TEKADOOR®

NOUVEAULINE EC

DESIGN AIR CURTAIN

INDIVIDUAL
INNOVATIVE
ENERGY-SAVING

ERP conform

NOUVEAULINE EC

DESIGN AIR CURTAIN

Applications

Nouveauline EC is the attractively-designed model for the sophisticated entry area. It is used in shops and retail, banks and architecturally significant façade areas.
Nouveauline EC fulfils the requirements of these wherever energy-efficient solutions meet high-quality design.
Installation-ready, free-hanging unit.

Special design

To save energy, the Nouveauline EC has been equipped with the new, optimised Jetflow discharge nozzle. This patented discharge nozzle is characterised by the multi-adjustable discharge angle and its adaptive, asymmetrical nozzle cross-section. Thanks to the specially selected asymmetrical adjustment of the Jetflow air guide profiles, not only is the level of noise reduced, but a larger throw distance is achieved, thus optimising the shielding performance.

The housing

Self-supporting steel-composite construction used for the air blower housing. Screws are not visible. High-quality powder coating, RAL 9006 as standard (white aluminium).
Other colours are available. Inspection panel opens downwards in combination with the intake grille.
Attractive intake grille – 3D stainless steel – finely perforated plate with micro grille behind it for filterless, easy maintenance application. Acoustically and thermally insulating lining.

Heating media

Heat exchangers for different heating media

LPHW: for normal temperature LPHW 70/50°C and low-temperature
LPHW 60/40°C, other temperatures available on request.
DX: DX register soldered under nitrogen for operation with heat pumps (only heating modus possible). High-quality heat exchanger made from copper tubes, with pressed-on, extra-strong aluminium fins. ELECTRO: 3-stage heat exchanger 400V, spiral form, corrosion resistant, with thermal overheating protection and switch-off delay.

Advantages at a glance

+ Made in Germany
+ ErP conform / EC fans
+ Certified by TÜV-Süd
+ Self-supporting steel-composite construction
+ Individual colours available (standard RAL 9006)
+ Patented energy-saving Jetflow nozzle
+ Individual unit lengths up to 2500 mm
+ Service-friendly thanks to filterless micro-intake grille
+ Simple to install
+ Higher throw distances thanks to optimised technology
+ Different heating media possible

+ Attractive intake grille
with micro-intake grille behind it

EC fans

The efficiency of the EC fans used by TEKADOOR is > 90% under partial load operation. This is 30–35% higher than for conventional AC fans. This does not just increase the efficiency, but also reduces the operating costs. The individually-driven EC fans with integrated motor protection can intake air in both directions. They have vibration-free bearings and are controlled with 0-10 V. They do not just comply with Directive ErP, but actually exceed this standard.
We recommend our suspended cladding to cover the supply lines.

Mounting

Simple mounting thanks to the rivet nuts (M8) incorporated on the upper side of the unit and optionally-available assembly materials. In the standard version, the unit does not need to be opened for electrical connection. Connection terminals for the voltage supply, as well as the connectors for the control unit and parallel operation can be accessed from the outside.

Maintenance

Easy to clean (micro grille) without opening the unit by simply vacuuming the intake grille. Secured inspection panel (hinges on one side) – easy to open for maintenance work, in combination with the intake grille.

Control

Electronic TEKADOOR GTC EC control unit, multifunctional with touch display, including an optional ModBus interface
A GTC 1 EC control unit is used as standard for models with LPHW heating. A GTC E EC control unit is used for models with electrical heating. The units come with 20 m preassembled and shielded data cable. The GTC 1 EC 5-stage control unit includes the ability to switch from manual to automatic and from summer mode to winter mode as standard. A solenoid valve of up to 2.5 A can be connected as an option for the winter mode. With the standard GTC E EC control unit, the airflow can be selected manually in 5 stages and the heating capacity – depending on the fan level – can be selected manually in 3 stages. Each control unit includes a manual to automatic mode switch and a potential-free contact for enabling via any on-site BMS or BEMS. A choice of 5-stage or stepless fan operation is offered as standard.
A maximum of 10 units can be connected in parallel.

