



## VLT® 5000 Series

### ■ General technical data

#### Mains supply (L1, L2, L3):

Supply voltage 200-240 V units .....	3 x 200/208/220/230/240 V ±10%
Supply voltage 380-500 V units .....	3 x 380/400/415/440/460/500 V ±10%
Supply voltage 525-600 V units .....	3 x 525/550/575/600 V ±10%
Supply frequency .....	48-62 Hz +/- 1%

#### Max. imbalance of supply voltage:

VLT 5001-5011, 380-500 V and 525-600 V and VLT 5001-5006, 200-240 V .....	±2.0% of rated supply voltage
VLT 5016-5062, 380-500 V and 525-600 V and VLT 5008-5027, 200-240 V .....	±1.5% of rated supply voltage
VLT 5072-5500, 380-500 V and VLT 5032-5052, 200-240 V .....	±3.0% of rated supply voltage
VLT 5075-5250, 525-600 V .....	±3.0% of rated supply voltage
True Power factor ( $\lambda$ ) .....	0.90 nominal at rated load
Displacement Power Factor (cos $\phi$ ) .....	near unity (>0.98)
No. of switches on supply input L1, L2, L3 .....	approx. 1 time/2 min.
Max. shortcircuit rating .....	100,000 A

#### VLT output data (U, V, W):

Output voltage .....	0-100% of supply voltage
Output frequency VLT 5001-5027, 200-240 V .....	0-132 Hz, 0-1000 Hz
Output frequency VLT 5032-5052, 200-240 V .....	0-132 Hz, 0-450 Hz
Output frequency VLT 5001-5052, 380-500 V .....	0-132 Hz, 0-1000 Hz
Output frequency VLT 5062-5102, 380-500 V .....	0-132 Hz, 0-450 Hz
Output frequency VLT 5122-5302, 380-500 V .....	0-132 Hz, 0-800 Hz
Output frequency VLT 5350-5500, 380-500 V .....	0-132 Hz, 0-450 Hz
Output frequency VLT 5001-5011, 525-600 V .....	0-132 Hz, 0-700 Hz
Output frequency VLT 5016-5052, 525-600 V .....	0-132 Hz, 0-1000 Hz
Output frequency VLT 5062-5250, 525-600 V .....	0-132 Hz, 0-450 Hz
Rated motor voltage, 200-240 V units .....	200/208/220/230/240 V
Rated motor voltage, 380-500 V units .....	380/400/415/440/460/480/500 V
Rated motor voltage, 525-600 V units .....	525/550/575 V
Rated motor frequency .....	50/60 Hz
Switching on output .....	Unlimited
Ramp times .....	0.05-3600 sec.

#### Torque characteristics:

Starting torque, VLT 5001-5027, 200 - 240 V and VLT 5001-5302, 380 - 500 V .....	160% for 1 min.
Starting torque, VLT 5032 - 5052, 200 - 240 V and VLT 5350-5500, 380 - 500 V .....	150% for 1 min.
Starting torque, VLT 5001-5250, 525 - 600 V .....	160% for 1 min.
Starting torque .....	180% for 0.5 sec.
Acceleration torque .....	100%
Overload torque, VLT 5001-5027, 200 - 240 V and VLT 5001-5302, 380 - 500 V and VLT 5001-5250, 525 - 600 V .....	160%
Overload torque, VLT 5032-5052, 200 - 240 V and VLT 5350-5500, 380 - 500 V .....	150%
Arresting torque at 0 rpm (closed loop) .....	100%

*The torque characteristics given are for the adjustable frequency drive at the high overload torque level (160%). At the normal overload torque (110%), the values are lower.*



## VLT® 5000 Series

	Braking at high overload torque level		
	Cycle time (s)	Braking duty cycle at 100% torque	Braking duty cycle at over torque (150/160%)
<b>200-240 V</b>			
5001-5027	120	Continuous	40%
5032-5052	300	10%	10%
<b>380-500 V</b>			
5001-5102	120	Continuous	40%
5122-5252	600	Continuous	10%
5302	600	40%	10%
5350-5500	300	10%	10%
<b>525-600 V</b>			
5001-5062	120	Continuous	40%
5075-5250	300	10%	10%



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website: <http://www.esys.us>





## VLT® 5000 Series

### Control card, digital inputs:

Number of programmable digital inputs	8
Terminal nos.	16, 17, 18, 19, 27, 29, 32, 33
Voltage level	0-24 V DC (PNP positive logics)
Voltage level, logical '0'	< 5 V DC
Voltage level, logical '1'	>10 V DC
Maximum voltage on input	28 V DC
Input resistance, $R_i$	2 k
Scanning time per input	3 msec.

*Reliable galvanic isolation: All digital inputs are galvanically isolated from the supply voltage (PELV).*

*VLT 5001-5250, 525-600 V do not meet PELV requirements. In addition, the digital inputs can be isolated from the other terminals on the control card by connecting an external 24 V DC supply and opening switch 4. See section on Installation of control cables.*

### Control card, analog inputs:

No. of programmable analog voltage inputs/thermistor inputs	2
Terminal nos.	53, 54
Voltage level	0 - ±10 V DC (scalable)
Input resistance, $R_i$	10 k
No. of programmable analog current inputs	1
Terminal no.	60
Current range	0/4 - ±20 mA (scalable)
Input resistance, $R_i$	200
Resolution	10 bit + sign
Accuracy on input	Max. error 1% of full scale
Scan time per input	3 msec.
Terminal no. ground	55

*Reliable galvanic isolation: All analog inputs are galvanically isolated from the supply voltage (PELV).*

*VLT 5001-5250, 525-600 V do not meet PELV requirements.*

### Control card, pulse/encoder input:

No. of programmable pulse/encoder inputs	4
Terminal nos.	17, 29, 32, 33
Max. frequency on terminal 17	5 kHz
Max. frequency on terminals 29, 32, 33	20 kHz (PNP open collector)
Max. frequency on terminals 29, 32, 33	65 kHz (Push-pull)
Voltage level	0-24 V DC (PNP positive logics)
Voltage level, logical '0'	< 5 V DC
Voltage level, logical '1'	>10 V DC
Maximum voltage on input	28 V DC
Input resistance, $R_i$	2 k
Scan time per input	3 msec.
Resolution	10 bit + sign
Accuracy (100-1 kHz), terminals 17, 29, 33	Max. error: 0.5% of full scale
Accuracy (1-5 kHz), terminal 17	Max. error: 0.1% of full scale
Accuracy (1-65 kHz), terminals 29, 33	Max. error: 0.1% of full scale

*Reliable galvanic isolation: All pulse/encoder inputs are galvanically isolated from the supply voltage (PELV). VLT 5001-5250, 525-600 V do not meet PELV requirements. In addition, pulse and encoder*



## VLT® 5000 Series

inputs can be isolated from the other terminals on the control card by connecting an external 24 V DC supply and opening switch 4. See section on Control cables.

### Control card, digital/pulse and analog outputs:

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No. of programmable digital and analog outputs	2
Terminal nos.	42, 45
Voltage level at digital/pulse output	0 - 24 V DC
Minimum load to ground (terminal 39) at digital/pulse output	600
Frequency ranges (digital output used as pulse output)	0-32 kHz
Current range at analog output	0/4 - 20 mA
Maximum load to ground (terminal 39) at analog output	500
Accuracy of analog output	Max. error: 1.5% of full scale
Resolution on analog output	8 bit

*Reliable galvanic isolation: All digital and analog outputs are galvanically isolated from the supply voltage (PELV). VLT 5001-5250, 525-600 V do not meet PELV requirements.*

### Control card, 24 V DC supply:

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Terminal nos.	12, 13
Max. load (short-circuit protection)	200 mA
Terminal nos. ground	20, 39

*Reliable galvanic isolation: The 24 V DC supply is galvanically isolated from the supply voltage (PELV). VLT 5001-5250, 525-600 V do not meet PELV requirements.*

### Control card, RS 485 serial communication:

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Terminal nos.	68 (TX+, RX+), 69 (TX-, RX-)
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*Reliable galvanic isolation: Full galvanic isolation.*

### Relay outputs:

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No. of programmable relay outputs	2
Terminal nos., control card	4-5 (make)
Max. terminal load (AC) on 4-5, control card	50 V AC, 1 A, 50 VA
Max. terminal load (DC-1 (IEC 947)) on 4-5, control card	75 V DC, 1 A, 30 W
Max. terminal load (DC-1) on 4-5, control card for UL/cUL applications	30 V AC, 1 A / 42.5 V DC, 1A
Terminal nos., power card	1-3 (break), 1-2 (make)
Max. terminal load (AC) on 1-3, 1-2, power card	240 V AC, 2 A, 60 VA
Max. terminal load DC-1 (IEC 947) on 1-3, 1-2, power card	50 V DC, 2 A
Min. terminal load on 1-3, 1-2, power card	24 V DC 10 mA, 24 V AC 100 mA

### Brake resistor terminals (only SB, EB and DE units):

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Terminal nos.	81, 82
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### External 24 Volt DC supply:

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Terminal nos.	35, 36
Voltage range	24 V DC $\pm$ 15% (max. 37 V DC for 10 sec.)
Max. voltage ripple	2 V DC
Power consumption	15 W - 50 W (50 W for start-up, 20 msec.)
Min. pre-fuse	6 Amp

*Reliable galvanic isolation: Full galvanic isolation if the external 24 V DC supply is also of the PELV type.*



## VLT® 5000 Series

### Cable lengths, cross-sections and connectors:

Max. motor cable length, screened cable .....	150 m
Max. motor cable length, unscreened cable .....	300 m
Max. motor cable length, screened cable VLT 5011 380-500 V .....	100 m
Max. motor cable length, screened cable VLT 5011 525-600 V and VLT 5008, normal overload mode, 525-600 V .....	50 m
Max. brake cable length, screened cable .....	20 m
Max. loadsharing cable length, screened cable .....	25 m from drive to DC bar.
<i>Max. cable cross-section for motor, brake and loadsharing, see next section</i>	
Max. cable cross-section for 24 V external DC supply	
- VLT 5001-5027 200-240 V; VLT 5001-5102 380-500 V; VLT 5001-5062 525-600 V .....	4 mm <sup>2</sup> /10 AWG
- VLT 5032-5052 200-240 V; VLT 5122-5500 380-500 V; VLT 5075-5250 525-600 V .....	2.5 mm <sup>2</sup> /12 AWG
Max. cross-section for control cables .....	1.5 mm <sup>2</sup> /16 AWG
Max. cross-section for serial communication .....	1.5 mm <sup>2</sup> /16 AWG
<i>If UL/cUL is to be complied with, cable with temperature class 60/75°C must be used (VLT 5001 - 5062 380 - 500 V, 525 - 600 V and VLT 5001 - 5027 200 - 240V).</i>	
<i>If UL/cUL is to be complied with, cable with temperature class 75°C must be used (VLT 5075 - 5500 380 - 500 V, VLT 5032 - 5052 200 - 240 V, VLT 5075 - 5250 525 - 600 V).</i>	
<i>Connectors are for use of both copper and aluminium cables, unless other is specified.</i>	

### Accuracy of display readout (parameters 009-012):

Motor current [6] 0-140% load .....	Max. error: ±2.0% of rated output current
Torque % [7], -100 - 140% load .....	Max. error: ±5% of rated motor size
Output [8], power HP [9], 0-90% load .....	Max. error: ±5% of rated output

