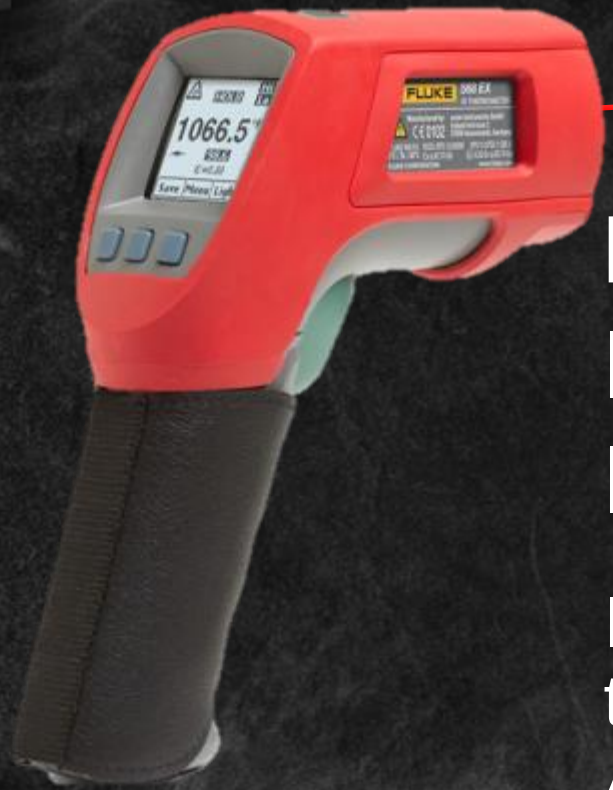
The Most Trusted Tools in the World.

FLUKE



Fluke 568 Ex Intrinsically Safe Infrared Thermometer

Intrinsically safe temperature measurements. Anywhere in the world.

Product Overview

Value Proposition

- Meets intrinsically safe certifications from all major safety agencies for Class I Div 1 and Div 2 or Zone 1 and 2 hazardous environments.
- One tool suitable for use anywhere in the world.
- Ideal for petroleum, chemical, oil & gas, or pharmaceutical environments.

Product Highlights

- Measure -40 °C to 800 °C (-40 °F to 1472 °F) with ± 1 % measurement accuracy
- Conductive case for carrying into hazardous areas
- Access advanced features easily with soft-keys and graphical display
- Accurate measurements from further away, with 50:1 distance-to-spot ratio
- Compatible with standard K-type mini-connector thermocouple (KTC) probe
- Adjustable emissivity, built-in material table
- Capture up to 99 points of data
- Versatile interface with multiple languages (user select)
- Two-year warranty

Applications

Application	Segments	Temp Range	Accuracy	D:S	
Repair and maintenance: Measure motor, pump to verify balanced phase-to-phase power distribution and proper operating temperature	Manufacturing Site 	120 ° C	Low	Low - Medium	Traditional applications of IR Thermometers on **equipment maintenance** (electrical motor for balanced phase-to phase power distribution, motor bearings, motor winding insulation), **electrical maintenance** (transformers, ballasts, utilities, uninterruptible power supplies), and **process/product** monitoring temperature on production line such as rubber to plastics can be applied using 568Ex but the operating environment is considered hazardous where inflammable gases and vapor exists which can cause explosion. Such environment usually exists in oil & gas, petrochemical, refinery, and pharmaceutical industry
Repair and maintenance: Measure panels, fuses, circuit brake, compressors, duct, vents in hard to reach areas	Installer, Contractor of Electrical/HVAC 	200 ° C	Low	Medium - High	
Maintenance: Taking measurement of transformers, wires and components located high above ground.	Utilities 	120 ° C	Low	High	
Maintenance & Quality control: Monitor the temperature during chemical processing	Chemical 	800 ° C	Medium-high	Medium-High	
Maintenance: Exterior of the kiln temperature , Monitor the surface temperature of the reformer tubes	Petrochemical 	800 ° C	Medium	Medium-High	

568 Ex will serve the needs of customers who must comply with EH&S regulations to ensure safety while operating in a hazardous environment where hazardous gases and vapor are present

Safety Certifications

AGENCY	SAFETY RATING
ATEX/IECEx	Zone 1 and 2 IECEx EPS 13.0006X Ex ia IIC T4 Gb 0°C ≤ Ta ≤ 50°C EPS 13 ATEX 1.525 X II 2G Ex ia IIC T4 Gb

What does it mean?