NOUVEAULINE EC
DETAILS

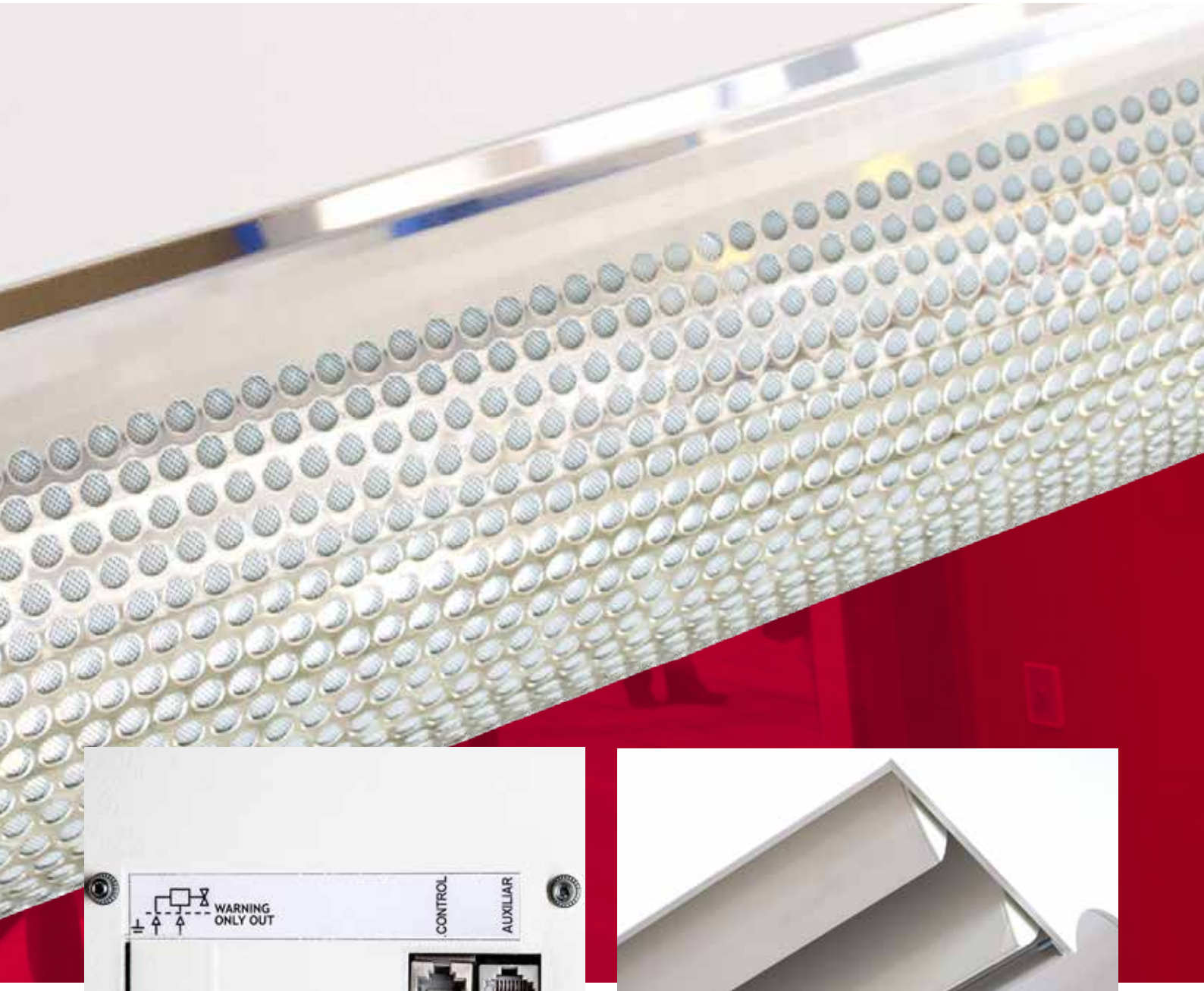
Connections

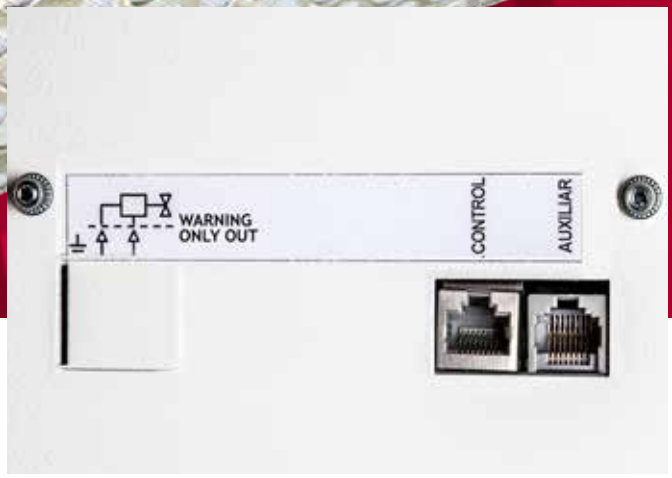
Heating connections – flow and return – on top of the unit as standard for easy connection to the on-site heating system. (Internal thread dimensions depend on the model)

Connection box (LPHW)

Simple electrical connection via connection box (voltage supply 230 V/50 Hz on the top of the unit).

Exception:
Electrical units with a heating capacity greater than 22.5 kW.





Data cable connection/interface

