

# CV30

Variable frequency drives from 0.4 kW to 7.5 kW



## CV30: General-purpose vector variable frequency drives

Salicru's **Controlvit CV30** variable frequency drive series stands out for its design, reliability, compact size and ease of use. The high quality of its components, advanced features and versatility make it the ideal variable frequency drive for the actuation of low-power motors (0.4 kW to 7.5 kW) in the vast majority of applications, being available for both single-phase (230 VAC) and three-phase (400 VAC and 230 VAC) supply voltages.

Its advanced sensorless vector control, which has two different algorithms depending on the required performance, ensures high torque even when working at very low speeds. In addition to all of this, it features an automatic energy-saving function which achieves significant consumption reductions, mainly in ventilation, water treatment and irrigation applications.

## Applications:

The **CV30** can be incorporated into the vast majority of machinery, and can control pumps and fans. Some of its common applications are: belt conveyors, agitators, compressors, hoists, saws, vibrators, presses, polishers, barriers and high-speed doors, centrifugal and submersible pumps, blowers, separators, industrial washing machines, mobile trolleys, positioners, ornamental fountains, dispensers, air extraction equipment, fans, advertising and mobile stages, meat, textile and packaging machinery, etc.



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## Performances

- Selectable control: V/f, sensorless vector or torque control.
- EMC filter, built-in or optional for easy connection (depending on model).
- Automatic motor tuning (static and dynamic).
- 150% torque at 0.5 Hz.
- Advanced PID process control.
- Simple sleep/wake function for control of one pump.
- Simple PLC (automatic cycle) and 16-speed multi-step control.
- RS485 Modbus RTU communication.
- Built-in potentiometer.
- Remote control with removable or optional keypad (depending on model).
- Intuitive parameter setting.
- Compact size and side-by-side installation (depending on model).
- DIN rail mounting (depending on model).
- Built-in dynamic braking unit.
- DC braking.
- Automatic energy saving and kWh meter.
- Pulse train input (max. 50 kHz).
- Fly-start function.
- Numerous inputs/outputs (4/5 digital inputs, 1 pulse input, 2 analogue inputs and 2 analogue outputs, 2 relay outputs, 1 transistor output).
- Cooling fans with On/Off control and easy replacement.
- Monitoring and parameter setting using VITdrive software.
- SLC Greenergy solution.



## Keypad and potentiometer always included

Regardless of the model, all drives in the range feature a keypad as standard (removable or film type, depending on the model) and analogue or digital potentiometer.

## Built-in energy meter

The **CV30** and **CV50** series are equipped with a meter to measure the kWh consumed by the drive. This metering can be stopped in the event of testing, setting an initial value, resetting and accessing it via Modbus communication.

## Software

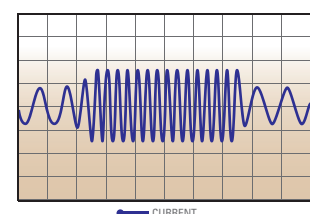
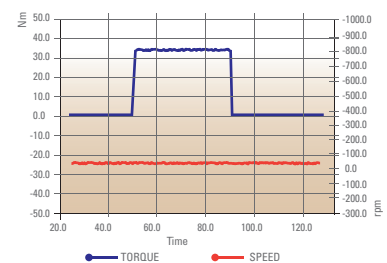
- Allows parameter setting of the equipment and facilitates commissioning and maintenance.
- Local and remote monitoring.

## Technical support and service

- Pre- and after-sales service.
- Commissioning.
- Telephone technical support.
- Training courses.
- Online registration at [www.salicru.com](http://www.salicru.com).

## Advanced vector control

In the event of a sudden change in load with the motor running at 0.5 Hz, the speed remains constant and the assembly is capable of providing the torque demanded at full load.



