



# Master-1

## Digital Climate Controller

The Master-1 enables continuous climate control by fan control signal based on temperature. It is equipped with 2 fan outputs and can control a heater (on-off and variable) or a cooler, an air inlet and activate an alarm. The Master-1 is equipped with an auto cooling down correction and a growth curve. Multiple Mf-Net modules can be connected to drive and control additional fans and other equipment.

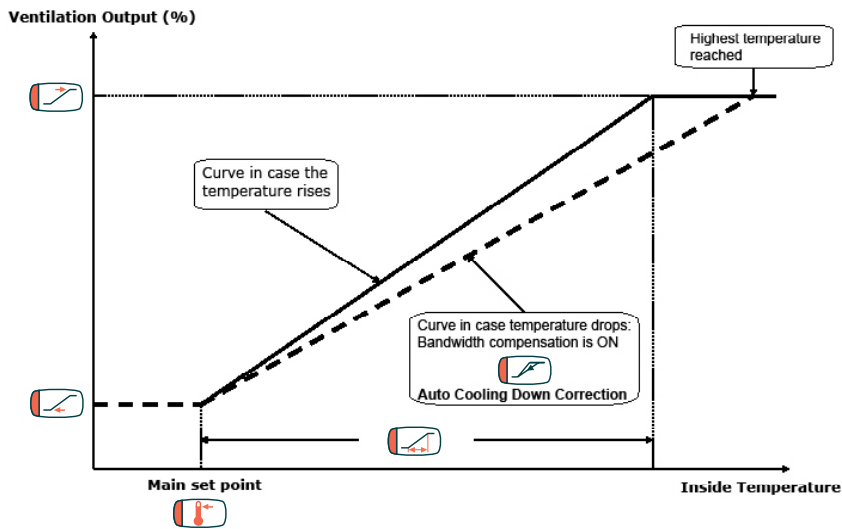
<p><b>Benefits</b></p> <ul style="list-style-type: none"> <li>• Easy to install</li> <li>• Easy to operate</li> <li>• Applicable for both new and existing ventilation systems</li> </ul> <p><b>Features</b></p> <ul style="list-style-type: none"> <li>• Two outputs for continuous variable 0-10V or 10-0V speed control signals for fans</li> <li>• Auto cooling down correction (outside temperature sensor needed)</li> <li>• Connections for inside and outside temperature sensors</li> <li>• Relay contact for heater or cooler</li> <li>• Alarm relay contact</li> <li>• Connection for airflow measuring device</li> <li>• 0-10V signal connection for air inlets</li> <li>• 0-10V signal connection for variable heaters</li> <li>• Built-in voltage and current protection</li> <li>• 14V output signal to power external sensors</li> <li>• Humidity control on minimum ventilation and cooling</li> </ul>	
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Inputs	Adjustments		Outputs
Temperature sensors <ul style="list-style-type: none"> <li>• Inside (1x)</li> <li>• Outside (1x)</li> </ul>		Set point Ventilation, alarm, heater, air inlet	0-10V connection for <ul style="list-style-type: none"> <li>• Variable ventilation (2x)</li> <li>• Air inlets (1x)</li> <li>• Variable heaters (1x)</li> </ul> Relay contact <ul style="list-style-type: none"> <li>• Heater or a cooler on / off (1x)</li> <li>• Alarm (1x)</li> </ul> 14V dc to power external sensors (1x)
0-10V for humidity sensor		Minimum values Ventilation, alarm, heater, air inlet	
Airflow measuring device		Maximum values Ventilation, alarm, heater, air inlet	
		Bandwidth Ventilation, alarm, heater, air inlet	

## Specifications Master-1

Definition	Min.	Typ.	Max.	Units	Notes
Controller Type					Main Controller
Mains supply	207	230	253	V	Single-phase F <sub>i</sub> size 5 x 20 mm
Mains frequency	50		60	Hz	
Mains supply fuse F4		1		A	
Output signal voltage fan 1	0		10	Vdc	
Output signal current fan 1	0		30	mA	
Output signal voltage fan 2	0		10	Vdc	
Output signal current fan 2	0		30	mA	
Output signal voltage heaters	0		10	Vdc	
Output signal current heaters	0		30	mA	
Output signal voltage inlets	0		10	Vdc	
Output signal current inlets	0		30	mA	
Heater relay contact			10 250	A V	cos = 1
		12,5		A	S, size 5 x 20 mm
Alarm relay contact	10		2	mA A	24V DC or 24V AC max.
Accuracy on variable outputs		±1		%	
Temperature sensor resistance		10K (25 °C)		Ω	NTC, moulded in plastic housing
Temperature display readout	-40		50	°C	
Accuracy on temperature reading		±1		°C	
Humidity input voltage	0		10	V	
Humidity input resistance		20K		Ω	
14V dc output voltage	12,6		15,4	Vdc	F <sub>i</sub> size 5 x 20 mm
14V dc output current			250	mA	
14V dc fuse		0,5		A	
Housing					IP54 plastic housing
Weight (unpacked)		1,7		kg	
Dimensions (W x H x D)		267 x 225 x 104		mm	
Operational temperature	0		40	°C	
Storage temperature	-15		50	°C	
Ambient relative humidity			95	%	

## Control Diagram Master-1



**Vostermans Ventilation developed the open modular system Mf-Net for various applications. Mf-Net is applied in agricultural and industrial market segments.**



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