Simple, standard plug and play connection of the data cable and an optional solenoid valve on the top of the unit.
The connection can be offset on request.

Control:
Input for the data cable to the control unit.

Auxiliary:
Output for parallel operation with other units.

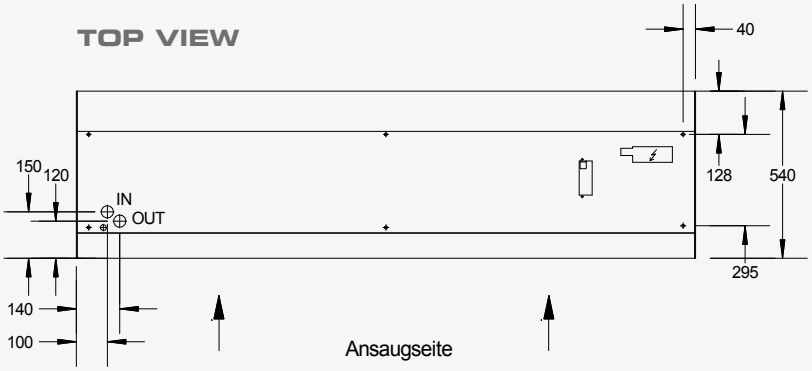
Jetflow discharge nozzle

Jetflow discharge nozzle with adaptive, asymmetrical nozzle cross-section. The special design of this patented discharge nozzle permits stepless variation of the discharge angle combined with a longer guided, smooth air stream with optimum throw distance.

