

## 230 V~ Actuator Control WST 2e / WST 4e / WST 8e

### Installation and Operation Instructions - Version 2/22

**Work may be performed only by qualified personnel!**

**Please read these instructions carefully.**

**Before starting any work, it is mandatory to deflect static charge.**

We do not assume any guarantee or liability for defects caused by faulty connection.

### 1 Intended use, concept

- Control for integration of 24 V- actuators in 230 V~ systems
- The actuators can be operated by ventilation buttons  $\Delta$  /  $\nabla$
- Internal indicators  $\Delta$  and  $\nabla$
- The use of K + G / Grasl actuators is recommended. For third-party actuators, the compatibility is to be checked.
- Plastic enclosure, light grey (RAL 7035)

⚠ *Controls of the type WST 2, WST 4 and WST 8 can be combined. The number of possible controls in one group is limited by the contact load rating of the used control components (ventilation buttons, wind and rain control, option AP). A corresponding fuse protection must be provided on site.*

#### 1.1 Options

- **PK-SA:** Potential-free contacts for forwarding indication of position  $\nearrow$  /  $\searrow$  /  $\dashrightarrow$   
 ⓘ *For using this option, actuators with additional limit switches (NC contacts) or external limit switches are required.*
- **AP:** Simplified connection of the mains supply cable, ventilation buttons and Wind and Rain Control directly in the control unit (without external junction box)  
 ⓘ *Option AP may only be installed in one control of a WST group*
- ⓘ *The options PK-SA and AP cannot be equipped simultaneously in one control!*

### 2 Installation / putting into and out of service / notes

- ⚠ *Perform work only in deenergised condition!*
- ⚠ *Actuators must not be controlled directly (e.g. with external accumulators for installation / maintenance) if they are already connected. This can lead to defects in the power output.*
- Fasten the enclosure securely using suitable mounting material, pass the connection cables through the openings provided and wire them according to the enclosed connection diagrams. Close the enclosure.
- After the mains supply is turned on, WST is ready for operation.  
 ⓘ *The control works only when travel commands are active.*
- The indicator  $\Delta$  /  $\nabla$ 
  - lights up: travel command is active.
  - blinks: an overload cut-off has responded.
  - flashes: the output has been switched off after 4 minutes.
- Switch off the mains voltage for putting out of service.
- ⓘ *If the output is overloaded, it is only possible to move in the same direction again after a change of direction.*
- ⓘ *If both directions off travel are activated at the same time, the actuators are retracted.*

## 3 Technical data

Type	<b>WST 2e</b>	<b>WST 4e</b>	<b>WST 8e</b>
Part number	8162 4502 0000	8162 4504 0000	8162 8508 0000
Mains power supply	230 V~ / 50 - 60 Hz	230 V~ / 50 - 60 Hz	230 V~ / 50 - 60 Hz
Current input	0,45 A / 230 V~	0,85 A / 230 V~	1,05 A / 230 V~
Inrush current	ca. 2 A / 5 ms	ca. 4,8 A / 8 ms	ca. 4 A / 4 ms
Nominal voltage of the actuator output	24 V $\overline{=}$ (+4 V / -3 V)	24 V $\overline{=}$ (+1 V / -2 V)	24 V $\overline{=}$ (+1 V / -2 V)
Ripple	< 150 mVpp	< 240 mVpp	< 240 mVpp
Output current	2 A (24 V $\overline{=}$ / 48 W)	4 A (24 V $\overline{=}$ / 96 W)	8 A (24 V $\overline{=}$ / 192 W)
Dimensions in mm (B x H x T)	200 x 150 x 80	248 x 198 x 96	
Mounting dimensions in mm	150 x 100	200 x 150	
Cable entry from all sides through stepped nipples (Ø 28 mm)	2 x 3 pieces (top / bottom) 2 x 2 pieces (right / left)	2 x 3 pieces (top / bottom)  2 x 3 pieces (right / left)	
Operating temperature	-5 °C ... +60 °C		
Max. constant ambient temperature	+50 °C		
Relative humidity	20 % ... 80 %, non-condensing		
Enclosure protection rating	IP43		
Duty cycle / power-on time:			
230 V~ input	S1		
24 V- output	S3 30 % <sup>1</sup>		
The output is automatically switched off after 4 minutes.			
Maximum cable-cross section	2,5 mm <sup>2</sup>		
Ventilation buttons <b>LT</b>	unlimited		
Wind and Rain Control (WRC)	Changeover contact <sup>2</sup>		

Permissible cable length between Control and actuator at 1 V voltage drop (simple, not widely branched arrangement). Depending on the operating voltage range of the actuators, a higher voltage drop may be permissible.

