



MICROWELL



SWIMMING POOL DEHUMIDIFIER

USER'S MANUAL

MODEL: DRY 800 & 1200 METAL

Thank you for purchasing our product.

Please read this user manual carefully before starting to use the device.

Please keep the instructions of this practical guide in order to get a quick know-how.

We do not take any responsibility or provide warranty in case of damage, loss or damnification caused by incorrect usage or usage for other purposes, not specified in this manual.

- Contents:
1. Safety measures
 2. Usage specification
 3. Instructions for use
 4. Instructions for maintenance
 5. Servicing the unit
 6. Installation guide
 7. Technical data

1. SAFETY MEASURES

- Do not manipulate with the device with wet hands.
- Do not spray any flammable substances into the equipment; this might lead to fire.
- Do not clean the device with water.
- The cover of the device is made of steel, coated by three anticorrosive layers, protected by two variants of surface colours: silver metallic finish or white colour (METAL type).
- Do not clean the equipment with aggressive cleaning agents, this might lead to damage or deformations.
- Never throw or insert any objects into any tube or opening.
- Use this device only for the intended purpose, as described in the attached instructions for use. Do not use components, which are not recommended.
- Never block the air opening of the product. Protect the air openings from clogging by particles, hair etc.
- When the device is not running correctly (smoke, smell, etc.), switch off the device by a circuit breaker in the switchboard.
- Repairs and relocations must be performed only by a service technician.
- Before cleaning the device, switch off the circuit breaker in the switchboard.
- Do not place any objects on the surface of the device.
- When you do not intend to use the device for a longer time, switch off the circuit breaker.

2. USAGE SPECIFICATION

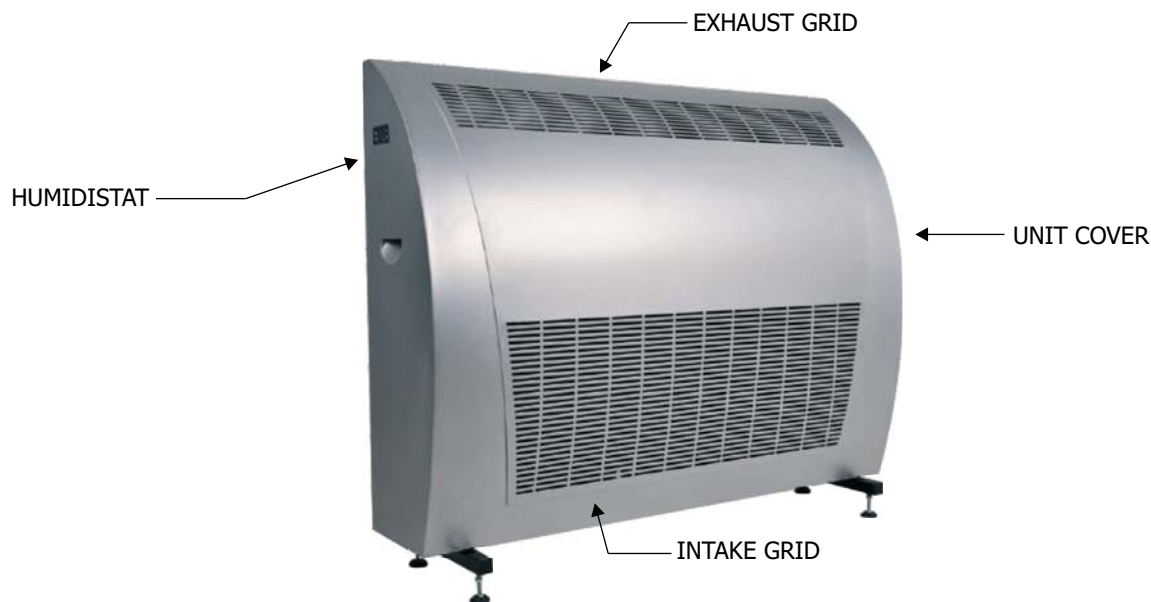
The units are designed especially for use in indoor swimming pools, spas and saunas. They can also be very useful in laundries, drying rooms and elsewhere.

Microwell DRY 800 METAL is designed for use in swimming pool halls with 60 to 90m² swimming pools.

Microwell DRY 1200 METAL is designed for use in swimming pool halls with 90 to 120m² swimming pools.

The condition of using the equipment is keeping a room temperature within a range between min. 22 °C and max. 35 °C.

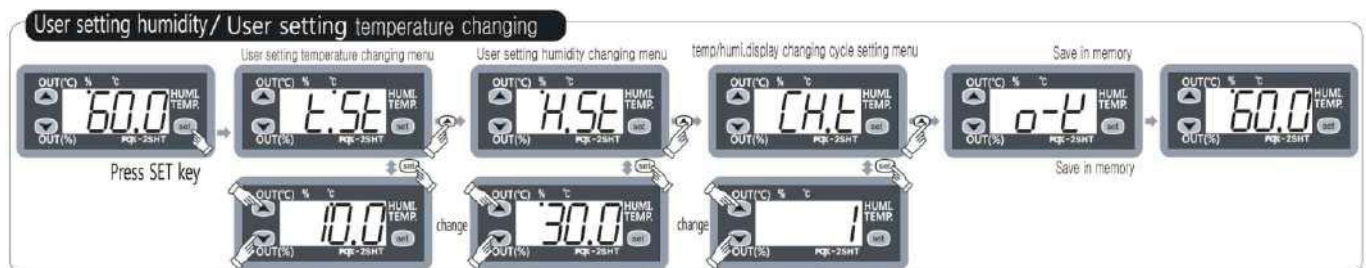
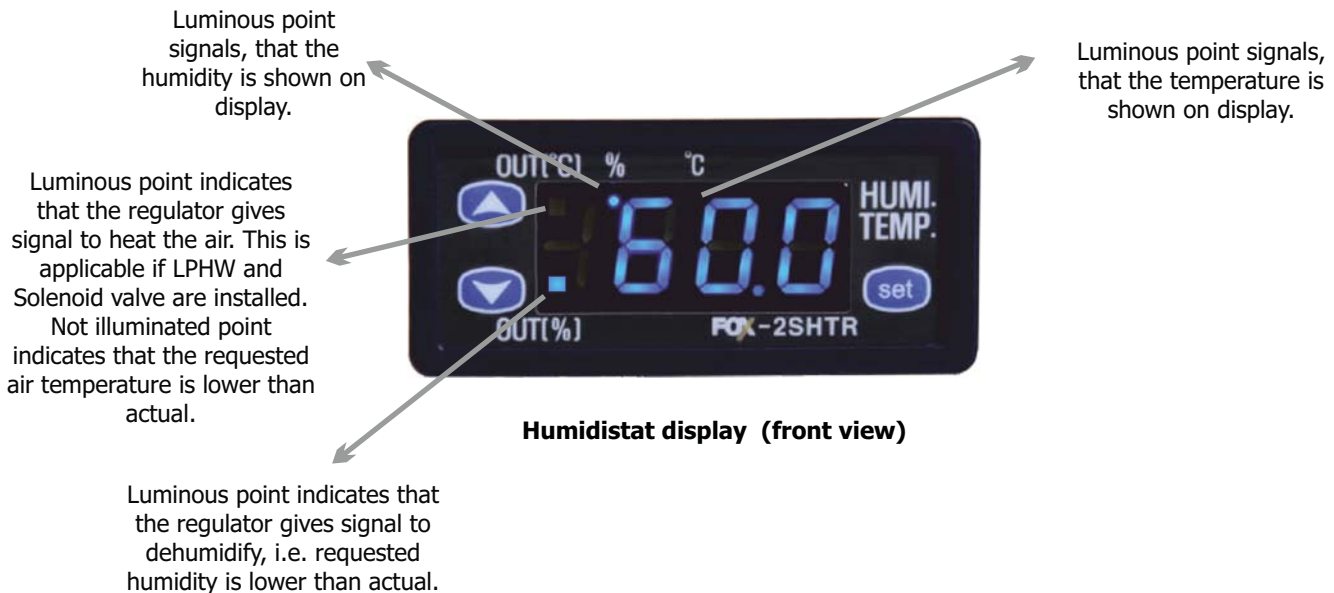
Optimal situation occurs when the room temperature is about 2-3 C ° higher than a swimming pool water-temperature.



3. INSTRUCTIONS FOR USE

3.1. Humidity regulation with an inbuilt digital humidistat located in the cover of the equipment

The inbuilt humidistat is located in the cover of the device. It reads the humidity of the incoming air, and depending on the set value, switches on the compressor. In indoor swimming pool halls, the optimal air humidity level should range between 55% and 65%. Decreasing the level of humidity under the above mentioned range is not desirable, considering the physiological aspects as well as the aspects of providing building protection. Moreover, it increases the consumption of electrical energy. The humidistat can be controlled by the user.

