seconds
+ Zone s 10 900 3:02:03	Time delay between step cut ins in the regulation band over the neutral zone Set in seconds
+Zone K 0.1 20.0 3:02:04	Regulation band over the neutral zone
NZ K 0.1 20.0 3:02:05	Neutral zone for suction pressure
-Zone K 0.1 20.0 3:02:06	Regulation band under the neutral zone
- Zone s 10 900 3:02:07	Time delay between step cut outs in the regulation band below the neutral zone Set in seconds
- - Zone s 5 300 3:02:08	Time delay between step cut outs in the regulation band below the "-Zone band" Set in seconds
Dt Night K -25 +25 3:02:09	Displacement value for suction pressure in connection with an active night setback signal (set in Kelvin)
Step Mode 1 2 3:02:10	Cut in and cut out sequence for compressors 1: Sequential (first in, last out) 2: Cyclic (equalisation of run time)
ManCap A OFF ON 3:02:11	Forced control function!!! OFF: No forced control ON: There may be forced control of the compressor capacity
ManCtrl.A % 0 100 3:02:12	Forced control function!!! Manual setting of compressor capacity The value is in % of total capacity controlled by the controller

A Compressor Status read out 4			Status of compressors
	AKA 14/S9 select 4:01		Setting for any connected external display
		AKA14/S9 1 9 4:01	The readout is defined with the following setting: 1: P0A 2: P0A reference 3: PcA 4: PcA reference 5: P0B 6: P0B reference 7: PcB 8: PcB reference 9: Selection by means of a resistance decade on the S9 input
	Compressor A No. 1 4:02		Compressor No. 1. Regulation A
		1A Cap. % 4:02:01	Actual cut in capacity on this compressor
		1A Runhour 4:02:02	Compressor's aggregate run time in hours (Zero-setting of the value can be performed under "Output configuration")
		1A Strt/ 24 h 4:02:03	Number of compressor starts during the past 24 hours
	Compressor A No. 2 4:03		As above, Compressor No. 2
	Compressor A No. 3 4:04		As above, Compressor No. 3
	Compressor A No. 4 4:05		As above, Compressor No. 4
	Compressor A No. 5 4:06		As above, Compressor No. 5
	Compressor A No. 6 4:07		As above, Compressor No. 6
	Compressor A No. 7 4:08		As above, Compressor No. 7
	Compressor A No. 8 4:09		As above, Compressor No. 8
	Compressor A No. 9 4:10		As above, Compressor No. 9

A Condenser Capacity Ctrl. 5	Condenser A measurements 5:01	PcA °C 5:01:01	Condenser's capacity regulation. Group A
		PcA Ref °C 5:01:02	Read-out of measured values with relation to capacity regulation
		A CondCap% 5:01:03	Discharge pressure in °C (measured with the pressure transmitter on the PcA input)
		A ReqCond% 5:01:04	Discharge pressure reference in °C
		Sout °C 5:01:05	Cut in condenser capacity in %
	Condenser A Settings 5:02	PcA RefMode 1 2 5:02:01	Reference for condenser capacity (deviations from "5:01:03" may be due to time delays)
		PcA SP °C -25.0 90.0 5:02:02	Temperature measured by Sout sensor (Air temperature at condenser inlet)
		++ Zone s 5 300 5:02:03	Settings for the condenser function
		+ Zone s 10 900 5:02:04	Definition of condenser regulation 1: Reference = set reference "PcA Ref." (5:02:02) 2: Reference is changed as a function of the Sout signal and application selection
		+Zone K 0.1 20.0 5:02:05	Setting of required discharge pressure in °C
		NZ K 0.1 10.0 5:02:06	Time delay between step cut ins in the regulation band over the "+Zone band"
		-Zone K 0.1 20 5:02:07	Time delay between step cut ins in the regulation band over the neutral zone
		- Zone s 10 900 5:02:08	Regulation band over the neutral zone
		-- Zone s 5 300 5:02:09	Neutral zone for discharge pressure in K
		A dim tm K 0 25 5:02:10	Regulation band under the neutral zone
		PcRefMax °C 30 90 5:02:11	Time delay between step cut outs in the regulation band under the neutral zone
			Time delay between step cut outs in the regulation band under the "-Zone band"
			Mean temperature differential across the condenser at max. load (tm differential at max. load) (It is the temperature differential between air- and condensing temperature)
			Max. permissible condensing pressure reference

