



STVS1

230 VAC transformer controller with TK and analogue control

The STVS1 series of transformer fan speed controllers regulate the rotational speed of single-phase voltage controllable motors in five steps by varying the output voltage according to an 0–10 VDC analogue input signal. They are equipped with auto-transformer(s) and feature TK monitoring for thermal motor protection. The controllers up to 7,5 A are available in plastic enclosure, while the models above 7,5 A are available in a metal enclosure.

Key features

- Analogue input signal (0–10 VDC) galvanically isolated
- Wide power range: 1,5 A–13 A
- TK monitoring for thermal motor protection
- 5 switching levels according to the input signal
- LED status indication
- +12 VDC output (e.g. as supply for MTP-X10K potentiometer from Sentera)

Technical specifications







Supply voltage	230 VAC / 50–60 Hz	
Control signal input	0–10 VDC	
Output	12 VDC / I _{max} 50 mA	
Unregulated output	230 VAC (max. 2 A)	
Switching levels	Up	2; 4; 6; 8; 9,5 VDC
	Down	Up level – 0,2 VDC
Enclosure	plastic (R-ABS, UL94-V0, grey RAL 7035) or sheet steel (RAL 7035, polyester powder coating), depending on the product version	
Protection standard	IP54 (according to EN 60529)	
Ambient conditions	Temperature	–20–35 °C
	Rel. humidity	5–95 % rH (non-condensing)



Article codes

Article code	Rated max. current [A]	Fuse [A]
STVS1-15L22	1,5	(5*20 mm) T-2,5 A-H
STVS1-25L22	2,5	(5*20 mm) T-4,0 A-H
STVS1-35L22	3,5	(5*20 mm) T-5,0 A-H
STVS1-50L22	5,0	(5*20 mm) T-8,0 A-H
STVS1-75L22	7,5	(6*32 mm) T-12,5 A-H
STVS1100L22	10,0	(6*32 mm) T-16,0 A-H
STVS1130L22	13,0	(6*32 mm) T-20,0 A-H

Voltage

0–10 VDC or external potentiometer positions (MTV or MTP)*	0	-	1	2	3	4	5
Wires		-					
Regulated output [VAC]							
Voltages***	0	80**	110	140	170	190	230
Unregulated output [VAC]							
L1	0	230	230	230	230	230	230

* See the operational diagram on the next page for the corresponding voltages.

** Available but not connected.

*** If more than 5 output voltages are available, it is possible to adjust the 5 steps by changing the internal wiring.

Area of use

- Fan speed control of voltage controllable motors (pumps and fans) in ventilation systems
- For indoor use only

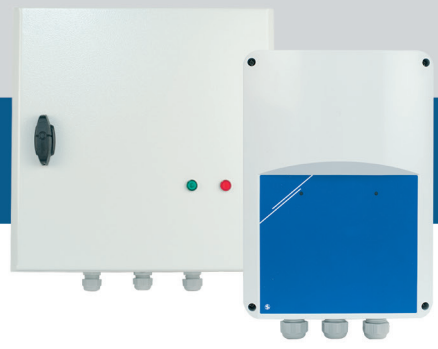
Wiring and connections

L	Power supply, phase (230 VAC / 50–60 Hz)
N	Power supply, neutral
Pe	Earth terminal
Pe	Earth terminal
L1	Unregulated output, line
N1	Unregulated output, neutral
N1	Regulated output to motor, neutral
U	Regulated output to motor, line
TK	Input - TK monitoring for thermal motor protection
TK	
0V	Ground
+12V*	Output 12 VDC / I _{max} 50 mA
+V*	Digital output 12 VDC / I _{max} 50 mA (0 VDC = TK fault; 12 VDC = normal operation)
V/C	Input U: 0–10 VDC

***Note: The total output current for both outputs (+12V and +V) must not exceed 100 mA!**

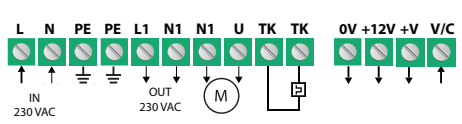
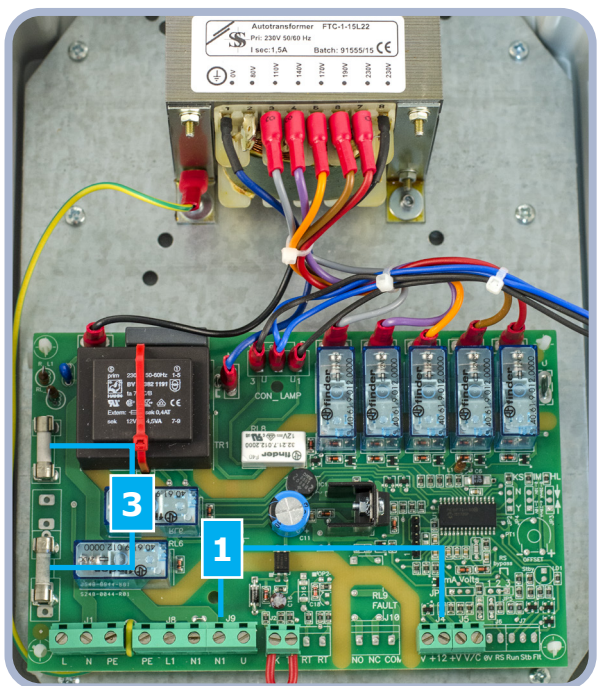
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Legend

