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MANDÍK®

AHU MANDÍK PARAMETERISATION FROM POL822 ROOM DEVICE

Climatix™

Building Technologies

Obsah

1 Description

Identification code

This identification code description is valid from the KJVVS103625.01 controller software version

Each air conditioner operating and configuration parameter is assigned to a unique identification code in the form of ***Xxx***, where:

- ***X*** (capital letter) - means a group of parameters.
- ***xx*** (digits) - means the parameter numeric code in the selected group of ***X.***

Units

Parameter values are listed in the following units, which are not visible due to display firmware:

- temperature (°C), where the temperature symbol icon appears next to the identification code.
- Relative humidity (%).
- Absolute humidity (g/m3).
- Air quality (ppm).
- Pressure (Pa).
- Air quantity in tens (m3/h).
- Speed, power, position (%).
- Time (s).

2 Control button functions

No.	Symbol	Name	Function	
1		**Mode/ Mod1**	**Short press**	Switches the operating modes ***Off, Tempering Attenuation, Comfort*** and ***Time Programme***. Outside the start-up screen with the mode selection, it terminates entering temperature, speed, fresh air, etc.
2		**Stay**	**Short press**	Switches the unit temporarily to **Comfort** mode.
			Long press 4s	Displays current faults that are indicated by icon No. 16.
			Long press 8s	Locks/unlocks key functions as indicated by **HMI Lock/HMI Open.**
3		**Prog**	**Short press**	Displays the current controller time setting. Outside the start-up screen, it prematurely terminates these and other parameter settings.
			Long press	Allows to change the time programme settings.
4	□	**Minus**	**Short press**	Allows the desired value of the selected parameter to be lowered (temperature, speed, fresh air amount, etc.).
			Long press	Displays the current status of each air conditioner component according to configuration. The display and marking system is described in Chapter 10.
5	□	**Plus**	**Short press**	Allows increasing the selected parameter's required value (temperature, speed, fresh air amount, etc.).
			Long press	Displays the current values of all the air conditioner sensors measuring units according to the configuration (temperature, humidity, air quality, etc.). The display and marking system is described in Chapter 11.
6		**OK**	**Short press**	Validates and simultaneously terminates entering the selected parameter's values.
7		**Fan**	**Short press**	Setting the fan speed within the preset speed range of the controller modes if enabled in the configuration.
8		**Dampers / Mod2**	**Short press**	Setting the amount of fresh air for the current mode until next mode change if enabled in configuration. When entering password, it switches between the values of the room device configuration etc.
9		**Three presses**	**Short press**	Setting the air conditioner configuration and operating parameters. The display and marking system is described in the separate documentation of "KJ Mandík Parameterisation from POL822 Room Device".
10		**Four presses**	**Short press**	Setting the internal communication parameters of the room device.

3 Control

Input password

Three-presses of the ***Plus, Minus***, and ***Mod2*** buttons will show a screen to enter four-digit service password. The password's individual flashing digits are circularly changed with the ***Plus*** and ***Minus*** buttons and confirmed with the ***Mod2*** button. When the service password is entered correctly, Ⓟ icon appears on the screen, and the parameter's identification code in the **A**-- form to select an identification code. If the input password is entered incorrectly, - - - appears. To return to enter password, press the ***Mod1*** button***.***

Identification code

After entering the password, the appropriate letter corresponding to the desired parameter group is selected with the ***Plus*** and ***Minus*** buttons. The letter flashes throughout the selection. By pressing ***Mod2*** button, the entry switches to the flashing number code selection and the ***Plus*** and ***Minus*** buttons select a specific number corresponding to the parameter in the selected group.

Parameter value change

After selecting the identification code, press the ***Mod2*** button to jump to the parameter value on the next line and that will start flashing. To change the parameter value, use the ***Plus*** and ***Minus*** buttons. To change the value, press the ***Mod2*** or ***Mod1*** key.

Return to home screen

To return to the Home screen to control the air conditioner, press the ***Mod1*** button repeatedly or automatically after about 30 seconds of button inactivity.

4 Parameters and their identification codes

Description

The specific range of parameter value change and the possible meaning is given for in the following table each parameter in the ***Value*** column. In the case of repeated ranges, "**Range_x**" is given in place of the numerical range, followed by the table. The exact meaning of the range values is described in "KJM MANDÍK Measurement & Control System Climatix".

Regulation of temperature

Code	Description	Value
A01	Requested temperature for regime **Comfort** - Summer	-50 .. 50°C
A02	Requested temperature for regime **Economy** - Summer	-50 .. 50°C
A03	Requested temperature for regime **Comfort** - Winter	-50 .. 50°C
A04	Requested temperature for regime **Economy** - Winter	-50 .. 50°C
A05	Requested temperature for regime Tempering by low room temperature - FreezeProtection.	-50 .. 50°C
A06	Compensation - the limit of the high outdoor temperature at which the setpoint temperature begins to shift.	-50 .. 50°C
A07	PID cascade regulation of temperature – proportional	0 .. 999
A10	PID cascade regulation of temperature – integration	0 .. 9999s
A11	Upper limit of cascade regulation.	-50 .. 50°C
A12	Down limit of cascade regulation.	-50 .. 50°C
A13	Hystereze of upper limit of cascade regulation.	-50 .. 50°C
A14	Hystereze of down limit of cascade regulation.	-50 .. 50°C
A15	HysterezeTCh – hystereze of calculated cascade temperature for regimes Heating/Cooling.	-50 .. 50°C
A16	Insensitivity of the supply temperature within the cascading limits.	-50 .. 50°C
A17	Maximal temperature of supply temperature.	-50 .. 300°C
A18	Selection of climate temperature for switching Heating/Cooling.	0– Outdoor 1– Room 2 - Supply 3- Exhaust 4-Preheating 5- Outlet 6- 1Room 2Room Season Contact
A19	Clima intensitivity.	-50 .. 50°C
A20	Temperature shift compared to setpoint.	-50 .. 50°C
A21	DelayTCh – delay of shift Heating/Cooling.	0 .. 9999s
A22	Sequence Delay - A delay in the chain for a lower degree of heating or cooling	0 .. 9999s
A23	Start power delay - switch-on delay of the unit with non-zero starting power.	0 .. 9999s
A24	Requested temperature of preheating.	-50 .. 300°C
A25	Temperature of switching season Summer/Winter	-50 .. 50°C
A26	Delay of switching season Summer/Winter.	0.. 9999min

