

Measurement and Regulation System KJM MANDÍK Climatix

Alarm messages

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MANDÍK®



ATEX II 2G IIB T4

Alarm messages

Alarm messages can be any predefined message, such as fault, event, report, etc. It consists of name, status, type (priority), and time of occurrence or termination. Current alarm and alarm history listings can contain a maximum of 50 items and work in a circular fashion. This means that the most recent alarm overwrites the oldest one. For all the components where contact monitoring is performed, a contact is expected to be closed when functioning properly. A faulty or abnormal condition of a component is usually also indicated by an open contact. If an AC unit features more than one identical component, then their alarm, if any, is indicated by a serial number in the name (e.g.: **2TemperatureRoom**, **2CondensingUnit**).

Every alarm is factory set to a class (priority) on which the operation of the AC unit depends in the event of this alarm. In some specific cases, the alarm class can be changed in the menu of the related component after factory login. The meaning of alarm **Priority** is as follows:

- **Priority A (Danger)** – the highest alarm class will shut down the AC unit, which will restart after the cause of the alarm has been removed and **Acknowledge** activated. A fire type alarm will shut down the A/C unit immediately, other alarms will cause the unit to enter the auxiliary **Ventilation** mode before shutting down.
- **Priority B (Urgently)** – high alarm class will shut down the AC unit, which will restart after the cause of the alarm is removed without activating **Acknowledge**. A fire type alarm will shut down the A/C unit immediately, other alarms will cause the unit to enter the auxiliary **Ventilation** mode before shutting down.
- **Priority C (Warning)** – low alarm class will not shut down the A/C unit, but the unit may switch to its auxiliary mode. The unit will return to the original mode when the cause of the alarm has ceased without acknowledging the alarm.
- **Priority D (Report)** – the lowest alarm class is a warning only, the AC unit continues running. The alarm notification will disappear after the cause of the alarm has ceased without the need to acknowledge the alarm.
- **Priority E** – the condition is not accepted as an alarm, so no alarm notification is issued.

The alarm announcement screen is accessed by the **Alarm** key indicated by the bell or red LED and contains the following items:

- **CurrentAlarms** – this displays the number of new or ongoing alarms. Confirming the item will display a list of the last 50 current alarms. After selecting and confirming a specific alarm, the **AlarmList Detail** detail information is displayed. A newly generated alarm is indicated by a ringing bell on the display or a flashing LED in the button. Acknowledge the alarm by setting the **Acknowledge** item to **Execute** in the **CurrentAlarms** menu. Two states can occur after acknowledging the alarm, which can be done after any level login:
 - **Alarm continues** – the LED or bell stops flashing and is permanently lit.
 - **Alarm terminated** – the LED or bell goes off. The alarm moves from the current alarm to the alarm history, where “OK” is added behind the alarm name.
- **AlarmHistory** – the number of expired or ongoing alarms is displayed here. Acknowledging the entry will display a listing of the history of the last 50 alarms. After selecting and confirming a specific alarm, the detailed **AlarmList Detail** will be displayed.

A list of all the alarms is given in the table (Table 5), including their description and the number under which they can be diagnosed on the POL822 room unit. The “**xxxxxx**” text, which specifies the sensor fault, can take the following variations:

- **OK** – failure of the connected sensor has ended.
- **NoSensor** – sensor is not connected.
- **overRange** – measured value is over the expected measurement range.
- **underRange** – measured value is under the expected measurement range.
- **OpenLoop** – sensor connection to the controller input is broken.
- **ShortedLoop** – sensor connection to the controller input is shorted.
- **Output** – output failure.
- **Others** – unspecified fault.
- **Communication** – communication failure.
- **MultiFaults** – cumulative fault.
- **Configuration** – configuration of the controller input does not match the type of connected sensor.

