



# Optimized for small powers

Emotron VS10 / VS30



**emotron**

DEDICATED DRIVE

 | A CG Product



# Optimized in size & price for small powers

Although small in size, our new Emotron VS10 and VS30 drive is equipped with several advanced features. It offers great flexibility in all senses. Functionality is easily adapted to your specific application requirements. The compact format offers flexible installation and the user-friendly set-up will have your system up and running in no time.

Emotron VS10 and VS30 offers reliable and cost-efficient operation of your pumps, fans and compressors as well as constant torque applications such as conveyors. The complete series covers motors in the power range of 0.25 - 7.5 kW.

# Smooth and efficient operation



1. Key hole mounting

2. Main Power Supply  
(removable connector  $\leq 2.2$  kW)

3. Motor Power Terminal  
(removable connector  $\leq 2.2$  kW)

4. Relay output

5. Memory module (parameter backup)

6. CAN connection with  
shield plate fixation (option)

7. HMI interface:  
Control panel hot-pluggable (option)

8. I/O Terminal with shield plate  
(removable terminals  $> 2.2$  kW)



# Technical data

## Emotron VS10 1-phase supply 230V

Model	Nominal rating		Rated output current (A) @230V	Unit size	Dim
	kW	hp			W x H x D (mm) [Inches]
VS10-23-1P7-20	0.25	0.33	1.7	1	60 x 155 x 130 [2.4 x 6.1 x 5.1]
VS10-23-2P4-20	0.37	0.5	2.4		
VS10-23-3P2-20	0.55	0.75	3.2	2	60 x 180 x 130 [2.4 x 7.1 x 5.1]
VS10-23-4P2-20	0.75	1.0	4.2		
VS10-23-6P0-20	1.1	1.5	6.0	3	60 x 250 x 130 [2.4 x 9.8 x 5.1]
VS10-23-7P0-20	1.5	2.0	7.0		
VS10-23-9P6-20	2.2	3.0	9.6		



## Emotron VS30-23, 1/3-phase supply 230V

Model	Nominal power		Rated output current @230V	Unit size	Dim
	kW	hp			W x H x D (mm) [Inches]
VS30-23-1P7-20	0.25	0.33	1.7	1	60 x 155 x 130 [2.4 x 6.1 x 5.1]
VS30-23-2P4-20	0.37	0.5	2.4		
VS30-23-3P2-20	0.55	0.75	3.2	2	60 x 180 x 130 [2.4 x 7.1 x 5.1]
VS30-23-4P2-20	0.75	1.0	4.2		
VS30-23-6P0-20	1.1	1.5	6.0	3	60 x 250 x 130 [2.4 x 9.8 x 5.1]
VS30-23-7P0-20	1.5	2.0	7.0		
VS30-23-9P6-20	2.2	3.0	9.6		

## Emotron VS30-40, 3-phase supply 400/480V

Model	Nominal power		Rated output current (A) @400/480V	Unit size	Dim
	kW	hp			W x H x D (mm) [Inches]
VS30-40-1P3-20	0.37	0.5	1.3/1.1	1	60 x 155 x 130 [2.4 x 6.1 x 5.1]
VS30-40-1P8-20	0.55	0.75	1.8/1.6	2	60 x 180 x 130 [2.4 x 7.1 x 5.1]
VS30-40-2P4-20	0.75	1.0	2.4/2.1		
VS30-40-3P2-20	1.1	1.5	3.2/3.0	3	60 x 250 x 130 [2.4 x 9.8 x 5.1]
VS30-40-3P9-20	1.5	2.0	3.9/3.5		
VS30-40-5P6-20	2.2	3.0	5.6/4.8		
VS30-40-7P3-20	3.0	4.0	7.3/6.3	4	90 x 250 x 130 [3.5 x 9.8 x 5.1]
VS30-40-9P5-20	4.0	5.0	9.5/8.2		
VS30-40-013-20	5.5	7.5	13/11	5	120 x 275 x 130 [4.7 x 10.8 x 5.1]
VS30-40-016-20	7.5	10	16.5/14		

## General specifications

Mains voltage	VS10: 1-phase, 190–240V +/-10% VS30-23: 1/3 phase, 190–240V +/-10% VS30-40: 3 phase, 380–480V +/-10%
Mains frequency	45Hz ..65Hz
Output voltage	3-phase, 0-Mains supply voltage level
Output frequency	0–599 Hz
Degree of Protection	IP20 / NEMA250
Mounting	Zero clearance side by side upright mounting, without derating
Cooling	Direct Air cooling (>= Unit size 3 with fan)
Connections	Spring loaded control terminals (removable ≤ 2.2 kW) Removable power terminals <=2.2kW
Approvals	CE, UL, cUL, RoHS2
EMC compliance	IEC 61800-3:2004 – Category C2, <20 m motor cable
Overload capacity	200% rated current for 3s 150% rated current for 60s
Switching frequency	2,4,8,16 kHz
Temperature	-10°C – 55°C /4kHz (>45°C/ reduce rated output current by 2.5 %/°C)

Process Interface	Qty
Digital input	5: (24VDC)
Digital output	1: (10..30V/50mA)
Analog input	1: (0..+10V, 0/4..+20mA) 1: (0.. +10V) 1: (10V) control supply
Analog output	1: (0..10V/max.5mA, 0/4...20mA) 1: (+10VDC Reference)
Relay	1: (NO/NC) AC 250V, 3A / DC 24V, 2A
Integrated motor holding brake control	YES
<b>Fieldbus communication optional</b>	
CAN open	YES
Modbus RS485	YES

# Standard functions and features

<b>Control types, motor control</b>	VFC control plus (linear or square-law V/Hz) Sensor less vector control (speed) Fixed / Auto-Boost DC Brake / Brake control Flying restart
<b>Basic functions</b>	Freely assignable user menu S-shaped ramps for smooth acceleration PID controller Sequencer Parameter set change-over Sleep / rinse function Memory module for parameter backup
<b>Monitoring and protective measures</b>	Short circuit Earth fault I <sup>2</sup> x t monitoring Motor phase failure Mains phase failure Motor over temperature/heat sink (de-rating) Motor maximum speed detection Motor maximum torque detection Motor maximum current detection Load loss monitoring
<b>Diagnostics</b> <b>Diagnostic interface</b>	Error management via LED, Failure history, Log (Control panel)
<b>Efficiency class</b>	Fulfills class IE2 in accordance with EN 50598-2 (from Ecodesign Directive)

## Options

CAN Open	Fieldbus communication interface
Modbus-RTU	RS485 Serial communication interface
USB	Diagnostic communication module
WiFi	Diagnostic communication module (available later)

## Control panel/ USB/ WiFi

A detachable control panel is optional.  
Languages supported: English, German





CG Drives & Automation  
Mörsaregatan 12  
Box 222 25  
SE-250 24 Helsingborg  
T + 46 42 16 99 00  
F +46 42 16 99 49  
info.se@cglobal.com  
www.cglobal.com / www.emotron.com