



Easidew Dew-Point Transmitter User's Manual



Please fill out the form(s) below for each instrument that has been purchased.

Use this information when contacting Michell Instruments for service purposes.

Transmitter	
Code	
Serial Number	
Invoice Date	
Location of Instrument	
Tag No	

Transmitter	
Code	
Serial Number	
Invoice Date	
Location of Instrument	
Tag No	

Transmitter	
Code	
Serial Number	
Invoice Date	
Location of Instrument	
Tag No	



Easidew

For Michell Instruments' contact information please go to
www.michell.com

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Safety

The manufacturer has designed this equipment to be safe when operated using the procedures detailed in this manual. The user must not use this equipment for any other purpose than that stated. Do not apply values greater than the maximum value stated.

This manual contains operating and safety instructions, which must be followed to ensure the safe operation and to maintain the equipment in a safe condition. The safety instructions are either warnings or cautions issued to protect the user and the equipment from injury or damage. Use competent personnel using good engineering practice for all procedures in this manual.

Electrical Safety

The instrument is designed to be completely safe when used with options and accessories supplied by the manufacturer for use with the instrument.

Pressure Safety

DO NOT permit pressures greater than the safe working pressure to be applied to the instrument. The specified safe working pressure is 45 MPa (450 barg / 6500 psig). Refer to the Technical Specifications in Appendix A.

Toxic Materials

The use of hazardous materials in the construction of this instrument has been minimized. During normal operation it is not possible for the user to come into contact with any hazardous substance which might be employed in the construction of the instrument. Care should, however, be exercised during maintenance and the disposal of certain parts.

Repair and Maintenance

The instrument must be maintained either by the manufacturer or an accredited service agent. For Mitchell Instruments' contact information please go to www.michell.com.

Calibration

The recommended calibration interval for this instrument is 12 months unless it is to be used in a mission-critical application or in a dirty or contaminated environment in which case the calibration interval should be reduced accordingly. The instrument should be returned to the manufacturer, Mitchell Instruments Ltd., or one of their accredited service agents for re-calibration.

Safety Conformity

This product meets the essential protection requirements of the relevant EU and US standards and directives. Further details of applied standards may be found in the Technical Specifications in Appendix A.

Abbreviations

The following abbreviations are used in this manual:

barg	pressure unit (=100 kP or 0.987 atm) gauge
°C	degrees Celsius
°F	degrees Fahrenheit
DC	direct current
ft-lbs	foot-pound force
g	grams
in	inch(es)
µm	micrometer
m/sec	meters per second
mA	milliampere
max	maximum
mm	millimetres
MPa	megapascal
NI/min	normal liters per minute
Nm	Newton meter
oz	ounces
ppm _v	parts per million by volume
psig	pounds per square inch
RH	relative humidity
scfh	standard cubic feet per hour
scfs	standard cubic feet per second
T	temperature
V	Volts
Ω	Ohms
∅	diameter

Warnings

The following general warning listed below is applicable to this instrument. It is repeated in the text in the appropriate locations.



Where this hazard warning symbol appears in the following sections it is used to indicate areas where potentially hazardous operations need to be carried out.

1 INTRODUCTION

The Easidew dew-point transmitter has been manufactured, tested and calibrated to the highest available standards and should be in perfect working order, ready for installation into a gas measurement application. If there are any questions about the instrument or how to install and operate it, please contact a Michell representative (for Michell Instruments' contact information go to www.michell.com).

1.1 Features

The Easidew dew-point transmitter is a continuous on line 4-20mA transmitter for the measurement of moisture content in air and other non-corrosive gases. The key features are:

- 4-20 mA 2-wire loop powered connection
- Dew-point OR parts per million (moisture content) in volume (ppm_v) measurements
- Accuracy ($\pm 2^{\circ}\text{Cdp}$ ($\pm 3.6^{\circ}\text{Fdp}$))
- Repeatability (0.5°Cdp (0.9°Fdp))
- Dew-point values traceable to international standards (NIST and NPL)
- Excellent sensor protection (rugged 316 stainless steel IP66 construction)
- Interchangeability

2 INSTALLATION

2.1 Unpacking the Instrument

On delivery, please check that all the following standard components are in the packing tube:

- Easidew Transmitter
- Bonded Seal
- Certificate of Calibration
- Connector (for sensor/cable)

Unpack the dew-point transmitter tube as follows:

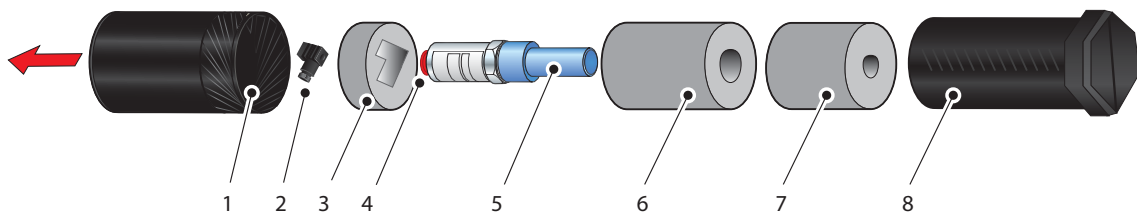


Figure 1 *Transmitter Unpacking Method*

1. Unscrew the cap (1) from the packing tube (8).
2. Remove the foam block (3) containing the connector (2).
3. Pull out the transmitter (5) from the tube, complete with the two foam covers (6) and (7) and the red protective cap (4).
4. Remove the foam covers from the transmitter but leave the blue plastic protective cover (5) and the red cap (4) in place until ready for installation.

