

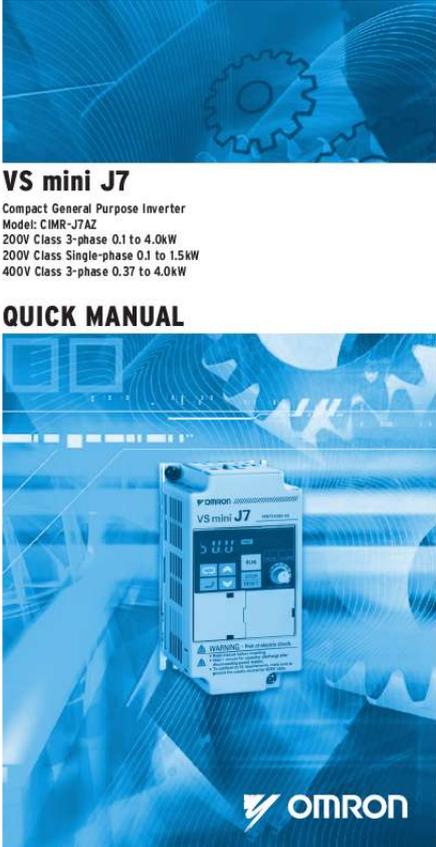


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You can read the recommendations in the user guide, the technical guide or the installation guide for OMRON CIMR-J7AZ. You'll find the answers to all your questions on the OMRON CIMR-J7AZ in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual OMRON CIMR-J7AZ
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Manual No.
D1K43-01



VS mini J7
Compact General Purpose Inverter
Model: CIMR-J7AZ
200V Class 3-phase 0.1 to 4.0kW
200V Class Single-phase 0.1 to 1.5kW
400V Class 3-phase 0.37 to 4.0kW

QUICK MANUAL

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Manual abstract:

Make sure all covers and shields are replaced before operating the product. This manual may be modified when necessary because of improvements to the product, modifications, or changes in specifications. To order a copy of this manual, or if your copy has been damaged or lost, contact your OMRON YASKAWA Motion Control B. OYMC is not responsible for any modification of the product made by the user, since that will void the guarantee. The following conventions are used to indicate precautions in this document. Failure to heed precautions provided in this document can result in serious or possibly even fatal injury or damage to the products or to related equipment and systems. Indicates precautions that, if not heeded, WARNING could possibly result in loss of life or serious injury. Indicates precautions that, if not heeded, could result in relatively serious or minor injury, damage to the product, or faulty operation. Failure to heed a precaution classified as a caution can result in serious consequences depending on the situation. @@@@ Confirm that all indicators are OFF before proceeding.

@@ Do not remove the Digital Operator or the blank cover unless the power supply is turned OFF. Never touch the printed circuit board (PCB) while the power supply is turned ON. This Inverter is not suitable for use on a circuit capable of delivering more than 18,000RMS symmetrical amperes, 250 volts maximum (200V class Inverters) or 480 volts maximum (400 V class Inverters). Low voltage wires shall be wired with Class I Wiring. Only basic insulation to meet the requirements of protection class I and overvoltage category II is provided with control circuit terminals.

Additional insulation may be necessary in the end product to conform to CE requirements. For 400 V class Inverters, make sure to ground the supply neutral to conform to CE requirements. Our products are tested by authorized bodies using the standards listed below. Do not install or operate any Inverter that is damaged or has missing parts. Failure to observe this caution may result in injury or equipment damage.

Verify that the part numbers match your purchase order or packing slip. Check the unit for physical damage that may have occurred during shipping. An English warning display is on the front panel of the inverter. If you need Japanese or French warning display, use the stickers at the back of this manual. When moving the Inverter, never lift it by the plastic case or the terminal covers. Otherwise, the main unit may fall and be damaged. Failure to observe this caution may result in a fire. When mounting Inverters in an enclosure, install a fan or other cooling device to keep the intake air temperature below 122°F (50°C) for IP20 (open chassis type), or below 105°F(40°C) for NEMA1 (TYPE1). Only begin wiring after verifying that the power supply is turned OFF. Failure to observe this warning may result in an electric shock or a fire.

