



Modul-Connect

26100-03 Modul-Connect EV Heater

Owner's Manual



Document Part Number

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Service Contact Information

E-mail: info@modul-system.com

Phone: +46 31 746 87 00

Web: www.modul-system.com

For safe and optimum performance, the **Modul-Connect EV PTC (Positive Temperature Coefficient) Heater** must be used properly. Carefully read and follow all instructions and guidelines in this manual and give special attention to the **CAUTION** and **WARNING** statements.

PLEASE KEEP THIS MANUAL FOR FUTURE REFERENCE

Disclaimer

While every precaution has been taken to ensure the accuracy of the contents of this guide, Modul-System assumes no responsibility for errors or omissions.

Note: As well that specifications and product functionality may change without notice.

Important

Please be sure to read and save the entire manual before using your **Modul-Connect EV Heater**. Misuse may result in damage to property or the vehicle and/or cause harm or serious injury.

Product Numbers

26100-03 Modul-Connect EV Heater

**Additional part/s
Required for 26100-03:**

- 26200-03 Manual Control switch (rheostat)
- Or
- 24000-03/24000-032 Modul-Connect 2.0 Main Box/ Modul-Connect PRO Main Box
- Or
- 24000-04 M-C Control Box (4th gen)



Optional:

- 26200-03 Manual Control switch (rheostat)
- 26101-03 Additional (Cab) Blower unit
- 26102-03 Neoprene Heater Ducting - 51mm (4 meter length)
- 26103-03 Triple Vane Ball Vent 50mm
- 26104-03 Y Connector 50mm (adjustable flow)
- 26105-03 180mm Defrost Vent 51mm
- 26106-03 50mm Flanged Outlet
- 26107-03 50mm rear outlet air blanking cap (Spare Part)
- 26108-03 Grill Round Air Vent 50mm (Spare Part Front Face)
- 26109-03 EV Heater 3 Meter CAN Cable (Spare Part)
- 26110-03 600w EV Heater 4 Meter Power cable assembly (Spare Part)



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1. Introduction

Thank you for purchasing the **Modul-Connect EV Heater**.

This EV Heater unit allows you to heat your load area and Cab.

The 26100-03 Heater is intended to use Modul-Connect as its control platform and must be fitted in conjunction with this system.

Modul-Connect provides the control and battery management features required.

The Addition of a 26200-03 Manual Control Switch is intended for independent use of the heater without the Modul-Connect control system and can be easily added as an option to the front face of the heater.

This heater must in all cases be powered from an additional battery bank and NOT DIRECTLY from the vehicles Chassis battery.

The EV Heater does not require a solid fuel supply or any external exhaust requirements, therefore can be fitted in any Racking unit in a suitable mounting position and orientation in the vehicle with no holes in the floor that contravene OEM vehicle manufactures no-drill areas.

This EV Heater unit is configured for optimum operation with any battery although AGM or Lithium are recommended over the use of lead acid batteries.

The unit is suited for all (LCV) light commercial vehicles and specifically all 'Electric' LCV's with the supporting infrastructure:

(BEVs or EVs) Battery Electric Vehicles

(HEV) Hybrid Electric Vehicles

(PHEV) Plug-In Hybrid Electric Vehicles

(REEVs) Range Extended Electric Vehicles

The Modul-Connect EV Heater is perfect as a source of heating for EV vehicles as it does not require a solid fuel supply or any external exhaust requirements, therefore can be fitted in any suitable mounting position and orientation in the vehicle with no holes in the floor that contravene OEM vehicle manufactures no-drill areas.

Note: In (ICE) Internal Combustion Engine vehicles with fossil fuel sources i.e., Diesel and Petrol fuelled heating methods will be more efficient, although the evolving emission regulations at the vehicle's location, use of renewable energy sources that are remote from point of use and implications of such are always debatable.

Please read and follow these instructions and precautions carefully.

1.1 Important safety information

This section contains important safety information for the Modul-Connect EV Heater. Each time, before using the product, READ ALL instructions and cautionary markings on, or provided with the heater, and all appropriate sections of this guide.