NOTE: The transmitter sensing element is protected while in transit by a blue cover containing a small desiccant capsule. The connection pins are protected by a red plastic cap. None of these plastic items are required for the operation of the transmitter.

NOTE: Keep the connector (2) in a safe place until the transmitter is ready for wiring.

2.2 Preparation of the Sensor Cable

The sensor cable is NOT supplied as standard. A cable can be obtained by contacting your local distributor or Michell Instruments (see www.michell.com for details).

Cable connection to the Easidew transmitter is made via the removable connector. Removing the central screw enables the connector terminal block to be removed from the outer housing by using a small screwdriver to prise it clear.

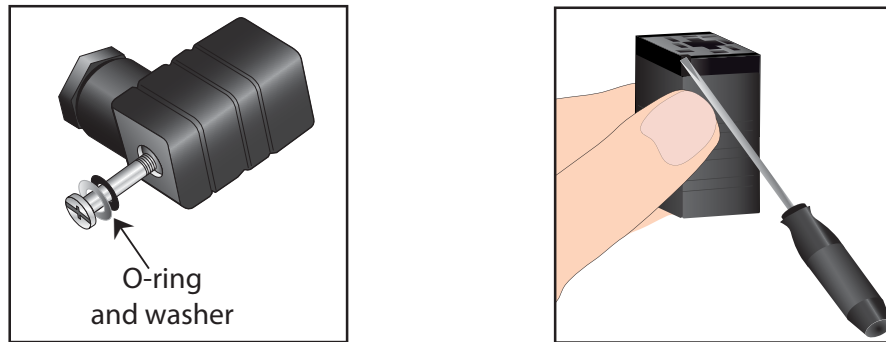


Figure 2 Connector Terminal Block Removal



Caution: When removing the central screw ensure that the small sealing O-ring and the washer are retained on the screw and are present during re-installation.

For the transmitter to work properly, and to achieve maximum performance, the sensor cable must be connected to the sensor connector as shown in the drawing below:

Note: The drawing below shows the identity of the connector terminals and wiring connections of the cable manufactured by Michell Instruments:

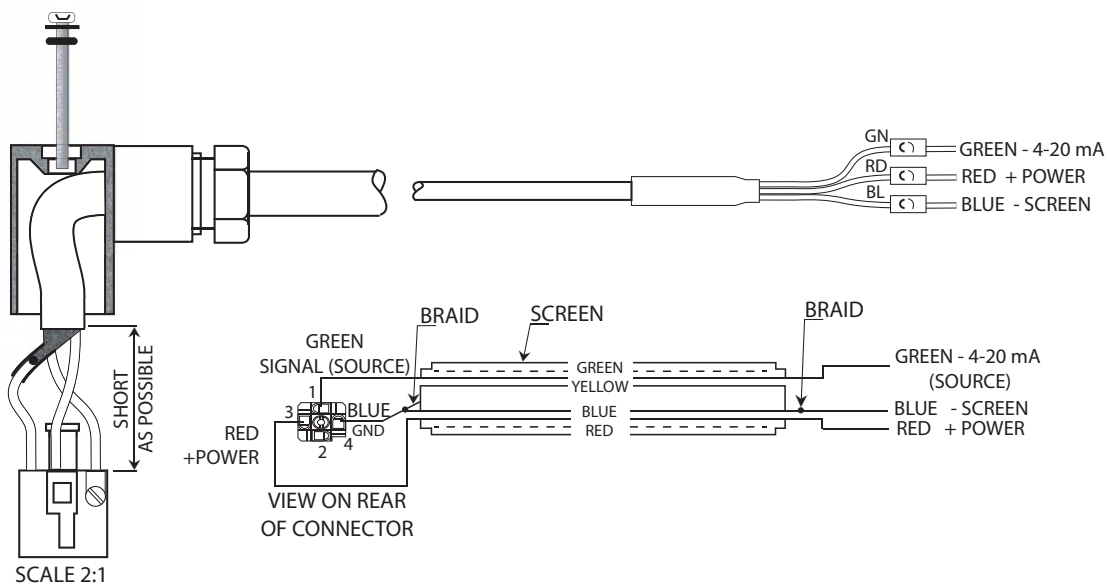


Figure 3 Wiring Connections



Always connect the 4-20 mA return signal to a suitable load (see Figure 3) before the power is applied. Without this connection, the transmitter may be damaged if allowed to operate for prolonged periods.

2.3 Cable Connection

When installing the connector, and to ensure that full ingress protection is achieved, the securing screw (with the O-ring and washer) must be tightened to a minimum torque setting of 3.4 Nm (2.5 ft-lbs). The sensor cable used must be a minimum diameter of 4.6mm (0.2”).

