

## AIRIUS STVS1 SPEED CONTROLLER - Ideal for BMS and Fire System Integration

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 autotransformer(s) and feature TK monitoring for thermal motor protection.



| AIRIUS MODEL | 10 | 15 | 25 | 45/PS-4 | 45/PS-2 | 50/PS-4 | 60/PS-4 |
|--------------|----|----|----|---------|---------|---------|---------|
| NO. OF UNITS | 67 | 53 | 25 | 20      | 6       | 11      | 6       |

### Key Features

- Analogue input signal (0—10 VDC) galvanically isolated
- 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 <sub>max</sub> 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]            |
|--------------|------------------------|---------------------|
| STVS1-50L22  | 5,0                    | (5*20 mm) T-8,0 A-H |

### Area of Use

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

### Voltage

| 0—10 VDC orexternal potentiometerpositions (MTVor MTP)* | 0   | -    | 1   | 2   | 3   | 4   | 5   |
|---|---|------|---|---|---|---|---|
| Wires   |  | -    |  |  |  |  |  |
| <b>Regulated output [VAC]</b>                           |   |      |   |   |   |   |   |
| Voltages***   | 0   | 80** | 110   | 140   | 170   | 190   | 230   |
| <b>Unregulated output [VAC]</b>                         |   |      |   |   |   |   |   |
| L1  | 0   | 230  | 230   | 230   | 230   | 230   | 230   |

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

\*\* Available but not connected.

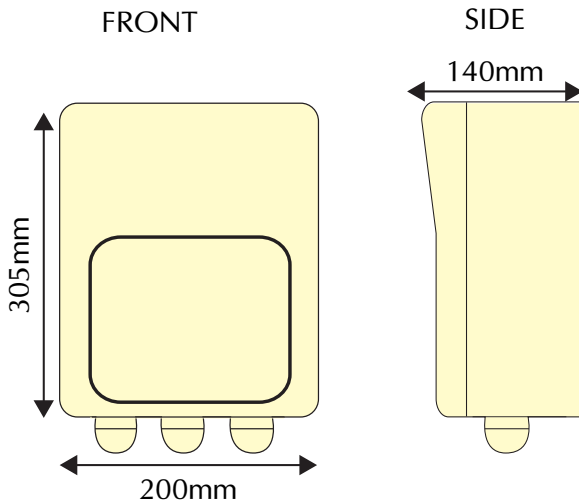
\*\*\* If more than 5 output voltages are available, it is possible to adjust the 5 steps by changing the internal wiring.

### 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 <sub>max</sub> 50 mA   |
| +V*   | Digital output 12 VDC / I <sub>max</sub> 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!

### DIMENSIONS



### SPEED CONTROLLER COMPONENTS

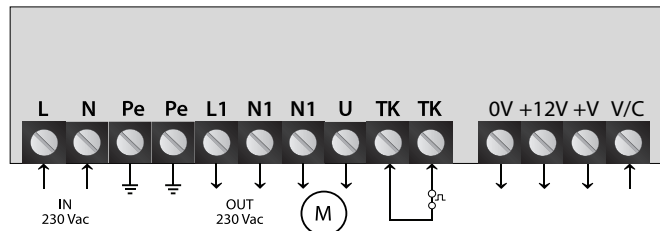
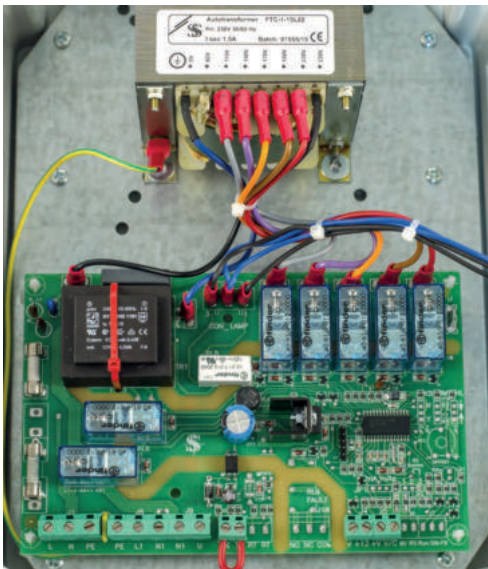


**SPEED CONTROLLER  
(FULLY ASSEMBLED)**



**4 x SCREWS AND WALL  
PLUGS FOR WALL MOUNTING**

### WIRING DIAGRAM



| Standards                            |    |
|--------------------------------------|----|
| · Low Voltage Directive 2014/35/EC   | CE |
| · EMC Directive 2014/30/EC: EN 61326 |    |
| · WEEE Directive 2012/19/EC          |    |
| · RoHs Directive 2011/65/EC          |    |

#### Mounting

The controllers are to be mounted on a smooth surface. Connect voltage supply, motor(s) and earth as shown in the scheme with cables of the proper diameter. On the mains side, a safety switch with recommend pre-fuses has to be installed.

#### Transport and Stock Keeping

Avoid shocks and extreme conditions, stock in original packaging.

#### Warranty

Two years from delivery date against defects in manufacturing. Any modifications or alterations to the product relieve the manufacturer of all responsibility. The manufacturer bears no responsibility for any misprints or mistakes in this data, and modifications or improvements to the product can be made at any time after date of publication.

#### Maintenance

In normal conditions the controllers are maintenance-free. If soiled clean with dry or dampish cloth. In case of heavy pollution clean with a non-aggressive product. In these circumstances the controller should be disconnected from the mains. Pay attention that no fluids enter the controller. Only reconnect the controller to the mains when it is completely dry.

#### Motor Protection

It is always recommended to install a proper motor protection device.

