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**VE1 AND VFNC3 TYPES**

- Single-phase 200-240VAC supply
- Three-phase motor power, 0.2 to 2.2kW / 0.25 to 3HP ratings at 230VAC
- Compliant with IEC/EN 61800-3 standards, first environment, without external suppressors
- Optional three-phase motor inductances for VFN3.



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**VFS15 TYPE**





- Three-phase 380-500VAC supply
- Three-phase motor power, 0.4 to 15kW / 0.5 to 20HP ratings at 400VAC
- Compliant with standards IEC/EN 61800-3, first environment cat C2 or second environment cat. C3, without external suppressors
- Integrated dynamic braking circuit
- Optional three-phase motor inductances
- Optional braking resistors.



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**VFPS1 TYPE**

- Three-phase 380-480VAC supply
- Three-phase motor power 18.5 to 630kW / 25 to 1000HP ratings at 400VAC
- Compliant with standards IEC/EN 61800-3, first environment cat. C2 or second environment cat. C3, without external suppressors
- Integrated dynamic braking circuit up to 220kW
- Optional three-phase motor inductances
- Optional braking resistors.

Description				
	<b>VE1</b> 1-phase	<b>VFNC3</b> 1-phase	<b>VFS15</b> 3-phase	<b>VFPS1</b> 3-phase
Method of control				
Constant torque V/f	●	●	●	●
Sensorless vector	—	●	●	●
Automatic torque boost	●	●	●	●
Variable torque (for pump and fan)	●	●	●	●
Energy saving	●	●	●	●
Vector with encoder feedback	—	—	—	●
Maximum output frequency	650Hz	400Hz	500Hz	500Hz
Overload	150% for 60s	150% for 60s	150% for 60s	120% for 60s
Serial communications RS485	n° 1	n° 1	n° 1	n° 2
Protocols	Modbus-RTU, Modbus-ASCII	Modbus-RTU, Toshiba	Modbus-RTU, PROFIBUS, Toshiba	Modbus-RTU, PROFIBUS, Toshiba
Digital inputs (inputs marked with ① can be configured as analog or digital)	5	4+1①	6+2①	6+1①
Digital outputs	1	1	2	3
Analog inputs (inputs marked with ① can be configured as analog or digital)	1	1	2+1①	2+1①
Analog outputs	1	1	1	2
Sequencer (frequency/time cycles)	●	—	—	—
Onboard potentiometer	●	●	●	—
Auto-tuning	—	●	●	●
PID adjustment	●	●	●	●
SLEEP function	●	●	●	●
WAKE-UP function	●	—	—	—
FIRE function	—	—	—	●
Frequency potentiometer	—	●	●	●
3-wire motor running	●	●	●	●
DC braking	—	●	●	●
Built-in braking circuit	—	—	●	●
Preset speed frequency	8	15	15	15
Pump and fan functions	●	●	●	●
Auto-speed adjustment	—	●	●	●
Motor PTC thermistor input	—	—	●	●
Safety stop per EN ISO 13849-1 cat. 3	—	—	—	●



- Versions for single-phase up to 2.2kW / 3HP and three-phase up to 630kW / 1000HP
- Special function for pump and fan control using PID algorithm
- Active earth leakage protection
- EMC suppressor built-in all versions
- Selectable motor control mode: V/f, vector, energy saving
- Selectable digital and analog input and output functions
- IEC IP55 version available on request
- HVAC version, compliant with IEC/EN 61000-3-12 standards, available on request.

## Motor drives

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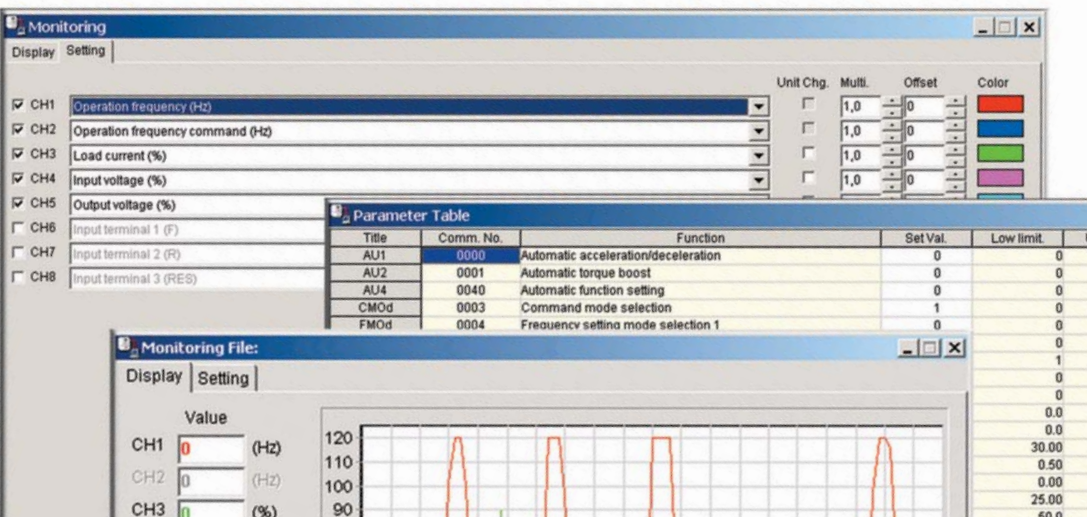
## Accessories

Three-phase inductances .....	6 - 6
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## Dimensions

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### VE1 type

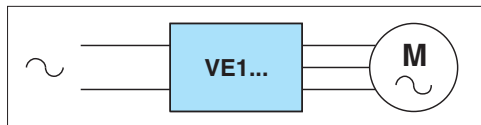


**new**

VE1...

Order code	Output current	3-phase motor power at 230V		Qty per pkg	Weight [kg]
	[A]	[kW]	[HP]	n°	
VE1 02 A240	1.8	0.2	0.25	1	1.200
VE1 04 A240	2.6	0.4	0.5	1	1.200
VE1 07 A240	4.3	0.75	1	1	1.200
VE1 15 A240	7.5	1.5	2	1	1.800
VE1 22 A240	10.5	2.2	3	1	1.800

Single-phase supply 200-240VAC 50/60Hz.  
Three-phase motor output 240VAC max.  
Built-in EMC suppressor (for 1° environment cat. C2).

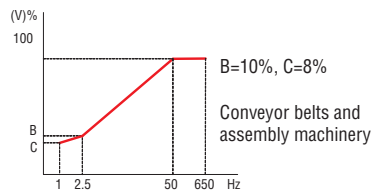


#### V/f CURVE PROGRAMMING

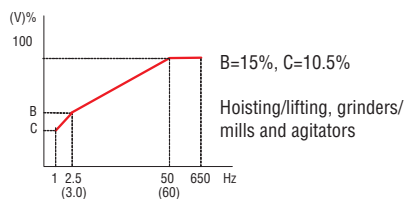
VE1 can handle 3 V/f preset curves and one programmed by the user.

