DIGITAL CONTROLLERS

DB-I4D

FUNCTION

Temperature and humidity control in heating, cooling, humidification and dehumidification systems with:
- 4 or 8 relay outputs;
- mode of operating for each relay:
  - "heating";
  - "cooling";
  - "alarm", with adjustable delay for relay activation and manual reset for the relay deactivation;
- setting of activation delay between successive activations for each relay;
- setting of activation point with "offset" for each relay (distance from the setpoint);
- setting of the "measuring offset" for a possible sensor calibration;
- choice of "rotation of the stages" operating mode, with casual sequence;
- 1 input for NTC 10K sensor and/or for 4...20 mA;
- 1 input for remote setpoint controller (optional accessory) for the models with °C range;
- 1 input for the serial channel (for the model DB-I4D/02/004);
- password and 2 access levels.

APPLICATIONS:

Driving of heating and cooling, humidification and dehumidification systems by the control of heaters, heat pumps, coolers, humidifiers and dehumidifiers.

TYPE	RANGE	STAGES	DIFF. IN THE STAGE	INPUT	DELAY min.
DB-I4D/02/001	-50...+110 °C	4	0...+10 K	NTC 10K	0...9.5
DB-I4D/02/002	0...100 % r.h.	4	0...100 % r.h.	4...20 mA	0...9.5
DB-I4D/02/003	-50...+110 °C 0...100 % r.h.	4	0...+10 K 0...10 % r.h.	NTC 10K 4...20 mA	0...9.5
DB-I4D/02/004	-50...+110 °C	8	0...10 K	NTC 10K	0...9.5

TECHNICAL DATA

Power supply:	230 Vac ± 10%, 50/60 Hz
Input:	- NTC 10K sensor and/or humidity-current transmitter 4...20 mA
	- remote setpoint controller (optional);
	- serial channel (only model DB I4D/02/004)
Output:	4 or 8 SPDT relays 10 A 230 Vac
Power cons.:	< 3 W (DB-I4D/02/004: < 6 W)
Visualization:	2 lines with 3 digit (7 segments display)
Setting of the parameters:	4 push/buttons keyboard on the front
Working:	-10...+50 °C
	10...90% r.h. (without condensing)
Storage:	-20...+70 °C
	< 95% r.h.
Housing:	Makrolon
Size:	200 x 120 x 75 mm (DB-I4D/02/004: 2 casing of 200 x 120 x 75 mm)
Protection:	IP65, class II
Weight:	920 g

SOFTWARE

The controller setting is done by keyboard on the front of unit and it is necessary to choose setpoint, working mode for each relay, offset values (distance from the setpoint to activate the load, differentials, possible min and max temperature for activating alarms, possible password.

ON REQUEST:

Remote setpoint controller:
DB-CDP/N1: remote setpoint controller +/- 5°C with potentiometer and NTC sensor

NOTE:
Do not use remote setpoint controller with the model DB-I4D-02/002.

WIRING DIAGRAM

DB-I4D/02/001, DB-I4D/02/002 and DB-I4D/02/003
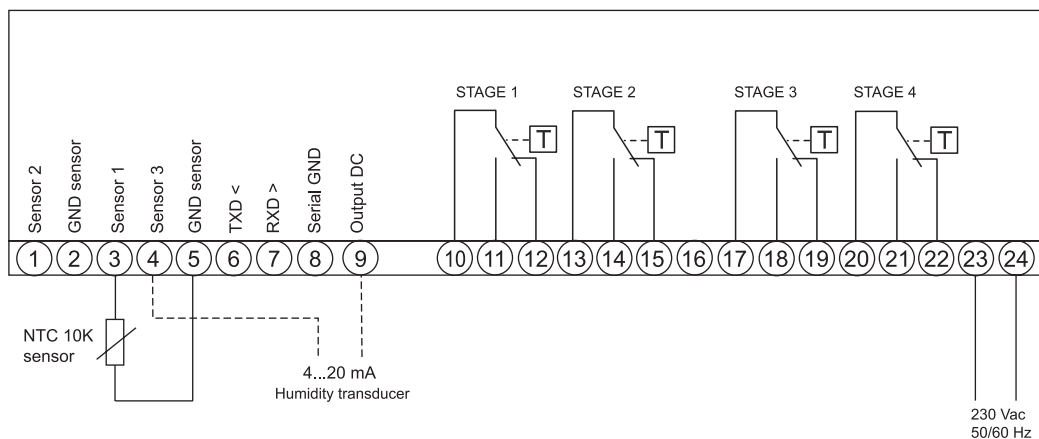The electrical wirings are shown in fig. 1. For input sensors see table.