A27	Delay of regimes.	0 .. 9999s
A28	PTFilter - filter of step change of required supply air temperature.	0 .. 9.99°C/sec
A29	Starting delay.	0 .. 9999min

Temperatures – assignment I/O

Code	Temperature		Value
A40	Outdoor	Selection of controller physical input for sensor.	Range_1
A41		Temperature correction.	-30 .. 50°C
A42		Smoothing constant.	0 – 9999s
A43	Supply preheating	Selection of controller physical input for sensor.	Range _1
A44		Temperature correction.	-30 .. 50°C
A45		Smoothing constant.	0 – 9999s
A46	Supply room	Selection of controller physical input for sensor.	Range _1
A47		Temperature correction.	-30 .. 50°C
A48		Smoothing constant.	0 – 9999s
A49	Supply after recuperation	Selection of controller physical input for sensor.	Range _1
A50		Temperature correction.	-30 .. 50°C
A51		Smoothing constant.	0 – 9999s
A52	Supply before recuperation	Selection of controller physical input for sensor.	Range _1
A53		Temperature correction.	-30 .. 50°C
A54		Smoothing constant.	0 – 9999s
A55	Outlet after recuperation	Selection of controller physical input for sensor.	Range _1
A56		Temperature correction.	-30 .. 50°C
A57		Smoothing constant.	0 – 9999s
A58	Supply heating water	Selection of controller physical input for sensor.	Range _1
A59		Temperature correction.	-30 .. 50°C
A60		Smoothing constant.	0 – 9999s
A61	Waste heating water	Selection of controller physical input for sensor.	Range _1
A62		Temperature correction.	-30 .. 50°C
A63		Smoothing constant.	0 .. 9999s
A64	Supply cooling water	Selection of controller physical input for sensor.	Range _1
A65		Temperature correction.	-30 .. 50°C
A66		Smoothing constant.	0 .. 9999s
A67	Waste cooling water	Selection of controller physical input for sensor.	Range _1
A68		Temperature correction.	-30 .. 50°C
A69		Smoothing constant.	0 .. 9999s
A70	Room 1	Selection of controller physical input for sensor.	Range _1
A71		Temperature correction.	-30 .. 50°C
A72		Smoothing constant.	0 .. 9999s
A73	Room 2	Selection of controller physical input for sensor.	Range _1
A74		Temperature correction.	-30 .. 50°C
A75		Smoothing constant.	0 .. 9999s
A76	Exhaust	Selection of controller physical input for sensor.	Range _1
A77		Temperature correction.	-30 .. 50°C
A78		Smoothing constant.	0 .. 9999s
A79	Outlet	Selection of controller physical input for sensor.	Range _1
A80		Temperature correction.	-30 .. 50°C
A81		Smoothing constant.	0 .. 9999s

A82	Flue gas	Selection of controller physical input for sensor.	Range _1
A83		Temperature correction.	-30 .. 50°C
A84		Smoothing constant.	0 .. 9999s
A85	Room controller	Temperature correction.	-30 .. 50°C
A86		Smoothing constant.	0 .. 9999s
A87	Room	Calculated room temprerature in case of more room sensors.	0-Average 1-Max 2-Min 3-1.sensor 4-2.sensor 5-SummerMin 6-WinterMin

Fans

Code	Description		Value
B01	Supply fan	Speed in regime Comfort - Summer.	0 ..100%
B02		Speed in regime Economy – Summer.	0 ..100%
B03		Speed in regime Comfort - Winter.	0 ..100%
B04		Speed in regime Economy – Winter.	0 ..100%
B05		Pressure in regime Comfort.	0 .. 9999Pa
B06		Pressure in regime Economy.	0 .. 9999Pa
B07		Air quantity on regime Comfort. (10x)	0 .. 9999 m3/h (10x)
B10		Air quantity on regime Economy. (10x)	0 .. 9999 m3/h (10x)
B11		PID speed regulation – proportional component.	0 .. 9999
B12		PID speed regulation – integration component.	0 .. 9999s
B13		k - factor	0 .. 9999
B14		Starting ramp.	0 .. 9999s
B15		Ramp down ramp.	0 .. 9999s
B16		Minimum speed.	0 ..100%
B17		Power-on delay.	0 .. 9999s
B18	Exhaust fan	Speed in regime Comfort - Summer.	0 ..100%
B19		Speed in regime Economy – Summer.	0 ..100%
B20		Speed in regime Comfort - Winter.	0 ..100%
B21		Speed in regime Economy – Winter.	0 ..100%
B22		Pressure in regime Comfort.	0 .. 9999Pa
B23		Pressure in regime Economy.	0 .. 9999Pa
B24		Air quantity on regime Comfort. (10x)	0 .. 9999 m3/h (10x)
B25		Air quantity on regime Economy. (10x)	0 .. 9999 m3/h (10x)
B26		PID speed regulation – proportional component.	0 .. 9999
B27		PID speed regulation – integration component.	0 .. 9999s
B28		k - factor	0 .. 9999s
B29		Starting ramp.	0 .. 9999s
B30		Ramp down ramp.	0 .. 9999s
B31		Minimum speed.	0 ..100%
B32	Compensation of mixing	Authorisation.	0- No 1- Supply 2- Exhaust 3– Both
B33	Compensation of speed for supply temperature.	Authorisation.	0- No 1- Supply 2- Exhaust 3- Both
B34		Deviation from the requested supply	-20 .. 20°C
B35		Supply temperature shift.	-20 .. 20°C
B36		End of delay.	0 .. 9999s
B37		PID speed regulation – proportional component.	0 .. 9999
B38		PID speed regulation – integration component.	0 .. 9999s

Fans - assignment I/O

B39		Cooling failure.		0 - Regime 1 - Comp
B40		Defrosting of condensate unit.		0 - Regime 1 - Comp
B41		Heating failure.		0 - Regime 1 - Comp
B42	Authorization of running for regimes heating, cooling and ventilation.			1– All 2- Heat+ 3 Cool+ 4 – Heat 5 – Cool
B43	Ventilation	Fans.		0 – Supply 1 – Exhaust 2 – Both
B44		Speed.		0 ..100%
B45	Turning off.	Temperature shift.		0 .. 50°C
B46		Delay.		0 .. 9999s
B47	Supply fan	Operating	Selection of the digital input of the controller.	Range_2
B48			Polarity of digital controller input.	Range _3
B49		Service switcher	Selection of the digital input of the controller.	Range _2
B50			Polarity of digital controller input.	Range _3
B51		Signalizatio n of flow	Selection of the digital input of the controller.	Range _2
B52			Polarity of digital controller input.	Range _3
B53		Pressure sensor	Selection of the analogue input of the controller.	Range _4
B54			Range of sensor.	0 .. 9999Pa
B55			Smoothing constant.	0 .. 9999s
B56			Pressure correction.	0 .. 9999Pa
B57		Flow sensor	Selection of the analogue input of the controller.	Range _4
B58			Range of sensor.	0 .. 9999m3/h (10x)
B59			Smoothing constant.	0 .. 9999s
B60			Quantity correction.	0 .. 9999m3/h (10x)
B61		Requested speed	Selection of the analogue input of the controller.	Range _4
B62			Smoothing constant	0 .. 9999s
B63			Quantity correction.	0 .. 100%
B64		Operating	Selection of the digital input of the controller.	Range _2
B65			Polarity of digital controller input.	Range _3