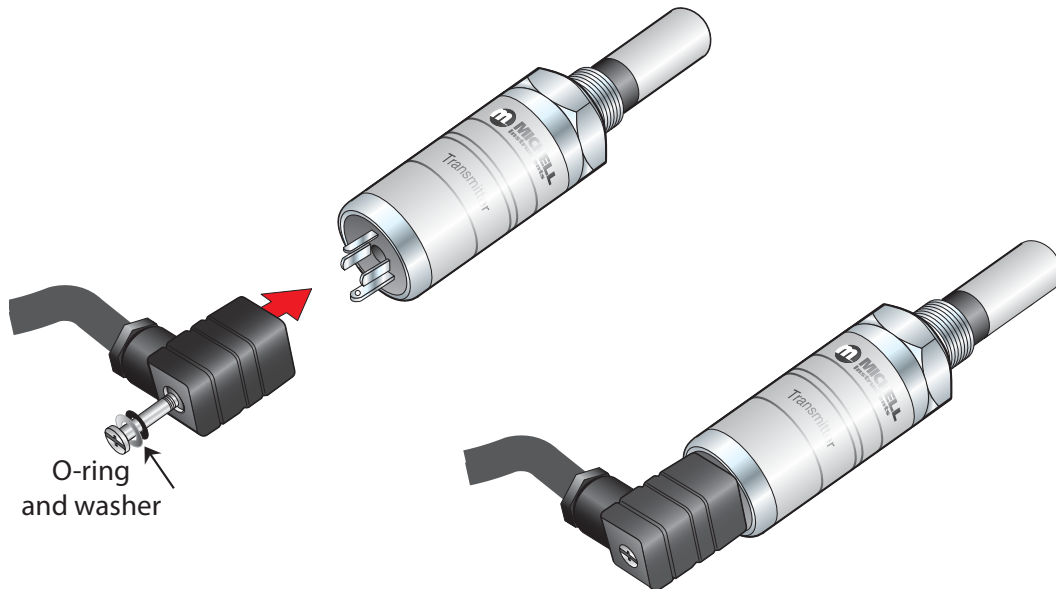


Figure 4 Connector Installation

2.4 Electrical Schematic

NOTE: The screen/shield should be connected for maximum performance and to avoid interference.

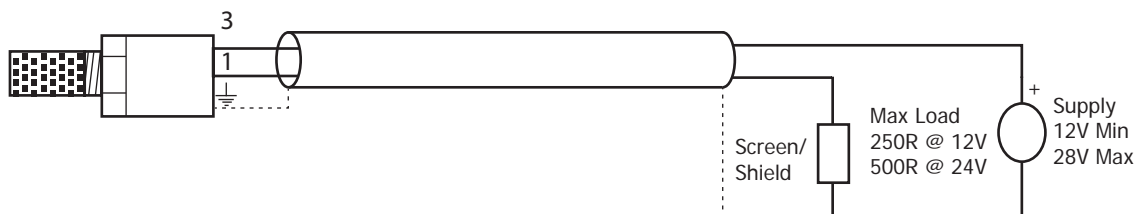


Figure 5 2-Wire Connection Diagram

2.4.1 Electrical Boundaries

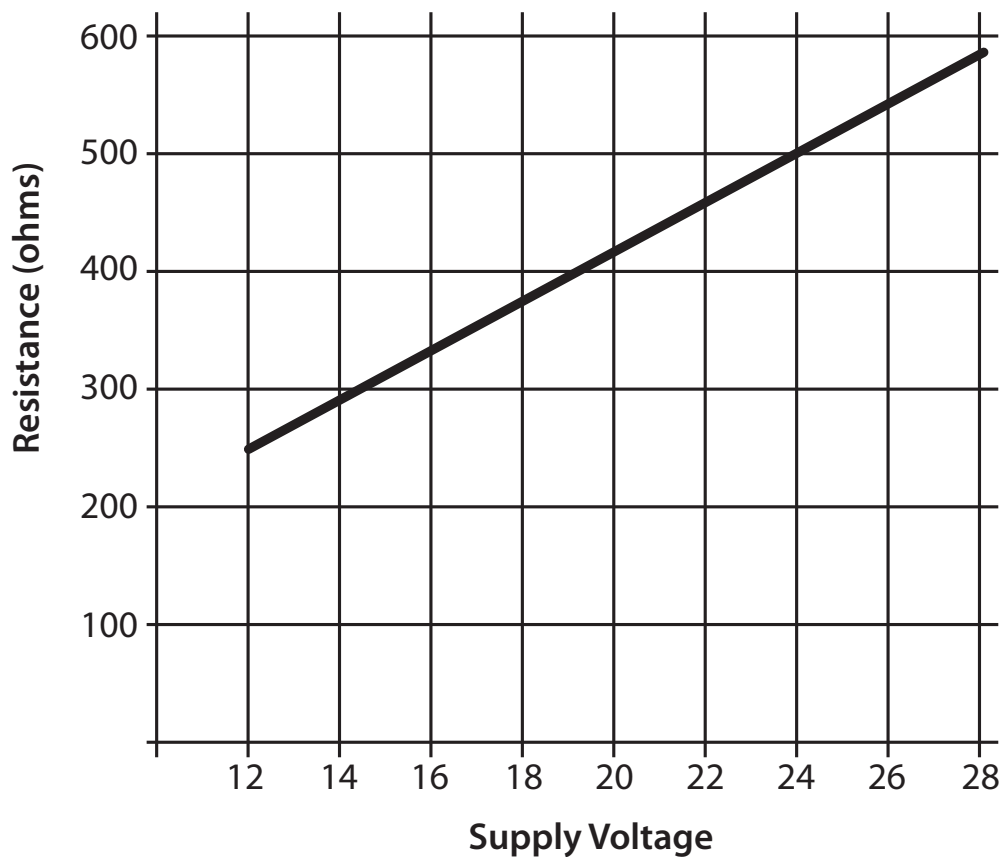


Figure 6 *Maximum Load of Easidew - Including Cable Resistance*

2.5 Transmitter Mounting

Prior to installation of the transmitter, unscrew and remove the blue plastic cover and retain for future use. Take care to prevent any contamination of the sensor before installation (handle the transmitter by the main body only, avoiding contact with the sensor guard).

