

**ROOFTOP UNIT ENERGY EFFICIENCY MADE EASY** 

# **Climatix** Variable Frequency Drives

usa.siemens.com/climatix-vfd

# Simplified setup saves weeks in labor

The Climatix VFD series is designed specifically for use in new or existing rooftop unit fan applications to provide the energy efficiency needed in an easily integrated, compact, cost-effective VFD. It leverages the Climatix RT controller to simplify commissioning, monitoring, and troubleshooting.

# **Features & Benefits**

# **Compact Form**

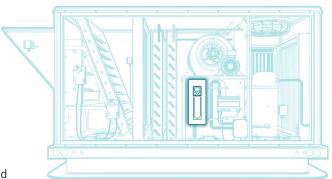
Designed to fit nicely in tight spaces with a size 40% smaller than other VFDs – ideal for RTU retrofits.

# **Conformal Coated PCBs**

Durable in harsh environments, the Climatix VFD printed circuit boards are built to withstand dust and moisture build-up.

# Ease of Use

- Easy commissioning with Climatix mobile app
- Compatible with existing induction motor or permanent magnet motors
- VFD configuration for induction motors with 10 or fewer parameters (25 or fewer for permanent magnet motors)
- Real-time status monitoring with pre-configured Climatix IC dashboards
- Easy access to boards via screwless front cover
- Removeable fan for easy maintenance
- Flexible mounting options for easy installation



# **Additional Features**

- Built-in Safe Torque Off (STO)
- Multi-motor control up to 4 motors
- Built-in PID
- · Phase loss protection
- · Plenum rated
- · DC braking
- Operating temperature -4° to 122° F (-20° to 50° C) without derating
- Certifications: UL, CE, RCM, TUV (SIL 2), RoHS, REACH

# Accessories

- Replacement fan kit VFD frames B-E
- EMC filter
- · Remote mounting kit
- · Line / load reactors
- DC choke

# **Easy system integration** with Siemens RTU Solution

Climatix rooftop unit solutions are designed to deliver better efficiency, comfort and savings to small, commercial buildings who want to use what they already have...just make it work more reliably, more cost effectively and improve the building environment and air quality.

Experience a new level of programming simplicity with the VFD sequence of operations preset in the Climatix RT controller for one-step commissioning.

The Climatix mobile app completes programming with a press of the button. Combine with Climatix IC remote monitoring and you always know the exact VFD setting and RTU fan performance.

# **Save Programming Time** All settings pre-configured in the controller

Simple Mobile App Commission a VFD in minutes...not days. Troubleshoot remotely to save unnecessary trips

**Designed for RTUs** Hassle-free communication Know exact performance with controller and quick startup

Remote Monitoring status and avoid unnecessary truck rolls

# **Commissioning Options**

# **Standard Configuration**

The Climatix mobile app simplifies VFD programming by connecting to the Climatix RT controller to configure communications and set RTU application defaults.

## Ideal for:

- Standard RTUs
- Fan applications

### **Benefits:**

- Easy to use
- · Fastest commissioning with customized RTU configuration wizard
- · Easily copy setup from unit to unit

# **Advanced Configuration**

Directly set up the Climatix VFD from the keypad for the most flexibility and access to advanced parameters.

#### Ideal for:

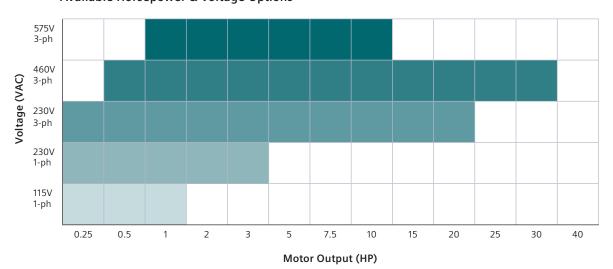
- Experienced users
- · Commissioning for fans, compressors, and pumps

### **Benefits:**

- Maximum programming flexibility
- Commissioning macros available to simplify start-up

Overload Capacity  Normal duty: 120% 60s, 150% 3s Heavy duty: 150% 60s, 200% 3s  Carrier Frequency  2-15 KHz (Default 4)  Speed Control Mode  1:50 ( V/f, SVC control for IM, Heavy duty) 1:20 ( SVC control for PM, Heavy duty)  Starting Torque  150% / 3 Hz (V/f, SVC control for IM, Heavy duty) 100% / (1/20 of motor rated frequency) (SVC control for PM, Heavy duty)  Ambient Operating Temperature  4° - +122° F (-20° - +50° C) -4° - +140° F (-20° - +50° C) with derating  Storage Temperature  4° - +122° F (-20° - +50° C) 140° (60° C) with derating  Relative Humidity (Operation)  Max 90%  Relative Humidity (Storage/Transportation)  Max 95%  Altitude  1000m/3280ft (>1000m w/ derating)  Vibration  IEC60068-2-6: 2Hz~13.2Hz: 1mm, peak-peak 13.2Hz~55Hz: 0.7G~2.0G 55Hz~512Hz: 2.0G  Enclosures Class  IP20, IP21 Kit Future release	General Specifications	
Output Frequency  Output Frequency  Standard model: 599.00 Hz / High speed model: 1500.0 Hz (with derating, V/F control only)  Overload Capacity  Normal duty: 120% 60s, 150% 3s Heavy duty: 150% 60s, 200% 3s  Carrier Frequency  2-15 KHz (Default 4)  Speed Control Mode  1: 50 ( V/f, SVC control for IM, Heavy duty)  1: 20 ( SVC control for PM, Heavy duty)  Starting Torque  150% / 3 Hz (V/f, SVC control for IM, Heavy duty)  100% / (1/20 of motor rated frequency) (SVC control for PM, Heavy duty)  Ambient Operating Temperature  -4° - +122° F (-20° - +50° C) -4° - +140° F (-20° - +60° C) with derating  Storage Temperature  4° - +122° F (-20° - +50° C) 140° (60° C) with derating  Relative Humidity (Operation)  Max 90%  Relative Humidity (Storage/Transportation)  Max 95%  Altitude  1000m/3280ft (>1000m w/ derating)  Vibration  Schelative Figure F	Input Voltages and Power Ranges (3-phase)	0.25-3 HP 230VAC (-15%- +10%) 1-ph 0.25-20 HP 230VAC (-15%- +10%) 3-ph
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	Braking	DC Injection Braking
Certifications UL, cUL, CE, RoHS, REACH, C-Tick	Protections	Over-current, Over-voltage, Over-temperature, Phase loss, Stall prevention
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# **Available Horsepower & Voltage Options**