### Control characteristics:

Frequency range .....	0 - 1000 Hz
Resolution on output frequency .....	±0.003 Hz
System response time .....	3 msec.
Speed, control range (open loop) .....	1:100 of synchro. speed
Speed, control range (closed loop) .....	1:1000 of synchro. speed
Speed, accuracy (open loop) .....	< 1500 rpm: max. error ± 7.5 rpm
.....	>1500 rpm: max. error of 0.5% of actual speed
Speed, accuracy (closed loop) .....	< 1500 rpm: max. error ± 1.5 rpm
.....	>1500 rpm: max. error of 0.1% of actual speed
Torque control accuracy (open loop) .....	0- 150 rpm: max. error ±20% of rated torque
.....	150-1500 rpm: max. error ±10% of rated torque
.....	>1500 rpm: max. error ±20% of rated torque
Torque control accuracy (speed feedback) .....	Max. error ±5% of rated torque

*All control characteristics are based on a 4-pole asynchronous motor*



## VLT® 5000 Series

### Externals:

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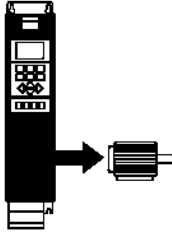
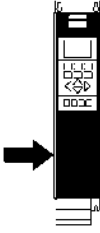
Enclosure (dependent on power size) .....	Chassis, Nema1, Nema12
Vibration test .....	0.7 g RMS 18-1000 Hz random. 3 directions for 2 hours (IEC 68-2-34/35/36)
Max. relative humidity .....	93 % (IEC 68-2-3) for storage/transport
Max. relative humidity .....	95 % non condensing (IEC 721-3-3; class 3K3) for operation
Aggressive environment (IEC 721 - 3 - 3) .....	Uncoated class 3C2
Aggressive environment (IEC 721 - 3 - 3) .....	Coated class 3C3
Ambient temperature Chassis, Nema 1(high overload torque 160%) .....	Max. 45°C (24-hour average max. 40°C)
Ambient temperature Chassis, Nema 1(normal overload torque 110%) ..	Max. 40°C (24-hour average max. 35°C)
Ambient temperature NEMA 12 (high overload torque 160%) .....	Max. 40°C (24-hour average max. 35°C)
Ambient temperature NEMA 12 (normal overload torque 110%) .....	Max. 40°C (24-hour average max. 35°C)
Ambient temperature IP 20/54 VLT 5011 500 V .....	Max. 40°C (24-hour average max. 35°C)
Min. ambient temperature in full operation .....	0°C
Min. ambient temperature at reduced performance .....	-10°C
Temperature during storage/transport .....	-25 - +65/70°C
Max. altitude above sea level .....	1000 m
EMC standards applied, Emission .....	EN 61000-6-3, EN 61000-6-4, EN 61800-3, EN 55011
EMC standards applied, Immunity .....	EN 61000-6-2, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4
EN 61000-4-5, EN 61000-4-6, VDE 0160/1990.12	

*VLT 5001-5250, 525 - 600 V do not comply with EMC or Low Voltage Directives.*

### VLT 5000 Series protection:

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- Electronic motor thermal protection against overload.
  - Temperature monitoring of heat-sink ensures that the drive cuts out if the temperature reaches 90°C for Chassis and Nema 1. For NEMA 12 cut-out temperature is 80°C. An overtemperature can only be reset when the temperature of the heat-sink has fallen below 60°C. VLT 5122-5172, 380-500 V cuts out at 80°C and can be reset if the temperature has fallen below 60°C. VLT 5202-5302, 380-500 V cuts out at 105°C and can be reset if the temperature has fallen below 70°C.
  - The drive is protected against short-circuiting on motor terminals U, V, W.
  - The drive is protected against earth fault on motor terminals U, V, W.
  - Monitoring of the intermediate circuit voltage ensures that the drive cuts out if the intermediate circuit voltage gets too high or too low.
  - If a motor phase is missing, the drive cuts out, see parameter 234 *Motor phase monitor*.
  - If there is a mains fault, the drive is able to carry out a controlled deramping.
  - If a mains phase is missing, the drive will cut out when a load is placed on the motor.

**■ Electrical data**
**■ Bookstyle and Compact, Mains supply  
3 x 200 - 240 V**

According to international requirements		VLT type	5001	5002	5003	5004	5005	5006	
	Output current	$I_{VLTN}$ [A]	3.7	5.4	7.8	10.6	12.5	15.2	
		$I_{VLT,MAX}$ (60 s) [A]	5.9	8.6	12.5	17	20	24.3	
	Output (240 V)	$S_{VLTN}$ [kVA]	1.5	2.2	3.2	4.4	5.2	6.3	
	Typical shaft output	$P_{M,IN}$ [kW]	0.75	1.1	1.5	2.2	3.0	3.7	
	Typical shaft output	$P_{M,IN}$ [HP]	1	1.5	2	3	4	5	
	Max. cable cross-section to motor, brake and loadsharing [mm <sup>2</sup> ] [AWG]		4/10	4/10	4/10	4/10	4/10	4/10	
	Rated input current	$I_{200V,IN,N}$ [A]	3.4	4.8	7.1	9.5	11.5	14.5	
	Max. cable cross-section power [mm <sup>2</sup> ] [AWG]		4/10	4/10	4/10	4/10	4/10	4/10	
	Max. pre-fuses	[J]/[J] <sup>1)</sup> [A]	16/10	16/10	16/15	25/20	25/25	35/30	
	Efficiency <sup>2)</sup>		0.95	0.95	0.95	0.95	0.95	0.95	
	Weight IP 20 EB Bookstyle	[kg]	7	7	7	9	9	9.5	
	Weight IP 20 FB Compact	[kg]	8	8	8	10	10	10	
	Weight IP 54 Compact	[kg]	11.5	11.5	11.5	13.5	13.5	13.5	
	Power loss at max. load	[W]	58	76	95	126	172	194	
	Enclosure		Protected Chassis/NEMA 1/NEVA 12						

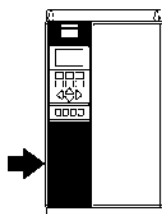
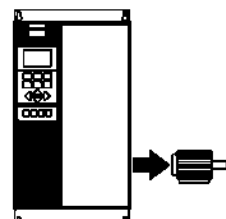
**Technical data**

1. For type of fuse see section Fuses

2. Measured using 100 ft. screened motor cables at rated load and rated frequency.

### ■ Compact, Mains supply 3 x 200 - 240 V

According to international requirements		VLT type	5008	5011	5016	5022	5027
<b>Normal overload torque (110 %):</b>							
Output current	$I_{M1N}$ [A]		32	46	61.2	73	88
	$I_{M1, MAX}$ (60 s) [A]		36.2	50.6	67.3	80.3	96.8
Output (240 V)	$S_{VLTN}$ [kVA]		13.3	19.1	25.4	30.3	36.6
Typical shaft output	$P_{VLTN}$ [kW]		7.5	11	15	18.5	22
Typical shaft output	$P_{VLTN}$ [HP]		10	15	20	25	30
<b>High overload torque (160 %):</b>							
Output current	$I_{M1N}$ [A]		25	32	46	61.2	73
	$I_{M1, MAX}$ (60 s) [A]		40	51.2	73.6	97.9	116.8
Output (240 V)	$S_{VLTN}$ [kVA]		10	13	19	25	30
Typical shaft output	$P_{VLTN}$ [kW]		5.5	7.5	11	15	18.5
Typical shaft output	$P_{VLTN}$ [HP]		7.5	10	15	20	25
Max. cable cross-section to motor, brake and loadsharing [mm <sup>2</sup> /AWG] <sup>3)</sup>	P 54		16/6	16/6	35/2	35/2	50/0
Min. cable cross-section to motor, brake and loadsharing <sup>3)</sup> [mm <sup>2</sup> /AWG]	P 20		16/6	35/2	35/2	35/2	50/0
<b>Efficiency and power loss:</b>							
Rated input current (200 V) $I_{1N}$ [A]			32	46	61	73	88
Max. cable cross-section, power [mm <sup>2</sup> /AWG] <sup>4)</sup>	P 54		16/6	16/6	35/2	35/2	50/0
	P 20		16/6	35/2	35/2	35/2	50/0
Max. pre-fuses [AUL] <sup>1)</sup> [A]			50	60	80	125	125
Efficiency <sup>2)</sup>			0.95	0.95	0.95	0.95	0.95
Weight IP 20 ±B [kg]			21	25	27	34	36
Weight P 54 [kg]			38	40	53	55	56
Power loss at max. load							
- high overload torque (160 %)	[W]		340	426	626	833	994
- normal overload torque (110 %)	[W]		426	545	783	1042	1243
Enclosure			Protectoc Chassis/NEMA 1/NEMA 12				

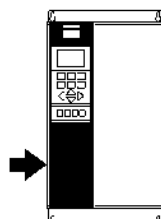
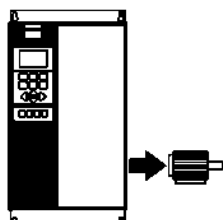


1. For type of fuse see section *Fuses*
2. Measured using 100 ft. screened motor cables at rated load and rated frequency.
3. Min. cable cross-section is the smallest cable cross-section allowed to be fitted on the terminals to comply with IP 20. Always comply with national and local regulations on min. cable cross-section.
4. Aluminium cables with cross-section above 35 mm<sup>2</sup> must be connected by use of a Al-Cu connector.



**■ Compact, Mains supply 3 x 200 - 240 V**

According to international requirements		VLT type	5032	5042	5052
<b>Normal overload torque (110 %):</b>					
Output current	$I_{M,T,N}$ [A] (200-230 V)		115	143	170
	$I_{M,T,MAX}$ (60 s) [A] (200-230 V)		127	158	187
	$I_{VLT,N}$ [A] (231-240 V)		104	130	154
	$I_{VLT,MAX}$ (60 s) [A] (231-240 V)		115	143	170
Output	$S_{V,IN}$ [kVA] (205 V)		41	52	61
	$S_{V,IN}$ [kVA] (230 V)		46	57	68
	$S_{V,IN}$ [kVA] (240 V)		43	54	64
Typical shaft output	[HP] (208 V)		40	50	60
Typical shaft output	[kW] (230 V)		30	37	45
<b>High overload torque (160 %):</b>					
Output current	$I_{M,T,N}$ [A] (200-230 V)		88	115	143
	$I_{M,T,MAX}$ [A] (200-230 V)		132	173	215
	$I_{VLT,N}$ [A] (231-240 V)		80	104	130
	$I_{VLT,MAX}$ [A] (231-240 V)		120	155	195
Output	$S_{V,IN}$ [kVA] (205 V)		32	41	52
	$S_{V,IN}$ [kVA] (230 V)		35	46	57
	$S_{V,IN}$ [kVA] (240 V)		33	43	54
Typical shaft output	[HP] (208 V)		30	40	50
	[kW] (230 V)		22	30	37
Max. cable cross-section to motor and loadsharing	$\text{mm}^2$ <sup>3)5)</sup>			120	
	[AWG] <sup>3)5)</sup>			300 mcm	
Max. cable cross-section to brake	$\text{mm}^2$ <sup>3)5)</sup>			25	
	[AWG] <sup>3)5)</sup>			4	
<b>Normal overload torque (110 %):</b>					
Rated input current	$I_{IN}$ [A] (230 V)		101,3	126,6	149,9
<b>Normal overload torque (150 %):</b>					
Rated input current	$I_{IN}$ [A] (230 V)		77,9	101,3	126,6
Max. cable cross-section power supply	$\text{mm}^2$ <sup>3)5)</sup>			120	
	[AWG] <sup>3)5)</sup>			300 mcm	
Min. cable cross-section to motor, power supply, brake and loadsharing	$\text{mm}^2$ <sup>3)5)</sup>			6	
	[AWG] <sup>3)5)</sup>			8	
Max. pre-fuses (mains) [-]/JL	[A] <sup>1)</sup>		150/150	200/200	250/250
Efficiency <sup>2)</sup>			0,96-0,97		
Power loss	Normal overload [W]		1389	1361	1612
	High overload [W]		838	1069	1361
Weight:	IP 00 [kg]		101	101	101
Weight:	IP 20 Nema12 [kg]		101	101	101
Weight:	IP 34 Nema12 [kg]		104	104	104
Enclosure			Protected chassis, Nema1, Nema12		


