MPC40 - HANDHELD MULTIFUNCTION CALIBRATOR

MPC40 Multifunction Calibrator is a handheld instrument that combines in one compact and lightweight unit the best features of fixed laboratory test meters reaching precision class up to 0.015. A prominent feature of the instrument is the data logging functions and the documentation management for the issuance of certificates of test / calibration session. No need for dedicated software, all you need is a normal Excel compatible spreadsheet.

MPC40 measures and simulates 13 types of thermocouples, 13 RTD kinds, resistance, current, voltage, frequency, pressure, source for pulse train.

Communication port to connect via adapter modules, pressure transmitters calibration sample on the front line.

Generation of voltages and currents mA / Volt for calibration of temperature transmitters, pressure, etc.

Internal power supply for passive circuits 4/20 mA, maximum load 1000 ohms.

250 Ohm resistance built for compatibility with PCLS and transmitters with HART protocol. Serial communication with ASCII commands for complete instrument interfacing to other devices.

Ability to customize the programming of points and trends calibration.

Recordings up to 21 measurement data for the instrument under test and up to 50 TAG of devices.

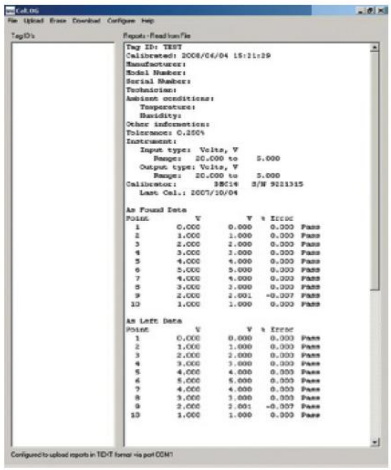
CE approval and construction according to the safety standards IEC1010

When not needed the logging functions and / or certification / documentation of calibration, provides the following basic models:

MPC10 Equipment with single function mono display. Serial interface RS232.

MPC20 Similar to the model MPC40, with dual display for read-channel input / output. Serial interface RS232.

MPC40 - DOCUMENTATION FUNCTION



Calibration report publishing is very simple. You choose the type of document you want in the menu, then select the type of measurement signal input and / or output. By selecting the "manual" option for either or each of the channels input and output it is possible to calibrate and document virtually any type of test. Connecting the calibrator to the device under test you can proceed normally to the desired measures. After each calibration point chosen press the Save button to store its value. At the end of storage chosing, press Done. The instrument will require at this point the insertion of one TAG, device type, ID, environmental conditions etc. which will be writed on the report sheet.

Saving data concludes the test section called "As found". you can choose whether or not if indicate the assessment condition pass / fail for the device under test, providing fault tolerance measurement allowed compared to the full scale. At this point, you can choose to return, and then print the document also for values performing such as "As left".

After the recording of the evidence is possible to print immediately on the field by the optional portable infrared printer, or by connecting to the computer MPC40. By connecting directly HyperTerminal print the ASCII document through Notepad or another similar text program.

The instrument is also supplied with a software utility for transferring data in one Excel compatible spreadsheet. The file in .txt or .csv format, so can be processed, handled by the user or data device and saving them in folders classified as individual files or as TAG nominal also in different paths.

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DESCRIPTIONS

1) display

2) function keys F1, F2, F3 for the menu bar and commands displayed by the calibrator

3) On/Off

4) HOME, returns to home menu

5) number keys

6) MEASURE / SOURCE, mA terminals, 3W, 4W

7) MEASURE/SOURCE, V, RTD 2W, 4W

8) External pressure module connector

9) Arrows used to vary the output value on the increase or decrease scaling

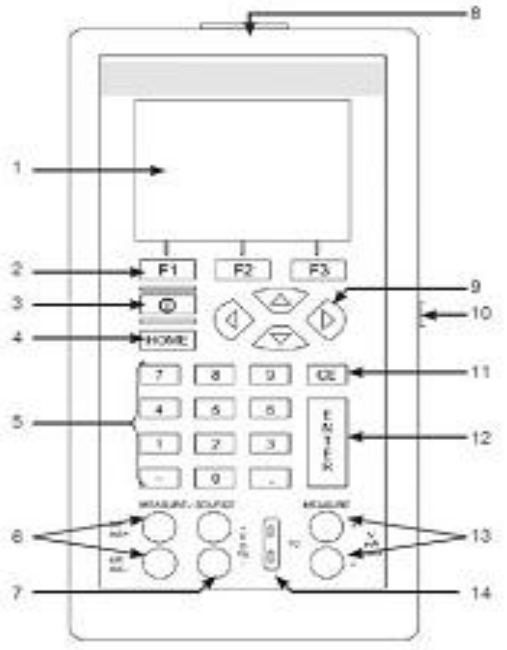
10) Serial port Interface

11) Delete, used to erase a value

12) Enter key

13) Input terminals for measuring current, voltage and power circuit terminals active mA