The EV Heater has external and internal fusing, apart from the internal blade fuses (found by removing the top cover) there are no internal end user serviceable parts. Please see the Warranty (Section 8) for how to handle product issues.

The Modul-Connect EV Heater utilises 3 off PTC (Positive Temperature Coefficient) heaters to heat the ambient air temperature.

The surfaces of the PTC heaters are fully electrically insulated, this makes them safer to use and operate than traditional fixed-resistance heaters that use metallic wires and coils to generate heat, and Ceramic and semiconductor heating elements.

PTC heaters are self-regulating and run open-loop without any direct diagnostic controls.

They use Positive Temperature Coefficient materials i.e., materials that exhibit a positive resistance change in response to the increase in temperature.

Such a heater will produce high power when it is cold, and rapidly heat itself up to a constant output temperature.

Due to the exponentially increasing resistivity, the heater can never heat itself to warmer than its designed temperature.

Above this temperature its construction acts as an electrical insulator.

Therefore, the PTC heaters in the Modul-Connect EV Heater unit are self-regulating and self-limiting. Self-regulating means that every point of the heater independently keeps a constant temperature without the need of additional surface temperature regulating electronics.

Self-limiting means that the PTC heater can never exceed its maximum specified designed temperature at any point and requires no additional overheat protection. That said, for additional safety, the PTC heaters are all mounted within a non-conductive and temperature resistant isolated housing within the heater chassis, so physically double insulated for added safety.

In the event of an 'overheat' situation, there are 2 additional designed safety systems built into the EV Heater.

1. The control system will shut the heater down when the input temperature reaches 52°C and will not switch back on until the internal temperature is below 30°C. The fan will keep running as to cool the heater as quickly as possible.
2. In the very unlikely event of a total fan failure, control system failure, or Main power switch failure, we have included a single use non-resettable thermal fuse if the internal core temperature of the double insulated housing reaches 110°C the fuse will break contact shutting off the power to all the PTC heating elements and immediately shut off any heat output.

In its design, the Heater would work purely as a convection heater, however, to maintain the heaters integrity the temperature output is physically restricted to protect damage to any temperature sensitive items or equipment that is installed or stored within the vicinity of the heater.

DANGER: Fire and/or Burn Hazard.

Do not cover or obstruct any air vent openings and/or install in a zero-clearance compartment or restrictive area.

DANGER: Failure to follow these instructions can result in death or serious injury.

- This Heater is designed for Utility style Light Commercial Vehicles.
- Ensure that the fan of the Heater is running when the unit is in operation.
- The heater should not be used by children or those of restricted ability, without proper supervision and instruction.
- **DO NOT COVER the heater during use, put flammable material on, under or near the EV Heater.**
- Never operate the heater when the air supply is contaminated severely by dust or other airborne contaminants.
- The Heater casing can become hot to the touch with prolonged use.
- The Heater output ducting can become hot to the touch with prolonged use.
- Ensure the additional output ducting is run neatly and fixed securely away from any combustible material.
- Locate the Power leads so that they will not be stepped on, tripped over, or otherwise subject to damage or stress. DO NOT lay the Power or Control leads on the battery.
- DO NOT operate the system with damaged cables or plugs – have them replaced immediately.
- Where the Heater is used for applications without Modul-Connect as the control platform an integrated battery guard set to 10.5 volts for protecting the supplying battery is used in the Manual Control Switch variant.
- The heater has 1 x Blue LED on the front face which shows the fan only is running on a (cool) recycle mode or for 20 seconds after the Heater has been turned off to cool down.
- The heater has 3 x Amber LED's on the front face which shows the supply to its PTC heating elements, ensure one or more LED lights are illuminated when in 'Heat' mode.
- The Heater has a limited temperature heat output for safe operation in its designed environment, but must always be installed in a position where the air inputs and outputs are not in the vicinity of or direct line of, (and not limited to) the following:

Heater Output:

- Animals
- Children
- Any person with a sensory disability
- Flammable material, paper, cardboard, fabrics and similar
- Flammable liquids or gases
- Temperature sensitive product or equipment

Heater Input:

- Overly Wet or damp environments.
- Dust
- Airborne contaminants
- Flammable liquids or gases

Special safety regulations:

- The heater has many built in safety features, it is advisable where possible to operate it under surveillance, do not leave it unattended for an excessive amount of time when in use.
 - (See operational controls)
- **The Main power switch can be turned off for security and locks out the PTC heater. The power switch should only be turned Off in a safety situation and not with the heater running. Always operate the heater from the (DSP) Display Switch Panel, App, or the Manual Control switch on the front face (if fitted).**
- Never position your face near the Heater or look directly into the heater output without first isolating the Main power switch and wearing the correct PPE (Personal Protective Equipment).
- The heater and control operate on a low DC voltage, although do not expose to snow or use if water ingress has occurred within the Heater.
- In very cold ambient temperature, the heater will take longer to heat the designated area.

DANGER: Shock Hazard.

- Avoid dropping or inserting any sharp metal tool or object through the heater casing. Doing so could create a spark or short circuit.
- If removing the heater, ALWAYS disconnect the main Anderson power plug before disconnecting the Modul-Connect CAN cable if fitted.
- DO NOT modify the Heaters internal electrical system circuitry in anyway without written confirmation from Modul-System.
- In the unlikely event of an internal fuse needing replacement, only use the same rating fuse as removed.
- When installing electrical equipment, have someone nearby in case of an emergency.

DANGER: Explosion hazard!

- DO NOT use the Modul-Connect EV Heater in the vicinity of flammable fumes or gases (such as propane tanks or large engines).
- Make sure the area around the Heater is well ventilated.
- AVOID covering the ventilation openings. Always operate the heater unit with a minimum of 80mm 'free air gap' around the unit.
- Prolonged contact to high input heat or freezing temperatures will decrease the working life of the unit.

Waste Electrical and Electronic Equipment recycling (WEEE)

- Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities. Contact your local government for information regarding the collection systems available.

CE EMC INFORMATION

This equipment has been tested and found to comply with the limits for CE EMC standard. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

LIMITATIONS ON USE

Do not use in connection with life support systems or other medical equipment or devices.

2. Product description

This EV Heater unit allows you to heat your load area, Cab or 'drying' lockers.

The **26100-03** Heater is Primarily intended to use Modul-Connect or Modul-Connect PRO as its control platform and for full functionality must be fitted in conjunction with this system. Modul-Connect provides the control and battery management features required.

The Addition of the **Manual Control Switch** on the heater means that it can also be fitted as a "Stand-Alone" unit. When the Manual Control Switch is fitted this activates the internal battery guard. The heater also has an optional remote display switching screen, Availability TBA (available under separate part number/s)

This heater must in all cases be powered from an additional battery bank and NOT DIRECTLY from the vehicles Chassis battery.

This EV Heater unit is configured for optimum operation with any battery although AGM or Lithium are recommended over the use of lead acid or 'Leisure' type batteries.

The Modul-Connect EV Heater package 26100-03 includes the items listed below:

- EV Heater
- 4 meter Power cable with Main Power plug
- Power cable Mega Fuse holder
- Power cable 100a Mega Fuse
- 3 meter CAN Communication cable for Modul-Connect standard and PRO main boxes
- QR Code on heater for link to the Owner's manual

When specified the 26100-03 Modul-Connect EV Heater package can also include the EV Heater with the front mounted (26200-03) Temperature control rotational switch fitted.

The Heater has 2 air outlets, one to the front and an additional to the rear.

As default, the rear outlet is fitted with a push fit blanking cap (26107-03).

The rear outlet is for routing to the vehicles' Cab or Clothes locker.

Additional parts are needed if the air ducting to the rear is used.

The Heater will not function correctly, and airflow will be vastly reduced from the second output if the additional fan is not used on the rear output air ducting runs over 1 meter.