Alarm name	Priority	Description	Number
2ElectricHeater	C	2nd electric heater fault information based on monitoring the status of the triac relay or contactor contact.	50
Filter2Exhaust Clogged	A	The second exhaust air filter is very dirty. Unit operation is blocked because the filter needs to be replaced.	31
Filter2Exhaust Dirty	D	The second exhaust air filter is dirty. The unit is not blocked, but it is recommended to replace the filter.	31
Filter2Exhaust xxxxxxxx	B	Damaged, not connected or incorrectly configured pressure sensor on the second exhaust air filter.	32
Filter2Supply Clogged	A	The second supply air filter is very dirty. Unit operation is blocked because the filter needs to be replaced.	25
Filter2Supply Dirty	D	The second supply air filter is dirty. The unit is not blocked, but it is recommended to replace the filter.	25
Filter2Supply xxxxxxxx	B	Damaged, not connected or incorrectly configured pressure sensor on the second supply air filter.	26
2CondensingUnit	C	Information on the failure of the second condensing unit by monitoring the outputs of the condensing unit informing of its operation or failure.	60
2SmokeSensor	A	Signal of smoke in a pipe or room (fire hazard) by contact from a second smoke sensor.	86
2AirQuaitySensor xxxxxxxx	B	Damaged, unconnected or misconfigured second air quality sensor.	82
2AirFlow	C	Insufficient air flow signal from the second sensor.	22
2HeatPump EEV	B	Fault signal from the EVD controller controlling the expansion valve in the second heat pump circuit.	70
2HeatPump Compressor	B	Signal of overheating of the compressor of the second circuit from the thermal protection.	64
2HeatPump Converter	B	Fault signal from the frequency converter controlling the second circuit heat pump compressor.	66
2HeatPump LowPressure	A	Low pressure signal in the second heat pump circuit from the pressure sensor.	74
2HeatPump HighPressure	A	High pressure signal in the second circuit of the heat pump from the pressure sensor.	72

2TemperatureRoom xxxxxxxx	B	Damaged, unconnected or misconfigured room temperature sensor.	4
2WaterHeatingPump	C	Failure of the 2nd water heating pump from pump thermocouple or pump circuit breaker contact.	43
2CondensingUnit	C	Information on the failure of the third condensing unit by monitoring the outputs of the condensing unit informing of its operation or failure.	61
3CondensingUnit	C	Information on the failure of the third condensing unit by monitoring the outputs of the condensing unit informing of its operation or failure.	61
4CondensingUnit	C	Information about the failure of the fourth condensing unit by monitoring the outputs of the condensing unit informing about its operation or failure.	61
5CondensingUnit	C	Information about the failure of the fifth condensing unit by monitoring the outputs of the condensing unit informing about its operation or failure.	61
6CondensingUnit	C	Information about the failure of the sixth condensing unit by monitoring the outputs of the condensing unit informing about its operation or failure.	61
ElectricalHeating	C	Information on the failure of the 1st electric heating unit based on monitoring the status of the triac relay or contactor contact.	49
ExhaustFilter Clogged	A	Exhaust air filter is very dirty. Unit operation is blocked because the filter needs to be replaced.	29
ExhaustFilter Dirty	D	The exhaust air filter is dirty. The unit is not blocked, but it is recommended to replace the filter.	29
ExhaustFilter xxxxxxxx	B	Damaged, not connected or incorrectly configured pressure sensor on supply air filter.	30
SupplyFilter Clogged	A	Supply air filter is very dirty. Unit operation is blocked because the filter needs to be replaced.	23
SupplyFilter Dirty	D	The supply air filter is dirty. The unit is not blocked, but it is recommended to replace the filter.	23
SupplyFilter xxxxxxxx	B	Damaged, not connected or incorrectly configured pressure sensor on supply air filter.	24
FatFilter Clogged	A	The fat filter is very dirty. Unit operation is blocked because the filter needs to be replaced.	27
FatFilter Dirty	D	The fat filter is dirty. The unit is not blocked, but it is recommended to replace the filter.	27