**Technical data**

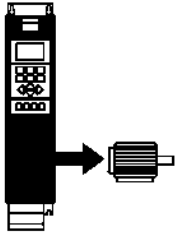
- For type of fuse see section Fuses
- Measured using 100 ft. screened motor cables at rated load and rated frequency.
- Max. cable cross-section is the maximum possible cable cross-section allowed to be fitted on the terminals. Min. cable cross-section is the minimum allowed cross-section. Always comply with national and local regulations on min. cable cross-section.
- Weight without shipping container
- Connection std.: M5 Brake: M6



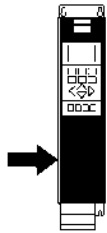
## VLT® 5000 Series

### ■ Bookstyle and Compact, Mains supply 3 x 380 - 500 V

According to international requirements		VLT type	5001	5002	5003	5004
Output current	$I_{VL,N}$ [A] (380-440 V)		2.2	2.8	4.1	5.6
	$I_{VL,MAX}$ (6C S) [A] (380-440 V)		3.5	4.5	6.5	9
	$I_{VL,N}$ [A] (441-500 V)		1.9	2.6	3.4	4.8
	$I_{VL,MAX}$ (6C S) [A] (441-500 V)		3	4.2	5.5	7.7
Output	$S_{V,VL}$ [kVA] (380-440 V)		1.7	2.1	3.1	4.3
	$S_{V,VL}$ [kVA] (441-500 V)		1.6	2.3	2.9	4.2
Typical shaft output	$P_{VITN}$ [kW]		0.75	1.1	1.5	2.2
Typical shaft output	$P_{VITN}$ [HP]		1	1.5	2	3
Max. cable cross-section to motor, brake and loadsharing [mm <sup>2</sup> ]/[AWG]			4/10	4/10	4/10	4/10



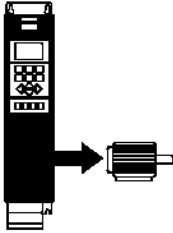
Rated input current	$I_{LN}$ [A] (380 V)	2.3	2.6	3.8	5.3
	$I_{LN}$ [A] (460 V)	1.9	2.5	3.4	4.8
Max. cable cross-section, power [mm <sup>2</sup> ]/[AWG]		4/10	4/10	4/10	4/10
Max. pre-fuses [-]/[UL] <sup>1</sup> [A]		16/6	16/6	16/10	16/10
Efficiency <sup>2</sup>		0.96	0.96	0.96	0.96
Weight IP 20 EB Bookstyle [kg]		7	7	7	7.5
Weight IP 20 FB Compact [kg]		8	8	8	8.5
Weight IP 54 Compact [kg]		11.5	11.5	11.5	12
Power loss at max. load [W]		55	67	92	110
Enclosure		Protected Chassis/NEMA1/NEMA 12			

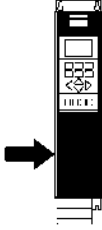


1. For type of fuse see section Fuses.
2. Measured using 100 ft. screened motor cables at rated load and rated frequency.

## VLT® 5000 Series

### Bookstyle and Compact, Mains supply 3 x 380 - 500 V

According to international requirements		VLT type	5005	5006	5008	5011
	Output current	$I_{VLTN}$ [A] (380-440 V)	7.2	10	13	16
		$I_{VLTN, MAX}$ (80 s) [A] (380-440 V)	11.5	16	20.8	25.6
		$I_{VLTN}$ [A] (441-500 V)	6.3	8.2	11	14.5
		$I_{VLTN, MAX}$ (80 s) [A] (441-500 V)	10.1	13.1	17.6	23.2
Output:	$S_{VLTN}$ [kVA] (380-440 V)	5.5	7.6	9.9	12.2	
	$S_{VLTN}$ [kVA] (441-500 V)	5.5	7.1	9.5	12.6	
Typical shaft output		$P_{VLTN}$ [kW]	3.0	4.0	5.5	7.5
Typical shaft output		$P_{VLTN}$ [IP]	4	5	7.5	10
Max. cable cross-section to motor, brake and loadsharing [mm <sup>2</sup> ] / [AWG]			4/10	4/10	4/10	4/10

	Rated input current:	$I_{LN}$ [A] (380 V)	7	9.1	12.2	15.0	
		$I_{LN}$ [A] (460 V)	6	8.3	10.6	14.0	
	Max. cable cross-section power [mm <sup>2</sup> ] / [AWG]			4/10	4/10	4/10	4/10
	Max. pre-fuses [F/L. 1] [A]			16/15	25/20	25/25	35/30
	Efficiency <sup>2)</sup>			0.96	0.96	0.96	0.96
	Weight: P 2C EB Bookstyle [kg]			7.5	9.5	9.5	9.5
	Weight: P 2C EB Compact [kg]			8.5	10.5	10.5	10.5
	Weight: P 54 EB Compact [kg]			12	14	14	14
	Power loss at max. load [W]			139	198	250	295
	Enclosure			Protected Class 5/NEVA1/NEMA 12			

1. For type of fuse see section *Fuses*.

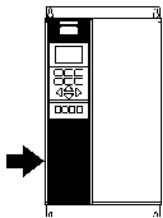
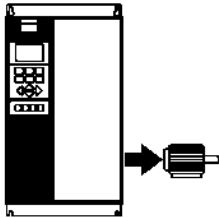
2. Measured using 100 ft. screened motor cables at rated load and rated frequency.



## VLT® 5000 Series

### ■ Compact, Mains supply 3 x 380 - 500 V

According to international requirements		VLT type	5016	5022	5027
<b>Normal overload torque (110 %):</b>					
Output current	$I_{M,TN}$ [A] (380-440 V)		32	37.5	44
	$I_{M,T,MAX}$ (60 s) [A] (380-440 V)		35.2	41.3	48.4
	$I_{M,TN}$ [A] (441-500 V)		27.9	34	41.4
	$I_{M,T,MAX}$ (60 s) [A] (441-500 V)		30.7	37.4	45.5
Output	$S_{V,TLN}$ [kVA] (380-440 V)		24.4	28.6	33.5
	$S_{V,TLN}$ [kVA] (441-500 V)		24.2	29.4	35.8
Typical shaft output:	$P_{M,TLN}$ [kW]		15	18.5	22
Typical shaft output:	$P_{M,TLN}$ [HP]		20	25	30
<b>High overload torque (160 %):</b>					
Output current	$I_{M,TLN}$ [A] (380-440 V)		24	32	37.5
	$I_{M,T,MAX}$ (60 s) [A] (380-440 V)		38.4	51.2	60
	$I_{M,TLN}$ [A] (441-500 V)		21.7	27.9	34
	$I_{M,T,MAX}$ (60 s) [A] (441-500 V)		34.7	44.6	54.4
Output	$S_{V,TLN}$ [kVA] (380-440 V)		18.5	24.4	28.6
	$S_{V,TLN}$ [kVA] (441-500 V)		18.5	24.2	29.4
Typical shaft output:	$P_{M,TLN}$ [kW]		11	15	18.5
Typical shaft output:	$P_{M,TLN}$ [HP]		15	20	25
Max. cable cross-section to motor, brake and loadsharing [mm <sup>2</sup> ]/[AWG] <sup>1,2</sup>		IP 54	16/6	16/6	16/6
		IP 20	16/6	16/6	35/2
Min. cable cross-section to motor, brake and loadsharing [mm <sup>2</sup> ]/[AWG]			10/8	10/8	10/8
Rated output current	$I_{r,N}$ [A] (380 V)		32	37.5	44
	$I_{r,N}$ [A] (460 V)		27.6	34	41
Max. cable cross-section, power [mm <sup>2</sup> ]/[AWG]		IP 54	16/6	16/6	16/6
		IP 20	16/6	16/6	35/2
Max. pre-fuses	(-) /UL <sup>1</sup> [A]		63/40	63/50	63/60
Efficiency			0.96	0.96	0.96
Weight: $\varnothing$ 20 FR	[kg]		21	22	27
Weight: $\varnothing$ 54	[kg]		41	41	47
Power loss at max. load:					
- high overload torque (160 %)	[W]		419	559	655
- normal overload torque (110 %)	[W]		559	655	788
Enclosure			Protected Chassis/NEMA1/NEMA 12		



1. For type of fuse see section Fuses
2. Measured using 100 ft. screened motor cables at rated load and rated frequency.
3. Min. cable cross-section is the smallest cable cross-section allowed to be fitted on the terminals to comply with IP 20. Always comply with national and local regulations on min. cable cross-section.



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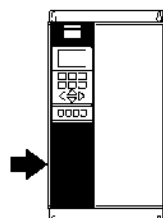
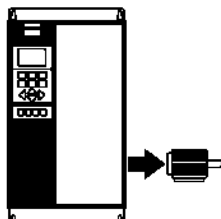




## VLT® 5000 Series

### Compact, Mains supply 3 x 380 - 500 V

According to international requirements	VLT type	5032	5042	5052
<b>Normal overload torque (110 %):</b>				
Output current	$I_{VLTN}$ [A] (380-440 V)	61	73	90
	$I_{VLTN, MAX}$ (60 s) [A] (380-440 V)	67.1	80.3	99
	$I_{VLTN}$ [A] (441-500 V)	54	65	78
	$I_{VLTN, MAX}$ (60 s) [A] (441-500 V)	59.4	71.5	88.8
Output	$S_{VLTN}$ [kVA] (380-440 V)	46.5	55.6	68.6
	$S_{VLTN}$ [kVA] (441-500 V)	46.8	56.3	67.5
Typical shaft output:	$P_{VLTN}$ [kW]	30	37	45
Typical shaft output:	$P_{VLTN}$ [HP]	40	50	60
<b>High overload torque (160 %):</b>				
Output current	$I_{VLTN}$ [A] (380-440 V)	44	61	73
	$I_{VLTN, MAX}$ (60 s) [A] (380-440 V)	70.4	97.6	116.8
	$I_{VLTN}$ [A] (441-500 V)	41.4	54	65
	$I_{VLTN, MAX}$ (60 s) [A] (441-500 V)	86.2	86	104
Output	$S_{VLTN}$ [kVA] (380-440 V)	33.5	46.6	55.6
	$S_{VLTN}$ [kVA] (441-500 V)	36.9	46.8	56.3
Typical shaft output:	$P_{VLTN}$ [kW]	22	30	37
Typical shaft output:	$P_{VLTN}$ [HP]	30	40	50
Max. cable cross-section to motor, brake and loadsharing [mm <sup>2</sup> ] / AWG <sup>1)</sup>	IP 54	35/2	35/2	50/0
	IP20	35/2	35/2	50/0
Min. cable cross-section to motor, brake and loadsharing [mm <sup>2</sup> ] / AWG <sup>2)</sup>		10/8	10/8	16/6
Rated output current	$I_{VLTN}$ [A] (380 V)	60	72	89
	$I_{VLTN}$ [A] (460 V)	53	64	77
Max. cable cross section power [mm <sup>2</sup> ] / AWG <sup>1)</sup>	IP 54	35/2	35/2	50/0
	IP 20	35/2	35/2	50/0
Max. pre-fuses	[I <sup>2</sup> t] / JLS <sup>3)</sup> [A]	80/80	100/100	125/125
Efficiency		0.96	0.96	0.96
Weight: IP 20 CB	[kg]	28	41	42
Weight: IP 54	[kg]	54	56	56
Power loss at max. load:				
- high overload torque (160 %)	[W]	768	1065	1275
- normal overload torque (110 %)	[W]			
	[W]	1065	1275	1571
Enclosure		Protected Chassis/NEMA 1/NEMA 12		