The Easidew can be mounted into either a flow-through sensor sampling block (optional) or directly inserted into a pipe or duct and can be operated at pressures of up to 45 MPa (450 barg / 6500 psig) when fitted with the bonded seal provided.

The recommended gas flow rate, when mounted in the optional sampling block, is 1 to 5 NI/min (2.1 to 10.6 scfh). However, for direct insertion applications, gas flow can be from static to 10 m/sec (32.8 fps).

NOTE: Pass the bonded seal over the 5/8"- 18 UNF mounting thread and assemble into the sampling location by hand using the wrench flats only. DO NOT grip and twist the sensor cover when installing the sensor.

When installed, fully tighten using a wrench until the seal is fully compressed and to the following torque setting:

5/8" - 18 UNF 30.5 Nm (22.5 ft-lbs)

2.5.1 Transmitter Mounting - Sample Block (Optional)



The following procedure must be carried out by a qualified installation engineer.

To mount the transmitter into the sensor block (preferred method), proceed as follows, refer to *Figure 7*.

1. Ensure that the protective cover (2), and its desiccant capsule (2a), have been removed from the tip of the transmitter.
2. Fit the bonded seal (4) over the threaded part of the transmitter body.



WARNING: Under no circumstances should the sensor guard be handled with the fingers.

3. Screw the transmitter (1) into the sample block (3) and tighten to a minimum torque setting of 30.5 Nm (22.5 ft-lbs). **NOTE: Use the flats of the hexagonal nut and not the sensor body.**
4. Fit the transmitter cable/connector assembly to the plug located on the base of the transmitter and tighten the fixing screw (see Section 2.3).

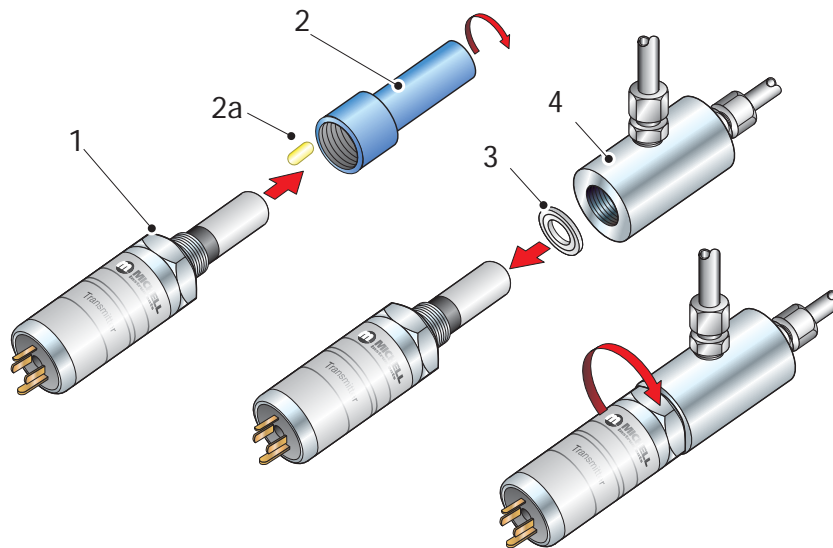


Figure 7 Transmitter Mounting - Sensor Block

2.5.2 Transmitter Mounting - Direct Pipeline Connection

The transmitter may be directly mounted into a pipe or duct, as shown in *Figure 8*



CAUTION: Do not mount the transmitter too close to the bottom of a bend where any condensate in the pipeline might collect and saturate the probe.

The pipe or duct will require a thread to match the transmitter body thread. Fixing dimensions are shown in *Figure 8*. For circular pipework, to ensure the integrity of a gas tight seal, a mounting flange will be required on the pipework in order to provide a flat surface to seal against.



The following procedure must be carried out by competent personnel.

1. Ensure that the blue protective cover (and its desiccant capsule) has been removed from the tip of the transmitter.



WARNING: Under no circumstances should the sensor guard be handled with the fingers.

2. Fit a bonded seal (2) over the threaded part of the transmitter body.
3. Screw the transmitter (3) into the pipe (1). Tighten enough to obtain a gas tight seal. (Torque will depend upon the pipeline material.) **NOTE: Do not overtighten or the thread on the pipework may be stripped.**

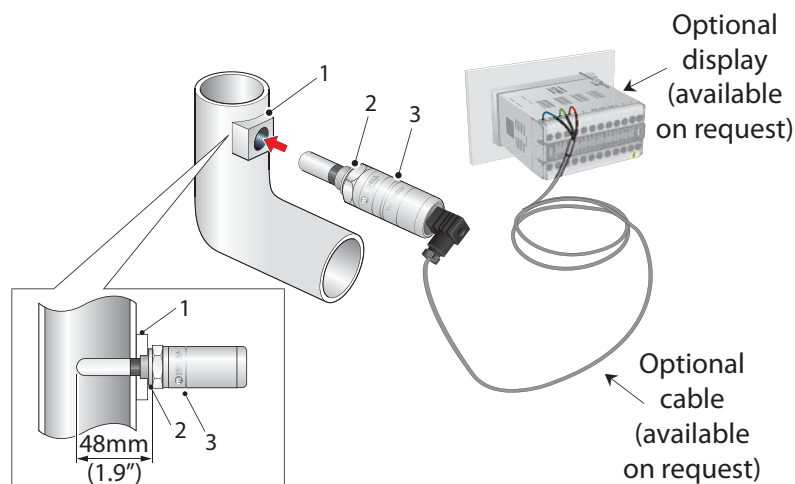


Figure 8 Transmitter Mounting - Pipe or Duct

2.5.3 Transmitter Mounting - With Additional Process Connection Adapter



The following procedure must be carried out by a qualified installation engineer.

