

PRODUCT INFORMATION PACKET

Model No: ND-VFD-503U75G-B-B
Heavy Duty VFD, 7.5KW(HO), 11KW(LO), 3 Ph, 50 Hz, 380V, Frame B

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Technical Specifications

Rated Input Data

Number of Phases	3 AC	Line Voltages	380 - 480 V +10 % -15 %
Line Frequency	45 - 65 Hz	Frequency Tolerance	± 5%
Rated Current (HO)	20.5 A	Rated Current (LO)	27.7 A

Rated Output Data

Number of Phases	3 AC	Rated Voltages	380 - 480 V
Rated Power (HO)	7.5 KW / 10 HP	Rated Power (LO)	11 KW / 15 HP
Rated Current (HO)	17 A	Rated Current (LO)	23 A
Pulse Frequency	1 - 12 kHz	Output Frequency Range	0 – 600 Hz (V/F) / 0 – 200 Hz (SVC) 0 – 400 Hz (SVC)

Overload Capability

High Overload	150% Rated Current for 60 s	Low Overload	120% Rated Current for 60 s
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General Technical Specifications

Brake Unit	Included	Display Design	Intelligent LCD
DC Reactor	No	Startup Torque	150%@0.5Hz(V/F) / 180%@0.25Hz(SVC) 200%@0Hz(VC)
Filter Class	Category C3		

Ambient Conditions

Cooling	Forced air cooling	Installation altitude	1000 m. Max 3000 m. Derated Factor: 1% / 100 m
Operation Ambient Temperature	-10°C – +40°C, Max: 50°C. Derated Factor: 1.5% / 1°C	Storage Ambient Temperature	-20°C – +60°C
Maximum Relative Humidity	95%, without condensation	Vibration Level	Less than 5.9 m/s ²



Mechanical Data

Degree of Protection	IP 20	Frame Size	B
Net Weight	3.02 Kg	Width	130 mm
Height	250 mm	Depth	180 mm

Digital Input Terminals

Number	5 (one of which supports high-speed pulse input up to 50kHz)	Frequency Range	0 – 200 Hz
Voltage Range	10V - 30V		

Digital Output Terminals

Number as Transistor	1	Voltage / Current Range	DC 0 - 24 V / 0mA – 50mA
Number as High-Speed Pulse	1 (0 – 50kHz)	Voltage / Current Range (As Transistor)	DC 0 - 24 V / 0mA – 50mA
Number as Relay Changeover Contact	1	Contact Rating	AC 250V 3A / DC 30V 1A

Analog Input Terminals

Number	2	Input Voltage	0 – 10V (Impedance 22 k Ω)
Input Current	0 – 20mA (Impedance 500 Ω)	Factory Default	Voltage Input

Analog Output Terminals

Number	2	Output Voltage	0 – 10V (Impedance \geq 22 k Ω)
Output Current	0 – 20mA (Impedance 200 - 500 Ω)	Factory Default	Voltage Output



Closed-loop Control Techniques

V/f Linear / Square – Law (V/F)	Yes	Speed Range	1:100
Speed Control Accuracy	±0.5%	Speed Response	5 Hz
Sensorless Vector Control (SVC)	Yes	Speed Range	1:200
Speed Control Accuracy	±0.2%	Speed Response	20 Hz
Vector control, with sensor (VC)	Yes	Speed Range	1:1000
Speed Control Accuracy	±0.02%	Speed Response	50 Hz

Communication

Included	Modbus RTU – RS 485 Built	Optional	Profinet , CANopen
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Power Terminal Connections

Conductor cross-section	6 mm ² (AWG 10)	Tightening torque	2 Nm
Screw	M4	Maximum Motor Cable length	100 m (Carrier frequency < 4kHz) 50 m (Carrier frequency < 8kHz) 20 m (Carrier frequency < 15kHz)



Standard Wiring Diagram

