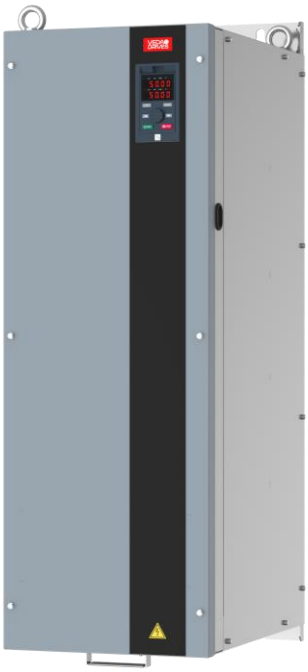
RD11 UNI series
VEDA-in frequency converters

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
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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