#### 3 V/f preset curves

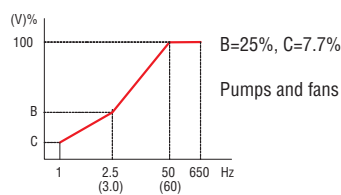
##### I – General use



##### II – High initial torque

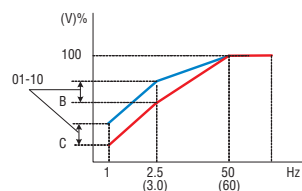


##### III – Variable curve



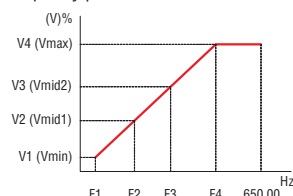
#### BOOST

Torque boost can be applied on all preset curves with up to 10%  
Voltage to overcome very high inertia load conditions.



#### 1 Programmable V/f curve

The user can customise a curve by defining 4 voltage / frequency points.



#### SPECIAL FUNCTIONS

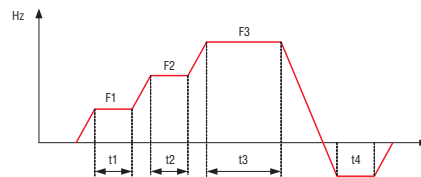
##### Sequencer

The user can program frequency-time cycles made up of a maximum of 8 steps, each characterised by motor speed, rotation direction and step duration.

The sequence cycle can be carried out in diverse modes:

- One single cycle with final motor stopping
- One single cycle with final motor running at last speed set
- Repeat cycles with no pause.

The sequence cycle can be stopped at any moment.



##### PID control

In some applications, such as pumps or fans, the output frequency of the drive is defined by the target to keep pressure or flow constant. Typically, by using the analog input, feedback is monitored and, with the PID offset control, the motor drive sets motor speed to obtain the target set-point.

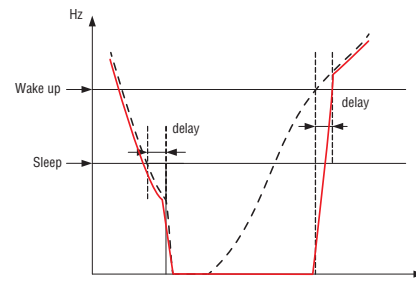
VE1 PID control also includes the following functions:

- **Sleep:** When the PID output frequency is lower than a programmed limit, that is the motor speed is close to the allowable minimum when propulsion is not needed, the motor drive completely stops the motor for energy saving.
- **Wake-up:** During sleep phase, when the PID output frequency is higher than the programmed limit, the motor drive picks up motor control again at a suitable speed to reach the target set-point without a manual starting.

----- PID calculated frequency

————— Generated frequency

Each function also has a programmable delay time to avoid inopportune and repetitive start-stop motor cycles.



#### General characteristics

VE1 is a very compact motor drive with high performance, V/f and boost torque control along with advanced features such as PID and sequential control. It is versatile, easy to install and program and can be used in numerous applications. It has a digital display to simplify parameterising which can also be done remotely using the RS485 port. Motor speed can be adjusted with the front potentiometer or by using one of the preset V/f curves, each provided with dedicated acceleration and deceleration ramps.

It can be used in general applications such as automatic door controls, on conveyor belts, assembly, packaging and packing machinery, or for pump and fan control.

#### SPEED REFERENCE SIGNALS

Reference signals for speed adjustment are obtained by:

- Front potentiometer
- Voltage signals: 0-10V
- Current signals: 4-20mA
- 8 preset speeds
- RS485 serial signals.

#### PROGRAMMABLE INPUTS

- 5 digital multifunction inputs
- PNP 12VDC connection; 24VDC on request.

#### PROGRAMMABLE OUTPUTS

- 1 programmable relay
- 1 analog 0-10V.

#### PROTECTION

- Overload
- Overvoltage
- Minimum voltage
- Output short circuit
- Earth/ground leakage dispersion
- Over-temperature
- Restart after momentary power loss, with programmable number of attempts.

#### SPECIAL FUNCTIONS

- PID adjustment with sleep and wake-up functions
- Sequencer (work cycles)
- Motor control: V/f constant torque, variable torque, programmable motor start and stop curves (1 programmable by user)
- Hour counter: Motor running hours and power supply on hours.

#### Operational characteristics

- Input voltage: 200-240VAC single phase
- Output voltage: 0-240VAC three phase
- Rated operational current: 1.8-10.5A
- Mains frequency: 50/60Hz
- Output frequency: 0-650Hz
- Current voltage: 150% for 60s
- IEC degree of protection: IP20
- Ambient conditions
  - Operating temperature: -10...+40°C (up to 50°C with forced ventilation or 20% output current derating)
  - Maximum altitude: 1000m
  - Relative humidity: 95%.

#### Certifications and compliance

Certifications obtained: UL Listed for USA and Canada (cULus – File E360929) as Power Conversion Equipment. Compliant with standards: IEC/EN 61800-5-1, IEC/EN 61800-3 – first environment cat. C2, IEC/EN 60721-3-3, UL 508 C, CSA C22.2 n°14.

### VFNC3 type



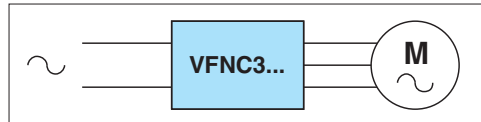
VFNC3...

Order code	Output current	3-phase motor power at 230V		Qty per pkg	Weight
	[A]	[kW]	[HP]		

Single-phase supply 200-240VAC 50/60Hz.  
 Three-phase motor output 240VAC max.  
 Built-in EMC suppressor (for 1° environment cat. C1).

<b>VFNC3S 2002 PLW</b>	1.4	0.2	0.25	1	0.900
<b>VFNC3S 2004 PLW</b>	2.4	0.4	0.54	1	1.000
<b>VFNC3S 2007 PLW</b>	4.2	0.75	1	1	1.300
<b>VFNC3S 2015 PLW</b>	7.5	1.5	2	1	2.000
<b>VFNC3S 2022 PLW</b>	10	2.2	3	1	2.000

① Operation up to 50°C without derating.



**“Side by Side” installation**  
 Multiple units can be installed without side clearance for space saving.

Traditional models need side space between units for sufficient cooling air circulation.

#### General characteristics

VFNC3 is an ultra-compact motor drive with high performance and extremely reliable (printed circuit surface protection per IEC/EN 60721-3-3). Easily installed, VFNC3 is equipped with a front display and innovative jog dial control, which simplifies the programming and control processes of the drive and motor. The on-board RS485 interface permits an overall remote control (supervision and communication protocols). VFNC3 can be used in simple applications such as extractor fans, ventilators, conveyor belts, machine tools, car washes, fitness equipment, but also in applications of intermediate complexity, such as pumps, waterworks. The vector control and the possibility to enable the motor auto-tuning warrants efficiency and high torques even with very low operating frequencies.

#### SPEED REFERENCE SIGNALS

Reference signals for speed adjustment are obtained by:

- Front jog dial control (potentiometer)
- External potentiometer: 1-10kΩ
- Voltage signal: 0-10V
- Current signal: 4-20mA
- Remote keypad option
- 15 preset speeds via digital inputs
- RS485 serial signals.