Technical data

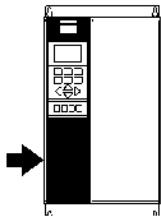
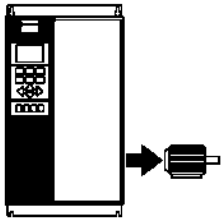
1. For type of fuse see section Fuses
2. Measured using 100 ft. screened motor cables at rated load and rated frequency.
3. Min. cable cross-section is the smallest cable cross-section allowed to be fitted on the terminals to comply with IP 20. Always comply with national and local regulations on min. cable cross-section.
4. Aluminum cables with cross-section above 35 mm<sup>2</sup> must be connected by use of a Al-Cu connector.



## VLT® 5000 Series

### Compact, Mains supply 3 x 380 - 500 V

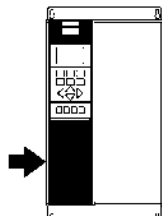
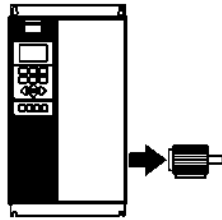
According to international requirements		VLT type	5062	5072	5102
<b>Normal overload torque (110 %):</b>					
Output current	$I_{M,IN}$ [A] (380-440 V)		106	147	177
	$V_{L,MAX}$ (60 s) [A] (380-440 V)		117	162	195
	$V_{L,IN}$ [A] (441-500 V)		106	130	160
	$V_{T,MAX}$ (60 s) [A] (441-500 V)		117	143	176
Output	$S_{VLTN}$ [kVA] (380-440 V)		50.5	102	123
	$S_{VLTN}$ [kVA] (441-500 V)		91.5	113	139
Typical shaft output	$P_{VL,N}$ [kW] (400 V)		55	75	90
	$P_{M,N}$ [HP] (460 V)		75	100	125
	$P_{VLTN}$ [kW] (500 V)		75	90	110
<b>High overload torque (160 %):</b>					
Output current	$I_{M,IN}$ [A] (380-440 V)		90	106	147
	$V_{L,MAX}$ (60 s) [A] (380-440 V)		95	159	221
	$V_{L,IN}$ [A] (441-500 V)		80	106	130
	$V_{T,MAX}$ (60 s) [A] (441-500 V)		120	159	195
Output	$S_{VLTN}$ [kVA] (380-440 V)		68.6	73.0	102
	$S_{VLTN}$ [kVA] (441-500 V)		69.3	92.0	113
Typical shaft output	$P_{VL,N}$ [kW] (400 V)		45	55	75
	$P_{M,N}$ [HP] (460 V)		60	75	100
	$P_{VLTN}$ [kW] (500 V)		55	75	90
Max. cable cross section to motor,		IP 54	50/0	150/300	150/300
				mm <sup>2</sup>	mm <sup>2</sup>
brake and loadsharing [mm <sup>2</sup> ] [AWG] <sup>1</sup>		IP 20	50/0	120/250	120/250
				mm <sup>2</sup>	mm <sup>2</sup>
Min. cable cross-section to motor, brake and loadsharing [mm <sup>2</sup> ] [AWG] <sup>1</sup>			16/6		
Rated input current	$I_{L,N}$ [A] (380 V)		104	145	174
	$I_{L,N}$ [A] (460 V)		104	128	158
Max. cable cross section power [mm <sup>2</sup> ] [AWG] <sup>1</sup>		IP 54	50/0	150	150
		IP 20	50/0	120 <sup>1</sup>	120 <sup>1</sup>
Max. pre-fuses	[1/0 <sub>UL</sub> ] <sup>1</sup> [A]		160/150	225/225	250/250
Efficiency			0.96	>0.97	>0.97
Weight IP 20/F3	[kg]		43	54	54
Weight IP 54	[kg]		60	77	77
Power loss at max. load,					
- high overload torque (160 %)	[W]		1571	<1200	<1400
- normal overload torque (110 %)	[W]		1851	<1400	<1600
	[%]				
Enclosure			Protected Chassis/NEMA1/NEMA 12		



- For type of fuse see section *Fuses*
- Measured using 100 ft. screened motor cables at rated load and rated frequency.
- Min. cable cross section is the smallest cable cross section allowed to be fitted on the terminals to comply with IP 20. Always comply with national and local regulations on min. cable cross-section.
- Aluminum cables with cross section above 35 mm<sup>2</sup> must be connected by use of a Al-Cu connector.
- Brake and loadsharing: 95 mm<sup>2</sup> / AWG 3/0

**■ Compact, Mains supply 3 x 380-500 V**

According to international requirements		VLT type	5122	5152	5202	5252	5302
<b>Normal overload current (110 %):</b>							
Output current	$I_{VLT}$ [A] (350-440 V)		212	260	315	395	480
	$I_{VLT,MAX}$ (60 s) [A] (380-440 V)		233	286	347	434	528
	$I_{VLT}$ [A] (441-500 V)		190	240	302	361	443
	$I_{VLT,MAX}$ (60 s) [A] (441-500 V)		209	264	332	397	487
Output	$S_{VLTN}$ [kVA] (400 V)		147	180	218	274	333
	$S_{VLTN}$ [kVA] (460 V)		151	191	241	288	353
	$S_{VLTN}$ [kVA] (500 V)		165	205	262	313	384
typical shaft output:	[kW] (400 V)		110	132	160	200	250
	[HP] (460 V)		150	200	250	300	350
	[kW] (500 V)		132	160	200	250	315
<b>High overload torque (160 %):</b>							
Output current	$I_{VLT}$ [A] (350-440 V)		177	212	260	315	395
	$I_{VLT,MAX}$ (60 s) [A] (380-440 V)		266	318	390	473	593
	$I_{VLT}$ [A] (441-500 V)		160	190	240	302	361
	$I_{VLT,MAX}$ (60 s) [A] (441-500 V)		240	285	360	453	542
Output	$S_{VLTN}$ [kVA] (400 V)		123	147	180	218	274
	$S_{VLTN}$ [kVA] (460 V)		127	151	191	241	288
	$S_{VLTN}$ [kVA] (500 V)		139	165	205	262	313
Typical shaft output	[kW] (400 V)		90	110	132	160	200
	[HP] (460 V)		125	150	200	250	300
	[kW] (500 V)		110	132	160	200	250
Max. cable cross-section to motor	[mm <sup>2</sup> ] <sup>3,5</sup>				2 x 185		
	[AWG] <sup>3,5</sup>				2 x 350 mc/m		
Max. cable cross-section to loadsharing and brake	[mm <sup>2</sup> ] <sup>3,5</sup>				2 x 185		
	[AWG] <sup>3,5</sup>				2 x 350 mc/m		
<b>Normal overload current (110 %):</b>							
Rated input current	$I_{LN}$ [A] (350-440 V)		208	256	317	385	467
	$I_{LN}$ [A] (441-500 V)		185	236	304	356	431
<b>High overload torque (160 %):</b>							
Rated input current	$I_{LN}$ [A] (380-440 V)		174	206	256	318	389
	$I_{LN}$ [A] (441-500 V)		158	185	236	304	356
Max. cable cross-section power supply	[mm <sup>2</sup> ] <sup>3,5</sup>				2 x 185		
	[AWG] <sup>3,5</sup>				2 x 350 mc/m		
Min. cable cross-section to motor and power supply	[mm <sup>2</sup> ] <sup>3,5</sup>				35		
	[AWG] <sup>3,5</sup>				2		
Min. cable cross-section to brake and loadsharing	[mm <sup>2</sup> ] <sup>3,5</sup>				10		
	[AWG] <sup>3,5</sup>				8		
Max. pre-fuses (trains) [-]/UL	[A] <sup>1</sup>		300/	350/	450/	500/	630/
			300	350	400	500	600
Efficiency <sup>2</sup>					0,96		
	Power loss						
Weight	Normal overload [W]		2619	3309	4163	4977	6107
	High overload [W]		2206	2619	3309	4163	4977
Weight	IP 00 [kg]		89	89	134	134	154
	IP 21/Nema 1 [kg]		96	96	143	143	163
Weight	IP 54/Nema 12 [kg]		96	96	143	143	163
	Enclosure		IP 00, IP 21/Nema 1 and IP 54/Nema 12				



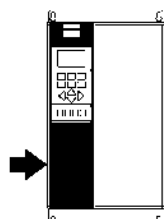
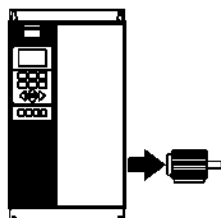
1. For type of fuse see section *Fuses*
2. Measured using 100 ft. screened motor cables at rated load and rated frequency.
3. Max. cable cross-section is the maximum possible cable cross-section allowed to be fitted on the terminals. Min. cable cross-section is the minimum allowed cross-section. Always comply with national and local regulations on min. cable cross-section.
4. Weight without shipping container.
5. Connection box: power supply and motor: M10; Brake and loadsharing: M8



