

DATA SHEET AND SERVICE MANUAL

TASCIUGO ARIADRY MULTI - DEXD216RF (AU/NZ)

Date: 20/05/2025



WARNING!

This appliance contains the **flammable refrigerant R290**. Any maintenance operation on the refrigeration circuit must be performed uniquely by specialized personnel which must have adequate skills and the certification required by the F-GAS directive.

RATING LABELS



De'Longhi Appliances s.r.l.
Via L. Seitz, 47
31100 Treviso - Italy

Model: DEXD216RF

Type: DEXD216F DEHUMIDIFIER

Voltage	220-240 V~ 50 Hz
Rated Power Input	300 W
Max moisture removed (30°C 80% RH)	0,67 l/h
Refrigerant Gas-Charge	R290 - 0,085 kg
Protection degree	IPX0
Maximum allowable pressure:	▪ suction 1200 kPa (12 bar) ▪ discharge 2600 kPa (26 bar)
Operating Condition	
Temperature	2 ÷ 30°C
Room Air Humidity	30 ÷ 90% RH



A3



CE



E28
N5317

Made in China

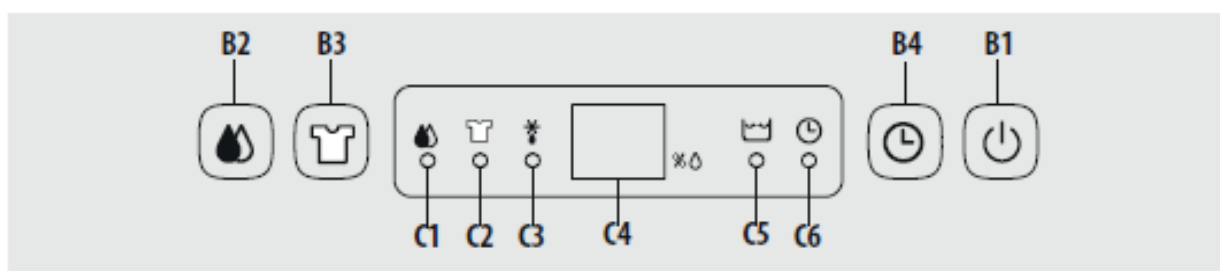
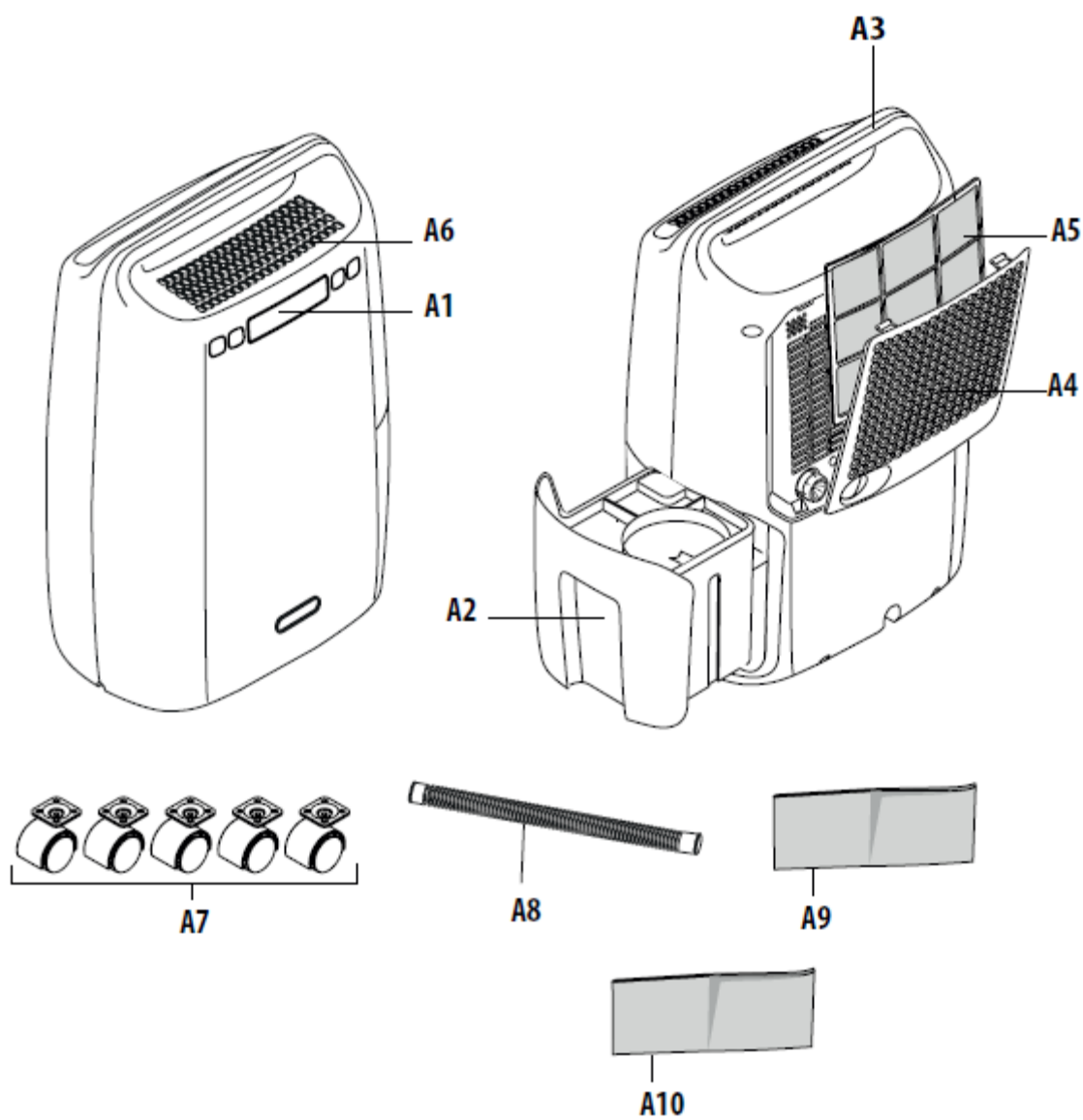
cat.: DEX 5414813844_00