Wiring should be performed only by qualified personnel. Failure to observe this warning may result in an electric shock or a fire. When wiring the emergency stop circuit, check the wiring thoroughly before operation. Failure to observe this warning may result in injury. Always ground the ground terminal according to the local grounding code. Failure to observe this warning may result in an electric shock or a fire. For 400V class, make sure to ground the supply neutral. Failure to observe this warning may result in an electric shock or a fire. If the power supply is turned ON during the FWD(or REV) RUN command is given, the motor will start automatically. Turn the power supply ON after verifying that the RUN signal is OFF.

Failure to observe this warning may result in injury. @@ Failure to observe this warning may result in injury. Verify that the Inverter rated voltage coincides with the AC power supply voltage. Failure to observe this caution may result in personal injury or a fire. To connect a Braking Resistor, Braking Resistor Unit, or Braking Unit, follow the Procedure described in this manual.

Failure to observe this caution may result in a malfunction, damage or a fire. @@@@ Failure to observe this caution may result in injury. Do not perform signal checks during operation. @@@@ Failure to observe this warning may result in an electric shock. @@ Failure to observe this warning may result in an electric shock.

@@ Failure to observe this warning may result in an electric shock. @@ The Inverter may restart suddenly after stopping. @@) Failure to observe this warning may result in injury. @@ The Inverter may restart suddenly after stopping. @@) Failure to observe this warning may result in injury. Failure to observe this warning may result in injury. Failure to observe this warning may result in injury. @@ Failure to observe this warning may result in injury. Never touch the heatsinks, which can be extremely hot. @@ It is easy to change operation speed from low to high.

@@@@ Failure to observe this caution may result in injury. @@ Failure to observe this caution may result in injury. Do not perform signal checks during operation. Failure to observe this warning may result in an electrical shock. @@ Confirm that all indicators are OFF before proceeding. @@ Do not perform withstand voltage test on any part of the VS mini. @@) Failure to observe these warnings may result in an electric shock. @@ Failure to observe this caution may result in injury. @@@@ 8 x 104 Pa, 57 to 85 psi (4 to 6kg / cm²) pressure If dust or oil cannot be removed, replace the inverter unit. Part Replacement Guidelines Part Cooling fan Smoothing capacitor Breaker relays Fuses Aluminium capacitors on PCBs Standard Replacement Period 2 to 3 years 5 years 10 years 5 years Replacement Method Replace with new part.

Failure to observe this warning can result in an electric shock or injury and will invalidate the guarantee. Do not subject the Inverter to halogen gases, such as fluorine, chlorine, bromine, and iodine, at any time even during transportation or installation. Otherwise, the Inverter can be damaged or interior parts burnt. Note 1: Connect single-phase 200 V AC to terminals R/L1 and S/L2 of the J7AZB Note 2: The braking resistor cannot be connected because no braking transistor is incorporated. Symbol Input S1 S2 S3 S4 S5 SC FS FR FC Output MA MB MC AM AC Function Forward at ON/Stops at OFF Set by parameter n36 (Reverse/Stop)*2 Set by parameter n37 (External Fault: NO)*2 Set by parameter n38 (Fault Reset)*2 Set by parameter n39 (Multi-step reference 1)*2 Sequence Input Common Common for S1 through S5 Frequency Reference Power Supply DC power supply for frequency reference use Frequency Reference Input Input terminal for frequency reference use Frequency Reference Common Common for frequency reference use Multi-function output: NO Multi-function output: NC Multi-function output Common Analogue Monitor output Analogue Monitor output Common Set by parameter n40 (during running)*2 Common for MA and MB use Set by parameter n44 (Output frequency)*2 Common for AM use Name Forward/Stop Multi-function Input 1 Multi-function Input 2 Multi-function Input 3 Multi-function Input 4 Signal Level Photocoupler 8 mA at 24 V DC*1 Refer to connections shown below *2 Functions in parentheses are default settings.



