memmert
Experts in Thermostatics

ADDITIONAL ACCESSORIES

100% ATMOSAFE. MADE IN GERMANY.

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Please contact our customer service before sending appliances for repair or before returning equipment, otherwise, we have to refuse acceptance of the shipment.

D24124 | Date 11/2016

About this manual

Purpose and target audience

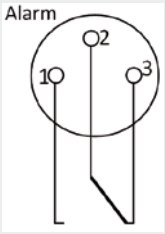
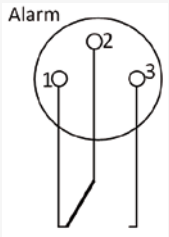
This manual describes the optional additional accessories for Memmert Generation 2012 appliances. It is intended for use by trained personnel of the owner, who have the task of operating and/or maintaining the respective appliance.

Other documents that have to be observed:

- the operating manual of the respective appliance
- For operation of the appliance with MEMMERT AtmoCONTROL, observe the separate software manual

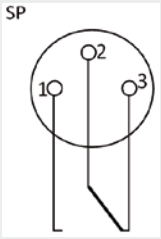
Contents

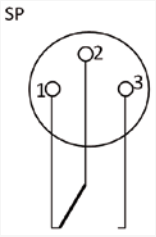
Floating switching contact ALARM (opt. H6)

Relay/ LED	Plug assignment	Functional description	Miscellaneous
Relay off Test LED red		Contact 2-3 is closed in case of the following errors: ▶ Loss of voltage ▶ Overtemperature ▶ Undertemperature (plus controller only) ▶ Humidity alarm ▶ Mechanical Temperature limiter TB ▶ Fan speed alarm (only for optional fan speed monitoring) ▶ Error of sensor PT100	Switching capacity max. 2 A max. 24 Volt
Relay on Test LED green		Contact 1-2 is closed ▶ Appliance switched on and in order	Switching capacity: max. 2 A max. 24 V

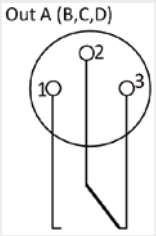
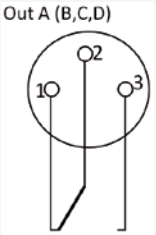
Floating switching contact setpoint reached (SP) (opt. H5)

<table>
<tr><th>Relay/ LED</th><th>Plug assignment</th><th>Functional description</th><th>Miscellaneous</th></tr>
<tr>
<td>Relay off

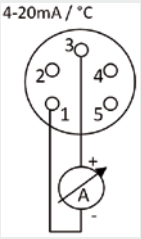
Test LED red</td>
<td> 
</td>
<td>Contact 2-3 is closed
▶ Setpoint not reached
▶ The actual temperature value is outside of a set tolerance band around the defined setpoint
<table>
<tr><th>Appliance type</th><th>Tolerance band</th></tr>
<tr><td>IN, IF, IPP, HPP, INCO2, HCP, ICP, ICH, IPS</td><td>dT ≥ 0.5 K</td></tr>
<tr><td>UN, UF, SN, SF, CTC, TTC</td><td>dT ≥ 2.0 K</td></tr>
</table></td>
<td>Switching capacity
max. 2 A
max. 24 Volt</td>
</tr>
<tr>
<td>Relay on

Test LED green</td>
<td> 
</td>
<td>Contact 1-2 is closed
▶ Setpoint reached
▶ The actual temperature value is within a set tolerance band around the defined setpoint
<table>
<tr><th>Appliance type</th><th>Tolerance band</th></tr>
<tr><td>IN, IF, IPP, HPP, INCO2, HCP, ICP, ICH, IPS</td><td>dT < 0.5 K</td></tr>
<tr><td>UN, UF, SN, SF, CTC, TTC</td><td>dT < 2.0 K</td></tr>
</table></td>
<td>Switching capacity:
max. 2 A
max. 24 V</td>
</tr>
</table>

Freely programmable switching contact (A – D)

Relay/ LED	Plug assignment	Functional description	Miscellaneous
Relay off Test LED red		Programming of the freely programmable switching contacts is done using the AtmoCONTROL software. Up to 4 (for single-phase appliances max. 2) floating switching contacts can be switched programme dependently. For switch setting "open" ▶ Contact 1-2 open ▶ Contact 2-3 closed 	Switching capacity max. 2 A max. 24 Volt
Relay on Test LED green		For switch setting "close" ▶ Contact 1-2 closed ▶ Contact 2-3 open 	Switching capacity: max. 2 A max. 24 V