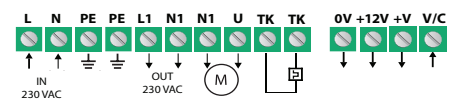
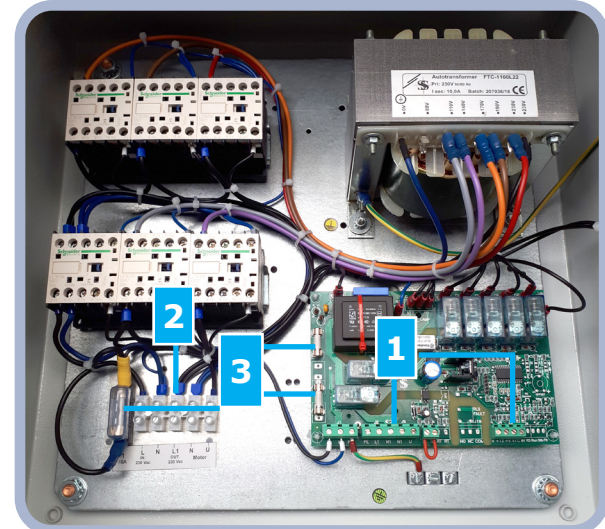
STVS1-15L22, STVS1-25L22, STVS1-35L22, STVS1-50L22, STVS1-75L22



- 1 - Terminal block
- 2 - Fuse

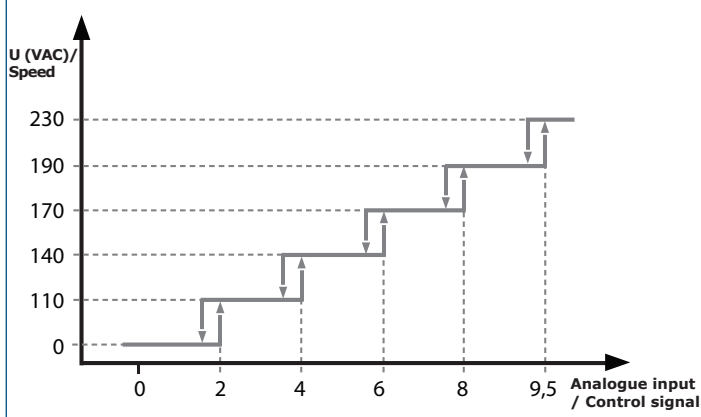
Legend

STVS1100L22, STVS1130L22



- 1 - Control terminal block
- 2 - Power terminal block
- 3 - Fuse

Operational diagram



Standards

- Low Voltage Directive 2014/35/EC
- EMC Directive 2014/30/EC: EN 61326
- WEEE Directive 2012/19/EC
- RoHS Directive 2011/65/EC

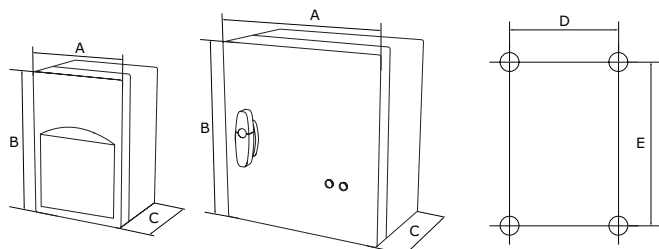


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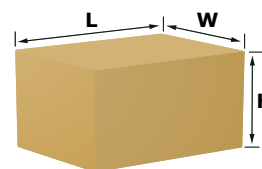


Fixing and dimensions



Article code	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Enclosure
STVS1-15L22	200	305	140	183	236	plastic (R-ABS, UL94-V0, grey RAL 7035)
STVS1-25L22	200	305	140	183	236	
STVS1-35L22	200	305	140	183	236	
STVS1-50L22	200	305	140	183	236	
STVS1-75L22	200	305	140	183	236	
STVS1100L22	300	325	170	255	255	
STVS1130L22	300	325	170	255	255	

Packaging



Article code	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight [kg]	Gross weight [kg]
STVS1-15L22	Unit (1 pc.)	262	180	160	3,52	3,80
STVS1-25L22	Unit (1 pc.)	262	180	160	4,02	4,30
STVS1-35L22	Unit (1 pc.)	262	180	160	5,04	5,33
STVS1-50L22	Unit (1 pc.)	262	180	160	5,66	5,93
STVS1-75L22	Unit (1 pc.)	320	210	160	7,72	7,99
STVS1100L22	Unit (1 pc.)	340	310	210	17,32	18,07
STVS1130L22	Unit (1 pc.)	340	310	210	19,67	20,42