

# STRS1

## 230 VAC transformer controller with TK



The STRS1 series of transformer fan speed controllers regulate the rotational speed of single-phase voltage controllable motors by varying the output voltage. They are equipped with auto-transformer(s), control the speed manually in five steps and feature TK monitoring for thermal motor protection. The used technology provides a regulated output voltage with a perfect sinusoidal shape. 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

- Wide power range: 1,5 A–20 A
- TK monitoring for thermal motor protection
- 5-step rotary switch for manual control plus off-position
- LED status indication

### Technical specifications








|                     |   |                            |
|---------------------|---|----------------------------|
| Supply voltage      | 230 VAC / 50–60 Hz  |                            |
| Maximum load        | depends on the version  |                            |
| Unregulated output  | 230 VAC, I <sub>max</sub> 2 A   |                            |
| 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]                |
|---------------|-------------------------|-------------------------|
| STRS1-15L22   | 1,5                     | (5*20 mm) F: T-2,5 A-H  |
| STRS1-22L22   | 2,2                     | (5*20 mm) F: T-3,15 A-H |
| STRS1-25L22   | 2,5                     | (5*20 mm) F: T-4,0 A-H  |
| STRS1-35L22   | 3,5                     | (5*20 mm) F: T-5,0 A-H  |
| STRS1-50L22   | 5,0                     | (5*20 mm) F: T-8,0 A-H  |
| STRS1-75L22   | 7,5                     | (5*20 mm) F: T-12,5 A-H |
| STRS1100L22   | 10,0                    | (6*32 mm) F: T-16,0 A-H |
| STRS1130L22   | 13,0                    | (6*32 mm) F: T-20,0 A-H |
| STRS1160L20   | 16,0                    | (6*32 mm) F: T-25,0 A-H |
| STRS1200L20   | 20,0                    | (6*32 mm) F: T-30,0 A-H |

\*The last 3 characters represent the voltage series. See table "Voltage series".

### Voltage

| Knob position            | 0   | -   | 1   | 2   | 3   | 4   | 5   |
|--------------------------|---|---|---|---|---|---|---|
| Wires                    |  |  |  |  |  |  |  |
| Regulated output [VAC]   |   |   |   |   |   |   |   |
| L20 version              | 0   | 80*   | 100   | 120   | 140   | 170   | 230   |
| L22 version**            | 0   | 80*   | 110   | 140   | 170   | 190   | 230   |
| Unregulated output [VAC] |   |   |   |   |   |   |   |
| L1                       | 0   | 230*  | 230   | 230   | 230   | 230   | 230   |

\* 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

| STRS1-15L22, STRS1-22L22 and STRS1-25L22   |  |
|--|--|
| Pe   | Earth terminal                             |
| L  | Power supply, line (230 VAC / 50–60 Hz)    |
| N  | Power supply, neutral                      |
| N1   | Unregulated output, neutral                |
| L1   | Unregulated output, line                   |
| U  | Regulated output to motor, line            |
| N  | Regulated output to motor, neutral         |
| TK   | TK monitoring for thermal motor protection |
| TK   |  |
| STRS1-35L22, STRS1-50L22, STRS1-75L22, STRS1100L22, STRS1130L22, STRS1160L20 and STRS1200L20 |  |
| L  | Power supply, line (230 VAC / 50–60 Hz)    |
| N  | Power supply, neutral                      |
| L1   | Unregulated output, line                   |
| N  | Regulated output to motor, neutral         |
| U  | Regulated output to motor, line            |
| TK   | TK monitoring for thermal motor protection |
| TK   |  |
| Pe   | Earth terminal                             |

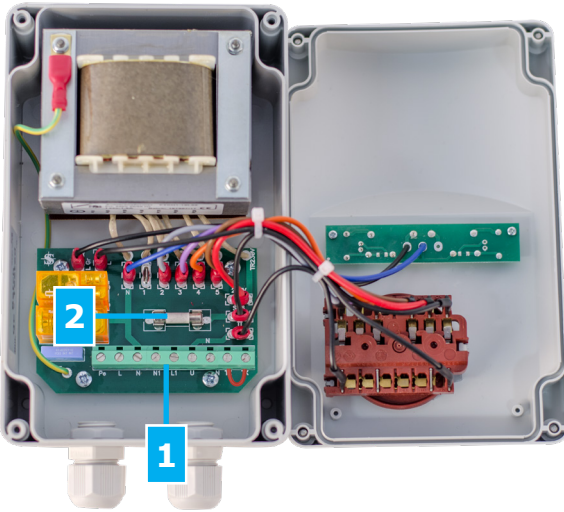
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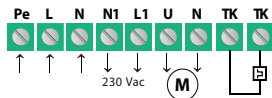