#### PROGRAMMABLE INPUTS

- Selectable PNP or NPN I/O logic
- 4 digital multifunction inputs
- 1 digital configurable as analog input.

#### PROGRAMMABLE OUTPUTS

- 1 relay with changeover contact
- 1 static configurable as analog 0-10V/4-20mA.

#### PROTECTION

- Overcurrent and overvoltage
- Input phase loss
- Output phase loss
- Motor drive overload
- Motor overload
- Output short circuit
- Motor stall.

#### SPECIAL FUNCTIONS

- PID function for pump and fan application
- Dual set of independent parameters and ramps for two different motor controls
- Automatic restarting and instantaneous speed tuning
- 15 viewable frequency values
- Start-up DC injection
- DC injection braking
- Motor control: constant torque V/f, sensorless vector, variable torque.

#### Operational characteristics

- Input voltage: 200-240VAC single-phase
- Output voltage: ≤ input voltage
- Rated operational current: 1.4-10A
- Mains frequency: 50/60Hz
- Output frequency: 0.1-400Hz
- Frequency modulation: 2-16kHz
- Current overload: 150% for 60s; 200% for 0.5s
- IEC degree of protection: IP20
- Ambient conditions
  - Operating temperature: -10...+60°C
  - Maximum altitude: 3000m (with derating)
  - Relative humidity: 5-95% (with no condensing).

#### Certifications and compliance

Certifications obtained: UL Listed for USA and Canada (File E204788) as Power Conversion Equipment; CSA certified for Canada (File 231252) as Motor Controllers - Miscellaneous.  
 Compliant with standards: IEC/EN 61800-5-1, IEC/EN 61800-3 - first environment cat. C1, IEC/EN 60721-3-3, UL508 C, CSA C22.2 n° 14.

### VFS15 type



VFS15...

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Order code	Output current	3-phase motor power at 400V <sup>Ⓜ</sup> Heavy load			Qty per pkg	Weight
	[A]	[kW]	[HP]	n°	[kg]	

Three-phase supply 380-500VAC 50/60Hz <sup>Ⓜ</sup>.  
Three-phase motor output 500VAC max.  
Built-in EMC suppressor (for 2° environment cat. C3).

VFS15 4004 PLW	1.5	0.4	0.5	1	1.800
VFS15 4007 PLW	2.3	0.75	1	1	1.800
VFS15 4015 PLW	4.1	1.5	2	1	1.800
VFS15 4022 PLW	5.5	2.2	3	1	3.200
VFS15 4037 PLW	9.5	4	5	1	3.200
VFS15 4055 PLW	14.3	5.5	7.5	1	5.500
VFS15 4075 PLW	17	7.5	10	1	5.500
VFS15 4110 PLW	27.7	11	15	1	8.400
VFS15 4150 PLW	33	15	20	1	8.400

#### Operational characteristics for normal load conditions <sup>Ⓜ</sup>

Type	Current <sup>Ⓜ</sup>	3-phase motor power at 400VAC	
VFS15 4004 PLW	2.1A	0.75kW	1HP
VFS15 4007 PLW	3A	1.1kW	1.5HP
VFS15 4015 PLW	5.4A	2.2kW	3HP
VFS15 4022 PLW	6.9A	3kW	4HP
VFS15 4037 PLW	11.1A	5.5kW	7.5HP
VFS15 4055 PLW	17A	7.5kW	10HP
VFS15 4075 PLW	23A	11kW	15HP
VFS15 4110 PLW	31A	15kW	20HP
VFS15 4150 PLW	38A	18.5kW	25HP

- <sup>Ⓜ</sup> Operation up to 50°C without derating.
- <sup>Ⓜ</sup> 150% overload for 60 seconds.
- <sup>Ⓜ</sup> 200-240VAC three-phase version available on request; consult Customer Service for details; see contact details on inside front cover.
- <sup>Ⓜ</sup> 120% overload for 60 seconds.



**"Side by Side" installation**  
Multiple units can be installed without side clearance for space saving.

Traditional models need side space between units for sufficient cooling air circulation.

#### General characteristics

The numerous functions available together with the constructive features consent the VFS15 speed control to be used in a host of industrial and civil sectors, such as: waterworks and methane piping ducts, cement, paper, chemical and petrochemical industries.  
The EASY function key allows direct switching to a customised menu with typical programming parameters for a dedicated application in order to quickly reach them for eventual consultation or changes.

#### SPEED REFERENCE SIGNALS

Reference signals for speed adjustment are obtained by:

- Front potentiometer
- External potentiometer: 1-10k $\Omega$
- Voltage signal: 0-10V
- Current signal: 4-20mA
- Keypad on front
- Remote keypad option
- 15 preset speeds via digital inputs
- RS485 serial signals.

#### PROGRAMMABLE INPUTS

- Selectable PNP or NPN I/O logic
- 6 digital multifunction inputs
- 2 digital configurable as analog input.

#### PROGRAMMABLE OUTPUTS

- 1 relay with changeover contact and 1 relay with NO contact; 1 transistor and 1 analog configurable as 0-10VDC or 4-20mA.

#### PROTECTION

- Overcurrent and overvoltage
- Input and output phase loss
- Drive, motor and braking resistor overload
- Drive overtemperature and excessive torque
- Earth/ground fault.

#### SPECIAL FUNCTIONS

- PID function for pump and fan application
- Dual set of independent parameters and ramps for two different motor controls
- Automatic restarting and instantaneous speed tuning
- 15 viewable frequency values
- DC-Bus access for DC power supply
- Capacitor pre-charge circuit
- Integrated dynamic braking circuit; optional external braking resistor
- Motor control: constant torque V/f, variable torque, sensorless vector
- Automatic motor torque boost control
- Logic "Myfunction" mode permits to combine among each other inputs, outputs and drive states including ON/OFF delay timing, to elaborate more complex functions and comparators
- DC injection braking
- Auto-tuning
- Frequency potentiometer (speed adjustment via 2 external pushbuttons)
- Quick parameter search and programming
- Sequential starting control for sets of motors
- SLEEP function: automatic motor stopping after continuous running at minimum frequency
- Start-up DC injection
- OVERRIDE function for summing analog VIA-VIB inputs.

#### Operational characteristics

- Input voltage: 380-500VAC three-phase
- Output voltage:  $\leq$  input voltage
- Rated operational current: 1.5-38A three-phase
- Mains frequency: 50/60Hz
- Output frequency: 0-500Hz
- Frequency modulation: 2-16kHz
- Current overload for 60s: 120% for normal load; 150% for heavy load
- Low speed torque: 200% 0.3Hz
- IEC degree of protection: IP20; IP54 on request
- Ambient conditions
  - Operating temperature: -10...+60°C
  - Maximum altitude: 1000m
  - Relative humidity: 20-93% (with no condensing).

#### Certifications and compliance

Certifications obtained: UL Listed for USA and Canada (File E204788) as Power Conversion Equipment; CSA certified for Canada (File 231252) as Motor Controllers - Miscellaneous; AS C-tick.  
Compliant with standards: EN 50178, IEC/EN 61800-3 - first environment cat. C2 or second environment cat. C3, UL508 C, CSA C22.2 n° 14.