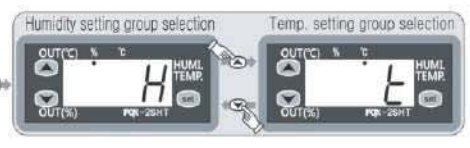


Failure reporting

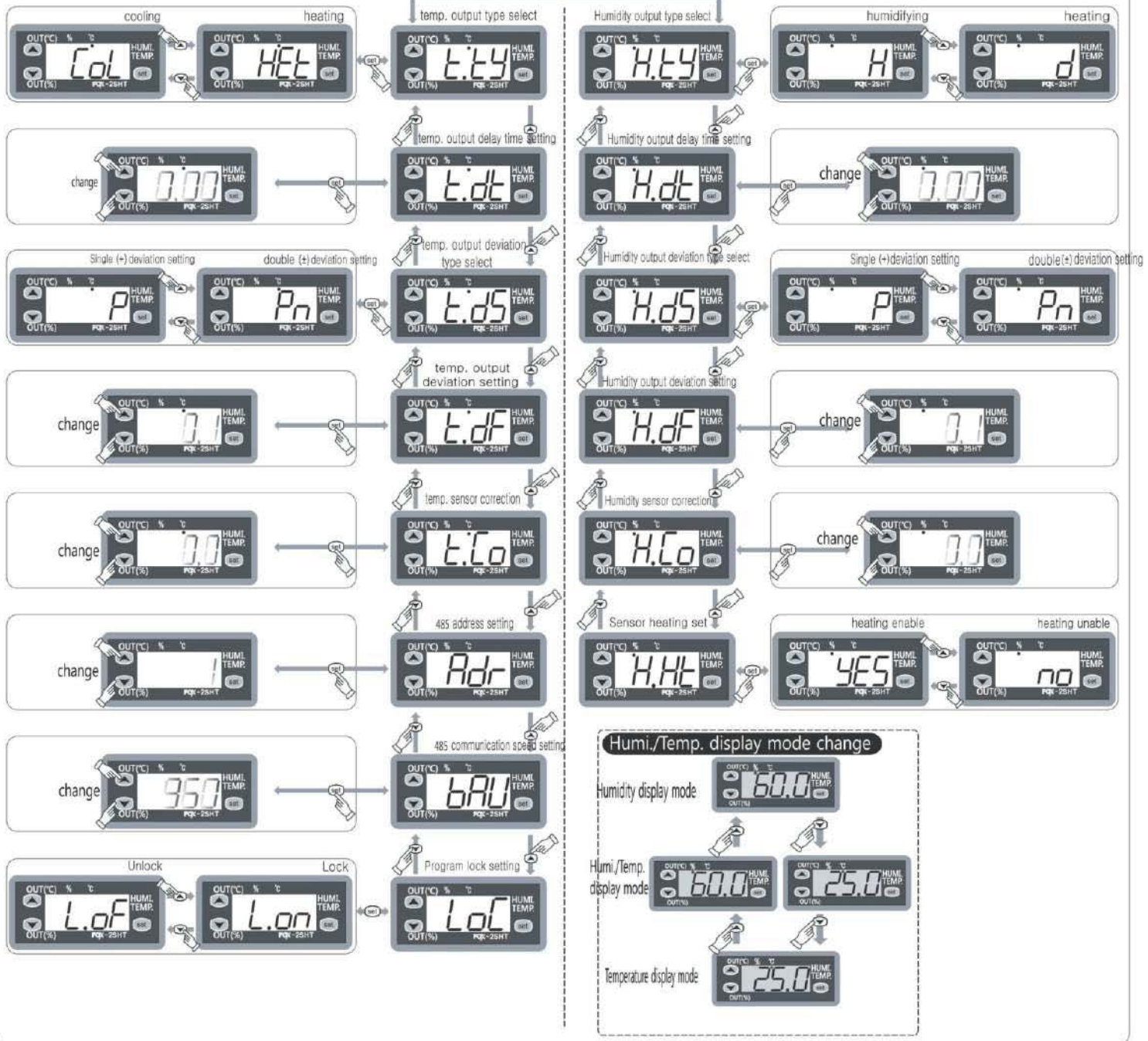
- Er1 Memory failure. Switch off and then switch on again the electrical connection. If the failure reporting continues, please ask us to change the component.
- 0-E Sensor failure. The electrical connection of the sensor is broken off. Please control the cable.
- S-E Sensor failure. The sensor is short-circuited. Please control the cable.

Program setting

Change of below preset settings is not suggested.



When select SEL : E When select SEL : H



By keeping the "set" button pressed for longer than 5 secs, the setting gets finished and you return to a mode of current humidity display. In case of inactiveness for longer than 30 secs, this is done automatically.

3.2. Humidity regulation with a back-up mechanical humidistat located in the electronic box

In the electronic box there is a back-up mechanical humidistat, which is set on the value of 70 % RH. This humidistat has a back-up function in case of digital humidistat failure. User should not perform any regulation of this humidistat.

3.3. Compressor regulation

The compressor's operation starting is for securing its protection, delayed by min. 3 minutes. Depending on the humidity of environment, it may last even longer. The user must not manipulate with the setting element of a time relay.

4. MAINTENANCE INSTRUCTIONS

It is necessary to make sure that the intake and exhaust outlets are not covered. It is forbidden to place towels or other clothes on the exhaust outlets to dry them. Cleaning of the device's cover is allowed only by using non-abradant cleaning agents. In case there is a water dripping from the equipment, please check whether a condensate pipe is not obstructed.

5. SERVICING THE UNIT

At least once a year, it is necessary to have the unit checked and cleaned by a service specialist. This is necessary in order to secure a long operational life of the device. Cleaning the interior parts of the device by a user is not recommended, as this may lead to a damage on the unit. The device contains mobile elements as well as elements under electrical pressure, therefore the interior parts can be cleaned only by a certified electrician with an appropriate knowledge of refrigerating technology.

6. INSTALLATION GUIDE

The unit must be installed in compliance with the local installation and electrical installation regulations !

6.1. Unit location

The unit is to be installed on the floor or on the wall. To ensure the right operations of the dehumidifier and its maximum efficiency in terms of humidity control, it is necessary ensure proper air circulation into and from the dehumidifier. This requires the actual unit placement appropriately into the swimming pool hall respecting basic prerequisites of air circulation and air flow. It is strictly forbidden to install the unit just below the ceiling. At least 200mm of a free space must be kept above the unit. Each swimming pool hall is individual thus a special care needs to be taken to choose a proper dehumidifier placement. It is also strictly forbidden to block the air inlet and outlet with any objects (canoe, buckets, ceiling beams, etc.). For maintenance purposes please keep free space of 200mm on both sides of the dehumidifier.

6.2. Equipment fixation

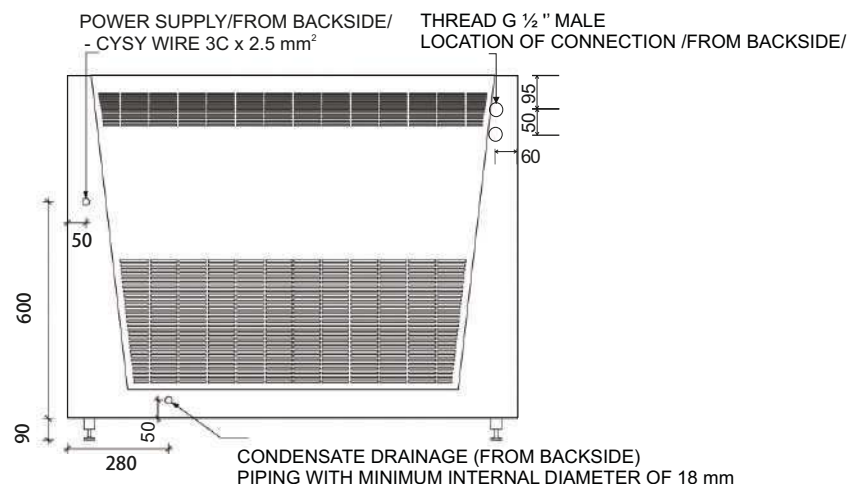
The equipment has a self-supporting construction and is very easy to install. There is an elevated adjustable stand included in the equipment accessories.

6.3. Dismounting and mounting of the cover

The cover can be disassembled by releasing of two screws located at the side parts of the device. Release the screws, pull the bottom part of the cover toward yourself and then, by lifting it shortly, rake down the cover from the rear plate. The unit installation is performed in an adverse way.

6.4. Condensate drain

Condensed water is drained from the device by the force of gravity. It is necessary to locate the device in a way that enables sufficient condensed water gradient. The condensate must be delivered through a siphon into the sewer or into the outside environment. It is strictly forbidden to deliver the condensate back into the swimming pool, as it may be bacterially contaminated. There is a tube for condensed water delivery located at the bottom of the device, on the left side. This tube must be plugged into a sewerage pipe with an internal diameter min. 18 mm.