The additional fan needed for the flow of air in this application must be plugged into the heater for control at the rear. This additional fan is powered and controlled in the same manner as the main fan.

26101-03	Additional (cab or locker) 12v booster Blower unit
26102-03	Neoprene Heater Ducting - 51mm (4 meter length)
26103-03	Triple Vane Ball Vent 50mm (57mm mounting hole, max material thickness 5mm)

3. Installation

WARNING: Modul-System recommends that all wiring be done by a certified Technician or Electrician to ensure adherence to the applicable electrical safety wiring regulations and installation codes. Failure to follow these instructions can damage the unit and could also result in personal injury or loss of life.

CAUTION: Before beginning your installation, please consider the following:

- The 26100-03 Heater is intended to use Modul-Connect as its control platform and must be fitted in conjunction with this system or with the additional Manual Control Switch (26200-03).
- Modul-Connect provides the control and battery management features required.
- Modul-Connect PRO provides full functionality control and reporting features.
- This heater must in all cases be powered from an additional battery bank and NOT DIRECTLY from the vehicles Chassis battery.
- This EV Heater unit is configured for optimum operation with any additional AGM, Lithium, or lead acid batteries.
- The Modul-Connect EV Heater should be used or stored in an indoor type of area, away from direct sunlight, heat, moisture, or conductive contaminants.
- When installing the unit, allow a minimum of 80 mm of space around the unit for optimal ventilation.
- The Modul-Connect EV Heater does not require a solid fuel supply or any external exhaust requirements, therefore can be fitted in any Racking unit in a suitable mounting position and orientation in the vehicle with no holes required in the vehicle floor that contravene OEM vehicle manufactures no-drill areas.
- When using the 2nd air outlet to the rear of the heater any air duct pipe run over 1 metre must have the 2nd auxiliary blower fan (26108-03) fitted. In longer pipe runs the heater is designed not to build any back pressure to move the free-standing air in the longer pipe runs.

NOTE!

- **Modul-System recommends you purchase as much auxiliary battery capacity as possible.**
- **Modul-System recommends you purchase the correct charging infrastructure for the auxiliary battery system.**

Fuse or Circuit Breaker:

- The EV Heater must be fitted with 1 off in-line 100 amp fuse for the main battery connection on the positive +12 volt supply.
- The 100 amp DC-rated fuse and holder is required at the DC positive source to protect the cable run.
- Internal fusing with LED 'Blow' indication is located under the top cover of the heater, and this protects the internal components.
- In the unlikely event of one of these Blade fuses failing, never replace a fuse with one that has different amperage than the original. The Original Fuses are 2 x 2a and 3 x 25a rating.

Cable:

If the cord of the heater is damaged, it must be repaired by manufacturer or qualified electrician.

- Use low resistance cable for all the DC connections between the EV Heater and the battery bank.
- The EV Heater must be connected with input (Red) 25mm² cables.
- The input (Red) and input (Black) 25mm² cables should be cut to length as short as possible to suit the installation but there are no length restraints within the load area of the vehicle.
- The EV Heater must be fitted with the supplied 1 off in-line Mega 100A fuse for the main +12v battery connection.

Modul-Connect EV Heater Installation:

- Choose an appropriate mounting location.
- Ensure All fuses, fuse holders and connecting cables are the correct gauge to the product and position.
- The EV Heater must be securely mounted on a metal or non-combustible surface.
- Use a mounting template (if needed) to mark the positions of the M6 mounting screws.
- The EV Heater has multiple fixing holes for ease of mounting.
- It is recommended to use a minimum of 2 off M6 fixings to secure the EV Heater.
- The front M6 mounting holes are designed to align with Modul-System shelving.
- Using the 2 front mounting holes (minimum), place the Heater in position and fasten it to the mounting surface.

IMPORTANT: 26100-03 EV heater Connection Procedure / Power up sequence to ensure normal operations with a 24000-03/24000-032/24000-04 Modul-Connect Control Box.