Meaning of Marking:		Zone 1	IIC	T4	0°C ≤ Ta ≤ 50°C
Marking:	Class 1	Division 1	Groups ABCD	T4	0°C ≤ Ta ≤ 50°C

Type of Flammable Substance

Class 1 - approved for strictest class

* Class 1 - Flammable gas, vapors, and liquids
* Class 2 - Combustible dusts
* Class 3 - Ignitable fibers and flyings

Area Classification

Division 1 - approved to the strictest division for both:

* Division 1 - flammable substances are continuously present or likely to exist under normal operating condition
* Division 2 - flammable substances are not likely to exist under normal operating condition

Gas Group

Group B - approved fro Group B, also approved for Groups C and D, but not A. If no Groups are listed, approved for all.

The gases are grouped according to certain physical characteristics on their explosive behavior

Temperature Code

If no temperature code is listed, meets strictest temperature code (T6)

This is the maximum temperature that the equipment is allowed to emit without causing an explosion/fire.

T4 in Zone 0, 1, 2 is equal to T4 and T4A in Division 1 and 2

Maximum Temperature T4 135 ^{0}C (275 ^{0}F) and T4A 120 ^{0}C (248 ^{0}F)

Ambient Temperature range (0°C ≤ Ta ≤ 50°C) is also marked.

Understanding Zone vs Division

Zone 0	Zone 1	Zone 2
Where ignitable concentrations of flammable gases, vapors, or liquids are present continuously or for long periods of time under normal operating conditions.	Where ignitable concentrations of flammable gases, vapors, or liquids: • Are likely to exist under normal operating conditions • May exist frequently because of repair, maintenance operations, or leakage	Where ignitable concentrations of flammable gases, vapors, or liquids: • Are not likely to exist under normal operating conditions • Occur for only a short period of time • Become hazardous only in case of an accident or some unusual operating condition
Division 1		Division 2
Where ignitable concentrations of flammable gases, vapors, or liquids: • Are likely to exist under normal operating conditions • Exist frequently because of maintenance/repair work or frequent equipment failure		Where ignitable concentrations of flammable gases, vapors, or liquids: • Are not likely to exist under normal operating conditions • Are normally in closed containers where the hazard can only escape through accidental rupture or breakdown of such containers or in case of abnormal operation of equipment

Table 2: Class 1 Group Comparison

Zone	Class/Division
IIC - Acetylene and Hydrogen	A — Acetylene
	B — Hydrogen
IIB — Ethylene	C — Ethylene
IIA — Propane	D — Propane

Fit in product line

- 568 Ex offers performance similar to 566, 568, PLUS Ex certification
- Range, D:S slightly under the premium 572-2 High-Temperature Infrared Thermometer
- Fluke's only intrinsically safe infrared thermometer





	Fluke 561 Infrared/Contact Thermometer	Fluke 566 Infrared/Contact Thermometer	Fluke 568 Infrared/Contact Thermometer	Fluke 568 Ex Intrinsically Safe Infrared Thermometer	Fluke 572-2 High-Temperature Infrared/Contact Thermometer
Temperature Range	-40 °C to 550 ° C -40 °F to 1022 °F	40 °C to 650 °C -40 °F to 1202 °F	-40 °C to 800 °C -40 °F to 1472 °F	-40 °C to 800 °C -40 °F to 1472 °F	-30 °C to 900 °C -22 °F to 1652 °F
Distance to Spot Ratio	12:1	30:1	50:1	50:1	60:1
Laser Sighting	Single point laser	Single point laser	Single point laser	Single point laser	Dual laser
Emissivity	Adjustable with three settings: Low (0.3), Medium (0.7). High (0.95)	By built-in table of common materials or digitally adjustable from 0.10 to 1.00 by 0.01	By built-in table of common materials or digitally adjustable from 0.10 to 1.00 by 0.01	By built-in table of common materials or digitally adjustable from 0.10 to 1.00 by 0.01	Digitally adjustable from 0.10 to 1.00 by 0.01 or via built-in table of common materials
Display Resolution	0.1°C (0.1 °F) of reading	0.1°C (0.1 °F) of reading	0.1°C (0.1 °F) of reading	0.1°C (0.1 °F) of reading	0.1°C (0.1 °F) of reading
Backlight Display	Yes	Two levels	Two levels	Two levels	Two levels, normal and extra bright for darker environments