

# Hand-Held multifunction process calibrators // MC 75.2

for electrical signals



MC 75.2



## Highlights

- Highest accuracy & Data logger
- Generation of RTD-, TC-, mA- and V signals as well as frequency and pulses
- Connection of pressure modules possible

## Technical data

### Resistance thermometers (RTD)

<b>Generation and measurement of RTD signals</b>	Pt50, Pt100, Pt200, Pt500, Pt1000, Cu10, Cu50, Ni100, Ni120, Ni1000
<b>Ω-generator function</b>	0...4000 Ω
<b>Ω-measurement function</b>	0...4000 Ω
<b>Accuracy (of reading + const.)</b>	±0.012 %
<b>Selectable temperature unit</b>	°C / °F
<b>Measurement of multi-wire connections</b>	2 / 3 / 4

### Thermocouples (TC)

<b>Generation and measurement of TC signals</b>	J, K, T, R, S, B, N, E, U, L
<b>mV-generator function</b>	0...100 mV
<b>mV-measurement function</b>	0...100 mV
<b>Accuracy (of reading + const.)</b>	±0.013 %
<b>Selectable temperature unit</b>	°C / °F
<b>Internal comparison point</b>	±0.3 °C

### Current (mA)

<b>Loop current signal generation</b>	0(4)...24 mA
<b>Loop current signal measurement</b>	0(4)...50 mA
<b>Accuracy (of reading + const.)</b>	±0.0175 %
<b>Current loop supply</b>	24 V ±10 %, 22 mA
<b>HART Communication protective resistor</b>	250 Ω

### Voltage (V)

<b>Voltage signal generation</b>	0...20 V
<b>Voltage signal measurement</b>	0...50 V
<b>Accuracy (of reading + const.)</b>	±0.015 %

# Technical data

Technical data	
<b>Continuity (O/C)</b>	
Continuity measurement	O / C
Switching threshold „open“	1 kΩ
<b>Frequency and pulse (Hz)</b>	
Frequency and pulse signal generation	0.01 Hz...10 kHz
Frequency and pulse signal measurement	0.01 Hz...20 kHz
Accuracy (of reading + const.)	±0.005 %
<b>Pressure signals (bar)</b>	
Pressure measurement with external pressure module	✓
Editable pressure units	✓
Connection via DIN socket	5-pin

Functions	
<b>Generation</b>	
High-speed call values	10 points (flexible)
Linear steps and ramps	✓
User-defined synthesiser values	100
User-defined signal output characteristic	10 points
Editable units	✓
Transmitter function simulation	✓
<b>Measurement</b>	
Data memory	10 000 values
Value tables and graphics function	✓
Offset programming for sensor characteristic	✓
Calibration data files and linearisation points	5 x 4 values
User-defined measuring input characteristic	10 points
Editable units	✓
Measured value min. / max.	✓
Averaging function	✓

General data	
<b>Features</b>	
Sensor connection	8 safety sockets (2 channels) incl. push lock, 4 sets with safety instrument leads (4 mm) and alligator clips (optional)
Power supply	Rechargeable battery including power adapter, 230 VAC / 12 VDC
Operator guidance	Menu with pull-down windows Separate channels for parallel signal processing
Display	Multifunction display, double-LCD, 2 x 6 digit, illuminated
<b>Housing</b>	
Version	ABS plastic with protective cover
Dimensions	110 x 210 x 50 mm (H x W x D)
Weight	Approx. 900 g

# Article numbers

Order code		
Type	Version	Order number
MC 75.2	Accuracy $\pm 0.0175$ % of reading + const.	EME8AOMC075020

Order code	
Accessories	Order number
DAkKS certificate	EKSIMMULTI000D
SIKA works calibration certificate	EKSIMMULTI000W
Transport case	EME8GKK3100000
Plug connector 4 mm, red	EME8AOSKLS40RT
Plug connector 4 mm, black	EME8AOSKLS40SW
External pressure module	EME8AOACL...

## External pressure module // EPM

for multifunction process calibrator MC 75.2



Ext. pressure module EPM

Technical data	
Pressure range	-1...1000 bar
Measuring rate	400 measurements / sec.
Digital signals	RS 485
Electrical connection	5-pin 1 m shielded connecting cable
Medium temperature	10...40 °C
Pressure connection	G¼ stainless steel 1.4404
Degree of protection	IP65
Dimensions	Approx. D = 30 mm, L = 110 mm
Weight	Approx. 140 g