## VLT® 5000 Series

### ■ Compact, Mains supply 3 x 380-500 V

According to international requirements		VLT type	5350	5450	5500
<b>Normal overload current (110 %):</b>					
Output current:	$I_{MLN}$ [A] (380-440 V)		600	658	745
	$I_{MLN, MAX}$ (60 s) [A] (380-440 V)		660	724	820
	$I_{MLN}$ [A] (441-500 V)		540	590	678
	$I_{MLN, MAX}$ (60 s) [A] (441-500 V)		594	649	746
Output:	$S_{VLTN}$ [kVA] (400 V)		416	456	518
	$S_{VLTN}$ [kVA] (460 V)		430	470	540
	$S_{VLTN}$ [kVA] (500 V)		468	511	587
Typical shaft output	[kW] (400 V)		315	355	400
	[HP] (460 V)		450	500	600
	[kW] (500 V)		355	400	500
<b>High overload torque (160 %):</b>					
Output current:	$I_{MLN}$ [A] (380-440 V)		490	600	658
	$I_{MLN, MAX}$ (60 s) [A] (380-440 V)		720	900	987
	$I_{MLN}$ [A] (441-500 V)		413	510	590
	$I_{MLN, MAX}$ (60 s) [A] (441-500 V)		665	810	885
Output:	$S_{VLTN}$ [kVA] (400 V)		333	416	456
	$S_{VLTN}$ [kVA] (460 V)		353	430	470
	$S_{VLTN}$ [kVA] (500 V)		384	468	511
Typical shaft output	[kW] (400 V)		250	315	355
	[HP] (460 V)		350	450	500
	[kW] (500 V)		315	355	400
Max. cable cross-section to motor and loadsharing	[mm <sup>2</sup> ] <sup>3,5</sup>		2x400 - 3x150		
Max. cable cross-section to brake	[mm <sup>2</sup> ] <sup>3,5</sup>		2x750 mm <sup>2</sup> - 3x350 mm <sup>2</sup>		
Max. cable cross-section to motor, power supply and loadsharing	[mm <sup>2</sup> ] <sup>3,5</sup>		70		
Max. cable cross-section to brake	[mm <sup>2</sup> ] <sup>3,5</sup>		2/0		
<b>Normal overload current (110 %):</b>					
Rated input current	$I_{LS}$ [A] (380-440 V)		584	648	734
	$I_{LS}$ [A] (441-500 V)		526	581	668
<b>High overload torque (160 %):</b>					
Rated input current	$I_{LS}$ [A] (380-440 V)		467	584	648
	$I_{LS}$ [A] (441-500 V)		431	526	581
Max. cable cross-section power supply	[mm <sup>2</sup> ] <sup>3,5</sup>		2x400 - 3x150		
Min. cable cross-section to motor, power supply and loadsharing	[mm <sup>2</sup> ] <sup>3,5</sup>		2x750 mm <sup>2</sup> - 3x350 mm <sup>2</sup>		
Min. cable cross-section to brake	[mm <sup>2</sup> ] <sup>3,5</sup>		70		
Max. and fuses (main) I <sup>2</sup> t/LIL	[A] <sup>1</sup>		3/0		
Min. cable cross-section to brake	[mm <sup>2</sup> ] <sup>3,5</sup>		10		
Max. and fuses (main) I <sup>2</sup> t/LIL	[A] <sup>1</sup>		8		
Efficiency <sup>3</sup>	Normal overload [W]		11300	12500	14400
	High overload [W]		9280	11300	12500
Weight	IP 00 [kg]		515	560	585
Weight	IP 21/Nema 1 [kg]		630	675	700
Weight	P 54/Nema 12 [kg]		640	685	710
Enclosure			IP 00, IP 20/Nema 1 and IP 54/Nema 12		







## VLT® 5000 Series

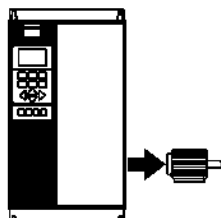
1. For type of fuse see section *Fuses*
  2. Measured using 100 ft. screened motor cables at rated load and rated frequency.
  3. Max. cable cross-section is the maximum possible cable cross-section allowed to be fitted on the terminals. Min. cable cross-section is the minimum allowed cross-section. Always comply with national and local regulations on min. cable cross-section.
  4. Weight without shipping container.
  5. Connection bolt power supply, motor and loadsharing: M12; Brake: M8
-



## VLT® 5000 Series

### ■ Compact, Mains supply 3 x 525 - 600 V

According to International requirements	VLT type	5001	5002	5003	5004
<b>Normal overload torque (110 %):</b>					
Output: current	$I_{VTN}$ [A] (550 V)	2.6	2.9	4.1	5.2
	$I_{VLT, MAX}$ (60 s) [A] (550 V)	2.9	3.2	4.5	5.7
	$I_{VTN}$ [A] (575 V)	2.4	2.7	3.9	4.9
	$I_{VLT, MAX}$ (60 s) [A] (575 V)	2.6	3.0	4.3	5.4
Output:	$S_{VLLN}$ [kVA] (550 V)	2.5	2.8	3.9	5.0
	$S_{VLLN}$ [kVA] (575 V)	2.4	2.7	3.9	4.9
Typical shaft output:	$P_{VLLN}$ [kW]	1.1	1.5	2.2	3
Typical shaft output:	$P_{VLLN}$ [HP]	1.5	2	3	4
<b>High overload torque (160 %):</b>					
Output: current	$I_{VTN}$ [A] (550 V)	1.8	2.6	2.9	4.1
	$I_{VLT, MAX}$ (60 s) [A] (550 V)	2.9	4.2	4.6	6.6
	$I_{VTN}$ [A] (575 V)	1.7	2.4	2.7	3.9
	$I_{VLT, MAX}$ (60 s) [A] (575 V)	2.7	3.5	4.3	6.2
Output:	$S_{VLLN}$ [kVA] (550 V)	1.7	2.5	2.8	3.9
	$S_{VLLN}$ [kVA] (575 V)	1.7	2.4	2.7	3.9
Typical shaft output:	$P_{VLLN}$ [kW]	0.75	1.1	1.5	2.2
Typical shaft output:	$P_{VLLN}$ [HP]	1	1.5	2	3
Max. cable cross-section to motor, brake and cabling [mm <sup>2</sup> ] / [AWG]		4/10	4/10	4/10	4/10

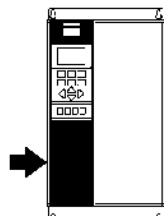


### Normal overload torque (110 %):

Rated input current	$I_{LN}$ [A] (550 V)	2.5	2.5	4.0	5.1
	$I_{LN}$ [A] (600 V)	2.2	2.5	3.6	4.6

### High overload torque (160 %):

Rated input current	$I_{LN}$ [A] (550 V)	1.8	2.5	2.8	4.0
	$I_{LN}$ [A] (600 V)	1.6	2.2	2.5	3.6
Max. cable cross-section, power [mm <sup>2</sup> ] / [AWG]		4/10	4/10	4/10	4/10
Max. core-fuses	$[ ]/L_{-1}$ [A]	3	4	5	6
Efficiency <sup>2)</sup>		0.96	0.96	0.96	0.96
Weight: P 20 EB	[kg]	10.5	10.5	10.5	10.5
Power loss at max. load	[W]	63	71	102	129
Enclosure		Protected Chassis/NE-MA <sup>1)</sup>			



1. For type of fuses see section Fuses.
2. Measured using 100 ft. screened motor cables at rated load and rated frequency.



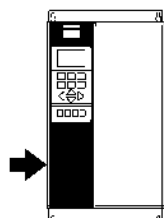
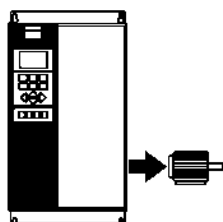
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email: [esys@esys.us](mailto:esys@esys.us)  
 website: <http://www.esys.us>



### Compact, Mains supply 3 x 525 - 600 V

According to international requirements	VLТ type	5005	5006	5008	5011
<b>Normal overload torque (110 %):</b>					
Output current:	$I_{VLN}$ [A] (550 V)	6.4	9.5	11.5	11.5
	$I_{VLN, MAX}$ (60 s) [A] (550 V)	7.0	10.5	12.7	12.7
	$I_{VLN}$ [A] (575 V)	6.1	9.0	11.0	11.0
	$I_{VLN, MAX}$ (60 s) [A] (575 V)	6.7	9.9	12.1	12.1
Output	$S_{VLIN}$ [kVA] (550 V)	6.1	9.0	11.0	11.0
	$S_{VLIN}$ [kVA] (575 V)	6.1	9.0	11.0	11.0
Typical shaft output	$P_{WTN}$ [kW]	4	5.5	7.5	7.5
Typical shaft output	$P_{WTN}$ [HP]	5	7.5	10.0	10.0
<b>High overload torque (160%):</b>					
Output current:	$I_{VLN}$ [A] (550 V)	5.2	6.4	9.5	11.5
	$I_{VLN, MAX}$ (60 s) [A] (550 V)	8.3	10.2	15.2	18.4
	$I_{VLN}$ [A] (575 V)	4.9	6.1	9.0	11.0
	$I_{VLN, MAX}$ (60 s) [A] (575 V)	7.8	9.8	14.4	17.6
Output	$S_{VLIN}$ [kVA] (550 V)	5.0	6.1	9.0	11.0
	$S_{VLIN}$ [kVA] (575 V)	4.9	6.1	9.0	11.0
Typical shaft output	$P_{WTN}$ [kW]	3	4	5.5	7.5
Typical shaft output	$P_{WTN}$ [HP]	4	5	7.5	10
Max. cable cross-section to motor, brake and loadsharing [mm <sup>2</sup> ] [AWG]		4/10	4/10	4/10	4/10
<b>Normal overload torque (110 %):</b>					
Rated input current	$I_{IN}$ [A] (550 V)	6.2	9.2	11.2	11.2
	$I_{IN}$ [A] (600 V)	5.7	8.4	10.3	10.3
<b>High overload torque (160 %):</b>					
Rated input current	$I_{IN}$ [A] (550 V)	5.1	6.2	9.2	11.2
	$I_{IN}$ [A] (600 V)	4.6	5.7	8.4	10.3
Max. cable cross-section, power [mm <sup>2</sup> ] [AWG]		4/10	4/10	4/10	4/10
Max. pre-fuses	[ ]/UL <sup>1)</sup> [A]	8	10	15	20
Efficiency $\eta^2$		0.96	0.96	0.96	0.96
Weight IP 20 FR	[kg]	10.5	10.5	10.5	10.5
Power loss at max. load.	[W]	160	236	288	288
Enclosure		Protected Chassis/NFMA1			



1. For type of fuses see section *Fuses*.

2. Measured using 100 ft. screened motor cables at rated load and rated frequency.



## VLT® 5000 Series

### ■ Compact, Mains supply 3 x 525 - 600 V

According to international requirements

VLT type 5016 5022 5027

#### Normal overload torque (110 %):

Output current	$I_{VTN}$ [A] (550 V)	23	28	34
	$I_{VLT MAX}$ (60 s) [A] (550 V)	25	31	37
	$I_{VLTN}$ [A] (575 V)	22	27	32
	$I_{VLT MAX}$ (60 s) [A] (575 V)	24	30	35
Output:	$S_{VLTN}$ [kVA] (550 V)	22	27	32
	$S_{VLTN}$ [kVA] (575 V)	22	27	32

Typ. ca. shaft output	$P_{VLTN}$ [kW]	15	18.5	22
Typ. ca. shaft output	$P_{VLTN}$ [HP]	20	25	30

#### High overload torque (160 %):

Output current	$I_{VTN}$ [A] (550 V)	18	23	28
	$I_{VLT MAX}$ (60 s) [A] (550 V)	29	37	45
	$I_{VLTN}$ [A] (575 V)	17	22	27
	$I_{VLT MAX}$ (60 s) [A] (575 V)	27	35	43
Output:	$S_{VLTN}$ [kVA] (550 V)	17	22	27
	$S_{VLTN}$ [kVA] (575 V)	17	22	27

Typ. ca. shaft output	$P_{VLTN}$ [kW]	11	15	18.5
Typ. ca. shaft output	$P_{VLTN}$ [HP]	15	20	25

