EKPCB4S

8.1 Assembly and fitting of fan control for remote control

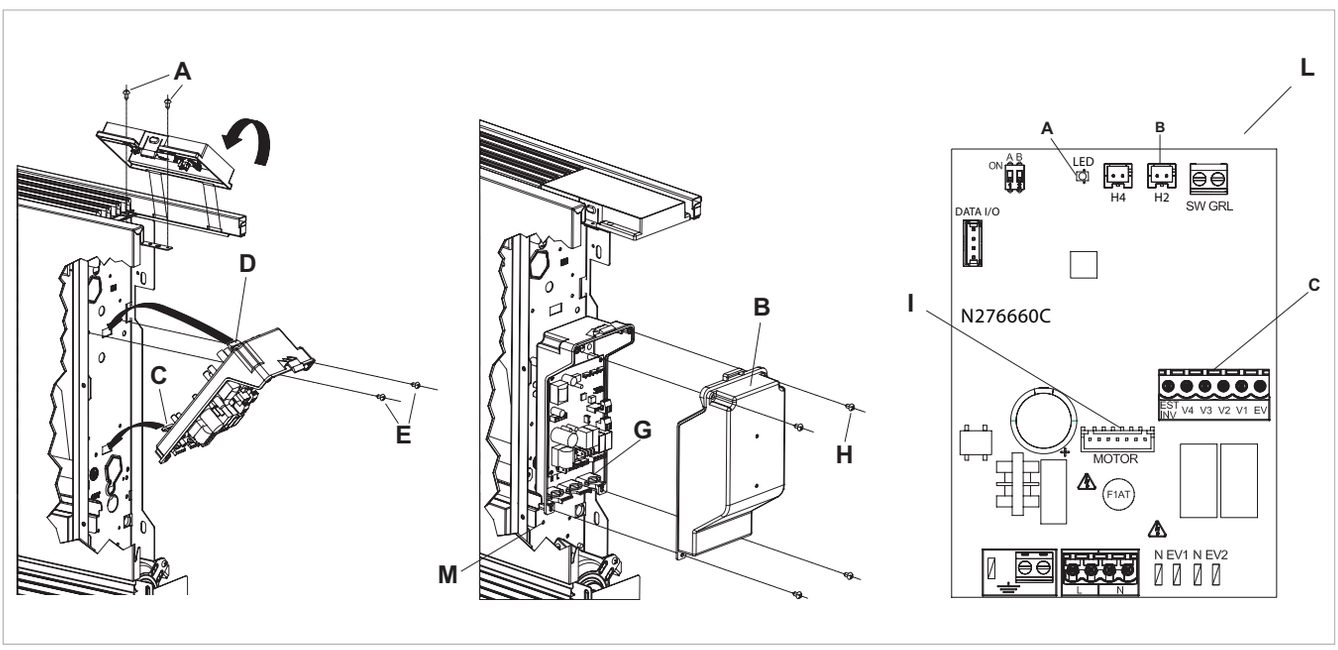
Assembled on-board the unit, this card allows the regulation of the motor with fixed speeds; it can be combined with control panels with thermostat and with all control panels available in the market.
It has a 230 V output to pilot the summer and winter solenoid valve.

8.2 Assembly

Slide the blanking panel into its housing in the upper part of the device and fix it with the two fixing screws (ref. A).
To install the connection box:

- open the box (ref. B);
- lock the lower tooth into its hole (ref. C) on the side of the device;
- hook the upper part of the box to the side (ref. D);
- fix it with the two fixing screws (ref. E);
- connect the grounding cable to the unit body (ref. M) using the fixing screws (the minimum force that must be applied for tightening screws must be around 2N);
- on the two SW GRL block terminals (ref. L) there is a bridge that can be used as an alarm (open = alarm).
- For other versions, remove the bridge and connect the two terminals originating on the grill safety microswitch*;
- connect the fast connector of the MOTOR to the other on the board (ref. I);
- Connect the electrics, tidy cables and fix them with the three clevises supplied (ref. G);
- close the box with the 4 screws (ref. H);
- refit the vanity plate on the side of the unit;
- tighten the upper screws on the blanking panel;
- place the screw head covers in their housing on the blanking panel;