	PcRefMin °C -25 30 5:02:12	Min. permissible condensing pressure reference
	Man CapA OFF ON 5:02:13	Forced control function!!! OFF: No forced control ON: There may be forced control of the condenser capacity
	ManCtrl.A% 0 100 5:02:14	Forced control function!!! Manual setting of condenser capacity The value is in % of total capacity controlled by the controller
B Compressor Capacity Ctrl. 6		Settings for regulation B All settings for the B regulation are built up in the same way as shown under regulation A. Please refer to same.
B Compressor Status read out 7		Regulation B is not to be set if application type = 1 is selected (11:01:01 = 1)
B Condenser Capacity Ctrl. 8		Condenser regulation B is not to be set if application type = 3 or 4 is selected (11:01:01 = 3/4)
Safety Functions 9		Safety limits
	Limits with 1. priority 9:01	Setting of limit values that stop the regulation
	PcA Max °C -30 100 9:01:01	Max. value of discharge pressure in °C (If the value is exceeded, the entire compressor capacity will be cut out) (At 3 K under PcA max. the entire condenser capacity will be cut in and the compressor capacity will be reduced)
	P0A Min °C -70 30 9:01:02	Min. value of suction pressure in °C (If the value becomes less, the entire compressor capacity will be cut out)
	SdA Max °C 0 150 9:01:03	Max. value of discharge gas temperature (If the value is exceeded, the entire compressor capacity will be but out and the entire condenser capacity will be cut in)
	Restart m 0 30 9:01:04	Time delay before restart of compressors (Applies to the functions: "Pc_ Max", "P0_ Min" and "Sd_ Max")
	PcB Max °C -30 100 9:01:05	Max. value of discharge pressure in °C (If the value is exceeded, the entire compressor capacity will be cut out) (At 3 K under PcB max. the entire condenser capacity will be cut in and the entire compressor capacity will be reduced)
	P0B Min °C -70 30 9:01:06	Min. value of suction pressure in °C (If the value becomes less, the entire compressor capacity will be cut out)
	SdB Max °C 0 150 9:01:07	Max. value of discharge gas temperature (If the value is exceeded, the entire compressor capacity will be but out and the entire condenser capacity will be cut in)

Day/Night Clock 10		Day- /night function
	Day/Night Setting 10:01	Settings
	Day/Night 0 3 10:01:01	Define day/night functions with following settings 0: No change 1: Use signal on the inlet "Night" 2: Use signal from the above mentioned time table 3: Use signal from the mastergateway's override function
	Mo day h 0 24 10:01:02	Time table for displacement of evaporating pressure on Mondays End of night setback (normal suction pressure) At setting = 0 there is no displacement this day
	Mo night h 0 24 10:01:03	Time table continued: Start (of night setback) when the suction pressure is changed with setting "3:02:09" At setting = 0 there is no displacement this day If day and night settings are identical, or if night comes before day, there will be a different function. See functional description
	Tu day h 0 24 10:01:04	As above, Tuesdays
	Tu night h 0 24 10:01:05	As above, Tuesdays
	We day h 0 24 10:01:06	As above, Wednesdays
	We night h 0 24 10:01:07	As above, Wednesdays
	Th day h 0 24 10:01:08	As above, Thursdays
	Th night h 0 24 10:01:09	As above, Thursdays
	Fr day h 0 24 10:01:10	As above, Fridays
	Fr night h 0 24 10:01:11	As above, Fridays
	Sa day h 0 24 10:01:12	As above, Saturdays
	Sa night h 0 24 10:01:13	As above, Saturdays
	Su day h 0 24 10:01:14	As above, Sundays
	Su night h 0 24 10:01:15	As above, Sundays



