

# RATE-OF-RISE & FIXED TEMPERATURE HEAT DETECTORS



Model D-103

## DESCRIPTION

DEMCO Heat Detectors **D-103** employ the principle of electrothermodynamics, the science of relation between heat and electromechanical works. They are professionally designed to work reliably with most fire detection system with central control equipment.

These units feature a double stage fire detection by employing two distinct methods: Rate-of-Rise and Fixed Temperature, both of which are open circuits designs designed to close an electrical circuit upon activation. The DEMCO **D-103** Heat Detectors meet the requirement of UL521.

## MODE OF DETECTION

### Rate-of-Rise

Being the first stage of detection, the Detector senses the rate-of-rise of temperature around its zone of coverage. When the rate of temperature increase exceeds 6°C within 4 seconds, the Detector instantly switches from its normally open circuit to closed circuit to activate the fire alarm. At the same time, the light emitting diode (LED) is illuminated indicating its active mode. It will remain active until the ambient temperature reduces substantially enough to automatically reset it back to its

open circuit standby mode (dual detection mode). Under normal day temperature fluctuations, the Detector remains in standby mode. The current consumption while in standby mode is nil, and changes to 1.5 mA when the Detector is activated.

### Fixed Temperature

The Fixed Temperature method comes into action in cases of slow smoldering fire where the temperature does not increase at the rate that would trigger the Rate-of-Rise detection.

At any time when the temperature in the zone of coverage reaches a predetermined point which is factory calibrated, a snap action mechanism switches the Detector from its standby open circuit mode to close circuit mode permanently. Once this has taken place, the unit will not reset itself and the LED indicator will stay lighted. Replacement of the set is required.

## DEMCO ADVANTAGES

- Double sensitivity (Rate of Rise & Fixed Temperature).
- Interchangeable base.
- Easy installation.
- Double terminal wire connector.
- LED indication.
- Low power consumption.
- Wide voltage variation.
- Auto Reset (Rate-of-Rise mode).
- Durable.

## SPECIFICATION

Supply Voltage	12-28V DC
Standby Current	Nil
Alarm Current	1.5mA
Size (Ø) x (H)	78 X 55 mm
Net Weight	92g
<b>SIRIM TEST REPORT 83LL128</b>	

Specifications are subject to change without prior notice.



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