novotechnik
Siedle Group

Signal Interface

MAP Series

Special features

• process-controlled indicator with digital display
• precision 0.01%
• scope of measurement range -9,999...+40,000
• adaptation of potentiometric sensors
• adaptation of active sensors with standardized output signal
• up to 32 meas. per second
• tare function
• max. 4 programmable limiting value comparators
• peak memory
• programming inhibit function
• communication via logic inputs and outputs
• RS 232 interface
• analog output function with standardized signals
• integrated auxiliary power supply for active sensors
• CE mark

Description

Fully galvanically-isolated microprocessor-controlled indicators support the connection of all potentiometric sensors as well as sensors with standardized output signals. As a result of digital programming, measured values can be displayed and monitored on-site irrespective of measurement length, angle or scaling range.

Precision and reliability

Outstanding precision of up to 0.01% is achieved through the use of selected components which guarantee optimum temperature stability and interference immunity.

The process monitor (MAP) supplies the sensors with a highly constant voltage supply. The input and output voltage is continuously monitored by the processor and compared to reference data in the memory. This excludes the possibility of measurements being corrupted by voltage and temperature fluctuations. In the design of the units, every conceivable aspect was taken into account to ensure effective EMC protection. The supply input, measurement input and RS 232 interface are all equipped with special interference suppressor filters.

Custom-tailored configuration

While the basic versions support a comprehensive range of applications, five other configurations are available to provide additional options.

Tare function

The tare function permits zeroing of the current display value at any optional position. All subsequent measurements indicate the differential to the stored measured value.

Limiting values

The limiting value comparators with adjustable switching function and hysteresis are freely programmable over the entire measurement range or within the scale.

Peak memory

The peak memory permits the currently displayed or limiting value to be frozen. Some standard configurations can display, or freeze, maximum, minimum and differential values (slave-pointer function). Call for details.

Inhibit function

This function safeguards programmed data against unauthorized or unintentional editing. During programming, it is only possible to display the data.

Value interrogation

When using a higher-level control system, display values can be read using logic outputs in BCD or HEX format.

Interface function

The interface function defines which peripheral unit is accessed by the RS 232 interface. The options are printer output and remote access or remote control via PC or PLC.

Analog output

The optional analog output permits the connection of external measurement, control or recording devices. Standardized output variables can be selected, whereby the start and end values can be freely programmed over the entire extent of the measured range.

Application

The panel-mounting indicator displays and monitors linear and angular values for position detection in grinding and sawing machines, running gear travel, metering strokes, valve and air flap positions, or for functions relating to test and inspection equipment construction, quality assurance and production control.

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	Basic version		Upgraded version		Intelligent version		Full version
Type designations	**MAP330**	**MAP340**	**MAP332**	**MAP342**	**MAP334**	**MAP344**	**MAP444**
Scope of measurement range	-2,000... +2,000	-9,999... +20,000	-2,000... +2,000	-9,999... +20,000	-4,000... +4,000	-9,999... +20,000	-9,999... +40,000
Measurement rate /sec.	1...16	1...16	1...16	1...16	1...32	1...16	1...16
Auxiliary voltage	•	•	•	•	•	•	•
Tare function	•	•	•	•	•	•	•
Limiting values	0	0	2	2	4	4	4
Peak memory					•	•	•
Programming inhibit function					•	•	•
Digital output BCD/Hex					•	•	•
Interface RS232					•	•	•
Analog output	Option	Option	Option	Option	Option	Option	Option
Measurement input	Optional potentiometric or active input (current or voltage) [MAP330/340/332/342]				Supplementary option potentiometric and active input (current) [MAP334/344]		Potentiometric and active input (current and voltage) [MAP444]
Voltage supply	Standard 230 VAC (optional feature 115 VAC or 24 VDC)						

• = Included in delivery
Other models on request

Technical Data		
Voltage supply	230 VAC, 50/60 Hz, 6 VA 115 VAC 50/60 Hz, 6 VA 24 VDC, 0.5 A; (20...30 VDC)	
Display	5 digit LED-measured value display, 14 mm high 1 digit LED programming unit display, 7 mm high	
Scope of measurement range	MAP330/332 MAP334 MAP340/342/344 MAP444	-2000...+2000 -4000...+4000 -9999...+20000 -9999...+40000
Precision	MAP330/322 MAP334 MAP340/342/344 MAP444	0.05%, ±1 Digit 0.03%, ±1 Digit 0.01%, ±1 Digit 0.01%, ±1 Digit
Measurement rate	Standard MAP334	1/2/4/8/16 meas./s 1/2/4/8/16/32 meas./s
Temperature coefficient	MAP330/332/334 MAP340/342/344 MAP444	50 ppm/°C 20 ppm/°C 20 ppm/°C
Control inputs	MAP330/340 MAP332/342 MAP334/344/444	2 x 20-30 V /typ. 5 mA 2 x 20-30 V /typ. 5 mA 4 x 20-30 V /typ. 5 mA programmable functions
Comparator	MAP332/342 MAP334/344/444	2-fold limiting value comparator 4-fold limiting value comparator
Relay output	only in versions with limiting values	2 x changeover contact 250 V max./ 1A limiting value output
Optocoupler output	MAP334/344 MAP444	4 x logic outputs max. 50 V/30 mA for limiting values or value interrogation