Configuration of inputs

The following menu screens can only be set when the MAIN SWITCH input is cut out

Definition of application

The application type is defined with the following setting:

- 1: One compressor groups. One condenser group (group A is used)
- 2: Two separate groups
- 3: Two compressor groups. One common condenser with two separate passages. Regulation is performed with condenser group A. Both PcA and PcB are used
- 4: Two compressor groups. One common condenser. Regulation is performed with condenser group A.

Setting of alarm inputs

There are three settings for each input. Define first what the input is to register. Next, the information that is to belong to the input. And finally, a time delay

Alarm input DI 1

0: Input not used

- 1: Input registers the A-compressors' safety circuit
Compressors no. is selected in the next menu
- 2: Input registers the A-condensers' safety circuit
Condensers no. is selected in the next menu
- 3: Input registers the B-compressors' safety circuit
Compressors no. is selected in the next menu
- 4: Input registers the B-condensers' safety circuit
Condensers no. is selected in the next menu
- 5: Input registers all A-compressors' safety circuit
(no value to be set in the next menu)
- 6: Input registers all B-compressors' safety circuit
(no value to be set in the next menu)
- 7: Other alarm monitoring.

Setting can also be made for the remaining DI-inputs in conformity with the settings shown above

Type = 1 and 3 (see above): Select the compressor no.

Type = 2 and 4(see above): Select the condenser no.

Setting can also be made for the remaining DI-inputs in conformity with the settings shown above

Time delay from the alarm is registered until executed

Setting can also be made for the remaining DI-inputs in conformity with the settings shown above

OUTPUT
Configuration
12

DO Relay Type of device 12:01	DO1 Type 0 4 12:01:01
	DO2 Type
	DO3 Type
	DO4 Type
	DO5 Type
	DO6 Type
	DO7 Type
	DO8 Type
	DO9 Type

DO relay Device number 12:02	DO1 Dev.No 0 9 12:02:01
	DO2 Dev.No
	DO3 Dev.No
	DO4 Dev.No
	DO5 Dev.No
	DO6 Dev.No
	DO7 Dev.No
	DO8 Dev.No
	DO9 Dev.No

DO relay Recycle time 12:03	DO1 Recy m 0 25 12:03:01
	DO2 Recy m
	DO3 Recy m
	DO4 Recy m
	DO5 Recy m
	DO6 Recy m
	DO7 Recy m
	DO8 Recy m
	DO9 Recy m

Configuration of relay outputs

The following menus can only be set when the MAIN SWITCH input is cut out

- Regulation with identical capacity on the individual relays
- The condensers must either be controlled completely by means of steps, or completely by means of speed regulation. A combination is not possible. Step coupling with a relay module may however be combined with DO outputs.

Relay output is used for:

Relay output DO1

- 0: Not used
- 1: Compressor A/ compressor steps A
- 2: Condenser A/ condenser steps A
- 3: Compressor B/ compressor steps B
- 4: Condenser B/ condenser steps B

Setting can also be made for the remaining DO-outputs in conformity with the settings shown above

Set the number of the compressor or condenser, which is connected to the actual relay

Relay output DO1

- If several relay outputs are set with the same number, the subsequent relay outputs will be regarded as belonging unloaders/steps

Setting can also be made for the remaining DO-outputs in conformity with the settings shown above

Minimum period of time between two successive starts

Relay output DO1

If the output controls an unloader or a condenser step, the setting will be set at zero

Setting can also be made for the remaining DO-outputs in conformity with the settings shown above

