Multi-Parameter System KM 3000

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Technical Specification

KM 3000 Multi-Parameter Controller

Power supply	115 / 230 V AC (-15/+10 %); 48…63 Hz, app. 25 VA (special version 24 V DC)
Ambient temperature	-10…+55 °C
Display	touch screen display 320x240 pixels, 256 colours, back-lighted
Menu languages	German, English
Data transmission	serial interface RS-232 and RS-485, GSM modem can be integrated, USB port, Ethernet interface
Controller outputs	4 floating relay outputs; I ≤ 5 A, U ≤ 250 V AC resistive load for limit or alarm functions; one of them as relay with timer function (washing contact; time interval adjustable 1…9999 hours)
Data storage	integrated data logging system for approx. 100,000 values incl. date and time
Log-bock	approx. 200 activities incl. date and time
Enclosure	extremely rugged aluminium case for wall mounting with separated strip compartment, protection IP 65 (NEMA 4X); dimensions look at drawings
Electrical connections	screw and clip terminals, plug able
Electromagnetic compatibility	89/336/EEC, EN 61326 class B, NAMUR NE 21
Protection by extra low voltage	EN 50178: 1998 (PELV)
Measuring modules	four internal measuring modules in any combination; inputs isolated; storage of calibration data, sensor supervision by individually adjustable limit bands; manual and automatic temperature compensation; detailed specification see table
Active modules	Analogue Current Output Module DAC 3000 plug able: 4 current outputs 0(4)…20 mA, scaleable, resolution 10 bit Controller Module PID 2000: 2 adjustable PID controllers with analogue, pulse or frequency output (by using the analogue or relay outputs)

External Measuring and Active Modules

Power supply	12…24 V AC/DC (supplied by the controller KM 3000)
Ambient temperature	-10…+55 °C
Cable connection	power and data transmission between the modules and to the controller KM 3000 via screened 4-wires bus cable; max. 1,000 m (depends from the number of nodes and their arrangement)
Enclosure	aluminium profile case, protection IP 65 (NEMA 4X); dimensions look at drawings
Electrical connections	internal screw terminals, plug able
Electromagnetic compatibility	89/336/EEC, EN 61326 class B, NAMUR NE 21
Measuring modules	up to 12 external measuring modules in any combination; inputs isolated; storage of calibration data, sensor supervision by individually adjustable limit bands; manual and automatic temperature compensation; detailed specification see table
Active modules	Analogue Current Output Module DAC 3000 CAN: 4 current outputs 0(4)…20 mA, scaleable, resolution 10 bit Relay Module REL 2000 CAN: 4 floating relay outputs; I ≤ 3 A, U ≤ 250 V AC or 30 V DC resistive load for limit or alarm functions

Sensortechnik Meinsberg GmbH
Qualitätsmanagementsystem nach DIN EN ISO 9001
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Internal Module	External Module	Main Measuring Parameter range	resolution	Secondary Measuring Parameters	Temperature range / resolution	Electrodes / Sensors
MVM 2210	**MV 2210**	pH value pH 0…14	pH 0.01	electrode voltage in mV	-10…130 °C 0.1 °C	pH combination & separated electrodes, temperature sensor Pt 1000
MVM 2215	**MV 2215**	redox potential (ORP) -2000…+2000 mV	1 mV	redox(ORP) voltage in relation to the standard hydrogen electrode	-10…130 °C 0.1 °C	redox(ORP) combination & separated electrodes, temperature sensor Pt 1000
MVM 2216	**MV 2216**	ion concentration acc. sensor specification (ISE) and calibration		electrode voltage in mV	-10…130 °C 0.1 °C	ion selective combination & separated electrodes ISE), Pt 1000
MVM 2220	**MV 2220**	conductivity (2-pol) 0…200 µS/cm 0…2 mS/cm 0…20 mS/cm 0…100 mS/cm automatic range selection	0.1 µS/cm 1 µS/cm 0.01 mS/cm 0.1 mS/cm	salinity 2…42 g/kg resistance	-10…130 °C 0.1 °C	conductive 2-electrode sensor; temperature sensor Pt 1000
MVM 2225	**MV 2220**	conductivity (4-pol) 0…200 µS/cm 0…2 mS/cm 0…20 mS/cm 0…500 mS/cm automatic range selection	0.1 µS/cm 1 µS/cm 0.01 mS/cm 0.1 mS/cm	salinity 2…42 g/kg resistance	-10…130 °C 0.1 °C	conductive 4-electrode sensor; temperature sensor Pt 1000
MVM 2230	**MV 2230**	O_2 saturation 0…120 %	0.1 %	O_2 concentration 0…20 mg/l	-10…130 °C 0.1 °C	membrane covered amperometric O_2 sensor, temperature sensor Pt 1000
MVM 2260 A	**MV 2260 A**	DC voltage input signal linear characteristic 0…5 V DC			-10…130 °C 0.1 °C	instrument or sensor with DC voltage output
MVM 2260 B	**MV 2260 B**	DC current input signal linear characteristic 0(4)…20 mA			-10…130 °C 0.1 °C	instrument or sensor with DC current output
MVM 2260 C	**MV 2260 C**	DC current input signal i. e. concentration (chlorine, chlorine dioxide etc.) 0…2 (10) mg/l	0.01 mg/l	sensor current in mA	-10…130 °C 0.1 °C	instrument or sensor with passive DC current output (i. e. chlorine)
MVM 2270	**MV 2270**	flow 0…100 l/h acc. sensor specification	0.1 l/h	frequency in Hz		vane flow sensor

