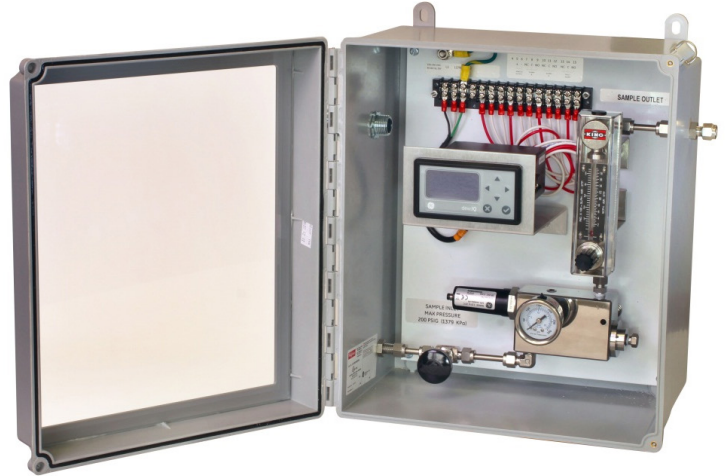


air.IQ

Moisture Analyzer Packaged Solution



Features

air.IQ simplifies the selection and installation of your moisture analyzer. Install the moisture probe, wire your power and outputs to the terminal strip, and connect your gas to the inlet fitting.

- Wall mounted NEMA 4X package
- Includes the analyzer display, moisture probe, interconnecting cable, and sample system
- Features the dew.IQ moisture analyzer
- Available with the IQ.probe or with the M Series moisture probe
- Sample system provides isolation, filtration, pressure and flow indication, pre-wired, and a clear door for easy viewing of all readings

Applications

The standard air.IQ package is designed for moisture measurement in any inert gas application, in industrial environments classified as safe areas, where the process gas pressure is slightly positive to a maximum of 200 psig. It combines the Panametrics dew.IQ and IQ.probe with 50 years of sample system design, to deliver the moisture measurement you have come to trust.

Markets and applications served include:

- Industrial Gas
- Air Dryer / Clean Dry Air
- Plastics Drying
- Pharmaceutical
- Aerospace
- Power Generation

Ordering Configuration

air.IQ is comprised of the following items:

- DEW.IQ-3-6-1-0
- IQ.PROBE-2-R-0-0-0-0
- 733-1155-00

Application Parameters

- Inert Gases such as air, nitrogen, SF6
- Sample Gas Pressure: 0 to 200 psig
- Sample Gas Temperature: 0 to +50 C
- Moisture Content: -110 to +20 C dew/frost point, non-condensing
- Power Requirements: 100 - 240 VAC @ 50 - 60 Hz

dew.IQ Specifications^{*}

European Certification

Complies with EMC Directive 2004/108/EC and 2006/95/EC Low Voltage Directive (Installation Category II, Pollution Degree II)

Input

Moisture signal from an M Series probe or IQ.probe

Analog Output

Single internal isolated recorder output, internally optically isolated, 10-bit (0.1%) resolution

Switch-Selectable Outputs

0 to 2 V, 10k Ω minimum load resistance
0 to 20 mA, 400 Ω maximum series resistance
4 to 20 mA, 400 Ω maximum series resistance
User-programmable within the range of the instrument and the corresponding sensor or transmitter

Alarm Relays

One fail-safe fault relay
Two standard Form C relays SPDT, rated for 3 A at 250 VAC/30 VDC
Set to any level within the range of the instrument; programmable from the front panel

Alarm Set Point Repeatability

$\pm 0.2^\circ\text{F}$ ($\pm 0.1^\circ\text{C}$) dew point

Datalogger

32 GB capacity with MicroSD card, 2 GB card included

Display

128 x 64 matrix LCD

Display Functions

Dew point temperature in $^\circ\text{F}$ or $^\circ\text{C}$, ppmv with a constant pressure input, or sensor signals for diagnostics

Power Requirements

Universal power 100-240 VAC @ 50-60 Hz,

Temperature

- Operating: -20° to 60°C (-4° to 140°F)
- Storage: -40° to 70°C (-40° to 158°F)

Warm-Up Time

Meets specified accuracy within three minutes

IQ.probe Specifications^{*}

Sensor Type

Thin-film aluminum oxide

Dew/Frost Point Temperature

Overall range capability: -110° to 60°C (-166° to 140°F)
Standard: -80° to 20°C (-112° to 68°F) with data to -110°C (-166°F)