Max. cable cross-section to motor, brake and loadsharing [mm <sup>2</sup> ]/[AWG] <sup>1)</sup>		16	16	35
Min. cable cross-section to motor, brake and loadsharing [mm <sup>2</sup> ]/[AWG] <sup>2)</sup>		0.5	0.5	10

		20	20	6
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#### Normal overload torque (110 %):

Rated input current	$I_{LN}$ [A] (550 V)	22	27	33
	$I_{LN}$ [A] (600 V)	21	25	30

#### High overload torque (160 %):

Rated input current	$I_{LN}$ [A] (550 V)	16	22	27
	$I_{LN}$ [A] (600 V)	16	21	25

Max. cable cross-section, power [mm <sup>2</sup> ]/[AWG] <sup>2)</sup>		16	16	35
		6	6	2

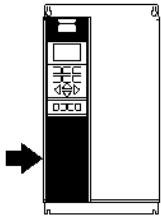
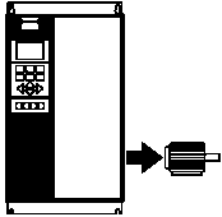
Max. pre-fuses	[ $I_{VLTN}$ ] [A]	30	35	45
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Efficiency		0.96	0.96	0.96
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Weight: IP 20 FB	[kg]	23	23	30
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Power loss at max. load	[W]	576	707	638
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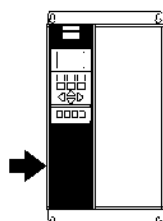
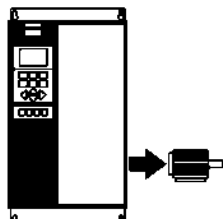
Enclosure			NEMA 1	
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1. For type of fuse see section *Fuses*
2. Measured using 100 ft. screened motor cables at rated load and rated frequency.
3. Min. cable cross-section is the smallest cable cross-section allowed to be fitted on the terminals to comply with IP 20. Always comply with national and local regulations on min. cable cross-section.

### Compact, Mains supply 3 x 525 - 600 V

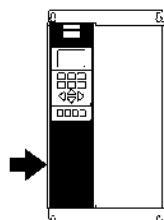
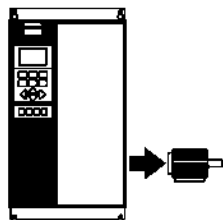
According to international requirements		VLT type	5032	5042	5052	5062
<b>Normal overload torque (110 %):</b>						
Output current	$I_{VLN}$ [A] (550 V)		43	54	65	81
	$I_{VLN, MAX}$ (60 s) [A] (550 V)		47	59	72	89
Output	$I_{VLIN}$ [A] (575 V)		41	52	62	77
	$I_{VLIN, MAX}$ (60 s) [A] (575 V)		45	57	68	85
	$S_{VLTN}$ [kVA] (550 V)		41	51	62	77
	$S_{VLTN}$ [kVA] (575 V)		41	52	62	77
Typical shaft output	$P_{VLIN}$ [kW]		30	37	45	55
Typical shaft output	$P_{VLIN}$ [HP]		40	50	60	75
<b>High overload torque (160 %):</b>						
Output current	$I_{VLN}$ [A] (550 V)		34	43	54	68
	$I_{VLN, MAX}$ (60 s) [A] (550 V)		54	69	86	104
Output	$I_{VLIN}$ [A] (575 V)		32	41	52	62
	$I_{VLIN, MAX}$ (60 s) [A] (575 V)		51	66	83	99
	$S_{VLTN}$ [kVA] (550 V)		32	41	51	62
	$S_{VLTN}$ [kVA] (575 V)		32	41	52	62
Typical shaft output	$P_{VLIN}$ [kW]		22	30	37	45
Typical shaft output	$P_{VLIN}$ [HP]		30	40	50	60
Max. cable cross-section to motor, brake and loadsharing [mm <sup>2</sup> ]/[AWG] <sup>1)</sup>			35	50	50	50
Min. cable cross-section to motor, brake and loadsharing [mm <sup>2</sup> ]/[AWG] <sup>2)</sup>			2	1/0	1/0	1/0
<b>Normal overload torque (110 %):</b>						
Rated input current	$I_{LN}$ [A] (550 V)		42	53	63	79
	$I_{LN}$ [A] (600 V)		38	49	58	72
<b>High overload torque (160 %):</b>						
Rated input current	$I_{LN}$ [A] (550 V)		33	42	53	63
	$I_{LN}$ [A] (600 V)		30	38	49	58
Max. cable cross-section power [mm <sup>2</sup> ]/[AWG] <sup>4)</sup>			35	50	50	50
Max. pre-fuses	$I_{FLI}$ [A]		60	75	90	100
Efficiency			0.96	0.96	0.96	0.96
Weight: P 20 CB	[kg]		30	48	48	48
Power loss at max. load	[W]		1074	1362	1624	2016
Enclosure			NEMA 1			



1. For type of fuse see section Fuses
2. Measured using 100 ft. screened motor cables at rated load and rated frequency.
3. Min. cable cross-section is the smallest cable cross-section allowed to be fitted on the terminals to comply with IEC 20. Always comply with national and local regulations on min. cable cross-section.
4. Aluminum cables with cross-section above 35 mm<sup>2</sup> must be connected by use of a Al-Cu connector.

### ■ Compact, Mains supply 3 x 525 - 600 V

According to international requirements		VLT type	5075	5100	5125
<b>Normal overload torque (110 %):</b>					
Output current	$I_{MTN}$ [A] (550 V)		104	131	151
	$I_{MT\ MAX}$ (60 s) [A] (550 V)		114	144	166
	$I_{MLTN}$ [A] (575 V)		99	125	144
	$I_{MLT\ MAX}$ (60 s) [A] (575 V)		109	135	158
Output	$S_{MLTN}$ [kVA] (550 V)		99	125	144
	$S_{MLTN}$ [kVA] (575 V)		99	124	143
Typical shaft output $P_{M\ FLN}$ [kW]			75	90	110
Typical shaft output $P_{M\ FLN}$ [HP]			100	125	150
<b>High overload torque (160 %):</b>					
Output current	$I_{MLN}$ [A] (550 V)		81	104	131
	$I_{MT\ MAX}$ (60 s) [A] (550 V)		130	166	210
	$I_{MTN}$ [A] (575 V)		77	99	125
	$I_{MLT\ MAX}$ (60 s) [A] (575 V)		123	158	200
Output	$S_{MLTN}$ [kVA] (550 V)		77	99	125
	$S_{MLTN}$ [kVA] (575 V)		77	99	124
Typical shaft output (380-440 V) $P_{M\ FLN}$ [kW]			55	75	90
Typical shaft output (380-440 V) $P_{M\ FLN}$ [HP]			75	100	125
Max. cable cross-section to motor, brake and loadsharing [mm <sup>2</sup> ]			120	120	120
[AWG]			4/0	4/0	4/0
Min. cable cross-section to motor, brake and loadsharing <sup>3)</sup> [mm <sup>2</sup> ]			6	6	6
[* AWG]			8	8	8
Max input current: 110%	$I_{L\ MAX}$ [A] (550 V)		101	128	147
	$I_{L\ MAX}$ [A] (575 V)		92	117	134
Max input current: 160%	$I_{L\ MAX}$ [A] (550 V)		79	101	128
	$I_{L\ MAX}$ [A] (575 V)		72	92	117
Max. cable cross-section to power [mm <sup>2</sup> ]			120	120	120
[AWG]			4/0	4/0	4/0
Min. cable cross-section to power <sup>3)</sup> [mm <sup>2</sup> / AWG]			6/8	6/8	6/8
Max. pre-fuses (mains) [-/J, 1 <sup>1)</sup> /A]			125	175	200
Efficiency <sup>2)</sup>			0.96-0.97		
Weight: IP 00		[kg]	109	109	109
Weight: Nema 1 CB		[kg]	121	121	121
Power loss at max. load [W]			2560	3275	3775



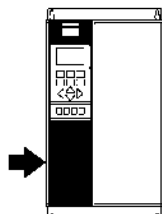
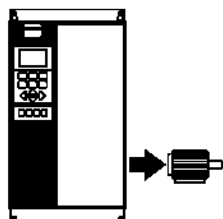
- For type of fuse see section Fuses
- Measured using 100 ft. screened motor cables at rated load and rated frequency.
- Min. cable cross-section is the smallest cable cross-section allowed to be fitted on the terminals. Always comply with national and local regulations on min. cable cross-section.
- Connection stud 1" x M8/2 x M8.



## VLТ® 5000 Series

### Compact, Mains supply 3 x 525 - 600 V

According to international requirements	VLТ type	5150	5200	5250
<b>Normal overload torque (110 %):</b>				
Output current	$I_{M.T.N}$ [A] (550 V)	201	253	289
	$I_{M.T.MAX}$ (60 s) [A] (550 V)	221	278	318
	$I_{M.T.N}$ [A] (575 V)	192	242	280
	$I_{M.T.MAX}$ (60 s) [A] (575 V)	211	266	318
Output	$S_{V-TN}$ [kVA] (550 V)	191	241	275
	$S_{V-TN}$ [kVA] (575 V)	191	241	288
Typ. ca. shaft output $P_{V-TN}$ [kW]		132	160	200
Typ. ca. shaft output $P_{V-TN}$ [HP]		200	250	300
<b>High overload torque (160 %):</b>				
Output current	$I_{M.T.N}$ [A] (550 V)	151	201	253
	$I_{M.T.MAX}$ (60 s) [A] (550 V)	242	322	405
	$I_{M.T.N}$ [A] (575 V)	144	192	242
	$I_{M.T.MAX}$ (60 s) [A] (575 V)	230	307	387
Output	$S_{V-TN}$ [kVA] (550 V)	144	191	241
	$S_{V-TN}$ [kVA] (575 V)	143	191	241
Typ. ca. shaft output $P_{V-TN}$ [kW]		110	132	160
Typ. ca. shaft output $P_{V-TN}$ [HP]		150	200	250
Max. cable cross-section to motor, brake and loadsharing [mm <sup>2</sup> ]		2x120	2x120	2x120
AWG		2x4/0	2x4/0	2x4/0
Min. cable cross-section to motor, brake and loadsharing <sup>3)</sup> [mm <sup>2</sup> ]		2x6	2x6	2x6
AWG		2x8	2x8	2x8
Max input current 110%	$I_{L,MAX}$ [A] (550 V)	196	246	281
	$I_{L,MAX}$ [A] (575 V)	179	226	270
Max input current 160%	$I_{L,MAX}$ [A] (550 V)	147	196	246
	$I_{L,MAX}$ [A] (575 V)	134	179	226
Max. cable cross-section to power <sup>4)</sup> [mm <sup>2</sup> ]		2x120	2x120	2x120
AWG		2x4/0	2x4/0	2x4/0
Min. cable cross-section to power <sup>4)</sup> [mm <sup>2</sup> AWG] <sup>1)</sup>		6/8	6/8	6/8
Max. pre-fuses (mains) [-FU-1] <sup>1)</sup> [A]		250	350	400
Efficiency <sup>2)</sup>		0.96-0.97		
Weight IP 00		[kg]	146	146
Weight Nema 1 EB		[kg]	161	161
Power loss at max. load [W]		5030	6340	7570
Enclosure		IP 00 / Nema 1 (IP 20)		



Technical data

- For type of fuse see section Fuses
- Measured using 100 ft. screened motor cables at rated load and rated frequency.
- Min. cable cross-section is the smallest cable cross-section allowed to be fitted on the terminals. Always comply with national and local regulations on min. cable cross-section.
- Connection stud 1 x M8/2 x M8.