6.5 Connecting the device to the mains

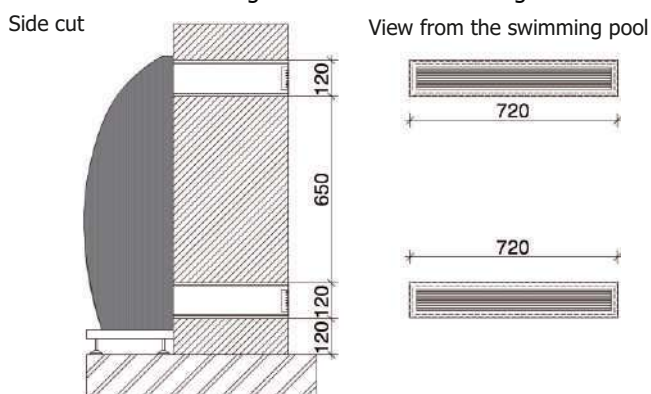
The unit's connection into the mains and its protection must meet the requirements of relevant norms. The connection requirements are the following: 220-240 V/50 Hz, 16A protection secured by a current protector with a nominal differential shut-off current not exceeding 30mA. There is a terminal board for connecting the unit to the main, located on the left hand side of the device. The master switch of the device must be located outside the swimming pool hall and it must be bipolaric and with L and N conductors' disconnecting. The dehumidifier must be inbuilt to a steady point for disconnecting the appliance from the mains with a minimum 3 mm distance between the contacts for all the poles and in a switched off status.

The dehumidifier's connection to the mains must be performed only by a qualified professional.

6.6 Mounting behind the wall - to order

The dehumidifiers are simply adapted also to installation behind the wall into the adjacent room. In such case, only two grids are visible in the swimming pool area. In the configuration for installation behind the wall, conduit adapters are screwed onto the dehumidifier's backside sheet. The adapters are delivered for passage through the wall of the length of 400 mm. In the place of installation, they are shortened from the side of the swimming pool as necessary.

Flanges on the direct pieces are slipped on, so they can be cut into appropriate sizes directly in a place of assembly. Afterwards the flanges are rivetted. The set also includes sealing band and screws for flanges' connection.



The dimensions of building slots are quoted.

6.6.1 Installation outside

When the dehumidifier is installed outside, it is equipped with special insulation to prevent condensation. The insulation thickness is 4cm K-Flex ALCLAD ST 19 R.

Back side of the unit is equipped with special double insulation with aluminum layer on the top.

When installing through the wall ducts, please apply insulation on revealed places to prevent condensation. Please note that typical swimming pool has 30°C and 60% RH. Dew point in these conditions is 21.4°C. Outside temperature is lower than this value for most of the year. It is thus essential to insulate all places where condensation may occur. Manufacturer supplied 2 pieces of extra insulation for this purpose.

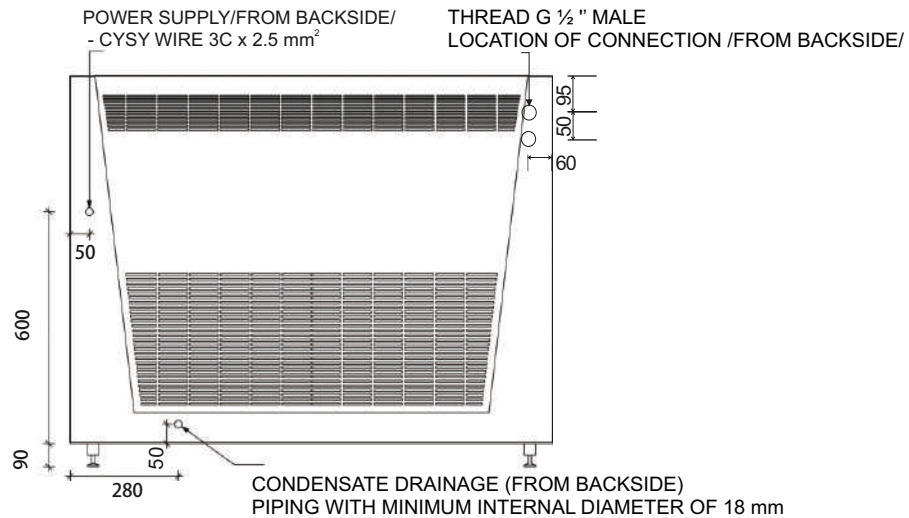
When unit is placed outside the unit is equipped with Winter module and Condensate tray defrost. Winter module keeps the compressor temperature at certain level to maintain oil viscosity. This helps overall performance of the unit and long term reliability. Winter module activates when compressor is off (no dehumidification) and outside temperature is lower than 2°C.

Condensate tray defrost is a standard feature applied when unit is used in subzero temperatures. The unit is by standard equipped with heated and insulated condensation hose. Please do not cut or shorten the heating element. It works automatically when there is ice or condensate formed and outside temperature is lower than 2°C.

Should your unit be equipped with a wireless control DRY EASY 300, then the antenna is packed inside the machine. During the installation please take it out through the air OUT ducting and keep it inside the ducting. This will improve the quality of signal transmission.

6.7. LPHW heater element - to order

The LPHW heater elements are supplied only to order. Connection of the hot water heater element onto the LPHW plumbing is carried out similarly to the installation of radiators. On the feeder pipe, it is connected by a control valve and on the return pipe by a closing screw joint. The LPHW is not supplied with a control valve and a screw joint; these are supplied by the supplier of the heating.



Attachment of the heater element to the distribution of the heating water

After installing the LPHW plumbing and leading the LPHW into the element under pressure, it is necessary to bleed the heater element. The bleeding valve is located on the feeder pipe of the LPHW heater element. To secure that the LPHW heater element works always at full heat output, blowing onto the unit by a fan must be provided even when no dehumidification is being performed. Therefore, when using the LPHW heater element, the switch of fan operation must be switched into the position of continuous operation.

6.8. Air filter - to order

Your dehumidifier may be equipped with an air filter on demand. Air filter is to gather dust and other mechanical particles and prevent them entering aluminum heat exchangers. Although air filter contributes to cleanness of your dehumidifier, it has no HEPA (antibacterial) filter functionality.

Your dehumidifier's operation is very much dependent on continuous free air supply. It is then important to keep your filter clean. Please review simple steps below how to clean your filter. In the case filter is not cleaned it creates a barrier for air supply. This has negative effect to your dehumidifier's operation and may result in its malfunction, damage or a complete failure. Some pools require cleaning once a year, some once a month some once a week. Time period in which your filter needs to be cleaned is very much dependent on actual individual conditions in your pool hall. It is then required to clean the filter at least once a month. Manufacturer, distributor or resellers are not responsible for malfunctions, damages or failures resulting from not cleaned filter.

When exchanging the filter power supply to the dehumidifier must be cut and the unit turned off.



1. Remove the dehumidifier cover. Please watch out for controller connectors such as cables or antennas!
2. Unscrew 2 screws on the right side and slightly release 3 screws on the left side.
3. Lift the filter and move it down-left-ward.
4. Remove the filter from the dehumidifier.

5. Clean the filter using vacuum machine or rinse with fresh warm water. If needed you may apply non aggressive cleaning agent. Please let the filter dry in shade. Do not expose the filter to sun.

6. Please install the filter back by undertaking above steps in reversed order.

6.9. Electrical heating

On demand your swimming pool dehumidifier can be equipped with electrical heater. This is a stainless steel resistance tube in aluminum fin exchanger. Capacity 2-4kW.

The electrical heater has separate power supply connection located in the dehumidifier power supply connection black box located on the electro box.



The electrical heater is equipped with 2 security off switches.

The electrical heater is turned on and off according to requested air temperature settings on a dehumidifier's controller /either built-in digital or wireless DRY EASY 300/.

Please note that the main dehumidifier cover is made from metal. The upper part of this cover, during electrical heater operations, may reach up to 65°C (at air temperature 35°C). It is thus forbidden to touch the metal cover at upper part of a dehumidifier during its operations. It is also forbidden to allow children to play around or with the dehumidifier. Should children be present in a room where the dehumidifier is installed, children are required to be supervised by an adult all the time and are required not to touch the dehumidifier.



Connection:

2kW	2.5mm CYSY	16A Protection
4kW	4mm CYSY	25A Protection

Your machine can be equipped with IP44 power supply cord. It is required for user to use IP44 socket. Socket with lower protection than IP44 does not guarantee IP44 protection of the dehumidifier.

When using IP44 power supply cord and socket:

- Do not place the plug and socket on wet places or places with leaking or dropping water
- Do not put any objects on a cable, do not use the cable for other purpose than a power supply of the machine.
- Place the cable off other appliances such as heaters, motors, rotors, etc.
- Do not use the dehumidifier if the cable shows signs of damage.
- Always follow electrical installation requirements /e.g. circuit breaker, residual circuit breaker/.
- Children and non-authorized persons are not allowed to manipulate with cable or plug.

