



# INDIA'S FIRST

## CLIMATE CONTROL HEATING SYSTEM

NO OXYGEN BURNING | FIRE PROOF

NO BURNING INJURIES

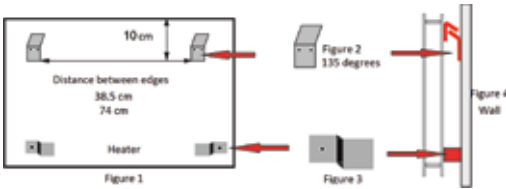
SAVES ELECTRICITY

UP TO 80%

# User Manual

Dear Customer!

We thank you for buying IRHS - NLO heater - the only infrared heating system in india. We are sincerely interested in your satisfaction with the IR heating system. This system will ensure warmth and coziness in your house & Workplace.



**IRHS Heater - WALL / ROOF mounted.**

ISO 9001:2015



## Caution

THE CASING OF THE HEATER SHALL BE EARTHED OR ZEROED.

# DO NOT COVER

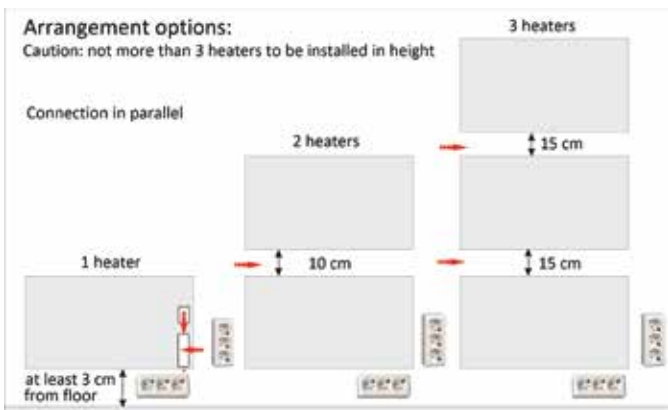
DEAL WITH QUALIFIED PROFESSIONALS.

The heater is to be connected to a cable with plug as follows:

- Two blue ones are to be connected to one cable (**Neutral**)
- Two black ones are to be connected to the phase (**L**)
- Yellow-green one is to be connected to the heater casing (**Z: earthing**)

You may shorten or lengthen the heater's cable. This will not affect the warranty. After cable connection it is needed to fix the cover. If the cover is hard to latch, you may fix it with any type of glue .

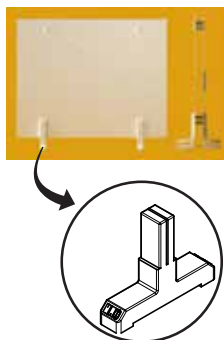
In order to connect two heaters at one time use three-conductor copper cable with 3x1.5 mm section. If you need to connect three heaters at one time, use copper cable with 3x2.5 m section. For connection of 5 heaters use cable with 3x4 mm section. It is preferable to install a separate socket and automatic circuit breaker for each heater or a group of heaters. This will help you to find a faulty heater, if any.



Sockets may be located behind the heaters along the edges

### How To Install Heater Legs:

1. Unfasten the nuts located at the lower part of the heater.
2. Remove bolts.
3. Remove decorative panels from metal structure of the legs.
4. Attach legs on the heater in order that holes are aligned with bolt's attachment point.
5. Place the bolt to its location.
6. Screw the nuts.
7. Latch decorative panels on the legs.



### To Improve Stability You May Fasten The Heater To The Floor.

- Place the heater in the desired location.
- Remove decorative panel.
- Fasten the heater to the floor through holes in the legs.
- Latch decorative panel.

Please remove all packing material from the heating system including from between the two panels before installation/switching on

## Tips To Achieve Maximum Efficiency

- IRHS - NLO heating system based on thermal panels refers to the radiant heating system. Its operating philosophy is based on tempering (surface heating), like sun beams or heating radiance emitted by the Sun. The heating system primarily heats walls in rooms, then heat all the objects inside, which in turn restore heat in the air.
- Please be aware that the system will heat and dry out (if needed) the objects of your room in the initial 7 to 10 days of operation. After this the system adjusts itself for normal operation with high energy efficiency. It is recommended to switch on the heater on the first occasion of seasonal temperature drop.
- In order to get maximum economy and comfort, it is necessary to keep your walls heated, since their heating requires additional energy. The most economic mode of operation is continuously keeping the needed temperature.
- The optimal temperature is deemed to be +20°C, while temperature rise/ drop by 1°C will lead to increasing/ reducing of energy consumption by 5-7%.
- If temperature in your room is higher than the one set by a temperature controller, the system will be inactive.
- Devices are designed for operation within the voltage range of 210-240V. In the event of reduced voltage, it is needed to install a surge protector. The quality of energy in electric mains is the area of responsibility of the end user/the power supplier.
- It is recommended to install a voltage relay with thermal protection function. It will allow energy saving and will protect your house from power surges.
- Expenses related to energy heating directly depend on thermal insulation of your home/office space.
- Do not wait for cold period when the problems with your space thermal insulation become visible. Resolve this problem during warm period. A window crack in the size of a match will lead to heat loss up to 30 cubic meters of heated air per hour.
- Warranty period of IRHS - NLO electric heater is 5 years from date of purchase.
- During the warranty period repairs or replacement of equipment is carried out at manufacturer's cost. To do that, please address your sales point (dealer) or directly the manufacturer. In the event of irrelevant storage, installation, or operation of IRHS - NLO equipment, no claims will be accepted. Heater damage related to non-compliance with the requirements provided in the technical document will exclude availability of free warranty service.