* For versions with hydraulic connections on the right, refer to the relevant paragraph



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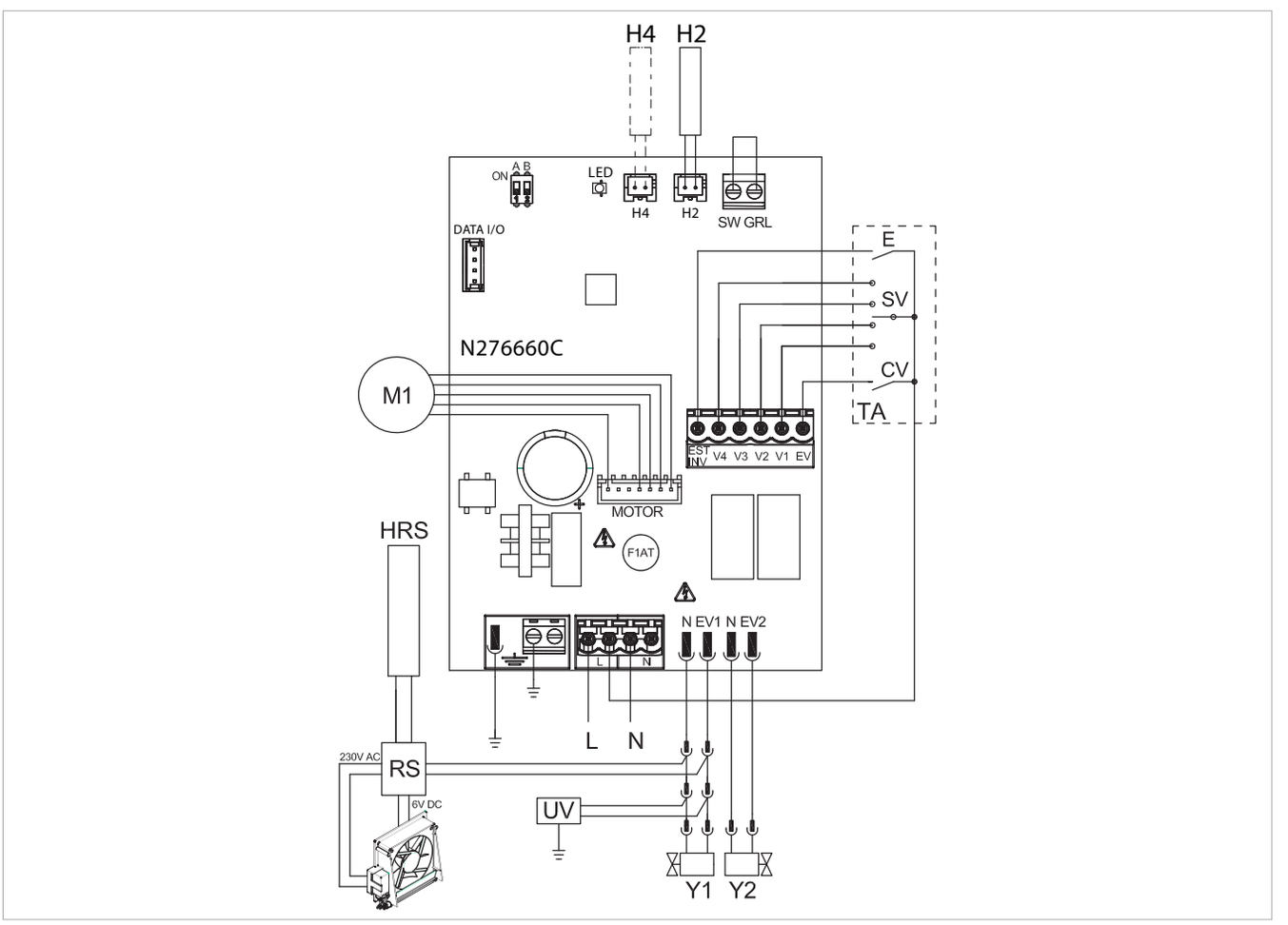
8.3 Connection diagram with 3-speed thermostat

make the electrical connections to a thermostat fit for use according to the diagram

