Controller Instrument
Kontrol 100 SERIES





Kontrol 100

The Kontrol 100-series are advanced controllers designed for high-end applications.
The units feature and independent proportional control output, probe quality checking and a variety of outputs.
The user has full programming authority.

TECHNICAL CHARACTERISTICS

Graphic display and Keypad
128 by 128 pixel resolution monochrome display with graphic icons to show digital output status, washing cycle, alarms with red backlight.
Simultaneous flashing values for the measurement (numeric + paragraph) and temperature readings.
Five control keys for instrument calibration and configuration.

Enclosure Box and Power Supply
Wall mounting ABS plastic material IP65 Full box (144x144x122 mm)
Panel mounting ABS IP65 Front panel only (96x96x42 mm)
Universal Power Supply 100÷240 Vac 50/60 Hz
Low Power Supply 12÷32 Vdc or 24 Vac

Current Outputs
4÷20mA output
Two independent programmable Output Measures with Proportional routine regulation.

PID regulation
K100 series controller provides a PID regulation mainly used in a wide range of applications for industrial process control.

Relay Outputs
Two independent relays, two set points, alarm remote and back washing probe setting by software.
On/Off, Timed and Proportional (PWM) routine function setting.

Solid State Relay (SSR)
Two Frequency output signal, two set points.

Snail Lock fixing system
Quick connection for panel mounting version.

Communication Features
Serial Output RS485 MODBUS RTU/ASCII (upon request)

APPLICATIONS

- Waste water
- Diary
- CIP
- Fish farming
- Drinking water
- Cooling towers
- Boilers
- Reverse osmosis
- Galvanic process
- Irrigation

Technical data can be changed without notice.
Kontrol-100-Series_R3

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PRODUCTS KEY

K	**Kontrol**						
	100	**Series**					
		PR	pH/ORP Probe				
		FX	Flow Probe				
		CD	Electric Conducibility (Conductivity) Probe				
		ID	Electric-Conducibility (Inductive) Probe				
		MP	**M**odular **P**arameter …CL/PAA/BR/H2O2/O3/ …Custom unit				
			P	Box Type 96x96			
			W	Box Type 144x144			
				M	100-240 Vac		
				N	12-32 Vdc, 24 Vac		
					0	None (Optional)	
					A	RS485 MODBUS	
						000	Free
K	**100**	**PR**	**P**	**M**	**0**	**000**	

MEASURE RANGE

Measure	Description	Accuracy
pH	0 ÷ 14,00 pH	± 0,01 pH
ORP	± 2.000 mV	± 1 mV
Conductivity	0,054 ÷ 200.000 µS	± 2 %
Flow Rate	0 ÷ 99.999 Liters/Sec	± 0, 5 Hz
Chlorine	0 ÷ 200 ppm	± 0,01 ppm
PAA	0 ÷ 99.000 ppm	± 0,01 ppm
H2O2	0 ÷ 99.000 ppm	± 0,01 ppm
Ozone	0 ÷ 99.000 ppm	± 0,01 ppm
Bromine	0 ÷ 10 ppm	± 0,01 ppm
Turbidity	0 ÷ 4.000 NTU	± 2 %
Oxygen	0 ÷ 20 ppm	± 2 %
Temperature	-50 ÷ 100 °C (-32÷212 °F ±1,8°F)	± 0,2 °C

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TECHNICAL SPECIFICATIONS FOR THE pH MEASURE

Measure Range	0.00 ÷ 14.00 pH
Resolution	± 0.01 pH
Accuracy	0.01 pH

TECHNICAL SPECIFICATIONS FOR THE ORP MEASURE

Measure Range	± 2.000 mV
Resolution	± 1 mV
Accuracy	± 1 mV

TECHNICAL SPECIFICATIONS FOR THE FLOWRATE MEASURE

Sensor	Hall, Reed or Push-Pull Sensor
Measure Range	0,5 Hz at 1.500 Hz
Accuracy	± 0.5 Hz

