MC 50.2 and MC 75.2

Type MC 50.2

Type MC 75.2

Type	MC 50.2	MC 75.2
Resistance thermometer (RTD)		
RTD signal generation and measurement	Pt50, Pt100, Pt200, Pt500, Pt1000, Cu10, Cu50, Ni100, Ni120, Ni1000	
Ω generator function	0...4000 Ω	
Ω measurement function	0...4000 Ω	
Accuracy (of rdg. + const.)	±0.012 %	
Selectable temperature unit	°C / °F	
Measurement of multi-wire	2 / 3 / 4	
Thermocouples (TC)		
TC signal generation and measurement	J, K, T, R, S, B, N, E, U, L	
mV generator function	0...100 mV	
mV measurement function	0...100 mV	
Accuracy (of rdg. + const.)	±0.013 %	
Selectable temperature unit	°C / °F	
Internal comparison point	±0.3 °C	
Current (mA)		
Loop current signal generation	0(4)...24 mA	
Loop current signal measurement	0(4)...50 mA	
Accuracy (of rdg. + const.)	±0.0175 %	
Current loop supply	24 V ±10 %, 22 mA	
HART compatible internal loop resistor	250 Ω	
Voltage (V)		
Voltage signal generation	0...20 V	
Voltage signal measurement	0...50 V	
Accuracy (of rdg. + const.)	±0.015 %	
Continuity (O / C)		
Continuity measurement	O / C	
Switching threshold "open"	1 kΩ	
Frequency and pulse (Hz)		
Frequency and pulse signal generation	0.01 Hz...10 kHz	
Frequency and pulse signal measurement	0.01 Hz...20 kHz	
Accuracy (of rdg. + const.)	±0.005 %	
Pressure signals (bar)		
Pressure measurement with external pressure module		✓
Editable pressure units		✓
Connection via DIN socket		5-pin

Functions	MC 50.2	MC 75.2
Generation		
High-speed call values	10 points (flexible)	10 points (flexible)
Linear steps and ramps	✓	✓
User-defined synthesiser values	100	100
User-defined signal output characteristic	10 points	10 points
Editable units	✓	✓
Transmitter function simulation		✓
Measurement		
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	10 points
Editable units	✓	✓
Measured value min. / max.	✓	✓
Averaging function	✓	✓

MC 50.2

- Operator guidance
  Separate channels for parallel signal processing
  Menu with pull-down windows
  Programming and control via PC
  Graphic display of connection options
  Configuration files for test adjustments (10)

- Battery supply / Operating time
  Approx. 25 h with Auto-Power off

MC 75.2

- Operator guidance
  Separate channels for parallel signal processing
  Menu with pull-down windows
  Programming and control via PC
  Graphic display of connection options
  Configuration files for test adjustments (10)
  Test report generation / Calibration routines (10)
- Battery supply / Operating time
  Approx. 20 h with Auto-Power off
- Test certificate
- Software (optional)

Further information on pressure measurement with the MC 75.2 simulator is provided on the next page.

Pressure measurement

MC 75.2 with external pressure modules

For universal on-site use, the MC 75 2 simulator is capable of measuring different pressures from -1 bar to 1000 bar.

The EPM plug-in modules are based on intelligent sensor technology with storage for measuring range and accuracy. Connection takes place via a DIN socket with Plug & Play function.

For the best measuring results with high accuracy, various absolute or relative pressure ranges in three precision classes are available.

Type EPM - external pressure modul

Technical data	Type EPM
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

Type EPM versions

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