# Versions

Ausführungen				
Type EPM	Model A	Model B	Model C	
Präzision	±0.05 % full scale	±0.025 % full scale	±0.01 % full scale	Max. pressure range
<b>1</b>	-1...1 bar rel. (PR)			2 bar
	0...1 bar abs. (PAA)			
<b>3</b>	-1...3 bar rel. (PR)			5 bar
	0...3 bar abs. (PAA)			
<b>4</b>	-1...4 bar rel. (PA)	-1...4 bar rel. (PA)		20 bar
	0...4 bar abs. (PAA)	0...4 bar abs. (PAA)		
<b>7</b>	-1...7 bar rel. (PA)	-1...7 bar rel. (PA)		
	0...7 bar abs. (PAA)	0...7 bar abs. (PAA)		
<b>10</b>	-1...10 bar rel. (PR)	-1...10 bar rel. (PA)	-1...10 bar rel. (PA)	
	0...10 bar abs. (PAA)	0...10 bar abs. (PAA)	0...10 bar abs. (PAA)	
<b>12</b>	-1...12 bar rel. (PA)	-1...12 bar rel. (PA)		60 bar
	0...12 bar abs. (PAA)	0...12 bar abs. (PAA)		
<b>20</b>	-1...20 bar rel. (PA)	-1...20 bar rel. (PA)		
	0...20 bar abs. (PAA)	0...20 bar abs. (PAA)		
<b>30</b>	-1...30 bar rel. (PR)	-1...30 bar rel. (PA)	-1...30 bar rel. (PA)	
	0...30 bar abs. (PAA)	0...30 bar abs. (PAA)	0...30 bar abs. (PAA)	
<b>40</b>	-1...40 bar rel. (PA)	-1...40 bar rel. (PA)		200 bar
	0...40 bar abs. (PAA)	0...40 bar abs. (PAA)		
<b>70</b>	0...70 bar rel. (PA)	0...70 bar rel. (PA)		
	0...70 bar abs. (PAA)	0...70 bar abs. (PAA)		
<b>100</b>	0...100 bar rel. (PA)	0...100 bar rel. (PA)	0...100 bar rel. (PA)	
	0...100 bar abs. (PAA)	0...100 bar abs. (PAA)	0...100 bar abs. (PAA)	
<b>120</b>	0...120 bar rel. (PA)	0...120 bar rel. (PA)		400 bar
	0...120 bar abs. (PAA)	0...120 bar abs. (PAA)		
<b>135</b>	0...135 bar rel. (PA)	0...135 bar rel. (PA)		
	0...135 bar abs. (PAA)	0...135 bar abs. (PAA)		
<b>160</b>	0...160 bar rel. (PA)	0...160 bar rel. (PA)		
	0...160 bar abs. (PAA)	0...160 bar abs. (PAA)		
<b>200</b>	0...200 bar rel. (PA)	0...200 bar rel. (PA)		
	0...200 bar abs. (PAA)	0...200 bar abs. (PAA)		
<b>300</b>	0...300 bar rel. (PA)	0...300 bar rel. (PA)	0...300 bar rel. (PA)	
	0...300 bar abs. (PAA)	0...300 bar abs. (PAA)	0...300 bar abs. (PAA)	
<b>400</b>	0...400 bar rel. (PA)	0...400 bar rel. (PA)		1000 bar
	0...400 bar abs. (PAA)	0...400 bar abs. (PAA)		
<b>700</b>	0...700 bar rel. (PA)	0...700 bar rel. (PA)	0...700 bar rel. (PA)	
	0...700 bar abs. (PAA)	0...700 bar abs. (PAA)	0...700 bar abs. (PAA)	
<b>1000</b>	0...1000 bar rel. (PA)	0...1000 bar rel. (PA)	0...1000 bar rel. (PA)	
	0...1000 bar abs. (PAA)	0...1000 bar abs. (PAA)	0...1000 bar abs. (PAA)	

PR: Relative pressure measuring cell, ambient pressure as zero point

PAA: Absolute pressure measuring cell, vacuum as zero point

PA: Absolute pressure measuring cell, ambient pressure as zero point

■ Standard pressure ranges

# Article numbers

Order code					
Ext. pressure module EPM	EME8AOACL				
Precision					
0.05% FS		A			
0.025%FS		B			
0.01%FS		C			
Type of pressure					
relativ (PR)			R		
relativ (PA)			R		
absolut (PAA)			A		
Pressure range					
-1(0)...1 bar				0001	
-1(0)...3 bar				0003	
-1(0)...4 bar				0004	
-1(0)...7 bar				0007	
-1(0)...10 bar				0010	
-1(0)...12 bar				0012	
-1(0)...20 bar				0020	
-1(0)...30 bar				0030	
-1(0)...40 bar				0040	
-1(0)...60 bar				0060	
0...70 bar				0070	
0...100 bar				0100	
0...120 bar				0120	
0...135 bar				0135	
0...160 bar				0160	
0...200 bar				0200	
0...300 bar				0300	
0...400 bar				0400	
0...700 bar				0700	
0...1000 bar				1000	
Example order number		EME8AOACL	A	R	0001

PR: Relative pressure measuring cell, ambient pressure as zero point

PA: Absolute pressure measuring cell, ambient pressure as zero point

PAA: Absolute pressure measuring cell, vacuum as zero point