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MANDÍK®

AHU MANDÍK PARAMETERISATION FROM POL822 ROOM DEVICE

Climatix™

Building Technologies

Contents

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*** (digit) - 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/m^3).
- air quality (ppm).
- pressure (Pa).

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		**Flaps / 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 "KJ Mandík Operating Instructions from POL822 Room Device".

Temperatures - I/O assignment

Code	Temperature	Description	Value
A00	Outdoor	Selecting the controller's physical input for the sensor.	Range_1
A01		Temperature correction.	-30 .. 50°C
A02		Smoothing constant.	0 – 9999s
A03		Fixed temperature value for selecting ***"Set"*** physical input.	-30 .. 50°C
A04	Preheating supplied	Selecting the controller's physical input for the sensor.	Range_1
A05		Temperature correction.	-30 .. 50°C
A06		Smoothing constant.	0 – 9999s
A07		Fixed temperature value for selecting ***"Set"*** physical input.	-30 .. 50°C
A10	Room input	Selecting the controller's physical input for the sensor.	Range_1
A11		Temperature correction.	-30 .. 50°C
A12		Smoothing constant.	0 – 9999s
A13		Fixed temperature value for selecting ***"Set"*** physical input.	-30 .. 50°C
A14	Supplied after recovery	Selecting the controller's physical input for the sensor.	Range_1
A15		Temperature correction.	-30 .. 50°C
A16		Smoothing constant.	0 – 9999s
A17		Fixed temperature value for selecting ***"Set"*** physical input.	-30 .. 50°C
A18	Supplied before recovery	Selecting the controller's physical input for the sensor.	Range_1
A19		Temperature correction.	-30 .. 50°C
A20		Smoothing constant.	0 – 9999s
A21		Fixed temperature value for selecting ***"Set"*** physical input.	-30 .. 50°C
A22	Waste after recovery	Selecting the controller's physical input for the sensor.	Range_1
A23		Temperature correction.	-30 .. 50°C
A24		Smoothing constant.	0 – 9999s
A25		Fixed temperature value for selecting ***"Set"*** physical input.	-30 .. 50°C

A26	Heating water supplied	Selecting the controller's physical input for the sensor.	Range_1
A27		Temperature correction.	-30 .. 50°C
A28		Smoothing constant.	0 – 9999s
A29		Fixed temperature value for selecting ***"Set"*** physical input.	-30 .. 50°C

Code	Sensor	Description	Value
A30	Outlet heating water	Selecting the controller's physical input for the sensor.	Range_1
A31		Temperature correction.	-30 .. 50°C
A32		Smoothing constant.	0 .. 9999s
A33		Fixed temperature value for selecting ***"Set"*** physical input.	-30 .. 50°C
A34	Cooling water supplied	Selecting the controller's physical input for the sensor.	Range_1
A35		Temperature correction.	-30 .. 50°C
A36		Smoothing constant.	0 .. 9999s
A37		Fixed temperature value for selecting ***"Set"*** physical input.	-30 .. 50°C
A38	Outlet cooling water	Selecting the controller's physical input for the sensor.	Range_1
A39		Temperature correction.	-30 .. 50°C
A40		Smoothing constant.	0 .. 9999s
A41		Fixed temperature value for selecting ***"Set"*** physical input.	-30 .. 50°C
A42	Room 1	Selecting the controller's physical input for the sensor.	Range_1
A43		Temperature correction.	-30 .. 50°C
A44		Smoothing constant.	0 .. 9999s
A45		Fixed temperature value for selecting ***"Set"*** physical input.	-30 .. 50°C
A46	Room 2	Selecting the controller's physical input for the sensor.	Range_1
A47		Temperature correction.	-30 .. 50°C
A48		Smoothing constant.	0 .. 9999s
A49		Fixed temperature value for selecting ***"Set"*** physical input.	-30 .. 50°C
A50	Outlet	Selecting the controller's physical input for the sensor.	Range_1
A51		Temperature correction.	-30 .. 50°C
A52		Smoothing constant.	0 .. 9999s
A53		Fixed temperature value for selecting ***"Set"*** physical input.	-30 .. 50°C
A54	Waste	Selection of the physical input of the controller for the sensor.	Range_1
A55		Temperature correction.	-30 .. 50°C
A56		Smoothing constant.	0 .. 9999s
A57		Fixed temperature value for selecting ***"Set"*** physical input.	-30 .. 50°C
A58	Flue gas	Selecting the controller's physical input for the sensor.	Range_1
A59		Temperature correction.	-30 .. 50°C
A60		Smoothing constant.	0 .. 9999s
A61		Fixed temperature value for selecting **"Set"** physical input.	-30 .. 50°C

Code	Sensor	Description	Value
A62	Room device	Temperature correction.	-30 .. 50°C
A63		Smoothing constant.	0 .. 9999s
A64	Room	Calculated room if there are multiple room temperature sensors.	0-Diameter 1-Max 2-Min 3-1st sensor 4-2nd sensor 5-SummerMin 6-WinterMin