fig. 1

DB-I4D/02/004
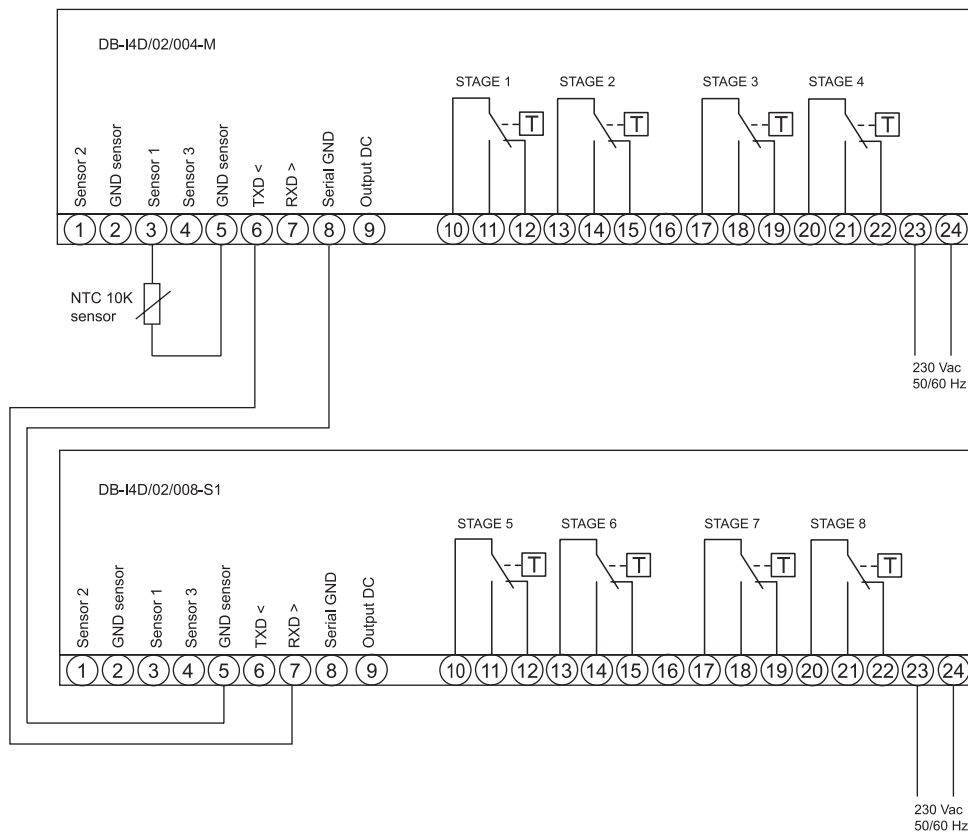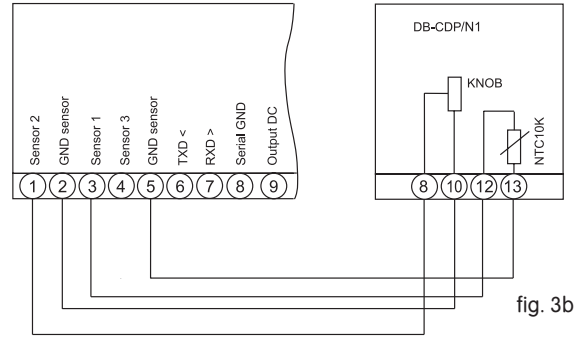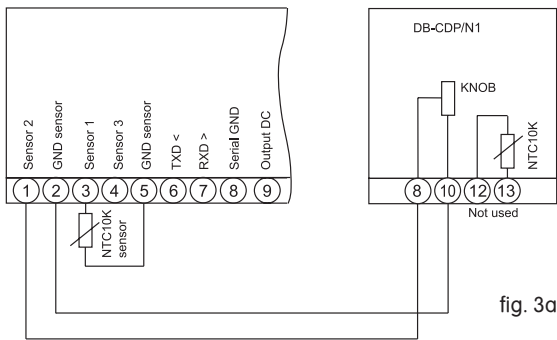The electrical wiring between master and slave units are shown in fig. 2.

fig. 2

DB-I4D/02/00x with the remote setpoint controller

fig. 3a   DB-CDP/N1 as remote setpoint controller;
fig. 3b   DB-CDP/N1 as remote setpoint controller and temperature sensor.

fig. 3a

fig. 3b

DIMENSIONS (mm)