TECHNICAL SPECIFICATIONS FOR THE mA MEASURE

Sensor	Current Sensor with 2 or 3 wires
Measure Range	0-20 mA or 4-20 mA
Resolution	±1 µA
Accuracy	± 0,01 ppm

TECHNICAL SPECIFICATIONS FOR THE CONDUCTIVITY MEASURE

Probes	Range
Range with C 0.01 cm-1 / K 100 sensor	0.005 µS/cm to 200 µS/cm (5 KΩ x cm to 200 MΩ x cm)
Range with C 0.10 cm-1 / K 10 sensor	0.05 µS/cm to 2 mS/cm (500 Ω x cm to 20 MΩ x cm)
Range with C 0.20 cm-1 / K 5 sensor	0.1 µS/cm to 4 mS/cm (250 Ω x cm to 10 MΩ x cm)
Range with C 1.00 cm-1 / K 1 sensor	0.5 µS/cm to 20 mS/cm (50 Ω x cm to 2 MΩ x cm)
Range with C 10.0 cm-1 / K 0.1 sensor	5 µS/cm to 200 mS/cm (5 Ω x cm to 200 KΩ x cm)
Range with C 20.0 cm-1 / K 0.05 sensor	10 µS/cm to 400 mS/cm (2,5 Ω x cm to 100 KΩ x cm)
Resolution Cond/Res	0.0001 / 0.001 / 0.01 / 0.1 / 1 (adjustable from menu)
Accuracy Cond/Res	± 2% on the measuring point
Maximum distance of the sensor	up to 50 m (up to 164 ft)
TDS Range	0.3 to 2.0 ppm/µS

TECHNICAL SPECIFICATIONS FOR THE TEMPERATURE MEASURE

Sensor	PT100/PT1000
Measure Range	-50 ÷ 150°C
Resolution	± 0.1 °C (°F)
Accuracy	PT100: ±0.5°C (±0.9°F) – PT1000: ±0.2°C (±0.4°F)

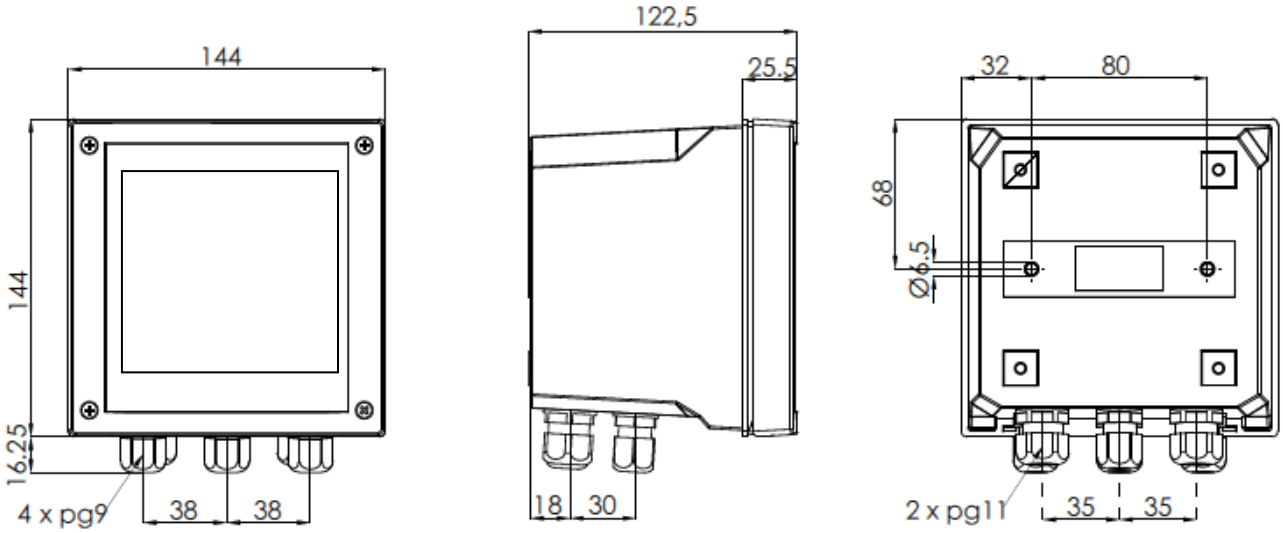
Technical data can be changed without notice.

