

This compact analyzer is user-configurable for processing up to eight water parameters and other process parameters simultaneously, specifically conceived and developed for industrial applications. Five internal amplifier-module boards free of configuration and measuring ranges meter pH, conductivity, redox-potential (ORP), dissolved oxygen, carbon dioxide concentration or ion concentration. The temperature measurement is used for automatical temperature compensation too. Additional three analog inputs can be used for flow, turbidity, or pressure. The KM 200 configuration with two or more modules for pH or conductivity or dissolved oxygen is a very economical multi-channel version. Highly user-friendly interface comprising dialogue-prompted menu. An RS-232 module provides complete PC and plotter compatibility. In addition, the analyzer has current outputs and independent adjustable relay outputs. Manual and automatical calibration modes can be used for pH (automatic buffer recognition), conductivity, and oxygen. Alarm relay outputs, set points, and hysteresis are user definable. Optional a PID controller unit for one parameter is programmable. This three set points controller provides a modulated pulse signal directly to externally controlled metering pumps or dosing systems. An operator selects all set points and dead band by scrolling on the alphanumeric display and enters the desired values using keypad. Another option is the KM 200-D with integrated data logging system.

The analyzer is packaged in an easy-access, weather-resistant enclosure and can be mounted on a wall or a pipe.

## Specifications

<b>Power</b>	230 V AC; 50...60 Hz, 20 VA or 110 V AC		
<b>Ambient temperature</b>	-10...50°C (14...122°F)		
<b>Display</b>	2 x 20 digit LCD, illuminated		
<b>Amplifier-modules</b>	up to five internal amplifier-modules, user definable; inputs isolated; instead of 1 amplifier module board the DAC 200 module (analogue outputs) or the data logging system (KM 200-D) can be installed		
<b>Analogue inputs</b>	3 inputs 0...5(10) V DC or 0(4)...20 mA i.e. for connection of a turbidity, pressure or flow sensor		
<b>Interface</b>	RS-232 for plotter, PC or data logger DAC 200 module for signal outputs 4 x 0(4)...20 mA; resolution 8 bits		
<b>Controller outputs</b>	4 alarm relay outputs; mechanical, programmable, rated for 5 A at 250 V AC resistive load		
<b>Option KM 200-R</b>	three setpoints PID controller with modulated pulse signals		
<b>Option KM 200-D</b>	integrated data logging system for 128 Kbytes; RS-232 output for read out		
<b>Enclosure</b>	screened plastic case (polystyrole) with separate strip compartment, watertight		
<b>Dimensions</b>	300 mm x 260 mm x 145 mm (W x H x D) (11.8"x 10.2"x 5.7")		
<b>Protection standard (DIN 0470)</b>	IP 65		
<b>EMC Interference transmission</b>	Generic Standard EN 50081-1		
<b>EMC Disturbance</b>	Generic Standard EN 50082-1 and EN 50082-2		
<b>Amplifier-module boards</b>	MV 215	pH / redox (ORP)	pH 0 ... 14 -1500 ... -500 mV; -1000...0 mV; - 500...500 mV; 0...1000 mV; 500... 1500 mV
	MV 216	ion concentration (ISE)	-350...-50 mV; -200...100 mV; -50...250 mV; 100 ... 400 mV; 250 ... 550 mV
	MV 220	conductivity	0 ... 20 mS/cm
	MV 221	conductivity	0 ... 2 mS/cm
	MV 222	conductivity	2 ... 200 µS/cm
	MV 230	oxygen	0 ... 20(80) mg O <sub>2</sub> /l; 0... 120 (200) % air saturation
	MV 250	Temperature	0 ... 100 °C
	MV 260	disinfectants content	0(4) ... 20 mA (Isolation amplifier) i.e. for chlorine sensor
	MV 270	turbidity	power supply for the turbidity probe SSN-T

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## Sensortechnik Meinsberg GmbH