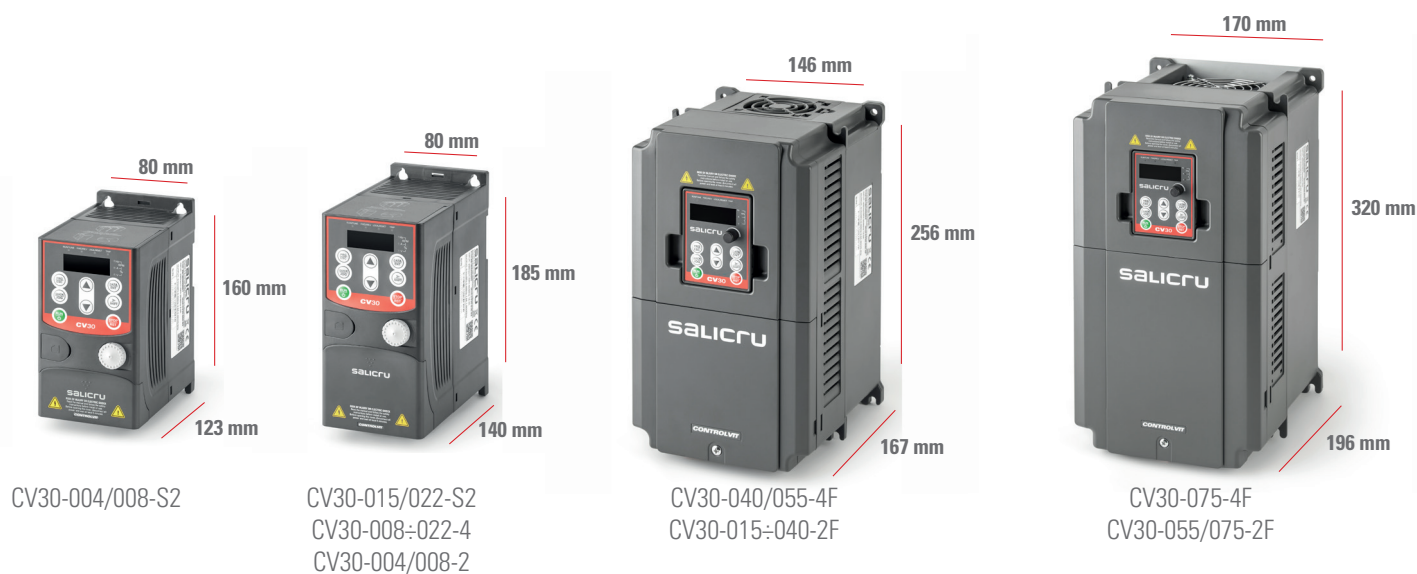
## Range

MODEL	CODE	POWER SUPPLY VOLTAGE	POWER (kW)	INPUT CURRENT (A)	OUTPUT CURRENT (A)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
CV30-004-S2	6B1BA000001	Single phase 230 V	0.4	6.5	2.5	123 × 80 × 160	1.3
CV30-008-S2	6B1BA000002	Single phase 230 V	0.75	9.3	4.2	123 × 80 × 160	1.3
CV30-015-S2	6B1BA000003	Single phase 230 V	1.5	15.7	7.5	140 × 80 × 185	1.6
CV30-022-S2	6B1BA000004	Single phase 230 V	2.2	24	10	140 × 80 × 185	1.6
CV30-008-4	6B1BC000001	Three-phase 400 V	0.75	3.4	2.5	140 × 80 × 185	1.4
CV30-015-4	6B1BC000002	Three-phase 400 V	1.5	5	4.2	140 × 80 × 185	1.4
CV30-022-4	6B1BC000003	Three-phase 400 V	2.2	5.8	5.5	140 × 80 × 185	1.4
CV30-040-4F	6B1BC000004	Three-phase 400 V	4	13.5	9.5	167 × 146 × 256	3.9
CV30-055-4F	6B1BC000005	Three-phase 400 V	5.5	19.5	14	167 × 146 × 256	3.9
CV30-075-4F	6B1BC000006	Three-phase 400 V	7.5	25	18.5	196 × 170 × 320	6.5
CV30-004-2	6B1BB000001	Three-phase 230 V	0.4	3.7	2.5	140 × 180 × 185	1.4
CV30-008-2	6B1BB000002	Three-phase 230 V	0.75	5	4.2	140 × 180 × 185	1.4
CV30-015-2F	6B1BB000003	Three-phase 230 V	1.5	7.7	7.5	167 × 146 × 256	3.9
CV30-022-2F	6B1BB000004	Three-phase 230 V	2.2	11	10	167 × 146 × 256	3.9
CV30-040-2F	6B1BB000005	Three-phase 230 V	4	17	16	167 × 146 × 256	3.9
CV30-055-2F	6B1BB000006	Three-phase 230 V	5.5	21	20	196 × 170 × 320	6.5
CV30-075-2F	6B1BB000007	Three-phase 230 V	7.5	31	30	196 × 170 × 320	6.5