FatFilter xxxxxxxx	B	Damaged, not connected or incorrectly configured pressure sensor on the supply air fat filter.	28
GlycolPress Low	E	Insufficient media pressure in the glycol exchanger.	41
GlycolPress xxxxxxxx	B	Damaged, unconnected or misconfigured pressure sensor in glycol circuit.	42
ExhaustDamper	B	The exhaust damper position does not match the expected value corresponding to the Nonsensitive and TimeOpen settings.	35
ExhaustDamper xxxxxxxx	B	Damaged, unconnected or misconfigured drain damper position monitoring. The "xxxxxx" text specifies a malfunction of the damper position signal.	35
SupplyDamper	B	The supply damper position does not match the expected value corresponding to the Nonsensitive and TimeOpen settings.	33
SupplyDamper xxxxxxxx	B	Damaged, not connected or incorrectly configured supply damper position monitoring. The "xxxxxx" text specifies a malfunction of the damper position signal.	33
MixingDamper	B	The mixing damper position does not match the expected value corresponding to the Nonsensitive and TimeOpen settings.	34
MixingDamper xxxxxxxx	B	Damaged, unconnected or misconfigured mixing damper position monitoring. The "xxxxxx" text specifies a malfunction of the damper position signal.	34
CondensingUnit	C	Condensing unit fault information based on monitoring of condensing unit outputs informing of condensing unit operation or fault.	59
CondensingUnit Frost	E	All the condensing units defrost simultaneously. In case only one condensing unit is installed, it signals its defrosting.	62
SmokeSensor	A	It signals smoke in a pipe or room (fire hazard) via a contact from the smoke sensor.	85
AirQuality Bad	E	Bad air quality alarm based on a set limit value.	82
AirQuaitySensor xxxxxxxx	B	Damaged, not connected or incorrectly configured air quality sensor.	81
MB-HeatPump	C	ModBus communication failure with the heat pump compressor frequency converter.	91
MB-ExhaustFan	A	ModBus communication failure with the frequency converter of the exhaust fan.	89

MB-SupplyFan	A	ModBus communication failure with the supply fan frequency converter.	88
MB-ElectricityMeter	D	ModBus communication failure with the electricity meter on the supply to the switchboard.	92
MB-RoomUnit	C	Failure of ModBus communication with the room unit.	
MB-EVD1_ComErr	C	Failure of communication with the EVD driver of the heat pump.	
GasHeating	C	Gas burner malfunction based on unavailable operation information signalled directly on the burner or burner chamber.	53
GasHeating Err	C	Gas burner failure information based on relay contact informing of its failure also signalled directly on the burner or burner chamber.	54
GasExchangerDamper	C	The position of the gas exchanger bypass damper does not correspond to the expected Nonsensitive and TimeOpen settings.	57
GasExchangerDamper xxxxxxx	B	Damaged, unconnected or misconfigured gas exchanger bypass damper position monitoring. The "xxxxxx" text specifies a malfunction of the damper position signal.	57
GasExchangePress xxxxxxxx	B	Damaged, unconnected or misconfigured pressure sensor designed to control the bypass damper position.	56
Fire-EPS	A	Fire hazard signalling by a contact from a fire sensor or fire alarm panel (EPS).	84
FireDamper	A	Fire hazard signalling from a fire damper. The damper is in an unexpected position.	87
RoomUnit	B	Damaged, unconnected or misconfigured room unit.	
AirFlow	C	Insufficient air flow signal.	18
Recuperator	C	Rotary recuperator motor frequency converter failure from the frequency converter contact or rotary recuperator not turning, possibly due to a cracked or loose belt.	36
Recuperator Icing	E	Manostat or temperature sensor indicates recuperator icing.	38
RecuperatorDamperAI	C	The position of the recuperator bypass damper does not correspond to the expected Nonsensitive and TimeOpen settings.	37