To mount the adapter into the transmitter, proceed as follows (see *Figure 9*) :

1. Ensure that the protective cover (2), and its desiccant capsule (2a), have been removed from the tip of the transmitter.
2. Fit the bonded seal (3) over the threaded part of the transmitter body.
3. Screw the adapter (4) onto the threaded part of the transmitter and tighten to 30.5 Nm (22.5 ft-lbs). **NOTE: Use the flats of the hexagonal nut and not the sensor body.**



WARNING: Under no circumstances should the sensor guard be handled with the fingers.

4. Screw the transmitter (1) with its seal (3) and adapter (4) into the sample block (see Section 2.4.1) or pipeline (see Section 2.4.2) and fully tighten using a wrench until the seal is fully compressed and to the following torque settings:

G 1/2" BSP	56 Nm (41.3 ft-lbs)
3/4" - 16 UNF `	40 Nm (29.5 ft-lbs)
1/2" NPT	Use a suitable sealant e.g. PTFE tape using correct taping procedures

NOTE: Use the flats of the hexagonal nut and not the sensor body.

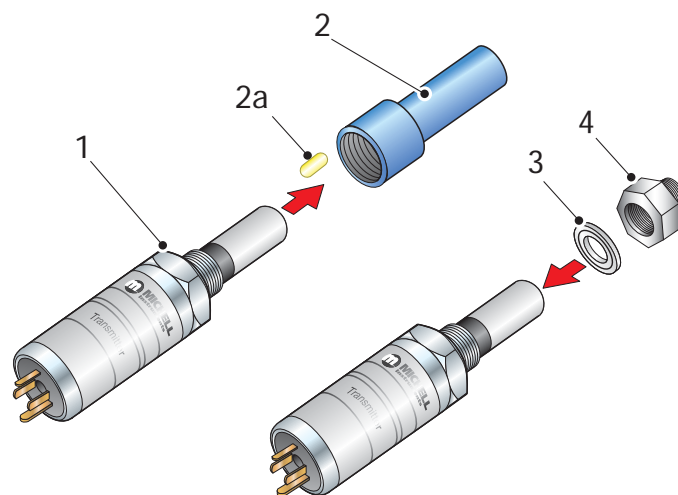


Figure 9 Transmitter Mounting with Adapter

3 OPERATION

Operation is very simple assuming the following installation techniques are adhered to:

Sampling Hints

Be Sure the Sample is Representative of the Gas Under Test:

The sample point should be as close to the critical measurement point as possible. Also, never sample from the bottom of a pipe as entrained liquids may be drawn into the sensing element.

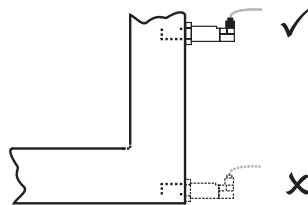


Figure 10 *Installation Location*

Minimize Dead Space in Sample Lines:

Dead space causes moisture entrapment points, increased system response times and measurement errors, as a result of the trapped moisture being released into the passing sample gas and causing an increase in partial vapor pressure.

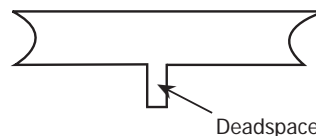


Figure 11 *Indication of Dead Space*

Remove Any Particulate Matter or Oil from the Gas Sample:

Particulate matter at high velocity can damage the sensing element and similarly, at low velocity, they may 'blind' the sensing element and reduce its response speed. If particulate, such as degraded desiccant, pipe scale or rust is present in the sample gas, use an in-line filter, as a minimum level of protection. For more demanding applications Michell Instruments offers a range of sampling systems (for more information contact www.michell.com).

Use High Quality Sample Tube and Fittings:

Michell Instruments recommends that, wherever possible, stainless steel tubing and fittings should be used. This is particularly important at low dew points since other materials have hygroscopic characteristics and adsorb moisture on the tube walls, slowing down response and, in extreme circumstances, giving false readings. For temporary applications, or where stainless steel tubing is not practical, use high quality thick walled PTFE tubing.

Position Transmitter away from Heat Source:

It is recommended, as good instrumentation practice, that the transmitter is placed away from any heat source to avoid adsorption/desorption.

4 MAINTENANCE

Calibration

Routine maintenance of the Easidew is confined to regular re-calibration by exposure of the Easidew to sample gases of known moisture content to ensure that the stated accuracy of the Easidew is maintained. Calibration services traceable to the UK *National Physical Laboratory* (NPL) and the US *National Institute of Standards and Technology* (NIST) are provided by Michell Instruments.

Michell Instruments offers a variety of re-calibration and exchange sensor schemes to suit specific needs. A Michell representative can provide detailed, custom advice (for Michell Instruments' contact information go to www.michell.com).

Sensor Guard Replacement

The sensor is supplied with a white HDPE guard (standard) or a stainless steel guard (if specified at time of order). The method of replacement is the same for both types.

HDPE Guard

The HDPE guard provides $<10\mu\text{m}$ protection to the dew-point sensor. It is designed to show any contamination and the guard should be changed if the surface becomes discolored.

When replacing the guard, care should be taken to handle the guard by the bottom part only. Replacement guards (EA2-HDPE) - pack of 10 - can be obtained by contacting Michell Instruments (www.michell.com) or your local distributor.