App. No.: NSW28272

TECHNICAL DATA

TECHNICAL DATA	VALUES
Dimensions (W x D x H)	334 x 220 x 508 mm
Weight (DEXD216RF)	10,5 kg
Tank Capability	2,1 litres
Defrost Device	Yes
Hygrometer	Yes
Ventilation Speed	2
Air Filter	Yes
Anti-Allergen Filter (certain models only)	Yes

PRODUCT DESCRIPTION



Appliance Description

- A1. Control panel
- A2. Condensate collection tank
- A3. Lifting handle
- A4. Air intake grill
- A5. Dust Air filter or silver-ion air filter (on certain models only)
- A6. Air outlet grill
- A7. Castors (on certain models only)
- A8. Condensate drain hose (approx. 1m)
- A9. Anti-allergen filter (on certain models only)
- A10. Activated carbon filter (on certain models only)

Control Panel Description

- B1. ON/STAND-BY button
- B2. Dehumidifying button
- B3. Dry button
- B4. Timer button

Display Description

- C1. Dehumidifying mode active
- C2. Dry mode active
- C3. Low temperature alarm
- C4. Digits for % Relative Humidity / Timer hours
- C5. Full tank alarm
- C6. Timer function active

INSPECTION MODE

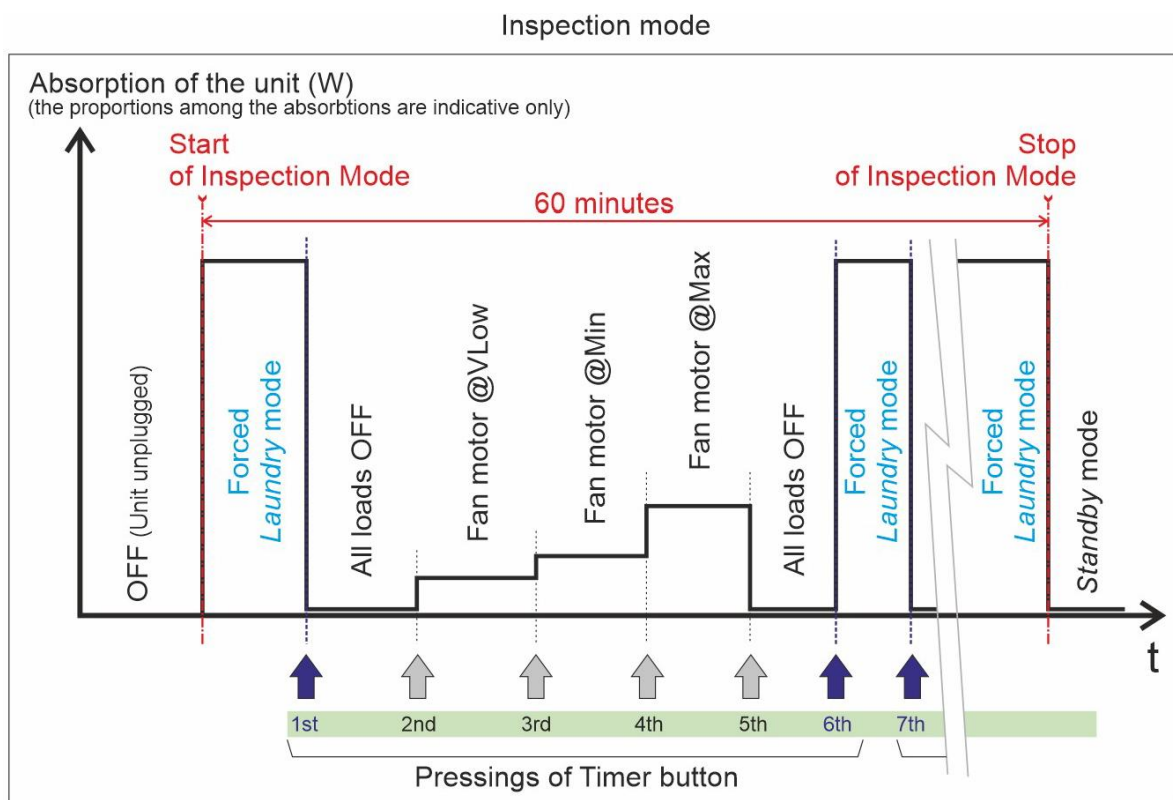
This feature provides a quick method to test all the resources of the unit (compressor and fan motor) disabling any delay, timing or humidity control. During the execution of this function, the display can show some different messages.