Quality System certified to DIN EN ISO 9001

Fabrikstraße 69

D-04720 Ziegra-Knobelsdorf /GERMANY

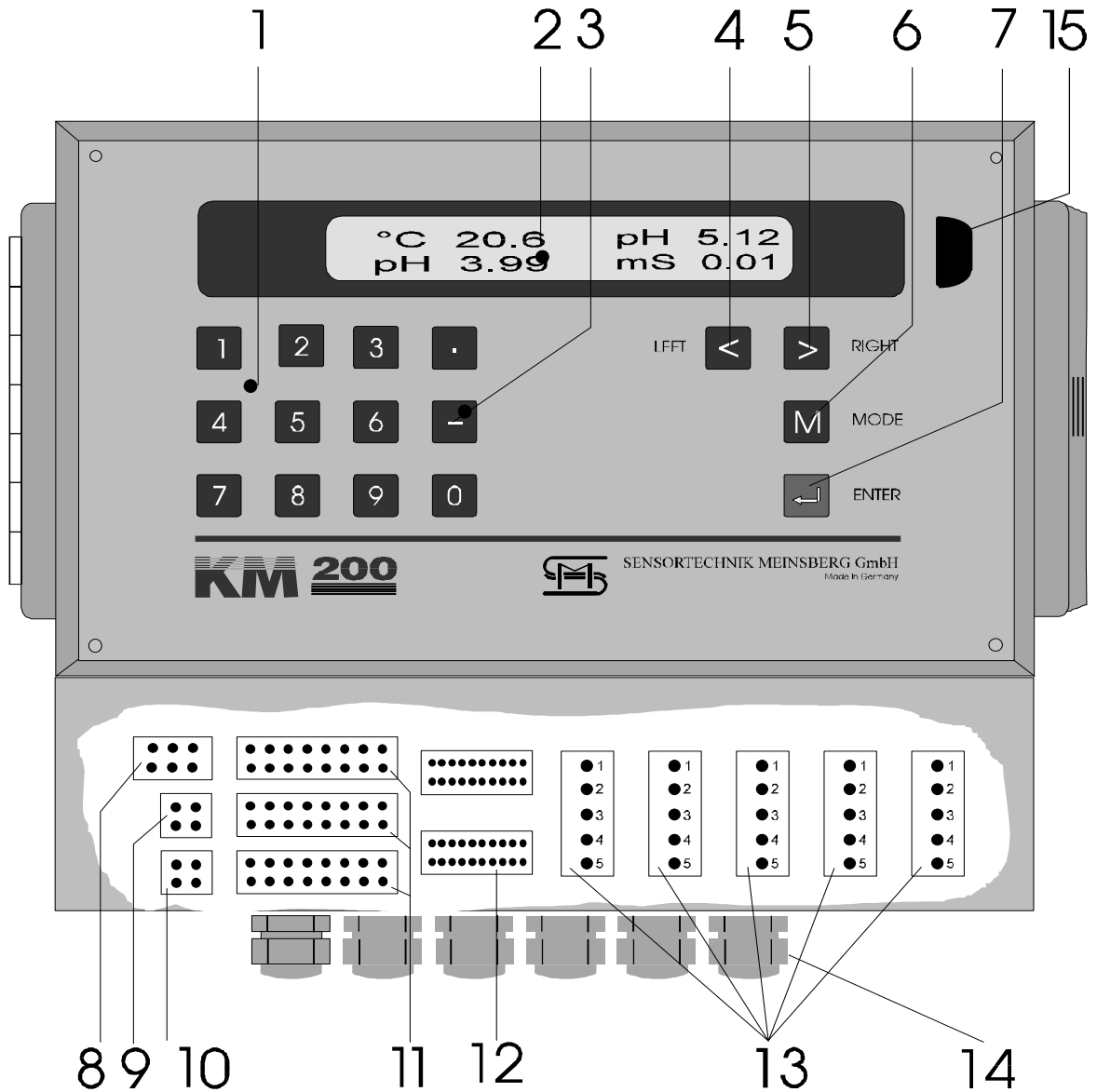
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## Construction:



- |   |                                |    |                                   |
|---|--------------------------------|----|-----------------------------------|
| 1 | Keypad numerical 0 ... 9       | 8  | Power connection 230 V AC         |
| 2 | Display 2 lines with 20 digits | 9  | Output power voltage (option)     |
| 3 | Sign switch                    | 10 | Power connection 24 V DC          |
| 4 | Cursor movement to left        | 11 | Relay outputs (adequate version)  |
| 5 | Cursor movement to right       | 12 | RS-232                            |
| 6 | Mode key                       | 13 | Sensor connections                |
| 7 | Enter key                      | 14 | Cable inputs                      |
|   |                                | 15 | RS-232 for data logger (KM 200-D) |

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# PROCESS MULTI PARAMETER ANALYZER KM 200