Fans

Code	Description		Value
B01	Supply fan	Speed in Comfort mode.	0 ..100%
B02		Speed in Attenuation Mode.	0 ..100%
B03		PID speed control - proportional component.	0 .. 9999
B04		PID speed control - integration component.	0 .. 9999s
B05		PID speed control - derivative component.	0 .. 9999s
B06		k - factor	0 .. 9999
B07		Starting ramp.	0 .. 9999s
B10		Ramp down ramp.	0 .. 9999s
B11		Minimum speed.	0 ..100%
B12		Power-on delay.	0 .. 9999s
B13	Outlet fan	Speed in Comfort mode.	0 ..100%
B14		Speed in Attenuation Mode.	0 .. 9999
B15		PID speed control - proportional component.	
B16		PID speed control - integration component.	0 .. 9999s
B17		PID speed control - derivative component.	0 .. 9999s
B18		k - factor	0 .. 9999s
B19		Starting ramp.	0 .. 9999s
B20		Ramp down ramp.	
B21		Minimum speed.	0 ..100%
B22	Mixing compensation.	Authorisation.	0 - No 1 - Inlet 2 - Outlet 3 - Both
B23	Speed compensation to supply temperature.	Authorisation.	0 - No 1 - Inlet 2 - Outlet 3 - Both
B24		Deviation from the desired supply temperature.	-20 .. 20°C
B25		Supply temperature shift.	-20 .. 20°C
B26		End of delay.	0 .. 9999s
B27		PID speed control - proportional component.	0 .. 999
B28		PID speed control - integration component.	0 .. 9999s
B29		PID speed control - derivative component.	0 .. 9999s
B30		Cooling failure.	0 -Mode 1 - Comp
B31		Condensing unit defrost.	0-Mode 1 - Comp
B32		Heating failure.	0 -Mode 1 - Comp
B33	Ventilation after heating components are switched off.		0 – Inlet 1 – Outlet 2 – Both

Fans – assignment I/O

Code	Description			Value
B34	Enable running for heating and cooling modes.			0 – Both 1 – Heat 2 - Cool 3 -Temper
B35	Supply fan	Operation	Selecting the controller digital input.	Range_2
B36			Controller digital input polarity.	Range_3
B37		Service switch	Selecting the controller digital input.	Range_2
B38			Controller digital input polarity.	Range_3
B39		Flow signalling	Selecting the controller digital input.	Range_2
B40			Controller digital input polarity.	Range_3
B41		Pressure sensor	Selecting the controller analogue input.	Range_4
B42			Sensor range.	0 .. 9999Pa
B43			Smoothing constant.	0 .. 9999s
B44			Fixed pressure value for selecting the controller analogue input ***"Set"***.	0 .. 9999Pa
B45	Output fan	Operation	Selecting the controller digital input.	Range_2
B46			Controller digital input polarity.	Range_3
B47		Service switch	Selecting the controller digital input.	Range_2
B48			Controller digital input polarity.	Range_3
B49		Flow signalling	Selecting the controller digital input.	Range_2
B50			Controller digital input polarity.	Range_3
B51		Pressure sensor	Selecting the controller analogue input.	Range_4
B52			Sensor range.	0 .. 9999Pa
B53			Smoothing constant.	0 .. 9999s
B54			Fixed pressure value for selecting controller analogue input ***"Set"***.	0 .. 9999Pa

Filters

Code	Description		Value
B60	Inlet filter 1	Alarm limit - dirty, report only.	0 .. 9999Pa
B61		Alarm limit – blocked, unit shutdown.	0 .. 9999Pa
B62		Alarm limit selection.	0 -Report 1- Turn off
B63		Alarm delay.	0 .. 9999s
B64	Inlet filter 2	Alarm limit - dirty, report only.	0 .. 9999Pa
B65		Alarm limit - blocked, unit shutdown.	0 .. 9999Pa
B66		Alarm limit selection.	0 -Report 1- Turn off
B67		Alarm delay.	0 .. 9999s
B68	Outlet filter1	Alarm limit - dirty, report only.	0 .. 9999Pa
B69		Alarm limit - blocked, unit shutdown.	0 .. 9999Pa
B70		Alarm limit selection.	0 –Report 1- Turn off
B71		Alarm delay.	0 .. 9999s
B72	Outlet filter2	Alarm limit - dirty, report only.	0 .. 9999Pa
B73		Alarm limit - blocked, unit shutdown.	0 .. 9999Pa
B74		Alarm limit selection.	0 –Report 1- Turn off
B75		Alarm delay.	0 .. 9999s
B76	Fat filter	Alarm limit - dirty, report only.	0 .. 9999Pa
B77		Alarm limit - blocked, unit shutdown.	0 .. 9999Pa
B78		Alarm limit selection.	0 –Report 1- Turn off
B79		Alarm delay.	0 .. 9999s

Filters – assignment I/O

B80	Inlet filter 1	Selecting controller digital input.	Range_2
B81		Controller digital input polarity.	Range_3
B82		Selecting controller analogue input.	Range_4
B83		Sensor range.	0 .. 9999Pa
B84	Inlet filter 2	Selecting controller digital input.	Range_2
B85		Controller digital input polarity.	Range_3
B86		Controller analogue input selection.	Range_4
B87		Sensor range.	0 .. 9999Pa
B88	Outlet filter1	Selecting controller digital input.	Range_2
B89		Controller digital input polarity.	Range_3
B90		Controller analogue input selection.	Range_4
B91		Sensor range.	0 .. 9999Pa
B92	Outlet filter2	Selecting controller digital input.	Range_2
B93		Controller digital input polarity.	Range_3
B94		Controller analogue input selection.	Range_4
B95		Sensor range.	0 .. 9999Pa

