Multifunction simulators

EC 10 and EC 25

Type EC 10

Type EC 25

Type	EC 10	EC 25
Resistance thermometer (RTD)		
RTD signal generation and measurement	Pt100, Pt200, Pt500, Pt1000, Cu10, Cu50	
Ω-generator function	0...4000 Ω	0...40 000 Ω
Ω-measurement function	0...5500 Ω	0...5500 Ω
Accuracy (rdg. + const.)	±0.05 %	
Selectable temperature unit	°C / °F	
Measurement of multi-wire connections	2 / 3 / 4	2 / 3
Thermocouples (TC)		
TC signal generation and measurement	J, K, T, R, S, B, N, E, U, L	J, K, T, R, S, B, N, E
mV generator function	-100...1100 mV	-100...110 mV
mV measurement function	-50...550 mV	
Accuracy (rdg. + const.)	±0.02 %	
Selectable temperature unit	°C / °F	
Internal comparison point	±0.5 °C	
Current (mA)		
Loop current signal generation		0...22 mA
Loop current signal measurement		-5...55 mA
Accuracy (of rdg. + const.)		±0.02 %
Current loop supply		24 V ±10 %, 22 mA
Voltage (V)		
Voltage signal generation		-1...11 V
Voltage signal measurement		-5...55 V
Accuracy (of rdg. + const.)		±0.02 %
Continuity (O / C)		
Continuity measurement	O / C	
Switching threshold "open"	0.5 kΩ	
Frequency and pulse (Hz)		
Frequency and pulse signal generation		3 Hz...110 kHz
Frequency and pulse signal measurement		3 Hz...50 kHz
Accuracy (of rdg. + const.)		±0.005 %

Functions	EC 10	EC 25
Generation		
High-speed call values		7 points (fix) in 25 % steps
Linear steps and ramps		✓
Output zero	✓	✓
Transmitter function simulation		✓
Measurement		
Measured value hold function	✓	✓
Averaging function	✓	✓
Room temperature display	✓	✓

EC 10

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

EC 25

- Operator guidance
  Keypad
  Separate channels for parallel signal processing
- Battery supply / Operating time
  Approx. 20 h with Auto-Power off

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.