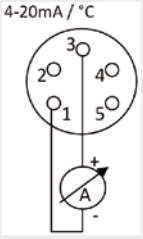
4–20-mA current loop interface for temperature

Plug assignment	Appliance	Range	4 mA	12 mA	20 mA
	IN / IF	0 … + 90 °C	0 °C	45 °C	90 °C
	IN^{PLUS}/IF^{PLUS} (with Steri function)	0 … + 90 °C	0 °C	45 °C	90 °C
	SN / SF	0 … + 260 °C	0 °C	130 °C	260 °C
	UN / UF	0 … + 310 °C	0 °C	155 °C	310 °C
	IPP / HPP	–10 … + 80 °C	– 10 °C	35 °C	80 °C
	ICP / ICH	–20 … + 70 °C	– 20 °C	25 °C	70 °C
	CTC	–50 … + 200 °C	– 50 °C	75 °C	200 °C
	Optional	0 … + 70 °C	0 °C	35 °C	70 °C
	Optional	0 … + 80 °C	0 °C	40 °C	80 °C
	Optional	0 … + 100 °C	0 °C	50 °C	100 °C
	Optional	0 … + 300 °C	0 °C	150 °C	300 °C
	Optional	20 … + 90 °C	20 °C	55 °C	90 °C
	Optional	20 … + 100 °C	20 °C	60 °C	100 °C
	Optional	20 … + 200 °C	20 °C	110 °C	200 °C
	Optional	20 … + 260 °C	20 °C	140 °C	260 °C
	Optional	20 … + 300 °C	20 °C	160 °C	300 °C
	Optional	20 … + 310 °C	20 °C	165 °C	310 °C

R resistance: max. 2,5 V@20 mA = 125 Ohm

For errors 0 mA output.

4–20-mA current loop interface for humidity

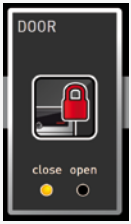
Plug assignment	Functional description				Miscellaneous
	Current loop interface 4-20 mA				R resistance: Max. 2.5V@ 20mA = 125 Ohm
	Range	4 mA	12 mA	20 mA	
	0…100 % rh	0 % rh	50 % rh	100 % rh	

Electric door locking mechanism

Functional description

Programming of the electric door locking mechanism is done using the AtmoCONTROL software. You can set the door locking mechanism to be electrically locked and unlocked at any stage of the programme.

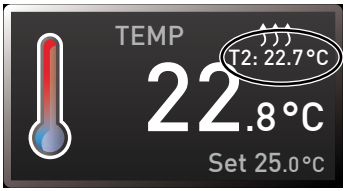
Setting "close":
Door locking mechanism
electrically locked



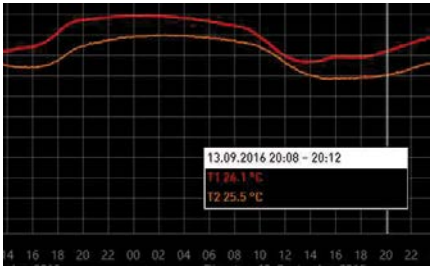
Setting "open":
Door locking mechanism
electrically unlocked

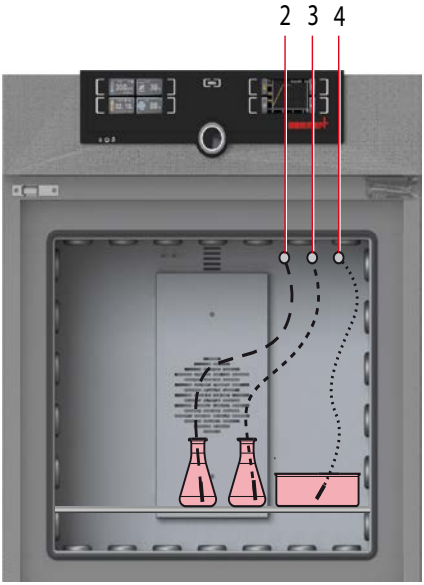
Freely positionable Pt100 temperature sensor (option H8)