Code	Description		Value
B96	Fat filter	Selecting the controller digital input.	Range_2
B97		Controller digital input polarity.	Range_3
B98		Controller analogue input selection.	Range_4
B99		Sensor range.	0 .. 9999Pa

Flaps

Code	Description		Value
C01	Inlet flap	Control signal.	0 .. 0-10V 1 .. 2-10V
C02		Opening time from 0 to 100%.	0 .. 9999s
C03	Outlet flap	Control signal.	0 .. 0-10V 1 .. 2-10V
C04		Opening time from 0 to 100%.	0 .. 9999s
C05	Mixing flap	Control signal.	0 .. 0-10V 1 .. 2-10V
C06		Opening time from 0 to 100%.	0 .. 9999s
C07	Fresh air	Control mode in Comfort mode.	0– Fixed 1- Temperature 2- POL 3- Desired
C10		Control mode in Attenuation mode.	
C11		***Fixed*** control selection value in Comfort mode.	0 .. 100%
C12		***Fixed*** control selection value in Economy mode.	0 .. 100%
C13		Control temperature for ***Temperature*** control selection.	0–Outlet 1- Area 2- Inlet 3- Recuper
C14		Minimum fresh air temperature in heating mode when control selection is ***Temperature***.	-50 .. 100°C
C15		Maximum fresh air temperature in heating mode when control selection is ***Temperature***.	-50 .. 100°C
C16		Minimum fresh air temperature in cooling mode when control selection is ***Temperature***.	-50 .. 100°C
C17		Maximum fresh air temperature in cooling mode when control selection is ***Temperature***.	-50 .. 100°C
C18		Order in the heating chain.	No, 1 .. 10
C19		Order in the cooling chain	No, 1 .. 10
C20		PID temperature control - proportional component.	0 .. 999
C21		PID temperature control - integration component.	0 .. 9999s
C22		PID temperature control - derivative component.	0 .. 9999s
C23		Minimum fresh air in Comfort mode.	0 .. 100%
C24		Minimum fresh air in Attenuation mode.	0 .. 100%

Recuperator

Code	Description		Value
C26	Control parameters	Control signal.	0 .. 0-10V 1 .. 2-10V
C27		Opening time from 0 to 100%.	0 .. 9999s
C28		Order in the heating chain.	No, 1 .. 10
C29		Order in the cooling chain	No, 1 .. 10
C30		PID temperature control - proportional component.	0 .. 999
C31		PID temperature control - integration component.	0 .. 9999s
C32		PID temperature control - derivative component.	0 .. 9999s
C33		Minimum anti-freeze temperature.	-50 .. 50°C
C34		Maximum anti-freeze pressure loss.	0 .. 9999Pa
C35		Minimum speed of the rotary recuperator.	0 .. 100%
C36		Maximum speed of the recuperator.	0 .. 100%
C37		Recuperator speed sensor time interval.	0 .. 9999s
C38	Rotary recuperator	Controller digital input selection for signal from frequency converter.	Range_2
C39		Digital controller input polarity for signal from frequency converter.	Range_3
C40		Controller digital input selection for speed monitor sensor.	Range_2
C41		Digital controller input polarity for speed monitor sensor.	Range_3
C42	Freezing recuperator	Selecting controller digital input.	Range_2
C43		Controller digital input polarity.	Range_3
C44		Selecting controller analogue input.	Range_4
C45		Sensor range.	0 .. 9999Pa
C46		Smoothing constant.	0 .. 9999s
C47		Fixed pressure value for controller analogue input selection ***"Set"***.	0 .. 9999Pa

Recuperator – assignment I/O

Glycol

Glycol – assignment I/O

Code	Description		Value
C51	Control parameters	Control signal.	0 .. 0-10V 1 .. 2-10V
C52		Opening time from 0 to 100%.	0 .. 9999s
C53		Minimum performance to turn on the pump.	0 .. 100%
C54		Maximum performance.	0 .. 100%
C55		Order in the heating chain.	No, 1 .. 10
C56		Order in the cooling chain.	No, 1 .. 10
C57		PID temperature control - proportional component.	0 .. 999
C58		PID temperature control - integration component.	0 .. 9999s
C59		PID temperature control - derivative component.	0 .. 9999s
C60		Minimum circuit pressure for refuelling.	0 .. 9999Pa
C61		Maximum anti-freezing pressure loss.	0 .. 9999Pa
C62	Pump	Selecting the controller digital input.	Range_2
C63		Controller digital input polarity.	Range_3
C64	Glycol circuit	Controller analogue input selection.	Range_4
C65		Sensor range.	0 .. 9999Pa
C66		Smoothing constant.	0 .. 9999s
C67		Fixed pressure value for controller analogue input selection ***"Set"***.	0 .. 9999Pa
C68	Exchanger freezing	Selecting the controller digital input.	Range_2
C69		Controller digital input polarity.	Range_3
C70		Controller analogue input selection.	Range_4
C71		Sensor range.	0 .. 9999Pa
C72		Smoothing constant.	0 .. 9999s
C73		Fixed pressure value for controller analogue input selection ***"Set"***.	0 .. 9999Pa

