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Transmation

The world's first modular fully automated multifunction calibrator with a built-in pressure controller. The QuikCal 190 multifunction calibrator family's design makes it ideal for field use as well as shop or lab calibrations. Modules up to 300 psi are connected directly to the internal pump while modules up to 2500 psi are available to meausre higher presssures. Match your calibration needs with modules for gauge, draft, differential and absolute pressure, Plus modules for vacuum as well as RTD, thermocouple, milliamp and voltage. Each member of the QuikCal 190 family can go anywhere you want to take it.

It's a pressure calibrator

You can't find a more accurate portable device for calibrating pressure instruments. Unlike dead weight testers, the accuracy of the QuikCal 190 family is unaffected by variations in external forces such as local gravity, ambient temperature, and mounting orientation. The built-in pump eliminates the need to carry around hand pumps or nitrogen tanks, further simplifying your calibration tasks. The pumps in the QuikCal 190/195 generate and control pressure from -11 to 100 psig. The pumps in the draft range QuikCal 191/196 have a range of ±10 psig, with incredible control stability. This makes these models ideal for calibrating draft range instruments with spans down to 1/2 inch!

It's a temperature calibrator

If you need to calibrate temperature devices, two plug-in modules are available for sourcing and reading common thermocouple and RTD signals. In addition, the base unit reads 100 ohm platinum RTD's (the most common type) without a module.

It's an automated calibrator

Enter a transmitter's calibrated temperature or pressure range, the number of measurements to test and the settling time. Press the start button and the QuikCal 190 handles the rest. With a QuikCal 190/191 a single test is performed and the results displayed. With a documenting 195/196 over thirty sets of "As Found" and "As Left" data are automatically saved for recall, printing or transferred to a supported CMS package or to Microsoft Excel with the included QuikTest Transfer Programs.

It's a documenting calibrator

"Smart" calibrators are the future of calibration. The QuikCal 195/196 are the most advanced documenting calibrators on the market. Documenting systems tend to be complex and difficult to use, but the QuikCal 195/196 are simple to operate. They interface with CMS (calibration management software) systmes, including ProCal by Prime Technologies, Cornerstone by Applied System Technologies, and AMS by Emerson Process Management (formerly Fisher Rosemount). Or output traceable calibration reports to a printer via the serial port.

Multifunction Calibrator with Automatic Pump
QuikCal 190 Family

- **Calibrate transmitters**
  Automatically tests pressure and temperature transmitters in the lab, shop or field
- **Fully automated**
  Built-in microprocessor controlled compressor automatically generates and controls pressure
- **Test safety switches**
  Built-in tests for automated testing of pressure and temperature switches
- **Check pressure gauges**
  Quickly verify analog and digital gauges
- **Set up controllers and recorders**
  Simulate the process to calibrate recorders and measure the output of controllers
- **Troubleshoot instrument loops**
  Measure mA and V while supplying pressure or temperature inputs
- **Match your pressure needs**
  Select gauge, differential, absolute, vacuum or compund pressure modules
- **Test temperature instruments**
  Add extremely accurate thermocouple and RTD modules for unmatched versatility
- **Test I/Ps and 4-20 mA inputs**
  Plug in a mA/V module to source mA and V plus simulate 2-wire transmitters
- **Unsurpassed accuracy**
  To 0.025 % of pressure reading or 0.01 % of full scale electrical value
- **Optional accessories**
  Dirt/moisture trap or filter limit contamination 12 V charger for car or truck

