



H394 Series TEMPCAL^{®1} Tester Multi-Range Thermocouple and Thermal Switch Tester

Precision Testing for

- Thermal Switches
- Chromel[®]-Alumel^{®2} Thermocouples
- Continuous-Wire Fire Detection Systems

Howell's TEMPCAL[®] Tester provides a portable, lightweight means for conducting repeatable, accurate testing of thermal switches, thermocouples and continuous-wire fire detection systems. Connected to the H394, TEMPCAL[®] Heater Probes can test heat sensitive detectors either in their normal operating location or on the bench. Testing thermal sensors in place dramatically reduces test time and associated cost.

Providing rapid heat rise and stabilization, this system enables an 800 °F thermal switch to be heated to test temperature in approximately five minutes. The five minute period is sufficient to heat the thermal switch and verify its operation. Once the probe is heated, additional switches can be checked rapidly.

H394R
NSN 4920-01-468-9406

H394-115
NSN 4920-01-464-9810



Heater Probes

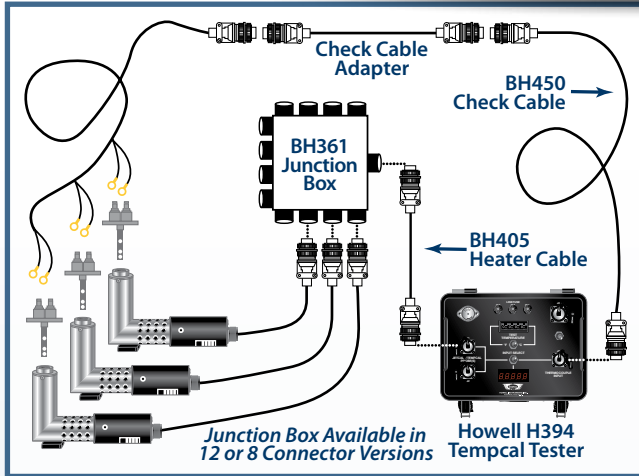
Specifications	
Indicator Range	-40 to 1850 °F -40 to 1010 °C
Indicator Accuracy	±1 °C in Normal Operating Conditions of 50° to 95 °F
Dimensions	14" H x 9.7" D x 12" W
Weight	25 lbs
Power Requirements	20A Maximum

1 TEMPCAL[®] is a registered trademark of Howell Instruments, Inc.
2 Chromel[®] and Alumel[®] are registered trademarks of Hoskins Manufacturing Company

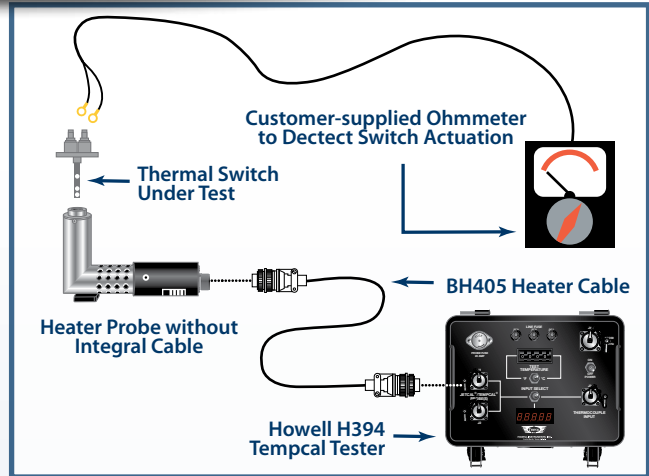
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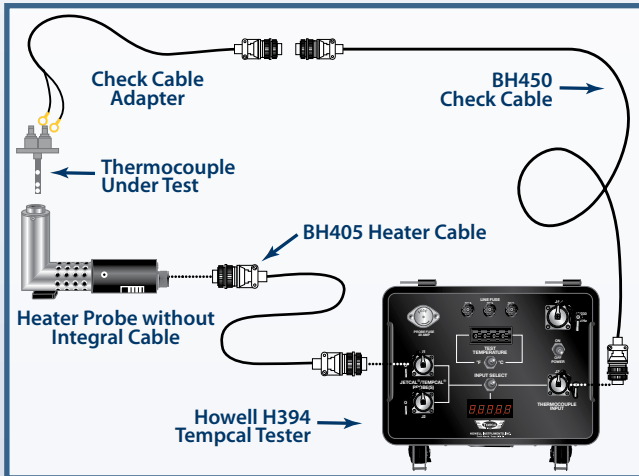
PORTABLE ENGINE TEST SETS & TRIMMERS



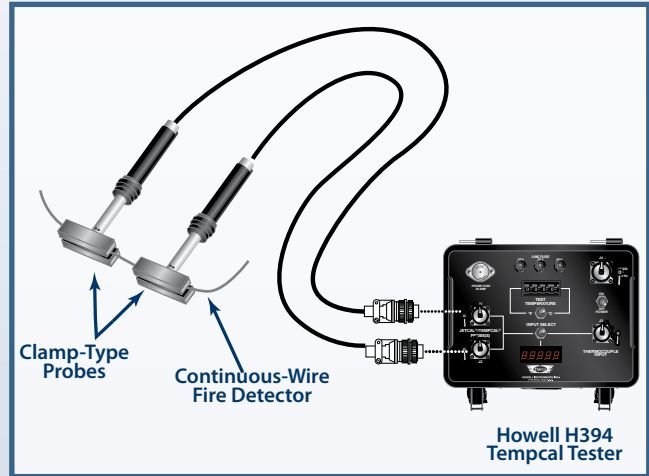
Harnesses containing up to 12 thermocouples can be tested by using the BH361 Series junction box. The H394 monitors the average probe temperature and the average thermocouple temperature.