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Selecting Input Method Switches SW7 and SW8, both of which are located above the control circuit terminals, are used for input method selection. Remove the front cover and optional cover to use these switches. Control circuit terminal block Control circuit terminal block Selecting Sequence Input Method By using SW7, NPN or PNP input can be selected as shown below Ground Bonds (remove any paint) Ground Bonds (remove any paint) Sets the frequency reference within a range between 0Hz and the maximum frequency. The frequency reference can be monitored or set while this indicator is lit. The output frequency of the Inverter can be monitored or set while this indicator is lit.

The output current of the inverter this indicator is lit. The values set in U01 through U10 are monitored while this indicator is lit. The direction of rotation can be selected while this indicator is lit when operating the Inverter with the RUN Key. Function The operation of the Inverter through the Digital Operator or according to the set parameters is selectable while this indicator is lit. Note: The status of this indicator can be only monitored while the Inverter is in operation. Any RUN command input is ignored while this indicator is lit. The parameter in n01 through to n79 can be set or monitored while this indicator is lit. Note: While the Inverter is in operation, the parameter can be only monitored and only some parameters can be changed. Any RUN command input is ignored while this indicator is lit. switches the setting and monitor item indicators in sequence.

Parameter being set will be cancelled if this key is pressed before entering the setting. increases multi-function monitor numbers, parameter numbers and parameter set values. Decreases multi-function monitor numbers, parameter numbers and parameter set values. Enters multi-function monitor numbers, parameter number and internal data values after they are set or changed. Starts the Inverter running when the 3G3JV is in operation with the Digital Operator.

Stops the Inverter unless parameter n06 is not set to disable the STOP Key. The following seven steps describe the recommended minimum operations to allow the J7 to control a connected motor in typical configuration, to allow simple operation in the quickest time: Step 1 initial checks 1-1 Checkpoints before connecting the power supply. Check that the power supply is as of the correct voltage. CIMR-J7AZ2@@@: Three phase 200 to 230VAC CIMR-J7AZB@@@: Single phase 200 to 240VAC (Wire R/L1 and S/L2) CIMR-J7AZ4@@@: Three phase 380 to 460VAC 1-2 Make sure that the motor output terminals (U/T1, V/T2, W/T3) are connected to the motor. 1-3 Ensure that the control circuit terminals and the control device are wired correctly.

1-4 Make sure that all control terminals are turned off. @@2-2 If the detection level. @@The Load is too large, reduce it or use larger Inverter. check motor FLA rating compared to inverter and V/F setting. Load inertia is too large and the motor is regenerating.

@@@The inverter is protecting the motor from overload based on an internal IT Increase the running speed of the motor. External fault Check your control terminal wiring. Run signal must be removed before this can be reset. Inverter must be stopped when Local/Remote switching attempted. Sequence error Inverter must be stopped when Comms/Remote switching Sequence input when inverter attempted running.

Entradas multifuncionales Valor*1 8 10 12 13 17 Función Referencia de multivelocidad 3 Comando Marcha por impulsos Base block externo (NA) Base block externo (NC) Selección local/remota Entradas multifunções Valor*1 7 8 10 12 13 17 Função Velocidade de referência multi-step 2 Velocidade de referência multi-step 3 Comando por impulsos Base block externo (NO) Base block externo (NC) Seleção local/remota In the event that the end user of this product is to be the military and said product is to be employed in any weapons systems or the manufacture thereof, the export will fall under the relevant regulations as stipulated in the Foreign Exchange and Foreign Trade Regulations. Therefore, be sure to follow all procedures and submit all relevant documentation according to any and all rules, regulations and laws may apply. Specifications are subject to change without notice for ongoing product modifications and improvements. Note: Specifications subject to change without notice. .



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