Water heating

Code	Description		Value
D01	Control parameters	Control signal.	0 .. 0-10V 1 .. 2-10V
D02		Opening time from 0 to 100%.	0 .. 9999s
D03		Minimum power to turn the pump on.	0 .. 100%
D04		Order in the heating chain.	No, 1 .. 10
D05		PID temperature control - proportional component.	0 .. 999
D06		PID temperature control - integration component.	0 .. 9999s
D07		PID temperature control - derivative component.	0 .. 9999s
D10		Minimum water heating temperature.	6 .. 64°C
D11		Heating water temperature required.	-50 .. 100°C
D12		Preheating: Outdoor temperature lower limit.	-20 .. 10°C
D13		Preheating: Performance for temperature lower limit.	0 .. 100%
D14		Preheating: Outdoor temperature upper limit.	-20 .. 10°C
D15		Preheating: Performance for lower limit temperature.	0 .. 100%
D16		Preheating: Constant heating time.	0 .. 9999s
D17		Preheating: Overrun temperature gradient.	0..999%/min
D18		Preheating: Speed compensation.	0 – No 1 – Yes 2 - Only
D19		Switching on the pump outside the power requirement.	0– No 1– LowTO 2– Heat 3- OffLowTO
D20		Weekly pump rotation.	0 – No 1 – Yes

Water heating – assignment I/O

Boiler room

Code			
D21	Pump	Selecting the controller's digital input.	Range_2
D22		Controller digital input polarity.	Range_3
D23	Frost protection	Selecting the controller's digital input.	Range_2
D24		Controller digital input polarity.	Range_3
D25	Conditions for heating water	Turn the boiler room on.	0 – No 1 – Winter 2 - Always
D26		Switch on at low heating water temperature indicated by water heating.	0 – No 1 – Yes
D27		Outdoor temperature lower limit	-20 .. 50°C
D28		Turn on at low outdoor temperature.	0 – No 1 – Winter 2- Summer 3 - Always

Code	Description		Value
D29	Conditions for heating water preparation	Minimum difference between desired and outdoor temperature.	-20 .. 50°C
D30		Switch on based on difference between desired and outdoor temperature.	0 – No 1 – Winter 2- Summer 3 - Always
D31		Minimum capacity of the condensing unit for the requirement to switch the boiler room on.	0 .. 100%
D32		Switching on when the minimum capacity of the condensing unit is exceeded.	0 – No 1 – Winter 2 - Always
D33		Fan start delay from switch-on the boiler room.	0 .. 9999min
D34		Fan start delay.	0 – No 1 – Winter 2 - Always
D35		Boiler room switch-on delay.	0 .. 9999min

Electric heating

Electric heating – assignment I/O

Code	Description		Value
D38	Control parameters	Contactor in heating mode permanently switched on.	0 – No 1 – Yes
D39		Delay on or off for the next stage.	0.. 9999min
D40		Maximum performance.	0 .. 100%
D41		Minimum performance of heating stage switch-on.	0 .. 100%
D42		Order in the heating chain.	No, 1 .. 10
D43		PID temperature control - proportional component.	0 .. 999
D44		PID temperature control - integration component.	0 .. 9999s
D45		PID temperature control - derivative component.	0 .. 9999s
D46		1st degree performance.	0 .. 99kW
D47		2nd degree performance.	0 .. 99kW
D48	Heating degrees	Controller digital input selection for 1st stage	Range_2
D49		Controller digital input polarity.	Range_3
D50		Controller digital input selection for 2nd stage.	Range_2
D51		Controller digital input polarity.	Range_3

Gas heating

Code	Description		Value
D61	Control parameters	Valve opening time from 0 to 100%.	0 .. 9999s
D62		Maximum performance.	0 .. 100%
D63		Order in the heating chain.	No, 1 .. 10
D64		PID supply temperature control - proportional component.	0 .. 999
D65		PID supply temperature control - integration component.	0 .. 9999s
D66		PID supply temperature control - derivative component.	0 .. 9999s
D67		Maximum flue gas temperature.	-50 .. 300°C
D68		Flue gas start temperature.	-50 .. 300°C
D69		Off delay.	0 .. 9999s
D70		PID flue gas temperature control - proportional component.	0 .. 999
D71		PID flue gas temperature control - integration component.	0 .. 9999s
D72		PID flue gas temperature control - derivative component.	0 .. 9999s
D73	Exchanger flap	Control signal.	0 .. 0-10V 1 .. 2-10V
D74		Control signal inversion.	0 – No 1 - Yes
D75		Desired flue gas temperature.	-50 .. 300°C
D76		Required exchanger pressure loss.	0 .. 9999Pa
D77		PID control - proportional component.	0 .. 999
D78		PID control - integration component.	0 .. 9999s
D79		PID control - derivative component.	0 .. 9999s
D80	Convector	Outdoor temperature for switching on tempering.	-50 .. 300°C
D81		Turn on tempering.	0-BurnerOn 1-Always 2-BurnerOff
D82		On or Off Delay.	0.. 9999min

Gas heating – assignment I/O

D83	Burner	Controller digital input selection for fault.	Range_2
D84		Controller digital input polarity for fault.	Range_3
D85		Selection of digital controller input for operation.	Range_2
D86		Controller digital input polarity for operation.	Range_3
D87	Pressure loss	Controller analogue input selection.	Range_4
D88		Sensor range.	0 .. 9999Pa
D89		Smoothing constant.	0 .. 9999s
D90		Fixed pressure value for controller analogue input selection ***"Set"***.	0 .. 9999Pa