## EMC Filters - Category C3

MODEL	VOLTAGE (V)	INVERTER	DIMENSIONS (F × AN × AL mm.)
IPF-EMC-CV30-022-S2	Single phase 230 V	CV30...-S2 (0.4 ÷ 2.2 kW)	38 x 69 x 31
IPF-EMC-CV30-022-2/4	Three-phase 400 V Three-phase 230 V	CV30...-4 (0.75 ÷ 2.2 kW) CV30...-2 (0.4 ÷ 0.75 kW)	

## Dimensions



## Technical specifications

MODEL		CV30
INPUT	Rated voltage	Single phase 220 V (-15%) ÷ 240 V (+10%) / Three-phase 380 V (-15%) ÷ 440 V (+10%) / Three-phase 220 V (-15%) ÷ 240 V (+10%)
	Rated frequency	50/60 Hz / Allowed range: 47 ÷ 63 Hz
OUTPUT	Rated voltage	Three-phase, 0 ÷ 100% of input voltage
	Frequency	0 ÷ 400 Hz
	Admissible overloads	150% for 1 min; 180% for 10 s; 200% for 1 s
	Maximum distance	<50 m without filter / between 50 and 100 m install chokes / >100 m sine wave filter
CONTROL SPECIFICATIONS	Type of motor	Asynchronous
	Method of control	V/f, sensorless vector control, torque control
	V/f characteristics	Linear, quadratic (3 types), user defined
	Degree of control	1% of maximum output frequency
	Speed fluctuation	±0.3% (in vector control mode)
	Braking unit	Built-in
INPUT SIGNALS	Digital	4/5 programmable inputs, PNP or NPN logic, pulse input, maximum frequency 50 kHz, selectable polarity, virtual activation, on/off delay times
	Analogue	2 inputs, AI2: 0 ÷ 10 V / 0 ÷ 20 mA and AI3: -10 ÷ 10 V Built-in potentiometer
OUTPUT SIGNALS	Relay	2 multifunction NO/NC switching outputs Maximum 3 A / 250 VAC, 1 A / 30 VDC. Selectable polarity and on/off delay
	Power Supply	24 V (±10%) 200 mA
	Analogue	2 selectable outputs 0 ÷ 10 V / 0 ÷ 20 mA, proportional to frequency, current, speed, voltage, torque, etc.
	Digital	1 multifunction open collector output (50 mA / 30 V) Selectable polarity and on/off delay
	Communication port	RS-485 Modbus-RTU
	Method	Keypad, control terminal and communication. Removable keypad up to 30 m for models 3ø 380 V ≥ 4 kW and 3ø 230 V ≥ 1.5 kW. For other models, remote keypad (up to 30 m) as optional extra.
OPERATION	Frequency setting	Digital, analogue, pulse train, multi-step, simple PLC, PID, Modbus communication
	Protection	Overcurrent, overvoltage, low voltage, inverter overheating, phase loss, overload, underload, etc.
FILTERING	EMC filter	Category C3 built-in for 3ø 380 V ≥ 4 kW and 3ø 230 V ≥ 1.5 kW inverters. Category C3 with easy connection for others as option
GENERAL	Ambient temperature	-10 ÷ 50°C (1% derating per degree exceeding 40°C)
	Degree of protection	IP20
	Cooling	By easy-to-maintain fans
	Installation	Side-by-side type on DIN rail or wall mounting for 1ø 230 V / 3ø 380 V ≤ 2.2 kW and 3ø 230 V ≤ 0.75 kW inverters. Wall of cabinet or flange mounting for other inverters.
STANDARDS	Safety	EN 61800-5-1
	Electromagnetic compatibility (EMC)	EN 61800-3 C3
	Corporate certification	ISO 9001, ISO 14001, ISO 45001

Information subject to change without notice.



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