OPERATING SPECIFICATIONS

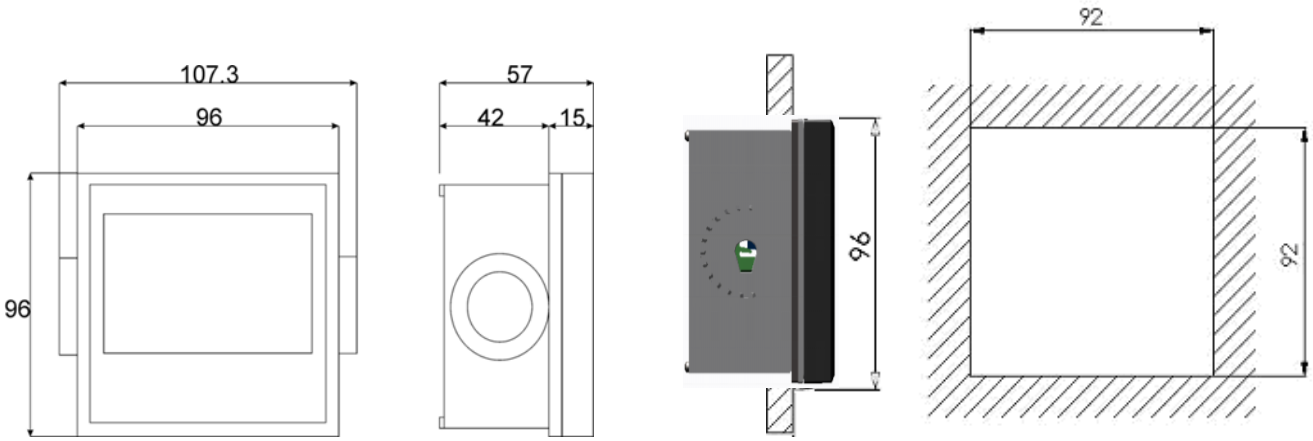
Power Supply	100÷240 Vac 50-60 Hz or 12÷32 Vdc / 24Vac
Power Consumption	< 5VA (@100÷240Vac) and <3.5W (@12÷32Vdc / 24 Vac
Relay Outputs:	mechanical 250 VAC/5A, 30 VCC/3 A
Alarms:	
Function	Delay, Faults and Min/Max
Delay time	1÷3600sec
Threshold disabling	Enable / Disable
Relay function	Closed / Open
Permanence Interval	0.00 ÷ 14.00pH / -2000 ÷ +2000 mV
Permanence Time	1÷3600sec For Alarm and Wash it is used the relay N. 2 with normally open contact, with maximum switching current of 5 Ampere at 230Vac. Maximum switching power on resistive load 230VA.
SSR (Solid State Relay)	2-SPST 400 VAC, max 125 mA, Bidirectional, NPN, PNP Frequency Output: 0 to 400 pulse/min Pulse-On Duration: 100 msec
Serial Port RS485:	Serial port RS485 with Modbus RTU/ASCII Protocol.
HOLD Digital Input:	
Input Voltage	12÷32 Vdc
Absorption	10mA max
Analog Outputs:	
Outputs	N.2 output 4-20mA Programmable
Maximum Load	800 Ohm
NAMUR Alarm Output	3.6 mA or 22 mA
Hold Alarm Value	

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DIMENSIONS



- Wall mounting size (144x144x122,5 mm) - Dimensions and footprint for wall mounted device.



-Panel mounting size (96x96x42 mm) - Panel cutout and dimensions for Snail Lock System for panel mounted device.

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