Water cooling

Code	Description		Value
E01	Control parameters	Control signal.	0 .. 0-10V 1 .. 2-10V
E02		Opening time from 0 to 100%.	0 .. 9999s
E03		Minimum power to turn the pump on.	0 .. 100%
E04		Order in the cooling chain	No 1 .. 10
E05		PID temperature control - proportional component.	0 .. 999
E06		PID temperature control - integration component.	0 .. 9999s
E07		PID temperature control - derivative component.	0 .. 9999s
E10		Pump permanently on in cooling mode.	0 – No 1 - Yes
E11	Pump	Selecting the controller's digital input.	Range_2
E12		Controller digital input polarity.	Range_3

Water cooling –assignment I/O

Condensing unit

Condensing unit – assignment I/O

Code	Description		Value
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 the next stage.	0.. 9999min
E18		Delay on switching off the condensing unit.	0.. 9999min
E19		Power which the condensing unit turns off. *)	0 .. 100%
E20		Control temperature.	0-Area 1-Outlet 2-Inlet 3-Preheating
E21		Shifting the desired supply temperature when dehumidifying.	-50 .. 50°C
E22		Minimum outdoor temperature at which the condensing unit will still cool. *)	50 .. 50°C
E23		Minimum outdoor temperature at which the condensing unit will still heat. *)	50 .. 50°C
E24		Block heating in summer or block cooling in winter.	0 – No 1 - Yes
E25		Switching cooling or heating outputs on according to power or mode.	0- Performance 1 - Climate
E26		Minimum defrost performance.	0 .. 100%
E27		Order in the heating chain.	No, 1 .. 10
E28		Order in the cooling chain.	No, 1 .. 10
E29		PID temperature control - proportional component.	0 .. 999
E30		PID temperature control - integration component.	0 .. 9999s
E31		PID temperature control - derivative component.	0 .. 9999s
E32	Signalling	Selection of controller's digital input for operation.	Range_2
E33		Controller digital input polarity for operation.	Range_3
E34		Controller digital input selection for fault.	Range_2
E35		Controller digital input polarity for fault.	Range_3
E36		Selection of controller's digital input for defrost.	Range_2
E37		Controller digital input polarity for defrost.	Range_3
	*) Specific parameter according to the type of condensing unit		

	Code	Description	Value
Air quality	**E41**	Management.	0 – Fixed 1 – Sensor
	E42	Validity.	0 – Mode 1 – Always 2 - Temper
	E43	Turn on.	0..2000ppm
	E44	Required.	0..2000ppm
	E45	Enable fans.	0 – No 1 – Yes
	E46	Supply fan performance.	0 .. 100%
	E47	Exhaust fan performance.	0 .. 100%
	E48	Allow fresh air.	0 – No 1 – Yes
	E49	Fresh air quantity.	0 .. 100%
	E50	PID quality control - proportional component.	0 .. 999
	E51	PID quality control - integration component.	0 .. 9999s
	E52	PID quality control - derivative component.	0 .. 9999s
	E53	Maximum PID control performance.	0 .. 100%
	E54	More quality sensors.	0 – Diameter 1 – Min 2 – Max 3 – 1.sensor 4 – 2.sensor
Air quality – assignment I/O	**E55**	Selecting controller digital input.	Range_2
	E56	Controller digital input polarity.	Range_3
	E57	Selecting controller analogue input of the 1st sensor.	Range_4
	E58	Range of the 1st sensor.	0 .. 9999Pa
	E59	Smoothing constant of the 1st sensor.	0 .. 9999s
	E60	Fixed pressure value for controller analogue input selection of the 1st sensor ***"Set"***.	0 .. 9999Pa
	E61	Selecting the controller's analogue input for the 2nd sensor.	Range_4
	E62	Range of the 2nd sensor.	0 .. 9999Pa
	E63	Smoothing constant of the 2nd sensor.	0 .. 9999s
	E64	Fixed pressure value for controller analogue input selection of the 2nd sensor ***"Set"***.	0 .. 9999Pa

Humidity

Code	Description	Value
E65	Validity.	0 – Mode 1 – Always 2 - Temper
E66	Turn on.	0 .. 100%
E67	Required.	0 .. 100%
E68	Supply fan performance.	0 .. 100%
E69	Exhaust fan performance.	0 .. 100%
E70	Fresh air quantity.	0 .. 100%
E71	Passive dehumidification.	0 – No 1 – Valve 2 – Flaps 3 - Both
E72	Active dehumidification.	0 – No 1 – Conden 2 – Heat.No. 3 – WaterCh 4 - All
E73	PID humidity control - proportional component.	0 .. 999
E74	PID humidity control - integration component.	0 .. 9999s
E75	PID humidity control - derivative component.	0 .. 9999s
E76	Maximum PID control performance.	0 .. 100%
E77	Selecting controller digital input.	Range_2
E78	Controller digital input polarity.	Range_3
E79	Selecting the controller analogue input of the room sensor.	Range_4
E80	Room sensor range.	0 .. 100%
E81	Room sensor smoothing constant.	0 .. 9999s
E82	Fixed pressure value for controller analogue input selection of the room sensor ***"Set"***.	0 .. 100%
E83	Selecting the controller analogue input of the outdoor sensor.	Range_4
E84	Outdoor sensor range.	0 .. 100%
E85	Outdoor sensor smoothing constant.	0 .. 9999s
E86	Fixed pressure value for controller analogue input selection of the outdoor sensor ***"Set"***.	0 .. 100%