Current	1.0 A	2.0 A	3.0 A	4.0 A	5.0 A	6.0 A	7.0 A	8.0 A
Cross-section								
2 x 0.75 mm <sup>2</sup>	22 m	11 m	7 m	5 m	4 m	4 m	3 m	3 m
2 x 1.50 mm <sup>2</sup>	44 m	22 m	15 m	11 m	9 m	7 m	6 m	5 m
2 x 2.50 mm <sup>2</sup>	73 m	36 m	24 m	18 m	15 m	12 m	10 m	9 m

The requirements of Directives 2014/35/EU and 2014/30/EU are met. **CE**  
 Suitable for operation in residential, business and commercial areas.

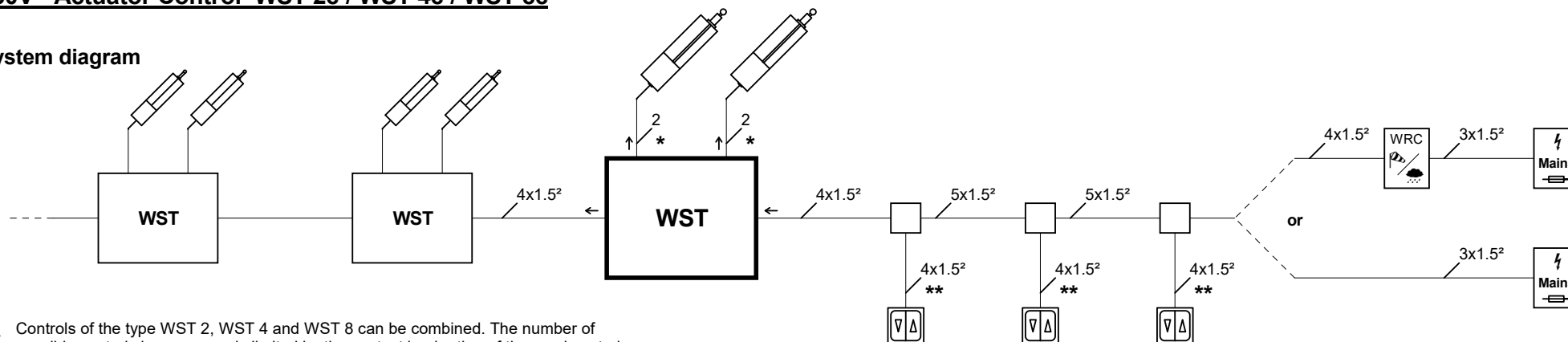
<sup>1</sup> Up to an ambient temperature of 50 °C. Up to 60 °C the duty cycle decreases linearly to S3 10 %.

S1 = Continuous operation, S3 = Operation with specified power-on time related to 10 min.

<sup>2</sup> In the WRC, a separate contact is required for each WST group to be controlled.