B66	Exhaust fan	Service switcher	Selection of the digital input of the controller.	Range _2
B67			Polarity of digital controller input.	Range _3
B68		Signalization of flow	Selection of the digital input of the controller.	Range _2
B69			Polarity of digital controller input.	Range _3
B70		Pressure sensor	Selection of the analogue input of the controller.	Range _4
B71			Range of sensor.	0 .. 9999Pa
B72			Smoothing constant.	0 .. 9999s
B73			Pressure correction.	0 .. 9999Pa
B74		Flow sensor	Selection of the analogue input of the controller.	Range _4
B75			Range of sensor.	0 .. 9999m3/h (10x)
B76			Smoothing constant.	0 .. 9999s
B77			Quantity correction.	0 .. 9999m3/h (10x)
B78		Requested speed	Selection of the analogue input of the controller.	Range _4
B79			Smoothing constant	0 .. 9999s
B80			Quantity correction.	0 .. 100%

Filters

Code	Description		Value
F01	Supply filter 1	Alarm limit – dirty, only report.	0 .. 9999Pa
F02		Alarm limit – blocked, unit shutdown.	0 .. 9999Pa
F03		Alarm limit selection.	0 – Report 1- Turn off
F04		Alarm delay.	0 .. 9999s
F05	Supply filter 2	Mez alarmu – Špinavý, pouze zpráva.	0 .. 9999Pa
F06		Alarm limit – blocked, unit shutdown.	0 .. 9999Pa
F07		Alarm limit selection.	0 – Report 1- Turn off
F10		Alarm delay.	0 .. 9999s
F11	Exhaust filter 1	Alarm limit – dirty, only report.	0 .. 9999Pa
F12		Alarm limit – blocked, unit shutdown.	0 .. 9999Pa
F13		Volba meze alarmu.	0 – Report 1- Turn off
F14		Alarm delay.	0 .. 9999s
F15	Exhaust filter 2	Alarm limit – dirty, only report.	0 .. 9999Pa
F16		Alarm limit – blocked, unit shutdown.	0 .. 9999Pa
F17		Volba meze alarmu.	0 – Report 1- Turn off
F18		Alarm delay.	0 .. 9999s
F19	Grease filter	Alarm limit – dirty, only report.	0 .. 9999Pa
F20		Alarm limit – blocked, unit shutdown.	0 .. 9999Pa
F21		Volba meze alarmu.	0 – Report 1- Turn off
F22		Alarm delay.	0 .. 9999s

Filters – Assignmen I/O

F23	Supply filter 1	Selecting controller digital input.	Range_2
F24		Controller digital input polarity.	Range _3
F25		Selecting controller analogue input.	Range _4
F26		Sensor range.	0 .. 9999Pa
F27	Supply filter 2	Selecting controller digital input.	Range _2
F28		Controller digital input polarity.	Range _3
F29		Selecting controller analogue input.	Range _4
F30		Rozsah čidla.	0 .. 9999Pa
F31	Exhaust filter 1	Selecting controller digital input.	Range _2
F32		Controller digital input polarity.	Range _3
F33		Selecting controller analogue input.	Range _4
F34		Sensor range.	0 .. 9999Pa
F35	Exhaust filter 2	Selecting controller digital input.	Range _2
F36		Controller digital input polarity.	Range _3
F37		Selecting controller analogue input.	Range _4
F38		Sensor range.	0 .. 9999Pa
F39	Grease filter	Selecting controller digital input.	Range _2
F40		Controller digital input polarity.	Range _3
F41		Selecting controller analogue input.	Range _4
F42		Sensor range.	0 .. 9999Pa

Dampers

Code	Description		Value
C01	Supply damper	Control signal.	Range_9
C02		Opening time from 0 to 100%.	0 .. 9999s
C03	Exhaust damper	Control signal.	Range _9
C04		Opening time from 0 to 100%.	0 .. 9999s
C05	Mixing damper	Control signal.	Range _9
C06		Opening time from 0 to 100%.	0 .. 9999s
C07	Control parameters	Control mode in Comfort mode.	0– Fixed 1- Lineary - POL - Requested
C10		Control mode in Economy mode.	
C11		Value for control selection Fixed in regime Comfort- Summer.	0 .. 100%
C12		Value for control selection Fixed in regime Economy- Summer.	0 .. 100%
C13		Value for control selection Fixed in regime Comfort- Winter.	0 .. 100%
C14		Value for control selection Fixed in regime Economy- Winter.	0 .. 100%
C15		Control temperature for control selection - Lineary.	0-Outdoor 1- Preheating BefRecup Room Supply AfRecup
C16		Temperature for minimum quantity of fresh air in heating mode by control selection Lineary.	-50 .. 100°C
C17		Temperature for maximum quantity of fresh air in heating mode by control selection Lineary	-50 .. 100°C
C18		Temperature for minimum quantity of fresh air in cooling mode by control selection Lineary.	-50 .. 100°C
C19		Temperature for maximum quantity of fresh air in cooling mode by control selection Lineary	-50 .. 100°C
C20		Order in the heating chain.	Ne, 1 .. 10
C21		Order in the cooling chain	Ne, 1 .. 10
C22		PID regulation of temperature– proportional.	0 .. 999
C23		PID regulation of temperature – integration part.	0 .. 9999s
C24		Minimum of fresh air in Comfort regime.	0 .. 100%
C25		Minimum of fresh air in Economy regime.	0 .. 100%
C26		Minimum of fresh air in by defrosting.	0-No, 1-Yes

