



VIFTER & MILJØ AS

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EVS

The EVS automatically controls the speed of single phase (230 Vac – 50 Hz) voltage controllable electric motors with a 0-10 Vdc or 0-20 mA control signal selectable by switch 19. It is possible to invert the control signal to 10..0 Vdc/20..0 mA by switch 16. To power on, an external switch on the power supply is provided. A supplementary terminal block is foreseen to branch off 230 Vac not controlled for 3-wire motor connection, a telltale or to control a valve or damper.

There are two working modes, internally selectable by switch 18.

- Kick start: the motor will always start (or restart) at max. speed for 10 sec, after that the motor speed automatically follows the position set by the 0-10 Vdc or 0-20 mA control signal.
- Without kick (soft) start: the motor starts according to the position set by the 0-10 Vdc or 0-20 mA control signal.

PWM signal

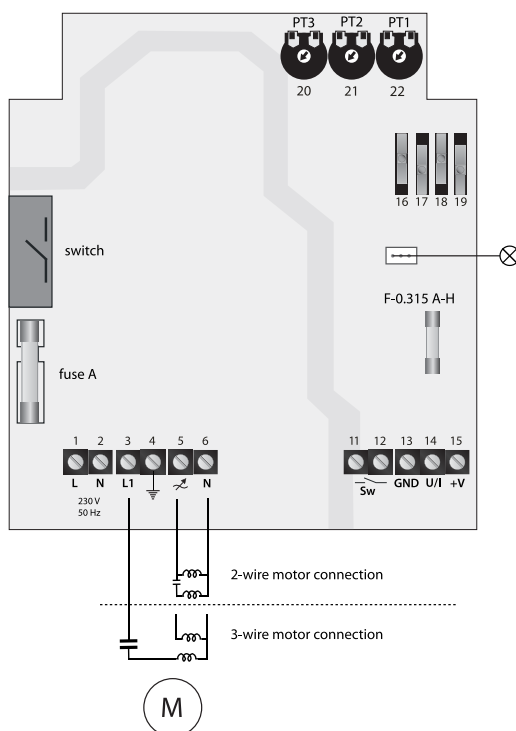
The CNVT-PWM-010V can easily be connected to provide a conversion of a PWM signal to a 0-10 V signal (see below).

Features

- < Power supply: 230 Vac 50 Hz
- < According to the low voltage directive: 2006/95/EC / the EMC directive: 2004/108/EC

	EVS-0-15 DT	EVS-0-30-DT	EVS-0-60-DT	EVS-0100-DT
Current rating (A)	0.1 - 1.5	0.1 - 3.0	0.5 - 6.0	0.5 - 10.0
Fuse (A) 5*20 mm	F-3.15 A-H	F-5.0 A-H	F-10.0 A-H	F-16.0 A-H (16*32mm)

Wiring diagram



High voltage:

- L: mains supply 230Vac / 50Hz – INPUT
- N: neutral – INPUT
- L1: 230 Vac not regulated output to motor (after fuse) – OUTPUT
- Earth terminal (only for 3, 6 & 10 A)
- M- regulated output to motor – OUTPUT
- N – neutral – OUTPUT

Low voltage:

- On/off switch
- On/off switch
- GND – ground
- U – control signal 0÷10Vdc (input impedance 90 kOhm)
I – 0÷20mA (input impedance 250 Ohm)
- +V – low voltage power supply: 12 Vdc / 1 mA for external trimmer



- switch down = 0-10 V
switch up = 10-0 V (select increase or decrease input voltage to control speed)
- switch down = disable off-level
switch up = enable off-level
- switch down = disable kickstart
switch up = enable kickstart
- switch down = 0-20 mA
switch up = 0-10 V (select current/voltage)

Example shows:

- up = 10-0 V
- down = disable off-level
- up = enable kickstart
- down = 0-20 mA

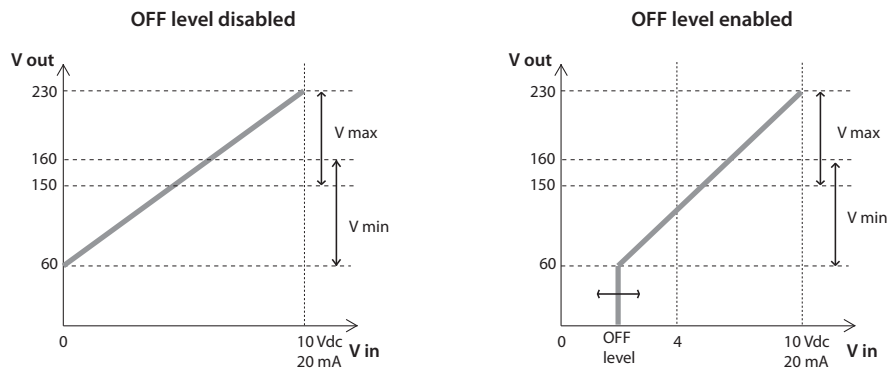


- Off level adjustment trimmer: 0-4 V or 10-6 V (depending on switch 16 – Fig.).
- Minimum speed adjustment trimmer range: 60-160 V
- Maximum speed adjustment trimmer range: 165-230 V



LED green: normal operation.
LED blinking: standby (input signal < off level).

Operation

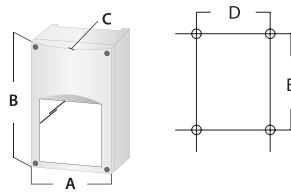


Calculation formula

$$V_{out} = ((V_{in}/10) * (V_{max} - V_{min})) + V_{min}$$

$$V_{out} = (((V_{in} - \text{OFF-level}) / (10 - \text{OFF-level})) * (V_{max} - V_{min})) + V_{min}$$

Dimensions & fixing



order code	A	B	C	D	E	net weight	gross weight
EVS-0-15-DT	115	180	85	98	140	575 g	690 g
EVS-0-30-DT	115	180	85	98	140	625 g	740 g
EVS-0-60-DT	115	180	85	98	140	785 g	900 g
EVS-0100-DT	115	180	85	98	140	785 g	900 g



PWM | converter

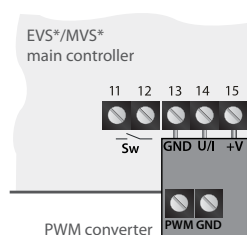
This PWM converter is designed as a 'plug-in' for EVS*/MVS* controllers to convert a PWM signal to an analogue 0-10 V signal. It is to be screwed directly into the terminal blocks of the main controller.

Characteristics

Input signal:
 < 24 V amplitude
 < 56 - 2000 Hz
 < duty cycle 1-100 %

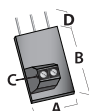
Input duty cycle	Output voltage
0 %	0 V
10 %	1 V
20 %	2 V
...	...
100 %	10 V

Connection



- 13. GND: ground
- 14. U/I: control signal 0-10 Vdc output
- 15. +V: low voltage power supply 12 Vdc from controller

Dimensions



order code	A	B	C	D	net weight	gross weight
CNVT-PWM-010V	15	22	9	6	3,0 g	3,5 g