7. Technical data

DATA	UNIT	DRY 800	DRY 1200
For swimming pools with max. water surface	m ²	90	120
Extraction rate at 30°C and 60 % RH	l/24hrs	90	120
Extraction rate at 30°C and 70 % RH	l/24hrs	115	150
Extraction rate at 30°C and 80 % RH	l/24hrs	136	181
Operational temperature - standard	°C	22-35	22-35
Operational temperature - antifreeze stat	°C	15-35	15-35
Operational temperature - Thermostatic expansive valve (TEV)	°C	-	-
Operational temperature - antifreeze stat + TEV	°C	-	-
Operational temperature - hot gas defrost	°C	-	-
Operational humidity range	% RH	20-100	20-100
Air flow	m ³ /h	1000	1000
Noise level (in 1m distance)	dB (A)	44	44
Heat output	W	5100	5250
Energy consumption	W	1700	1750
Voltage	V/Hz/f	230/50/1	230/50/1
Operating / Starting current	A	7.5 / 50	7.6 / 50
Protection	A	16	16
Conductor	mm ²	CYSY 3C x 2,5	CYSY 3C x 2,5
Condensed water pipe	mm	d 18	d 18
Dimensions netto (width x height x depth)	mm	1250 x 950 x 310	1250 x 950 x 310
Dimensions brutto (width x height x depth)	mm	1300 x 1020 x 370	1300 x 1020 x 370
Weight netto / brutto	kg	100 / 133 kg	101 / 134kg
Amount of refrigerant - R 410 A	kg	1,25	1,6
Max. pressures in the system HP/LP	bar	35/12	35/12

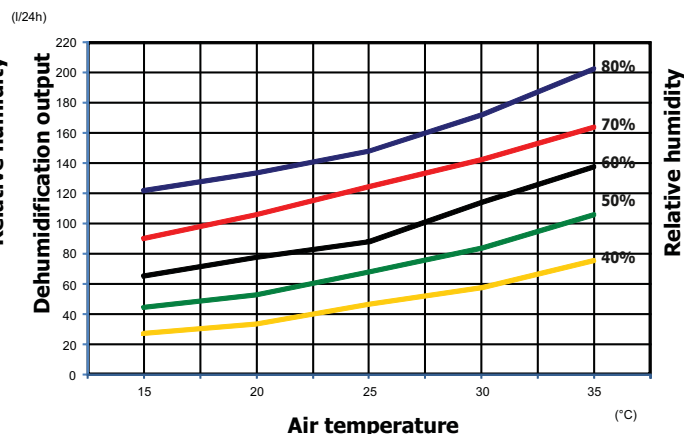
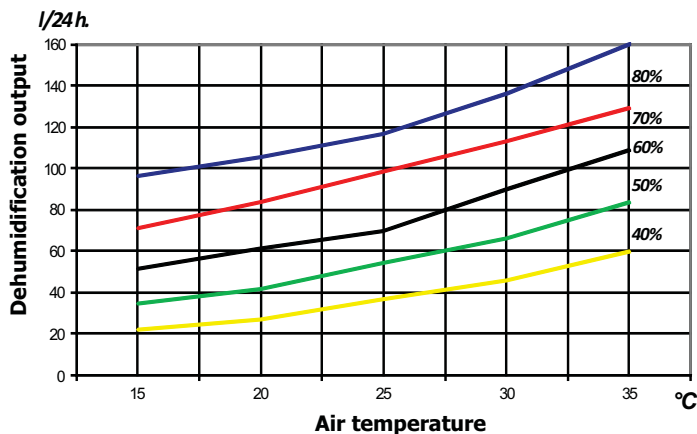
The cooling circuit is filled with R410A refrigerant that consists of 2 components (R32/R125). These components are considered as fluorocarbon greenhouse gases.

The product contains fluorocarbon greenhouse gases listed in the Kyoto Protocol:

**R410A with the global warning potential (GWP) 1720
(R-32/125 50/50)
CH₂F₂ + CF₃CHF₂
1200 g (DRY 800)
1600 g (DRY 1200)**

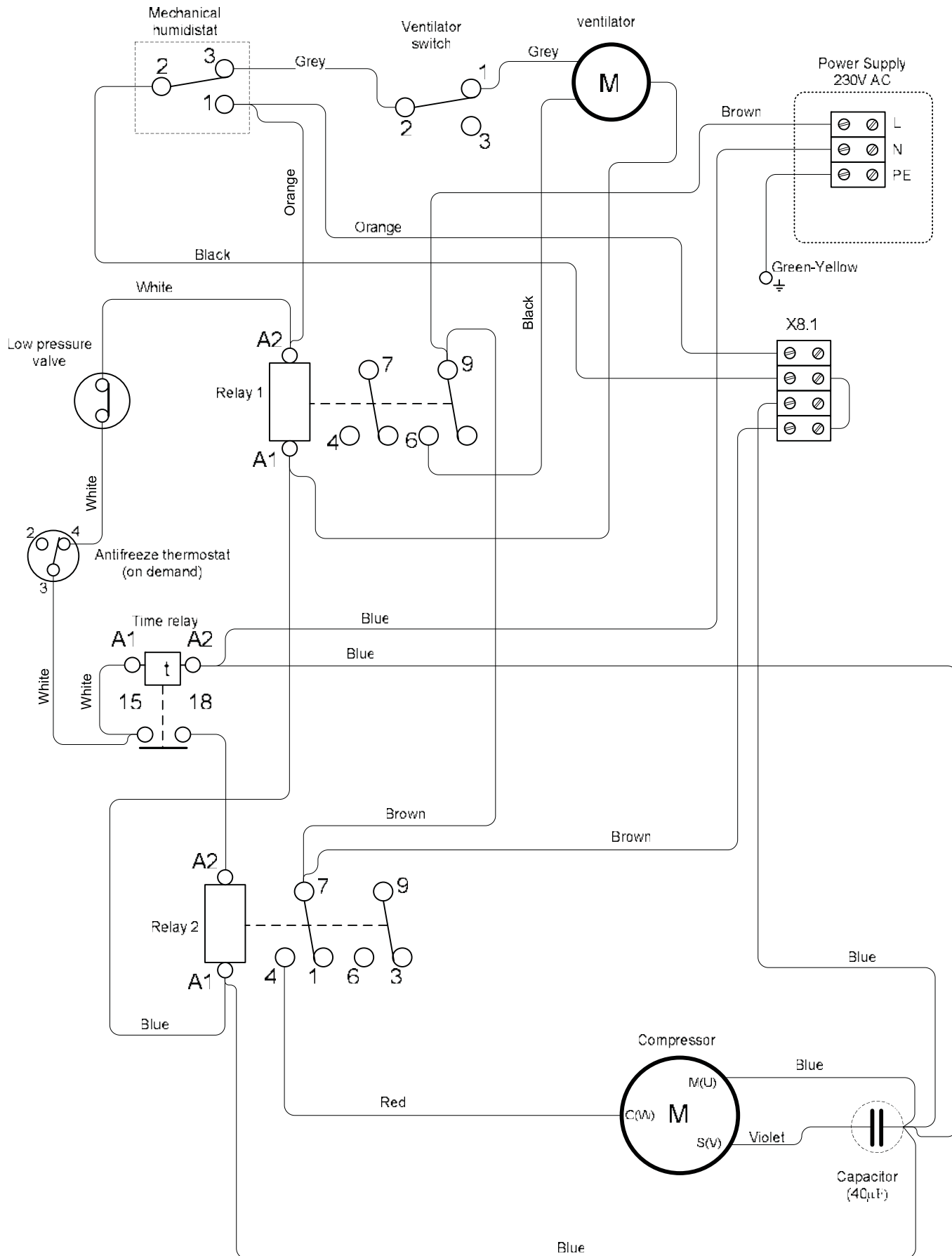
OUTPUT DIAGRAM OF DEHUMIDIFICATION (DRY 800 METAL)

OUTPUT DIAGRAM OF DEHUMIDIFICATION (DRY 1200 METAL)