Thermal switches are tested by using a customer-supplied ohmmeter to detect switch actuation at the proper test temperature. BH405 heater cables are required for probes without integral cables.



Thermocouples are tested by using the two-position selector switch to compare the heater probe temperature with the output of the thermocouple under test.



Clamp-type Probes (1 or 2 probes) are used to test continuous-wire fire detection systems such as those manufactured by Walter Kidde and Meggitt. These systems are checked by comparing the operation of the normal indicating device (indicator, lamp, alarm, etc.) with the heater probe temperature display on the H394.

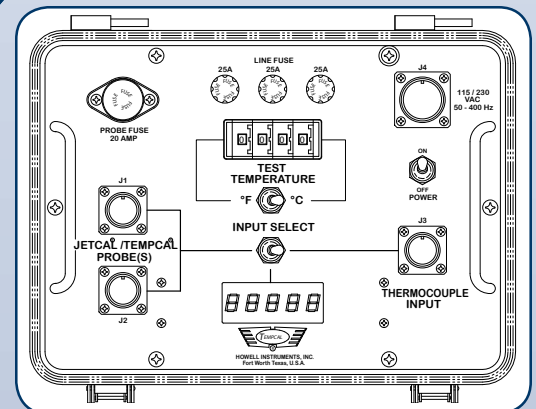
Application Table

Note:

If the TEMPCAL® Probe being used does not have an integral cable, the BH405 Heater Cable is required.

* For Meggitt (Systron Donner) Fire Detection Systems.

	H394R-1 TEMPCAL® Tester	BH31294-115 Power Cable	BH31294-230 Power Cable	BH405 Heater Cable	BH450 Check Cable	BH27906-120 Heater Probe	BH1278 Heater Probe	BH7413-40 Heater Probe	BH7424 Heater Cable	C12714 Accessory Case
H394R	1	1	1	1						
H394-115	1	1		1						
H394-230	1		1	1						
H394-1	1	1		1			1			
H394A-1	1		1	1			1			
H394-2	1	1		1			1			1
H394-3	1	1			1			1	1	
H394SD-115*	1	1				2				
H394SD-230*	1		1			2				



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TEMPCAL^{®1} Heater Probes

Test Thermocouples, Thermal Switches and Continuous-Wire Fire Detection Systems

Howell's TEMPCAL[®] Heater Probes dynamically test thermal switches, continuous-wire heat detection systems, and thermocouples.

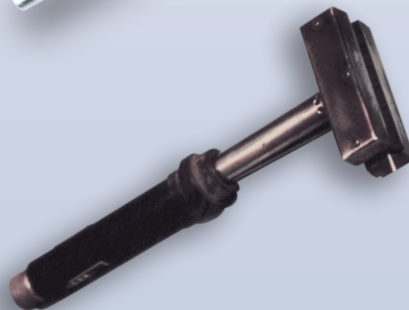
Connected to the JETCAL^{®1} Analyzer/Trimmer or TEMPCAL[®] Tester, TEMPCAL[®] Heater Probes can test heat sensitive detectors either in their normal operating location or on the bench. Both testers monitor the probe temperature and supply the precise voltage necessary to accurately control the probe heaters.

Probes permit rapid heat rise and stabilization. Typically, in 10 minutes, an 800 °F thermal switch can be heated to test temperatures of the switch. The 10-minute period includes the time required to heat the probes and open and close the switch. Once the probe is heated, additional switches can be checked rapidly.

Contact Howell to receive a list of TEMPCAL[®] Probe Applications.



Heater Probes



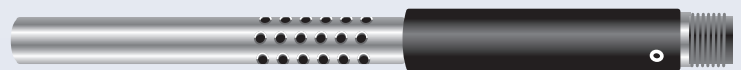
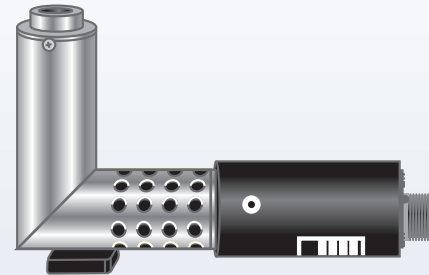
PORTABLE ENGINE TEST SETS & TRIMMERS

Engine	Part Number
ALLISON 501D22A, -22C	BH16447-40
CF34-8	BH19817A-40
CFM-56	BH22207-40, BA
CFM-56-5	BH24994-40
CT-7 / T700	BH16463-40
GTC85-98D	BH19808-40
GTE-431	BH14122-40
JT15D	BH14114-40
JT9D	BH30758-40
	BH30759-40
JT8D-1, THRU -17	BH3378-40
J85-21	BH14113-120
J85-5	BH3806A-70
PT6	BH22206-40
	BH7437-40
	BH16454-40
TF33	BH3879-40
TF39, CF6	BH7436-40
TPE331	BH3887-40
T53-L-13, -15	BH7434L-40
	BH7434R-40
T53-L-703	BH19811BA
T56A-14 (LSE), -15 (LSE)	BH16447-40
T58-GE, -10	BH3808-40
T63/ALLISON 250	BH7413-40
T64	BH7435-40

For a complete engine application list, visit our website at www.howellinst.com

Thermocouple and Thermal Switch Probes

Thermocouple and Thermal Switch Probes are manufactured in either straight or right-angle configurations. The diameter and depth of the opening into which the switch is inserted is critical and must be designed precisely for the switch being tested.



TEMPCAL® Probe

The clamp-type TEMPCAL® probe is used to test continuous-wire fire detection systems. This probe heats 3-1/2 inches of the wire and can accept continuous-wires up to 1/8 inch in diameter. It functionally checks the continuous-wire, amplifier, relay and cockpit indicator.