The Pt100 temperature sensor can be flexibly positioned in the interior or in the chamber load to measure temperatures locally (a maximum of 3 additional sensors is possible). The individual temperatures measured are logged in the integrated data logger and shown on the ControlCOCKPIT display (T2, T3, etc.):



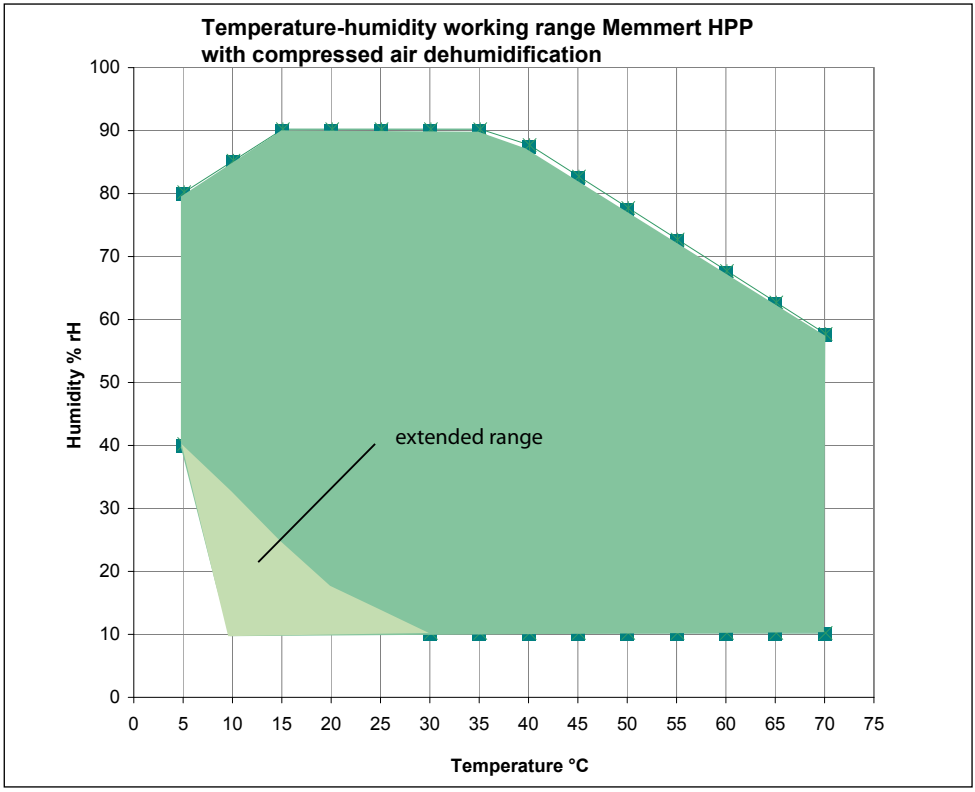
In the AtmoCONTROL software, the temperature sensor values are represented as additional coloured lines, also designated as T2, T3, etc.:





HPP constant climate chamber with compressed air dehumidification

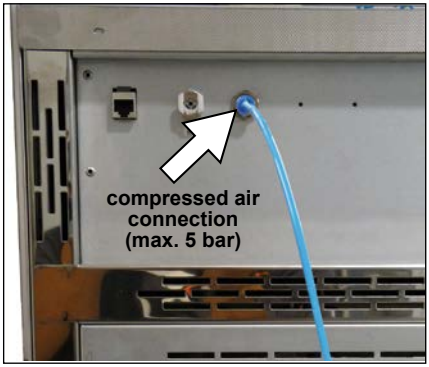
In this special variation, the temperature-humidity working area of the appliance is extended by the use of external compressed air. This makes it possible to dehumidify the air in the appliance even at 10 °C down to 10 % relative humidity:



In order to do this, connect a suitable pressure hose at the rear of the chamber (see picture) to an external compressed air supply (max. 5 bar).

Only oil-free compressed air may be used.

If 10 % humidity is not attained at 10 °C, the compressed air is not, or not sufficiently, pre-dehumidified. In this case it is possible to dehumidify the compressed air before it is fed into the chamber via a maintenance unit connected upstream, available from MEMMERT. Several chambers can be connected to this maintenance unit.