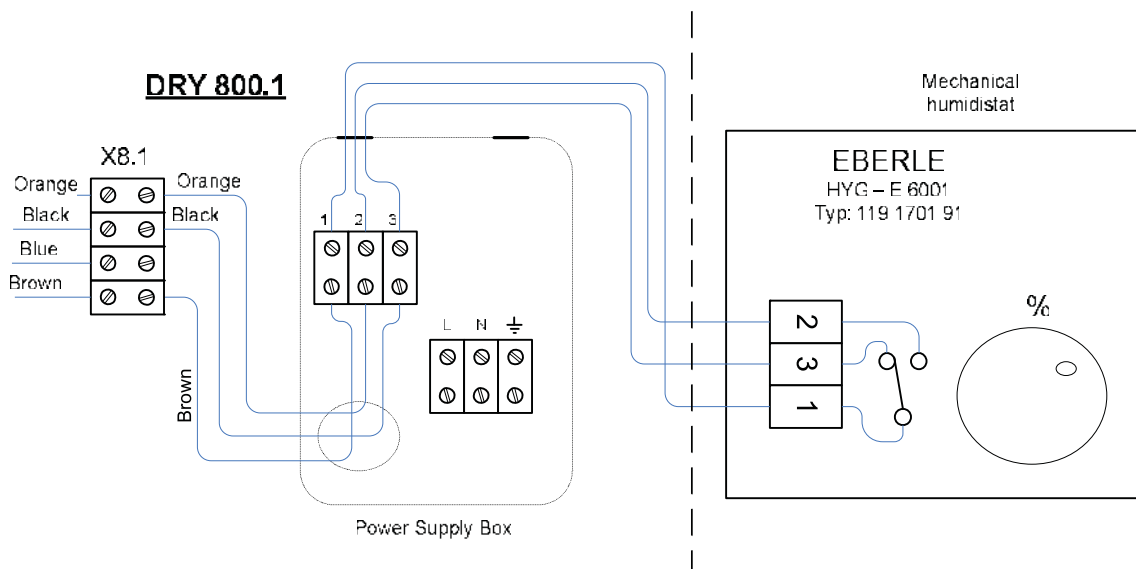
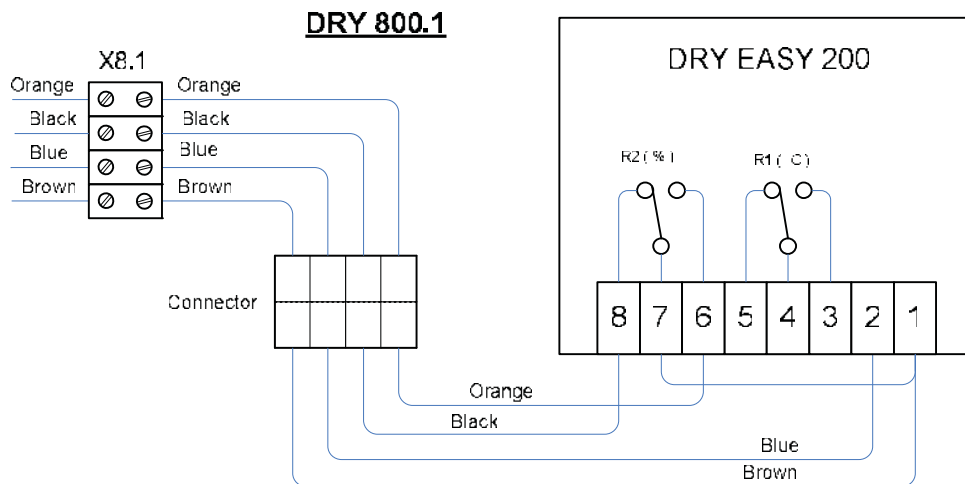
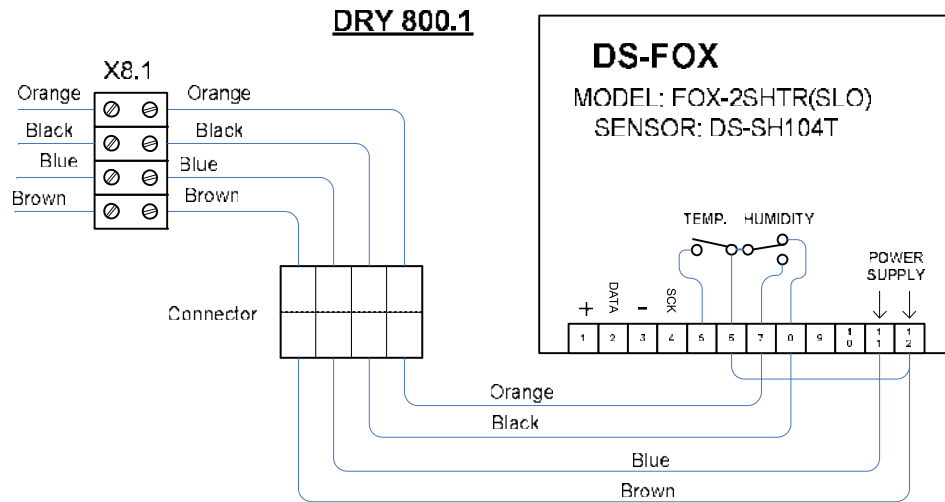
WIRING DIAGRAM OF MODEL MICROWELL DRY 800 METAL

DRY 800.1



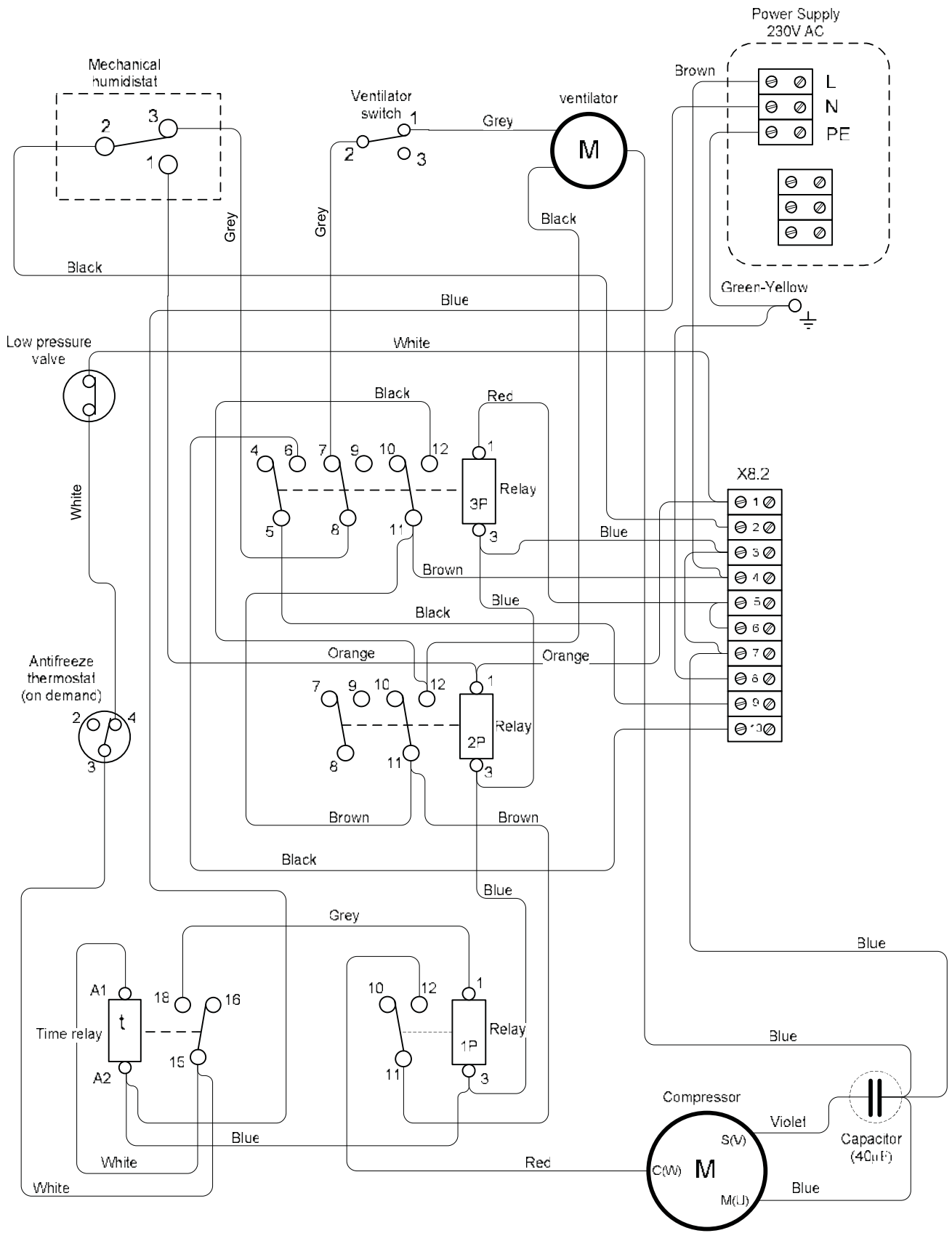
Note: Producer reserves right to make changes on wiring.

DRY 800.1 - X8.1 DSFOX, EASY 200, EBERLE



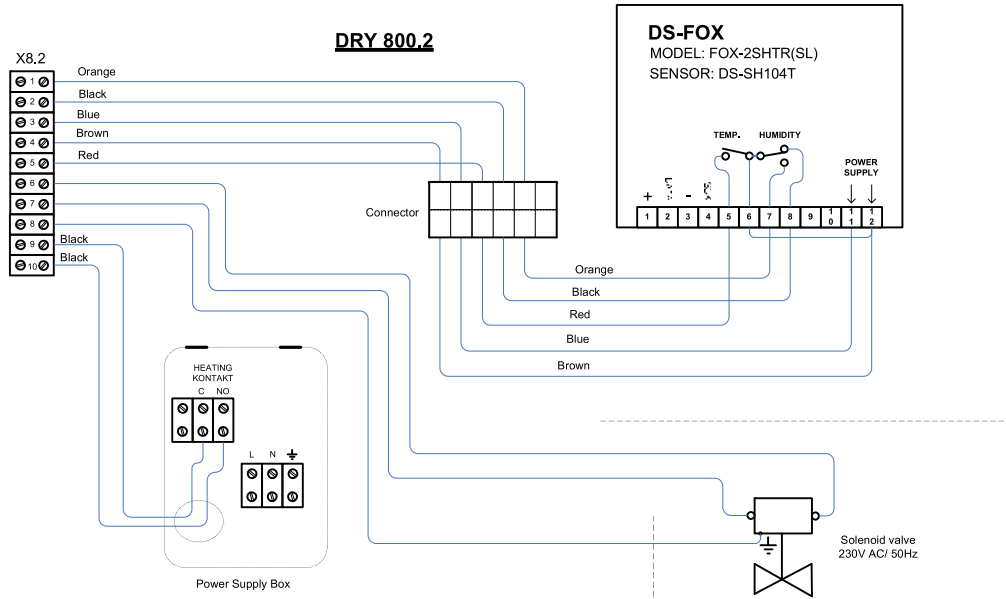
Note: Producer reserves right to make changes on wiring.