This feature can be activated inserting the power plug while keeping pressed the Laundry button, for at least 5 seconds. Then, the unit will operate as in **Dry** mode but without any humidity control (forced on).

The duration of the Inspection mode is limited to 60 minutes. After the above time, the **Inspection Mode** finishes and the unit goes in **Standby** mode.

To interrupt the *Inspection Mode* before the above time, the operator can press the Standby button on the keyboard or turn the unit off by plug. The *Inspection Mode* is never restored at the power up by plug. During the *Inspection Mode*, the display shows the letters "tt" (**test**) and the software version.

Some special features are performed during the *Inspection Mode*. The first consists in the activation and deactivation of the single loads pressing repeatedly the **Timer button**. The sequence of activations follows the diagram below. The sequence can be repeated several times within 60'. The other special features included in *Inspection Mode* are described below.



Compressor Counter 1

This function involves an hour counter to record the compressor operating time. The operating range of this counter, called **Counter 1**, is from 0 to 99999 hours, after which the count remains at 99999.

The value of **Counter 1** is displayed by pressing the **Dehumidifier button** during the **Inspection Mode**. When the button is released, the display will show in sequence, at intervals of 2-3 seconds, the script "**C1**", the thousands of hours, the letters "**th**" for thousands, then the hundreds accompanied by the corresponding letter "**h**". Finally, the tens and the units together. For example, to show the value "05682 hours", the display will show, in sequence: "**C1**", "05", "**th**", "6**h**", "82", after which the digits will return to the previous displaying of Inspection Mode.

Once the compressor operating hours have been displayed, an acoustic signal is emitted and the control returns to the normal Inspection Mode.

Counter 1 cannot be reset.

The following is an exemplificative sequence of "Counter 1 visualization":

- 1) Activation of the **Inspection Mode**:
 - Unit plugged in, keeping pressed the Laundry button for at least 5 seconds,
 - Buzzer Sound 4.
- 2) Activation of the **Counter 1** visualization phase:
 - Dehumidifier button pressed,
 - Buzzer Sound 4.
- 3) Display shows the **Counter 1**:
 - Script "**C1**",
 - Thousands of hours,
 - Script "**th**",
 - Hundreds of hour, followed by "**h**",
 - Tens and units together.
- 4) End of the "Counter 1 visualization" phase:
 - Buzzer sound 4,
 - The unit returns to the normal operation of **Inspection Mode**.

Examples of visualization

		
1) The unit is off.	2) The operator has plugged the unit keeping pressed the Laundry button for at least 5s. The "tt" text appears.	3) The operator has pressed the Dehum. button. The Counter visualization starts with script "C1" (for 3s).
		
4) Thousands of "C1" (for 3s).	5) "th" thousands script (for 3s).	6) Hundreds of "C1" (for 3s).
		
7) Tens and units of "C1" (for 3s).	8) End of Counter visualization. The "tt" script re-appears (for 8s).	9) Firmware version (for 2s).

Settings reset

At the beginning of the Inspection Mode the microcontroller resumes the default settings. The default settings are as follows:

- Default humidity set point in dehumidifying mode (60%RH),
- Default timer setting = 6h.

