

# STRA1

## 230 VAC transformer controller with TK and start / stop



The STRA1 series of transformer fan speed controllers regulate the rotational speed single-phase voltage controllable motors by varying the output voltage. They are equipped with auto-transformer(s) and control the speed manually in five steps. They feature TK monitoring for thermal motor protection, contacts for remote start / stop and a 230 VAC alarm output. 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
- 5-step rotary switch for manual control plus off-position
- TK monitoring for thermal motor protection
- Auto restart after power failure
- 230 VAC alarm output
- LED status indication
- 2 start / stop contacts for remote ON / OFF switching

### Technical specifications

<b>Supply voltage</b>	230 VAC / 50–60 Hz	
<b>Max. motor current</b>	20 A	
<b>Maximum load</b>	1,5 A–20 A, depending on the version	
<b>Unregulated output</b>	230 VAC	
<b>Enclosure</b>	plastic (R-ABS, UL94-V0, grey RAL 7035) or sheet steel (RAL 7035, polyester powder coating), depending on the product version	
<b>Protection standard</b>	IP54 (according to EN 60529)	
<b>Ambient conditions</b>	Temperature	-20–35 °C
	Rel. humidity	5–95 % rH (non-condensing)









### Article codes

Article code*	Rated max. current, [A]	Fuse [A]
STRA1-15L22	1,5	(5*20 mm) T-2,5 A-H
STRA1-25L22	2,5	(5*20 mm) T-4,0 A-H
STRA1-35L22	3,5	(5*20 mm) T-5,0 A-H
STRA1-50L22	5,0	(5*20 mm) T-8,0 A-H
STRA1-75L22	7,5	(5*20 mm) T-12,5 A-H
STRA1100L22	10,0	(6*32 mm) T-16,0 A-H
STRA1130L22	13,0	(6*32 mm) T-20,0 A-H
STRA1160L20	16,0	(6*32 mm) T-25,0 A-H
STRA1200L20	20,0	(6*32 mm) T-30,0 A-H

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

### Voltage series

Knob position	0	-	1	2	3	4	5
<b>Wires</b>		-					
<b>Regulated output [VAC]</b>							
<b>L20 version**</b>	0	80*	100	120	140	170	230
<b>L22 version**</b>	0	80*	110	140	170	190	230
<b>Unregulated output [VAC]</b>							
<b>All voltage series, L1</b>	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

<b>Pe</b>	Earth terminals
<b>L</b>	Power supply, line (230 VAC / 50–60 Hz)
<b>N</b>	Power supply, neutral
<b>L1</b>	Unregulated output, line
<b>N</b>	Regulated output to motor, neutral
<b>M / U</b>	Regulated output to motor, line
<b>CC</b>	Input - normally closed contact for remote ON / OFF switching
<b>CC</b>	
<b>OC</b>	Input - normally open contact for remote ON / OFF switching
<b>OC</b>	
<b>TK</b>	Input - TK monitoring for thermal motor protection
<b>TK</b>	
<b>N</b>	Alarm output (230 VAC / 1 A)
<b>AL</b>	

### Standards

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



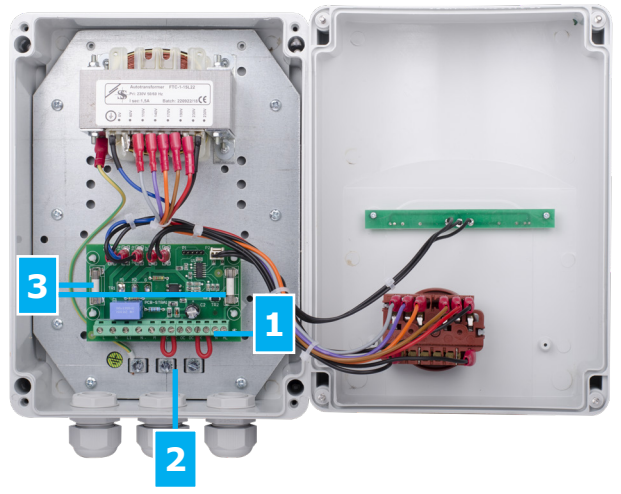
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230 VAC transformer controller with TK and start / stop



### Legend

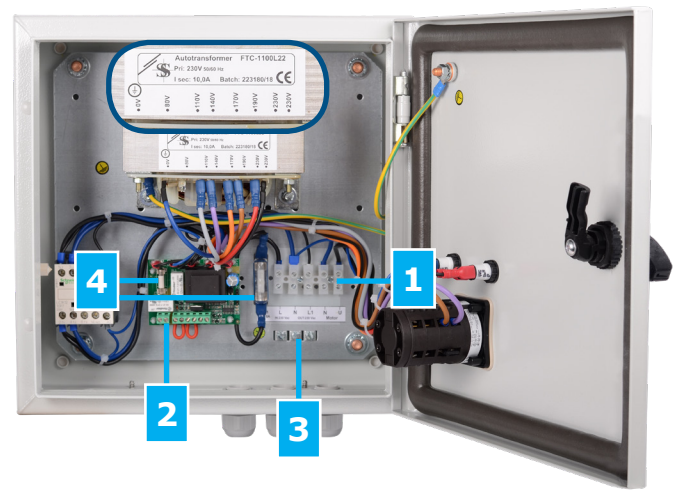
STRA1-15L22, STRA1-25L22, STRA1-35L22, STRA1-50L22, STRA1-75L22