## NOT ALLOWED TO DO

- Using the IRHS - NLO heater with no zeroing, earthing, or with removed casing.
- Installing the heater in close vicinity of sockets and switches.
- Placing flammable and combustible mixtures or liquids near to the equipment.
- Installing heaters within areas where there is a risk of direct access of water and chemically active media, which may destruct metal and insulation.
- Washing or wet cleaning of IRHS - NLO equipment being in operation, put clothes to be dried on equipment, etc.
- Covering equipment, which may lead to its overheating.
- Making alterations in design on your own authority, as well as carrying out painting and repairs.
- Placing furniture, household appliances, radio-, TV and computer devices near to the heater at a distance, which is less than 25 cm. This is applicable to all models in order to ensure free air circulation.
- Letting children and people with special needs or people not possessing necessary knowledge using heaters unless they are familiar with the equipment or supervised by a responsible person is not advisable. Look after the children and pet and do not let them play with equipment!

- IRHS NLO needs to operate and consume electricity only for about 20 percent of the time in a 24-hour cycle.
- Its continued operation leads to reduction in power consumption and saving of electricity by almost 70-80 percent.
- Once ambient temperature attained, the coziness of the living spaces are maintained as per conduciveness of the Human Body; irrespective of the low temperature outside the living space.

# Technical Specifications

## TU 27.51.26-001-0080689159-2017

- Please read this technical instructions very carefully.
- Keep it while using your electric space heater.

### 1. Purpose and configuration:

1.1 IRHS - NLO series electric space heater (hereinafter: electric heater) is purposed for local heating of people, any kind of domestic and industrial rooms, green houses, drying vegetables, fruits, leather goods, gypsum, heating of assembly components and units, etc.

1.2 Electric heater consists of casing and heating element. Casing is made of galvanized steel with polymer coating. Heating element is marked as IRHS NLO (which means film radiant electric heater).

1.3 Electric heater is highly efficient and economical; efficiency coefficient: 96%.

1.4 This electric heater is environment friendly; it does not oxidize and does not corrode.

### 2. Technical parameters:

2.1. Voltage (V): 220 V, 50 Hz.

2.2. Rated capacity (W): 350, 450, 500, 600, 650, 700, 750, 800, 1000, 1200 W.

2.3. Dimensions (mm): 660x1020x2; 360x1020x40; 520x1020x40; 700x1030.

2.4. Average surface temperature: from +60°C to +85°C.

2.5. Maximum relative humidity: upto 60%.

2.6. Weight: from 8 kg to 50 kg

2.7. Thickness: from 2 mm to 34 mm.

2.8. Protection degree of heating element: IP-54, IP-67 (dust-proof and water-tight).

Protection degree is marked on the casing.

2.9. Items are fabricated in compliance with Technical Specifications TU 27.51.26-001-0080689159-2017.

2.10. The product corresponds to requirement "On Low-Voltage Equipment Safety" (CU TR 004/2011)

2.11. The product corresponds to requirement "On Electromagnetic compatibility of Technical Devices" (CU TR 020/2011).

Certified : MSME LAB, CE, ROHS, ISO

### 3. Scope of supply:

3.1. IRHS - NLO series electric heater.

3.2. Wall mounting kit.

3.3. Cable, 1.7 m.

3.4. Installation manual.

3.5. Technical specification and operations manual.

### 4. Safety requirements:

4.1 Caution: while installing IRHS - NLO electric heaters it is required to ensure earthing or zeroing of its casing.

4.2 Electric heater is to be connected to AC network (220 V, 50 Hz) via a residual current device.

4.3 It is not permitted to anyhow cover the electric heater and interfere in free heat exchanging. It is not permitted to locate the electric heater at a distance less than 40 mm to building structures, near to flammable materials, liquids, or gases (the distance shall be at least 50 cm).

4.4 It is not permitted to dismantle the electric heater, make repairs, replace its cable, or use with a faulty cable and incorrect earthing.

4.5 It is not permitted to locate the electric heater under beds, behind furniture and other household items, and under power sockets. It is not permitted to dip the electric heater into water or pour it with water containing caustic or chemically active agents. It is not permitted to rest on the electric heater or stand on it.