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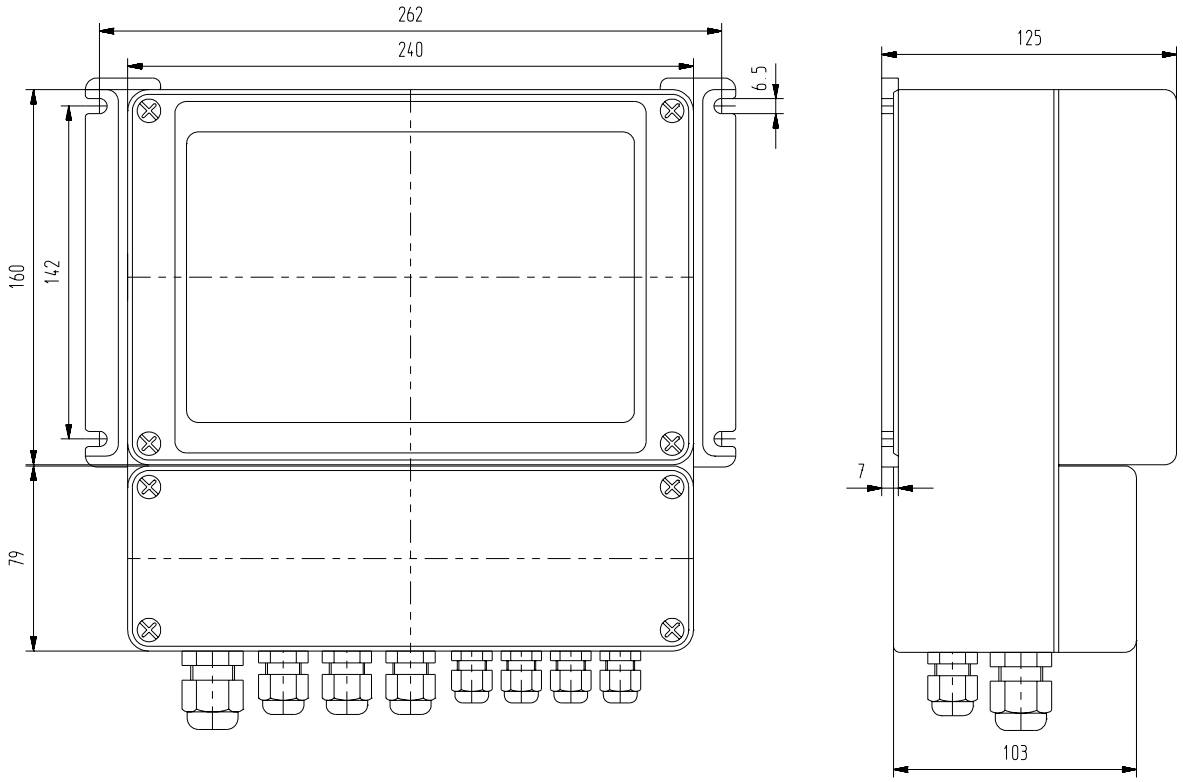
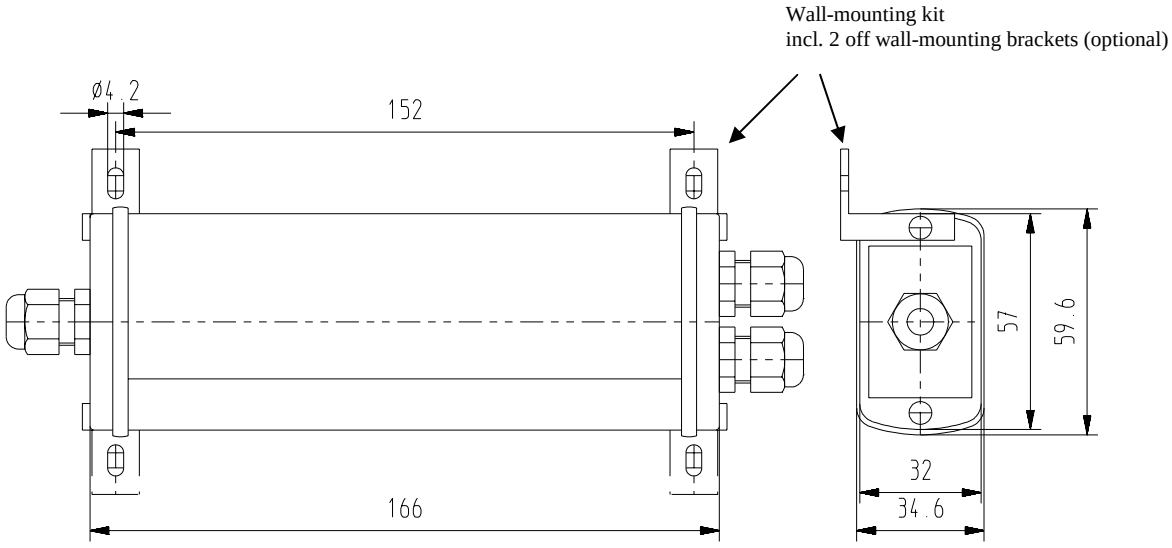
Dimensioned Enclosure Drawings

KM 3000 Multi-Parameter Controller



External measuring and active modules



Dimensions in mm

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