

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

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



Applications

- Compressed air dryers
- Plastic moulding
- Ozone generators
- Medical gases
- Pneumatics
- Breathing air
- Welding gases
- ... and many more

ES10 Sampling Systems





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

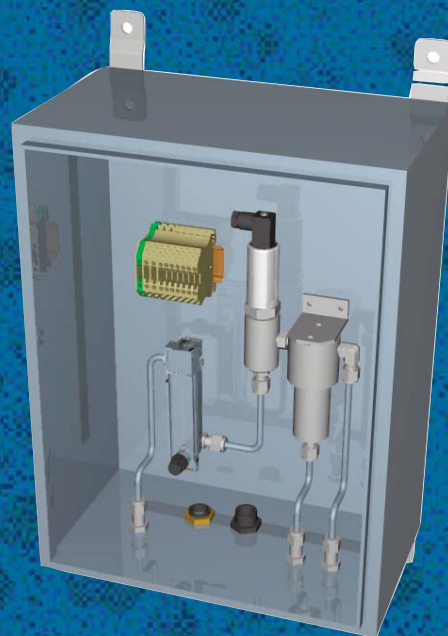
Easidew Online

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.



Atmospheric or system pressure dew point

Gas pressure to 1 MPa (10 Barg)



Compressed air dryers

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



Easidew Sampler

Easidew TX I.S.

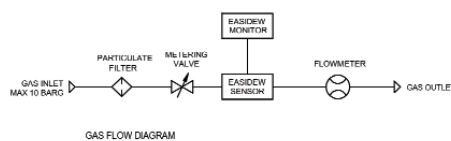
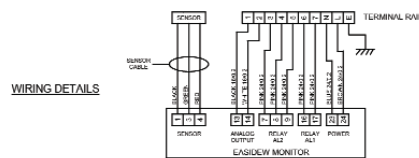
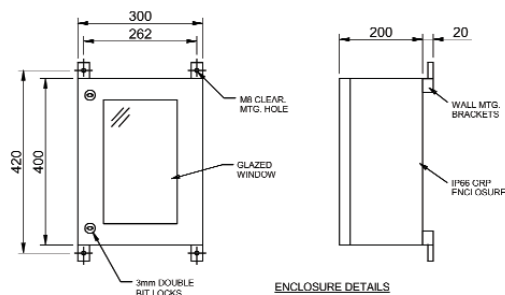
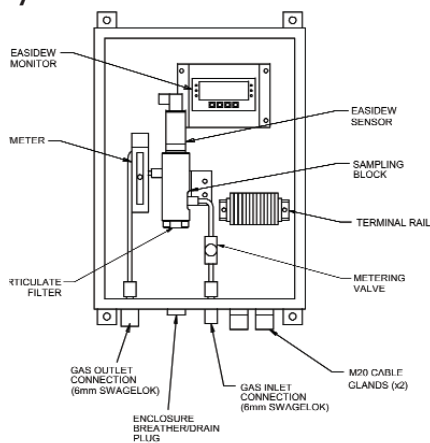
Easidew Sampling Systems Ordering Code

| ES10 - {1} - {2} - {3} - {4} | |
|---|--|
| Suffix {1} | Pressure Configuration |
| S | Measurement at System Pressure |
| A | Measurement at Atmospheric Pressure |
| Suffix {2} | Filter Configuration |
| P | Particulate Filter |
| C | Coalescing Filter |
| Suffix {3} | Mounting Configurations |
| P0 | Sampling System Mounted on Plate, no Monitor |
| P1 | Sampling System Mounted on Plate, with Monitor on Bracket |
| G0 | 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 |
| S0 | 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 |
| O | Outlet Solenoid |
| P | Vacuum Pump (to provide 0.5 litre / min sample flow) |
| C | 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



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



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

ES10 Sampling Systems