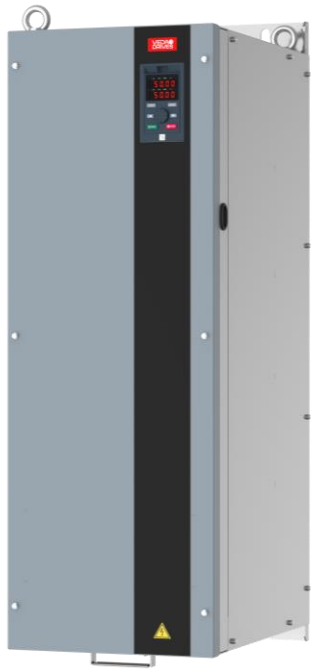
# RD11 UNI series
# VEDA-in frequency converters

A universal frequency converter for heating, ventilation and air conditioning, as well as pump applications and general industrial applications, including heavy duty start



**RD11 series** refers to frequency converters for heating, ventilation and air conditioning, as well as pump applications and general industrial applications, including heavy duty start. The drive is designed for operation in supply mains 1×220V, 3×380V, 3×660V and power from 0.75 to 1120 kW; it can be executed with normal and high overload. The drive has a built-in RS-485 network interface. The RD11 frequency converter is able to control asynchronous and synchronous motors.

Having “booklet” design, this drive series allows for wall-to-wall mounting without compromising performance. Separation of the cooling system prevents air flow through the electronic components, which increases the service life of the frequency converter. The efficient cooling system allows operation at ambient temperatures up to 50 °C. The device has removable cooling fans for easy maintenance.

RD11 UNI Drive reduces costs and commissioning time due to built-in elements such as EMC filter, brake interrupter unit, and user-friendly operator panel with potentiometer. The drive has a modular structure and its functionality can be extended by special additional boards.

Automatic adaptation to the motor (with or without motor rotation) is available for this series, which makes commissioning quick and easy. The device has a built-in DC link choke (55 kW and more) that reduces harmonic distortion to less than 45% THiD and extends service life of the frequency converter.

**Power range**

3×380 V ..... 0.75–1120 kW
3×660 V ..... 22–1120 kW
1×220 V ..... 0.75–11 kW

**Enclosure rating**

IP20, IP54

| Special features | Advantages |
|---|---|
| **Reliability** | **Extended operational life** |
| Maximum ambient temperature 50 °C without reducing nominal parameters | Reliable operation at elevated temperatures |
| Protective coating of boards | For operation in aggressive environments and longer service life |
| Smart cooling system without air entering electronic components | Increased component service life |
| **User comfort** | **Reduced commissioning and maintenance costs** |
| Built-in basic-category EMC filter | No additional filter required |
| Built-in operator panel with potentiometer | Efficiency on additional operator console and ease of use |
| Automatic adaptation to the motor | Saves time for start and more accurate determination of motor parameters |
| **Additional features** | **Energy and cost efficiency** |
| DC line choke (from 55 kW) | Reduced harmonic distortion and increased service life |
| Maximum length of shielded cable up to 150 m | No additional devices required for EMC compliance |
| Built-in brake chopper unit up to 22 kW | Saves space in control cabinet; buying an external interrupter is not required |

## Technical specifications

| Input specifications of the supply mains | |
|---|---|
| Input voltage | S2: 1 × 220 V, T4: 3 × 380 V, T6: 3 × 660 V |
| Permitted tolerance | Voltage unbalance level <3% |
| Mains frequency | 50/60 Hz ±5% |
| **Output characteristics (U, V, W)** | |
| Output voltage | 0–100% of input voltage |
| Output frequency | 0–299 Hz ± 0.5% |
| Overload capacity | 150% for 1 minute, 180% for 10 s, 200% for 0.5 s |
| **Key regulatory indicators** | |
| Motor type | Asynchronous, synchronous electric motors |
| Motor control type | U/f, vector control without feedback, vector control with feedback |
| Switching frequency | 1–16 kHz |
| **Key features** | |
| Analog input | 2 (0–10 V or 0/4–20 mA) |
| Relay | 1 |
| Analog output | 1 0–10 V, 0/4–20 mA, pulsed |
| Digital inputs and outputs | 5 inputs, 1 output |
| Display | Built-in digital |
| **Environment, type of drive** | |
| Case | IP20, IP54 (IP55 customized) |
| Maximum height | 1000 m, further feature decrease 1%/100 m |
| Operating temperature | -10 °C ... 50 °C. Decrease of nominal performance when exceeding 40 °C |
| Vibration | 0.6 g in the range of 9–200 Hz |