Recuperation

Code	Description		Value
C28	Parameters of control	Control signal.	Range_9
C29		Opening time from 0 to 100%.	0 .. 9999s
C30		Order in the heating chain.	No, 1 .. 10
C31		Order in the cooling chain	No, 1 .. 10
C32		PID regulation of temperature– proportional.	0 .. 999
C33		PID regulation of temperature – integration part.	0 .. 9999s
C34		Minimal anti-freeze temperature.	-50 .. 50°C
C35		Maximal anti-freeze pressure drop.	0 .. 9999Pa
C36		Minimal speed of rotary exchanger.	0 .. 100%
C37		Maximal speed of rotary exchanger.	0 .. 100%
C38		Recuperator speed sensor time interval.	0 .. 9999s

Recuperation – assignment I/O

C39	Rotary recuperator	Selects the digital input of the controller for the signal from the frequency converter.	Range _2
C40		Polarity of digital input of the controller for the signal from the frequency converter.	Range _3
C41		Selects the digital input of the controller for the speed sensor.	Range _2
C42		Polarity of digital input of the controller for the speed sensor.	Range _3
C43	Freezing of recuperator	Selects the digital input of the controller for the manostat.	Range _2
C44		Polarity of digital input of the controller for the manostat.	Range _3
C45		Selects the analogue input of the controller for the pressure sensor.	Range _4
C46		Sensor range.	0 .. 9999Pa
C47		Smoothing constant.	0 .. 9999s
C48		Pressure correction.	0 .. 9999Pa

Glycol

Glycol – assignment I/O

Code	Description		Value
C51	Parameters of control	Control signal.	Range _9
C52		Opening time from 0 to 100%.	0 .. 9999s
C53		Minimal power for turning on of pump.	0 .. 100%
C54		Order in the heating chain.	No, 1 .. 10
C55		Order in the cooling chain	No, 1 .. 10
C56		PID regulation of temperature– proportional.	0 .. 999
C57		PID regulation of temperature – integration	0 .. 9999s
C58		Minimal pressure in circuit for refuelling.	0 .. 9999Pa
C59		Maximum anti-freezing pressure drop.	0 .. 9999Pa
C60	Termocontact of pump	Selecting the controller digital input.	Range _2
C61		Controller digital input polarity.	Range _3
C62	Pressure in glycol circuit	Controller analogue input selection.	Range _4
C63		Sensor range.	0 .. 9999Pa
C64		Smoothing constant.	0 .. 9999s
C65		Pressure correction.	0 .. 9999Pa
C66	Freezing of coil	Selects the digital input of the controller for the manostat.	Range _2
C67		Polarity of digital input of the controller for the manostat.	Range _3
C68		Selects the analogue input of the controller for the pressure sensor.	Range _4
C69		Sensor range.	0 .. 9999Pa
C70		Smoothing constant.	0 .. 9999s
C71		Pressure correction.	0 .. 9999Pa

	Code	Description		Value
Water heating	D01	Control parameters	Control signal.	Range _9
	D02		Opening time from 0 to 100%.	0 .. 9999s
	D03		Minimal power for turning on of pump.	0 .. 100%
	D04		Order in the heating chain.	No, 1 .. 10
	D05		PID regulation of temperature-proportional component	0 .. 999
	D06		PID regulation of temperature – integration component.	0 .. 9999s
	D07		Minimal temperature of heating water.	6 .. 64°C
	D10		Requested temperature of heating water.	-50 .. 100°C
	D11		Preheating: Outdoor temperature lower limit.	-20 .. 10°C
	D12		Preheating: Power for temperature lower limit.	0 .. 100%
	D13		Preheating: Outdoor temperature upper limit.	-20 .. 10°C
	D14		Preheating: Power for lower limit temperature.	0 .. 100%
	D15		Preheating: Constant heating time.	0 .. 9999s
	D16		Preheating: Overrun temperature gradient.	0..999%/min
	D17		Preheating: Speed compensation.	0 – No 1 – Yes 2 – Only
	D18		Switching on the pump outside the power requirement.	0– Normal 1– LowTo 2– Heat
Water heating – assignment I/O	D19		Weekly pump rotation.	0 – No 1 – Yes
	D20	Pump	Selecting the controller's digital input of pump engine termocontact	Range _2
	D21		Controller digital input polarity.	Range _3
	D22	Anti-freeze protection	Selecting the controller's digital input.	Range _2
	D23		Controller digital input polarity.	Range _3
Boiler room	D24	Conditions of preparation of heating water	Turn the boiler room on.	0– No 1– Winter 2– Always
	D25		Switch on at low heating water temperature indicated by water heating.	0 – No 1 – Yes
	D26		Outdoor temperature lower limit	-20 .. 50°C
	D27		Turn on at low outdoor temperature.	0 – No 1 – Winter 2- Heat 3 – Always
	D28		Minimum difference outdoor temperature.	-20 .. 50°C
	D29		Switch on based on difference between requested and outdoor temperature.	0– No 1– Winter 2- Heat 3 – Always
	D30		Minimum capacity of the condensing unit for the requirement to switch the boiler room on.	0 .. 100%

D31		Switching on when the minimum capacity of the condensing unit is exceeded.	0 – No 1 – Winter 2 – Always
D32		Fan start delay from switch-on the boiler room.	0 .. 9999min
D33		Fan start delay.	0 – No 1 – Winter 2 - Always
D34		Boiler room switch-on delay.	0 .. 9999min

Elektric heating

Code	Description		Value
D35	Control parameters	Contactor in heating mode permanently switched on.	0 – No 1 – Yes
D36		Delay on or off for the next stage.	0.. 9999min
D37		Maximum power	0 .. 100%
D38		Minimum power of heating stage switch- on.	0 .. 100%
D39		Order in the heating chain.	No, 1 .. 10
D40		PID temperature control-proportional part.	0 .. 999
D41		PID temperature control – integration part.	0 .. 9999s
D42		1st degree power.	0 .. 99kW
D43		2nd degree power.	0 .. 99kW

Elektric heating– Assignment I/O

D44	Heating steps	Controller digital input selection for 1st stage	Range_2
D45		Controller digital input polarity.	Range _3
D46		Controller digital input selection for 2nd stage.	Range _2
D47		Controller digital input polarity.	Range _3