Technical Data		
Measurement inputs	MAP330/340 MAP332/342 MAP334/344 MAP444	Standard: potentiometer or 0(4)…20 mA or 0...10 V Standard: potentiometer and 0(4)...20 mA or 0...10 V and 0(4)…20 mA
Interface	MAP334/344 MAP444	 RS 232
Auxiliary voltage output	24 VDC, 70 mA non-stabilized No-load voltage max. 30 VDC	
Protection class	IP 00 at terminals, IP 40 at front of housing to DIN 40050	
Analog outputs (supplementary option MAP444)	0...10 V/ 0...20 mA/ 4...20 mA; resolution 0.05% Current output: burden impedance max. 400 Ω Voltage output, load impedance min. 10 kΩ	
Ambient temperature	0...50°C	
Dimensions Housing Recess measurements	 H48 x W96 x D135 mm H92 x W45	
Terminal	screw-type, plugable	

Subject to changes

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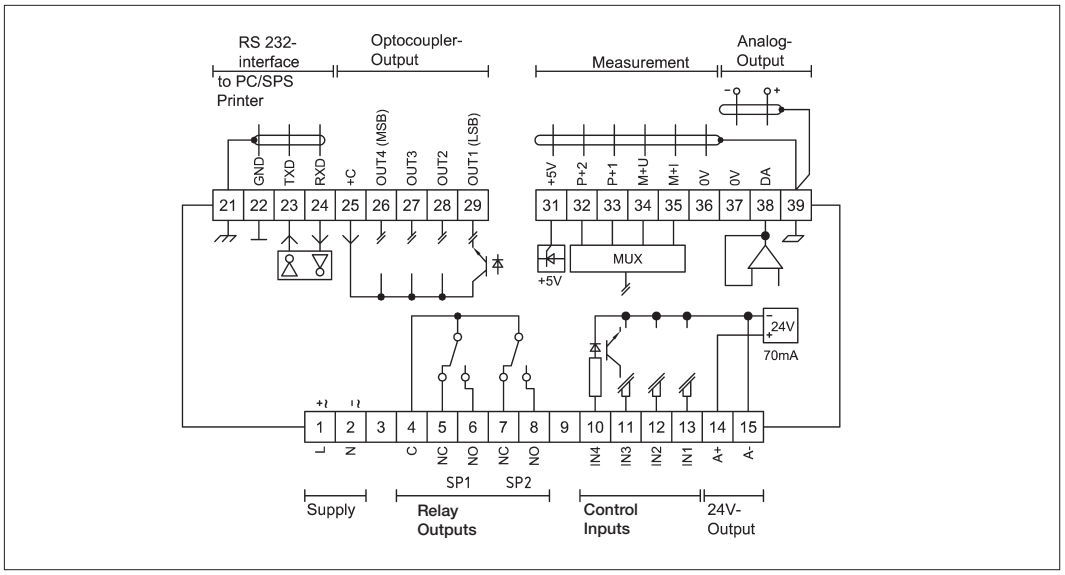