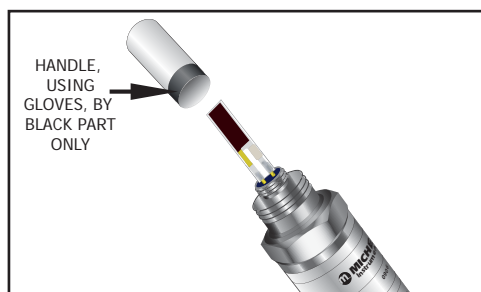


Figure 12 Replacement of HDPE Guard

Stainless Steel Guard

The stainless steel guard provides $<80\mu\text{m}$ protection to the dew-point sensor. It is designed to show any contamination and the guard should be changed if the surface becomes discolored.

When replacing the guard, care should be taken to handle the guard by the bottom part only. A replacement guard (SSG) can be obtained by contacting Michell Instruments (www.michell.com) or your local distributor.

Bonded Seal

If the installed bonded seal gets damaged or lost, a pack of 5 replacement bonded seals can be obtained by contacting Michell Instruments, or your local distributor, and quoting part number BS-58-PK5.

Appendix A

Technical Specifications

Appendix A Technical Specifications

Performance									
Measurement Range (Dew Point)	-100 to +20°Cdp (-148 to +68°Fdp)								
Accuracy (Dew Point)	±2°Cdp (±3.6°Fdp)								
Response Time	5 mins to T95 (dry to wet)								
Repeatability	0.5°Cdp (0.9°Fdp)								
Calibration	13 point calibration with traceable 7 point calibration certificate								
Electrical Specification									
Output Signal	4-20 mA (2-wire connection current source) User-configurable over range								
Output	Dew point or moisture content for ppm _v								
Analog Output Scaled Range	Dew point: -100 to +20°C (-148 to +68°F) OR Moisture content in gas: 0 - 3000 ppm _v Non-standard available upon request								
Supply Voltage	12 to 28 V DC								
Load Resistance	Max 250 Ω @ 12 V (500 Ω @ 24 V)								
Current Consumption	20 mA max								
CE Marked	Certified								
Operating Specifications									
Operating Temperature	-40 to +60°C (-40 to +140°F)								
Operating Pressure	45 MPa (450 barg / 6500 psig) max								
Flow Rate	1 to 5 NI/min (2.1 to 10.6 scfh) mounted in standard sampling block; 0 to 10 m/sec (0 to 32.8 fps) direct insertion								
Temperature Coefficient	Temperature compensated across operating temperature range								
Mechanical Specifications									
Ingress Protection	IP66 in accordance with standard BS EN60529:1992 NEMA 4 in protection accordance with standard NEMA 250-2003								
Housing Material	316 stainless steel								
Dimensions	Transmitter plus connector L=132mm x ø45mm (5.19" x ø1.77")								
Sensor Guard	Standard: HDPE Guard < 10µm Optional: 316 stainless steel sintered guard < 80µm								
Process Connection & Material	5/8" - 18 UNF 316 stainless steel								
Weight	150g (5.29oz)								
Interchangeability	Fully interchangeable transmitter								
Electrical Connection	Hirschmann GDS series (DIN 4350-C)								
Diagnostic Conditions (factory programmed)	<table border="1"> <thead> <tr> <th>Condition</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Sensor fault</td> <td>23 mA</td> </tr> <tr> <td>Under-range dew point</td> <td>4 mA</td> </tr> <tr> <td>Over-range dew point</td> <td>20 mA</td> </tr> </tbody> </table>	Condition	Output	Sensor fault	23 mA	Under-range dew point	4 mA	Over-range dew point	20 mA
Condition	Output								
Sensor fault	23 mA								
Under-range dew point	4 mA								
Over-range dew point	20 mA								
Digital Diagnostic Communications	RS485, 2-wire Modbus RTU								