Humidity – assignment I/O

Ventilation

Code	Description	Value
E90	Desired temperature	-50 .. 50°C
E91	Shift.	-50 .. 50°C
E92	Minimum outdoor temperature.	-50 .. 50°C
E93	Minimum ON time.	0 ..9999min
E94	Switch type.	0 – Normal 1 – Directly
E95	Manually.	0 – Off 1 – On
E96	Selecting controller digital input for ***Switch Type = Directly.***	Range_2
E97	Controller digital input polarity for ***Switch Type = Directly.***	Range_3

Ventilation – assignment I/O

Temperature regulation

Code	Description	Value
F01	Desired temperature for ***Comfort*** mode.	-50 .. 50°C
F02	Desired temperature for ***Attenuation*** mode.	-50 .. 50°C
F03	Desired temperature for ***tempering*** mode at low room temperatures – ***Frost Protection***.	-50 .. 50°C
F04	Desired temperature for ***tempering*** mode at high room temperatures - ***Ventilation***.	-50 .. 50°C
F05	High outdoor temperature limit at which the required temperature shift occurs.	-50 .. 50°C
F06	Required temperature shift at high outdoor temperatures.	-50 .. 50°C
F07	PID cascade temperature control - proportional component.	0 .. 999
F10	PID cascade temperature control - integration component.	0 .. 9999s
F11	PID cascade temperature control - derivative component.	0 .. 9999s
F12	Upper limit of cascade control.	-50 .. 50°C
F13	Lower limit of cascade control.	-50 .. 50°C
F14	Upper limit of cascade control hysteresis.	-50 .. 50°C
F15	Lower limit of cascade control hysteresis.	-50 .. 50°C
F16	Calculated cascade temperature hysteresis for Heat/Cool modes.	-50 .. 50°C
F17	Insensitivity of the supply temperature within the cascade control limits.	-50 .. 50°C
F18	Maximum supply air temperature.	-50 .. 300°C
F19	Control function selection.	0 – Both 1 – Heat 2 - Cool
F20	Temperature climate selection for Heat/Cooling switching.	0– Outdoor 1– Area 2 - Inlet 3-Outlet 4- Preheat 5-Waste
F21	Climate numbness.	-50 .. 50°C
F22	Shifting the climate temperature compared to desired.	-50 .. 50°C
F23	Switching delay of Heating/Cooling.	0 .. 9999s
F24	Insensitivity between desired and actual temperature.	50 .. 50°C
F25	Delay permit in the chain for lower heating or cooling level.	0 .. 9999s
F26	Unit delay switch with nonzero starting power.	0 .. 9999s
F27	Shift of input temperature compared outdoor for switching to cooling.	-50 .. 50°C
F28	Shifting the room temperature to outdoor to switch to cooling.	-50 .. 50°C
F29	Delay in activating room temperature shift to outdoor for switching to cooling.	0.. 9999min
F30	Desired pre-heating temperature.	-50 .. 300°C
F31	Temperature switch of Summer/Winter.	-50 .. 50°C
F32	Delay of Summer/Winter period switching.	0.. 9999min

External switches

Code	Description	Value
F41	***Off*** mode meaning.	0 – Off 1 – Temper
F42	Type of switch.	0 – Contact 1 – Pulse
F43	Time of unit operation after pressing the resident switch.	0 .. 9999min
F44	Controller digital input selection for 1st switch.	Range_2
F45	Controller digital input polarity for 1st switch.	Range_3
F46	Controller digital input selection for 2nd switch.	Range_2
F47	Controller digital input polarity for 2nd switch.	Range_3
F48	Controller digital input selection for 3rd switch.	Range_2
F49	Controller digital input polarity for 3rd switch.	Range_3
F50	Selecting the controller physical input for temperature from the control panel.	Range_4
F51	Minimum value from control panel.	-50 .. 300°C
F52	Maximum value from control panel.	-50 .. 300°C
F53	Smoothing constant.	0 – 9999s
F54	Fixed temperature value for selecting ***"Set"*** physical input.	-30 .. 50°C
F55	Controller digital input selection for BMS.	Range_2
F56	Controller digital input polarity for BMS.	Range_3
F57	Controller digital input selection for alarm confirmation.	Range_2
F58	Controller digital input polarity for alarm confirmation.	Range_3
F59	Controller digital input for Fire-EFS.	Range_2
F60	Controller digital input polarity for Fire-EFS.	Range_3
F61	Controller digital input selection for 1st smoke sensor.	Range_2
F62	Controller digital input polarity for 1st smoke sensor.	Range_3
F63	Controller digital input selection for 2nd smoke sensor.	Range_2
F64	Controller digital input polarity for 2nd Smoke Sensor.	Range_3

External switches – assignment I/O

Fire flaps - assignment I/O

Code	Description	Value
F65	Controller digital input selection - 1st flap open.	Range_2
F66	Controller digital input polarity - 1st flap open.	Range_3
F67	Controller digital input selection - 1st flap closed.	Range_2
F68	Controller digital input polarity - 1st flap closed.	Range_3
F69	Controller digital input selection - 2nd flap open.	Range_2
F70	Controller digital input polarity - 2nd flap open.	Range_3
F71	Controller digital input selection - 2nd flap closed.	Range_2
F72	Controller digital input polarity - 2nd flap closed.	Range_3