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 website: <http://www.esys.us>





## VLT® 5000 Series

### ■ Fuses

#### UL compliance

To comply with UL/cUL approvals, pre-fuses according to the table below must be used.

#### 200-240 V

VLT	Bussmann	SIBA	Little fuse	Ferraz-Shawmut
5001	KTN-R10	5017906-010	KLN-R10	ATM-R10 or A2K-10R
5002	KTN-R10	5017906-010	KLN-R10	ATM-R10 or A2K-10R
5003	KTN-R25	5017906-016	KI N-R15	ATM-R15 or A2K-15R
5004	KTN-R20	5017906-020	KI N-R20	ATM-R20 or A2K-20R
5005	KIN-R25	5017906-025	KLN-R25	ATM-R25 or A2K-25R
5006	KTN-R30	5012406-032	KLN-R30	ATM-R30 or A2K-30R
5008	KTN-R50	5014006-050	KLN-R50	A2K-50R
5011	KTN-R60	5014006-063	KI N-R60	A2K-60R
5016	KTN-R85	5014006-080	KI N-R80	A2K-80R
5022	KTN-R125	2028220-125	KI N-R125	A2K-125R
5027	KIN-R125	2028220-125	KLN-R125	A2K-125H
5032	KTN-R150	2028220-160	L25S-150	A25X-150
5042	KTN-R200	2028220-200	L25S-200	A25X-200
5052	KTN-R250	2028220-250	L25S-250	A25X-250

#### 380-500 V

	Bussmann	SIBA	Little fuse	Ferraz-Shawmut
5001	KTS-R6	5017906-006	KLS-R6	ATM-R6 or A6K-6R
5002	KTS-R6	5017906-006	KLS-R6	ATM-R6 or A6K-6R
5003	KTS-R10	5017906-010	KLS-R10	ATM-R10 or A6K-10R
5004	KTS-R10	5017906-010	KLS-R10	ATM-R10 or A6K-10R
5005	KTS-R15	5017906-016	KLS-R16	ATM-R16 or A6K-16R
5006	KTS-R20	5017906-020	KLS-R20	ATM-R20 or A6K-20R
5008	KTS-R25	5017906-025	KI S-R25	ATM-R25 or A6K-25R
5011	KTS-R30	5012406-032	KLS-R30	A6K-30R
5016	KTS-R40	5012406-040	KLS-R40	A6K-40R
5022	KTS-R50	5014006-050	KLS-R50	A6K-50R
5027	KTS-R60	5014006-063	KLS-R60	A6K-60R
5032	KTS-R80	2028220-100	KLS-R80	A6K-180R
5042	KTS-R100	2028220-125	KLS-R100	A6K-100R
5052	KTS-R125	2028220-125	KI S-R125	A6K-125R
5062	KTS-R150	2028220-160	KI S-R150	A6K-150R
5072	FWI-220	2028220-200	L50S-225	A50-P225
5102	FWH-250	2028220-250	L50S-250	A50-P250
5122	FWH-300	2028220-315	L50S-300	A50-P300
5152	FWH-350	2028220-315	L50S-350	A50-P350
5202	FWH-400	206xx32-400	L50S-400	A50-P400
5252	FWH-500	206xx32-500	L50S-500	A50-P500
5302	FWI-600	206xx32-600	L50S-600	A50-P600
5350	FWI-700	206xx32-700	L50S-700	A50-P700
5450	FWI-800	206xx32-800	L50S-800	A50-P800
5500	FWH-900	206xx32-800	L50S-800	A50-P800





## VL<sup>®</sup> 5000 Series

### 525-600 V

	Bussmann	SIBA	Littel fuse	Ferraz Shawmut
5001	KTS R3	5017906-004	KLS-R003	A6K-3R
5002	KTS R4	5017906-004	KLS-R004	A6K-4R
5003	KT R5	5017906-005	KLS-R005	A6K-5R
5004	KTS-R6	5017906-006	KLS-R006	A6K-6R
5005	KIS-H8	5017906-008	KLS-H008	A6K-8H
5006	KIS-H10	5017906-010	KLS-H010	A6K-10H
5008	KTS-R15	5017906-016	KLS-R015	A6K-15R
5011	KTS R20	5017906-020	KLS-R020	A6K-20R
5016	KTS R30	5017906-030	KLS-R030	A6K-30R
5022	KTS-R35	5014006-040	KLS-R035	A6K-35R
5027	KIS-H45	5014006-050	KLS-H045	A6K-45H
5032	KTS-R60	5014006-063	KLS-R060	A6K-60R
5042	KIS-H75	5014006-080	KLS-H075	A6K-80H
5052	KTS-R90	5014006-100	KLS-R090	A6K-90R
5062	KTS-R100	5014006-100	KLS-R100	A6K-100R
5075	FWP-125A	2018920-125	L70S-125	A70QS-125
5100	FWP-175A	2018920-180	L70S-175	A70QS-175
5125	FWP-200A	2018920-200	L70S-200	A70QS-200
5150	IWP-250A	2018920-250	L70S-250	A70QS-250
5200	FWP-350A	206xx32-350	L70S-350	A70QS-350
5250	FWP-400A	206xx32-400	L70S-400	A70QS-400

Technical  
data

KTS-fuses from Bussmann may substitute KTN for 240 V drives.  
FWH-fuses from Bussmann may substitute FWX for 240 V drives.

KLSR fuses from LITTEL FUSE may substitute KLNK fuses for 240 V drives.  
L70S fuses from LITTEL FUSE may substitute L70S fuses for 240 V drives.

A6KR fuses from FERRAZ SHAWMUT may substitute A2KH for 240 V drives.  
A50X fuses from FERRAZ SHAWMUT may substitute A25X for 240 V drives.

### Non UL compliance

If UL/cUL is not to be complied with, we recommend the above mentioned fuses or:

VL 5001-5027	200-240 V	type gG
VL 5001-5062	380-500 V	type gG
VIT 5001-5062	525-600 V	type gG
VLI 5032-5052	200-240 V	type gH
VIT 5072-5500	380-500 V	type gR
VLI 5075-5250	525-600 V	type gH

Not following the recommendation may result in unnecessary damage of the drive in case of malfunction. Fuses must be designed for protection in a circuit capable of supplying a maximum of 100000 A<sub>rms</sub> (symmetrical), 500/600 V maximum.



## VLT® 5000 Series

### ■ Brake resistors, VLT 5001 - 5052 / 200 - 240 V

#### Standard brake resistors

VLT	10% duty cycle			40% duty cycle		
	Resistance [ohm]	Power [kW]	Code No.	Resistance [ohm]	Power [kW]	Code No.
5001	145	0.065	175U1820	145	0.260	175U1920
5002	90	0.095	175U1821	90	0.430	175U1921
5003	65	0.250	175U1822	65	0.80	175U1922
5004	50	0.285	175U1823	50	1.00	175U1923
5005	35	0.430	175U1824	35	1.35	175U1924
5006	25	0.8	175U1825	25	3.00	175U1925
5008	20	1.0	175U1826	20	3.50	175U1926
5011	15	1.8	175U1827	15	5.00	175U1927
5016	10	2.8	175U1828	10	9.0	175U1928
5022	7	4.0	175U1829	7	10.0	175U1929
5027	6	4.8	175U1830	6	12.7	175U1930
5032	4.7	6	175U1954	Not available	Not available	Not available
5042	3.3	8	175U1955	Not available	Not available	Not available
5052	2.7	10	175U1956	Not available	Not available	Not available

See instruction MI.90.FX.YY for further information.

#### Flatpack brake resistors for horizontal conveyors

VLT type	Motor [kW]	Resistor [ohm]	Size	Order number	Max. duty cycle [%]
5001	0.75	150	150 100 W	175U1005	14.0
5001	0.75	150	150 200 W	175U0989	40.0
5002	1.1	100	100 100 W	175U1006	8.0
5002	1.1	100	100 200 W	175U0991	20.0
5003	1.5	72	72 200 W	175U0992	16.0
5004	2.2	47	50 200 W	175U0993	9.0
5005	3	35	35 200 W	175U0994	5.5
5005	3	35	72 200 W	2 x 175U0992*	12.0
5006	4	25	50 200 W	2 x 175U0993*	11.0
5008	5.5	20	40 200 W	2 x 175U0996*	6.5
5011	7.5	13	27 200 W	2 x 175U0995*	4.0

1. Order 2 pcs.

Mounting angle for flatpack resistor 100 W 175U0011

Mounting angle for flatpack resistor 200 W 175U0009

Mounting frame for 1 resistor narrow (slim bookstyle) 175U0002

Mounting frame for 2 resistors narrow (slim bookstyle) 175U0004

Mounting frame for 2 resistors broad (wide bookstyle) 175U0003

See *Instruction MI.50.BX.YY* for further information.



## VLТ® 5000 Series

### ■ Ordering numbers, Brake resistors, VLT 5001 - 5500 / 380 - 500 V

#### Standard brake resistors

VLT	10% duty cycle			40% duty cycle		
	Resistance [ohm]	Power [kW]	Code No.	Resistance [ohm]	Power [kW]	Code No.
5001	620	0.065	175U1840	620	0.260	175U1940
5002	425	0.095	175U1841	425	0.430	175U1941
5003	310	0.250	175U1842	310	0.80	175U1942
5004	210	0.285	175U1843	210	1.35	175U1943
5005	150	0.430	175U1844	150	2.0	175U1944
5006	110	0.60	175U1845	110	2.4	175U1945
5009	80	0.85	175U1846	80	3.0	175U1946
5011	65	1.0	175U1847	65	4.5	175U1947
5016	40	1.8	175U1848	40	5.0	175U1948
5022	30	2.8	175U1849	30	9.3	175U1949
5027	25	3.5	175U1850	25	12.7	175U1950
5032	20	4.0	175U1851	20	13.0	175U1951
5042	15	4.8	175U1852	15	15.8	175U1952
5052	12	5.5	175U1853	12	19.0	175U1953
5062	9.8	15	175U2008	9.8	38.0	175U2008
5072	7.3	13	175U0069	5.7	38.0	175U0068
5102	5.7	15	175U0067	4.7	45.0	175U0066
5122	3.8	43	175U0080			
5152	3.2	52	175U0081			
5202	2.6	60	175U0082			
5252	2.1	78	175U0083			
5302	1.65	96	175U0084			
5350	2.6	128	2 x 175U1062 <sup>1)</sup>			
5450	2.3	145	2 x 175U1063 <sup>1)</sup>			
5500	2.1	163	2 x 175U1064 <sup>1)</sup>			

Technical data

1. Order 2 pcs.

See instruction MI.90.FX.YY for further information.