### VFPS1 type



VFPS1...

Order code	Output current	3-phase motor power at 400V <sup>①</sup>		Qty per pkg	Weight
	[A]	[kW]	[HP]	n°	[kg]

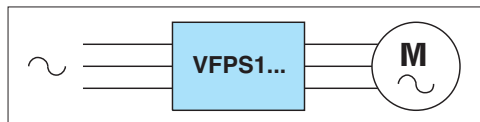
Three-phase supply 380-480VAC 50/60Hz<sup>②</sup>  
 Three-phase motor output 480VAC max.  
 Built-in EMC suppressor (for 2° environment cat. C3).

VFPS1 4185 PLWP	41	18.5	25	1	22.200
VFPS1 4220 PLWP	48	22	30	1	23.700
VFPS1 4300 PLWP	66	30	40	1	32.500
VFPS1 4370 PLWP	79	37	50	1	32.800
VFPS1 4450 PLWP	94	45	60	1	54.000
VFPS1 4550 PLWP	116	55	75	1	54.000
VFPS1 4750 PLWP	160	75	100	1	54.000
VFPS1 4900 PCWP	179	90	125	1	100.000
VFPS1 4110 KPCWP	215	110	150	1	100.000

Three-phase supply 380-440VAC 50Hz/380-480VAC 60Hz<sup>③</sup>  
 Three-phase motor output 440/480VAC max.  
 Built-in EMC suppressor (for 2° environment cat. C3).

VFPS1 4132 KPCWP	259	132	200	1	108.000
VFPS1 4160 KPCWP	314	160	250	1	118.000
VFPS1 4220 KPCWP	427	220	350	1	161.000
VFPS1 4250 KPCWP	481	250	400	1	194.000
VFPS1 4280 KPCWP	550	280	450	1	204.000
VFPS1 4315 KPCWP	616	315	500	1	204.000
VFPS1 4400 KPCWP	759	400	600	1	302.000
VFPS1 4500 KPCWP	941	500	700	1	320.000
VFPS1 4630 KPCWP	1181	630	1000	1	462.000

- ① Operation up to 50°C without derating. Consult Customer Service for details regarding the following; see contact details on inside front cover:
- ② 240VAC three-phase available on request except for VPS1 4110 KPCWP type.
- ③ 600VAC three-phase available on request.
- ④ Indicated ratings are for normal load; available on request for heavy load conditions.



### General characteristics

VFPS1 is a motor drive combining the most advanced and optimised mode for energy saving with a compact and complete line as well as a function software dedicated to pump and fan applications.

The on-board EMC surge suppressor and standard-supplied (up to 315kW type) DC inductance consent to radically reduce harmonic distortions and noise disturbances generated by the motor drive and to limit the input current to a maximum value of 1.1 times output current.

QUICK mode provides for a customised menu of 32 specific parameters for a single application, inhibiting access to all the other parameters.

### SPEED REFERENCE SIGNALS

Reference signals for speed adjustment are obtained by:

- External potentiometer: 1-10kΩ
- Voltage signal: 0 to 10V or -10 to +10V
- Current signal: 4-20mA or 0-20mA
- Keypad on front
- Remote keypad option
- 15 preset speeds via digital inputs
- RS485 serial signals.

### PROGRAMMABLE INPUTS

- Selectable PNP or NPN I/O logic
- 6 digital multifunction inputs
- 1 digital configurable as analog input.

### PROGRAMMABLE OUTPUTS

- 1 relay with changeover contact
- 2 static usable as pulse train
- 2 analog configurable as 0-10VDC, 0-20mA or 4-20mA.

### PROTECTION

- Overcurrent and overvoltage
- Output short circuit and earth/ground leakage
- Drive, motor and braking resistor overload
- Drive overtemperature
- Motor stall
- Too low torque.

### SPECIAL FUNCTIONS

- PID function for pump and fan application
- Dual set of independent parameters and ramps for two different motor controls
- Automatic restarting and instantaneous speed tuning
- 15 viewable frequency values
- DC-Bus access for DC power supply
- Built-in DC reactor for reduced harmonic content at input
- DC braking board standard-supplied up to 220kW/350HP rating; optional external braking resistors
- DC injection at starting
- Motor control: constant torque V/f, variable torque, torque boost with automatic starting, sensorless vector, vector control in closed-loop conditions
- Auto-tuning
- Frequency potentiometer; speed adjustment via 2 external push buttons
- SLEEP function: automatic motor stopping after continuous running at minimum frequency
- FIRE control function: specified speed maintained even in alarm conditions
- Built-in PTC thermistor input.

### Operational characteristics

- Output voltage: ≤ input voltage
- Rated operational current: 41-1181A
- Mains frequency: 50/60Hz ±5%
- Output frequency: 0.5-500Hz
- Frequency modulation: 1-16kHz
- Current overload: 120% for 60s, 135% for 2s
- IEC degree of protection: IP00 for all except VFPS1 4185 PLWP with IP20; IP55 on request
- Ambient conditions:
  - Operating temperature: -10...+60°C
  - Maximum altitude: 1000m without derating; up to 3000m with derating
  - Relative humidity: 20-93% (with no condensing).

### Certifications and compliance

Certifications obtained: UL Listed for USA and Canada (File E204788) as Power Conversion Equipment; CSA certified for Canada (File 231252) as Motor Controllers - Miscellaneous; AS C-tick. Compliant with standards: IEC/EN 61800-5-1, IEC/EN 61800-3 - first environment cat. C2 or second environment cat. C3, UL508 C, CSA C22.2 n° 14.

### Three-phase inductances



6

IND...

Order code	I <sub>e</sub>	mH	For motor drive rating <sup>①</sup>	Qty per pkg	Weight
	[A]		[kW]	n°	[kg]
IND2020	12	1	0.75...4	1	1.850
IND2030	25	0.6	5.5...11	1	2.670
IND3040	50	0.2	15...22	1	7.220
IND4040	100	0.15	30...45	1	14.410
IND4075	150	0.08	55...75	1	21.680
IND4090	300	0.04	90...110	1	27.000
IND5060	400	0.03	132...160	1	37.600
IND5080	600	0.02	220...250	1	45.000
IND7070	800	0.016	280...315	1	62.000

① For other drive ratings, consult Customer Service; see contact details on inside front cover.

#### General characteristics

The three-phase inductances, IND type, can be connected to the drives type VFNC3..., VFS11... and VFPS1... in the following ways:

- On the motor drive input to reduce the harmonic content upstream, with the subsequent reduction of input current consumption of the drive itself.
- On the motor drive output to limit peak voltages generated by drives on the motor or in case there are more motors connected in parallel, controlled simultaneously by the drive itself.

The inductances can be used at the motor drive input having single-phase power supply.

For the correct choice, select the inductance with I<sub>e</sub> current rating equal to or greater than the rated current of the drive they will be used with.