DRY 800.2

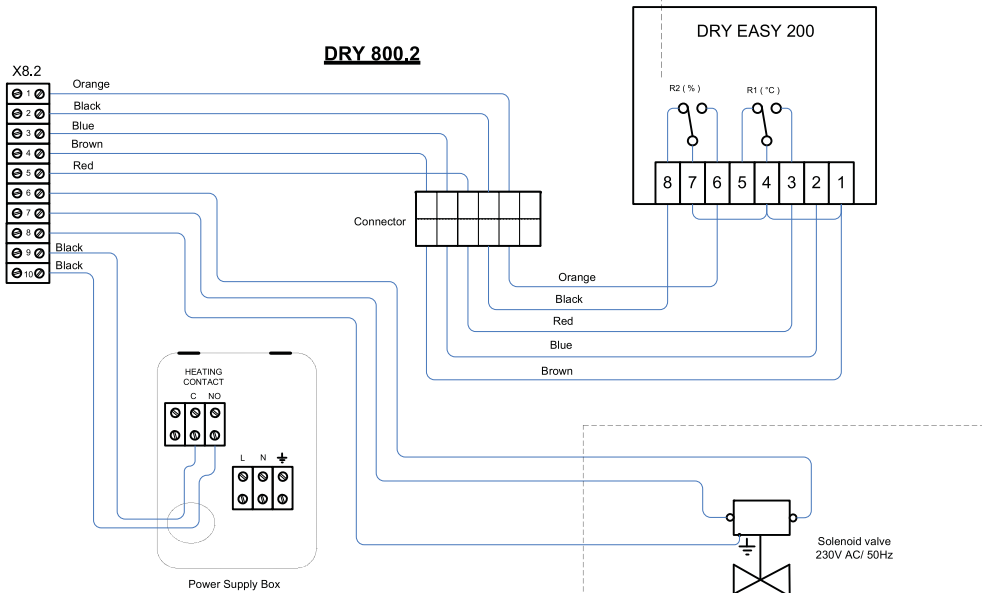


Note: Producer reserves right to make changes on wiring.

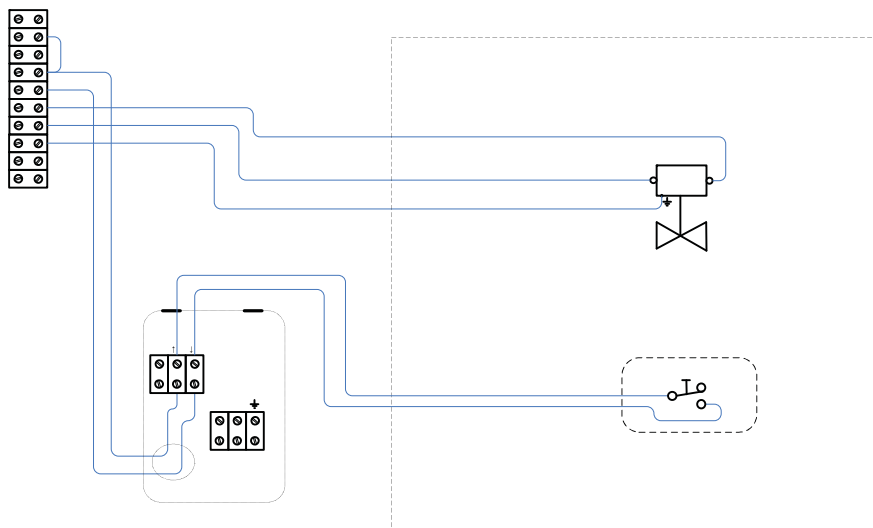
DRY 800.2 - X8.2 DS FOX , NO CURRENT CONTACT FOR HEATING, SOLENOID VALVE



DRY 800.2 - X8.2 DRY EASY 200, NO CURRENT CONTACT FOR HEATING, SOLENOID VALVE



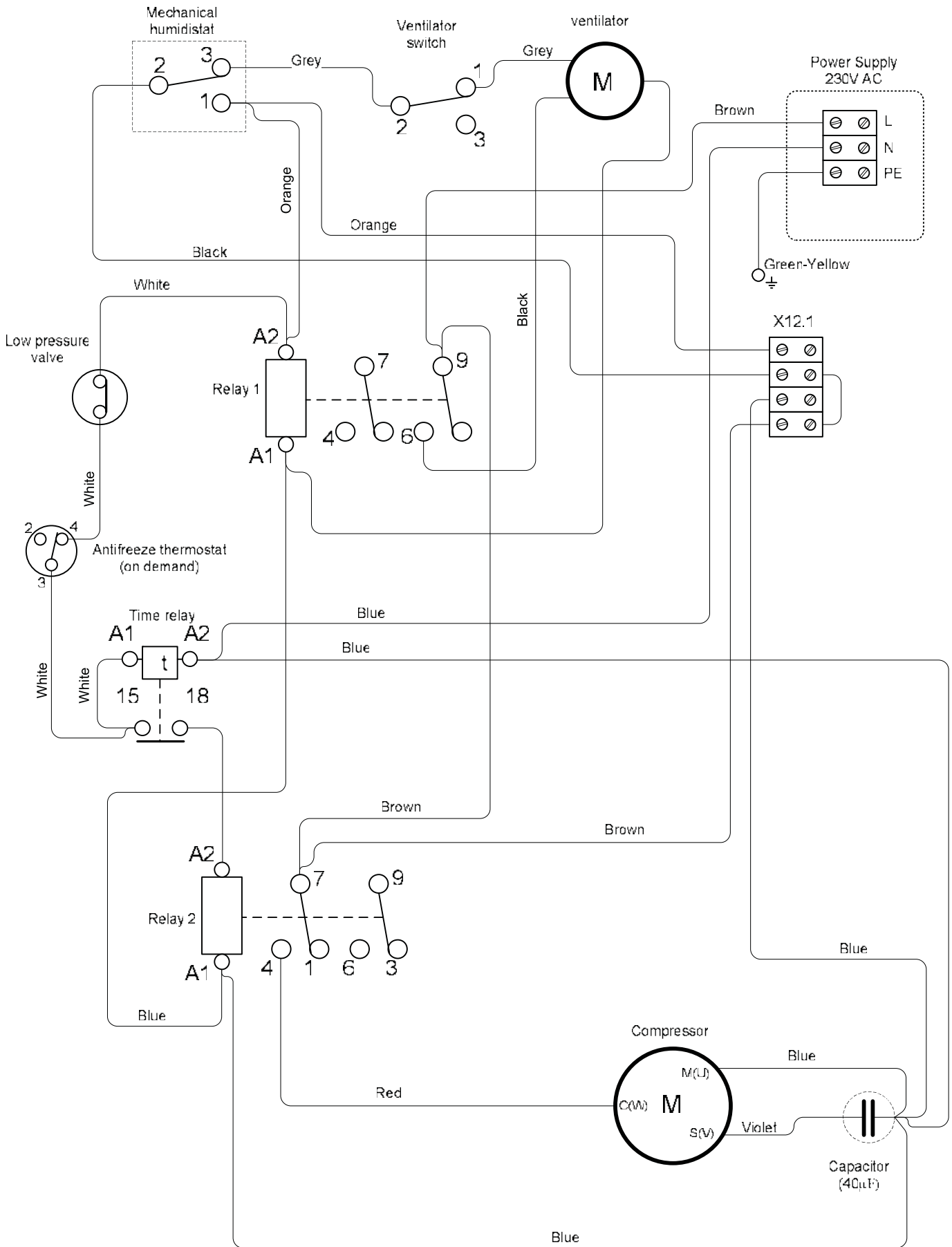
DRY 800.2



Note: Producer reserves right to make changes on wiring.