1. Remove the 100A in-line fuse from the fuse holder.
2. Ensure the Main power switch on the heater is switched to the Off position.
3. Connect the CAN communication cable to the MOLEX pins on the **Modul-Connect**.
MOLEX Pin 8 Can High (Yellow) and MOLEX Pin 16 CAN Low (Green) - (CAN Comms port 1 on Modul-Connect)
4. Connect the CAN communication cable to the EV Heater.
5. Connect the main power cables to the positive battery terminal (with fuse holder) and battery negative or chassis earth.
6. Plug the Main power cable into the heater and secure.
7. Insert 100A battery fuse in the mega fuse holder.
8. **IMPORTANT: Power up the Modul-connect system, program the systems Inputs, outputs and switching functionality.**
9. Ensure the Main power switch on the heater is only then switched to the On position.
10. The Modul-Connect APP may take about a minute when connecting for the first time to the heater to retrieve the correct ambient temperature reading. If this does not happen close and restart the APP.

If this order is not followed the EV Heater switching via Modul-Connect may not function correctly. To reset, turn the Main power switch on the heater to the Off position and ensure Modul-Connect is operating correctly to resume normal function.

26200-03 Manual Control Switch (rheostat) installation

1. Remove the lid of the heater
2. Remove the grommet from the front of the heater
3. Disassemble the 'push fit' rotational control knob and nut from the rheostat
4. Place the rheostat in the hole and tighten the nut
5. Fit the temperature label icon over the rheostat with the 'Off' position at 9 o'clock
6. On the rear of the reostat plug the 5-way multi plug into the PCB control board

7. Ensure the rheostat and 'push fit' rotational control knob are aligned an operational in the 'Off' position at 9 o'clock
8. Refit the lid

With the rheostat connected the heater will now only work with the rheostat control switch and not with the CAN connection.

4. EV Heater DC input connection

Rear connections:



- DC Power +12v
-12v
- CAN CAN High (Yellow)
CAN Low (Green)
- Manual Switch Input
Input 1 +12V limits Heater to 200W
Input 2 +12V limits Heater to 400W
Input 3
- Serial Programming Pin 1
(No User Function) Pin 2
Pin 3

- The EV Heater must be fitted with 1 off in-line 100A fuse for the main battery connection.
- The 100 amp DC-rated fuse and holder is required at the DC positive source to protect the cable run.

CAN Connection 26100-03 Heater to Modul-Connect.

- The Heater is controlled and monitored by CAN 1 from the Modul Connect box as a default. Please use MOLEX Pin 8, CAN 1 High (Yellow) and MOLEX Pin 16, CAN 1 Low (Green) The CAN cables can be cut down in length if required but ensure that the MOLEX is NOT plugged in to the Modul-Connect box when doing so.

CAN Plug connection into the Heater:



CAUTION: Reversing the Main Power DC Input polarity at the connection plug will damage the unit and cannot be repaired.

Damage caused by a reverse polarity connection is NOT covered by the warranty.

5. EV Heater operation

At a petrol station:

When installed in:

(HEV) Hybrid Electric Vehicles

(PHEV) Plug-In Hybrid Electric Vehicles

(REEVs) Range Extended Electric Vehicles

IMPORTANT: The Heater must be switched OFF from 'heating' with the Phone APP or at a switch panel when fuelling any of the above EV vehicles at a petrol station.

EV vehicles should always be fitted with a Modul-Connect (DSP) Display Switch Panel in the Cab to show the heaters status to the operator the of the vehicle.

The 26100-03 Modul-Connect EV Heater operates with an input voltage between 10.5v – 15.5 v.

