General Purpose

AC Variable Speed Drive

0.37kW – 22kW
0.5HP – 30HP
200 – 480V
Single & 3 Phase Input

IP20 **IP66**

TECHTOP

Easy to Use General Purpose Drive

Focused on ease of use, TECTOP provides unrivalled simplicity of installation, connection and commissioning, allowing the user to benefit from precise motor control and energy savings within minutes.

IP20

Up to 22kW

- Easy to use
- Compact & robust

IP66

Up to 7.5kW

- Dust-tight
- Washdown ready

Key Features

TECHTOP

Simple Commissioning

With just 14 basic parameters and application macro functions providing rapid set up, TECTOP minimises start-up time.

Intuitive Keypad Control

Precise digital control at the touch of a button.

Application Macros

Switch between **Industrial**, **Pump** & **Fan** modes to optimise TECTOP for your application.

- Internal Category C1 EMC filter
- Internal PI control
- Internal brake chopper
- Dual analogue inputs
- Operates up to 50°C
- Bluetooth® connectivity

Internal Category C1 EMC Filter

An internal filter in every TECTOP saves cost and time for installation.

Cat C1 according to EN61800-3:2004

Modbus RTU
CANopen

on-board as standard

Sensorless Vector Control for all Motor Types

Precise and reliable control for IE2, IE3 & IE4 motors

IM	IE2 & IE3 Induction Motors
PM	AC Permanent Magnet Motors
BLDC	Brushless DC Motors
SynRM	Synchronous Reluctance Motors

IP20 Models

Up to 22kW

Compact, robust and reliable general purpose drive for panel mounting

Simple Installation
DIN rail and keyhole mounting options

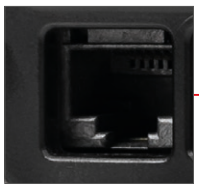
Fast Connection
5mm rising clamp terminals with captive screws

Power supply connects at top

Quick Reference
Integrated help card

Operates up to 50°C

Modbus RTU
CANopen
on-board as standard



OPTISTICK
Rapid parameter cloning and Bluetooth PC interface

Dual analogue inputs

Motor supply connects at base

CE

Incredibly Easy to Use

- Built in PI control, EMC filter (C1) & brake chopper
- Application macros for industrial, fan and pump operation
- Bluetooth® connectivity

Simply Power Up

TECTOP provides precise motor control and energy savings using the factory settings. Simply power up and the drive can immediately deliver energy savings.

14 basic parameters allow simple adjustment for your application if required, with up to 50 parameters available in total for a highly flexible performance.

4 sizes cover global supply ratings

IP66 Models

TECHTOP

Up to 7.5kW

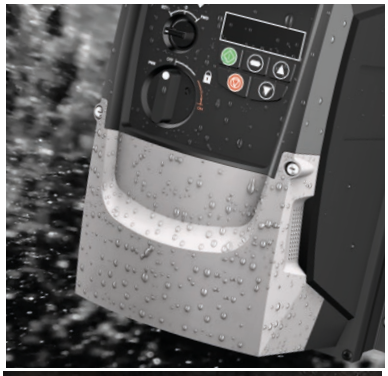
Enclosed drives for direct machine mounting, dust-tight and ready for washdown duty

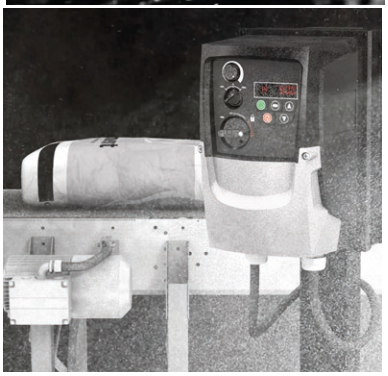
Coated Heatsink as Standard

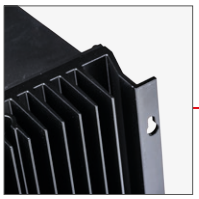
Ideal for hygiene based operations requiring washdown — such as food and beverage

Fanless Heatsink

For reliable, cost effective operation







Switched or Non-Switched

Conformal coating as standard

Dust-Tight Design

Install directly on your processing equipment and be sure of protection from dust and contaminants.

Washdown Ready

With a sealed ABS enclosure and corrosion resistant heatsink, the TECTOP IP66 is ideal for high-pressure washdown applications.

TECTOP IP66 Switched

Simply wire up the drive, turn the inbuilt potentiometer and the motor will start running – allowing immediate energy savings

Saving energy cannot be easier than this!

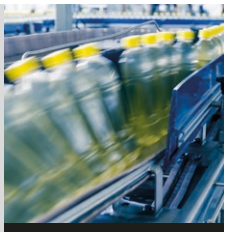
Local Speed Potentiometer

Run Reverse / Off / Run Forward Switch

Lockable Mains Disconnect / Isolator

Switch modes with a single parameter change to optimise TECTOP for your application

Industrial Mode



Industrial Mode optimises TECTOP for load characteristics of typical industrial applications.