WIRING DIAGRAM OF MODEL MICROWELL DRY 1200 METAL

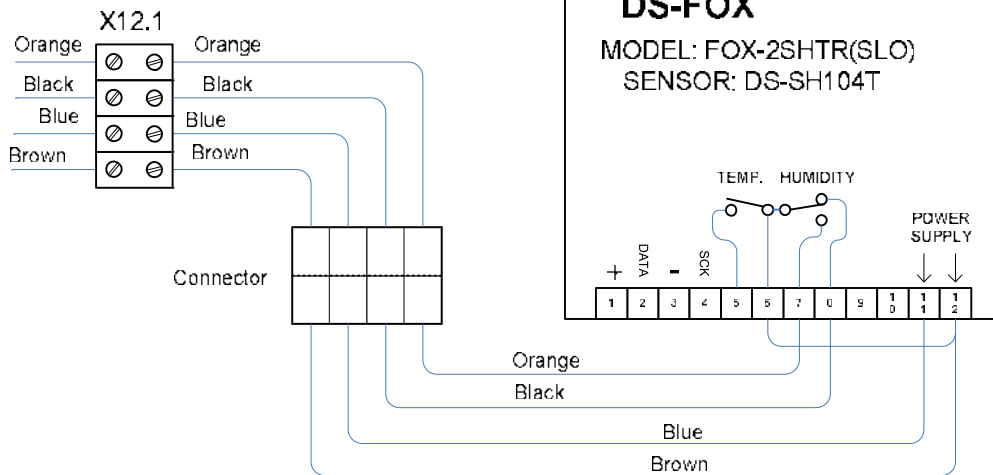
DRY 1200.1



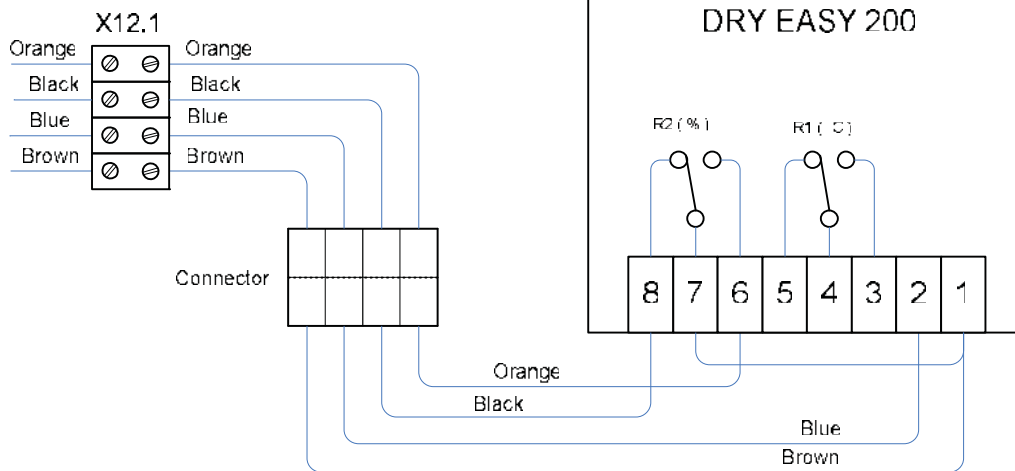
Note: Producer reserves right to make changes on wiring.

DRY 1200.1 - X12.1 DSFOX, EASY 200, EBERLE

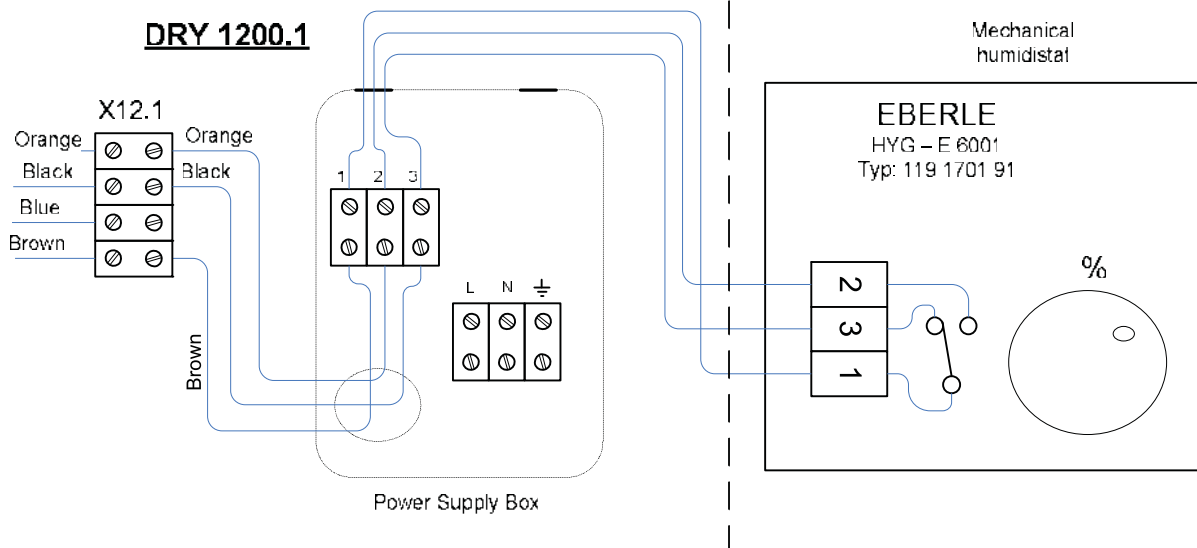
DRY 1200.1



DRY 1200.1

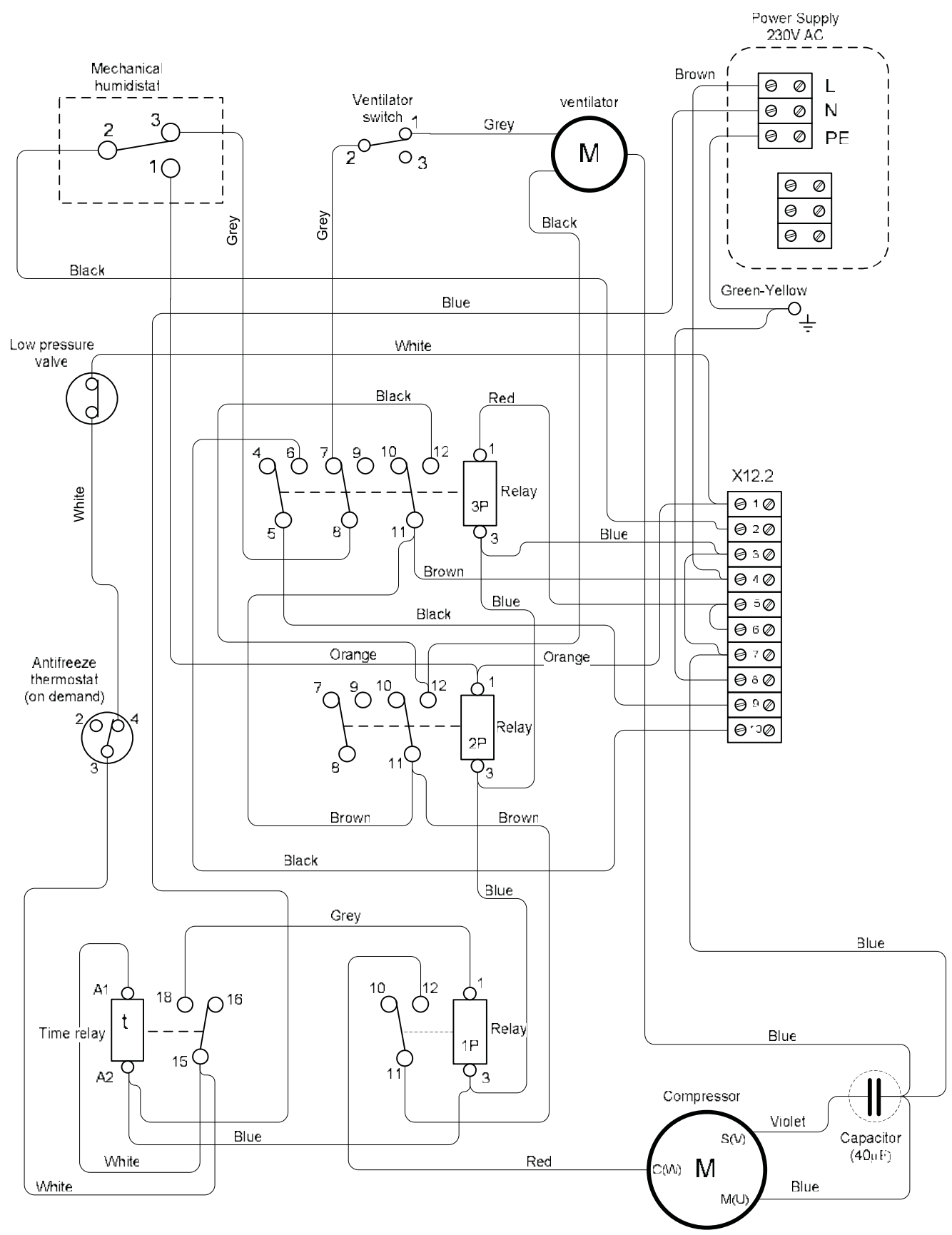


DRY 1200.1



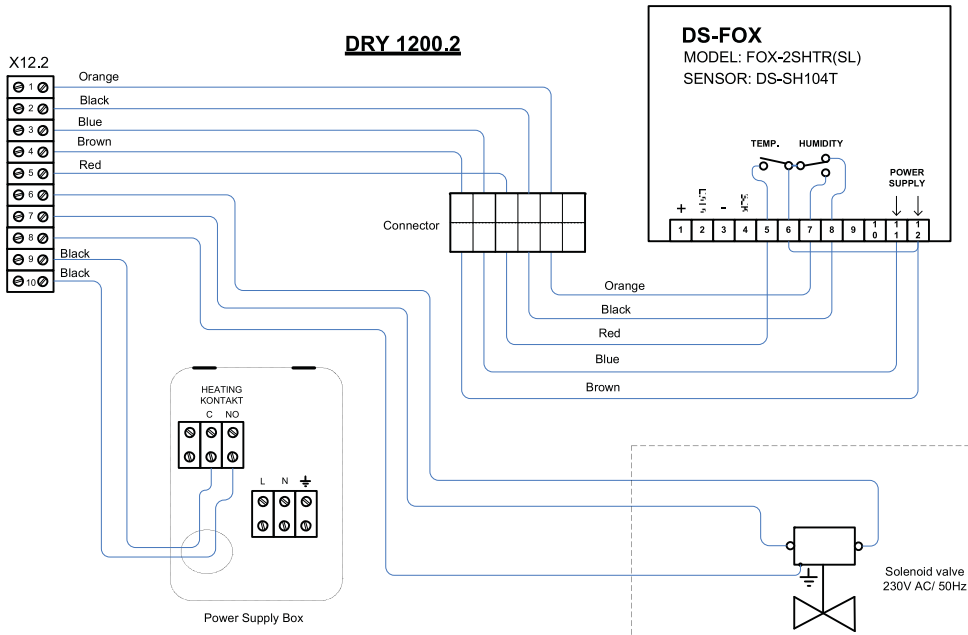
Note: Producer reserves right to make changes on wiring.