14) Input / Output Thermocouples



1) Numeric Display

2) Main parameters

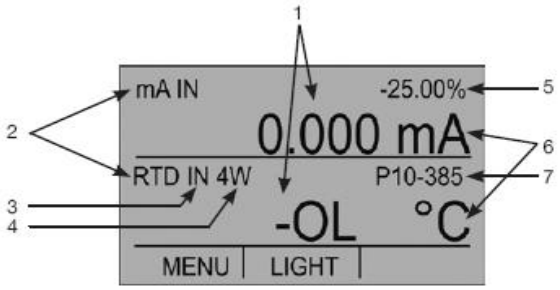
3) Input/Output control

4) Additional settings

5) Span indication

6) Unit

7) Sensor type



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TECHNICAL SPECIFICATIONS

Display:	MPC20 and MPC40 Dual display, H 8 mm digit
Power supply:	24V dc main supply and/or 4x AA alkaline batteries, 6V DC, 20 h,
RTD frequency response:	5 ms; works with all pulse transmitters
Frequency:	1 ... 20 V amplitude amplifiable
Pulse:	1…20 V amplitude amplifiable (source only)
Interface:	RS232, USB serial adapter optional
EMC:	EN50082-1/1992, EN55022/1994 class B
Operating temperature:	-10…+50°C, storage -20…+70°C, stability 0.005% of reading/°C over 23°C +/-5%
Protecion degree:	IP52
Dimensions and weight:	220.9x106.6x58.4 mm, about 863 g
Functions:	step / auto ramp
	direct input of RTD coefficients
	setting setpoints for each output function
	Integral resistor for HART communication

VOLTAGE	Generator:	0.000…20.000 Vdc			
	Measure:	0.000…30.000 Vdc, isolated, 0.000…20.000 Vdc not isolated			
THERMOCOUPLE mV	Generator:	-10.000…+75.000 mV			
	Measure:				
CURRENT mA	Generator:	0.000…24.000 mA; 1 kOhm max load			
	Measure:	0.000…24.000 mA isolated, 0.000…24.000 mA not isolated			
	Option : 50 mA generator and measure				
FREQUENCY (1…20V selectable amplitude)	CPM generation and measure 2.0 ... 600.0 CPM				
	Hz generation and measure 1.0…1000.0 Hz				
	kHz generatione and measure 1.0…10.00 kHz				
PULSE (1…20V selectable amplitude)	Generator	Pulse 1…30000			
		2 CPM…10 kHz			
OHMS	Generator:	5.0…4000.0 Ohms			
	Measure:	0.00…4000.0 Ohms			
THERMOCOUPLE	J	-200.0…+1200.0°C	C	0…+2316.0°C	
	K	-200.0…+1370.0°C	XK	-200.0…+800.0°C	
	T	-200.0…+400.0°C	BP	0…+2500.0°C	
	E	-200.0…+950.0°C	L	-200.0…+900.0°C	
	R	-20.0…+1750.0°C	U	-200.0…+400.0°C	
	S	-20.0…+1750.0°C	N	-200.0…+1300.0°C	
	B	+600.0…+1800.0°C			
THERMORESISTANCES RTD	Ni120(672)	-80.0…+260.0°C	Cu10	-100.0…+260.0°C	
	Pt100(385)	-200.0…+800.0°C	YSI400	+15.00…+50.00°C	
	Pt100(3926)	-200.0…+630.0°C	Cu50	-180.0…+200.0°C	
	Pt100(3916)	-200.0…+630.0°C	Cu100	-180.0…+200.0°C	
	Pt200(385)	-200.0…+630.0°C	Pt385-10	-200.0…+800.0°C	
	Pt500(385)	-200.0…+630.0°C	Pt385-50	-200.0…+800.0°C	
	Pt1000(385)	-200.0…+630.0°C			

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TECHNICAL SPECIFICATIONS

Included accessories:	Protective cover, 4 alkaline batteries, soft carrying case, test leads, communications cable, USB adapter, manual, DVD and CD video training and NIST traceable calibration certificate						
Optional accessories:	Pressure modules adaptor						
	Pressure modules (29 ranges)						
	Charger Kit						
	Portable battery Printer						
Accuracy:	Voltage +/-0.015% r.v. ,+/- 2 mV						
	Thermocouple mV +/- 0.02% of reading, +/- 10 ΩV						
	Thermocouple (tipical error @ 100°C) (in °C; + 0.2 for cold junction compensated error)						
	J	0.2°C	S	1.2°C	L	0.2°C	
	K	0.3°C	B	1.2°C	U	0.25°C	
	T	0.2°C	C	0.6°C	N	0.4°C	
	E	0.2°C	XK	0.2°C			
	R	1.2°C	BP	0.9°C			
	RTD (1 year uncertainty; typical at 100 ° C)						
	Ni120(672)	0.06°C	Pt500(385)	0.21°C	Cu100	0.13°C	
	Pt100(385)	0.13°C	Pt1000(385)	0.14°C	Pt385-10	0.84°C	
	Pt100(3926)	0.13°C	Cu10	0.82°C	Pt385-50	0.21°C	
	Pt100(3916)	0.13°C	YSI400	0.05°C			
	Pt200(385)	0.45°C	Cu50	0.20°C			
		Measure			Generator		
	Current mA	+/-0.015% reading value,+/- 2 ΩA			+/-0.015% reading value,+/- 2 ΩA		
	CPM	+/-0.05% reading value,+/- 0.1 CPM			+/-0.05% reading value		
	Hz	+/-0.05% reading value,+/- 0.1 Hz			+/-0.05% reading value		
	KhZ	+/-0.05% reading value,+/- 0.01 kHz			+/-0.125% reading value		
	Ohms	works with all pulsed transmitters under 5 ms					
	5-400	+/-0.015% r.v.,+/- 0.03 Ohm			+/-0.015% rv,+/- 0.1 Ohm (0.1-0.5mA)		
	5-400	+/-0.015% r.v.,+/- 0.03 Ohm			+/-0.015% rv,+/- 0.03 Ohm (0.5-3.0mA)		
	400-1500	+/-0.015% r.v.,+/- 0.3 Ohm			+/-0.015% rv,+/- 0.3 Ohm (0.05-0.8mA)		
	1500-4000	+/-0.015% r.v.,+/- 0.3 Ohm			+/-0.015% rv,+/- 0.3 Ohm (0.05-0.4mA)		

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