Calibrated Accuracy at 77°F (25°C)

- $\pm 3.6^\circ\text{F}$ ($\pm 2^\circ\text{C}$) above -148°F (-100°C)
- $\pm 5.4^\circ\text{F}$ ($\pm 3^\circ\text{C}$) below -148°F (-100°C)

Repeatability

- $\pm 0.4^\circ\text{F}$ ($\pm 0.2^\circ\text{C}$) above -148°F (-100°C)
- $\pm 0.9^\circ\text{F}$ ($\pm 0.5^\circ\text{C}$) below -148°F (-100°C)

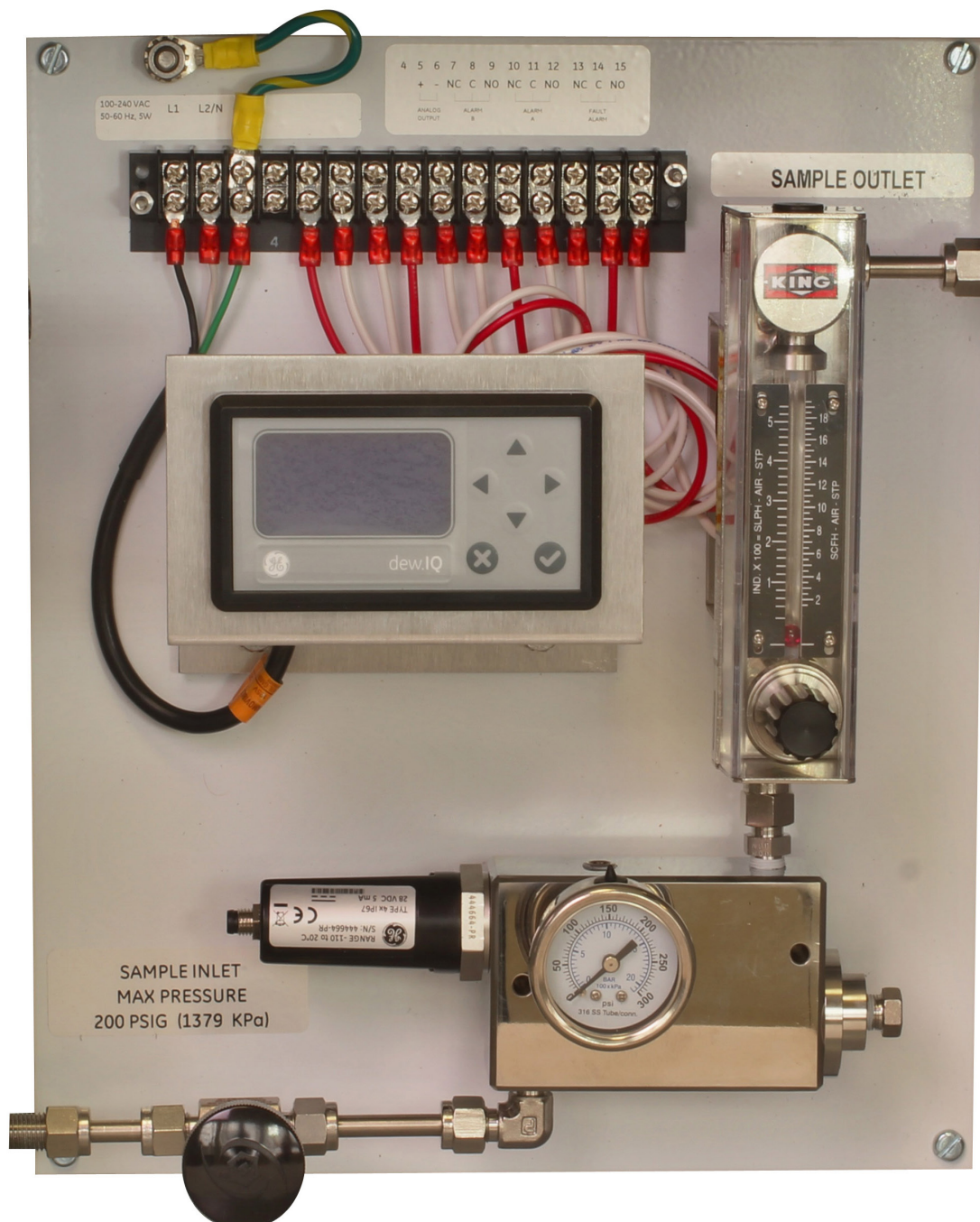
* Refer to dew.IQ and IQ.probe data sheets for complete specification details