ALARMS

Operating faults and safety events (e.g. full tank) immediately stop the unit. The situation is displayed on the two digits of the user interface board and with two LEDs:

- **Probe fault alarm:**
Display shows "Ex" where x is the number of faulty probe.



- **Full tank alarm:**
Only the "Full Tank" led is steady on.



- **Frost alarm:**
Display shows the normal visualization but the frost alarm led is steady on.



The alarms have the following priority: **Probe fault – Full tank – Frost alarm.**

Probe Fault alarm

Any fault (probe open, probe short-circuited, instability) involving at least one of the three sensors, is signaled on the display with "Ex", and stops all the utilities. "x" indicates the number of the faulty probe. When the alarm is fixed, the operating cycle resumes as normal. This alarm is automatically reset. The probes are identified as follows:

1) Room humidity -> "E1"



2) Room temperature -> "E2"



3) Pipe temperature -> "E3"



Full Tank alarm

The "Full tank" input, if active for a continuous time at least equal to 5 seconds, this input triggers this alarm to indicate that the condensate tank is full or absent. This alarm stops all the resources and locks the keypad, in all the operating modes, including *Standby*. This alarm is displayed by the red led "**Full tank**" () steady on. Any other visualization is OFF. This alarm is automatically reset when the input becomes not active for 5s.

Frost alarm

This alarm is related to the temperature sensor on the evaporator heat exchanger. The **frost alarm** diagnostics is active in *Dehumidifying* and *Dry* modes. This alarm is activated when the sensor detect a temperature lower than -5°C. The alarm is reset when the temperature rises above 2°C. When this alarm is activated, the compressor is switched off, while the fan continues to operate.

Once the compressor is activated again, the temperature of the heat exchanger is not measured for a period equal to 10 minutes, called Frost forced ON time. After this time, if the temperature of the exchanger is lower than -5°C, the compressor is stopped for a period at least equal to the Frost forced OFF time. When this time has elapsed, the temperature of the exchanger is checked again. The compressor remains off until the temperature rises back above 2°C. At this point, the cycle will resume with a new Forced ON time, a new temperature check, etc.

The Frost forced OFF time is split in two values, according to the room temperature:

- 6 minutes if the room temperature is equal or less than 10°C;
- 3 minutes if the room temperature is higher than 10°C.

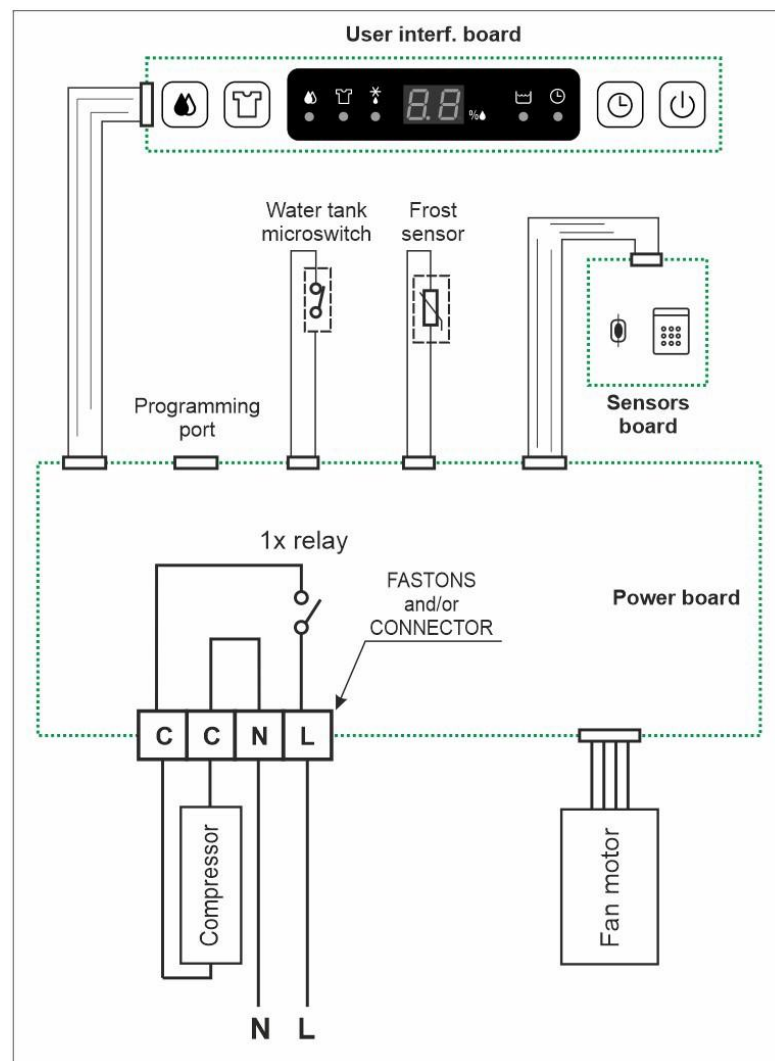
This alarm is signaled by the yellow "**Frost alarm**" led () that is lit steadily, in addition to the other normal visualizations.

