

# APPLICATION DATA SHEET

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## skil ENVIRONMENTAL



## Emissions Monitoring System Model 2950

- ✓ Wall mounting controller
- ✓ 24V DC or 110/230vAC operation
- ✓ 24V Independent Audio/Visual Alarm driver
- ✓ Volt free contact outputs
- ✓ 4-20mA signal outputs
- ✓ Digital display showing gas concentration
- ✓ Battery backup options
- ✓ Optional additional input/output cards
- ✓ Easy installation
- ✓ Duct mounting Oxygen sensor

The Skil Model 2950 is a simple to use oxygen analyser utilising a Zirconia Oxygen sensor mounted directly into the process or flue.

The product is not susceptible to interference from any other gases and can tell the relative amount of oxygen in any atmosphere.

The controller gives a direct 4-20mA output and a direct reading so you can instantly see the oxygen content on a clear LCD screen and interface to host control systems. The control panel allows the user to set alarm levels based on the Oxygen reading and CO<sub>2</sub> calculation.

The product can be used to provide control of the oxygen content or give alarms and trigger external devices.

## Oxygen Probe Specification

Supply Voltage, V	24Vdc $\pm$ 5%
Supply Current, A	500mA
Output Signal	0-10Vdc or 4-20mA
Oxygen Range	0.1 - 25% vv
Ambient temperature	-10°C to 50°C
Resolution	12 bit
Sensitivity	1.05ms/mbar
Accuracy	$\pm$ 2%
Reproducibility	$\pm$ 1%
Warm up time	10min (approx.)
Permissible gas temperature	-100 +250°C
Gas flow rate	0-10m/s
Repetitive permissible acceleration	5g
Incidental permissible acceleration	30g
Protection level, housing	IP65



CH<sub>4</sub> H<sub>2</sub>S CO<sub>2</sub>  
NO<sub>x</sub> SO<sub>2</sub> NO<sub>2</sub> CO

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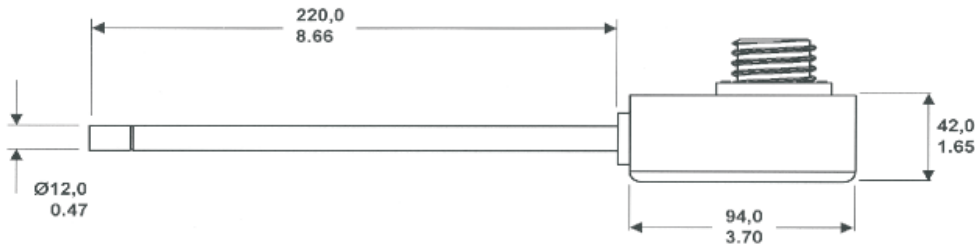
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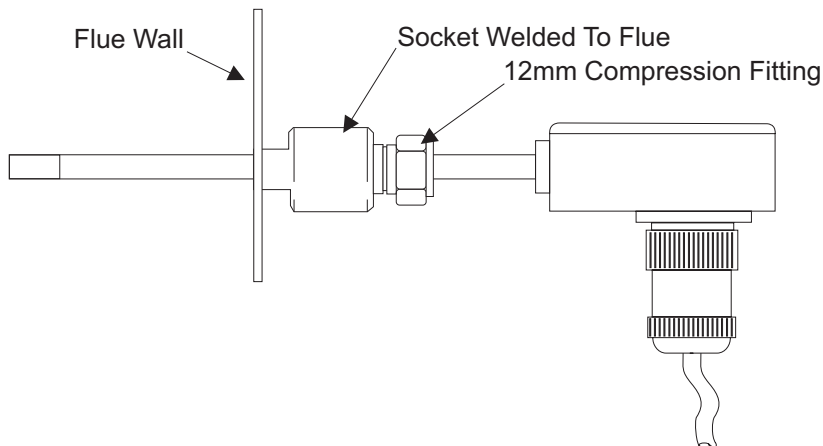
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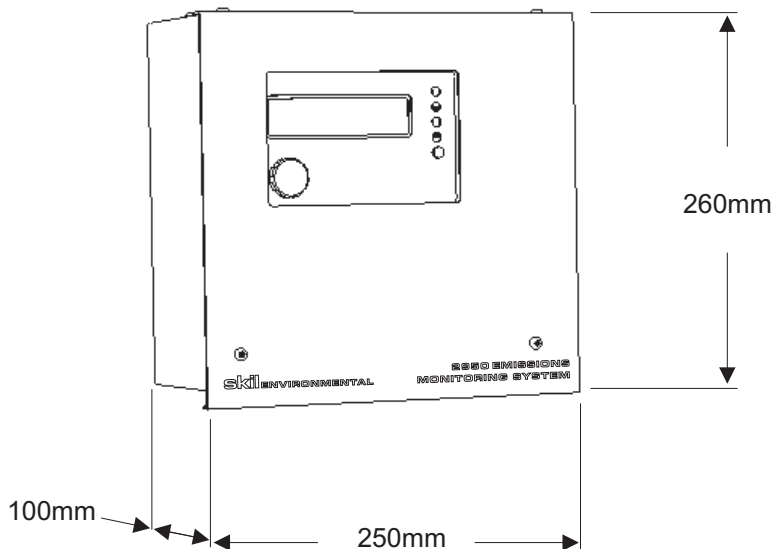
## Basic Probe Dimensions