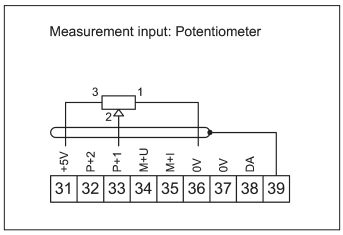

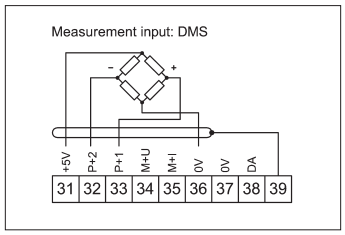

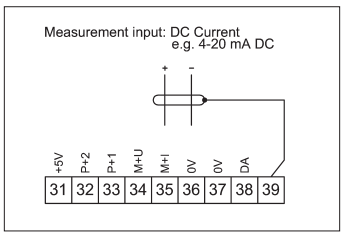

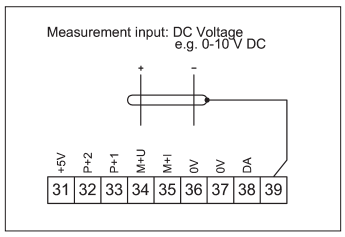

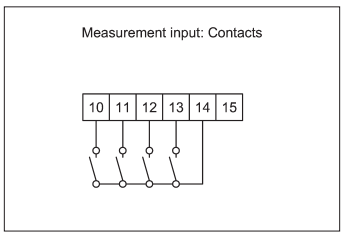

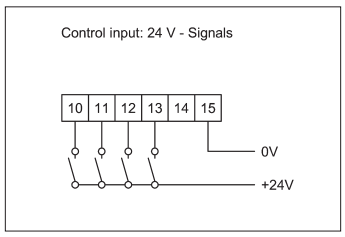

Terminal diagram

Terminal assignment

1 Supply voltage AC (L) or DC (+)
2 Supply voltage AC (N) or DC (-)
3 Not assigned
4 Common terminal limiting values
5 Break contact output limiting value 1
6 Make contact output limiting value 1
7 Break contact output limiting value 2
8 Make contact output limiting value 2
9 Not assigned
10 Control input 4
11 Control input 3
12 Control input 2
13 Control input 1
14 Auxiliary supply output 24 V (+)
15 Auxiliary supply output 24 V (-) (common terminal control inputs)
21 Shielding RS 232
22 GND interface RS 232
23 TXD interface RS 232
24 RXD interface RS 232
25 Reference potential (+V inp.) for optocoupler outputs
26 Optocoupler outputs 4 (MSB)
27 Optocoupler outputs 3
28 Optocoupler outputs 2
29 Optocoupler outputs 1 (LSB)
31 Sensor terminal 3
32 Measurement input or DMS-
33 Sensor terminal 2 or DMS+
34 Measurement input voltage (f.e. 0...10 VDC)
35 Measurement input current (f.e. 0...20 mA DC)
36 Sensor terminal 1 or 0 V
37 0 V
38 Analog output
39 Shielding fo measurement input and analog output

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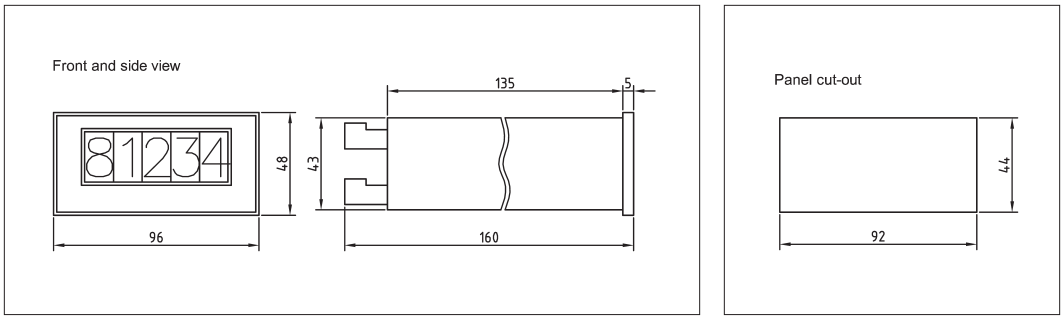
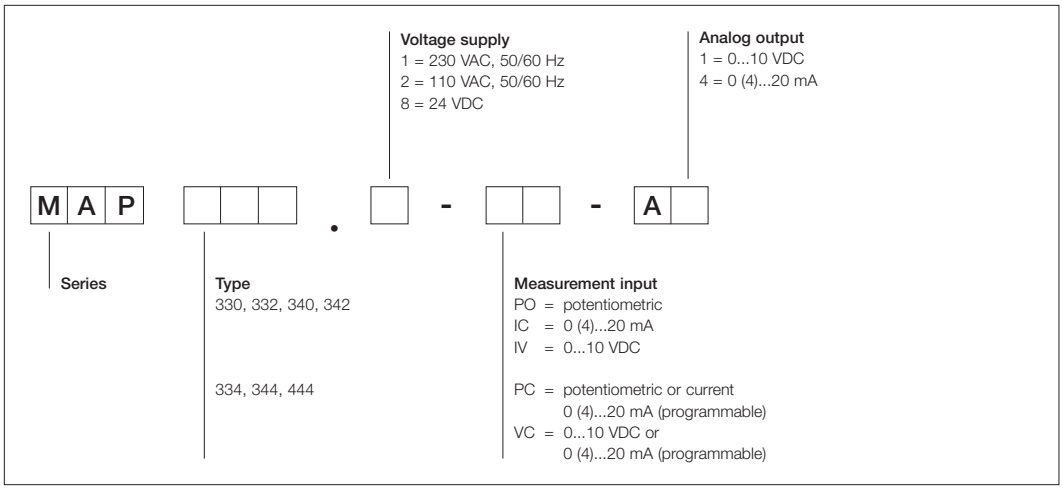
Dimensions



Order designations



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