Sensorless Vector provides high starting torque and excellent speed regulation.

IP20 panel mount units or
IP66 for direct machine mounting

Applications include:

Conveyors
Mixers
Treadmills

Rapid parameter cloning using **OPTISTICK**

Pump Mode

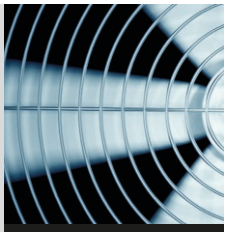
Pump Mode makes energy efficient pump control easier than ever.

- Constant or variable torque
- Internal PI control

Applications include:

Dosing Pumps
Borehole Pumps
Transfer Pumps
Swimming Pools
Spas
Fountains

Fan Mode



Fan Mode (inc. fire operation) makes air handling a breeze, ideal for simple HVAC systems.

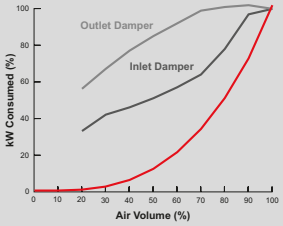
- High efficiency variable torque motor control
- Flying start capability
- Mains loss ride through
- PI control

Applications include:

Air Handling Units
Ventilation Fans
Circulating Fans
Air Curtains
Kitchen Extract

Instant Power Savings

The graph to right shows the incredible efficiency of TECTOP for controlling airflow compared to traditional damper control methods.



Options & Accessories

TECHTOP

OPTISTICK

Optistick OPT-2-STICK-IN

Rapid Commissioning Tool

- Allows copying, backup and restore of drive parameters
- Provides Bluetooth wireless interface to a PC running OptiTools Studio

Remote Keypads

Optipad OPT-2-OPPAD-IN

Remote Keypad & OLED Display

OPT-2-OPORT-IN

Optiport 2

Remote Keypad & LED Display

RJ45 Accessories

Ideal for simple and fast connection of Modbus RTU/CAN networks

OPT-J4505-IN	RJ45 Cable 0.5m
OPT-J4510-IN	RJ45 Cable 1.0m
OPT-J4530-IN	RJ45 Cable 3.0m
OPT-J45SP-IN	RS485 3 Way Data Cable Splitter RJ45

EtherNet Module

OPT-2-ETHEG-IN

- ODVA compliant EtherNet/IP Modbus Translator Device
- Compatible with all drive platforms: P2, E3 & Eco
- Integrated network switch: simplifying network architecture
- Compatible with RSLogix and CoDeSys PLCs

External EMC Filters, Input Chokes & Output Filters are available

	kW	HP	Amps	Size	Product Family	Generation	Frame Size	Voltage Code	Capacity	Supply Phases	EMC Filter	Brake Transistor	Enclosure Type A / B / 2
200–240V ± 10% 1 Phase Input	0.37	0.5	2.3	1	TEC	- 3 -	1	2	0023 -	1	F	1	#
	0.75	1	4.3	1	TEC	- 3 -	1	2	0043 -	1	F	1	#
	1.5	2	7	1	TEC	- 3 -	1	2	0070 -	1	F	1	#
	1.5	2	7	2	TEC	- 3 -	2	2	0070 -	1	F	4	#
	2.2	3	10.5	2	TEC	- 3 -	2	2	0105 -	1	F	4	#
	4	5	15.3	3	TEC	- 3 -	3	2	0153 -	1	0	4	#
380–480V ± 10% 3 Phase Input	0.75	1	2.2	1	TEC	- 3 -	1	4	0022 -	3	F	1	#
	1.5	2	4.1	1	TEC	- 3 -	1	4	0041 -	3	F	1	#
	1.5	2	4.1	2	TEC	- 3 -	2	4	0041 -	3	F	4	#
	2.2	3	5.8	2	TEC	- 3 -	2	4	0058 -	3	F	4	#
	4	5	9.5	2	TEC	- 3 -	2	4	0095 -	3	F	4	#
	5.5	7.5	14	3	TEC	- 3 -	3	4	0140 -	3	F	4	#
	7.5	10	18	3	TEC	- 3 -	3	4	0180 -	3	F	4	#
	11	15	24	3	TEC	- 3 -	3	4	0240 -	3	F	4	2
	15	20	30	4	TEC	- 3 -	4	4	0300 -	3	F	4	2
	18.5	25	39	4	TEC	- 3 -	4	4	0390 -	3	F	4	2
	22	30	46	4	TEC	- 3 -	4	4	0460 -	3	F	4	2

Enclosure & Display Types

A  **IP66** Non-switched

B  **IP66** Switched

2  **IP20**

EMC Filter

F	Internal EMC Filter
0	No Internal EMC Filter

IP20

	Size	1	2	3	4
mm	Height	173	221	261	420
mm	Width	83	110	131	171
mm	Depth	123	150	175	212
kg	Weight	1.0	1.7	3.2	9.1
	Fixings	4xM5	4xM5	4xM5	4xM8