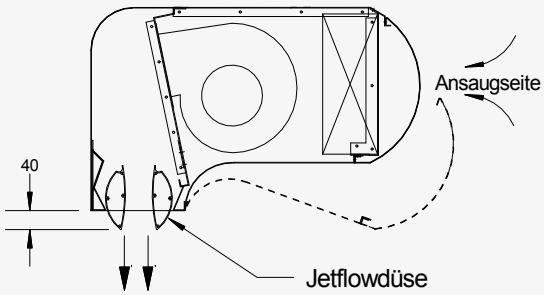
NOUVEAULINE EC

FREE-HANGING INSTALLATION

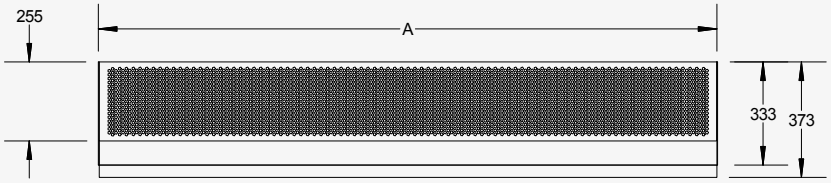
TOP VIEW



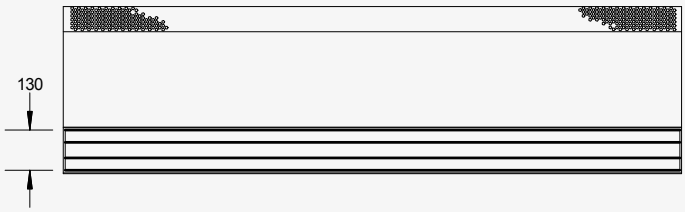
SIDE VIEW/SECTION



FRONT VIEW



BOTTOM VIEW



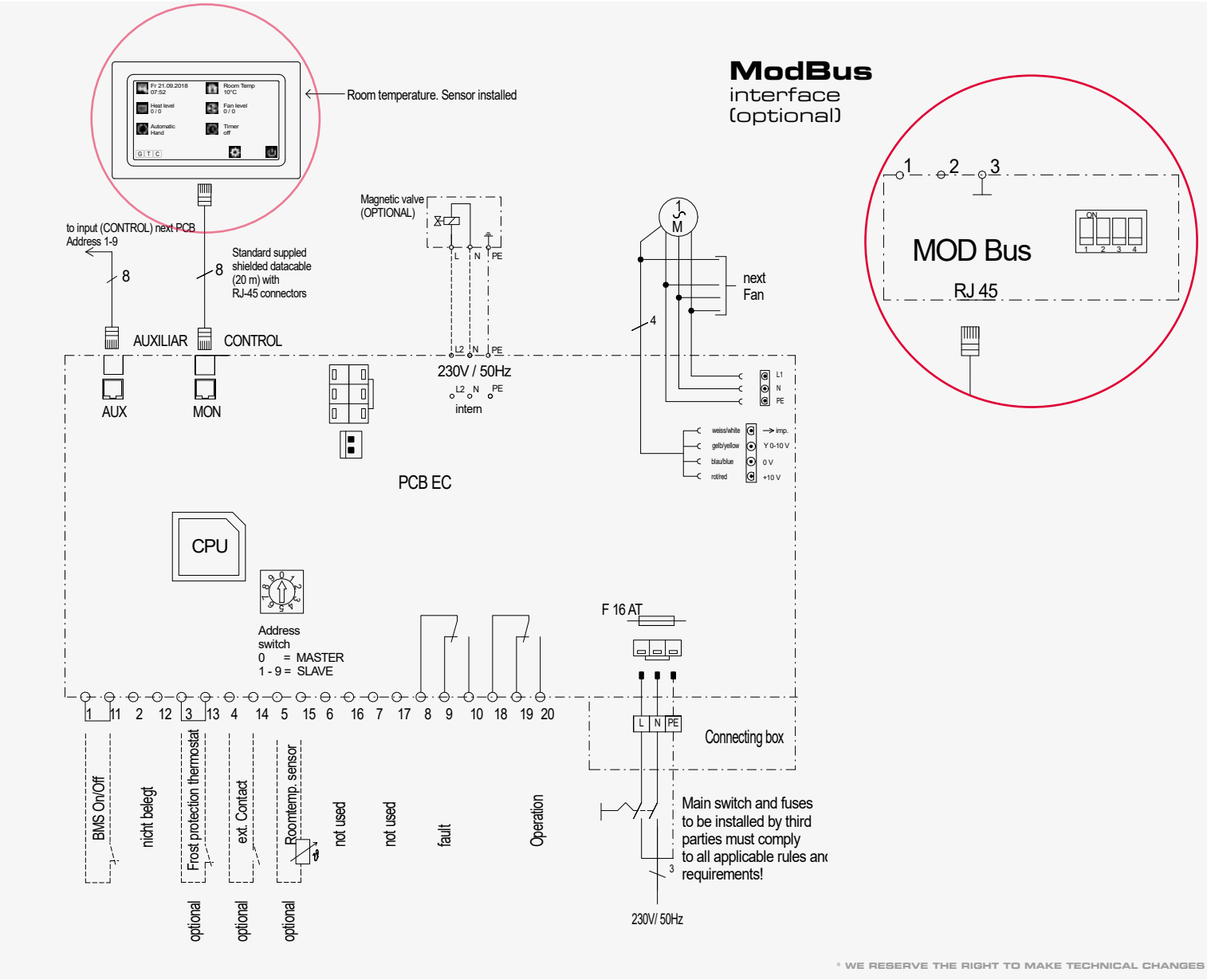
A = VARIABLE UNIT LENGTH

* WE RESERVE THE RIGHT TO MAKE TECHNICAL CHANGES

Connection-ready free-hanging door air curtain unit for visible installation directly above the door.
Ambient air intake is at the front, on the room side.

