



Application Survey for MKS Process & Environmental Analysis Solutions

Please fill in as much as you can so we can determine the measurement feasibility with the optimal system configuration that will support your application as an FTIR or Precise TFS analyzer.

Customer Name:	
Company:	
Address:	
City:	
State / Zip:	
Country:	
Email:	Phone :
Date of this request:	MKS Contact:
IF DIFFERENT FROM ABOVE:	
End User:	Installation Country:

1. Please describe your application or process?
TYPE HERE
Examples: <ul style="list-style-type: none">• Vehicle or engine Combustion emission monitoring• Continuous emissions monitoring• Ethylene production (alkanes, alkynes, alkenes)• Natural gas metering (C1-C6)• Acid &/or sour gas monitoring,• LNG, LPG, Syngas, Biogas, CNG• Power generation (BTU, Methane Number, Wobbe Index)• Trace impurities in natural gas (i.e. moisture &/or sulfur).• Total BTU measurement (i.e. burner of furnace control)

2. What methods or instruments are currently used and why are they insufficient?
TYPE HERE
Examples: <ol style="list-style-type: none">1) GC-TCD, GC-FID, FTIR, NDIR, TDL Residual Oxygen, etc.2) Need to lower the cost of testing3) Wants faster response with hydrocarbon speciation4) In-line unattended monitoring is critical, etc.

3. Sample Conditions – Please provide the following information				
Requested Information	Range			Additional Notes
	Minimum	Nominal	Maximum	
Sample temperature <input type="checkbox"/> °F or <input type="checkbox"/> °C	Minimum	Nominal	Maximum	
Sample pressure at tap / sampling point: <input type="checkbox"/> ATM <input type="checkbox"/> PSIG <input type="checkbox"/> TORR	Minimum	Nominal	Maximum	
If pressure > 20 psig can it be dropped to 20psig?	<input type="checkbox"/> YES or <input type="checkbox"/> NO			
Sample flow rate (in LPM)	Minimum	Nominal	Maximum	
Desired plumbing interface for TFS Sensor (size & type of fittings)				
Other information?				

FTIR Analyzer Related ONLY

1. Do you have any previous experience with FTIR?
a. <input type="checkbox"/> Yes <input type="checkbox"/> No
b. If yes, which manufacturer of FTIR?

2. FTIR Temperature:
The MKS FTIRs are configured to run Hot and Wet gas streams however there is a limit on how high the gas stream temperature can be.
If temperature > 191°C can it be dropped to 191°C? <input type="checkbox"/> YES or <input type="checkbox"/> NO

3. FTIR Detector Options:
MKS uses high sensitivity MCT detectors. For the broadest range of components Liquid N2 (LN2) is needed to cool the detector every 14-18 hours. For 24/7 use an external 5L dewar can be added to allow up to 3-5 days of unattended use. MKS also has thermal electrically (TE) cooled detectors (which do not need LN2, and run continuously) but they have a more limited list of components.
a. Can LN2 be used to cool the detector? <input type="checkbox"/> Yes <input type="checkbox"/> No
b. If YES, do you want to include the External 5L Dewar? <input type="checkbox"/> Yes <input type="checkbox"/> No

Environmental

1. Installation related questions:				
Requested Information	Range or MKS Available Options			Additional Notes
Ambient temperature <input type="checkbox"/> °F or <input type="checkbox"/> °C	Minimum	Nominal	Maximum	
Ambient humidity	%RH = ____			
Where will the analyzer be housed?	TYPE HERE Example: Climate controlled shelter, environmental shelter, open air, etc.			
Is the area Climate Controlled? <input type="checkbox"/> YES or <input type="checkbox"/> NO	TYPE HERE If NO, any extreme conditions? (Humidity, vibration, direct sunlight, etc.)			
Analyzer voltage requirement	<input type="checkbox"/> 120V / 60Hz <input type="checkbox"/> 220V / 50Hz <input type="checkbox"/> 220V / 60Hz <input type="checkbox"/> Other? _____			
Other information?	TFS ONLY <input type="checkbox"/> 24DC			

2. Data acquisition and interface measurements		
Requested Information	MKS Available Options	Additional Notes
Desired measurement rate?	<input type="checkbox"/> 5 Hz (200 msec) <input type="checkbox"/> 1 HZ (1sec) <input type="checkbox"/> 5 sec <input type="checkbox"/> 30 sec <input type="checkbox"/> 60 sec <input type="checkbox"/> Other (specify) _____	
Desired data OUTPUT interface and protocol (TFS ONLY)	<input type="checkbox"/> Analog/Digital I/Os <input type="checkbox"/> OPC <input type="checkbox"/> MODBUS <input type="checkbox"/> OTHER	
Desired data INPUT/OUTPUT interface and protocol (FTIR ONLY)	<input type="checkbox"/> AK Protocol <input type="checkbox"/> Analog/Digital I/Os <input type="checkbox"/> OPC <input type="checkbox"/> Toolweb (free) <input type="checkbox"/> MODBUS	
Other information?		

3. Hazardous Area Classification:			
<input type="checkbox"/> CSA Class1 Div1	<input type="checkbox"/> CSA Class1 Div2	<input type="checkbox"/> ATEX ZONE 1	<input type="checkbox"/> ATEX ZONE 2
<input type="checkbox"/> IECEX	<input type="checkbox"/> TIIS	<input type="checkbox"/> CE	<input type="checkbox"/> OTHER? _____

4. Any special analytical or acceptance criteria needed (e.g. specific EPA, ASTM or DIN regulations).

- EPA 1065/1066 Euro 5, 6 TUV MCERTS
 Other? _____

5. TFS ONLY Options:

- Portable (general purpose rated)
 Rack mountable (4U general purpose rated)
 SS316L low-carbon stainless steel enclosure
 SS316L low-carbon stainless steel gas cell & wetted parts
 Stream switching
 Local HMI/display
 Analog outputs
 3 year total warranty package

OTHER REQUIREMENTS

1. What is the timeframe for a solution or analyzer (i.e. now, 3 months, 6 months, 1+ year)

- Now 3 months 6 months 12+ months

2. Are there other requirements not covered in any section above?

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