CKVJ-1250

TOSHIBA

Leading Innovation

Variable Speed Drive

TOSVERT VF-S15

TOSHIBA eco style

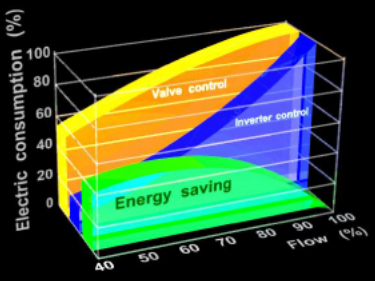
Simple compact and high performance drive

The new Toshiba VF-S15, standard general purpose drive, is designed for controlling wide range of variable torque and constant torque applications such as pumps, fans, lifts, conveyors, machine tool, food processor and mixers as well as for process control in various types of industries.
Also, PM motor drive for energy saving and a wide variety of communication options are available for all needs.

EC Directive (CE marking), UL, CSA

PM motor drive

Permanent magnetic motor (SPM, IPM) can be driven for energy saving purpose for variable torque.



Energy saving

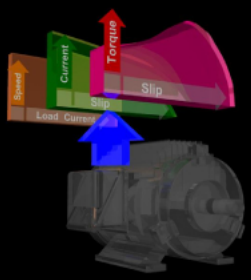
Reducing the energy consumption for variable torque application (FAN and Pump)

Installation

The bottom wire protection cover can be removed by one push opener.
I/O terminal door cover can be locked for safety.

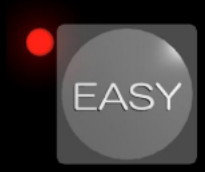
Setup Dial

Easy to operate for parameter writing and monitoring with setup dial



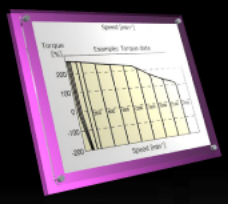
Auto-tuning

It leads you easy access to motor constant setup and fully use of all the advantages of motor.



Easy Key

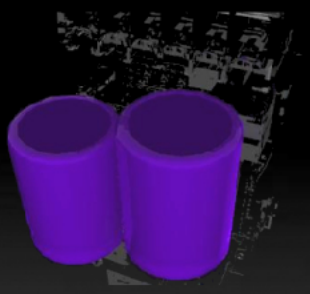
Up to 32 kinds of parameter can be stored for one group



Easy operation of high torque load

Vector control mode generate stable, high torque power from motor startup to a desired motor operating speed.

When a Toshiba standard 3-phase 400V-1.5kW motor is driven by the VFS15-4015PL after parameters are set



Long-life design

10 years life design by using long life capacitors

Parameter writer (Optional)

VFS15 can be programmed parameters without power connection

Communications

Ethenet/IP™
Modbus TCP
EtherCAT®
Profibus-DP
CANopen®
DeviceNet™
CC-link available with optional card

Item		Specification								
Input voltage		3-phase 240V								
Applicable motor (kW)		0.4	0.75	1.5	2.2	4.0	5.5	7.5	11	15
Rating	Type	VFS15								
	Form	2004PM-W	2007PM-W	2015PM-W	2022PM-W	2037PM-W	2055PM-W	2075PM-W	2110PM-W	2150PM-W
	Capacity (kVA) (Note 1)	1.3	1.8	3.0	4.2	6.7	10.5	12.6	20.6	25.1
	Rated output current (A) (Note 2)	3.3	4.8	8.0	11.0	17.5	27.5	33.0	54.0	66.0
	Output voltage (Note 3)	3-phase 200V to 240V								
	Overload current rating	150%-60 seconds, 200%-0.5 second								
Power supply	Voltage-frequency (Allowable fluctuation)	3-phase 200V to 240V - 50/60Hz (170V to 264V (Note 4), frequency ±5%)								
	Required capacity (kVA) (Note 5)	1.4	2.5	4.3	5.7	9.2	13.8	17.8	24.3	31.6
Protection degree (IEC60529)		IP20								
Cooling method		Self-cooling		Forced air-cooled						
Built-in filter		Basic filter								