NOUVEAULINE EC

STANDARD CIRCUIT DIAGRAM FOR LPHW



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CONTROL UNIT GTC 1 EC

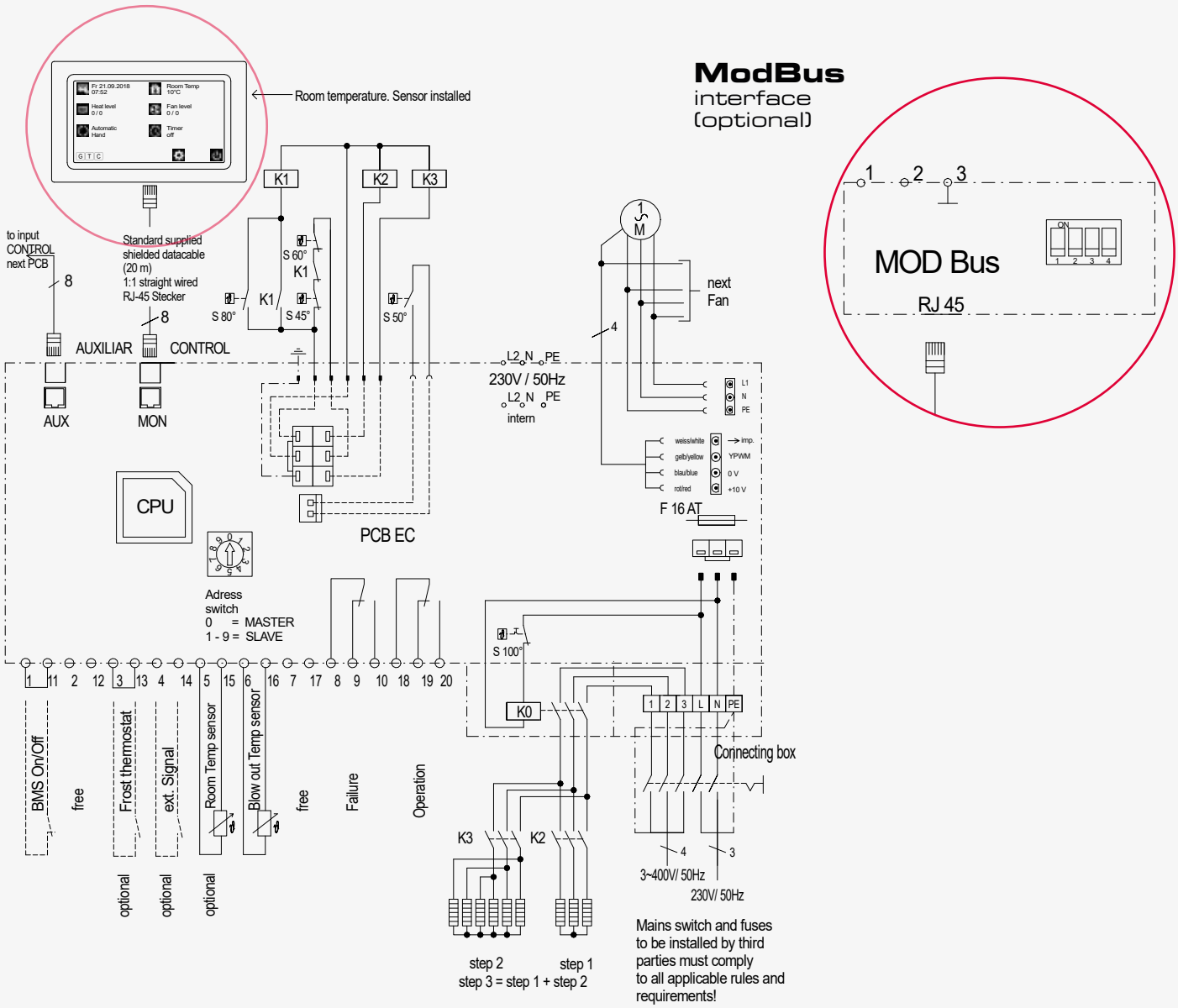
Multilingual, menu-driven electronic control unit for TEKADOOR air curtains with LPHW heating and energy-saving EC fans. A standard feature of the control unit with touch display is a choice between 5-stage or stageless fan control, which can be selected individually by the operator. The relevant operating modes and symbols are arranged clearly on the colour display. The date, time and room temperature are shown as standard. The room temperature is monitored via an internal temperature sensor in the control unit as standard.

