

# 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.



### Highlights

- 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 System

## 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 1 MPa (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.

## 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.



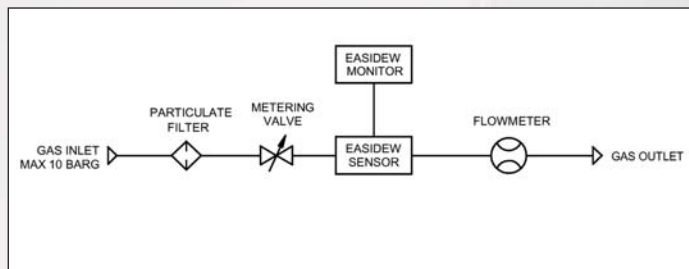
# ES10 Sampling System

## Sampling system features

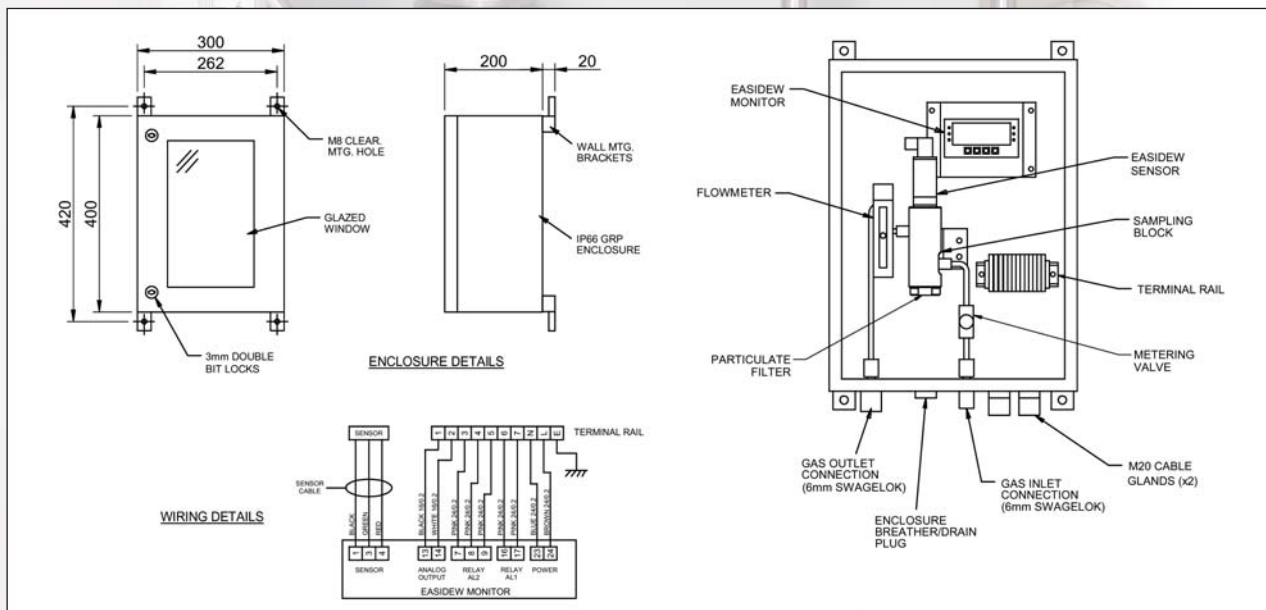
- Atmospheric or system pressure dew point
- Gas pressure to 1 MPa (10 barg)
- Sample filtration
- Flow control
- Low cost