Device testing

Code	Description	Value
G01	Allow.	0 – No 1 – Yes
G02	Supply fan speed.	0 .. 100%
G03	Ventilator fan speed.	0 .. 100%
G04	Inlet, outlet and mixing flap position inversely.	0 .. 100%
G05	Recuperator performance.	0 .. 100%
G06	Glycol performance.	0 .. 100%
G07	Water heating performance.	0 .. 100%
G10	Electric heating performance.	0 .. 100%
G11	Gas heating performance.	0 .. 100%
G12	Gas heating bypass flap position.	0 .. 100%
G13	Gas heating convector.	0 – Off 1 – On
G14	Water cooling performance.	0 .. 100%
G15	Condensing unit operation.	0 – Cool 1 – Heat
G16	Condensing unit performance.	0 .. 100%
G17	Heat pump operation.	0 – Cool 1 – Heat
G18	Heat pump performance.	0 .. 100%
G19	Gas heating convector.	0 – Off 1 – On
G20	Fire flaps.	0 – Open 1 – Close

Assigning analogue and digital outputs

Code	Description			Value
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	POL63x	Analogue outputs	X3 - Fixed value for KJ ***"Set"*** component selection.	0 .. 100%
H41			X4 - Controlled KJ component.	Range_8
H42			X4 - Fixed value for KJ ***"Set"*** component selection.	0 .. 100%
H43			X5 - Controlled KJ component.	Range_8
H44			X5 - Fixed value for KJ ***"Set"*** component selection.	0 .. 100%
H45			X6 - Controlled KJ component.	Range_8
H46			X6 - Fixed value for KJ ***"Set"*** component selection.	0 .. 100%
H47			X7 - Controlled KJ component.	Range_8
H48			X7 - Fixed value for KJ ***"Set"*** component selection.	0 .. 100%
H49			X8 - Controlled KJ component.	Range_8
H50			X8 - Fixed value for KJ ***"Set"*** component selection.	0 .. 100%

Configuration

Code		Description	Value
I01	Temperatures	Desired temperature.	0 – Inlet 1 – Area 2 – Outlet 3 – Preheating 4 – Waste
I02		Room unit.	0 – No 1 – POL822 2 – OP41tep 3 – OP41Ven 4 – OP70
I03		Room temperature.	0 – No 1 – 1 2 – 2
I04		Inlet temperature.	0 – No 1 – Inlet 2 – Preheating 3 – Both
I05		Flue gas temperature.	0 – No 1 – Yes
I06		Outside 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 – Outlet 2 – Inlet 3 – Both
I11		Cooling water temperature.	0 – No 1 – Outlet 2 – Inlet 3 – Both
I12		Temperature outlet.	0 – No 1 – Outlet 2 – Waste 3 – Both
I13	Humidity	Humidity control.	0 – No 1 – Dehumidify 2 – Humidifier 3 – Both
I14		Humidity sensors.	0 – DI-High 1 – DI-Low 2 – Room 3 – Outdoor 4 - Both

Code	Description		Value
I15	Air quality		0 – No 1 – DI 2 – AI 3 – 2xAI
I16	Flaps	Inlet flap.	0 – No 1 – Unit 2 – Mix 3 – Contact
I17		Mixing flap.	0 – No 1 – Yes
I18		Outlet flap.	0 – No 1 – Unit 2 – Mix 3 – Contact
I19	Filters	Inlet filter.	0 – No 1 – DI 2 – AI 3 – 2xDI 4 – 2XAI
I20		Fat filter.	0 – No 1 – DI 2 – AI
I21		Outlet filter.	0 – No 1 – DI 2 – AI 3 – 2xDI 4 – 2XAI
I22	Inlet fan	Type and kind of communication.	0 – No 1 – Yes 2 – FM-MB 3 – EC-MB
I23		Air quantity control source.	0 – Controller 1 – Pressure 2 – Inlet 3 – Directly 4 – POLv1 5 – POLv2 6 – AMR 7 – CPM-WRF
I24	Outlet fan	Type and kind of communication.	0 – No 1 – Yes 2 – FM-MB 3 – EC-MB
I25		Air quantity control source.	0 – Controller 1 – Pressure 2 – Inlet 3 – Directly 4 – POLv1 5 – POLv2 6 – AMR 7 – CPM-WRF

Code	Description		Value
I26	Recuperator.		0 – No 1 – Board 2 – Rotational 3 -RotationalZV 4-RotationalMB
I27	Glycol.		0 – No 1 – Yes 2 – Vapour
I28	Water heating	Inlet flap.	0 – No 1 – Yes 2 – Vapour
I29		Boiler room	0 – No 1 – Yes
I30	Electric heating.		0 – No 1 – 1S-1M 2 – 2S-1M 3 – 2S-2M
I31	Gas heating	Burner type.	0 – No 1 – Mod 2 – 1st 3 – 2nd
I32		Exchanger flap.	0 – No 1 – Temperature 2 – Pressure
I33	Water cooling.		0 – No 1 – Independently 2 – w. heating 3 – 2w. heating
I34	Condensing unit	Type and control.	0 – Modulant 1 – UTI-INV 2 – ANL2WIRE 3 – KM113.03 4 – FDP3 5 – EKEQFCB 6 – PAC-IF012
I35		Source of control.	0 – No 1 – 1xC/H 2 – 2xC/H 3 – 3xC/H 7 – 1xC 8 – 2xC 9 – 3xC
I36	Heat pump.		0 – No 1 – 1 2 – 2 3 – 1-MB 4 – 2-MB
I37	Ventilation.		0 – No 1 – Yes