Product Specifications

Output pressure range	190 & 195: -11 to 100 psi (-75 to 690 kPa)
	191 and 196: -10 to +10 psi (-69 to +69 kPa)
Standard engineering units	Electrical: mA, V, %; Temperature: °C, °F
	Pressure: psi, Pa, kPa, MPa, bar, mbar, atm, kgf/cm^2, Torr, mm Hg @ 0 °C, inch Hg @ 32 °F and 60 °F, inch H$_2$0 @ 40 °F, 60 °F, 68 °F, 73.4 °F, mm H$_2$0 @ 4 °C and 23 °C, cm H$_2$0 @ 4 °C and 23 °C
SI engineering units	Electrical: mA, V, %; Temperature: °C; Pressure: Pa, kPa, MPa, bar, mbar
Input ranges	Current: ±50.000 mA; Voltage: ±50.000 Volts
	RTD: (100 Ω Platinum RTD, DIN 43760, IEC 751 Curve): -40.0 °F to 212.0 °F (-40.0 °C to 100.0 °C)
Input calibrated accuracy	Current: ±0.01 % of reading ± 0.01 % of f.s.; Voltage: ±0.05 % of reading ± 0.01 % of f.s; RTD: ±0.5 °C
Input impedance	Current: 10 Ohms nominal; Voltage: >1 megohm
Loop power	24 Volts ± 20 %; current limited to 25 mA nominal
Max common mode voltage	200 V peak to peak (between switch test terminals and any other terminal)
Normal mode rejection	80 dB @ 50/60 Hz
Input protection	mA input is fuse protected (0.125A)
Switch test	Isolated, wet or dry, 250 V ac max
Power	Rechargeable 12 V sealed lead acid battery, 5000 mAh
Battery life and charge time	Battery life: 6 hours in typical use; Charge time: 8 hours typical. May be charged during operation.
Display	320 x 240 dot matrix paperwhite graphics LCD; 8 digit resolution; back lighting and contrast adjustments
Input/Output connections	Electrical: Full-size double insulated banana jacks; Pressure: 1/8" NPT via module connection
	Serial I/O: 8 pin Mini-DIN terminal (external module connection) DB9 serial port (RS-232)
Filtration of supplied air	40 micron sintered brass filter; cleanable
Housing	Black ABS/Polycarbonate (UL 94V-O)
Dimensions	Size (HWD) 6.0" x 7.75" x 16.25" (153 mm x 197 mm x 413 mm); Weight:12.65 lb. (5.75 kg)
Operating temperature	32 °F to 122 °F (0 °C to 50 °C)

QuikCal Module Specifications

Gauge Pressure Modules

Model	Range	Media	Accuracy
90-5G*	5 psig		>10 % of range
90-10G*	10 psig	Clean, dry gas only	±0.025 % of reading
90-30G*	30 psig		+0.015 % full scale
90-100G*	100 psig		
90-300G*	300 psig		<10 % of range
90-500G	500 psig	Gas or liquid	±0.030 % full scale
90-1000G	1,000 psig	compatible with	
90-2500G	2,500 psig	316SS and	
90-5KG	5,000 psig	florocarbon rubber	±0.1 % full scale

Differential Pressure Modules

Model	Range	Media	Accuracy
90-10WD*	±10" H2O psid		±0.025 % full scale

Absolute, Vacuum & Compound Pressure Modules

Model	Range	Media	Accuracy
90-15A*	15 psia		
90-30A*	30 psia	Clean, dry gas only	±0.05 % full scale
90-15V*	vac to 0 psig		
90-15C*	vac to 15 psig		

Electrical Module

Model	Range	Accuracy
40	0.000 to 24.000 mA	±(0.015 % reading +0.002 mA)
	±11.000 V dc	±(0.015 % reading +0.002 V)

Thermocouple Module

Model	Range	Accuracy			
60	±110.000 mV	±(0.015 % reading +0.006 mV)			
	Theromcouple Types	J/T/E	K/N	R/S	B
	Typical Accuracy	±0.2 °C	±0.3 °C	±0.6 °C	±0.7 °C

RTD Module

Model	Range	Accuracy
70	0.00 to 200.00 Ω	±(0.01 % reading +0.075 ohms)
	12 RTD Types	±0.3 °C typical for Pt 100 Ω 1.3850

Dry Block Interface Module

Model	
	Module is no longer available

* Modules of 300 psi and below may be connected to the internal compressor for pressure generation.

At least one module is required for operation of any QuikCal 190 family calibrator.

Ordering information — Part No.
QuikCal 190 Multifunction Calibrator with 100 psi pump — 190P
QuikCal 191 Multifunction Calibrator with ±10 "H2O Pump — 191P
QuikCal 195 Documenting Multifunction Calibrator with100 psi pump — 195P
QuikCal 196 Documenting Multifunction Calibrator with ±10 "H2O pump — 196P

Optional accessories — Part No.
DC Charger with cigarette adapter plug — 502226-131
Carrying case - padded nylon — 190-CS

Dirt/Moisture trap — IDT600-2
In-line filter — 700ILF

Included with each QuikCal are: 110 V ac or 220 V ac charger,1 Pair of test leads with shielded banana plugs, alligator clips, test probes and spade lugs; manual, quick start guide and one year warranty

In additional, the 195 and 196 documenting versions include: Serial cable for computer connection, CD with QuikTest Transfer Programs and manual for QuikTest Trans fer Programs

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