Item		Specification												
Input voltage		1-phase 240V					3-phase 500V							
Applicable motor (kW)		0.2	0.4	0.75	1.5	2.2	0.4	0.75	1.5	2.2	4.0	5.5	7.5	11	15
Rating	Type	VFS15S					VFS15								
	Form	2002PL-W	2004PL-W	2007PL-W	2015PL-W	2022PL-W	4004PL-W	4007PL-W	4015PL-W	4022PL-W	4037PL-W	4055PL-W	4075PL-W	4110PL-W	4150PL-W
	Capacity (kVA) (Note 1)	0.6	1.3	1.8	3.0	4.2	1.1	1.8	3.1	4.2	7.2	10.9	13.0	21.1	25.1
	Rated output current (Note 2)	1.5	3.3	4.8	8.0	11.0	1.5	2.3	4.1	5.5	9.5	14.3	17.0	27.7	33.0
	Rated output voltage (Note 3)	3-phase 200V to 240V					3-phase 380V to 500V								
	Overload current rating	150%-60 seconds, 200%-0.5 second					150%-60 seconds, 200% -0.5 second								
Power supply	Voltage-frequency (Allowable fluctuation)	1-phase 200V to 240V – 50/60Hz (170V to 264V (Note 4), frequency ±5%)					3-phase 380V to 500V - 50/60Hz (323V to 550V (Note 4), frequency ±5%)								
	Required capacity (kVA) (Note 5)	0.8	1.4	2.3	4.0	5.4	1.6	2.7	4.7	6.4	10.0	15.2	19.5	26.9	34.9
Protection degree (IEC60529)		IP20					IP20								
Cooling method		Self-cooling			Forced air-cooled		Forced air-cooled								
Built-in filter		EMC filter					EMC filter								

Note 1: Capacity is calculated at 220V for the 240V models, at 440V for the 500V models.
Note 2: Indicates rated output current setting when the PWM carrier frequency (parameter F300) is 4kHz or less.
Note 3: Maximum output voltage is the same as the input voltage.
Note 4: At 180V-264V for the 240V models, at 342V-550V for the 500V models when the inverter is used continuously (load of 100%).
Note 5: Required power supply capacity varies with the value of the power supply side impedance (including those of the input reactor and cables).

Voltage Class	Applicable Motor (kW)	Dimensions (mm) VF−S15 W	H	D	W1	H1	Approx. weight (kg)
3-phase 240V	0.4	72	130	120	60	121.5	0.9
	0.75			130			1.0
	1.5	105			93		1.4
	2.2						1.4
	4.0	140	170	150	126	157	2.2
	5.5	150	220	170	130	210	3.5
	7.5						3.6
	11	180	310	190	160	295	6.8
	15						6.9
1−phase 240V	0.2	72	130	101	60	131	0.8
	0.4			120		121.5	1.0
	0.75			135			1.1
	1.5	105		150	93		1.6
	2.2						1.6

Voltage Class	Applicable Motor (kW)	Dimensions (mm) VF−S15 W	H	D	W1	H1	Approx. weight (kg)
3−phase 500V	0.4	107	130	153	93	121.5	1.4
	0.75						1.5
	1.5						1.5
	2.2	140	170	160	126	157	2.4
	4.0						2.6
	5.5	150	220	170	130	210	3.9
	7.5						4.0
	11	180	310	190	160	295	6.4
	15						6.5

W: width H:height D: depth
W1: Mounting dimension(horizontal)
H1: Mounting dimension (vertical)

To users of our inverters:

Our inverters are designed to control the speeds of three-phase induction motors for general industry.

⚠Precautions

*Please read the instruction manual before installing or operating the inverter 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 Inverter 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 induction 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 inverter is incorporated or to any equipment that is used in combination with the Toshiba inverter. 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.
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