### Legend

STRS1-15L22, STRS1-22L22 and STRS1-25L2



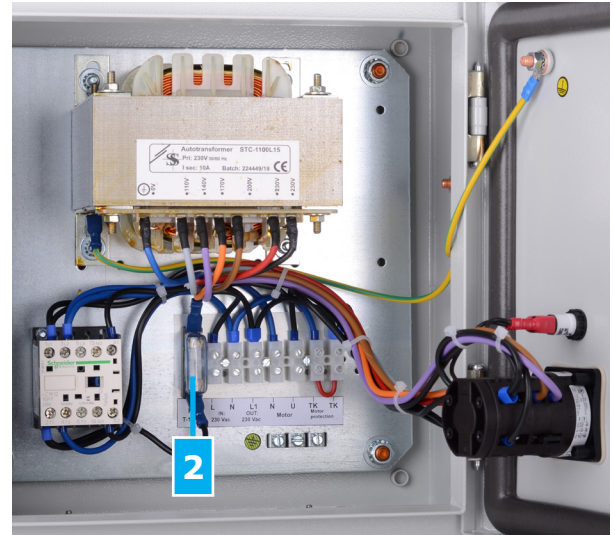
1 - Terminal block



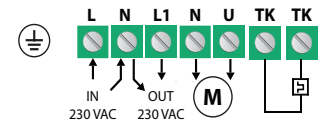
2 - Fuse

### Legend

STRS1100L22, STRS1130L22, STRS1160L20 and STRS1200L20



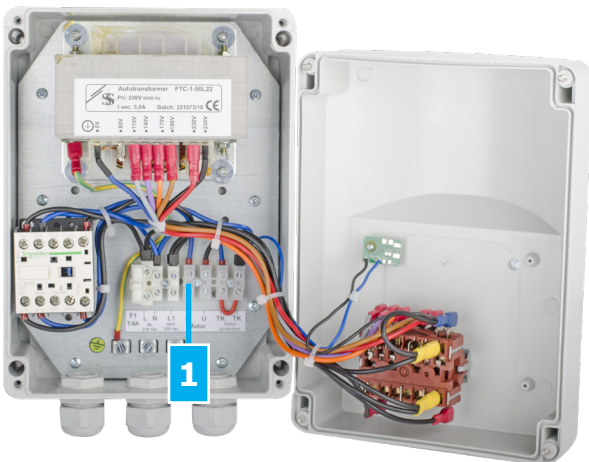
1 - Terminal block



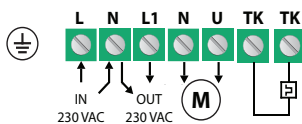
2 - Fuse

### Legend

STRS1-35L22, STRS1-50L22 and STRS1-75L22



1 - Terminal block



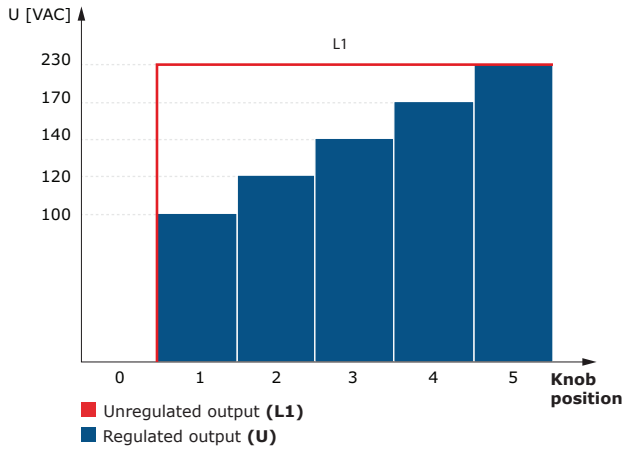
2 - Fuse

# STRS1

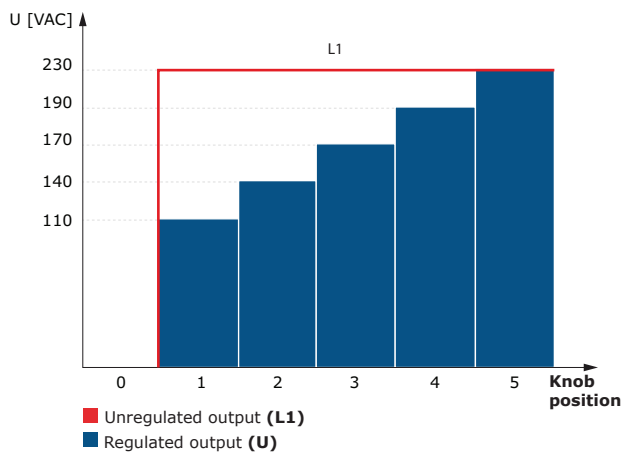
230 VAC transformer controller with TK



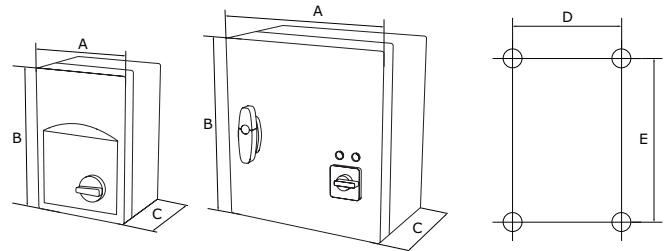
## Operational diagram - L20



## Operational diagram - L22

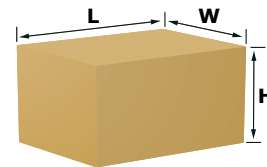


## Fixing and dimensions



| Article code | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | Enclosure                                       |
|--------------|--------|--------|--------|--------|--------|---|
| STRS1-15L22  | 115    | 205    | 100    | 98     | 140    | plastic (R-ABS, UL94-V0, grey RAL 7035)         |
| STRS1-22L22  | 115    | 205    | 100    | 98     | 140    |   |
| STRS1-25L22  | 170    | 255    | 140    | 155    | 194    |   |
| STRS1-35L22  | 170    | 255    | 140    | 155    | 194    |   |
| STRS1-50L22  | 170    | 255    | 140    | 155    | 194    |   |
| STRS1-75L22  | 200    | 305    | 140    | 183    | 236    |   |
| STRS1100L22  | 300    | 325    | 185    | 255    | 255    | sheet steel (RAL7035, polyester powder coating) |
| STRS1130L22  | 300    | 325    | 185    | 255    | 255    |   |
| STRS1160L20  | 300    | 425    | 235    | 255    | 355    |   |
| STRS1200L20  | 300    | 430    | 235    | 255    | 355    |   |

## Packaging



| Article code | Packaging    | Length [mm] | Width [mm] | Height [mm] | Net weight [kg] | Gross weight [kg] |