# **Product Numbers**

ating 25 HP 36 HP 18P 18P 18P 18P 18P 18P 18P 18P 18P 18		RT	0	01X
ating 25 HP 36 HP 10P 10P 10P 10P 10P 10P 10P 10P 10P 10	amily			
25 HP 5 HP 5 HP 6 HP H	Rooftop			
5 HP	Power Rating			
HP	002 – 0.25 HP			
HP	0005 – 0.5 HP			
HP	001X – 1 HP			
HP HP HP HP HP HP 1-ph 1-ph 3-ph	002X – 2 HP			
HP HP HP HPph 1-ph 3-ph	003X – 3 HP			
HP HP HP HPph 1-ph 3-ph	005x – 5 HP			
HP HP HPph 1-ph 3-ph	0075 – 7.5 HP			
HP HP -ph 1-ph 3-ph	010X – 10 HP			
HP HP -ph 1-ph 3-ph	015X – 15 HP			
HP  -ph 1-ph 3-ph	20X – 20 HP			
-ph 1-ph 3-ph	025X – 25 HP			
1-ph 3-ph	030X - 30 HP			
1-ph 3-ph	/oltage			
3-ph	1 = 115V 1-ph			
	1 = 230V 1-ph 3 = 230V 3-ph			
J pil	3 = 460V 3-ph			
	3 = 575v 3-ph			

Siemens Part Number	Product Information	Voltage	НР	Phase	Frame
RT0002-11N	VFD 115V, 1-PH; 0.25HP	115	0.25	1	A1
RT0005-11N	VFD 115V, 1-PH, 0.5HP	115	0.5	1	A3
RT001X-11N	VFD 115V, 1-PH, 1HP	115	1	1	C1
RT0002-21N	VFD 230V, 1-PH, 0.25HP	230	0.25	1	A1
RT0005-21N	VFD 230V, 1-PH, 0.5HP	230	0.5	1	A3
RT001X-21N	VFD 230V, 1-PH, 1HP	230	1	1	B2
RT002X-21N	VFD 230V, 1-PH, 2HP	230	2	1	C1
RT003X-21N	VFD 230V, 1-PH, 3HP	230	3	1	C1
RT0002-23N	VFD 230V, 3-PH, 0.25HP	230	0.25	3	A1
RT0005-23N	VFD 230V, 3-PH, 0.5HP	230	0.5	3	A2
RT001X-23N	VFD 230V, 3-PH, 1HP	230	1	3	A5
RT002X-23N	VFD 230V, 3-PH, 2HP	230	2	3	B1
RT003X-23N	VFD 230V, 3-PH, 3HP	230	3	3	C1
RT005X-23N	VFD 230V, 3-PH, 5HP	230	5	3	C1
RT0075-23N	VFD 230V, 3-PH, 7.5HP	230	7.5	3	D1
RT010X-23N	VFD 230V, 3-PH, 10HP	230	10	3	E1
RT020X-23N	VFD 230V, 3-PH, 20HP	230	20	3	F1
RT015X-23N	VFD 230V, 3-PH, 15.2HP	230	15	3	E1
RT0005-43N	VFD 460V, 3-PH, 0.5HP	460	0.5	3	A4
RT001X-43N	VFD 460V, 3-PH, 1HP	460	1	3	A5
RT002X-43N	VFD 460V, 3-PH, 2HP	460	2	3	B1
RT003X-43N	VFD 460V, 3-PH, 3HP	460	3	3	C1
RT005X-43N	VFD 460V, 3-PH, 5HP	460	5	3	C1
RT0075-43N	VFD 460V, 3-PH, 7.5HP	460	7.5	3	D1
RT015X-43N	VFD 460V, 3-PH, 15HP	460	15	3	E1
RT010X-43N	VFD 460V, 3-PH, 10HP	460	10	3	D1
RT020X-43N	VFD 460V, 3-PH, 20HP	460	20	3	E1
RT025X-43N	VFD 460V, 3-PH, 25HP	460	25	3	F1
RT030X-43N	VFD 460V, 3-PH, 30HP	460	30	3	F1
RT001X-53N	VFD 575V, 3-PH, 1HP	575	1	3	A5
RT002X-53N	VFD 575V, 3-PH, 2HP	575	2	3	B1
RT003X-53N	VFD 575V, 3-PH, 3HP	575	3	3	C1
RT005X-53N	VFD 575V, 3-PH, 5HP	575	5	3	C1
RT0075-53N	VFD 575V, 3-PH, 7.5HP	575	7.5	3	D1
RT010X-53N	VFD 575V, 3-PH, 10HP	575	10	3	D1

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