	Code	Description		Value
Gas heating	**D51**	Control parameters	Valve opening time from 0 to 100%.	0 .. 9999s
	D52		Maximum power.	0 .. 100%
	D53		Order in the heating chain.	No, 1 .. 10
	D54		PID supply temperature control - proportional component.	0 .. 999
	D55		PID supply temperature control - integration component.	0 .. 9999s
	D56		Maximum flue gas temperature.	-50 .. 300°C
	D57		Flue gas start temperature.	-50 .. 300°C
	D58		Off delay.	0 .. 9999s
	D59		PID flue gas temperature control - proportional component.	0 .. 999
	D60		PID flue gas temperature control - integration component.	0 .. 9999s
	D61	Exchanger damper	Control signal.	Range_9
	D62		Requested flue gas temperature.	-50 .. 300°C
	D63		Requested exchanger pressure drop.	0 .. 9999Pa
	D64		PID control - proportional component.	0 .. 999
	D65		PID control - integration component.	0 .. 9999s
	D66	Convector	Outdoor temperature for switching on tempering.	-50 .. 300°C
	D67		Tempering on.	0–BurnerOn 1-Always 2-BurnerOff
	D68		On or Off Delay.	0.. 9999min
Gas heating – assignment I/O	**D69**	Burner	Controller digital input selection for fault.	Range _2
	D70		Controller digital input polarity for fault.	Range _3
	D71		Selection of digital controller input for	Range _2
	D72		Controller digital input polarity for operation.	Range _3
	D73	Pressure drop	Controller analogue input selection.	Range _4
	D74		Sensor range.	0 .. 9999Pa
	D75		Smoothing constant.	0 .. 9999s
	D76		Pressure correction.	0 .. 9999Pa

Water cooling

Water cooling – assignment I/O

Code	Description		Value
E01	Control parameters	Control signal.	Range_9
E02		Opening time from 0 to 100%.	0 .. 9999s
E03		Minimal power for turning on of pump.	0 .. 100%
E04		Order in the heating chain.	No, 1 .. 10
E05		PID regulation of temperature-proportional component	0 .. 999
E06		PID regulation of temperature – integration component.	0 .. 9999s
E07		Pump permanently on in cooling mode.	0 – No 1 - Yes
E10	Pump	Digital input selection of controller of pump engine thermocontact.	Range_2
E11		Controller digital input polarity.	Range_3

	Code			Value
Condensate unit	**E15**	Control parameters	Condensing unit permanently switched on with air conditioner start.	0 – Yes 1 – No
	E16		Maximum performance.	0 .. 100%
	E17		Delay on switching on condensate unit. *)	0.. 9999min
	E18		Delay on switching off condensate unit.	0.. 9999min
	E19		Power which the condensing unit turns off. *)	0 .. 10V
	E20		Control temperature.	0-Room 1-Exhaust 2-Supply
	E21		Minimum outdoor temperature at which the condensing unit will still cool. *)	-50 .. 50°C
	E22		Minimum outdoor temperature at which the condensing unit will still heat. *)	-50 .. 50°C
	E23		Block heating in summer or block cooling in winter.	0 – No 1 – Yes
	E43		Switching cooling or heating outputs on according to power or state heating/cooling. *)	0 – Power 1 - Clima
	E25		Order in the heating chain.	No, 1 .. 10
	E26		Order in the cooling chain.	No, 1 .. 10
	E27		PID temperature component.	0 .. 999
	E28		PID temperature control - integration	0 .. 9999s
	E29		Change the control voltage from 0-10V to 10-0V in heating mode. *)	0– No 1– Yes
	E30		Change the control voltage from 0-10V to 10-0V in cooling mode. *)	0– No 1–Yes
Condensate unit – assignment I/O	**E31**	Signalization	Selection of controller's digital input for operation.	Range_2
	E32		Digital controller input polarity for operation.	Range _3
	E33		Controller digital input selection for failure.	Range _2
	E34		Digital controller input polarity for failure.	Range _3
	E35		Controller digital input selection for defrost.	Range _2
	E36		Digital controller input polarity for defrost.	Range _3
		*) Specific parameter by type of condensate unit		

	Code		Value
Air quality	**E41**	Validity.	0– Regime 1– Always 2– Tempering
	E42	Switch on.	0..2000ppm
	E43	Requested.	0..2000ppm
	E44	Allow.	0 – No 1 – Fan 2 – Mixing 3 – Both
	E45	Supply fan power.	0 .. 100%
	E46	Exhaust fan power.	0 .. 100%
	E47	Fresh air quantity.	0 .. 100%
	E48	More quality sensors.	0 –Average 1 – Min 2– Max 3– 1.sensor 4– 2.sensor
Air quality – assignment I/O	**E49**	Selecting controller digital input.	Range_2
	E50	Controller digital input polarity.	Range_3
	E51	Selecting controller analogue input of the 1st sensor.	Range_4
	E52	Range.	0 .. 9999ppm
	E53	Smoothing constant.	0 .. 9999s
	E54	Correction.	0 .. 9999ppm
	E55	Selecting the controller's analogue input for the 2nd	Range_4
	E56	Range of the 2nd sensor.	0 .. 9999ppm
	E57	Smoothing constant.	0 .. 9999s
	E58	Correction.	0 .. 9999ppm

	Code	Description	Value
Humidity control	F50	Validity.	0-Regime 1 – Always 2 – Tempering
	F51	Requested humidity in regime Comfort.	0 .. 100%
	F52	Requested humidity in regime Economy.	0 .. 100%
	F53	Switch on upper limit.	0 .. 50%
	F54	Switch off down limit.	-50 .. 50%
	F55	Supply fan power.	0 .. 100%
	F56	Exhaust fan power.	0 .. 100%
	F57	Fresh air quantity.	0 .. 100%
	F58	Passive dehumidifing.	0 – No 1 –Fan 2–Mixing 3 - Both
	F59	Active dehumidifing.	0 – No 1–Condensate 2 – HeatPump 3 – Water 4 – All
	F60	Control.	0–Room 1–Exhaust 2 –Supply
	F61	PID humidity control - proportional component.	0 .. 999
	F62	PID humidity control - proportional component.	0 .. 9999s
	F63	Power limitation.	0 .. 1.00
Humidity control – assignment I/O	F64	Controller digital input selection.	Range_2
	F65	Controller digital input polarity.	Range_3
	F66	Controller analogue input selection of room sensor.	Range_4
	F67	Smoothing constant.	0 .. 9999s
	F68	Correction.	0 .. 100%
	F69	Controller analogue input selection of supply sensor	Range_4
	F70	Smoothing constant.	0 .. 9999s
	F71	Correction.	0 .. 100%
	F72	Controller analogue input selection of outdoor sensor.	Range_4
	F73	Smoothing constant.	0 .. 9999s
	F74	Correction.	0 .. 100%
	F75	Controler analogue input selection of exhaust sensor.	Range_4
	F76	Smoothing constant.	0 .. 9999s
	F77	Correction.	0 .. 100%