An easy-to-navigate menu offers a selection of different operating modes:
Hand – manual operation
Auto AS – automatic operation via cool down protection
Auto RT – automatic operation via room temperature
Auto TK – automatic operation via door contact
Auto Kombi – option to combine all individual automatic modes

An enabling contact and potential-free operation and malfunction signals are provided for control via an on-site BMS or BEMS. Errors and faults are displayed with a red „warning“ sign. By coding the control boards differently, up to 10 door air curtains can also be operated in parallel with 1 control unit, using the Master/Slave principle. The control board is preinstalled in the door air curtain unit and 20 m of preassembled data cable (connection between the door air curtain and control unit) are included as standard.

NOUVEAULINE EC

CIRCUIT DIAGRAM FOR ELECTRICAL HEAT EXCHANGER



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CONTROL UNIT GTC E EC

Multilingual, menu-driven electronic control unit for TEKADOOR air curtains with LPHW heating and energy-saving EC fans. 5-stage fan operation or stageless fan control – easy to adjust on the control unit using the touch display. The electric heater can be activated in 3 stages.The relevant operating modes and symbols are arranged clearly on the colour display. The date, time and room temperature are shown as standard. The room temperature is monitored via an internal temperature sensor in the control unit as standard.

An easy-to-navigate menu offers a selection of different operating modes:
Hand – manual operation
Auto AS – automatic operation via cool down protection
Auto RT – automatic operation via room temperature
Auto TK – automatic operation via door contact
Auto AT – automatic operation via constant discharge temperature
Auto Kombi – option to combine all individual automatic modes

An enabling contact and potential-free operation and malfunction signals are provided for control via an on-site BMS or BEMS. A constant discharge temperature can be set via an optional cable temperature sensor. This enables optimisation of the shielding performance. A week timer is incorporated as standard, enabling up to 12 different switching times to be programmed per week. Errors and faults are displayed with a red „warning“ sign. By coding the control boards differently, up to 10 door air curtains can also be operated in parallel with 1 control unit, using the Master/Slave principle.The control board is preinstalled in the door air curtain unit and 20 m of preassembled data cable (connection between the door air curtain and control unit) are included as standard.

NOUVEAULINE EC

OPTIONAL ACCESSORIES

Thermostatic straight-way valve

(Setting range + 20 °C to + 35 °C) limits the discharge temperature (constant supply air temperature limitation). Also available as a 3-way valve.

Solenoid valve

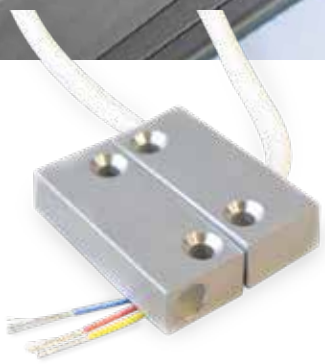
Opens or closes the warm water circuit in the summer/winter setting of the control unit, in order to close the heating water circuit and save energy during summer operation or when the air curtain is not working (normally closed).
Caution: If solenoid valves are used, it is expressly recommended to install a frost protection thermostat (automatically actuated) and a strainer.

Thermo-electric shut-off valve

230 V / 50 Hz, normally closed. On-site installation in the heating flow. Actuated by the summer/ winter circuit. Summer function – closed. Winter function – opened.