Start-Up Procedure

- Insert moisture probe into the sample cell
- Start with the inlet valve and the valve on rotameter fully closed
- For dew points at process pressure, slowly open the inlet valve until fully open; then crack the valve on the rotameter to get flow on scale
- For dew points at atmospheric pressure, fully open the valve on the rotameter; then crack the inlet needle valve on the rotameter to get flow on scale

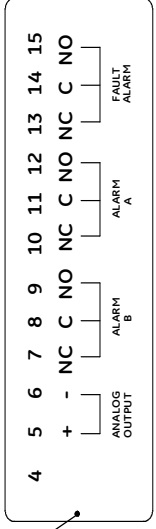
Shut-Down Procedure

- Slowly close the inlet needle valve
- Slowly open the valve on the rotameter until the pressure on the pressure gauge is 0 psig
- Remove the moisture probe

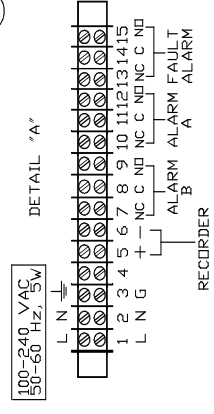


REV		ECO	DESCRIPTIONS		DWN	CKD	APVD
1			ORIGINATED FOR REV CONTROL		10/26/12	10/26/12	10/26/12
2			UPDATE		12/24/12	12/24/12	12/24/12