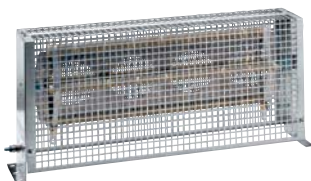
#### Operational characteristics

- Class: H
- Current: 12-800A
- Ambient conditions:
  - Operating temperature: -25...+100°C.

#### Reference standards

Compliant with standards: IEC/EN 61558-1.

### Braking resistors



ROF...  
ROPPE...

Order code	Power	Capacity	Qty per pkg	Weight
	[W]	[Ω]	n°	[kg]
ROF20100	200	100	1	0.210
ROF20150	200	150	1	0.220
ROF35060	350	60	1	0.610
ROF50035	500	35	1	0.773
ROF80030	800	30	1	1.570
ROPPE11430	1300	30	1	3.856
ROPPE12515	2200	15	1	5.200
ROPPE14008	4000	8	1	6.780
ROPPE24003	8000	3	1	11.000

Drive type	Resistor type
ROF20150	VFS15 4004 PLW
	VFS15 4007 PLW
ROF20100	VFS15 4015 PLW
	VFS15 4022 PLW
ROF35060	VFS15 4037 PLW
	VFS15 4055 PLW
ROF50035	VFS15 4075 PLW
ROF80030	VFS15 4110 PLW
	VFS15 4150 PLW
ROPPE11430	VFPS1 4185 PLWP
ROPPE12515	VFPS1 4220 PLWP
	VFPS1 4300 PLWP
ROPPE14008	VFPS1 4370 PLWP
	VFPS1 4450 PLWP
	VFPS1 4550 PLWP
	VFPS1 4750 PLWP
ROPPE24003	VFPS1 4900 PLWP
	VFPS1 4110 KPCWP
	VFPS1 4132 KPCWP
	VFPS1 4160 KPCWP
	VFPS1 4220 KPCWP
②	VFPS1 4250 KPCWP
②	VFPS1 4280 KPCWP
②	VFPS1 4315 KPCWP
②	VFPS1 4400 KPCWP
②	VFPS1 4500 KPCWP
②	VFPS1 4630 KPCWP

② For details and choice on braking resistors, consult Customer Service; see contact details on inside front cover.

#### General characteristics

The braking resistors can be connected to motor drives VFS15... and VFPS1...; see the table below the order codes.

#### Operational characteristics for ROF... and ROPPE...

- Maximum applicable voltage: 1000V
- Connection: With 250mm cable for ROF; directly on the resistor terminal for ROPPE
- Degree of protection: IP54 for ROF; IP20 for ROPPE.

#### Reference standards

Compliant with standards: IEC/EN 60204-1, IEC/EN 60664-1.

### Others



VEX C00



MITOS

Order code	Description	Qty per pkg	Weight
		n°	[kg]
For VE1 type motor drives.			
<b>VEX C00</b>	Connecting cable for VE1 RS485 port with PC USB port, 1.8m long ❶	1	0,080
For VFNC3-VFS15-VFPS1 type motor drives.			
<b>MITOSVT6</b>	Remote control panel with functions: motor running, inverse rotation, speed adjustment and quantities control. IP65. 16 character-2 line display. Cable excluded ❷	1	0.200
<b>MITOSVT6ECO</b>	Remote control panel for quantities retention and control of a system (PID: pressure, temperature, etc). IP65. 16 character-2 line display. Cable excluded ❷	1	0.200
<b>RJ45SH05000</b>	Connecting cable RJ45 for MITOS..., RKP002Z or USB001Z to motor drive. 5m long	1	0.140
<b>RKP002Z</b>	Remote control panel with functions: motor running, speed adjustment, quantities control and parameter setting. IP20. 4 character-7 segment display. Cable excluded ❷	1	0.280
<b>USB001Z</b>	Motor drive programming module ❸❹❺	1	0.260
<b>51 PT25H101K</b>	1kOhm potentiometer 10 turns, complete with operating knob	1	0.100
<b>51 PT35H11K</b>	1kOhm potentiometer 1 turn, complete with operating knob	1	0.052

- ❶ The VE1 programming software is standard supplied with the cable.
- ❷ RJ45 cable to be purchased separately; order code RJ45SH05000.
- ❸ For USB001Z module → PC USB port connection, use a normal USB cable, USB1.1/2.0 compatible, type A-B connection, maximum recommendable length 1m only.
- ❹ Ask Customer Service for the motor drive remote control software; see contact details on the inside front cover.

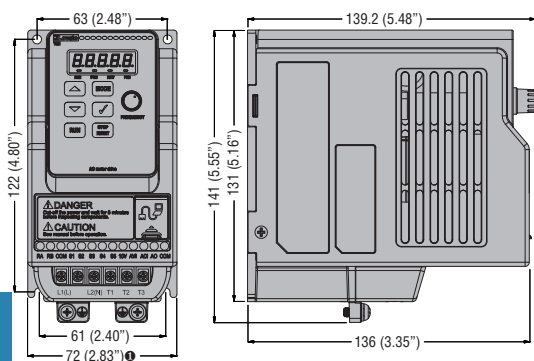
### Reference standards

Compliant with standards: EN 50178, IEC/EN 61000-6-2, IEC/EN 61000-6-3 for MITOS... and RKP... types.

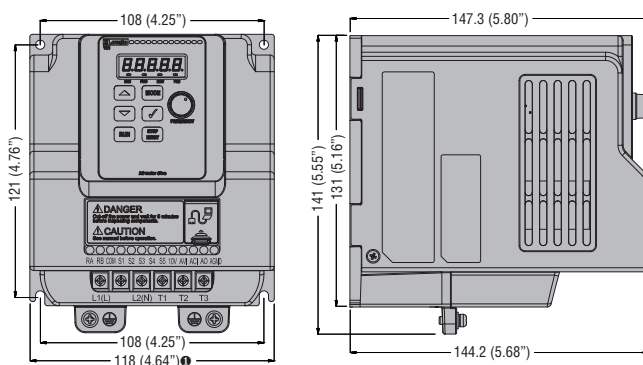


### SINGLE PHASE MOTOR DRIVES

#### VE1 02 A240 - VE1 04 A240 - VE1 07 A240

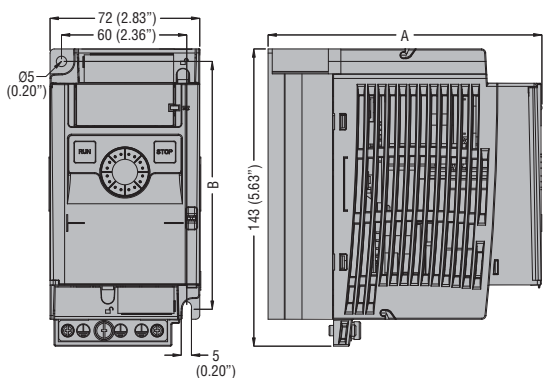


#### VE1 15 A240 - VE1 22 A240

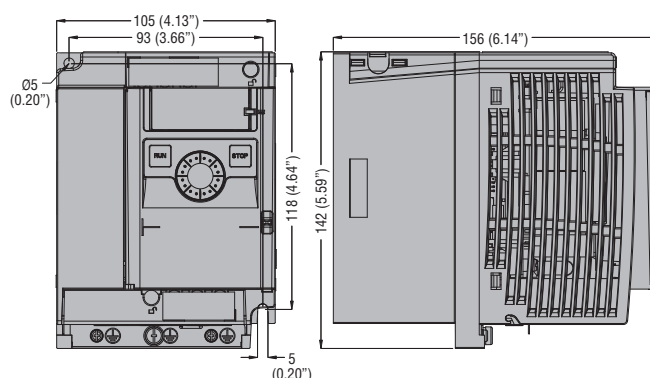


● In a control panel when more than one VE1 is installed side by side, provide sufficient air circulation space, of at least 5cm / 2" between each, in order to ensure proper cooling effect.