4.6 It is required to keep children, pets, and people with special needs away from the electric heater.

4.7 It is not permitted to leave unattended the electric heater, which is connected without a temperature controller.

4.8 It is not permitted to cover the electric heater with heat-reflecting materials.

4.9 It is not permitted to use the electric heater in the rooms with temperature higher than +30 °C.

5.0 Recommendations on installation and usage:

5.1. The electric heater shall be installed as per Section 4 and installation manual, applicable to your model.

5.2. It is recommended to use the electric heater connected via a socket-type temperature controller in order to maintain the desired temperature in the room. A temperature controller will help to sufficiently reduce energy consumption.

5.3 The electric heater shall be stored in enclosed ventilated rooms at temperature from +1°C to +50°C and relative humidity up to 80%.

## 6. Warranty Liabilities:

6.1 The manufacturer guarantees the correspondence of product quality to the requirements of technical specifications provided that safety requirements and recommendations on installation and usage are strictly followed. The warranty period is 5 years from date of purchase. Service life of the electric heater is 30 years or more.

6.2 Warranty does not cover the following items:

- Devices, which are used without following this manual.
- Devices, which have mechanical damages (deep scratches, cuts, etc.).
- Devices, which bear the signs of breaking open or non-authorized modernization in contravention with Section 4 of the present manual;
- Devices, which were exposed to high temperature or high voltage.
- Devices, which are out of order due to incorrect connection or installation.

## 7. Acceptance Certificate

IRHS - NLO series electric heater corresponds to Technical Specifications 27.51.26-001-0080689159-2017; and it is approved for usage MSME LAB, CE, ROHS, ISO .

QC Dept Representative \_\_\_\_\_

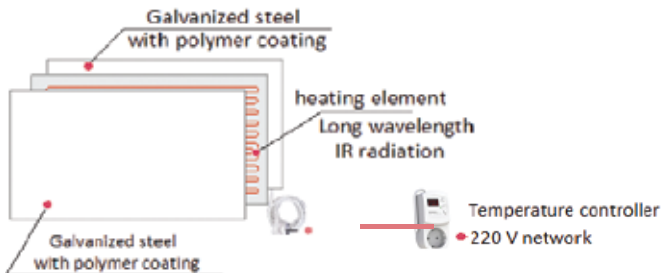
Signature \_\_\_\_\_

## 8. Typical Failures And Remedy Measures:

| FAILURE                          | CAUSE  | REMEDY MEASURE   |
|----------------------------------|--|--|
| Signs of smoke or burning smell. | Electric heater is covered with foreign objects, clothes, etc.   | Disconnect electric heater from the power source and remove foreign objects.                                 |
| Offensive odor.                  | Possible vicinity of objects, which may emit harmful substances. | Relocate electric heater.  |
| Heating failure.                 | Heating element is out of order.<br>Power cable is out of order. | Return electric heater to the manufacturer.<br>Replace power cable with the aid of the qualified specialist. |

**For maximum efficiency DO NOT switch off the Heater. Autocutoff (control climate) Thermostat (at 20 degree Celsius) will ensure energy efficiency and 24/7 ambient temperature.**

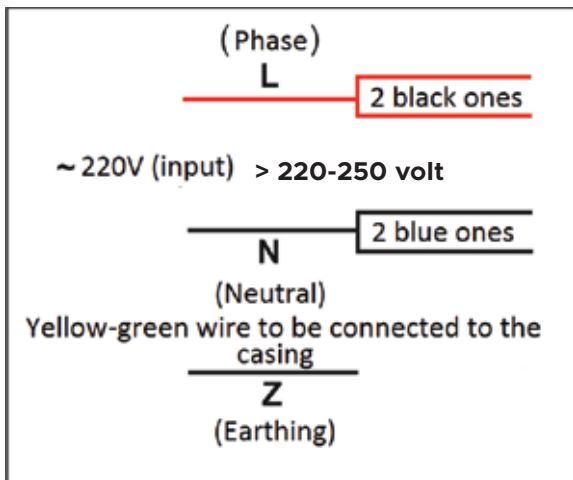
## Electric Heater Structure:



## Scope Of Supply:

- Double-plate heater – 1 pc
- Decorative plate for bolt screw – 4 pcs
- Bolt screw – 4 pcs
- Expansion anchor – 4 pcs
- Legs – 2 pcs (may be not part of supply depending on a heater model)
- Wall attachments (135 degree edges) – 2 pcs
- Cable with socket – 1 pc
- Installation manual – 1 pc
- Technical passport – 1 pc
- Leg, Thermostat Climate Control (Additional device for energy saving work 24x7)

## Installation Vertical/ Horizontal



Please ensure the distance between the heater and thermostat / power source is at the cord maximum length.

## How To Install Heater Thermostat (Control Climate)