## Application Examples

Application	Measuring Parameters	Measuring Ranges	Control Outputs	KM 200 Configuration	Probe Assembly	Electrodes
<b>Drinking-Water Quality Monitoring</b>	pH-value Redox pot.(ORP) Conductivity Temperature	pH 0...14 -1500...1500 mV 0...2 mS/cm 0...100 °C	4 alarm relay outputs	MV 215 MV 215 MV 221 MV 250	Flow Through Housing AD 23 with 4 ports for in-line use in a pipe	pH-Combined Electrode EGA 161 L/PG Redox-Combined Electrode EMC 173 I Conductivity Cell LTG 1/24 I Temperature Sensor Pt 1000 I
<b>Potable Water Treatment</b>	pH-value Conductivity Dissolved Oxygen Temperature	pH 0...14 0 ... 20 mS/cm 0...20 mg/l 0...100 °C	2 alarm relay outputs, PID-controller for diss. oxygen to control the air or oxygen feed	MV 215 MV 220 MV 230 MV 250	Immersion Housing ET 32-311 with 3 ports for submersible use in a fluid- filled tank or large body of water	pH-Combined Electrode EGA 153 I Conductivity Cell LTC 1/24 I Process Oxygen Probe MF 39
<b>Surface Water Quality Monitoring Station</b>	pH-value Conductivity Dissolved Oxygen Turbidity Temperature	pH 0...14 0...20 mS/cm 0...20 mg/l 1...100 NTU 0...100 °C	4 alarm relay outputs	MV 215 MV 220 MV 230 analogue input MV 250	Immersion Housing ET 32-411 with 4 ports for submersible use in a fluid- filled tank or large body of water	pH-Combined Electrode EGA 153 I Conductivity Cell LTC 1/24 I Process Oxygen Probe MF 39 Turbidity Probe SSN-T
<b>Waste Water Treatment</b>	pH-value Conductivity Dissolved Oxygen Temperature	pH 0...14 0 ... 20 mS/cm 0...20 mg/l 0...100 °C	4 (2) alarm relay outputs, PID-controller free of choice	MV 215 MV 220 MV 230 MV 250	Flow Through Housing AD 23 with 2 ports combined with Flow Through Housing AD 82 for in-line use in a pipe	pH-Combined Electrode EGA 173 I Conductivity Cell LTC 1/24 I Process Oxygen Probe MF 39
<b>Swimming Pool Water Treatment</b>	pH-value Redox pot.(ORP) Free / Total Chlorine	pH 0...14 -1500...1500 mV 0...2 mg/l	2 alarm relay outputs, PID-controller for chlo- rine dosing system	MV 215 MV 215 MV 260	Transparent Flow Through Housing AD 2000 with 4 ports for in-line use in a pipe	pH-Combined Electrode EGA 150 I Redox-Combined Electrode EMC 33 I Chlorine Sensor CL 4 or CP 2

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## Monitoring Software KMremote for Windows

Monitoring Software KMremote features evaluation, graphical analysis, and storing time-series data from KM 200. Period, time sequence, number of parameters and scaling can be changed on your PC system. In addition, KM remote features incorporation of the measured data into computer spreadsheets, word processors, and other graphic packages

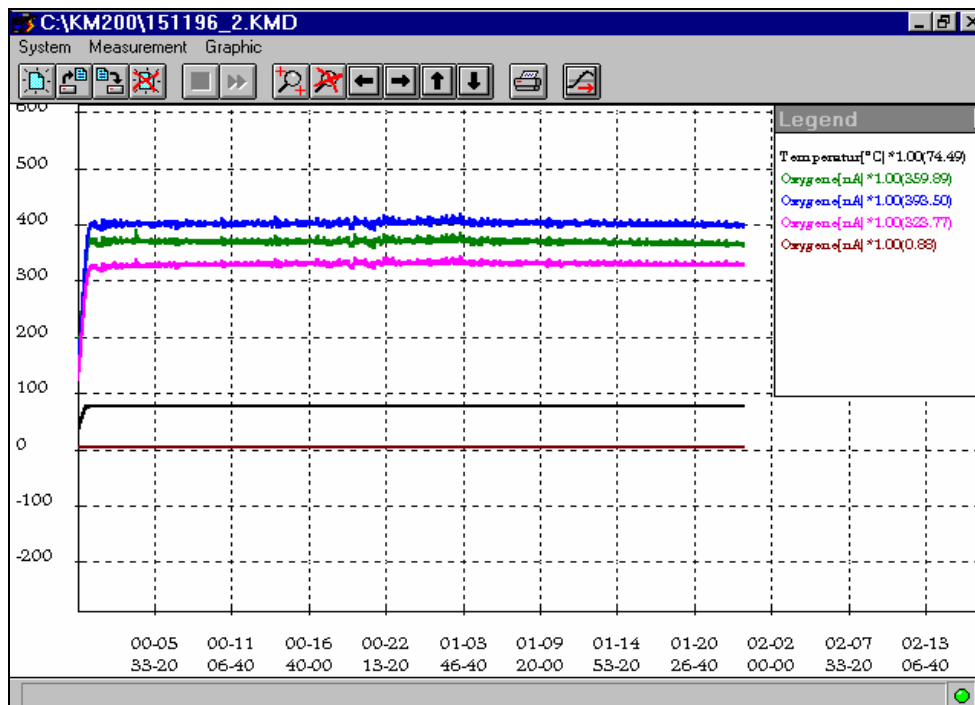
**KMremote represents a new generation and a new way of looking at water monitoring data management.**

### Features / Specifications

- Selection of interfaces COM 1 - COM 4
- Storage of data files with any name
- Measuring time sequence  $\geq 1$  s
- Verifying with absolute or relative time
- Colouring measuring graphs from several parameters simultaneously
- Historic and comparative data can be zoomed or scrolled across time, during measurement
- Automatic displaying of actual data and automatic change of the time axis

### Computer Requirements

- PC system with processor 80486 or higher
- 8 MB RAM
- MS-Windows 3.1 or higher
- Free serial interface RS-232



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