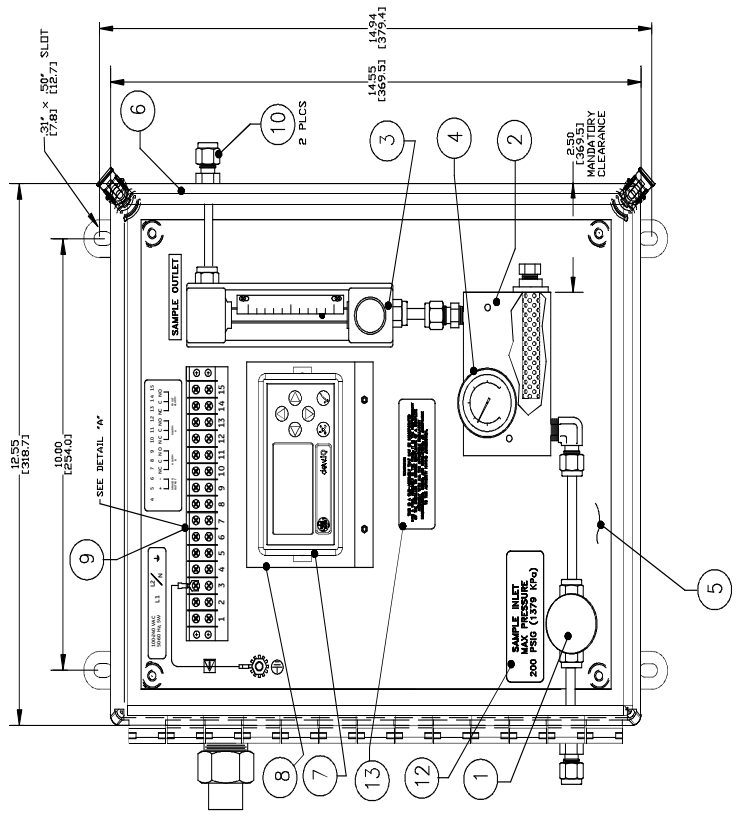
LABEL, SAMPLE SYSTEM,
DEW.IQ OUTPUTS




LABEL, SAMPLE SYSTEM,
DEW.IQ, POWER STRIP

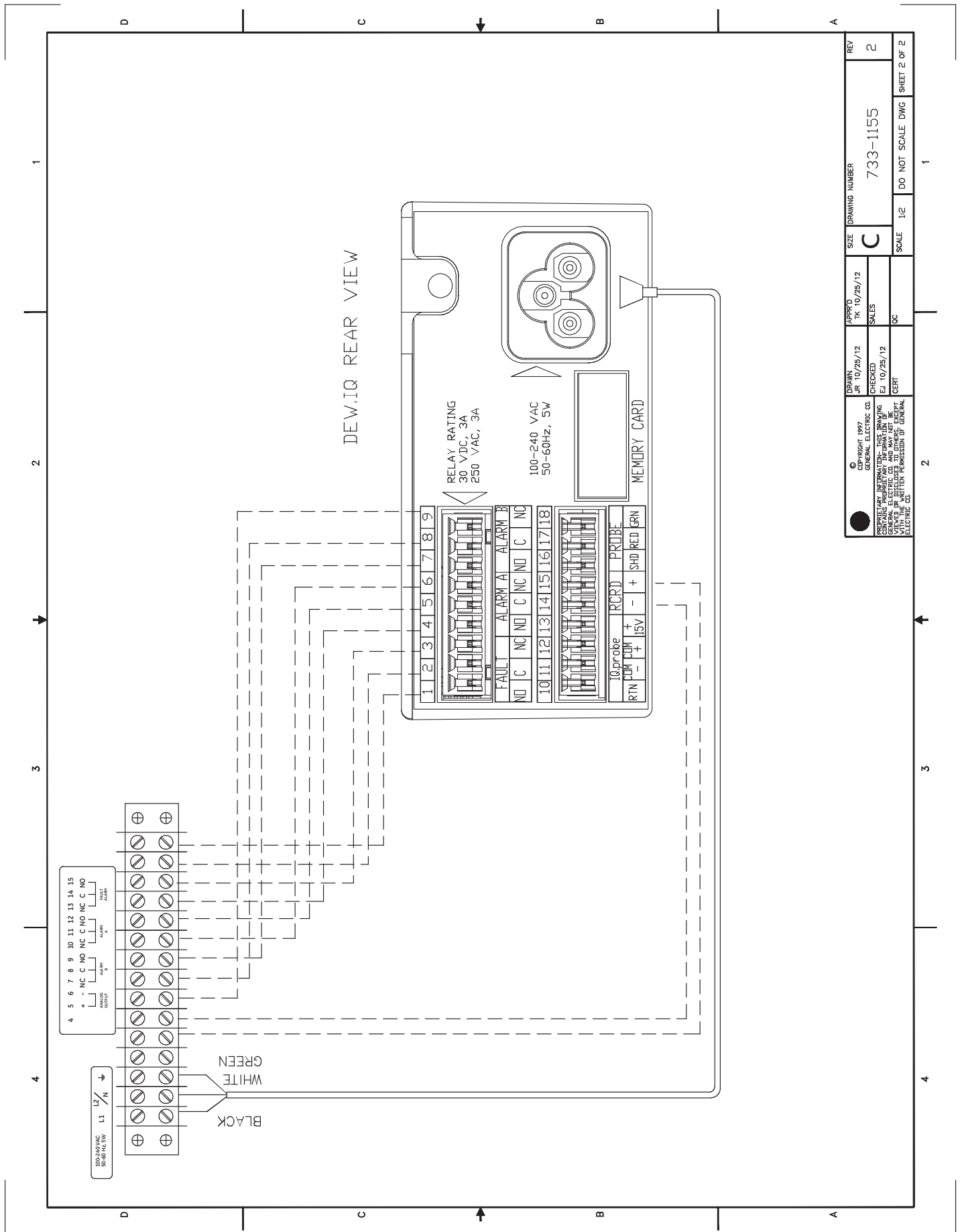


- NOTES:
1. ENCLOSURE NEMA 4X; 14.55"Hx12.55"Wx8.00"D (369.5x318.7x203.2) PANEL 12.75"x10.88" (323.8x276.3)
 2. PROCESS CONNECTIONS: 1/4" COMPRESSION FITTINGS
 3. PROCESS TUBING: 1/4" STAINLESS STEEL
 4. ELECTRICAL CONNECTION: 1/2" FNPT
 5. INCHES/(MM)
 6. REF. DWG. BM733-1155-00REV2
 7. WIRE PROBE CABLE FROM PROBE TO DEW.IQ PER SHEET 2
 8. ALL PIPE THREADS TO BE SEALED USING PIPE THREAD SEALER