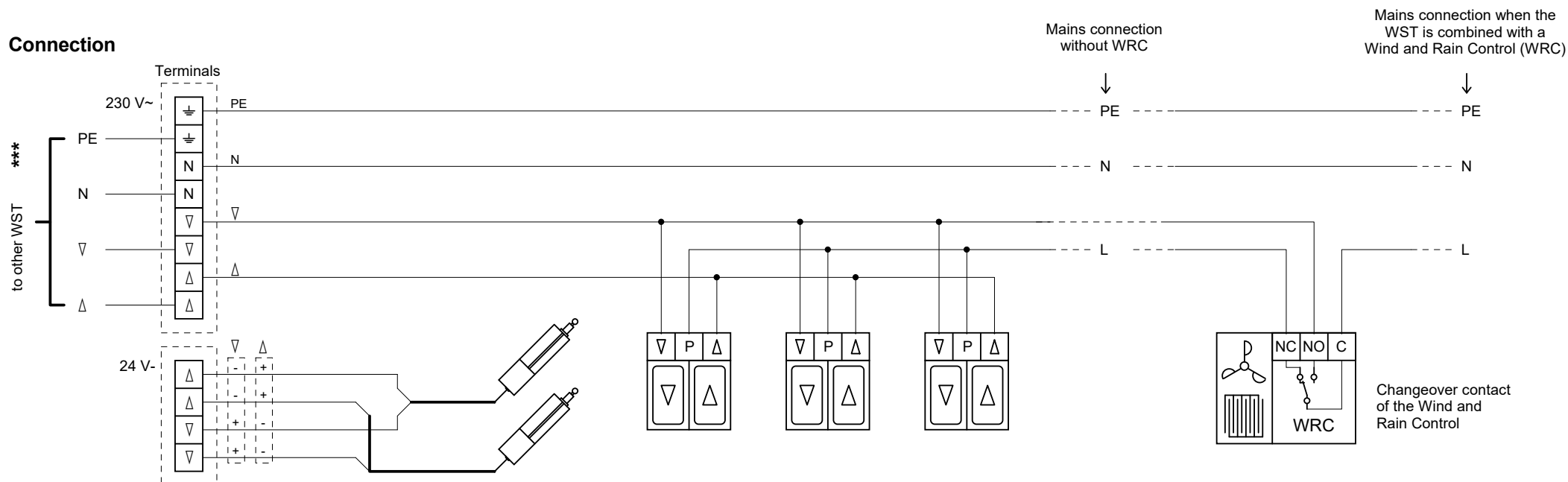
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### System diagram



Controls of the type WST 2, WST 4 and WST 8 can be combined. The number of possible controls in one group is limited by the contact load rating of the used control components (ventilation buttons, wind and rain control, option AP). A corresponding fuse protection must be provided on site.

### Connection



\* For permissible cable length, see section "Technical Data".  
Max. 2.5 mm² can be clamped.

\*\* PE not used.

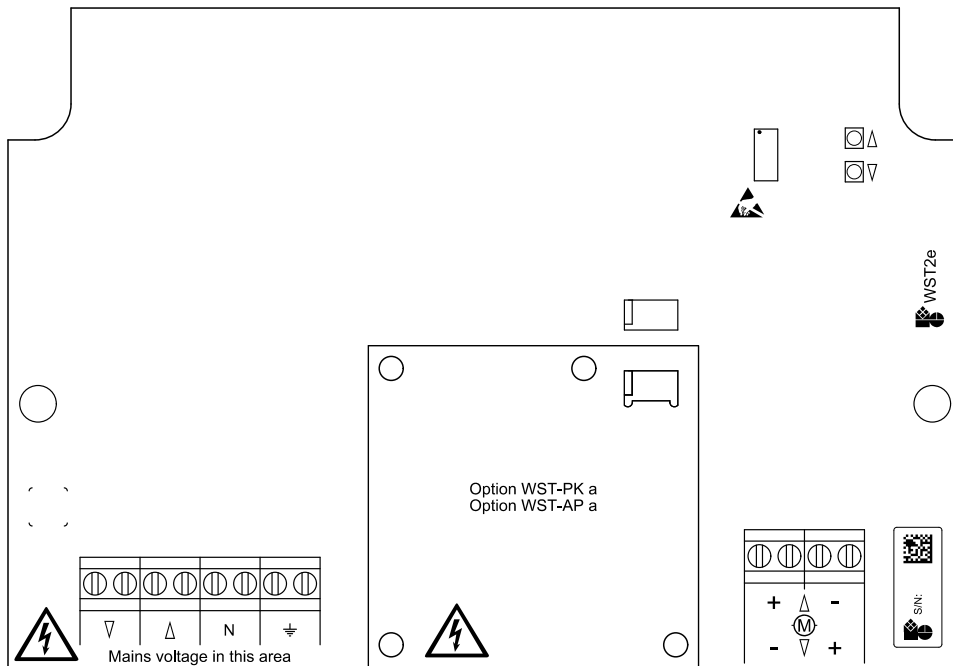
\*\*\* All 230 V~ clamps are duplicated. They are used for the parallel connection of several WST controls and are connected to terminals with the same name. The WST controls of one group are actuated by the same ventilation button.