DRY 1200.2

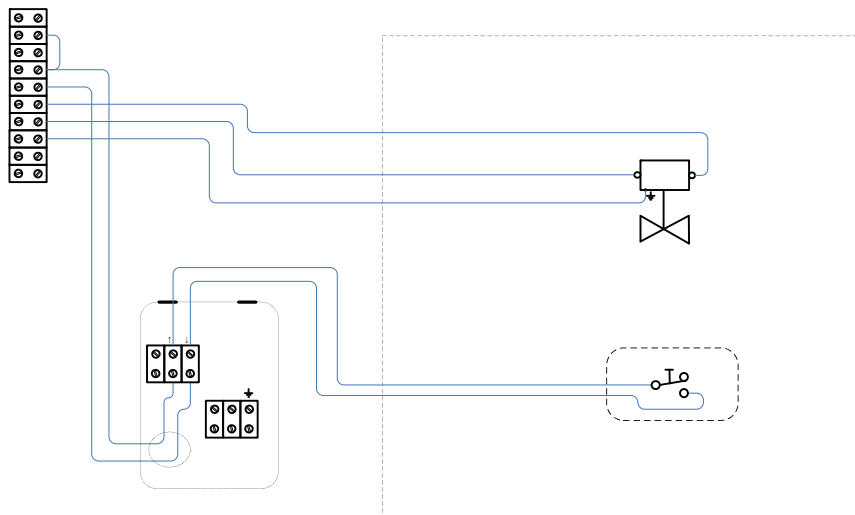
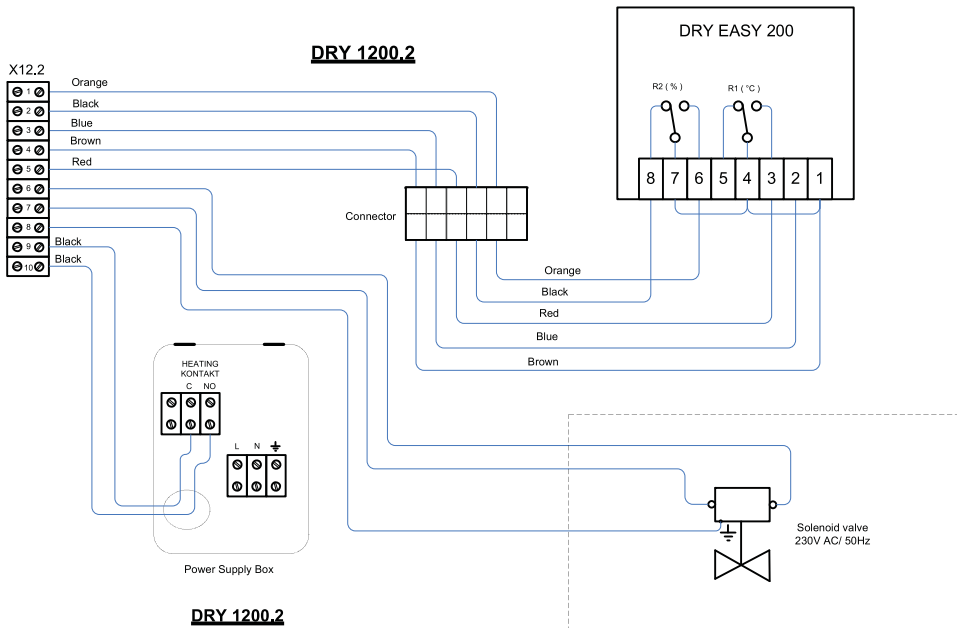


Note: Producer reserves right to make changes on wiring.

DRY 1200.2 - X12.2 DS FOX , NO CURRENT CONTACT FOR HEATING, SOLENOID VALVE



DRY 1200.2 - X12.2 DRY EASY 200, NO CURRENT CONTACT FOR HEATING, SOLENOID VALVE



Note: Producer reserves right to make changes on wiring.

8. WARRANTY CONDITIONS

The following exceptions stated by Microwell, Ltd. apply within the warranty.

No claims will be accepted if:

1. The dehumidifier is used in an incorrect way, not as described in this manual.
2. The dehumidifier is installed in an incorrect way, not as described in this manual.
3. The dehumidifier was put to operation by an unauthorized person.
4. The air flow through the dehumidifier is out of the defined borders.
5. The water flow through the dehumidifier is out of the defined borders.
6. The water's pH level and/or chemical condition is out of the defined borders:

Acidity / pH level:	pH	7.4 +/- 0.4
Total alkalinity, as CaCO ₃	ppm	80-120
Total hardness, as CaCO ₃	ppm	100-300
Total melted dry mass	ppm	max. 3000
Maximal saline content	wt/wt	6%
Free chlorine range	ppm	1.0-3.0
Superchlorination	ppm	max. 30 ppm/max. 24 hours
Bromine	ppm	2-3
Baquacil	ppm	25-50
Ozone	ppm	0.8-1.0
Maximum copper content	ppm	max. 2
Aquamatic single purifier	ppm	max. 2
Tarn clean purifier	ppm	max. 2
Sherwood purifier	ppm	max. 2

7. The dehumidifier suffered frost damage.
8. The electric tension source is insufficient or improper in any other way.

IN CASE OF ANY UNCERTAINTY YOU MAY HAVE, PLEASE FEEL FREE TO CONTACT US !

NOTE:

When applying applicable warranty, the registration card that ensures applicable warranties must be returned. In case you cannot find the registration card of your dehumidifier, please contact the Service department of Microwell, Ltd. - indicated your name, address and serial number of your dehumidifier. The registration card will be then sent to you for filling in. In case you have any service or technique related questions, please specify the model number and serial number of your dehumidifier. These information will help us in making proper diagnosing of your unit and the service can be performed with a minimum time delay.

TRANSPORT INSTRUCTIONS:

The dehumidifiers must be transported only in the original packaging and in a vertical position. Make sure that the dehumidifier cannot turn over or fall down during transportation. Do never put the dehumidifier aside! It may lead to serious **compressor damage!** No claims are accepted in case of any damage caused by transportation. When receiving the product delivered to you, please check whether the package is not damaged. If any kind of objections occurs, please make a proper documentation of them.

**CERTIFIKÁT ZHODY
CONFORMITY CERTIFICATE**

Č./No.: 111299033

pre výrobcu alebo jeho autorizovaného zástupcu v Európskej únii
to the manufacturer or his authorised representative in the European UnionMICROWELL s.r.o.
SNP 2018/42

927 01 Šaľa, Slovenská republika / Slovak Republic

Výrobok a určenie typu / Product and designation of type

Bazénový odvlhčovač MICROWELL
typ: DRY 800 Metal, DRY 1200 MetalSwimming bath dehumidifier
type: DRY 800 Metal, DRY 1200 Metal

Preskúšaná vzorka spĺňa základné požiadavky na bezpečnosť podľa nasledujúcich európskych smerníc Nového prístupu:

The tested sample meets the essential safety requirements of the following European New Approach Directives:

Smernica o EMC	2004/108/EC
Smernica o tlakových zariadeniach	97/23/EC
Smernica o nízkom napätí	2006/95/EC
Smernica o bezpečnosti strojov	2006/42/EC

2004/108/EC	EMC Directive
97/23/EC	Directive pressure equipment
2006/95/EC	Low Voltage Directive
2006/42/EC	Machinery Directive

Existujú pre to nasledujúce dokumenty:

There are following documents exist for this

Protokol o skúškach č. 100500137/1 zo dňa 10.3.2011
Protokol o skúške EMC č. 100500137/EMC zo dňa 26.11.2010
Protokol o skúške č. MICROWELL 02/11a zo dňa 22.02.1011
Protokol o skúške pádom č. 100500137 zo dňa 18.1.2011
Protokol o meraní č. 100500137 zo dňa 4.1.2011
Protokol o skúške č. 100500137/2011/2 zo dňa 28.3.2011
Protokol o skúške č. 100500137/2011/3 zo dňa 14.3.2011

Test Report No.100500137/1 date of issue 10.03.2011
Test Report EMC No. 100500137 date of issue 26.11.2010
Test Report No. MICROWELL 02/11a date of issue 22.02.2011
Fall Test Report No. 100500137 date of issue 18.1.2011
Test Report No. 100500137 date of issue 04.01.2011
Test Report No. 100500137/2011/2 date of issue 28.03.2011
Test Report No. 100500137/2011/3 date of issue 14.03.2011

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Ing. Anna ONDRÁŠIKOVÁ
riaditeľka posudzovania zhody výrobkov
Product Conformity Assessment Director

MICROWELL, Ltd.

SNP 2018/42

927 01 Šaľa, Slovakia

Phone: +421 31 7020 540-1

Fax: +421 31 7020 542

E-mail: microwell@microwell.sk

www.microwell.eu

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