

VISS3, control voltage interface



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VISS3, *VoltageInterfaceSinkSource3steps*, is an interface for devices with control input for voltage 0 - 10VDC. By 3 digital inputs, which are connected to digital outputs on the main control computer, the control voltage for the controlled device can be regulated in 3 steps. VISS3 is equipped with components that enable regulation for both sink and source.

The three steps are adjustable by a knob and a switch. Visualization of the set control voltage takes place via a simple display.

VISS3 has a built-in regulator with input from the controlled object, which ensures that the control voltage always is kept according to the setting. This compensates for load in the control network during parallel control of many units.

Change in output occurs with soft ramping up and down. The ramp speed is by default 200 seconds from 20 to 100%, but can be adapted to the controlled object when commissioning VISS3.

VISS3 is mounted in a sheet metal housing. The control current must be limited to a maximum of 1A to be on the safe side when it comes to heat generation.

Example: Typically, a lighting luminaire (source) draws 1 - 2 mA / pc, which means that VISS3 (sink) can control 1,000 - 500 luminaires simultaneously. However, of course, voltage drops in long lines and disturbance sensitivity must always be taken into account. VISS3 itself can actually handle up to 5,000 luminaires, but then you can have problems with the cooling.

Examples of application:

A cucumber grower wants to change the brightness of LED lighting that has an analog input for voltage. The brightness is controlled between 0 - 10V where 0 is off (0%) and 10 is 100%. Control takes place via the greenhouse computer LCC4, which has digital lighting outputs that can step in 3 steps for each luminaire group. The brightness in VISS3 is set for each step, eg 30, 60 and 100%. The step outputs from LCC4 are connected to VISS3's digital inputs and now the lighting can be varied gently up and down depending on, for example, light coming from outside (sun) or plant physiology due to brightness.

Brief function and layout description:

There are 8 connection terminals in the lower, right corner. They have the following function from left to right:

- 1 Control signal out -
- 2 Control signal out + (0) 2..10V
- 3 Voltage supply 0VDC
- 4 Voltage supply + 12VDC
- 5 -C, common to control computer, minus
- 6 Step 1 from control computer
- 7 Step 2 from the control computer
- 8 Step 3 from the control computer

The inputs from the control computer are potential-free and galvanic separated by opt couplers. Detection range +12 - + 24V. The steps must be activated in sequence 1-2-3 and the previous step must remain activated when the next step is activated. A relay completely breaks the control voltage if no step is activated.

Example:

Step 1 activated. Control voltage according to setting for step 1.

Steps 1 and 2 activated. Control voltage according to setting for step 2.

Steps 1, 2 and 3 activated. Control voltage according to setting for step 3.

Steps 2 and 3 activated. Control voltage 0 (incorrect sequence).

Steps 1 and 3 activated. Control voltage according to setting for step 1. Step 2 is neglected.

Settings

Procedure: There is a *rotary switch*, A, with 4 steps: Out, Step 1, Step 2, Step 3. There is also a stepless *knob*, B, to the right of the switch. Here you set the desired control voltage for each step. Under the switch is an *Enter button*, C. This confirms the entered value to VISS3.

Normal position on switch A is *Out*, which means that the control voltage of the controlled object, e.g. lighting fixtures, corresponds to the display and input from the control computer.

How to perform a setting?

1. Turn switch A to step 1.
2. Turn knob B to the brightness, in% of full brightness, desired for step 1. The setting is shown in the display. The range for setting is 20 - 100%.
3. When the correct value appears in the display, press the Enter key C. Then - C - (copy) appears in the display as a confirmation that the entry is ready for this step.
4. Then turn the switch to the next step and repeat the procedure.
5. When all settings are complete, turn switch A to *Out*.

What happens if I set the value of Step 1 higher than Step 2? There is a latch that prevents the next step from having a lower value than the previous one. If you still try to do this, the input is blocked and the step stays at the value in the previous step +2.

Beställningsnummer

9318100 VISS3 in steel cabinet 300 x 300 x 150 mm