



Smart solutions.  
Strong relationships.

# Vibrant, Compact & Dynamic AC Drives

## Emotron VSB Series

Simple to use & suitable for standard applications



■ 0.75kW – 5.5kW / 1HP – 7.5HP

■ 50°C Ambient Temperature

■ IP20 Protection Class

*We put all our energy  
into saving yours!*

# Vibrant, Simple & Suitable for Standard Applications

CG Drives & Automation presents you with another series which will solve your entire standard requirement in this fast evolving world of automation.

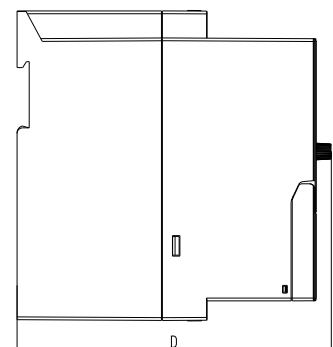
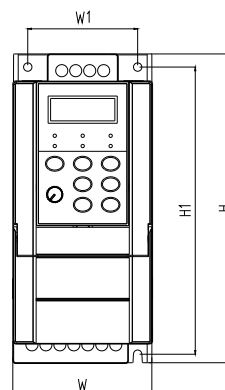
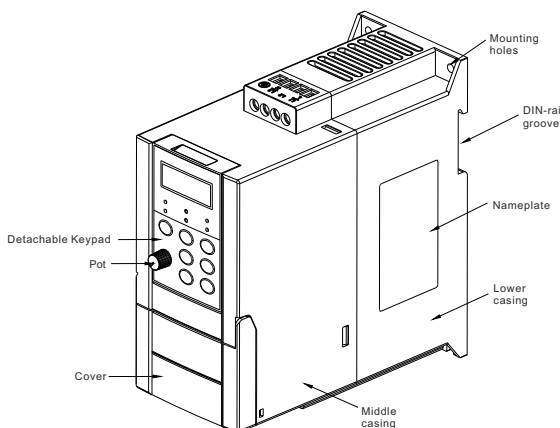
VSB will not only save energy but is also easy to operate, a quick fix for commissioning. VSB is also cost effective, safe & energy efficient solution for the demanding industrial environment.

CG offers the drives which are reliable & productive with exceptional performance as expected from Emotron series and is suitable for applications like Fan, Pump, Blower, Compressor etc.



## Emotron VSB – 3 Phase, 380-480V with dimensional details

Model	Heavy Duty (150%, 1 min, every 10 min)		Installation Dimensions (mm)					Weight
	Power	Current	H	W	D	H1	W1	kg
	kW	A						
VSB48-003-20CNB	0.75	2.5	166	75	168	154	59	1.4
VSB48-004-20CNB	1.5	3.8						
VSB48-006-20CNB	2.2	5.5	188	85	172	175	69	2
VSB48-009-20CNB	3.7	9						



# Technical Details

## Input Power

Voltage	Three phase AC, 380V / 400V / 415V / 440V / 460 / 480V.
Frequency	50Hz/60Hz, Tolerance $\pm 5\%$ .
Voltage variation	Continuous fluctuation $\pm 10\%$ . Short fluctuation - 15% to 10% (323V-528V). Voltage out-of-balance $< 3\%$ . Distortion rate as per the requirements of IEC61800-2.

## Output Power

Voltage	3-phase: 0 - rated input voltage, error $< \pm 3\%$ .
Output frequency range	0 - 600Hz.
Frequency resolution	0.01Hz.

## Overload Capacity

Normal duty	120% 60 seconds / 600 seconds.
Heavy duty	150% 60 seconds / 600 seconds.
Higher overload	180% 10 seconds, 200% 0.5 seconds.
Starting torque	0.5Hz: 180% (V/f control, sensorless vector control).

## Control Characteristics

Acceleration time setting	0.00 - 60000 seconds.
Deceleration time setting	0.00 - 60000 seconds.
Switching frequency	0.7kHz - 12kHz.
Control methods	V/f control, sensorless vector control.
Range of speed regulation	1:100 (V/f, vector control).
Speed accuracy	$\pm 0.5\%$ (V/f control). $\pm 0.2\%$ (sensorless vector control).

## Basic function

Frequency setting source	Digital setting + keypad $\wedge / \vee$ . Digital setting + terminal UP/DOWN. Potentiometer. Communication. Analogue setting (AI).
Motor starting methods	Started from starting frequency. DC braking and then started.
Motor stopped methods	Ramp to stop. Coast to stop. Ramp stop + DC brake.

Dynamic braking unit	In-built.
Dynamic braking capacity	Brake unit threshold voltage: 400V input: 650V~750V. 200V input: 325V~375V. service time: 0.0~3100.0s.

## Input/Output Terminals

Digital inputs	4
Digital output	1
Analogue input	1 (Current / Voltage)
Analogue output	1 (Current / Voltage)
Relay output	1

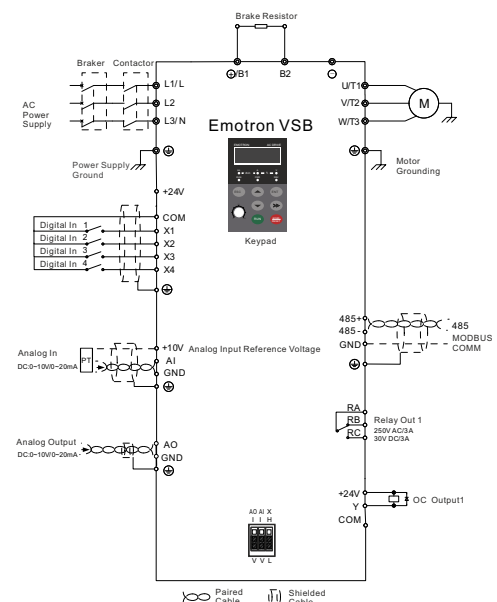
## Environment

Enclosure	IP20
Ambient temperature	-10°C to 50°C
Relative humidity	0 - 95%, no condensation.
Vibration	Less than 5.9 m/s <sup>2</sup> (0.6g)
Storage temperature	-40°C to +70°C
Altitude	0 - 2000m deration above 1000 meters.

## Communication Interface

Default Interface	Modbus 485
485 differential signal	4800/9600/19200/38400/57600/115200 bps.
Max. Dist	500 mts Std network cable.

## Terminal and wiring details



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