DO relay Min.ON-time 12:04	DO1 ON m 0 25 12:04:01	Minimum duration of ON period
	DO2 ON m DO3 ON m DO4 ON m DO5 ON m DO6 ON m DO7 ON m DO8 ON m DO9 ON m	Relay output DO1 If the output controls an unloader or a condenser step, the setting will be set at zero Setting can also be made for the remaining DO-outputs in conformity with the settings shown above
DO relay Accumulated ON 12:05	DO1 Time h 0 30000 12:05:01	Hourmeter
	DO2 Time h DO3 Time h DO4 Time h DO5 Time h DO6 Time h DO7 Time h DO8 Time h DO9 Time h	Relay output DO1 Reading and adjustment, if applicable, of hourmeter Setting can also be made for the remaining DO-outputs in conformity with the settings shown above
AO Output 12:06	AO Type 0 4 12:06:01	Analog output
	Fan Step 0 8 12:06:02	The output is defined with the following setting 0: The output is not used 1: Step coupling of condenser group A via relay module 2: Speed regulation of all fans on condenser group A 3: Step coupling of condenser group B via relay module 4: Speed regulation of all fans on condenser group B
	Lim Night % 0 100 12:06:03	If settings 1 or 3 above have been selected and the signal is to be connected to one or two relay modules type EKC 331, then the setting must correspond to the number of relays used (i.e. 1, 2, 3, 4, 6 or 8) If definition 2 or 4 above has been selected, the fan speed can be lowered during night operation
Service Mode 13	Measurements of input terminals 13:01	Service function
	P0A Bar 13:01:01	Measurements on inputs
	PcA Bar 13:01:02	Suction pressure (measured with P0A pressure transmitter)
	P0A °C 13:01:03	Discharge pressure (measured with PcA pressure transmitter)
	PcA °C 13:01:04	Suction pressure converted to °C
		Discharge pressure converted to °C

P0B Bar 13:01:05	Suction pressure (measured with P0B pressure transmitter)
PcB Bar 13:01:06	Discharge pressure (measured with PCB pressure transmitter)
P0B °C 13:01:07	Suction pressure converted to °C
PcB °C 13:01:08	Discharge pressure converted to °C
SdA °C 13:01:09	Discharge gas temperature (measured with SdA temperature sensor)
SdB °C 13:01:10	Discharge gas temperature (measured with SdB temperature sensor)
S6 °C 13:01:11	Temperature measurement (performed with S6 temperature sensor)
S7 °C 13:01:12	Temperature measurement (performed with S7 temperature sensor)
S8 °C 13:01:13	Temperature measurement (performed with S8 temperature sensor)
S9°C/AKA14 13:01:14	Temperature measurement (performed with S9 temperature sensor)/ Asterisks if a switch is used on the input
Sout °C 13:01:15	Temperature measurement (performed with Sout temperature sensor)
Ext. Main 13:01:16	Status of external "Main Switch" input In pos. OFF the regulation is stopped by force
Night inp. 13:01:17	Status of input "Night" In pos. ON the signal is OK (= night operation)
DI 1 Status 13:01:18	Status of input DI 1 In pos. ON the signal is OK, and the controller can regulate
DI 2 Status 13:01:19	Status of input DI 2 In pos. ON the signal is OK, and the controller can regulate
DI 3 Status 13:01:20	Status of input DI 3 In pos. ON the signal is OK, and the controller can regulate
DI 4 Status 13:01:21	Status of input DI 4 In pos. ON the signal is OK, and the controller can regulate
DI 5 Status 13:01:22	Status of input DI 5 In pos. ON the signal is OK, and the controller can regulate
DI 6 Status 13:01:23	Status of input DI 6 In pos. ON the signal is OK, and the controller can regulate
DI 7 Status 13:01:24	Status of input DI 7 In pos. ON the signal is OK, and the controller can regulate
DI 8 Status 13:01:25	Status of input DI 8 In pos. ON the signal is OK, and the controller can regulate
DI 9 Status 13:01:26	Status of input DI 9 In pos. ON the signal is OK, and the controller can regulate