Code	Description		Value
I38	Fire flaps	Tracking type.	0 – Motor 1 – Man2C 2 – THC 3 – Man1C
I39		Number.	0 – No 1 – 1 2 – 2
I40	External mode and function switch.		0 – No 1 – Modes 2 – Modes2 3 – 2xPlace 4 – WRF 5 – CPM 6 – 3xSpeed 7 – Party
I41	Energy balance		0 – No 1 – Yes
I42	ModBus	POL4xx	0 – No 1 – Local 2 – Service 3 – All
I43		POL63x	0 – No 1 – Local 2 – Service 3 – Loc+Serv 7 – Loc+IP 8 – Serv+IP 9 – All

Controller inputs – assignment of type

Code	Description		Value
I51	POL4xx	X1.	Range_5
I52		X2.	Range_5
I53		X3.	Range_5
I54		X4.	Range_5
I55		X5.	Range_5
I56		X6.	Range_5
I57		X7.	Range_5
I58		X8.	Range_5
I59	POL63x	X1.	Range_5
I60		X2.	Range_5
I61		X3.	Range_5
I62		X4.	Range_5
I63		X5.	Range_5
I64		X6.	Range_5
I65		X7.	Range_5
I66		X8.	Range_5

ModBus Configuration

Code	Description			Value
I68	POL 42x	Address.		0 .. 250
I69		RS485 Local port	Type of device.	0 – Slave 1 – Master
I70			Transfer rate.	Range_6
I71			2 stop bits.	0 – No 1 – Yes
I72			Parity.	0 – Even 1 – Odd 3 – None
I73			Delay.	0 .. 9999s
I74			Response delay.	0 .. 9999s
I75		T-HI service port	Type of device.	0 – Slave 1 – Master
I76			Transfer rate.	Range_6
I77			2 stop bits.	0 – No 1 – Yes
I78			Parity.	0 – Even 1 – Odd 3 – None
I79			Delay.	0 .. 9999s
I80			Response delay.	0 .. 9999s
I81	POL 63x	Address.		0 .. 250
I82		RS485 local port	Type of device.	0 – Slave 1 – Master
I83			Transfer rate.	Range_6
I84			2 stop bits.	0 – No 1 – Yes
I85			Parity.	0 – Even 1 – Odd 3 – None
I86			Delay.	0 .. 9999s
I87			Response delay.	0 .. 9999s
I88		T-HI service port	Type of device.	0 – Slave 1 – Master
I89			Transfer rate.	Range_6
I90			2 stop bits.	0 – No 1 – Yes
I91			Parity.	0 – Even 1 – Odd 3 – None
I92			Delay.	0 .. 9999s
I93			Response delay.	0 .. 9999s
I94		Ethernet port T-IP	Type of device.	0 – Slave 1 – Master
I95	Terminating resistor.			0 – No 1 – Yes
I96	Enable ModBus on the service port.			0 – No 1 – Yes

Working with parameters

Code	Description	Value
I97	Save parameter settings from the working area to the controller backup area as user parameters.	0 – No 1 – Execute
I98	Load saved user parameters from the backup area to the controller working area.	0 – No 1 – Execute
I99	Load saved default parameters from the backup area to the controller working area.	0 – No 1 – Execute

5 Range values

Range_1

Analogue temperature input assignment										
POL4xx:										
Value	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
Input	Set	X1	X2	X6	X7	X8	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										
POL4xx:										
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**
Polarity	Normal	Invert

Range_4

Voltage analogue input assignment										
POL4xx:										
Value	**0**	**1**	**2**	**3**	**4**	**5**				
Input	Set	X1	X2	X6	X7	X8				
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**
Type	NC	I-DI	I-mA	I-V	I-NI1000	I-PT1000
Value	**6**	**7**	**8**	**9**	**10**	**11**
Type	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	GlcA
Value	**7**	**8**	**9**	**10**	**11**	**12**	**13**
Component	WtH	El	El2	-	-	Gas	GasM
Value	**14**	**15**	**16**	**17**	**18**	**19**	**20**
Component	GasL	WtC	Cnd	CndC	CndH	Cnd2C	Cnd2H
Value	**21**	**22**	**23**	**24**	**25**	**26**	**27**
Component	Cnd3C	Cnd3H	Cnd1O	Cnd2O	Cnd3O	HPC1	HPV1
Value	**28**	**29**	**30**	**31**	**32**	**33**	**34**
Component	HPE1	HPC2	HPV2	HPE2	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	FnO	FnE	H/C	WRF	HPCV1	HPCV2	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	-	-	Gas	DmpG	WtC
Value	**14**	**15**	**16**	**17**	**18**	**19**	**20**
Component	Cnd1	Cnd1	Cnd3	-	HP	HP2	Hum
Value	**21**	**22**	**23**	**24**	**25**	**26**	**27**
Component	DmpS	DmpE	DmpM2	CndCH1	CndO	-	-
Value	**28**	**29**	**30**	**31**	**32**	**33**	**34**
Component	-	AFl1	AFl2	CndCH2	CndCH3	-	-
Value	**35**	**36**	**37**	**38**	**39**	**40**	
Component	-	-	-	-	-	-	

MANDÍK, a.s.
Dobříšská 550
26724 Hostomice
Czech Republic
Tel.: +420 311 706 706
E-Mail: mandik@mandik.cz
www.mandik.com