

FD50  
FD100  
FD200



☺	<b>User friendly setting</b>
🔊	<b>Control for very low motor noise</b>
⚡	<b>Speed control &lt; 100 rpm</b>
🔋	<b>High efficiency</b>
⚡	<b>EMC Internal Filtering</b>
🔒	<b>Auto protected</b>

## ► General information

FD inverters have been developed to control brushless sinusoidal motors with a sensed approach. They have high efficiency and low acoustic noise, essential requirements in ventilation applications.



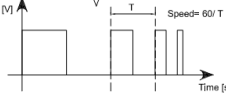
FD inverters run motors in speed-control mode. A 0-10V input signal sets the speed reference from a minimum to a selectable maximum value. The control changes the driving of the motor to maintain selected speed in the case of load and supply variations. The input signal is isolated with respect to live parts.

FD inverters have inbuilt protections to prevent themselves from working in unsafe conditions when installed in typical ventilation applications. The activation of a protection is indicated with a led and with an optoisolated transistor. The alarm signal can be read by an external supervision system.

## ► Models

Cod.	Dimensions	VI	IL	WI	Inrush current @ 230Vac	Leakage current @ 230Vac	ET CODE	MOTOR TYPE COMPATIBILITY
	[C x A x B (mm)]	Volt	Amp	Watt	Amp (pk)	mAmp (rms)		
FD50	87,7 x 145 x 45,2	230	0,70	70	31 (2ms)	0,51	99261000	R0003.yy R0005.yy
FD100	87,7 x 160 x 60,2	230	1,00	120	37 (2ms)	0,61	99261010	R0004.yy
FD200	87,7 x 160 x 60,2	230	1,70	200	37 (2ms)	0,61	99261020	R0005.yy

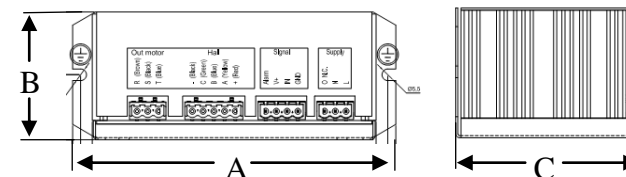
## ► Specification

<b>Power supply (L/N)</b>	230V +/- 10% - 50/60 Hz
<b>Input Power</b>	FD50 Win = 70 W (Wlimit = 90 W) FD100 Win = 120 W (Wlimit = 150 W) FD200 Win = 200 W (Wlimit = 250 W) Limitation @ 1400 rpm (46,67 Hz - 4 poles)
<b>Insulating Class</b>	<b>CL. I</b> for external metal parts <b>CL. II</b> for the terminal command (SIGNAL) (✓ 4kV respect to the live parts) ATTENTION: command (SIGNAL) with principale insulating respect earth: using capacitor ( <b>Command leakage current of = 0,1 mA</b> )
<b>Temperature Range</b>	-20°C + 50°C  <b>Air Over Inverter</b>
<b>Index of protection</b>	IP 20
<b>Output Motor (R/S/T)</b>	Three-phase sinusoidal PWM; max voltage = Vin -5% Fmin = 3 Hz, Fmax = 52 Hz
<b>Sensor Type (A/B/C)</b>	For Hall effect sensors powered at 5 V  <b>Not isolated sensor !</b>
<b>Input command (IN)</b>	0-10Vdc o PWM 10V. ON 0.5V (OFF 0.25V)- Set max = 9 V R <sub>in</sub> = 160 KΩ r <sub>in</sub> = 41 ms
<b>Alarm Output (ALARM/ TACHO OUT)</b>	Contact open collector open in alarm (Vmax 24V, Imax 10mA Sink) DIP4 OFF: opened to GND = ALARM ON closed = ALARM OFF DIP4 ON: 1 pulse x shaft revolution (DUTY CYCLE 50%) 
<b>Auxiliary supply (V+)</b>	10 V regulated - 10 mA max
<b>Regulation type</b>	Speed control
<b>Protection</b>	<b>UNDER VOLTAGE</b> power supply 140Vac <b>OVER VOLTAGE</b> power supply 265Vac <b>OVER TEMP</b> active 85°C re-start at 80°C <b>OVER CURRENT</b> (peak) 9A pk <b>OVER LOAD</b> Input power limitation Temperature limitation Speed limitation Rotor stall after repetated alarms <b>STOP</b>
<b>EC Directives</b>	EN 60335-1
<b>EMC Norms</b>	EN 61000-6-2 Immunity for industrial environments EN 61000-6-3 Emission standard for residential, commercial and light-industrial environments. EN 61000-3-2 - Limits for harmonics


## ► Over-load and Over-temperature conditions


Input power reduction and speed reduction in case of excessive load or excessive temperature.


## ► Dimensions



## ► Installation

 **WARNING !** Holes with ⊕ symbol must be used for safety earth connection. This connection is mandatory.

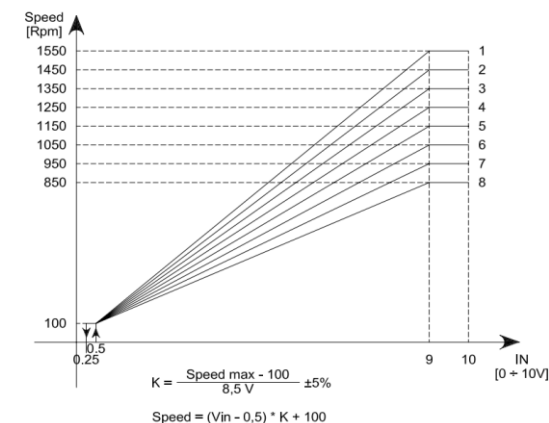
 **WARNING !** Inverter must be kept under ventilation.

 **WARNING !** Do not change motor type.


Always check that mechanical and electrical protections are present to ensure a safe and compliant installation.

## ► Speed control regulation (Speed vs Vin)

Maximum speed can be set by a dip-switch selector. There are 8 speed ranges available.



Refer to product datasheet for detailed information

 Rpm reserves the right to improve or modify the features of its products without any obligation to update previous production and manuals.