RecuperatorDamperAl xxxxxxx	B	Damaged, unconnected or misconfigured monitoring of the recuperator bypass damper position. The "xxxxxx" text specifies a malfunction of the damper position signal.	37
HeatPump EEV	B	Fault signal from the EVD controller controlling the expansion valve in the heat pump circuit.	69
HeatPump Compressor	B	Compressor overheating signal from thermal protection.	63
HeatPump Converter	B	Fault signal from the frequency converter controlling the heat pump compressor.	65
HeatPump Icing	E	Manostat signals icing of the heat pump heat exchanger.	75
HeatPump LowPressure	A	It signals low pressure in the heat pump circuit from the pressure sensor.	73
HeatPump HighPressure	A	Signal of high pressure in the heat pump circuit from the pressure sensor.	71
TemperatureExhaust xxxxxxx	B	Damaged, unconnected or misconfigured exhaust air temperature sensor.	9
TemperatureExtract xxxxxxx	B	Damaged, unconnected or misconfigured room exhaust air temperature sensor.	8
CoolingWaterDrain xxxxxxx	B	Damaged, unconnected or misconfigured cooling water discharge water temperature sensor.	13
HeatingWaterDrain xxxxxxx	B	Damaged, not connected or incorrectly configured water heating drain water temperature sensor.	11
TemperatureRoom xxxxxxx	B	Damaged, unconnected or misconfigured room temperature sensor.	3
TemperaturePreheat xxxxxxx	B	Damaged, not connected or incorrectly configured supply air temperature sensor after preheat.	1
TemperatureSupply xxxxxxx	B	Damaged, not connected or incorrectly configured supply air temperature sensor.	2
CoolingWaterSupplied xxxxxxx	B	Damaged, not connected or incorrectly configured cooling water supply water temperature sensor.	12
HeatingWaterSupplied xxxxxxx	B	Damaged, not connected or incorrectly configured heating water supply temperature sensor.	10
TemperatureSupply Compensation	E	Supply air temperature is significantly outside the temperature control limits, AC unit is off.	52
TemperatureSupply Limit	B	Supply air temperature is significantly outside the temperature control limits, AC unit is off.	51
TemperatureSupply Low	E	Low temperature of air supplied to the water heat exchanger.	46

TemperatureRecuperExhaust xxxxxxx	B	Temperature sensor damaged, not connected or incorrectly configured.	7
TemperatureRecuperAfter xxxxxxx	B	Temperature sensor damaged, not connected or incorrectly configured.	6
InletTemperatur xxxxxxx	B	Temperature sensor damaged, not connected or incorrectly configured.	5
TemperatureFlue High	C	High temperature of exhaust gases per the MaxTempExhaustGases value in the GasHeating component, at which the gas burner shuts down.	55
TemperatureFlue xxxxxxx	B	Damaged, unconnected or misconfigured flue gas temperature sensor.	14
TemperatureWater Low	E	Low temperature of heating water in the water heat exchanger.	45
TemperatureOutdoor xxxxxxx	B	Temperature sensor damaged, not connected or incorrectly configured.	0
ExhaustFan	A	Failure of exhaust fan from the fan motor frequency converter contact.	19
ExhaustFlowSensor xxxxxxx	B	Damaged, not connected or misconfigured exhaust fan airflow sensor.	21
ExhaustPress xxxxxxx	B	Exhaust fan air pressure sensor damaged, not connected or not configured correctly.	21
ExhaustFanSwitch	B	Exhaust fan service switch is not turned on.	20
SupplyFan	A	Supply fan failure from the fan motor frequency converter contact.	15
SupplyFlowSensor xxxxxxx	B	Supply fan air pressure sensor damaged, not connected or misconfigured.	17
SupplyPressSensor xxxxxxx	B	Supply fan airflow sensor damaged, not connected or not configured correctly.	17
FanSupplySwitch	B	Supply fan service switch is not turned on.	16
Humidity Low	E	It indicates that the humidity low limit has been exceeded.	80
Humidity High	E	It indicates that the upper humidity limit has been exceeded.	80
HumidityRoom xxxxxxx	B	Damaged, not connected or incorrectly configured humidity sensor.	78
HumidityOutdoor xxxxxxx	B	Damaged, not connected or incorrectly configured humidity sensor.	79
WaterCoolingPump	C	Water cooling pump failure from pump thermal contact or pump circuit breaker contact.	58
WaterHeatingPump	C	Failure of 1st water heating pump from pump thermocontact or pump circuit breaker contact.	43

<i>Anti-FreezeProtection</i>	A	Danger of freezing of the water heating exchanger. Water heating pump on, valve open 100%.	44
<i>Message Service</i>	D	Information about the need for a scheduled service according to the value in component <i>NextServiceRequest</i> .	92
<i>Humidifier</i>	C	Humidifier failure based on unavailable operation information signalled directly from the humidifier.	76
<i>Humidifier Err</i>	C	Humidifier fault information based on humidifier fault information signalled directly from the humidifier.	77

Table 1 – List of fault messages