## Gas Flow Diagram



## Sampling Systems

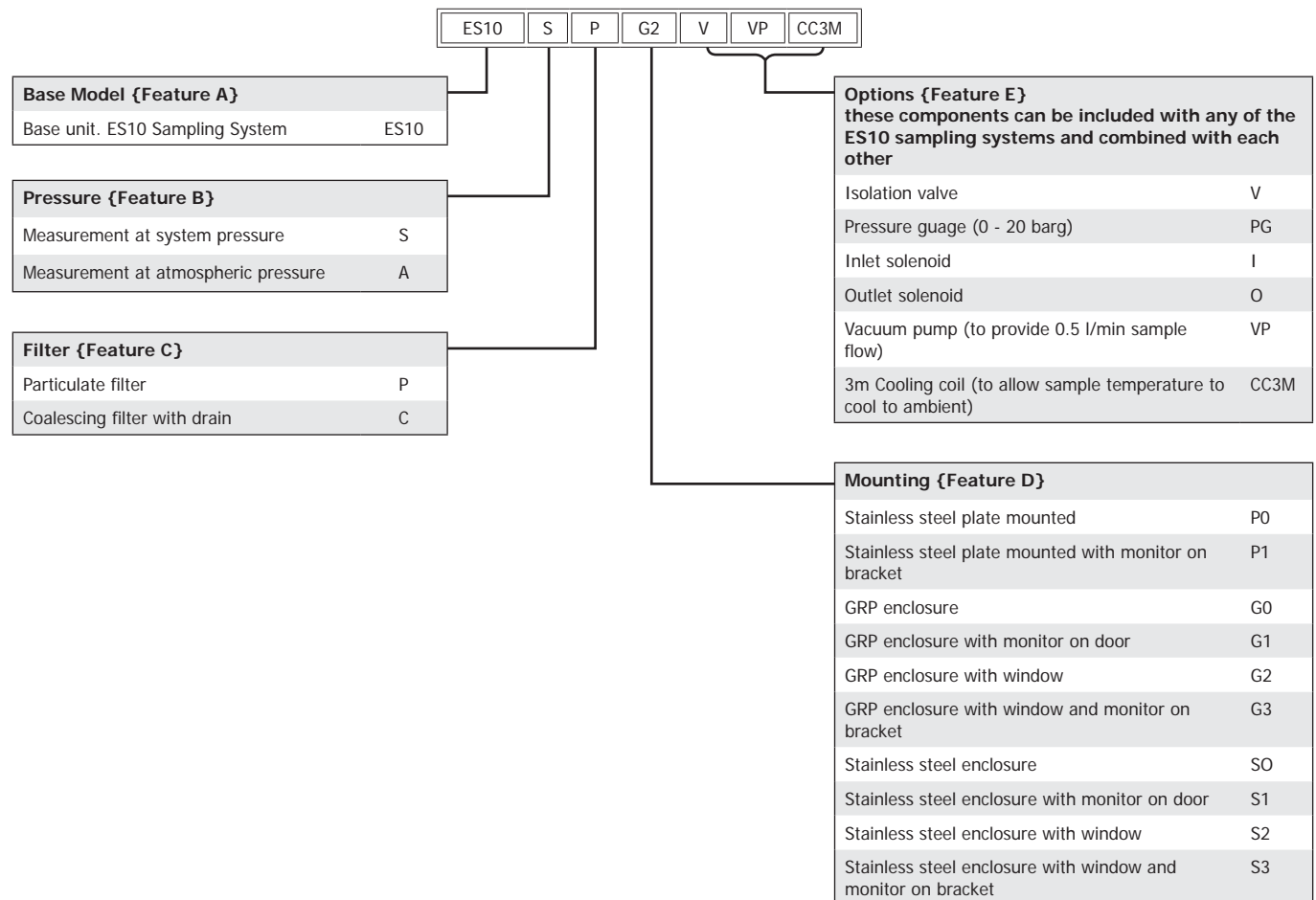


## Easidew Sampling Systems Ordering Codes

To construct the order code, select the relevant feature from the tables below, starting with the base model, which is {Feature A} and then add on options to create a string: {Feature A} + {Feature B} + {Feature C} + {Feature D} + {Feature E}

**Order example:** ES10 + S + P + G2 + V + VP + CC3M

Easidew 145 psig/10 barg sampling system for system pressure dew point, particulate filter, GRP enclosure w/window & isolation valve, vacuum pump & 3m cooling coil



## Accessories and Spare Parts

Item	Product / Description
SSF-CF-10PK	Pack of 10 coalescing filter cartridges
SSF-PF-10PK	Pack of 10 particulate filter cartridges

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Michell Instruments adopts a continuous development programme which sometimes necessitates specification changes without notice.  
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