IP66

	Size	1	2	3
mm	Height	232	257	310
mm	Width	161	188	210.5
mm	Depth	179	187	252
kg	Weight	3.1	4.1	7.6
	Fixings	4xM4	4xM4	4xM4

Drive Specification

TECHTOP

Input Ratings	Supply Voltage	110 – 115V ± 10% 200 – 240V ± 10% 380 – 480V ± 10%
	Supply Frequency	48 – 62Hz
	Displacement Power Factor	> 0.98
	Phase Imbalance	3% Maximum allowed
	Inrush Current	< rated current
	Power Cycles	120 per hour maximum, evenly spaced
Output Ratings	Output Power	110V 1 Ph Input: 0.5–1.5HP (230V 3 Ph Output) 230V 1 Ph Input: 0.37–4kW (0.5–5HP) 230V 3 Ph Input: 0.37–11kW (0.5–15HP) 400V 3 Ph Input: 0.75–22kW 460V 3 Ph Input: 1–30HP
	Overload Capacity	150% for 60 seconds 175% for 2.5 seconds
	Output Frequency	0 – 500Hz, 0.1Hz resolution
	Acceleration Time	0.01 – 600 seconds
	Deceleration Time	0.01 – 600 seconds
	Typical Efficiency	> 98%
Ambient Conditions	Temperature	Storage: −40 to 60°C Operating: −10 to 50°C
	Altitude	Up to 1000m ASL without derating Up to 4000m maximum
	Humidity	95% Max, non condensing
	Vibration	Conforms to EN61800-5-1
Enclosure	Ingress Protection	IP20, IP66
Programming	Keypad	Built-in keypad as standard Optional remote mountable keypad
	Display	7 Segment LED
Control Specification	Control Method	Sensorless Vector Speed Control PM Vector Control BLDC Control Synchronous Reluctance
	PWM Frequency	4–32kHz Effective
	Stopping Mode	Ramp to stop: User Adjustable 0.1–600 secs Coast to stop
	Braking	Motor Flux Braking Built-in braking transistor (not frame size 1)
	Skip Frequency	Single point, user adjustable
	Setpoint Control	Analog Signal: 0 to 10 Volts 10 to 0 Volts 0 to 20mA 20 to 0mA 4 to 20mA 20 to 4mA
		Digital: Motorised Potentiometer (Keypad) Modbus RTU CANopen EtherNet/IP

Fieldbus	Built-in	CANopen	125–1000 kbps
		Modbus RTU	9.6–115.2 kbps selectable
I/O Specification	Power Supply	24 Volt DC, 100mA, Short Circuit Protected 10 Volt DC, 5mA for Potentiometer	
	Programmable Inputs	4 Total 2 Digital 2 Analog / Digital selectable	
	Digital Inputs	8 – 30 Volt DC, internal or external supply Response time < 4ms	
	Analog Inputs	Resolution: 12 bits Response time: < 4ms Accuracy: ± 2% full scale Parameter adjustable scaling and offset	
	Programmable Outputs	2 Total 1 Analog / Digital 1 Relay	
	Relay Outputs	Maximum Voltage: 250 VAC, 30 VDC Switching Current Capacity: 6A AC, 5A DC	
	Analog Outputs	0 to 10 Volt	
Application Features	PI Control	Internal PI Controller Standby / Sleep Function	
	Fire Mode	Bidirectional Selectable Speed Setpoint (Fixed / PI / Analog / Fieldbus)	
Maintenance & Diagnostics	Fault Memory	Last 4 Trips stored with time stamp	
	Data Logging	Logging of data prior to trip for diagnostic purposes: Output Current Drive Temperature DC Bus Voltage	
	Monitoring	Hours Run Meter	
Standards Compliance	Low Voltage Directive	Adjustable speed electrical power drive systems. EMC requirements	
	EMC Directive	2004/108/EC Cat C1 according to EN61800-3:2004	
	Machinery Directive	2006/42/EC	
	Conformance	CE, RCM	

TECHTOP

Low Power Applications

Dedicated to low power applications, TECTOP combines innovative technology, reliability, robustness and ease of use in a range of compact IP20 & IP66 enclosures.

Simple Commissioning

14 parameter basic setup. Default settings suitable for most applications. Contactor style connection for simple wiring.

TECtop IP66

Environmentally protected, IP66 rated models can be mounted directly on your processing equipment.

Washdown Ready

With a sealed ABS enclosure and corrosion resistant heatsink, TECTOP IP66 models are ideal for high-pressure washdown applications.

On-drive Control

IP66 models feature optional, convenient controls for speed control, REV/OFF/FWD and Power ON/OFF, complete with safety lock.

RoHS CE

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