Status of Output terminals 13:02	AKC ON A 13:02:01	Status of relay output "AKC ON A" OFF: Forced closing of all AKV valves ON: Normal operation of AKC controllers
	AKC ON B 13:02:02	Status of relay output "AKC ON B" OFF: Forced closing of all AKV valves ON: Normal operation of AKC controllers
	DO1 Relay 13:02:03	Status of relay output DO 1 In pos. ON the relay is operated
	DO2 Relay 13:02:04	Status of relay output DO 2 In pos. ON the relay is operated
	DO3 Relay 13:02:05	Status of relay output DO 3 In pos. ON the relay is operated
	DO4 Relay 13:02:06	Status of relay output DO 4 In pos. ON the relay is operated
	DO5 Relay 13:02:07	Status of relay output DO 5 In pos. ON the relay is operated
	DO6 Relay 13:02:08	Status of relay output DO 6 In pos. ON the relay is operated
	DO7 Relay 13:02:09	Status of relay output DO 7 In pos. ON the relay is operated
	DO8 Relay 13:02:10	Status of relay output DO 8 In pos. ON the relay is operated
	DO9 Relay 13:02:11	Status of relay output DO 9 In pos. ON the relay is operated
	Alarm Relay 13:02:12	Status of alarm output In pos. ON the relay is operated, and there is no alarm
	A0 Volt 13:02:13	Status of "AO" output (analog signal 0 - 10 V d.c.)
	Manual control of outputs 13:03	Man.Ctrl. OFF ON 13:03:01
AKC ON A OFF ON 13:03:02		Manual operation of relay output "AKC ON A" OFF: Forced closing of all AKV valves (only if the output is connected) ON: (Activated) Normal operation
AKC ON B OFF ON 13:03:03		Manual operation of relay output "AKC ON B" OFF: Forced closing of all AKV valves (only if the output is connected) ON: (Activated) Normal operation
DO1 Relay OFF ON 13:03:04		Manual operation of relay output DO 1 ON: Relay activated OFF: Relay not activated

		DO2 Relay OFF ON 13:03:05	Manual operation of relay output DO 2 ON: Relay activated OFF: Relay not activated
		DO3 Relay OFF ON 13:03:06	Manual operation of relay output DO 3 ON: Relay activated OFF: Relay not activated
		DO4 Relay OFF ON 13:03:07	Manual operation of relay output DO 4 ON: Relay activated OFF: Relay not activated
		DO5 Relay OFF ON 13:03:08	Manual operation of relay output DO 5 ON: Relay activated OFF: Relay not activated
		DO6 Relay OFF ON 13:03:09	Manual operation of relay output DO 6 ON: Relay activated OFF: Relay not activated
		DO7 Relay OFF ON 13:03:10	Manual operation of relay output DO 7 ON: Relay activated OFF: Relay not activated
		DO8 Relay OFF ON 13:03:11	Manual operation of relay output DO 8 ON: Relay activated OFF: Relay not activated
		DO9 Relay OFF ON 13:03:12	Manual operation of relay output DO 9 ON: Relay activated OFF: Relay not activated
		Alarm Relay OFF ON 13:03:13	Manual operation of alarm relay ON: Relay activated (no alarm) OFF: Relay not activated
		AO Volt 0.0 10.0 13:03:14	Manual control of analog output "AO"
		Alarm destinations 14	Alarm priorities Set priority for the following alarm texts Choose between 1,2,3 or 0. They have the following meaning: 1: Alarm at AKC 25H3 relay output + DO 2 on master gateway + message on DANBUSS 2: DANBUSS message only 3: Alarm at AKC 25H3 relay output + DANBUSS message 0: No activity
		Sensor alarms 14:01	
		P0A sensor 0 3 14:01:01	
		PcA sensor 0 3 14:01:02	
		P0B sensor 0 3 14:01:03	
		PcB sensor 0 3 14:01:04	