## Recommended Probe Mounting



## Basic Control Panel Dimensions



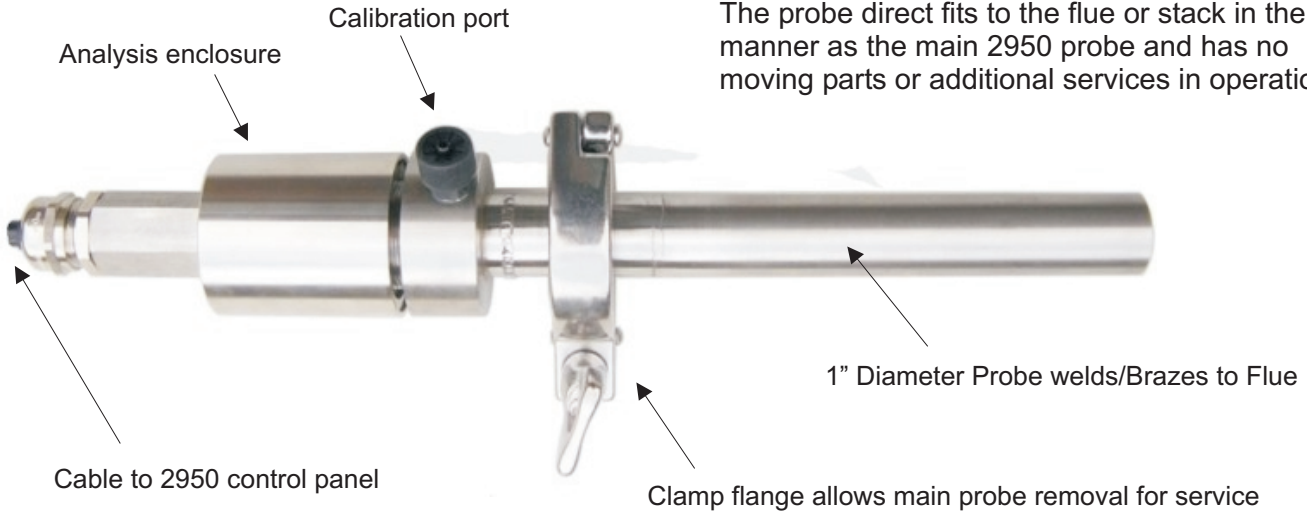
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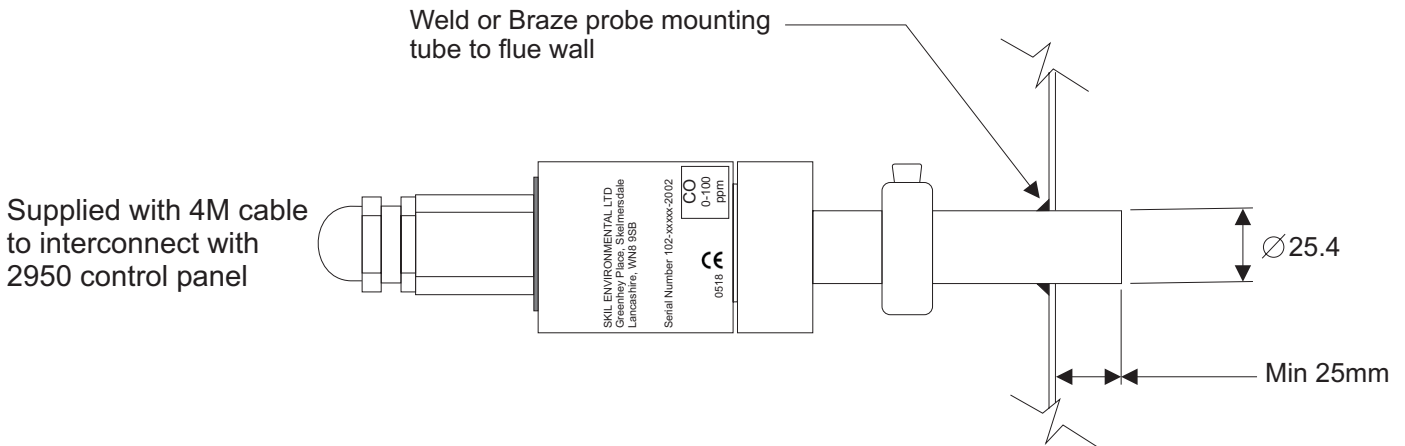
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## Carbon Monoxide Probe