#### Flatpack brake resistors for horizontal conveyors

VLT type	Motor [kW]	Resistor [ohm]	Size	Order number	Max. duty cycle [%]
5001	0.75	630	620 100 W	175U1001	14.0
5001	0.75	630	620 200 W	175U0982	40.0
5002	1.1	430	430 100 W	175U1002	8.0
5002	1.1	430	430 200 W	175U0983	20.0
5003	1.5	320	310 200 W	175U0984	16.0
5004	2.2	215	210 200 W	175U0987	9.0
5005	3	150	150 200 W	175U0989	5.5
5005	3	150	300 200 W	2 x 175U0985 <sup>1)</sup>	12.0
5006	4	120	240 200 W	2 x 175U0986 <sup>1)</sup>	11.0
5008	5.5	82	160 200 W	2 x 175U0988 <sup>1)</sup>	6.5
5011	7.5	65	130 200 W	2 x 175U0990 <sup>1)</sup>	4.0

1. Order 2 pcs.

Mounting frame for 2 resistors narrow (slim bookstyle) 175U0004

Mounting angle for flatpack resistor 100 W 175U0011

Mounting frame for 2 resistors broad (wide bookstyle) 175U0003

Mounting angle for flatpack resistor 200 W 175U0009

Mounting frame for 1 resistor narrow (slim bookstyle) 175U0002

See *Instruction MI.50.BX.YY* for further information.

For VLT 5001-5250, 550-600 V please contact Danfoss.



## VLT® 5000 Series

### ■ Ordering numbers, Brake resistors, VLT 5001 - 5250 / 550 - 600 V

#### Standard brake resistors

VLT	10% duty cycle			40% duty cycle <sup>4</sup>		
	Resistance [ohm] <sup>2</sup>	Power [kW]	Code No.	Resistance [ohm] <sup>2</sup>	Power [kW]	Code No.
5001 <sup>3</sup>	797.0	0.11	*1)	797.0	0.44	*1)
5002 <sup>3</sup>	534.0	0.16	*1)	534.0	0.64	*1)
5003 <sup>3</sup>	398.0	0.22	*1)	398.0	0.88	*1)
5004 <sup>3</sup>	267.0	0.32	*1)	267.0	1.28	*1)
5005 <sup>3</sup>	199.0	0.44	*1)	199.0	1.75	*1)
5006 <sup>3</sup>	149.0	0.58	*1)	149.0	2.33	*1)
5008 <sup>3</sup>	107.0	0.80	*1)	107.0	3.21	*1)
5011 <sup>3</sup>	80.0	1.09	*1)	80.0	4.38	*1)
5016 <sup>3</sup>	53.4	1.60	*1)	53.4	6.42	*1)
5022 <sup>3</sup>	39.8	2.19	*1)	39.8	8.75	*1)
5027 <sup>3</sup>	32.0	2.70	*1)	32.0	10.80	*1)
5032 <sup>3</sup>	26.7	3.21	*1)	26.7	12.84	*1)
5042 <sup>3</sup>	19.9	4.38	*1)	19.9	17.51	*1)
5052 <sup>3</sup>	16.0	5.40	*1)	16.0	21.59	*1)
5062 <sup>3</sup>	13.3	6.56	*1)	13.3	26.26	*1)
5075 <sup>5</sup>	11.0	8.16	*1)			
5100 <sup>5</sup>	8.2	10.88	*1)			
5125 <sup>5</sup>	6.8	13.60	*1)			
5150 <sup>5</sup>	5.6	16.32	*1)			
5200 <sup>5</sup>	4.3	21.77	*1)			
5250 <sup>5</sup>	3.3	27.21	*1)			

1) No Danfoss part number. Resistors must be ordered from another vendor according to specifications.

2) Tolerance +/- 5%

3) 10% Duty Cycle, 120 second period

4) 40% Duty Cycle, 120 second period

5) 10% Duty Cycle, 300 second period

See instruction MI.90.F X.YY for further information.



Contact Esys for more information about this product:  
 Esys® The Energy Control Company™  
 4520 Stine Road, Ste 7  
 Bakersfield, CA 93313  
 (661) 833-1902

email: [esys@esys.us](mailto:esys@esys.us)  
 website: <http://www.esys.us>





## VLТ® 5000 Series

### ■ Ordering numbers, Harmonic filters

Harmonic filters are used to reduce mains harmonics

- AHF 010: 10% current distortion
- AHF 005: 5% current distortion

#### 380-415V, 50Hz

I <sub>AHF,N</sub>	Typical Motor Used [kW]	Danfoss ordering number		VLT 5000
		AHF 005	AHF 010	
10 A	4, 5.5	175G6600	175G6622	5006, 5008
19 A	7.5	175G6601	175G6623	5011
26 A	11	175G6602	175G6624	5016
35 A	15, 18.5	175G6603	175G6625	5022, 5027
43 A	22	175G6604	175G6626	5032
72 A	30, 37	175G6605	175G6627	5042, 5052
101 A	45, 55	175G6606	175G6628	5062, 5072
144 A	75	175G6607	175G6629	5102
180 A	90	175G6608	175G6630	5122
217 A	110	175G6609	175G6631	5152
289 A	132, 160	175G6610	175G6632	5202, 5252
324 A		175G6611	175G6633	
Higher ratings can be achieved by paralleling the filter units				
360 A	200	Two 180 A units		5302
434 A	250	Two 217 A units		5350
578 A	315	Two 289 A units		5450
613 A	355	289 A and 324 A units		5500

Technical data

#### 440-480V, 60Hz

I <sub>AHF,N</sub>	Typical Motor Used [HP]	Danfoss ordering number		VLT 5000
		AHF 005	AHF 010	
19 A	10, 15	175G6612	175G6634	5011, 5016
26 A	20	175G6613	175G6635	5022
35 A	25, 30	175G6614	175G6636	5027, 5032
43 A	40	175G6615	175G6637	5042
72 A	50, 60	175G6616	175G6638	5052, 5062
101 A	75	175G6617	175G6639	5072
144 A	100, 125	175G6618	175G6640	5102, 5122
180 A	150	175G6619	175G6641	5152
217 A	200	175G6620	175G6642	5202
289 A	250	175G6621	175G6643	5252
Higher ratings can be achieved by paralleling the filter units				
324 A	300	144 A and 180 A units		5302
397 A	350	180 A and 217 A units		5350
506 A	450	217 A and 289 A units		5450
578 A	500	Two 289 A units		5500

Please note that the matching of the Danfoss frequency converter and filter is pre-calculated based on 400V/480V and assuming typical motor load (4 pole) and 160 % torque. For other combinations, please consult MG.80.BX.YY.



## VLT® 5000 Series

### ■ Mechanical dimensions

All the below listed measurements are in inches/millimeters.

	A	B	C	D	a	b	a0/be	Type
<b>Bookstyle IP 20</b>								
5001 - 5003 200 - 240 V								
5001 - 5005 380 - 500 V	15.6/395	3.54/90	10.23/260		15.11/384	2.75/70	3.94/100	A
5004 - 5006 200 - 240 V								
5006 - 5011 380 - 500 V	15.6/395	5.12/130	10.23/260		15.11/384	2.75/70	3.94/100	A
<b>Compact chassis / IP 00</b>								
5032 - 5032 200 - 240 V								
5075 - 5125 525 - 600 V	31.5/800	14.56/370	13.18/335		30.7/780	10.6/270	8.8/225	B
5122 - 5152 380 - 500 V	41.18/1046	16.10/408	14.76/375 <sup>2</sup>		39.41/1001	11.97/304	8.8/225	J
5150 - 5250 525 - 600 V	55.1/1400	16.5/420	15.75/400		54.33/1380	13.78/350	8.8/225	B
5202 - 5302 380 - 500 V	52.24/1327	16.10/408	14.76/375 <sup>2</sup>		15.47/1282	11.97/304	8.8/225	J
5350 - 5500 380 - 500 V	74.7/1896	43.26/1099	19.44/494		72.71/1847	41.92/1065	15.75/400 <sup>1)</sup>	I
<b>Compact NEMA 1/ protected chassis</b>								
5001 - 5003 200 - 240 V								
5001 - 5005 380 - 500 V	15.6/395	8.66/220	6.30/160		15.12/384	7.9/200	3.93/100	C
5004 - 5006 200 - 240 V								
5006 - 5011 380 - 500 V	15.6/395	8.66/220	7.87/200		15.12/384	7.9/200	3.93/100	C
5001 - 5011 525 - 600 V (IP 20 and NEMA 1)								
5008 200 - 240 V								
5016 - 5022 380 - 500 V	22.0/560	9.52/242	10.2/260		21.25/540	7.9/200	7.9/200	D
5016 - 5022 525 - 600 V (NEMA 1)								
5011 - 5016 200 - 240 V								
5027 - 5032 380 - 500 V	27.6/700	9.52/242	10.2/260		26.77/680	7.9/200	7.9/200	D
5027 - 5032 525 - 600 V (NEMA 1)								
5022 - 5027 200 - 240 V								
5042 - 5062 380 - 500 V	31.5/800	12.12/308	11.55/296		30.70/780	10.63/270	7.9/200	D
5042 - 5062 525 - 600 V (NEMA 1)								
5072 - 5102 380 - 500 V	31.5/800	14.7/370	13.9/335		30.70/780	12.99/330	8.86/225	D
<b>Compact NEMA 1/IP20/IP21</b>								
5032 - 5052 200 - 240 V								
5075 - 5125 525 - 600 V	37.55/964	14.56/370	13.18/335		30.7/780	10.63/270	8.8/225	E
5122 - 5152 380 - 500 V	47.56/1208	16.54/420	14.69/373 <sup>2</sup>		45.43/1154	11.97/304	8.8/225	J
5150 - 5250 525 - 600 V	61.22/1554	16.5/420	15.7/400		54.33/1380	13.77/350	8.8/225	E
5202 - 5302 380 - 500 V	62.52/1588	16.54/420	14.69/373 <sup>2</sup>		60.43/1535	11.97/304	8.8/225	J
5350 - 5500 380 - 500 V	79.1/2010	47.2/1200	23.6/600		-	-	15.7/400 <sup>1</sup>	H
<b>Compact NEMA 12/Nema12</b>								
5001 - 5003 200 - 240 V								
5001 - 5005 380 - 500 V	18.11/460	11.10/282	7.67/195	3.34/85	10.23/260	10.15/258	4.0/100	F
5004 - 5006 200 - 240 V								
5006 - 5011 380 - 500 V	20.86/530	11.10/282	7.67/195	3.34/85	12.99/330	10.15/258	4.0/100	F
5008 - 5011 200 - 240 V								
5016 - 5027 380 - 500 V	31.9/810	13.77/350	11.02/280	2.75/70	22.0/560	12.83/326	7.9/200	F
5016 - 5027 200 - 240 V								
5032 - 5062 380 - 500 V	37.0/940	15.7/400	11.02/280	2.75/70	27.16/690	14.8/375	7.9/200	F
5032 - 5052 200 - 240 V	36.89/937	19.5/495	16.57/421	-	32.7/830	14.72/374	8.8/225	G
5072 - 5102 380 - 500 V	37.0/940	15.75/400	14.21/361	2.75/70	27.17/690	14.76/375	8.86/225	F
5122 - 5152 380 - 500 V	47.56/1208	16.54/420	14.69/373 <sup>2</sup>		45.43/1154	11.97/304	8.8/225	J
5202 - 5302 380 - 500 V	62.52/1588	16.54/420	14.69/373 <sup>2</sup>		60.43/1535	11.97/304	8.8/225	J
5350 - 5500 380 - 500 V	79.1/2010	47.2/1200	23.62/600	-	-	-	15.7/400 <sup>1)</sup>	H

a0: Minimum space above enclosure

be: Minimum space below enclosure

1: Only above enclosure (ab) IP 00 when built in a Rittal cabinet.

2: With disconnect, acc. to IEC 60422