Fire dampers

Fire dampers - assignment I/O

Code	Description	Value
G25	Opening.	0 .. 9999s
G26	Off regime.	0 – Open 1 – Close
G27	Digital controller input selection - 1. damper open.	Range_2
G28	Digital controller input polarity - 1. damper open.	Range_3
G29	Digital controller input selection - 1. damper closed.	Range_2
G30	Digital controller input polarity - 1. damper closed.	Range_3
G31	Digital controller input selection - 2. damper open.	Range_2
G33	Digital controller input polarity - 2. damper open.	Range_3
G34	Digital controller input selection - 2. damper closed.	Range_2
G35	Digital controller input polarity - 2. damper closed.	Range_3

Ventilation

Ventilation - assignment I/O

Code	Description	Value
F81	Requested temperature.	-50 .. 50°C
F82	Shift.	-50 .. 50°C
F83	Minimum outdoor temperature.	-50 .. 50°C
F84	Minimum ON time.	0 ..9999min
F85	Temperature condition.	0– No 1– Yes
F86	Manually.	0 – Off 1 – On
F87	Digital input selection.	Range_2
F88	Polarity.	Range_3

	Code		Value
Other	E60	External switchers.	0 – OFF 1 – ON
	E61	Regime OFF importance.	0 – OFF 1 – Temper
	E62	Room button.	0 .. 9999min
	E63	Type of switcher.	0 – Contact 1 – Pulse
	E64	Next service.	0– No 1– InYear 2– In6Months 3– In3Months 4– InMonth
	E65	Service light.	0 – Light 1 – Flash
	E66	Failure light.	0 – Light 1 – Flash 2 – Both
Other – assignment I/O	E67	Digital controller input selection for 1st switcher.	Range_2
	E68	Digital controller input polarity for 1st. switcher.	Range _3
	E69	Digital controller input selection for 2nd switcher.	Range _2
	E70	Digital controller input polarity for 2nd switcher.	Range _3
	E71	Digital controller input selection for 3rd switcher.	Range_2
	E72	Digital controller input polarity for 3rd switcher.	Range_3
	E73	Phyzical controller input selection for requested temperature from control panel.	Range_4
	E74	Minimum value from control panel.	-50 .. 50°C
	E75	Maximum value from control panel.	-50 .. 50°C
	E76	Smoothing constant.	0 – 9999s
	E77	Correction.	-30 .. 50°C
	E78	Digital controller input selection for BMS	Range_2
	E79	Digital controller input polarity for BMS.	Range_3
	E80	Digital controller input selection for alarm confirmation.	Range_2
	E81	Digital controller input polarity for alarm confirmation.	Range_3
	E82	Digital controller input selection for Fire-EFS.	Range_2
	E83	Digital controller input polarity for Fire-EFS.	Range_3
	E84	Digital controller input selection for 1st Smoke sensor.	Range_2
	E85	Digital controller input polarity for 1st Smoke sensor.	Range_3
	E86	Digital controller input selection for 2nd Smoke sensor.	Range_2
	E87	Digital controller input polarity for 2nd Smoke sensor.	Range_3

Device testing

Code	Description	Value
G01	Allow.	0 – No 1 – Yes
G02	Supply fan speed.	0 .. 100%
G03	Exhaust fan speed.	0 .. 100%
G04	Supply,exhaust and mixing damper position inversely.	0 .. 100%
G05	Recuperation power.	0 .. 100%
G06	Glycol power.	0 .. 100%
G07	Water heating power.	0 .. 100%
G10	Electric heating power.	0 .. 100%
G11	Gas heating power.	0 .. 100%
G12	Gas heating bypass damper position.	0 .. 100%
G13	Water cooling power.	0 .. 100%
G14	Condensate unit operation.	0 – Cool 1 – Heat
G15	Condensate unit power.	0 .. 100%
G16	Heat pump operation.	0 – Cool 1 – Heat
G17	Heat pump power.	0 .. 100%
G18	Humidifier power.	0 .. 100%
G19	Fire dampers.	0 – Open 1 – Close

Analogue and digital input assignment

H01	POL4xx	Digital outputs	Q1 - Controlled KJ component.	Range_7
H02			Q1 - polarity.	Range_3
H03			Q3 - Controlled KJ component.	Range_7
H04			Q3 - polarity.	Range_3
H05			Q4 - Controlled KJ component.	Range_7
H06			Q4 - polarity.	Range_3
H07			Q5 - Controlled KJ component.	Range_7
H10			Q5 - polarity.	Range_3
H11			Q6 - Controlled KJ component.	Range_7
H12			Q6 - polarity.	Range_3
H13			DO1 - controlled KJ component.	Range_7
H14			DO1 - polarity.	Range_3
H15			DO2 - controlled component KJ.	Range_7
H16			DO2 - polarity.	Range_3
H17		Analogue outputs	X3 - Controlled KJ component.	Range_8
H18			X3 - Fixed value for KJ ***"Set"*** component selection.	0 .. 100%
H19			X4 - Controlled KJ component.	Range_8
H20			X4 - Fixed value for KJ ***"Set"*** component selection.	0 .. 100%
H21			X5 - Controlled KJ component.	Range_8
H22			X5 - Fixed value for KJ ***"Set"*** component selection.	0 .. 100%
H23	POL63x	Digital outputs	Q1 - Controlled KJ component.	Range_7
H24			Q1 - polarity.	Range_3
H25			Q2 - Controlled KJ component.	Range_7
H26			Q2 - polarity.	Range_3
H27			Q3 - Controlled KJ component.	Range_7
H28			Q3 - polarity.	Range_3
H29			Q4 - Controlled KJ component.	Range_7
H30			Q4 - polarity.	Range_3
H31			Q5 - Controlled KJ component.	Range_7
H32			Q5 - polarity.	Range_3
H33			Q6 - Controlled KJ component.	Range_7
H34			Q6 - polarity.	Range_3
H35		Analogue outputs	Y1 - controlled KJ component.	Range_8
H36			Y1 - fixed value for KJ ***"Set"*** component selection.	0 .. 100%
H37			Y2 - controlled component KJ.	Range_8
H38			Y2 - fixed value for KJ ***"Set"*** component selection.	0 .. 100%
H39			X3 - Controlled KJ component.	Range_8
H40			X3 - pevná hodnota pro volbu komponenty KJ ***„Set"***.	0 .. 100%
H41			X4 - ovládaná komponenta KJ.	Rozsah_8