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS DECIMALS ANGLES ± 1/32" .XX ± .01 .XXX ± .005 SURFACE FINISH 125		THIRD ANGLE PROJECTION		GE Sensors 1100 Technology Park Dr. Billerica, MA 01821 USA	
DRAWN 10/26/12 APP'D 10/26/12		DRAWN 10/26/12 APP'D 10/26/12		TITLE SAMPLE SYSTEM	
CHECKED 10/26/12 SALES		CHECKED 10/26/12 SALES		SIZE DRAWING NUMBER 733-1155	
COPRIGHT 1997 GENERAL ELECTRIC CO		CERT DC		REV 2	
PREPARED BY: [REDACTED] THIS DRAWING IS THE PROPERTY OF GENERAL ELECTRIC CO. AND MAY NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF GENERAL ELECTRIC CO.		GENERATED USING AUTOCAD		SCALE 1:2	
MODEL NO. SAMPLE SYSTEM		SCALE 1:2		BD NOT SCALE DWG SHEET 1 OF 2	

 GE Sensing 1100 Technology Park Drive, Billerica, MA 01821, USA		DRAWN	APPROVED	MODEL NO.	SAMPLE SYSTEM BILL OF MATERIALS	BM	REV	
		JR 10/25/12	TK 10/25/12			BM733-1155-00	2	
		CHECKED	RELEASE NO.			SHEET 1 OF 1		
		EJ 10/25/12						
DWG ITEM	SALES P/N	PART NO.	DESCRIPTION	QTY PER ASSY (GP)				
				-01				
1		255-184	Needle valve, 5000 psig, 316 SS, 1/4" compression fittings	1				
2		421-1466	HOUSING, SS880 SAMPLE SYSTEM	1				
		410-485	CAP PLUG RED 3/4-16X1/2"	1				
		255-165	PIPE PLUG 1/8 NPTF 316 SS	1				
		421-1468	PLUG, SS880 SAMPLE SYSTEM	1				
		255-160-02	Connector 316 SS, 1/4" compression fitting, 1/8" MNPT	1				
		463-002	FILTER SUPPORT CORE GAS/LIQUID	1				
		440-023	Filter element, borosilicate microfiber (replacement for 440-024 filter coalescer)	1				
		410-548	O-RING 1.049ID 0.103THK VT/FKM	1				
		255-161-02	Elbow 316 SS, 1/4" compression fittings, 1/8" MNPT	1				
3		443-199	Flowmeter assy, 200 psig, integral inlet flow control valve 2 to 20 SCFH/54 to 540 SLPH, 1/4" compression fittings	1				
		255-161-03	Elbow 316 SS, 1/4" compression fittings, 1/4" MNPT	2				
		418-061	Bracket, Type AA, 3/4" Hole	2				
4		443-046-01	1-1/2" pressure gauge, 316 SS, 1/8" NPTM center back mount, range 0-300 psig	1				
5		421-2002	Assembly mounting and piping of sample system components onto a white-enamel painted steel plate, 12.75" x 10.88"	1				
6		425-406	NEMA 4X Enclosure, Fiberglass, 14.55"H x 12.55"W x 8"D	1				
7			Mounting of DEW.IQ on a sample system plate, DEW.IQ should be specified, priced and ordered as a separate item.	1				
8		418-200	Mounting Bracket	1				
9		213-2000	Terminal Strip 15 Position	1				
		213-2001	Terminal Strip Cover	1				
10		255-163-04	Bulkhead, Union, 316 SS, 1/4" compression fittings	2				
11		442-1036	Label, Output	1				
		442-1345	Label, Power Strip	1				
12		442-1347	Sample Inlet Label	1				
13		442-1355	Sub Component Label	1				
14		255-347	Union, Explosionproof, conduit to conduit fitting, 1/2" NPTM TO 1/2" NPTF, CL 1, DIV 1 & 2, Grp A,B,C & D	1				
15		412-2028	1/2' Conduit Locknut	1				
16		410-516-01	Gasket, PVC, Self Retaining, with steel ring, 3/8" to 1/2"	1				
17		413-540	Spacer, Threaded, Aluminum, 6-32, 1/4"	2				
REV	ECN NO.	DATE/APPD	REV	ECN NO.	DATE/APPD	REV	DATE/APPD	NOTES
1	N/A	10/25/2012						1. REF DWG 733-1155rev2
2	N/A	12/6/2012						2. PROCESS CONNS: 1/4" COMPRESSION FITTINGS
								3. PROCESS TUBING: 1/4" STAINLESS STEEL TUBING
								4. ELECTRICAL CONN: 1/2" NPTF



REV	2	DRAWING NUMBER	733-1155	SCALE	1:2	DO NOT SCALE DWG	SHEET 2 OF 2
APPROVED	DATE	CHECKED	DATE	SALES	DATE	CERT	DATE
	10/25/12		10/25/12				
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