- The EV Heater is turned On and Off with the Modul Connect switches or by Phone APP or associated timer function. When a Manual Control switch for the temperature control to the front panel this 'overrides' the Modul-Connect control.
- Ensure the Main power Switch on the Heater is switched On to prior to any remote use. The Main power switch can be left turned On. When turned On (and the Fan is Off) the heater consumes minimal power (<6Ma)
 - **Safety:** The Main Power switch can be turned Off at any heater state to immediately shut Off the Heater elements.
 - **Function**
The heater has 4 LED's to the front face.
The top single Blue LED indicates the Fan status.
Each of the 3 Amber LED's indicate the heater status and heat output.
 - 1 Blue LED indicates Fan operation ONLY (recirculate)
 - 1 Blue LED and 1 amber LED indicates Fan operation and 200w of heat.
 - 1 Blue LED and 2 amber LED's indicates Fan operation and 400w of heat.
 - 1 Blue LED and 3 amber LED's indicates Fan operation and 600w of heat.
 - The heater control will 'ramp' the heating load On and Off through the power outputs to control the ambient and set achievable temperatures. i.e., when there is a large difference between the set temperature and ambient temperature the heater will run at maximum capacity, (600w) when nearing the set target temperature, the heater will ramp down the heater elements one at a time (600w > 400w > 200w > 0w - Recirculate) until the target temperature is reached. The heater will then monitor the ambient temperature and turn On/Off heating function and load accordingly.
 - The heater will recirculate and heat ambient air, it is not an air conditioner so will not significantly cool ambient air temperature.
 - **Turning off:**
The fan in the Heater will run on for 20 to 25 seconds after the heater is switched Off. This is to cool the PTC heating elements to prolong their usable life span.
- **Auxiliary blower fan (26108-03)**
- If the 2nd auxiliary blower fan (26108-03) is fitted – for secondary outlet, this operates in the same way as the OEM fan in the heater.

- All secondary safety fusing for the OEM Fan, Auxiliary blower fan and 3 x heating elements is located under the top cover of the heater, to the right-hand side (as viewed from the front) any issue is indicated by an illuminated led next to the fuse that can be viewed through the top cover of the heater without having to remove it.
- The heater output can be Electrically restricted if required.
On the rear of the EV Heater +12v can be applied into the Manual Switch Input.
Input 1 +12V limits Heater to 200W
Input 2 +12V limits Heater to 400W
Input 3 has no current function.
+12v can be supplied by the heaters supplying battery or via a 'link' cable between the Auxiliary fan output plug (+12v) and input pin 1 Or 2.

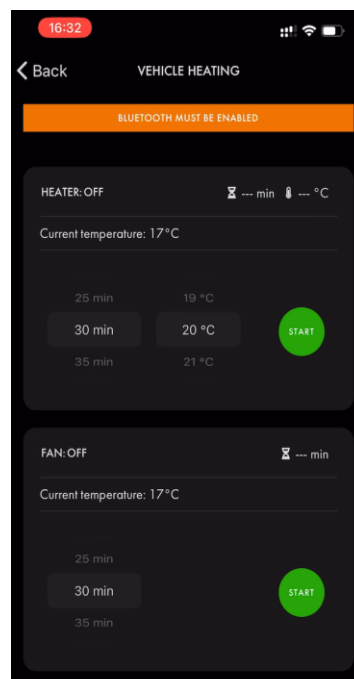
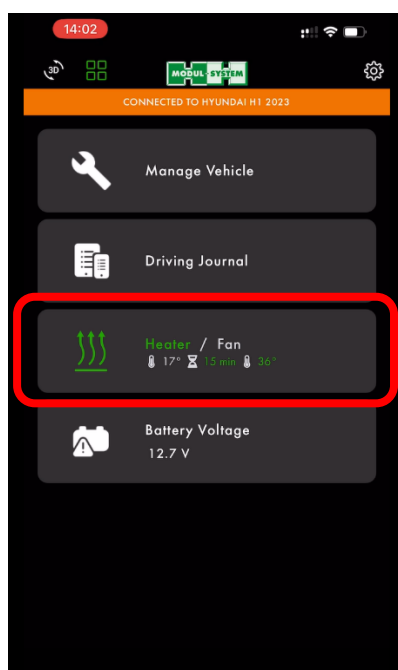
Modul-Connect switching Control by (DSP) Display Switch Panel:

- Use the (Right/Left, Up/Down and centre select) Navigation switches to scroll Right/Left to the Heater display.
When at the heater display press the centre select button to enter the settings.
Follow the on-screen instructions.