## Options for RD11 UNI Drive frequency converters

| Order code | Type code |
|---|---|
| 11A00PAC001 | External digital two-line keyboard |
| 11A00PAC002 | RD11 ProfiBus option |
| 11A00PAC003 | RD11 ProfiNet option |
| 11A00PAC004 | RD11 option for expansion of inputs/outputs |
| 11A00PAC005 | RD11 Encoder option 5 V |
| 11A00PAC006 | RD11 Encoder option 12 V |
| 11A00PAC007 | RD11 Resolver option |
| 11A00PAC008 | RD11 CAN option |
| 11A00PAC009 | External digital one-line keyboard |
| 11A00PAC010 | External graphical operator keyboard |
| 11A00PAC013 | RD11 Modbus TCP/IP option, 24 V |

## Ordering codes for RD11 UNI Drive, 3x380V

| Power, kW | Current, A | Ordering codes | | | | | |
|---|---|---|---|---|---|---|---|
| 0.75 | 3 | 11A00AAC101 | x | x | 11A00AAC001 | x | x |
| 1.5 | 4 | 11A00AAC102 | x | x | 11A00AAC002 | x | x |
| 2.2 | 6 | 11A00AAC103 | x | x | 11A00AAC003 | x | x |
| 4 | 10 | 11A00AAC104 | x | x | | x | x |
| 5.5 | 13 | 11A00AAC105 | x | x | 11A00AAC004 | x | x |
| 7.5 | 17 | 11A00AAC106 | x | x | 11A00AAC005 | x | x |
| 11 | 25 | 11A00AAC107 | x | x | 11A00AAC006 | x | x |
| 15 | 32 | 11A00AAC108 | x | x | 11A00AAC007 | x | x |
| 18.5 | 38 | 11A00AAC109 | x | x | 11A00AAC008 | x | x |
| 22 | 45 | 11A00AAC110 | x | x | 11A00AAC009 | x | x |
| 30 | 60 | 11A00AAC118 | 11A00AAC111 | x | 11A00AAC010 | x | x |
| 37 | 75 | 11A00AAC119 | 11A00AAC112 | x | 11A00AAC018 | 11A00AAC011 | x |
| 45 | 90 | 11A00AAC120 | 11A00AAC113 | 11A00AAC123 | 11A00AAC019 | 11A00AAC012 | x |
| 55 | 110 | 11A00AAC121 | 11A00AAC114 | 11A00AAC124 | 11A00AAC020 | 11A00AAC013 | 11A00AAC023 |
| 75 | 150 | 11A00AAC122 | 11A00AAC115 | 11A00AAC125 | 11A00AAC021 | 11A00AAC014 | 11A00AAC024 |
| 90 | 180 | x | 11A00AAC116 | 11A00AAC126 | 11A00AAC022 | 11A00AAC015 | 11A00AAC025 |
| 110 | 210 | x | 11A00AAC117 | 11A00AAC127 | x | 11A00AAC016 | 11A00AAC026 |
| 132 | 250 | x | x | 11A00AAC128 | x | 11A00AAC017 | 11A00AAC027 |
| 160 | 310 | x | x | 11A00AAC129 | x | x | 11A00AAC028 |
| 185 | 340 | x | x | 11A00AAC130 | x | x | 11A00AAC029 |
| 200 | 380 | x | x | 11A00AAC131 | x | x | 11A00AAC030 |
| 220 | 415 | x | x | 11A00AAC132 | x | x | 11A00AAC031 |
| 250 | 470 | x | x | 11A00AAC133 | x | x | 11A00AAC032 |
| 280 | 510 | x | x | 11A00AAC134 | x | x | 11A00AAC033 |
| 315 | 600 | x | x | 11A00AAC135 | x | x | 11A00AAC034 |
| 355 | 670 | x | x | 11A00AAC136 | x | x | 11A00AAC035 |
| 400 | 750 | x | x | 11A00AAC137 | x | x | 11A00AAC036 |
| 450 | 810 | x | x | 11A00AAC138 | x | x | 11A00AAC037 |
| 500 | 860 | x | x | 11A00AAC139 | x | x | 11A00AAC038 |
| 560 | 990 | x | x | 11A00AAC140 | x | x | 11A00AAC039 |
| 630 | 1200 | x | x | 11A00AAC141 | x | x | 11A00AAC040 |
| 710 | 1340 | x | x | 11A00AAC142 | x | x | 11A00AAC041 |
| 800 | 1500 | x | x | 11A00AAC143 | x | x | 11A00AAC042 |
| 900 | 1620 | x | x | 11A00AAC144 | x | x | 11A00AAC043 |
| 1000 | 1720 | x | x | 11A00AAC145 | x | x | 11A00AAC044 |
| 1120 | 1980 | x | x | 11A00AAC146 | x | x | 11A00AAC045 |
| Overload | | 150% | 150% | 150% | 120% | 120% | 120% |
| Brake chopper unit | | built-in | external | external | built-in | external | external |
| DC Choke | | external | external | built-in | external | external | built-in |

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