H42			X4 - Controlled KJ component.	Range_8
H43			X4 - Fixed value for KJ ***"Set"*** component selection.	0 .. 100%
H44			X5 - Controlled KJ component.	Range_8
H45			X5 - Fixed value for KJ ***"Set"*** component selection.	0 .. 100%
H46			X6 - Controlled KJ component.	Range_8
H47			X6 - Fixed value for KJ ***"Set"*** component selection.	0 .. 100%
H48			X7 - Controlled KJ component.	Range_8
H49			X7 - Fixed value for KJ ***"Set"*** component selection.	0 .. 100%
H50			X8 - Controlled KJ component.	Range_8

Device configuration

Code			Value
I01	Temperatures	Requested temperature.	1– No 2– Supply 3 – Room 4– Exhaust 5–Preheating 6 – Waste
I02		Room controller.	0 – No 1 – POL822 2 – OP41tep 3 – OP41Ven 4 – OP70
I03		Room temperature.	0 – No 1 – 1 2 – 2
I04		Supply temperature.	0 – No 1 – Supply 2 –Preheating 3 – Both
I05		Flue gas temperature.	0 – No 1 – Yes
I06		Outdoor temperature.	0 – No 1 – Yes
I07		Temperatures around the recuperator.	0 – No 1 – Waste 2 –Preheating 3 - After 4–Waste+Preh 5–Waste+After 6–Preh+After 7–All
I10		Heating water temperature.	0 – No 1 – Exhaust 2 – Supply 3 – Both
I11		Cooling water temperature	0 – No 1 – Exhaust 2 – Supply 3 – Both
I12		Exhaust temperature.	0 – No 1 – Exhaust 2 – Waste 3 – Both
I13	Humidity	0 1 Humidity control.	0– No 1– Dehumidifing 2 – Humidifing 3 – Both
I14		2 3 4 1st humidity sensor.	0– DI-High 1– DI-Low 2– Room 3 – Exhaust 4 - Both
I15		5 6 2nd humidity sensor.	0– No 1– Supply 2– Outdoor

			4 – Both
I16		Air quality.	0 – No 1 – DI 2 – AI 3 – 2xAI
I17	Dampers	Supply damper.	0 – No 1 –Unit 2–Mixing 3 – Contact
I18		Mixing damper.	0 – No 1 – Yes
I19		Exhaust damper.	0 – No 1 –Unit 2-Mixing 3 – Contact
I20	Filters	Supply filter.	0 – No 1 – DI 2 – AI 3 – 2xDI 4 – 2XAI
I21		Grease filter.	0 – No 1 – DI 2 – AI
I22		Exhaust filter.	0 – No 1 – DI 2 – AI 3 – 2xDI 4 – 2XAI
I23	Supply fan	Type and kind of communication.	0– No 1– Yes 2– FM-MB 3– EC-MB
I24		Air quantity control source.	0– Regime 1– Pressure 2-Directly 3 – POLv1 4– POLv2 5– AMR 6– CPM-WRF
I25	Exhaust fan	Type and kind of communication.	0– No 1– Yes 2- Togeth 3– FM-MB 4– EC-MB
I26		Air quantity control source.	0– Regime 1– Pressure 2– Directly 3 – POLv1 4– POLv2 5– AMR 6– CPM-WRF F
I27	Recuperator.		0– No 1– Plate 2 – Rotary 3 – RotaryZV

I28	Glycol.		0 – No 1 – Yes 2 – Steam
I29	Water heating	Supply damper.	0 – No 1 – Yes 2 – Steam
I30		Boiler room.	0 – No 1 – Yes
I31	Electric heating.		0 – No 1 – 1S-1M 2 – 2S-1M 3 – 2S-2M
I32	Gas heater	Kind of burner.	0 – No 1 – Mode 2 – 1st 3 – 2st
I33		Exchanger damper.	0 – No 1 – Temperature 2 – Pressure
I34	Water cooling.		0 – No 1 – Independently 2 – w. Heating 3 – 2w. Heating
I35	Condensate unit	Type and control.	0 – Modulant 1 – ANL2WIRE 2– FDP3 3– EKEQFCB 4– PAC-IF
I36		Control source.	0– No 1– 1xC/H 2– 2xC/H 3– 3xC/H 4– 4xC/H 5– 1xC 6– 2xC 7– 3xC 8– 4xC
I38	Ventilation.		0 – No 1 – Yes
I39	Fire dampers	Tracking type.	0– Motor 1– Man2C 2– THC 3– Man1C
I40		Number.	0 – No 1 – 1 2 – 2
I41	External mode and function switch		0 – No 1 – Regimes 2 – Regimes2 3 – 2xPlace 4 – WRF 5– CPM 6– 3xSpeed
I42	Energy balance		0 – No 1 – Yes

I43	ModBus	POL4xx	0 – No 1 – Local 2 – Service 3 – All
I44		POL63x	0 – No 1 – Local 2 – Service 3 - IP 4 – Loc+Serv 5 – Loc+IP 6 – Serv+IP 7 – All

Controller inputs – type assignment

Code	Description		Value
I51	POL42x	X1	Range_5
I52		X2	Range_5
I53		X6	Range_5
I54		X7	Range_5
I55		X8 (only digital input)	Range_5
I56	POL63x	X1	Range_5
I57		X2	Range_5
I58		X3	Range_5
I59		X4	Range_5
I60		X5	Range_5
I61		X6	Range_5
I62		X7	Range_5
I63		X8	Range_5

Work with parameters

Code	Description	Value
I93	Save parameter settings from the working area to the controller backup area as user parameters.	0 – No 1 – Execute
I94	Load saved user parameters from the backup area to the controller working area.	0 – No 1 – Execute
I95	Load saved default parameters from the backup area to the controller working area.	0 - No 1 – Execute

