

TOSHIBA

Variable torque Drive

TOSVERT™ VF-PS1



Totally enclosed box type for IP54/UL type 12

point 1

Totally enclosed box type for IP54/UL type 12

- IP54 protection for direct mounting on a wall

point 2

High-frequency noise reduction

- IP54 product with EN 55011 class A or class B (IEC/EN 61800-3) built-in EMC filters

point 3

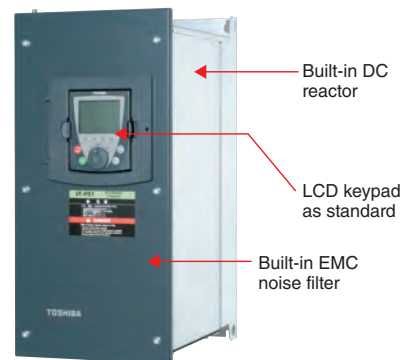
Harmonics reduction

- New types of compact and space-saving DC reactor is built-in for all models

point 4

LCD keypad as standard

- Possible for palm top operation



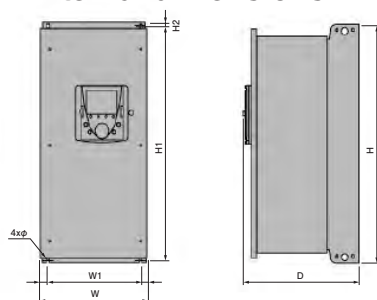
Standard specifications

Item		Specification															
Applicable motor (kW)		0.75	1.5	2.2	4.0	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90
Type	Type	VFPS1-															
Form	Form	4007PLE	4015PLE	4022PLE	4037PLE	4055PLE	4075PLE	4110PLE	4150PLE	4185PLE	4220PLE	4300PLE	4370PLE	4450PLE	4550PLE	4750PLE	4900PLE
Rating	Capacity(KVA)Note 1)	1.8	3.1	3.9	6.9	9.1	12.0	17.0	23.0	28.0	33.0	45.0	54.0	65.0	78.0	104.0	124.0
	Output current(A) Note 2)	2.3	4.1	5.1	9.1	12	16	22.5	30.5	37	43.5	58.5	71.5	85	103	137	163
Power supply	Voltage/frequency	3-phase 380 to 480V, 50/60 Hz															
	Allowable fluctuation	Voltage +10%, -15% (±10% during continuous 100% load) Frequency ±5%															
	Rated output voltage	3 phase 380 to 480V : 400V class (The maximum output voltage is same as the input source voltage)															
	Output frequency range	0.01 to 500 Hz (Default setting 0.01 to 60.0/50.0 Hz)															
	Overload current rating	110%-60 seconds(Inverse time-lag characteristic)															
	Dynamic breaking circuit	Built-in dynamic breaking circuit															
	Dynamic breaking resistor	External option															
	Main functions	Parameter setup quick mode, Local/remote operation, Automatic energy saving mode, programmable I/O terminal block, multi-PID control, Fire control enables forced operation, My function															
	Ambient temperature	-10 to 50°C (current decreases when over 40°C)															
	Relative humidity	5 to 95% (free from condensation and vapor)															
	Protective method	IP54/UL type 12															
	Cooling method	Forced air cooling															
	Built-in filter	EN55011 class A, EN61800-3 category C2 compliant (built-in EMI noise filter) :PLE type 0.75 to 5.5kW EN55011 class A, EN61800-3 category C3 compliant (built-in EMI noise filter) :PLE type 7.5 to 90kW EN55011 class B, EN61800-3 category C1 compliant (built-in EMI noise filter) :PDE type															
	Reactor	Built-in DC reactor															

Note 1) Capacity is calculated at 440V

Note 2) Rated output current when the PWM carrier frequency(parameter CF) is 8kHz or less.

External dimensions



Input voltage Class	Applicable motor (kW)	Inverter type Note 1)	Dimensions (mm)							Approximate Weight(kg) Note 1)
			W	H	D	W1	H1	H2	ø	
3-phase 400 V	0.75	VFPS1-4007PLE(PDE)								
	1.5	VFPS1-4015PLE(PDE)	240	490	261	200	476	6	6	13(15)
	2.2	VFPS1-4022PLE(PDE)								
	4.0	VFPS1-4037PLE(PDE)	240	490	275	200	476	6	6	16(18)
	5.5	VFPS1-4055PLE(PDE)								
	7.5	VFPS1-4075PLE(PDE)	260	525	275	220	511	6	6	20(23)
	11	VFPS1-4110PLE(PDE)								
	15	VFPS1-4150PLE(PDE)	296	560	304	250	544	8	6	25(29)
	18.5	VFPS1-4185PLE(PDE)								
	22	VFPS1-4220PLE(PDE)	315	665	305	270	647	10	6	36(41)
	30	VFPS1-4300PLE(PDE)	285	720	301	245	700	10	7	34(39)
	37	VFPS1-4370PLE(PDE)								
	45	VFPS1-4450PLE(PDE)	285	880	332	245	860	10	7	43(49)
	55	VFPS1-4550PLE(PDE)								
	75	VFPS1-4750PLE(PDE)	362	1000	353	300	975	10	9	69(80)
	90	VFPS1-4900PLE(PDE)								

Note 1) The values in parentheses refer to PDE type.

VFPS1-****PLE:Built-in class A EMC filter, VFPS1-****PDE:Built-in class B EMC filter

Standard connection diagram

See the Standard connection diagram for Standard type.

For users of the products : Our variable speed drives are designed to control the speeds of three-phase motors for general industry.

Precautions

- * Please read the instruction manual before installing or operating the drive unit.
- * This product is intended for general purpose uses in industrial application. It cannot be used applications where may cause big impact on public uses, such as power plant and railway, and equipment which endanger human life or injury, such as nuclear power control, aviation, space flight control, traffic, safety device, amusement, or medical. It may be considerable whether to apply, under the special condition or an application where strict quality control may not be required. Please contact our headquarters, branch, or local offices printed on the front and back covers of this catalogue.
- * When exporting Toshiba variable speed drive separately or combined with your equipment, please be sure to satisfy the objective conditions and inform conditions listed in the export control policies, so called Catch All restrictions, which are set by the Ministry of Economy, Trade and Industry of Japan, and the appropriate export procedures must also be taken.
- * Please use our product in applications where do not cause serious accidents or damages even if product is failure, or please use in environment where safety equipment is applicable or a backup circuit device is provided outside the system.
- * Please do not use our product for any load other than three-phase motors.
- * None of Toshiba, its subsidiaries, affiliates or agents, shall be liable for any physical damages, including, without limitation, malfunction, anomaly, breakdown or any other problem that may occur to any apparatus in which the Toshiba variable speed drive is incorporated or to any equipment that is used in combination with the Toshiba variable speed drive. Nor shall Toshiba, its subsidiaries, affiliates or agents be liable for any compensatory damages resulting from such utilization, including compensation for special, indirect, incidental, consequential, punitive or exemplary damages, or for loss of profit, income or data, even if the user has been advised or apprised of the likelihood of the occurrence of such loss or damages.

For further information, please contact your nearest Toshiba Representative or International Operations-Producer Goods.

The information in this brochure is subject to change without notice.

Toshiba Industrial Products and Systems Corporation

Global Sales Department Motor Drive Division

580, Horikawa-cho, Saiwai-ku, Kawasaki, Kanagawa 212-0013, Japan Tel: +81-44-520-0828 Fax: +81-44-520-0508

<http://www.toshiba-tips.co.jp/en/>

8699B

2019-08