Dimensions

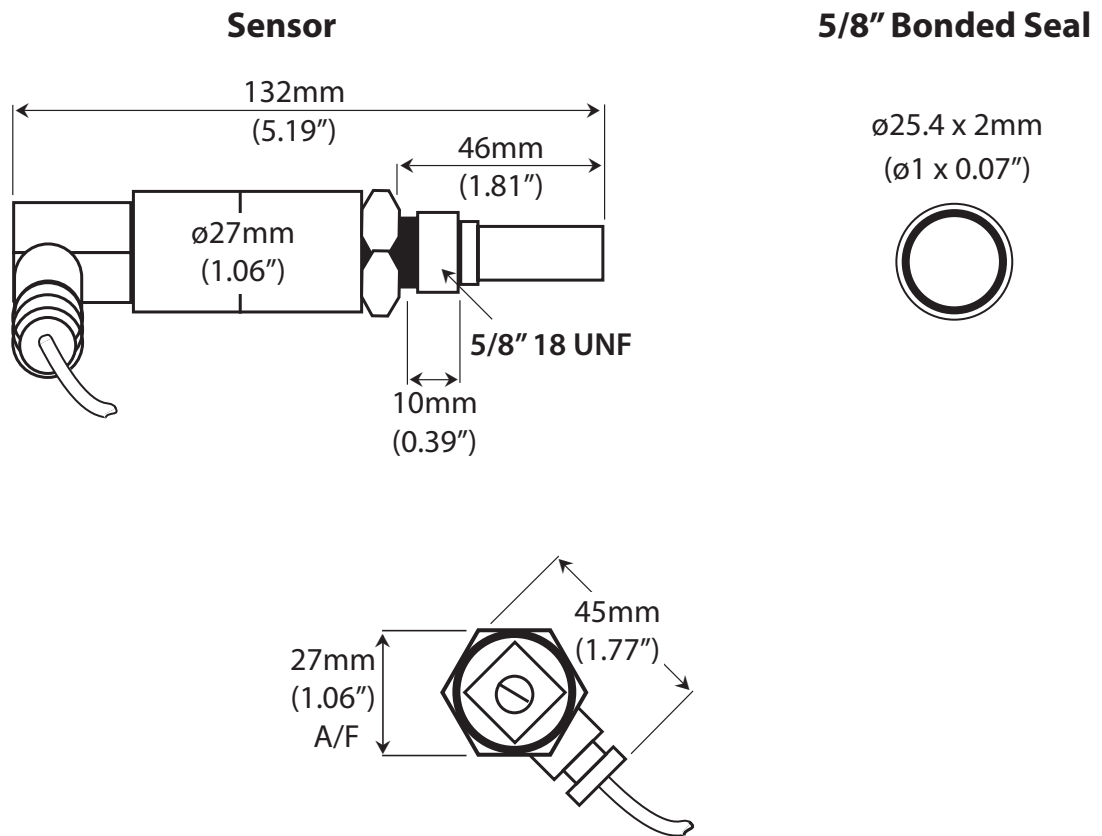


Figure 13 Dimensions - Easidew

Appendix B

EC Declaration of Conformity

Appendix B EC Declaration of Conformity

EC Declaration of Conformity



Manufacturer: **Michell Instruments Limited**
48 Lancaster Way Business Park
Ely, Cambridgeshire
CB6 3NW. UK.



We declare under our sole responsibility that the product:

Easidew & Easidew 34 Dewpoint Transmitter

complies with all the essential requirements of the EC directives listed below.

2004/108/EC **EMC Directive**

Using the standards:

EN61326-1:2006 **Electrical equipment for measurement, control and laboratory use – EMC requirements – Group 1, Class B (emissions) and immunity.**

and has been designed to be in conformance with the relevant sections of the following standards or other normative documents.

EN61010-1:2010 **Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements**

A handwritten signature in blue ink, appearing to read 'Andrew M.V. Stokes'.

Andrew M.V. Stokes, Technical Director

Date of Issue: Sept. 2012

Appendix C

Quality, Recycling & Warranty Information

Appendix C Quality, Recycling & Warranty Information

C.1 Pressure Equipment Directive (PED) 97/23/EC

The above Directive has been implemented in United Kingdom Law by the Pressure Equipment Regulations 1999.

The Regulations require that all pressure equipment and assemblies within the scope of the Pressure Equipment Directive must be safe when placed on the market or put into service.

Michell Instruments' products have been assessed and, as referenced against the Classification Charts detailed in Annex II of the Directive, do not fall into the requirements for CE marking compliance with the Pressure Equipment Directive.

Article 3, paragraph 3 states that any product containing a pressurized fluid that does not qualify for compliance should, nevertheless, be constructed with Sound Engineering Practice (SEP).

Michell Instruments attests here that its products have been designed, manufactured & tested to assure safe operation, and in accordance with Sound Engineering Practices.

C.2 Recycling Policy



Michell Instruments is concerned with the protection of the environment. It is our commitment to reduce and eliminate from our operations, wherever possible, the use of substances which may be harmful to the environment. Similarly, we are increasingly using recyclable and/or recycled material in our business and products wherever it is practical to do so.

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle responsibly. If batteries are not properly disposed of, these substances can cause harm to human health and the environment.

The product that you have purchased may contain recyclable and/or recycled parts and we will be happy to provide you with information on these components if required. For further information please see the following sections.

C.3 WEEE Compliance

Directive 2012/19/EU 4 July 2012 on Waste Electronic and Electrical Equipment (WEEE)

The Waste Electronic and Electrical Equipment (WEEE) Directive places rules upon European manufacturers of electrical and electronic equipment. The directives' aim is to reduce the impact that electronic devices have on the environment.

Michell Instruments is in full compliance with the WEEE Directive and is registered with an approved recycler (Registration No. WEE/JB0235YW) and treats the requirement of the directive and the protection of the environment with the utmost importance. All Michell Instruments' products are appropriately marked indicating their requirement for recycling.

It may be required to return certain instruments for treatment at the end of their working life.

Feb 2013

C.4 RoHS2 Compliance

Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011

The Restriction of Hazardous Substances (RoHS) Directive places rules upon European manufacturers of electrical and electronic equipment. The directives' aim is to reduce the impact that electronic devices have on the environment.

According to the EC Directive 2002/95/EC, Michell Instruments' products qualify as Category 9, Control and Monitoring Equipment. Under the 2002/95/EC Directive, Category 9 products are exempt from compliance with the Directive.

However, the careful design of all Michell Instruments' products takes into consideration the requirements of the Directive and, wherever possible, compliance is achieved. All future products will be developed entirely using compliant materials. Furthermore, Michell Instruments is taking active steps to remove non-compliant materials and components from existing products wherever these may occur. Presently, none of the non-compliant materials are known to occur in Michell Instruments' products.

The new Directive 2011/65/EU (RoHS2) entered into force on 21 July 2011 and required all Member States to transpose the provisions into their respective national laws by 2 January 2013.

Under the provisions of the RoHS2 EU Directive 2011/65/EU (Article 3, [24]) defines 'Control and Monitoring Equipment' specifically as 'monitoring and control instruments designed exclusively for industrial or professional use'.

RoHS2 EU Directive 2011/65/EU states the closing date for compliance of any Control and Monitoring Equipment product sold into the EU market place as 22nd July 2017.

