

# VARISPEED-626M5

# INSTRUCTION MANUAL

VECTOR-CONTROLLED INVERTER FOR MACHINE TOOLS (VS-626M5)

MODEL: CIMR-M5A ☐

200V CLASS 5 to 40HP (3.7 to 30kW)

400V CLASS 7.5 to 60HP (5.5 to 45kW)

CONVERTER WITH POWER REGENERATIVE FUNCTION (VS-656MR5)

MODEL: CIMR-MR5A ☐

200V CLASS 5 to 40HP (3.7 to 30kW) (7 to 48kVA)

400V CLASS 7.5 to 60HP (5.5 to 45kW) (9 to 70kVA)

---

Upon receipt of the product and prior to initial operation, read these instructions thoroughly, and retain for future reference.

---



---

# CONTENTS

|                                                                       |    |
|-----------------------------------------------------------------------|----|
| NOTES FOR SAFE OPERATION .....                                        | 4  |
| 1 RECEIVING .....                                                     | 13 |
| 1.1 INSPECTION CHECKPOINTS .....                                      | 13 |
| 1.2 IDENTIFYING THE PARTS .....                                       | 15 |
| 2 INSTALLATION .....                                                  | 17 |
| 2.1 CHOOSING A LOCATION TO MOUNT THE CONVERTER .....                  | 17 |
| 2.2 CLEARANCES .....                                                  | 18 |
| 3 WIRING .....                                                        | 20 |
| 3.1 CONNECTION WITH PERIPHERAL UNITS .....                            | 21 |
| 3.2 CONNECTION DIAGRAM .....                                          | 22 |
| 3.3 WIRING THE MAIN CIRCUIT .....                                     | 23 |
| 3.4 WIRING THE CONTROL CIRCUIT .....                                  | 39 |
| 3.5 WIRING INSPECTION .....                                           | 46 |
| 4 OPERATION .....                                                     | 47 |
| 4.1 TEST RUN .....                                                    | 47 |
| 4.2 CONTENTS OF 7-SEGMENT LED DISPLAY .....                           | 49 |
| 5 OPERATION OF DIGITAL OPERATOR .....                                 | 51 |
| 5.1 MOUNTING OF DIGITAL OPERATOR .....                                | 51 |
| 5.2 FUNCTIONS OF DIGITAL OPERATOR .....                               | 52 |
| 5.3 KEY OPERATIONS AND DISPLAY .....                                  | 55 |
| 6 MAINTENANCE AND INSPECTION .....                                    | 61 |
| 6.1 PERIODIC INSPECTION .....                                         | 62 |
| 6.2 PARTS REPLACEMENT SCHEDULE (GUIDELINES) .....                     | 62 |
| 7 TROUBLESHOOTING .....                                               | 63 |
| 7.1 LIST OF CONVERTER FAULTS .....                                    | 64 |
| 7.2 LIST OF INVERTER FAULTS .....                                     | 65 |
| 7.3 MOTOR FAULTS AND CORRECTIVE ACTIONS .....                         | 69 |
| APPENDIX 1 SPECIFICATIONS .....                                       | 73 |
| APPENDIX 2 DIMENSIONS .....                                           | 77 |
| 2.1 INVERTER (VS-626M5) Heatsink Externally Cooling Type .....        | 77 |
| 2.2 INVERTER (VS-626M5) Open Chassis Type .....                       | 78 |
| 2.3 CONVERTER (VS-656MR5) Heat Sink Externally Cooling Type .....     | 79 |
| 2.4 CONVERTER (VS-656MR5) Open Chassis Type .....                     | 80 |
| 2.5 PANEL CUTOUT DIMENSIONS (Heat Sink Externally Cooling Type) ..... | 81 |
| 2.6 CALORIFIC VALUE AND COOLING AIR SPEED .....                       | 82 |

---

|                                                                    |    |
|--------------------------------------------------------------------|----|
| APPENDIX 3 PERIPHERAL UNITS .....                                  | 84 |
| 3.1 SPECIFICATIONS OF AC REACTOR (Model: UZBA-B for 50/60Hz) ..... | 84 |
| 3.2 SPECIFICATIONS OF MCCB AND MC .....                            | 86 |
| 3.3 MAGNETIC CONTACTOR SPECIFICATIONS FOR WINDING SELECTION .....  | 87 |
| APPENDIX 4 TYPICAL CONNECTION DIAGRAM .....                        | 88 |
| 4.1 WINDING SELECTION TYPE .....                                   | 88 |
| 4.2 STOP AT ARBITRARY POSITION BY LOAD SHAFT ENCODER .....         | 89 |
| 4.3 STOP AT HOME/ARBITRARY POSITION BY MAGNETIC SENSOR .....       | 90 |
| APPENDIX 5 OPERATION STATUS DISPLAY .....                          | 91 |
| APPENDIX 6 CONTROL CONSTANTS .....                                 | 93 |