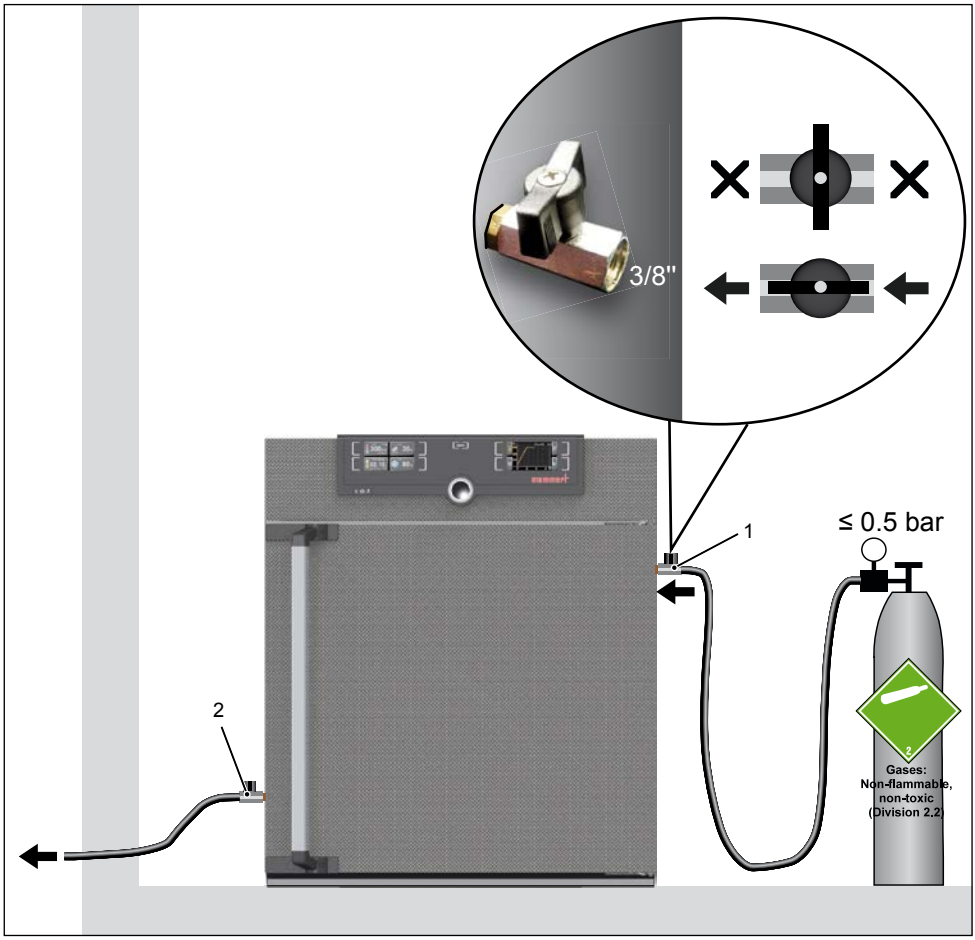


Gas flushing

Description

When equipped with gas flushing, gas can be flushed through the appliance. The gas flows in through a ball valve on the upper right and is channelled out through a second ball valve on the bottom left. The ball valves have a 3/8“internal thread to connect them to the system.

At the inlet valve (1), standard gas bottles with pressure-relief valve can be connected (maximum connection pressure 0.5 bar). Open the outlet valve (2) before injecting gas. Ensure that there is no overpressure in the appliance. The released gas must be channelled out.



Appliance with gas flushing (schematic diagram)
1 gas inlet
2 gas outlet

Safety regulations

Observe the following special precautionary measures and safety regulations for appliances with gas flushing:

Warning!
Danger of explosion and poisoning!

- **Only inject non-combustible, non-flammable, non-explosive, non-toxic and non-corrosive gases into the appliance.**
- **Always close the pressure-relief valve at the gas bottle and ball valves if the appliance is not in operation.**
- **Do not leave the appliance door open while gas is flowing in.**
- **Always keep the outlet valve open while injecting gas.**
- **Do not operate the appliance without ventilation at the outlet valve.**
- **Read the safety notes and instructions of the gas supplier.**

Handling

Operation

1. Put the appliance into operation.
2. Open the outlet valve (2) on the bottom left of the appliance.
3. Open the gas bottle (max. 0.5 bar).
4. Open the inlet valve (1).

Ending operation

1. Close the gas bottle.
2. Close the inlet valve (1).
3. Close the outlet valve (2).
4. Switch off the appliance.
5. Ventilate the appliance (open the door).

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