Ceiling attachment set

For problem-free, vibration free ceiling attachment, consisting of M8 or M10 threaded rods, up to 1000 mm length, vibration dampers, turnbuckles and counter nuts.



Frost protection thermostat

For monitoring LPHW heat exchangers exposed to the risk of frost. As soon as the temperature falls below +7 °C, the fans are switched off and an optional solenoid valve is opened.

Control unit GTC 2 EC

Possibility of combination of various automatic operations. A constant discharge temperature can be set via an optional electronic control valve, and a week timer is incorporated as standard, enabling up to 12 different switching times to be programmed per week.

Electronic control valve

Electronic valve with 0-10V impulse and blow-out temperature sensor completely installed and wired. In combination with the GTC 2 control, a preselected blow-out temperature is kept constant.

Door contact solenoid switch

In automatic mode switches on the door air curtain in the preselected stage

NOUVEAULINE M EC

TECHNICAL DATA
FREE-HANGING

Design based on:

recommended operating point
intake temperature tLE = +20 °C
discharge temperature tLA = +34 °C
discharge height = up to 2.70 m

MODEL				M 1	M 1.5	M 2	M 2.5
Air quantity max.			m^3/h	1800	2700	3600	4500
Heating capacity	**rated**[1]	LPHW 70 / 50 °C	kW	8.5	12.7	17.0	21.2
		LPHW 60 / 40 °C	kW	8.5	12.7	17.0	21.2
Flow rate		LPHW 70 / 50 °C	m^3/h	0.37	0.56	0.75	0.93
		LPHW 60 / 40 °C	m^3/h	0.37	0.55	0.74	0.92
Water resistance		LPHW 70 / 50 °C	kPa	0.5	5.7	2.4	3.2
		LPHW 60 / 40 °C	kPa	3.8	7.0	4.5	3.2
Nominal connection sizes		Internal thread	Inches	2 x 3/4"	2 x 3/4"	2 x 3/4"	2 x 3/4"
		Flow/return	DN	20	20	20	20
EC fans [3]		Voltage	V	230 / 1 / N / PE			
		Frequency	Hz	50			
		Current consumption	A	2.4	3.6	4.7	5.9
		Motor power	kW	0.33	0.5	0.7	0.8
Electric heater 3-stage		Voltage	V	400 / 3 / N / PE			
		Frequency	Hz	50			
		Heating capacity	kW	3/6/9	4/8/12	6/12/18	6/12/18
Sound pressure level [2]		Highest setting	dB (A)	58	59	60	61
Drawing dimension		Unit width (A)	mm	1000	1500	2000	2500
		Unit height	mm	373	373	373	373
		Unit depth	mm	540	540	540	540
Weight			kg	51	65	80	85

* WE RESERVE THE RIGHT TO MAKE TECHNICAL CHANGES

1. Rated operation based on operating point (see above), discharge temperature control recommended.
2. Measured at a lateral distance of 3 m. Sound pressure level may very depending on surrounding conditions.
3. Control voltage 0-10 V.

A well-balanced pressure ratio is one of the prerequisites for perfect function.

NOUVEAULINE L EC

TECHNICAL DATA
FREE-HANGING

Design based on:

recommended operating point
intake temperature tLE = +20 °C
discharge temperature tLA = +34 °C
discharge height = up to 3.00 m

MODEL				L 1	L 1.5	L 2	L 2.5
Air quantity max.			m^3/h	2700	3600	5400	6300
Heating capacity	**rated[1]**	LPHW 70 / 50 °C	kW	12.7	17.0	25.5	29.7
		LPHW 60 / 40 °C	kW	12.7	17.0	25.5	29.7
Flow rate		LPHW 70 / 50 °C	m^3/h	0.56	0.75	1.11	1.31
		LPHW 60 / 40 °C	m^3/h	0.55	0.74	1.11	1.29
Water resistance		LPHW 70 / 50 °C	kPa	0.8	2.8	3.7	5.2
		LPHW 60 / 40 °C	kPa	1.7	3.7	4.2	6.1
Nominal connection sizes		Internal thread	Inches	2 x 3/4"	2 x 3/4"	2 x 3/4"	2 x 3/4"
		Flow/return	DN	20	20	20	20
EC fans [3]		Voltage	V	230 / 1 / N / PE			
		Frequency	Hz	50			
		Current consumption	A	3.5	4.7	7.1	8.2
		Motor power	kW	0.5	0.7	1.0	1.2
Electric heater 3-stage		Voltage	V	400 / 3 / N / PE			
		Frequency	Hz	50			
		Heating capacity	kW	5/10/15	7.5/15/22.5	10/20/30	10.7/21.4/32
Sound pressure level [2]		Highest setting	dB (A)	60	61	62	63
Drawing dimension		Unit width (A)	mm	1000	1500	2000	2500
		Unit height	mm	373	373	373	373
		Unit depth	mm	540	540	540	540
Weight			kg	55	65	85	110

