

NEW Hart Scientific Intrinsically Safe Reference Thermometer

- Certified to ATEX Directive—EX II 2G EEx ib IIB T4 Rating
- System Accuracy to $\pm 0.05^{\circ}\text{C}$ (readout and probe!)
- Battery Powered
- Dual Channel with Differential Measurement

We get many requests every year from our customers for an intrinsically safe reference thermometer for use in hazardous areas. Up to now, there have been very few intrinsically safe thermometers available—and certainly no reference-grade thermometers.

The 5577 is an intrinsically safe, reference-grade thermometer, that combines an ATEX IS rating with high accuracy ($\pm 0.05^{\circ}\text{C}$ over the entire range -100°C to 135°C) for the readout and probe together. It doesn't get any better than this!

So how do we achieve such high performance? The 5577 uses Pt100 probes and a calibration procedure that uses system calibration data to marry the probe and the readout, which ensures high-accuracy measurements across a complete temperature range. System calibrations—done by Hart—are NIST-traceable and NVLAP-accredited.

The 5577 can be used with one or two probes and will display both measurement channels simultaneously along with their difference. Several probe designs are available depending on what process you're measuring. An optional convenient carrying-case provides storage for one readout and up to two probes.

Since the 5577 is battery powered, the thermometer is lightweight and extremely portable—perfect for measurements in those hard-to-get-to places out on the pipeline. A standard IS-rated 9V "D" cell powers the thermometer for up to 20 hours.



Temperature Test Instruments

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Specifications

Temperature Range	-100°C to 135°C
System Accuracy	
(calibration plus repeatability)	$\pm 0.05^{\circ}\text{C}$
Drift (1 year)	$\pm 0.05^{\circ}\text{C}$ (assumes proper handling of probes)
Resolution	0.01°
Sensor Type	Pt100, 4-wire, DIN '385' Alpha
Communications	RS-232 (not for use within hazardous environments)
Power Supply	9V IS-rated battery
Battery Life	20 hours
Display	2-line LCD
Operating Range	0°C to 40°C
IS Rating	EX II 2G EEx ib IIB T4 rating; Certified by CENELEC to European ATEX directive
Dimensions	8" H x 3.5" W x 1.5" D (20 x 8.5 x 4 cm)
Weight	0.7 lb. (0.3 kg)
Calibration	NIST-traceable, NVLAP accredited system cal from Hart with data

CENELEC IS Markings	
EX	EC Examination Mark
II	ATEX Gas Groups – Group II is for gases in non-mining industries
2G	ATEX Zones – 2G identifies zones in which an explosive gas/air mixture is likely to be present
EEx	European Mark for Explosion Protected
ib	Explosion Protection Type and Zones – ib indicates intrinsic safety in zones in which an explosive gas/air mixture is at least likely to be present
IIB	Explosive Gas Groups – IIB is for atmospheres containing ethylene or gases of an equivalent hazard
T4	Temperature Classification – T4 has an upper temperature limit to 135°C

Ordering Information

Order #	Mfg #	Description	Price
MPHT5577	5577	Handheld IS-Rated Thermometer Readout, P655-EX	
MPHT5315-001	5315-001	Immersion Probe*, -100°C to 135°C , 150 x 3 mm	
MPHT5315-002	5315-002	Immersion Probe*, -100°C to 135°C , 300 x 3 mm	
MPHT5315-003	5315-003	Immersion Probe*, -100°C to 135°C , 300 x 6 mm	
MPHT5315-005	5315-005	IS-Approved Spare Battery	
MPHT9326	9326	Carrying Case (fits 5577 and two 300 mm probes)	

Note: Each purchased probe must be system calibrated with its 5577 to achieve specified accuracy