Integrated Flame Scanner with Internal Flame Relay

Addendum to CU-120 reduced temperature operation

The Fireye InSight IV flame scanners (e.g., 95IRS4, 95UVS4) are microprocessor-based flame scanners utilizing dual solid-state infrared (IR) and ultraviolet (UV) sensors.

Fireye's engineering department performed tests confirming the ability of our model "InSight IV" flame scanner to perform at reduced temperatures. Testing was carried out on Fireye InSight IV models, 95UVS4 and 95IRS4.

The units were placed in a cold-box set for -50°C and left overnight with no power applied to the scanners. The following morning the scanners were powered up and the displays read the internal temperature as –50°C. A flame was simulated outside of the cold-box through an eight-inch sight-tube.

Power was applied to the scanner, and after 20 minutes the scanner inside temperature had risen to -39°C, although the ambient remained at -50°C throughout (internal heat rise). Upon reaching an internal temperature of -39°C, power was cycled to the scanner, and it operated normally.

Conclusion:

The InSight IV scanners will properly operate from a cold start condition of -50°C if power is applied to the InSight IV scanner for a minimum of 20 minutes and power is cycled.