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VECTOR 1
AUTOMATION, ELECTRONICS

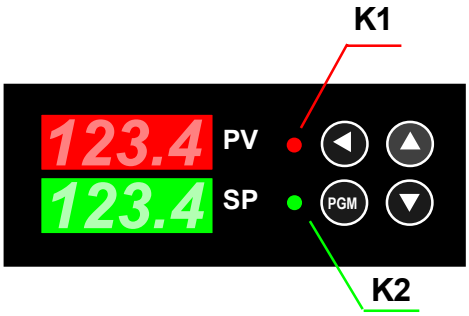
Digital controllers VECON 10

VECON 10 is a digital controller for measurement and control of variety of technological variables such as temperature, relative humidity, pressure, etc.

TECHNICAL DATA:

measurement input:	Pt100; thermocouples J, K, S; sensor for relative humidity; (4 ... 20) mA
outputs:	a) 1 or2 relays 250 V AC / 4 A b) 1 or 2 transistors c) current signal (4 ... 20) mA
control algorithm:	ON / OFF ON / OFF with alarm contact 3 - positional PD PID (optional)
accuracy:	0,25% from span
hysteresis:	programmable 0,2 ... 5 °C
data backup:	EEPROM
temperature compensation (for TC):	automatic
measurement circuit monitoring:	for probe break and short- circuit
electrical connection:	screw terminals2,5 mm-
power supply:	220 V AC ; 24 V AC
consumption:	Max. 3 VA
operating conditions: a) temperature: b) operating humidity:	 0 to +45 °C 0 to 80% (25 °C)
mounting:	on panel - horizontal or vertical
protection:	front panel - IP 54, rear - IP 20
dimensions:	96 x 48 x 135 mm depth 130 mm
panel cutout:	92 x 44 mm

FRONT PANEL:



The keyboard has 4 buttons with following functions:

PGM - select mode

◀ - select next parameter

▲ - increase parameter value

▼ - decrease parameter value

The display consists of 2 rows of 7-segment LED-indicators.

First row (red) indicators is for measurement value (PV), the second (green) is for set point value (SP).

Red and green LEDs indicated the output relays condition (for K1 and K2).

PARAMETERS:

There are following parameters for input:

a) by ON / OFF control algorithm
SP - set point value
Hd - hysteresis

b) by ON / OFF control algorithm with alarm contact
SP - set point value
Hd - hysteresis
AL - alarm value

c) by 3-positional control algorithm
SP - set point value
Hd - hysteresis
dL - deviation limit

d) by PD control algorithm
SP - set point value
d - derivative time

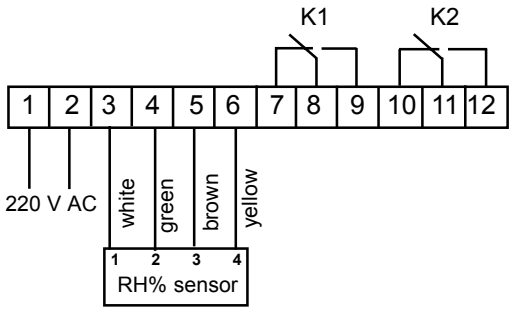
DIAGNOSTICS:

The measuring input is monitoring for *probe break* or *short - circuit* errors.

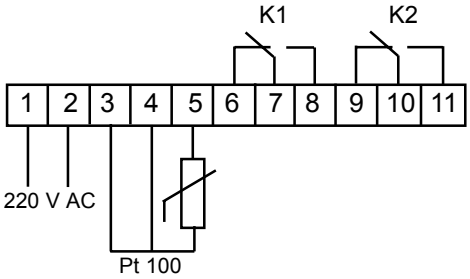
The following error messages are displayed:
Err1 - *short circuit* in measuring input
Err2 - *probe break* (no signal) in measuring input

CONNECTION DIAGRAMS:

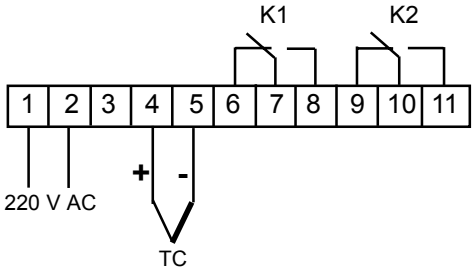
a) for sensor for relative humidity RH%



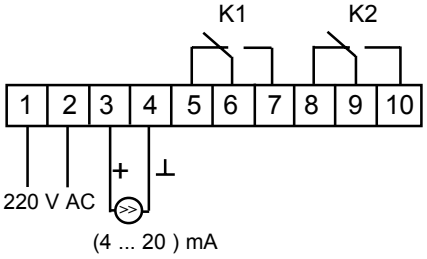
b) for Pt 100 sensor



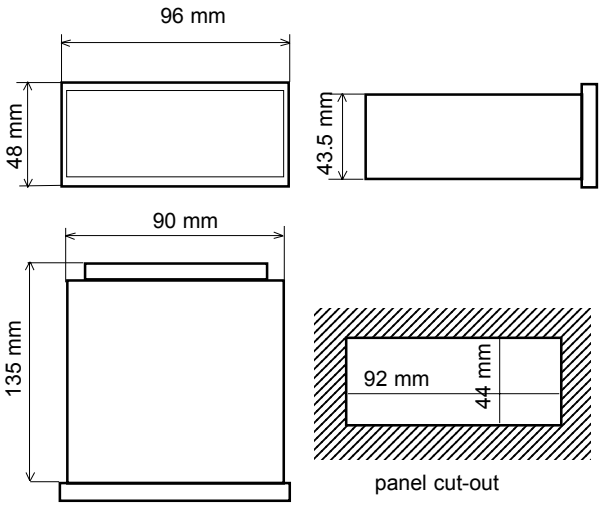
c) for thermocouple



d) for sensor with current signal (4 ... 20) mA



DIMENSIONS:



ORDERING CODE:

VECON 10 / XX - X - X - X - X (1) (2) (3) (4) (5)	
(1) Inputs and ranges:	
Pt 100 -50 ... +50 °C	11
Pt 100 0 ... +100 °C	12
Pt 100 0 ... +200 °C	13
Pt 100 0 ... +400 °C	14
Fe-CuNi **J** 0 ... +800 °C	21
NiCr-Ni **K** 0 ... +1200 °C	22
PtRh-Pt **S** 0 ... +1600 °C	23
relative humidity probe 0 ... 100 %	31
current signal (4 ... 20) mA	41
(2) Control algorithm:	
ON / OFF	1
ON / OFF with alarm contact	2
3 - positional	3
PD	4
PID (option)	5
(3) Output:	
relay 220 V AC/ 4 A	1
transistor open collector	2
current signal (4 ... 20) mA	3
(4) Interface RS 485:	
not installed	1
installed (option)	2
(5) Mounting:	
horizontal	1
vertical	2

Example:

VECON10 / 12-1-1-1-1
ON / OFF regulator for Pt 100 sensor,
range 0 ... 100 °C,
1 relay output,
without RS485,
horizontal mounting