Steel Wall Sensor Details

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Note: All channel fittings connected using 1/2" spring channel nuts (P1006) and 1/2" hex head bolts, 1 1/2" in length.

Front and Rear Views of Wall Frame with Steel Wall Sensor Installed
SCALE: 1/10

DETAIL A
SCALE 1 / 4

Unistrut P1065
Flat Plate Fitting

Unistrut P1026
Ninety Degree Fitting

Unistrut P1000
1 5/8" Channel

High Temperature Silicone Gasket
Details:
The steel wall sensor is constructed using 3 sheets of 18 ga steel, each measuring 75 in by 25 in, bolted to a Unistrut steel frame. All bolting hardware is fitted loosely in order to avoid buckling as the material thermally expands under fire exposure. The total mass of the sheet steel is approximately 12 kg, and the total mass of the entire frame including bolting hardware is approximately 129 kg. With a total area of 75 in by 75 in (3,629 m²), a total mass of 129 kg, and density of 7900 kg/m³, the effective thickness of the wall is 4.5 mm. Thermocouples are resistance welded to the back side of the steel sheet in the location indicated.

Front and Rear Views of the Steel Wall Sensor
SCALE: 1/10