	SdA sensor 0 3 14:01:05
	SdB sensor 0 3 14:01:06
	S6 sensor 0 3 14:01:07
	S7 sensor 0 3 14:01:08
	S8 sensor 0 3 14:01:09
	S9 sensor 0 3 14:01:10
	Sout Sens. 0 3 14:01:11
Other alarms 14:02	
	StandbyMod 0 3 14:02:01
	Rfg. Type 0 3 14:02:02
	ChClockSet 0 3 14:02:03
	No DI def. 0 3 14:02:04
	Man.Ctrl. 0 3 14:02:05
	POA Min 0 3 14:02:06
	POB Min 0 3 14:02:07
	PcA Max 0 3 14:02:08
	PcB Max 0 3 14:02:09

|
SdA Max
0 3
14:02:10

|
SdB Max
0 3
14:02:11

|
DI1 Alarm
0 3
14:02:12

|
DI2 Alarm
0 3
14:02:13

|
DI3 Alarm
0 3
14:02:14

|
DI4 Alarm
0 3
14:02:15

|
DI5 Alarm
0 3
14:02:16

|
DI6 Alarm
0 3
14:02:17

|
DI7 Alarm
0 3
14:02:18

|
DI8 Alarm
0 3
14:02:19

|
DI9 Alarm
0 3
14:02:20

Alarm message

The following display read-outs are only visible if there is an active error.

When the error is corrected, the Alarm message can be removed by pressing ENTER.

Alarm message	Cause	Remedy
Po_ sensor error	Faulty PO pressure transmitter	Check connection
Pc_ sensor error	Faulty Pc pressure transmitter	Check connection
S_ sensor error	Faulty S_ sensor	Check sensor connection/sensor resistance
Rfg. type_ has been changed	Changed refrigerant	Check the selected refrigerant. Regulation with changed refrigerant may not be done until the controller has been de-energised
Rfg. type_ is not defined	No setting	Set refrigerant type
Rfg. types A and B differ	Warning	Different refrigerants are only permitted if the condenser circuits are separate
Dishcharge temp too high	Too high pressure gas temperature	Sd_ higher than max. Sd_ setting. Wait for temperature to drop
Condensing pres. _ too high	Too high condensing temperature	Pc_ higher than max. Pc_ setting. Wait for temperature to drop
Suction pressure_ too low	Too low suction pressure temperature	P0_ lower than min. P0_ setting
No DI defined for compressor	A "DI-input" for a compressor is not defined	Define the input under "Configuration of inputs" or set alarm destination at "0".
Compr. no _ safety cutout	Signal on terminal DI () interrupted	Check compressor safety circuit
Compr.no _ oil press. cutout	Alarm from AKC 22H	Check compressor safety circuit
Compr. _ over current cutout	Alarm from AKC 22H	Check compressor safety circuit
Compr. _ dish. press. cutout	Alarm from AKC 22H	Check compressor safety circuit
Compr. _ motor prot. cutout	Alarm from AKC 22H	Check compressor safety circuit
Compr. no. _ not in auto	Wrong setting of switch on AKC 22H	Put switch in pos. "AUT."
Compr. _ disch temp. cutout	Alarm from AKC 22H	Check compressor safety circuit
Cond. _ safety cut out	Signal on terminal DI () interrupted	Check condensers safety circuit

Check Clock Settings	Power failure	After power failure, timer must be set. NB! If Network = ON, resetting will take place automatically from the gateway
Standby mode	Regulation has stopped	The function switch (Main switch) is either set in the position "Controller stopped" or "Service function" (see 2:01:01)
Man. compr. cap. ctrl __ set ON	Regulation is overridden	The forced control function for the compressor capacity or the condenser capacity is active
Manual condenser ctrl __ set ON	Regulation is overridden	The forced control function for the condenser capacity or the condenser capacity is active
Safety cut out of all _ compr	Signal on terminal DI () interrupted	Check safety circuit
General purpose alarm DI ()	Signal on terminal DI () interrupted	Check safety circuit

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