Modul-Connect Phone APP control:

- The Heater is best controlled via the Phone APP or DSP (Modul-Connect Display Switch Panel) as this gives the greatest control functionality.
- Follow the 'In-APP' instructions.
- Heater and Fan Function and Status can be seen on the HOME screen, the actual ambient temperature is shown on the left followed by the run timer and then the desired Set temperature on the right.
- On the settings screen heater function is at the top and Fan control at the bottom.



- An addition to the EV heater with manual switch functions and temperature control to the front panel of the heater is also available from Modul-System please enquire with your local market or Products page on www.Modul-System.com or www.Modul-System.co.uk
- The colour status LED indicators on the front of the Heater show the physical status as follows:

Status LED colour	Status LED output	Mode	Note
Off	Off	Off	Heater Off
Blue	Constant ON	Fan	Cooling / recirculation
Amber 1 (Blue On)	Constant ON	Heat	Fan and 200w Heating On
Amber 2 (Blue On)	Constant ON	Heat	Fan and 400w Heating On
Amber 3 (Blue On)	Constant ON	Heat	Fan and 600w Heating On

5.1 24/7 Timer function

For 24/7 remote switching functionality and live vehicle status reporting the 24000-032 Modul-Connect Pro or 24000-04 M-C Control Box (4th gen) control box should be used as a 'control' option.

6. Troubleshooting

To troubleshoot the Modul-Connect EV Heater,

- Ensure the supplying batteries are fully Charged by plugging the vehicle into a Shore supply charger.
- **The EV Heater has an internal battery guard set at 10.5 volts, the heater will not operate below this voltage.**
- Ensure that the power has not been disconnected by the main power switch or battery guard settings via Modul-Connect. This can be reviewed via the Phone APP Or DSP (Display Switch Panel).
- Please first note the Modul-Connect switch indication LED indication on the Heater.
- Check via the Modul-Connect APP that the voltage at the output pins is the same as the batteries and physically that the polarity is correct.
- Check LED indications on the Heater.
- Disconnect Power from Modul-Connect wait 30 seconds then reapply the power to reboot or reboot it from the 'Settings' tab on the Phone APP. The unit will automatically reset.
- Check that all the fuses located under the top cover of the Heater are OK.

- Fan fuses are 2 x 2 amp and heater PTC fuses are 3 x 25 amp. Only replace a broken fuse with a fuse of the same rating.
- Check that the Fan is not physically blocked.
- Do not operate the Heater if at least the 1st top Amber LED is not illuminated with the heater on the heat setting.
Investigate the cause for safe operation.
- UK Email Support: Email support@modul-connect.co.uk
- International Email Support: Email support@modul-connect.com

6.1 Understanding the errors

- In Fan mode the single Blue LED should be illuminated on the heater.
- In Heat mode 3 Amber LEDs should be illuminated on the heater.
- If none of the Amber LEDs are illuminated on the heater in heat mode and there is a large negative difference between the set heat requirement and ambient temperature, the heater is not blowing heat efficiently, the internal thermal fuse has activated.
- In the unlikely event of a total fan and control board failure, we have included a single use non-resettable thermal fuse. If the internal secondary insulated heater box temperature reaches 110°C the thermal fuse will break, contact shutting off the power to ALL the PTC heating elements and immediately shut off any further heat output. This is not easily replaceable, by the end user and the heater should be returned for Factory repair/replacement.

7. Technical specification

Note: The specifications are subject to change without notices.