General: length of cable max. 400 m, if not specified otherwise.

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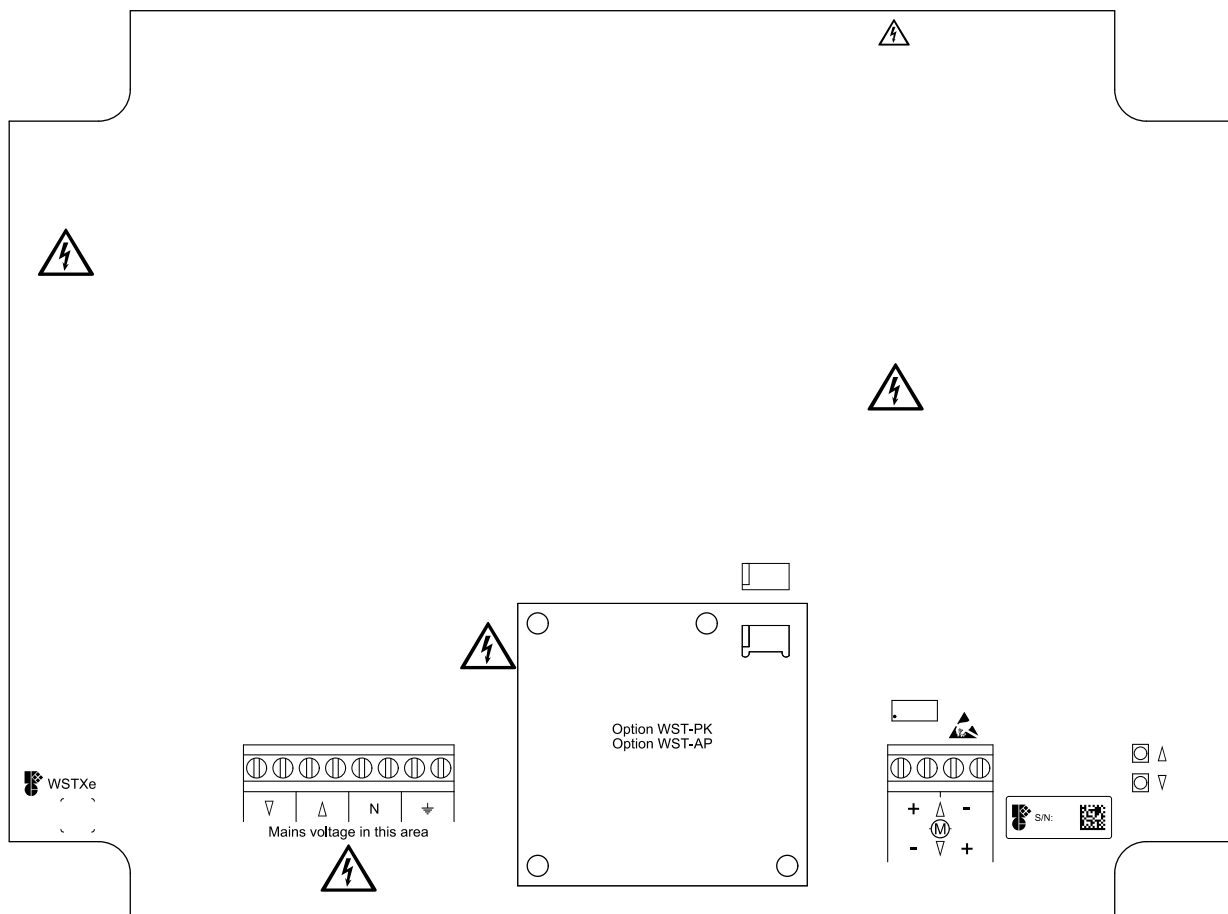


## WST 2e

### Layout diagram

WST2eA11.pdf

Ver. 1/20 JK 19 Mar. 2020



## WST 4e / WST 8e

### Layout diagram

WSTXe-A1-1.pdf

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