SPECIFICATIONS OF THE LOADS

Compressor: 5A Max at 230 VAC (AC3)

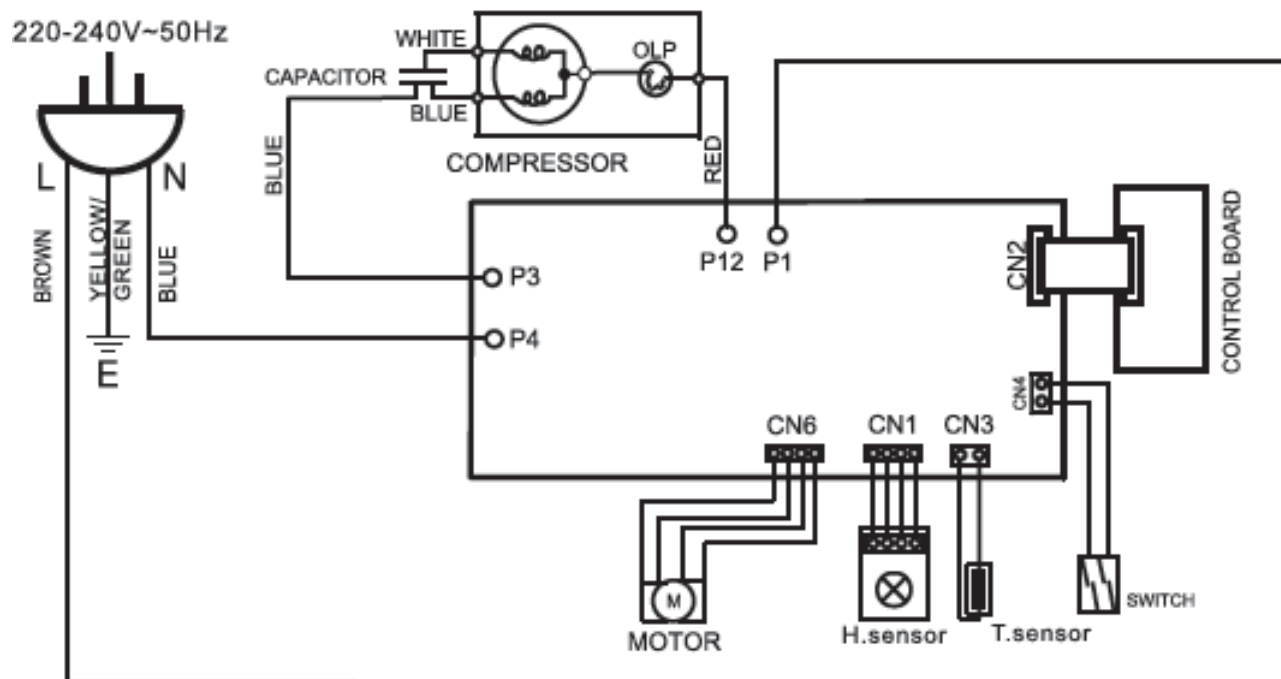
Fan: 12VDC. The fan motor provides 3 speeds through a PWM control, Max, Min and VLow.

Electrical diagram:



Note: the positioning of the connections are indicative only.

SCHEMATIC WIRING DIAGRAM

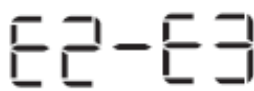


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TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
The appliance is operating in dehumidifying mode, but the humidity does not decrease	The filter is clogged	Clean the dust filter
	Either the temperature or humidity in the room is too low	In certain conditions the appliance will not dehumidify: check the operating limits of the appliance. In certain cases, it is recommended to heat the room needing to be dehumidified.
	The set relative humidity level is too high	Set a lower humidity value.

ALARMS SHOWN ON DISPLAY

ALARM	CAUSE	SOLUTION
	Tank (A2) missing or incorrectly positioned	Place the tank back in its correct position
	Tank full	Empty the tank
	Room temperature too low	Increase the ambient temperature if possible
	Humidity in room too low or too high for correct measuring	Move the appliance to another room with humidity and temperature levels within the operating limits: if the problem persists, call the Service Centre.
	Faulty probe	Contact the Service Centre