ModBus Configuration

Code	Description			Value
I64	POL 42x	Address.		0 .. 250
I65		Local port RS485	Type of device.	0 – Slave 1 – Master
I66			Transfer rate.	Range_6
I67			2 stop bits.	0 – No 1 – Yes
I68			Parity.	0 – Even 1 – Odd 3 – None
I69			Delay.	0 .. 9999s
I70			Response delay.	0 .. 9999s
I71		Service port T-HI	Type of device.	0 – Slave 1 – Master
I72			Transfer rate.	Range_6
I73			2 stop bits.	0 – No 1 – Yes
I74			Parity.	0 – Even 1 – Odd 3 – None
I75			Delay.	0 .. 9999s
I76			Response delay.	0 .. 9999s
I77	POL 63x	Address.		0 .. 250
I78		Local port RS485	Type of device.	0 – Slave 1 – Master
I79			Transfer rate.	Range_6
I80			2 stop bits.	0 – No 1 – Yes
I81			Parity.	0 – Even 1 – Odd 3 – None
I82			Delay.	0 .. 9999s
I83			Response delay.	0 .. 9999s
I84		Service port T-HI	Type of device.	0 – Slave 1 – Master
I85			Transfer rate.	Range_6
I86			2 stop bits.	0 – No 1 – Yes
I87			Parity.	0 – Even 1 – Odd 3 – None
I88			Delay.	0 .. 9999s
I89			Response delay	0 .. 9999s
I90		Ethernet port T-IP	Type of device.	0 – Slave 1 – Master
I91	Terminating resistor.			0 – No 1 – Yes
I92	Enable ModBus on service port.			0 – No 1 – Yes

5 Range values

Range_1

Analogue temperature input assignment										
POL42x:										
Value	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**		
Input	Set	X1	X2	X6	X7	B1	B2	B3		
POL63x:										
Value	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Input	Set	X1	X2	X3	X4	X5	X6	X7	X8	POL
Value	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**
Input	1X1	1X2	AMR	2X1	2X2	2X3	2X4	2X5	2X6	2X7
Value	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**
Input	2X8	3X1	3X2	3X3	3X4	3X5	3X6	3X7	3X8	3B1
Value	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**
Input	3B2	3B3	4X1	4X2	5X1	5X2	5X3	5X4	5X5	5X6
Value	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**
Input	5X7	5X8	6X1	6X2	6X3	6X4	6X5	6X6	6X7	6X8
Value	**50**	**51**	**52**	**53**						
Input	6B1	6B2	6B3	Int						

Range_2

Digital input assignment										
POL42x:										
Value	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**		
Input	Off	D1	D2	X1	X2	X6	X7	X8		
POL63x:										
Value	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Input	Off	D1	D2	D3	D4	D5	X1	X2	X3	X4
Value	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**
Input	X5	X6	X7	X8	1X1	1X2	1X3	1X4	2X1	2X2
Value	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**
Input	2X3	2X4	2X5	2X6	2X7	2X8	3D1	3D2	3D3	3D4
Value	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**
Input	3D5	3X1	3X2	3X3	3X4	3X5	3X6	3X7	3X8	4X1
Value	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**
Input	4X2	4X3	4X4	5X1	5X2	5X3	5X4	5X5	5X6	5X7
Value	**50**	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**
Input	5X8	6D1	6D2	6D3	3D4	3D5	6X1	6X2	6X3	6X4
Value	**60**	**61**	**62**	**63**						
Input	6X5	6X6	6X7	6X8						

Range_3

Digital input polarity		
Value	**0**	**1**
Input	Normal	Invert

Range_4

Voltage analogue input assignment										
POL42x:										
Value	**0**	**1**	**2**	**3**	**4**					
Input	Set	X1	X2	X6	X7					
POL63x:										
Value	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Input	Set	X1	X2	X3	X4	X5	X6	X7	X8	2X1
Value	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**
Input	2X2	2X3	2X4	2X5	2X6	2X7	2X8	3X1	3X2	3X3
Value	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**
Input	3X4	3X5	3X6	3X7	3X8	5X1	5X2	5X3	5X4	5X5
Value	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**
Input	5X6	5X7	5X8	6X1	6X2	6X3	6X4	6X5	6X6	6X7
Value	**40**									
Input	6X8									

Range_5

Input / output type assignment						
Value	**0**	**1**	**2**	**3**	**4**	**5**
Input	NC	I-DI	I-mA	I-V	I-NI1000	I-PT1000
Value	**6**	**7**	**8**	**9**	**10**	**11**
Input	I-R2500	NTC10K	I-NTC100K	O-DO	O-V	O-mA

Range_6

Transfer speed [baud]						
Value	**0**	**1**	**2**	**3**	**4**	**5**
Speed	110	300	600	1200	2400	4800
Value	**6**	**7**	**8**	**9**	**10**	**11**
Speed	9600	1440	19200	38400	57600	115200

Range_7

Digital output assignment							
Value	**0**	**1**	**2**	**3**	**4**	**5**	**6**
Component	Set	FanS	FanE	DmpM	Rec	Glc	AGl
Value	**7**	**8**	**9**	**10**	**11**	**12**	**13**
Component	WtH	ElH	ElH2	-	-	Gs	GsM
Value	**14**	**15**	**16**	**17**	**18**	**19**	**20**
Component	GsL	WtC	Cnd	CndC	CndH	Cnd2C	Cnd2H
Value	**21**	**22**	**23**	**24**	**25**	**26**	**27**
Component	Cnd3C	Cnd3H	Cnd1O	Cnd2O	Cnd3O	-	-
Value	**28**	**29**	**30**	**31**	**32**	**33**	**34**
Component	-	-	-	-	Hum	DmpF	Fire
Value	**35**	**36**	**37**	**38**	**39**	**40**	**41**
Component	Boil	Red	Cmf	FiE	Srv	-	CnvG
Value	**42**	**43**	**44**	**45**	**46**	**47**	**48**
Component	Err	Ex1	Ex2	On	-	-	FnO
Value	**49**	**50**					
Component	FnE	H/C					

Range_8

Analogue output assignment							
Value	**0**	**1**	**2**	**3**	**4**	**5**	**6**
Component	Set	FanS	FanE	DmpM	Rec	Glc	WtH
Value	**7**	**8**	**9**	**10**	**11**	**12**	**13**
Component	ElH	ElH2	DmpS	DmpE	GasH	DmpG	WtC
Value	**14**	**15**	**16**	**17**	**18**	**19**	**20**
Component	CndU1	CndU2	CndU3	CndU4	-	-	Hum
Value	**21**	**22**	**23**	**24**	**25**	**26**	**27**
Component	CndCH1	CndCH2	CndCH3	CndCH4	CndOn	AirFl1	AirFl2
Value	**28**	**29**	**30**	**31**	**32**	**33**	**34**
Component	-	-	-	-	-	-	-
Value	**35**	**36**	**37**	**38**	**39**	**40**	
Component	-	-	-	-	-	-	

Range_9

Control signal				
Value	**0**	**1**	2	**3**
Polarity	0-10V	2-10V	10-0V	10-2V

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