### VFNC3S 2002 PLW...VFNC3S 2007 PLW



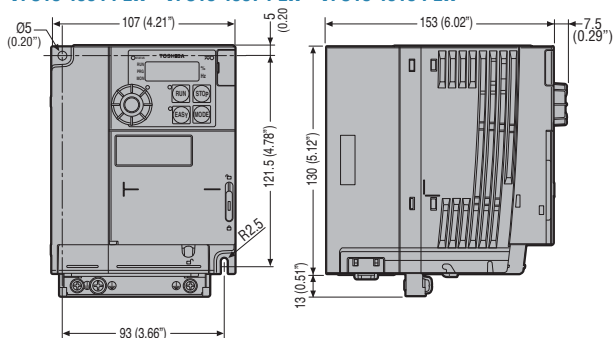
### VFNC3S 2015 PLW - VFNC3S 2022 PLW



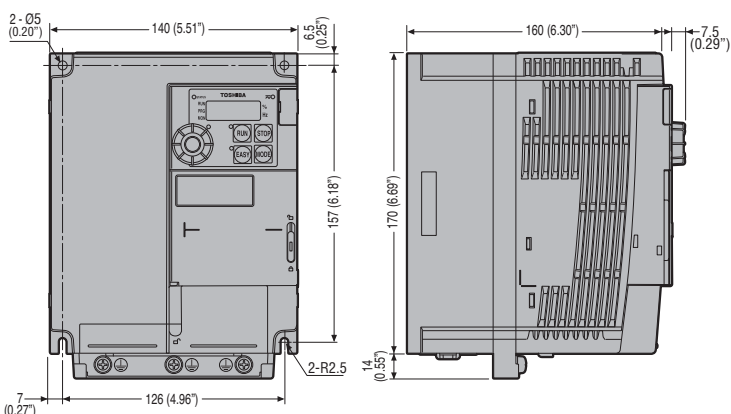
TYPE	A	B
VFNC3S 2002PL W	102 (4.01")	131 (5.16")
VFNC3S 2004PL W	121 (4.76")	118 (4.64")
VFNC3S 2007PL W	131 (5.16")	118 (4.64")

### THREE PHASE MOTOR DRIVES

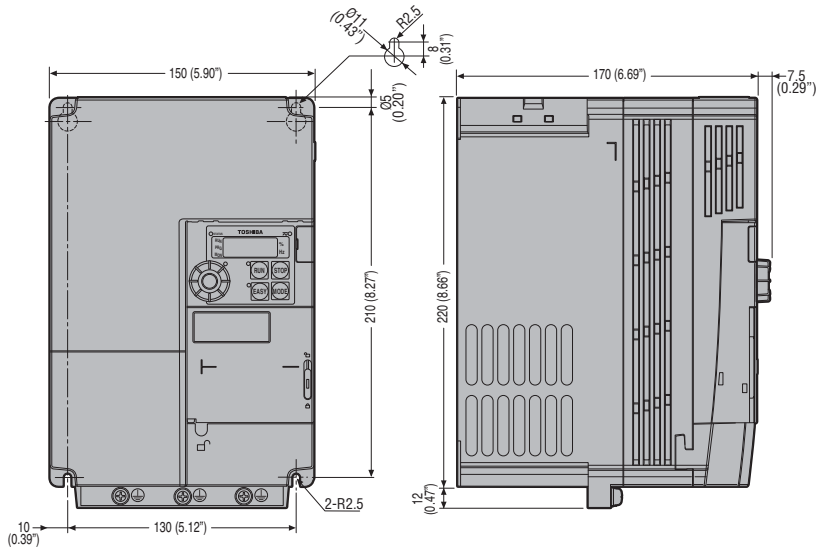
#### VFS15 4004 PLW - VFS15 4007 PLW - VFS15 4015 PLW



