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Empowering you to work smarter

NSV1 **Smart Refrigerant Valve**

User Manual



Failure to follow warnings could result in death or serious injury.

SAVE THIS MANUAL
FOR FUTURE REFERENCE



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I. Safety Information

Please read this manual carefully before operating, overhauling, or maintaining the product in order to fully understand the safety issues and precautions necessary for its proper use and operation to ensure long-term, stable operation.

Please carefully verify that the product you received matches your order, that all accessories and the instruction manual are complete, and that there is no damage from transportation. If you find any of the above situations, please contact customer service or local distributor promptly.

By carefully reading the manual and adopting the correct operation, you can ensure both the safe operation and the service life of this equipment.

Dispose of This Product Correctly



This mark indicates that this product should not be disposed of with other household waste. It is important to prevent uncontrolled waste disposal that may be harmful to the environment or human health, please use a return and collection system or contact the retailer from whom you purchased the product. They can recycle this product in an environmentally safe manner.



Warning

Indicates a risk of injury or death if used incorrectly.

Caution

Indicates improper use may cause damage to the equipment, preventing it from operating properly or reducing its performance.

Warning

1. This equipment must be operated by qualified personnel who are familiar with air conditioning and refrigeration systems!
2. All components (system, refrigerant meter valve group, refrigerant cylinder, etc.) should be properly and securely grounded before starting this equipment!
3. Please open the equipment to check whether the sealing is proper before using it to prevent refrigerant leaks that could pose a risk to personnel!
4. Please wear protective gloves and goggles during operation to prevent the refrigerant from coming into contact with your skin or eyes and causing harm to your health!
5. Connect the tubes of this equipment according to the instructions to prevent the wrong connection that could lead to refrigerant leaks and harm to personnel!
6. The product shall not be used in a potentially explosive environment!

Caution

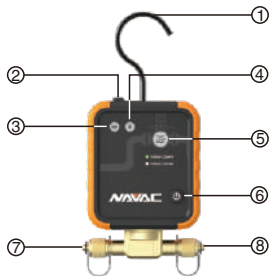
1. Please open the equipment before use to check whether the power is sufficient or not!
2. Please check the equipment before use to ensure that the metal valve opens and closes normally!
3. Please check the equipment before use to ensure that the sealing of the metal valve is functioning properly!
4. Please screw the copper cap on the inlet and exhaust joints after using the equipment!
5. After completing the charging process, the refrigerant flow in the refrigerant cylinder should be stopped!
6. The smart solenoid valve shall not be used near a magnetic field!

II. Technical Specification






Environmental Conditions	Operating temperature: -10 ~ 50 °C / 14 ~122 °F Storage temperature: -10 ~ 50 °C / 14 ~122 °F Humidity in the operating area: 10...90 % RH
Applicable Refrigerant	Class III: R12, R134a, R401C, R406A, R500
	Class IV: R22, R401A, R401B, R402B, R407C, R407D, R408A, R409A, R502, R509
	Class V: R143A, R402A, R404A, R407A, R407B, R410A, R507
Power Supply	Power: Battery pack rated at 7.4v DC (rechargeable) Battery pack life: > 60 h with 2000 cycles of solenoid valve operation
Interface	2.4Ghz support BLE5.0 Bluetooth transmitting module
Maximum Operating Pressure	551 psi
Bluetooth Range	>98.4' (30m) (no obstruction around)
Protection Class	IP54
Dimensions	4.76"H × 3.62"W × 1.87"D
Net weight	1.33 lbs



III. Product Overview

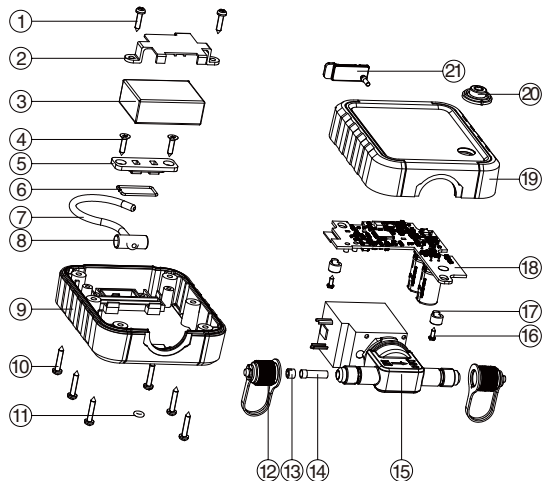


1. Folding Hook
2. Charging port
3. Power indicator

	Power Indicator
	Red indicates charging
	Green indicates charging fully charged
	Flashing green 25% < power ≤ 100%
	Flashing yellow 5% < power ≤ 25%
	Flashing red power ≤ 5%

4. Bluetooth indicator: Shows the Bluetooth status of the device.
 - Flashing yellow: Bluetooth not connected (standby mode).
 - Flashing blue: Bluetooth connected.
 - Flashing red: Bluetooth module error.
5. Valve indicator: Indicates the device's valve status.
 - Always green: Open valve.
 - Off: Closed valve.
 - Flashing red: Abnormal.
6. Operation buttons: Control the device's power and manage the opening and closing of the metal valve.
 - Turn on the device: Press and hold the button for 2 seconds
 - Turn off the device: Press and hold the button for 2 seconds .
 - Open the valve: Press the button twice within 0.3 seconds while the device is on. The valve will open for 1 second before closing.
 - Close the valve: Press the button while the valve is open to close it instantly.
7. Refrigerant input port: 1/4" SAE.
8. Refrigerant output port: 1/4" SAE.

IV. Structural Breakdown Diagram



Spare Parts List

No.	Item
1	Cross Recessed Pan Head Tapping Screws
2	Electromagnetic Cover
3	Lithium Battery Pack
4	Cross Recessed Countersunk Head Tapping Screws
5	Hook Pressure Plate
6	O-Ring
7	Hook
8	O-Ring
9	Lower Housing
10	Cross Recessed Pan Head Tapping Screws
11	O-Ring
12	Copper Cap Assembly
13	Strainer Press Studs
14	Strainer
15	Self-retaining Valve
16	Cross Recessed Countersunk Head Tapping Screws
17	Compression caps
18	PCB Assembly
19	Upper Housing
20	Pushbutton
21	Plug