1 - Terminal block	
2 - Earth terminals	
3 - Fuse	

### Legend

STRA1100L22, STRA1130L22, STRA1160L20, STRA1200L20



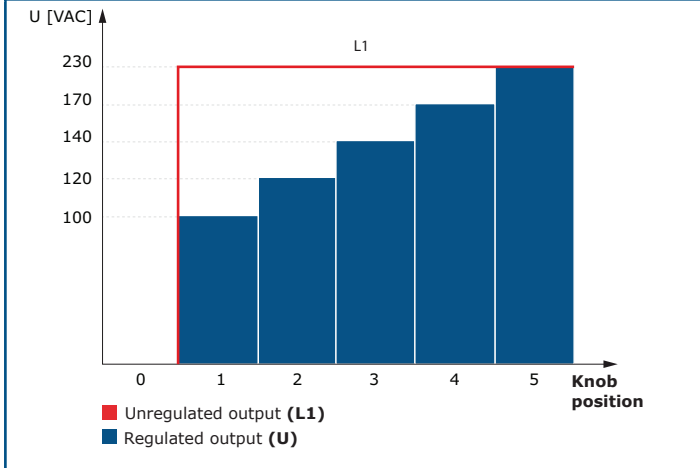
1 - Power terminal block	
2 - Control terminal block	
3 - Earth terminals	
4 - Fuse	

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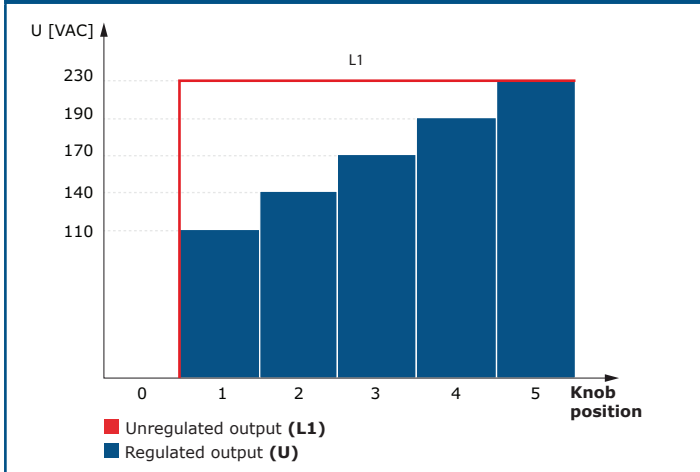
230 VAC transformer controller with TK and start / stop



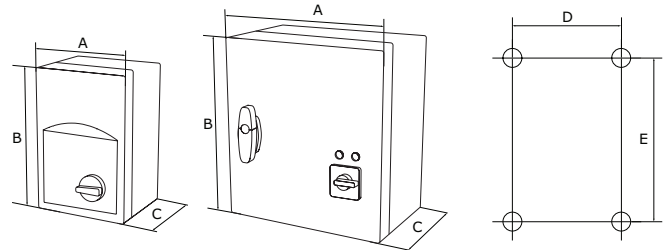
**Operational diagram - L20**



**Operational diagram - L22**

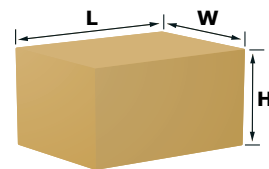


**Fixing and dimensions**



Article code	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Enclosure
STRA1-15L22	170	255	140	155	194	plastic (R-ABS, UL94-V0, grey RAL 7035)
STRA1-25L22	170	255	140	155	194	
STRA1-35L22	170	255	140	155	194	
STRA1-50L22	170	255	140	155	194	
STRA1-75L22	200	305	155	183	236	sheet steel (RAL7035, polyester powder coating)
STRA1100L22	300	325	185	255	255	
STRA1130L22	300	325	185	255	255	
STRA1160L20	300	425	235	255	355	
STRA1200L20	300	430	235	255	355	

**Packaging**



Article code	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight [kg]	Gross weight [kg]
STRA1-15L22	Unit (1 pc.)	270	180	150	3,2	3,5
STRA1-25L22	Unit (1 pc.)	270	180	150	3,7	4,0
STRA1-35L22	Unit (1 pc.)	270	180	150	4,6	4,9
STRA1-50L22	Unit (1 pc.)	270	180	150	5,6	5,9
STRA1-75L22	Unit (1 pc.)	325	210	155	8,0	8,7
STRA1100L22	Unit (1 pc.)	340	310	200	14,3	14,6
STRA1130L22	Unit (1 pc.)	340	310	200	16,6	17,0
STRA1160L20	Unit (1 pc.)	440	310	250	20,0	20,5
STRA1200L20	Unit (1 pc.)	440	310	250	24,3	24,8