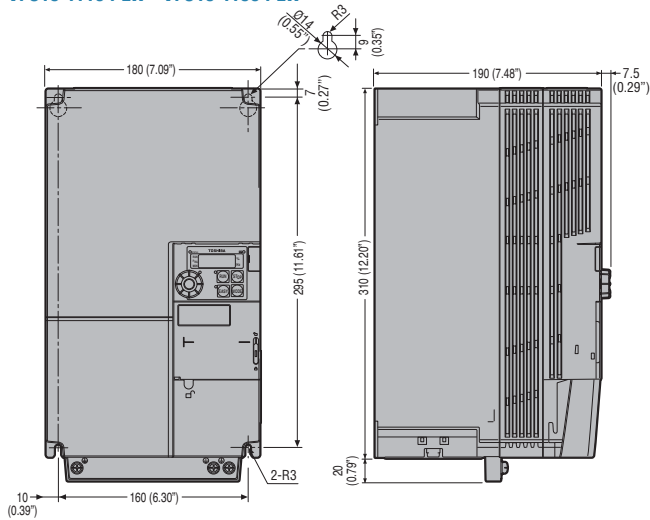
#### VFS15 4022 PLW...VFS15 4037 PLW



### VFS15 4055 PLW - VFS15 4075 PLW



### VFS15 4110 PLW - VFS15 4150 PLW



### THREE PHASE MOTOR DRIVES

#### VFPS1 4185 PLWP

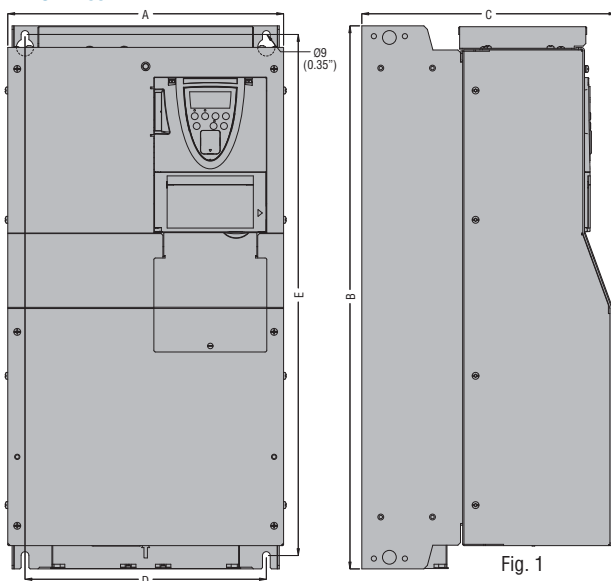


Fig. 1

#### VFPS1 4220 PLWP...VFPS1 4370 PLWP

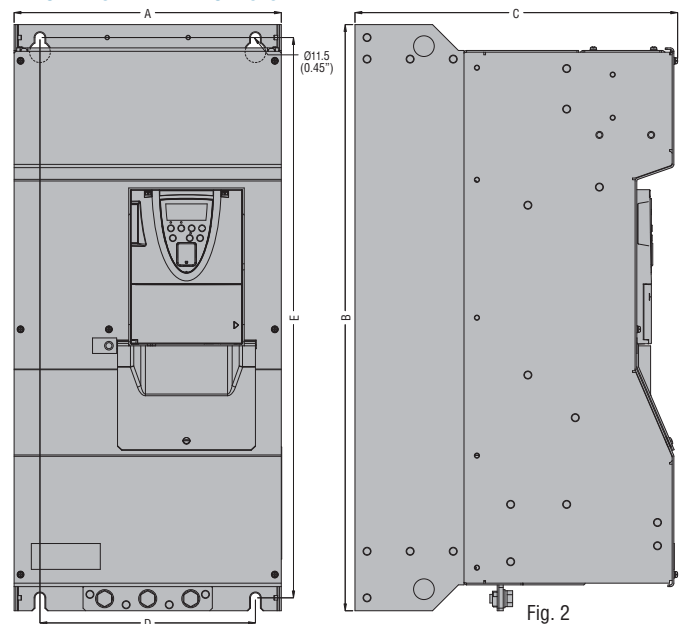


Fig. 2

TYPE	Fig.	A	B	C	D	E	F
VFPS1 4185 PLWP	1	230 (9.05")	409 (16.10")	191 (7.52")	210 (8.27")	386 (15.20")	16 (0.63")
VFPS1 4220 PLWP	2	240 (9.45")	420 (16.53")	212 (8.35")	206 (8.11")	403 (15.87")	—
VFPS1 4300 PLWP	2	240 (9.45")	550 (21.65")	242 (9.53")	206 (8.11")	529 (20.83")	—
VFPS1 4370 PLWP	2	240 (9.45")	550 (21.65")	242 (9.53")	206 (8.11")	529 (20.83")	—