However, the careful design policy of all Michell Instruments' products continues to attain compliance in the shortest practical timescales and strives to ensure that less than 0.1% of total mass per product, of all non-compliant materials, appear within them. Michell Instruments continues to monitor suppliers and material sources to ensure that compliance of goods provided is maintained.

January 2013

C.5 Warranty

Unless otherwise agreed, the Supplier warrants that, as from the date of delivery for a period of 12 months, the goods and all their component parts, where applicable, are free from any defects in design, workmanship, construction or materials.

The Supplier warrants that the services undertaken shall be performed using reasonable skill and care, and be of a quality conforming to generally accepted industry standards and practices.

Except as expressly stated, all warranties whether express or implied, by operation of law or otherwise, are hereby excluded in relation to the goods and services to be provided by the Supplier.

All warranty services are provided on a return to base basis. Any transportation costs for the return of a warranty claim shall reside with the Customer.

C.6 REACH Compliance

Regulation (EC) No. 1907/2006

Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Michell Instruments is a manufacturer of moisture measurement and gas analysis instrumentation and is a 'downstream' user of chemicals, as described by the EU Council Directive 76/769/EEC. The products we supply are not raw chemical products (goods).

Under normal and reasonably foreseeable circumstances of application, the goods supplied to you shall not contain or release any prohibited chemicals. No listed SVHC (Substances of Very High Concern) appear within products manufactured by Michell Instruments. Therefore the 0.1% mass per product, or total usage of 1 tonne/year, will never be exceeded. For these reasons we are neither required by obligation for registration nor for the creation of material safety data sheets (MSDS) for our products.

Our continued review of the SVHC Candidate List and latest additions is to ensure we remain compliant.

Michell Instruments maintains a hazardous material register in which MSDS data sheets are collated, and we will check that our suppliers will comply to REACH requirements for all materials and substances we use in the processes of our manufacturing.

In the unlikely event that any chemicals of concern appear in our products in quantities greater than 0.1% of total mass per product we will immediately inform you by correspondence according to the REACH Article 33 requirements. Our current appraisal is, however, that we do not expect or foresee such an incidence.

January 2013

C.7 Calibration Facilities

Michell Instruments' calibration facilities are among the most sophisticated in the world and have been recognized for their excellence.

Traceability to the National Physical Laboratory (NPL) UK is achieved through our UKAS Accreditation (Number 0179). This covers dew point over the range -90 to +90°C (-130 to +194°F) and also Relative Humidity.

Dew-point calibrations are also traceable to the National Institute for Standards & Technology (NIST) USA over the range -75 to +20°C (-103 to +68°F).

NOTE: Standard traceable calibration certificates for instruments and sensors are not issued under our UKAS accreditation. UKAS certificates are usually to special order and are clearly identified.

C.8 Return Policy

If a Michell Instruments' product malfunctions within the warranty period, the following procedure must be completed:

1. Notify a Michell Instruments' distributor, giving full details of the problem, the model variant and the serial number of the product.
2. If the nature of the problem indicates the need for factory service then the instrument should be returned to Michell Instruments, carriage prepaid, preferably in the original packaging, with a full description of the fault and the customer contact information.
3. Upon receipt, Michell Instruments will evaluate the product to determine the cause of the malfunction. Then, one of the following courses of action will be taken:
 - If the fault is covered under the terms of the warranty, the instrument will be repaired at no cost to the owner and returned.
 - If Michell Instruments determines that the fault is not covered under the terms of the warranty, or if the warranty has expired, an estimate for the cost of the repairs, at standard rates, will be provided. Upon receipt of the owner's approval to proceed, the product will be repaired and returned.

C.9 Manufacturing Quality

Michell Instruments is registered with the British Standards Institute for Quality Assurance to:

BS EN ISO 9001: 2008

Rigorous procedures are performed at every stage of production to ensure that the materials of construction, manufacturing, calibration and final test procedures meet the requirements laid down by our BSI approved Quality System.

Please contact Michell Instruments (www.michell.com) if the product does not arrive in perfect working order.

Appendix D

Return Document & Decontamination Declaration

Appendix D Return Document & Decontamination Declaration

Decontamination Certificate

IMPORTANT NOTE: Please complete this form prior to this instrument, or any components, leaving your site and being returned to us, or, where applicable, prior to any work being carried out by a Michell engineer at your site.

Instrument			Serial Number	
Warranty Repair?	YES	NO	Original PO #	
Company Name			Contact Name	
Address				
Telephone #			E-mail address	
Reason for Return /Description of Fault:				
Has this equipment been exposed (internally or externally) to any of the following? Please circle (YES/NO) as applicable and provide details below				
Biohazards			YES	NO
Biological agents			YES	NO
Hazardous chemicals			YES	NO
Radioactive substances			YES	NO
Other hazards			YES	NO
Please provide details of any hazardous materials used with this equipment as indicated above (use continuation sheet if necessary)				
Your method of cleaning/decontamination				
Has the equipment been cleaned and decontaminated?			YES	NOT NECESSARY
Michell Instruments will not accept instruments that have been exposed to toxins, radio-activity or bio-hazardous materials. For most applications involving solvents, acidic, basic, flammable or toxic gases a simple purge with dry gas (dew point <-30°C) over 24 hours should be sufficient to decontaminate the unit prior to return. Work will not be carried out on any unit that does not have a completed decontamination declaration.				
Decontamination Declaration				
I declare that the information above is true and complete to the best of my knowledge, and it is safe for Michell personnel to service or repair the returned instrument.				
Name (Print)			Position	
Signature			Date	



F0121, Issue 2, December 2011

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<http://www.michell.com>