|--------------|--------------|-------------|------------|-------------|-----------------|-------------------|
| STRS1-15L22  | Unit (1 pc.) | 205         | 125        | 105         | 2,11            | 2,21              |
| STRS1-22L22  | Unit (1 pc.) | 205         | 125        | 105         | 2,13            | 2,23              |
| STRS1-25L22  | Unit (1 pc.) | 260         | 170        | 140         | 3,56            | 3,76              |
| STRS1-35L22  | Unit (1 pc.) | 260         | 170        | 140         | 4,66            | 4,86              |
| STRS1-50L22  | Unit (1 pc.) | 260         | 170        | 140         | 5,31            | 5,51              |
| STRS1-75L22  | Unit (1 pc.) | 315         | 200        | 145         | 7,90            | 8,18              |
| STRS1100L22  | Unit (1 pc.) | 330         | 300        | 190         | 12,54           | 12,97             |
| STRS1130L22  | Unit (1 pc.) | 330         | 300        | 190         | 15,08           | 15,51             |
| STRS1160L20  | Unit (1 pc.) | 430         | 310        | 255         | 19,90           | 20,46             |
| STRS1200L20  | Unit (1 pc.) | 430         | 310        | 255         | 21,50           | 22,06             |

## Standards

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



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### Global trade item numbers (GTIN)

| Article            | Unit           |
|--------------------|----------------|
| <b>STRS1-15L22</b> | 05401003016015 |
| <b>STRS1-22L22</b> | 05401003016022 |
| <b>STRS1-25L22</b> | 05401003016039 |
| <b>STRS1-35L22</b> | 05401003016046 |
| <b>STRS1-50L22</b> | 05401003016053 |
| <b>STRS1-75L22</b> | 05401003016060 |
| <b>STRS1100L22</b> | 05401003016077 |
| <b>STRS1130L22</b> | 05401003016084 |
| <b>STRS1160L20</b> | 05401003016091 |
| <b>STRS1200L20</b> | 05401003016107 |