### VFPS1 4450 PLWP...VFPS1 4750 PLWP

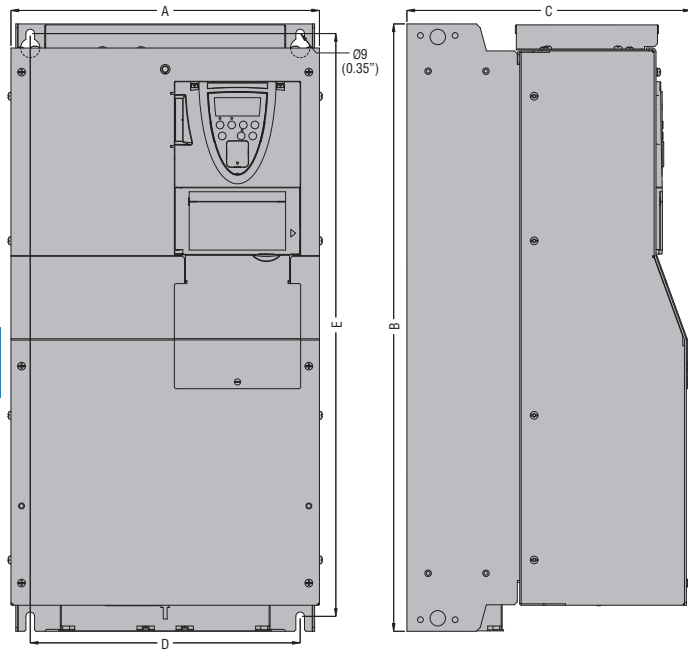


Fig. 3

### VFPS1 4900 PCWP VFPS1 4110 KPCWP...VFPS1 4630 KPCWP

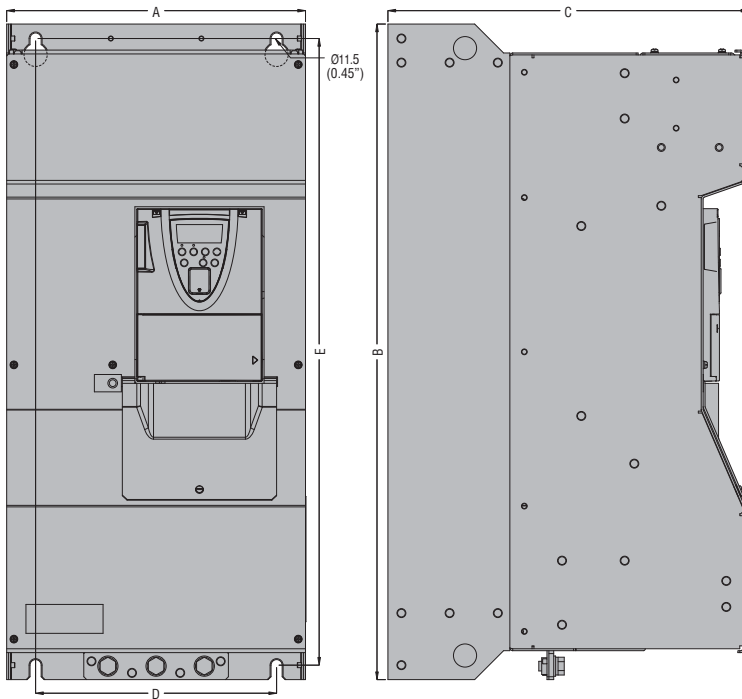


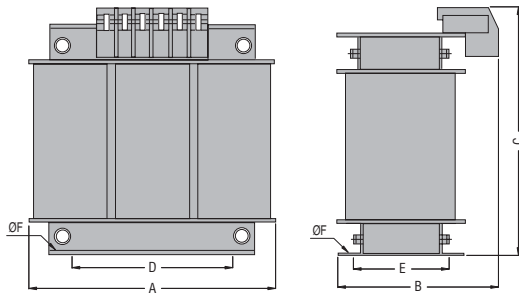
Fig. 4

TYPE	Fig.	A	B	C	D	E
VFPS1 4450 PLWP	3	320 (12.60")	630 (24.80")	290 (11.42")	280 (11.02")	605 (23.82")
VFPS1 4550 PLWP	3	320 (12.60")	630 (24.80")	290 (11.42")	280 (11.02")	605 (23.82")
VFPS1 4750 PLWP	3	320 (12.60")	630 (24.80")	290 (11.42")	280 (11.02")	605 (23.82")
VFPS1 4900 PCWP	4	310 (12.20")	680 (26.77")	375 (14.76")	250 (9.84")	650 (25.59")
VFPS1 4110 KPCWP	4	310 (12.20")	680 (26.77")	375 (14.76")	250 (9.84")	650 (25.59")
VFPS1 4132 KPCWP	4	350 (13.78")	782 (30.79")	375 (14.76")	298 (11.73")	758 (29.84")
VFPS1 4160 KPCWP	4	330 (12.99")	950 (37.40")	377 (14.84")	285 (11.22")	920 (36.22")
VFPS1 4220 KPCWP	4	430 (16.93")	950 (37.40")	377 (14.84")	350 (13.78")	920 (36.22")
VFPS1 4250 KPCWP	4	585 (23.03")	950 (37.40")	377 (14.84")	540 (21.26")	920 (36.22")
VFPS1 4280 KPCWP	4	585 (23.03")	950 (37.40")	377 (14.84")	540 (21.26")	920 (36.22")
VFPS1 4315 KPCWP	4	585 (23.03")	950 (37.40")	377 (14.84")	540 (21.26")	920 (36.22")
VFPS1 4400 KPCWP	4	880 (34.64")	1150 (45.27")	377 (14.84")	831 (32.71")	1120 (44.09")
VFPS1 4500 KPCWP	4	880 (34.64")	1150 (45.27")	377 (14.84")	831 (32.71")	1120 (44.09")
VFPS1 4630 KPCWP	4	1108 (43.62")	1150 (45.27")	377 (14.84")	1065 (41.93")	1120 (44.09")

### ACCESSORIES

#### Three-phase inductances

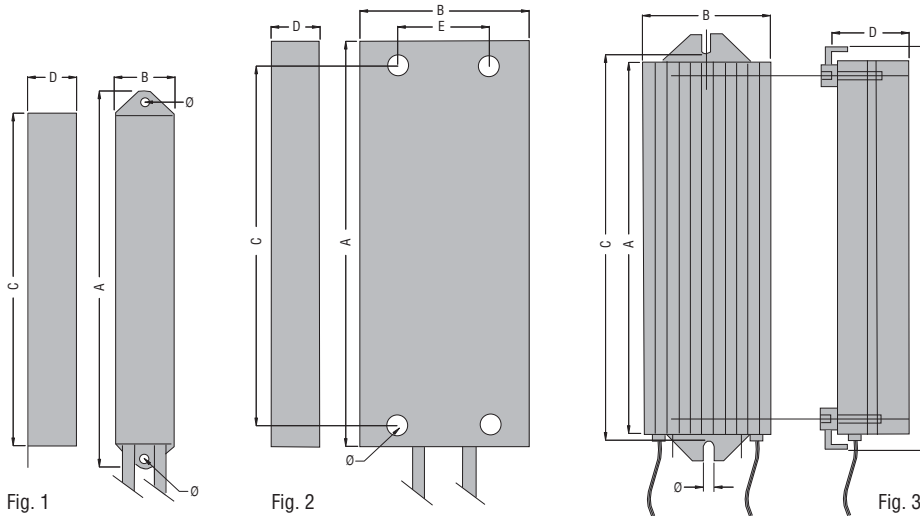
#### IND...



Type	A	B	C	D	E	ØF
IND2020	115 (4.53")	80 (3.15")	125 (4.92")	78 (3.07")	55 (2.16")	5.5 (0.22")
IND2030	115 (4.53")	90 (3.54")	125 (4.92")	78 (3.07")	65 (2.56")	5.5 (0.22")
IND3040	170 (6.69")	115 (4.53")	190 (7.48")	115 (4.53")	85 (3.35")	6.5 (0.25")
IND4040	240 (9.45")	135 (5.31")	230 (9.05")	146 (5.75")	80 (3.15")	8.5 (0.33")
IND4075	240 (9.45")	170 (6.69")	220 (8.66")	146 (5.75")	105 (4.13")	8.5 (0.33")
IND4090	240 (9.45")	195 (7.68")	220 (8.66")	146 (5.75")	120 (4.72")	8.5 (0.33")
IND5060	350 (13.78")	170 (6.69")	325 (12.79")	240 (9.45")	105 (4.13")	12.5 (0.49")
IND5080	350 (13.78")	190 (7.48")	325 (12.79")	240 (9.45")	125 (4.92")	12.5 (0.49")
IND7070	440 (17.32")	200 (7.87")	420 (16.53")	245 (9.64")	120 (4.72")	12.5 (0.49")

### Braking resistors

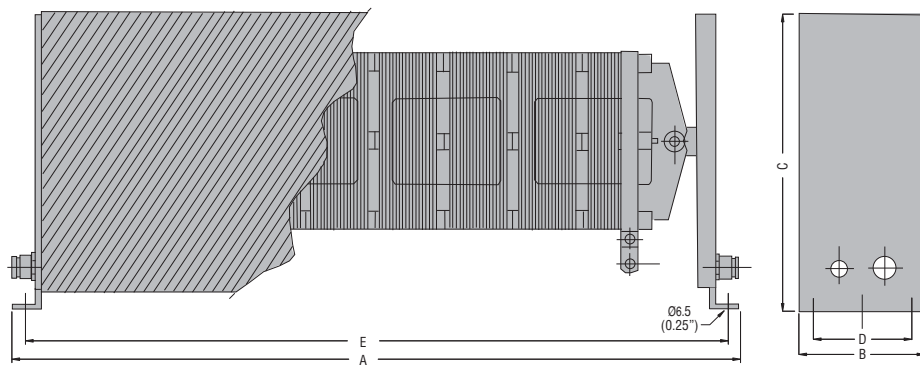
#### ROF...



Type	ROF 20	ROF 35	ROF 50	ROF 80
Fig.	1	2	2	3
A	192 (7.56")	169 (6.65")	299 (11.77")	240 (9.45")
B	30 (1.18")	80 (3.15")	80 (3.15")	80 (3.15")
C	180 (7.09")	140 (5.51")	180 (7.09")	254 (10")
D	25 (0.98")	20 (0.79")	20 (0.79")	52 (2.05")
E	—	45 (1.77")	45 (1.77")	—
L	—	—	—	275 (10.83")
Ø	5 (0.20")	5 (0.20")	5 (0.20")	6 (0.24")

### Braking resistors

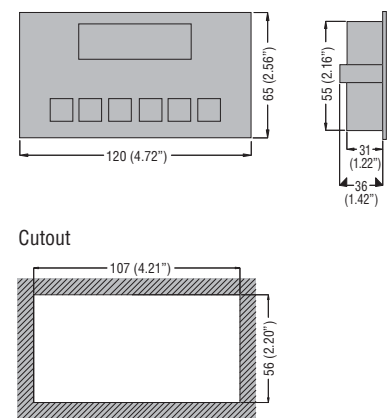
#### ROPPE...



Type	ROPPE 114	ROPPE 125	ROPPE 140	ROPPE 240
A	386 (15.20")	506 (19.92")	626 (24.64")	626 (24.64")
B	107 (4.21")	107 (4.21")	107 (4.21")	197 (7.75")
C	260 (10.24")	260 (10.24")	260 (10.24")	260 (10.24")
D	80 (3.15")	80 (3.15")	80 (3.15")	160 (6.30")
E	366 (14.41")	486 (19.13")	606 (23.86")	606 (23.86")

### Remote control panel

#### MITOS...



### Remote control panel

#### RKP002Z