An additional probe can be fitted to the Skil Model 2950 to provide Carbon Monoxide measurement. The probe direct fits to the flue or stack in the same manner as the main 2950 probe and has no moving parts or additional services in operation.



## Carbon Monoxide Probe Mounting Details



## Carbon Monoxide Probe Specifications

Range	0-1000ppm
Power	24V DC
Temperature	-10 to 50 Deg C Ambient 100 Deg C Flue Temp
RH	5 to 95% RH
Accuracy	+/- 3%
Output	Linear 4-20mA output from Skil 2950 control panel

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## Control Panel Specifications

Power Source	85 to 260 VAC ( 18 to 30 VDC Option)
Power Consumption	40 Watts
Display	2 x 16 backlight LCD
Operating Temperature	0°C to 50°C
Operating Humidity	Up to 95% non-condensing
Resolution	2 Decimal Places O2 and CO2
	Temp Displayed as Whole Numbers (Temp is optional)
	1 Decimal Place Efficiency 0-100% (Option)
Update Rate	1 Second
Size (mm)	255 (H) x 265 (W) x 100 (D)
Inputs	O2 sensor (4-20mA)
	Temp Sensor Option (4-20mA 0-500 Deg C)
Available Outputs	3 x configurable SPCO relays (7 Amp non conductive load)
	1 x fault SPCO relays (7 Amp non conductive load)
	1 x solid state audio/sounder 24VDC
	1 x solid state visual/flasher 24VDC
	4-20mA Output For Oxygen Reading
	4-20mA Output For Calculated CO2
	4-20mA Output For Temperature (Optional)
	4-20mA Output For Efficiency (Optional Requires Temp Probe Option)
Optional Equipment	Battery backup module 7AH 255 (H) x 265 (W) x 100 (D)
CE Declaration	EN50081-2: 1994
	EN50082-2: 1995
	EN61010-1: 2001

## Order Codes

Part Number	Description
90-5135501	2950 base unit Includes: Control Panel Duct Mounted Probe 3M Interface Cable
90-5135601	2950 Temperature Probe Option
90-5135701	2950 Efficiency Output Option (See note below)
90-5138301	2950 CO Probe Option (Note: Control Panel Allows Efficiency or CO Probe Output Not Both)



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