Specification	Metric	Imperial & Other
26100-03		
26108-03 Additional (cab or locker) 12v booster Blower unit	24w Max inrush	
Fan Cool/Recirculate	24w Max inrush	
Heat Output	200w / 400w / 600w Max	2048 BTU Max
Air Nozzle Size	2x Ø 50 mm	2x Ø 2"
Airflow	187 m3/hr	110 cfm
PTC Heating Eliments	3 off	
Min Temperature	-10 °C	14 °F
Nominal heat Output Temperature	50 °C	122 °F
Max Output operating Temperature	60 °C	140 °F
Controlled saftey cutoff	52 °C Off reset On below 30 °C	125.6 °F / 86 °F
Mechanical saftey cutoff	110 °C	230 °F
Dimensions (LWH)	310 x 220 x 220 mm	12.2" x 8.7" x 8.7"
Weight	4.6 kg	10.14 lbs
Fan Speeds	Single Speed	
Fan Life	70,000 Hrs @ 40°C	70,000 Hrs @ 104°F
Noise	55 dB(A)	
Voltage	10.5v – 15.5v 12v Nominal	
Battery Guard default setting (internal)	10.5v (with 26200-03 Manual Control Switch)	
Current Max	52a Continuous, ~70a Inrush	
DC Power Cable	25mm ² Dc Battery Cable	
Current (sleep)	< 6Ma	
Current (main switch Off)	Zero Consumption (after 27 seconds)	
External Fusing	100a Mega Fuse	
Internal Fusing (Fan) + Aux	2 x 2 amp Standard Blade with remote LED Blow Indicator	
Internal Fusing (PTC Heaters)	3 x 25 amp Standard Blade with remote LED Blow Indicator	
Communication To/From Modul-Connect	CAN 1 (MOLEX Pin 8 &16)	
CAN Comms	Twisted Pair Yellow \ Green	
CAN Comms	High (Yellow cable)	Low (Green Cable)
Mounting	The Heater should be bolted into a shelf at the attachment points provided	
Internal 2nd Electrically insulated Heater Enclosure Construction	Aluminium construction	
External Heater Enclosure Construction	Powder Coated Graphite Gray Steel	

8. Warranty

TWO YEAR LIMITED WARRANTY

The limited warranty program is the only one that applies to this unit, and it sets forth all the responsibilities of Modul-System. There is no other warranty, other than those described herein. Any implied warranty of merchantability of fitness for a particular purpose on this unit is limited in duration to the duration of this warranty.

This unit is warranted, to the original purchaser only, to be free of defects in materials and workmanship for two years from the date of purchase without additional charge. The warranty does not extend to subsequent purchasers or users.

Manufacturer will not be responsible for any amount of damage in excess of the retail purchase price of the unit under any circumstances. Incidental and consequential damages are specifically excluded from coverage under this warranty.

This warranty does not apply to damage to units from misuse or incorrect installation/connection. Misuse includes wiring or connecting to improper polarity power sources.

RETURN/REPAIR POLICY:

If you are experiencing any problems with your unit, please contact our customer service department at info@modul-system.com or phone +46 31 746 87 00 before returning product. After speaking to a customer service representative, if products are deemed non-working or malfunctioning, the product may be returned to Modul-System within 30 days of original purchase. Any defective unit that is returned to manufacturer within 30 days of the date of purchase will be replaced free of charge.

If such a unit is returned more than 30 days but less than two years from the purchase date, manufacturer will repair the unit or, at its option, replace it, free of charge. If the unit is repaired, new or reconditioned replacement parts may be used, at manufacturer's option. A unit may be replaced with a new or reconditioned unit of the same or comparable design. The repaired or replaced unit will then be warranted under these terms for the remainder of the warranty period. The customer is responsible for the shipping charges on all returned items.

LIMITATIONS:

This warranty does not cover accessories, such as adapters and batteries, damage or defects result from normal wear and tear (including chips, scratches, abrasions, discoloration or fading due to usage or exposure to sunlight), accidents, damage during shipping to our service facility, alterations, unauthorized use or repair, neglect, misuse, abuse, failure to follow instructions for care and maintenance, fire and flood.

If your problem is not covered by his warranty, contact our Customer Service Department info@modul-system.com or +46 31 746 87 00 for general information if applicable.