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1. Rated operation based on operating point (see above), discharge temperature control recommended.
2. Measured at a lateral distance of 3 m. Sound pressure level may very depending on surrounding conditions.
3. Control voltage 0-10 V.

A well-balanced pressure ratio is one of the prerequisites for perfect function.

NOUVEAULINE DX-H M EC

TECHNICAL DATA
FREE-HANGING
ONLY HEATING MODE POSSIBLE

Design based on:

recommended operating point
intake temperature tLE = +20 °C
discharge temperature tLA = +34 °C
discharge height = up to 2.70 m
heating gas temperature = 70 °C
condensation temperature = 50 °C
condensate exit temp. = 45 °C
operating pressure = max. 45 bar

MODEL				DX-H M 1	DX-H M 1.5	DX-H M 2	DX-H M 2.5
Air quantity max.			m^3/h	1800	2700	3600	4500
Power	**rated**[1]	DX heating capacity	kW	8.6	12.9	17.3	21.3
Delivery and intake line		Connections	mm	10/16	10/16	10/18	10/22
EC fans [3]		Voltage	V	230 / 1 / N / PE			
		Frequency	Hz	50			
		Max. current consumption	A	2.4	3.6	4.7	5.9
		Max. motor power	kW	0.3	0.5	0.7	0.8
Sound pressure level [2]		Highest setting	dB (A)	58	59	60	61
Drawing dimension		Unit width (A)	mm	1000	1500	2000	2500
		Unit height	mm	373	373	373	373
		Unit depth	mm	540	540	540	540
Weight			kg	53	68	84	90

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1. Rated operation based on operating point (see above).
2. Measured at a lateral distance of 3 m. Sound pressure level may very depending on surrounding conditions.
3. Control voltage 0-10 V

A well-balanced pressure ratio is one of the prerequisites for perfect function.

NOUVEAULINE DX-H L EC

TECHNICAL DATA
FREE-HANGING
ONLY HEATING MODE POSSIBLE

TEKADOOR®

Design based on:

recommended operating point
intake temperature tLE = +20 °C
discharge temperature tLA = +34 °C
discharge height = up to 3.00 m
heating gas temperature = 70 °C
condensation temperature = 50 °C
condensate exit temp. = 45 °C
operating pressure = max. 45 bar

MODEL				DX-H L 1	DX-H L 1.5	DX-H L 2	DX-H L 2.5
Air quantity max.			m^3/h	2700	3600	5400	6300
Power	**rated**[1]	DX heating capacity	kW	12.7	17.0	25.7	29.6
Delivery and intake line		Connections	mm	10/16	10/18	10/22	10/22
EC fans		Voltage	V	230 / 1 / N / PE			
		Frequency	Hz	50			
		Max. current consumption	A	3.5	4.7	7.1	8.2
		Max. motor power	kW	0.3	0.7	1.0	1.2
Sound pressure level [2]		Highest setting	dB (A)	60	61	62	63
Drawing dimension		Unit width (A)	mm	1000	1500	2000	2500
		Unit height	mm	373	373	373	373
		Unit depth	mm	540	540	540	540
Weight			kg	57	68	89	115

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1. Rated operation based on operating point (see above).
2. Measured at a lateral distance of 3 m. Sound pressure level may very depending on surrounding conditions.
3. Control voltage 0-10 V

A well-balanced pressure ratio is one of the prerequisites for perfect function.

TEKADOOR®

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