### Easidew Sampling Systems Ordering Code

## ES10 - {1} - {2} - {3} - {4}

Suffix {1}	Pressure Configuration
S	Measurement at System Pressure
A	Measurement at Atmospheric Pressure
Suffix {2}	Filter Configuration
Р	Particulate Filter
C	Coalescing Filter
Suffix {3}	Mounting Configurations
PO	Sampling System Mounted on Plate, no Monitor
P1	Sampling System Mounted on Plate, with Monitor on Bracket
GO	Sampling System Mounted Within GRP Enclosure, no Monitor
G1	Sampling System Mounted Within GRP Enclosure with Monitor on Door
G2	Sampling System Mounted Within GRP Enclosure with Window, No Monitor
G3	Sampling System Mounted Within GRP Enclosure with Window, Monitor on Bracket
SO	Sampling System Mounted Within Stainless Steel Enclosure, no Monitor
S1	Sampling System Mounted Within Stainless Steel Enclosure with Monitor on Door
S2	Sampling System Mounted Within Stainless Steel Enclosure with Window, no Monitor
S3	Sampling System Mounted Within Stainless Steel Enclosure with Window, Monitor on Bracket
Suffix {4}	Sampling System Components
(Optional) can include multiple codes combinations - see ordering example	The components listed below can be included with any of the sampling systems above and combined with each other than with Suffix {4} e.g. VG or VPC, etc
V	Isolation Valve
G	Pressure Gauge (0-20 Barg)
I	Inlet Solenoid
0	Outlet Solenoid
Р	Vacuum Pump (to provide 0.5 litre / min sample flow)
С	Cooling Coil (3 m to allow sample temperature to cool to ambient)

#### Ordering Examples

ES10-S-P-S0	Easidew 10 Bar sampling system for system pressure dew point particulate filter
ES10-S-C-S1	Easidew 10 Bar sampling system for system pressure dew point with coalescing filter
ES10-A-P-G3	Easidew 10 Bar sampling system for atmospheric dew point with particulate filter (as seen in example below)
ES10-S-P-G2-VPC	Easidew 10 Bar sampling system for system pressure dew point with particulate filter
	Extra components - isolation valve, cooling coil and vacuum pump

## ES10 Sampling Systems









GAS FLOW DIAGRAM

Please note: The accuracy stated represents the typical variation between the instruments under test and a calibrated and corrected reference.

Please contact us for the latest version: ES10: Ref: EAS10-0308

amplit

 Michell Instruments Ltd

 48 Lancaster Way Business Park

 Ely, Cambridgeshire

 CB6 3NW, United Kingdom

 Tel:
 +44 (0) 1353 658 000

 Fax:
 +44 (0) 1353 658 199

 Email:
 info@michell.co.uk

 Web:
 www.michell.com



# ES10 Sampling Systems

A complete sampling system, with filtration and flow control, for measurement of either pressure or atmospheric dew points, designed for use with Michell's hygrometer series of products



## **Features**

- $\rightarrow$  Simple to use
- $\rightarrow$  Sample filtration
- ightarrow Flow control
- ightarrow Atmospheric or system pressure dew point
- ightarrow Gas pressure to 1 MPa (10 Barg)

## **Applications**

- → Compressed air dryers
- ightarrow Plastic moulding
- $\rightarrow$  Ozone generators
- $\rightarrow$  Medical gases
- → Pneumatics
- ightarrow Breathing air
- ightarrow Welding gases
- ightarrow ... and many more



### Background

To ensure accurate and stable moisture measurement, it is important that the hygrometer is exposed to a representative sample of the gas to be monitored. This sample should be free of contaminants, at the correct pressure and at a flow rate that ensures fast response to changing conditions.

The ES10 sampling systems are an economic method of mounting any of the Michell Instruments impedance dew point transmitters and providing the necessary filtration, pressure and flow control. In applications as diverse as compressed air, medical gas or process control, the ES10 sampling systems can be specified to exactly meet the requirements of the customer and the dew point instrument.

#### Filtration

The ES10 can be supplied with either particulate or coalescing filters. If there is no danger of the sample gas containing liquids, then a simple particulate filter with glass borosilicate element can provide protection to 99.5 % 0.3 micron levels. If liquids are possible or even likely, then a coalescing filter with an adjustable drain flow can be specified.

#### **Measurement Pressure**

Different applications and different specifications call for the dew point to be measured at either system pressure or at atmospheric pressure. The ES10 can be easily specified to provide dew point measurement at either of these pressures up to a maximum system pressure of 10 Barg.

For higher pressure, please contact Michell Instruments.

#### **Flow Control**

The ES10 sampling systems contain as standard a flow meter and metering valve. This allows the user to set the sample flow through the system to the optimum level of between 1 and 5 litres per minute.

#### Enclosures

The ES10 can be supplied mounted on a plate and within either 304 stainless steel or GRP enclosures depending on the demands of the application. Additionally the Easidew display can be mounted within the system or remotely.

www.michell.com



## ES10 Sampling System

Low cost

Flow control

Sample filtration

## **Related Products**



Easidew TX

Easidew Online

#### **Dew-Point Transmitters**

#### **Additional Components**

While every effort has been made to ensure that ES10 covers as many application requirements as possible, there will always be customers who have unusual or unforeseen requirements, and of course the customer is always right!. Therefore a number of additional components can be added including pumps and solenoid valves.

#### System Design

Michell Instruments have over 25 years experience of design, manufacture, supply and maintenance of sampling systems used with moisture and dew point measurement instrumentation. Michell Instruments Systems Engineering department have the necessary expertise to provide sampling systems that take into consideration any non-standard requirements, or extreme conditions that the customers application might require.



Please note: Michell Instruments adopts a continuous development program which sometimes necessitates specification changes without notice.

© Michell Instruments 2008



Atmospheric or system pressure dew point

> Gas pressure to 1 MPa (10 Barg)



**Easidew Sampler** 

. . . . . . . . . . . . . .

Easidew TX I.S.