L-N	electrical supply 230V-50Hz
EV	solenoid valve permission input
V1	maximum fan speed
V2	medium fan speed
V3	minimum fan speed
V4	supersilent speed
E	heating selection input, cooling / see paragraph on Water Probe Management
Y2	full flat connection 230V/ 50Hz 1A)
Y1	water solenoid valve (230 V/ 50 Hz 1A output voltage)
UV	UV lamp connection

M1	DC inverter fan motor
TA	3-speed room thermostat (to be purchased, installation and connection to be made by installed)
CV	thermostat permission
SV	speed selector
H2*	water temperature probe (10 kΩ)
*	positioned in the on-board battery. See paragraph on Water Probe Management



8.4 Connections with 3-speed thermostat

The CV input is the board ON/OFF which when open puts the board in stand-by. It must be bridged to the L terminal on the 230V power supply to activate solenoid valve Y1.
The 4 speed inputs V1, V2, V3 and V4, when bridged to the L terminal on the 230V power supply, activate the fan if the S1 input to which the grill safety microswitch is connected is closed. The sequence is: maximum speed (1400 rpm on terminal V1), medium speed (1100 rpm on terminal V2), minimum speed (680 rpm on terminal V3) and supersilent speed (400 rpm on terminal V4).
Connect the three thermostat speeds to 3 out of the 4 available inputs as per the characteristics and use of the room: connect, for example, medium speed V2, minimum V4 and supersilent V4 for residential applications, when greater silence is required, whereas V1, V2 and V3 can be connected for commercial applications where the thermal yield is more important.
If multiple inputs are simultaneously closed, the motor will run at a number of revs equal to that of the connection with the highest speed.
Multiple cards can be connected in parallel to a single thermostat, also using different speeds.

8.6 LED signals

The LED (ref. A) is off if the CV input is not closed (stand-by condition).
It turns on when the CV contact is closed and indicates normal operation.

- Flashes frequently if the grille microswitch S1 is activated due to the filter cleaning operation
- 1 flash + pause indicates a fan stoppage alarm due to unsuitable water (with H2 water probe connected).
- 2 flashes + pause due to a motor alarm (e.g. blockage caused by foreign objects, faulty rotation sensor).
- 3 flashes + pause indicates a disconnected or faulty water probe alarm.

8.5 Water probe management with 3-speed thermostat

If the board is used with electromechanical thermostats, or with other commercial controllers with water probe, the on-board probe H2 should not be connected and the fan is controlled by the remote control.
If on the other hand the controller is not set up for managing the water probe, this function can be performed by the board, by connecting the 10 kΩ probe on the battery to the H2 connector on the board (ref. B).
In this case the board carries out the minimum temperature function for heating operations and maximum temperature function for cooling. Therefore, if the water temperature is not suitable for active operation (above 20°C when cooling, under 30°C when heating) the fan is stopped and the anomaly is signalled by a single flash + pause of the LED (ref. A).
The discrimination between heating/cooling is actuated via the Summer-Winter (ref. C) input of the board: leaving it open the board activates heating, closed activates cooling.
If after having connected the probe it is disconnected or measures incorrect values the anomaly is signalled by 3 flashes + pause of the LED (ref. A) and operation is stopped.
To confirm operation without a probe, turn the power to the board off and then on again.
This condition is saved by the board for future start-ups.
In any case, as and when the probe is connected, the unit returns to normal operation with temperature thresholds.

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