

DIS030-PDT

4-20 mA Loop Powered - 2 Wire Dewpoint Transmitter for the measurement of moisture in gases and dry compressed air



Features and Benefits

- Single channel 4 digit red LED display
- 2 wire Dewpoint Transmitter
- 4-20mA Loop Powered
- Ranges available between: -60 °C to +50 °C (-76 °F to +122 °F) Dewpoint
- IP65 / NEMA4 protection on DIS030 & PDT
- Long Term Stability
- Fast Response
- Calibrated to International Standards
- Custom-Compact Sampling Systems available - Made to order service



Low Cost - Reliable

- Accurate
- Easy to Install
- Stable.

The **DIS030-PDT** is a single channel 4-20 mA loop powered (24 Vdc) on-line hygrometer designed for the measurement of moisture content in process gases and dry compressed air and can withstand up to 5,000 kPa (50 barg) maximum pressure.

DIS030 Display acts as a 4 digit local display and it is connected directly to the PDT Dewpoint Transmitter. The **DIS030** Display unit can be rotated 270°, and the Facia of the display unit can also be rotated 360° for more flexible application solutions.

The hygrometer gives unparalleled speed and accuracy in trace moisture measurement for medium dewpoint ranges between -60 °C to +50 °C (-76 °F to +122 °F). Configuration can also be factory set to measure in PPM (11-9999, equivalent to -60 °C to +7 °C) or, set in % RH (measuring 0 to 100%).

The **DIS030-PDT On-Line Hygrometer** is factory calibrated and set to customer range specification and will need little or no maintenance after installation.

Designed with the operator in mind, for reliable and accurate measurements, the PDT Dewpoint Transmitter is extremely easy to install and operate. The **PDT** Transmitter is supplied with a Certificate of Calibration, an instruction manual and 2 metres connecting cable as standard. A large range of custom and compact sampling system including closed enclosures are available through our made-to-order service.

Technical Data

DIS030 Round Display:

Visual Display	4 Red LED digits
Electrical Connections	M12 5 pole DIS030 to PDT M12 5 pole rear connection/cable. Two types available, see order section page 4
Power Supply	12 - 33 Vdc
Protection Class	IP 65
Ambient Temperature	-20 °C - +70 °C
Dimensions	See dimensions below.
Manufacturers Warranty	12 Months

PDT Dewpoint Transmitter:

Measuring Range	-60°C to +50°C dewpoint, or factory set option 0 - 100%RH
Pressure Range	Up to 50 barg
Power Supply	16 - 30 Vdc
Protection Class	IP 65

EMC According to DIN EN 61326

Operating Temp -20°C - +70°C

Electrical Connection M12, 5-pole

Thread G1/2"

Dimensions See dimensions below.

Output 4-20 mA

Analogue Output MAX LOAD: 500 Ω

Manufacturers Warranty 12 Months

Transmitter Holder SH-PDT:

Material 316 high grade stainless steel

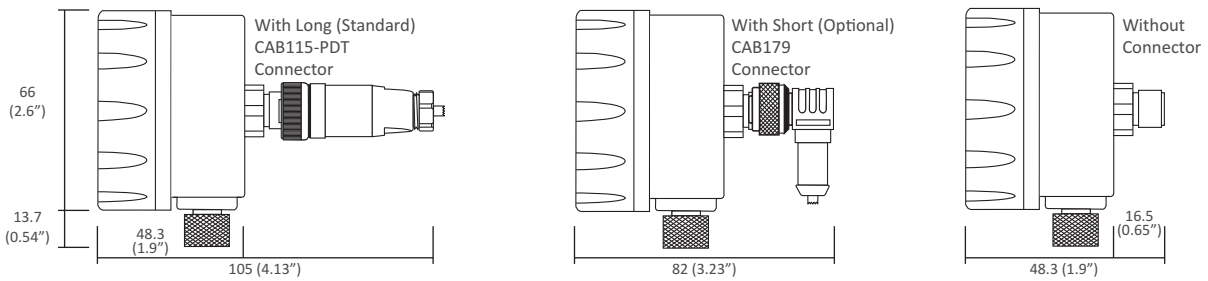
Components Transmitter holder, mounting plate and 2 pillars. Tube fittings sold separately

Thread (Transmitter Port) G1/2"

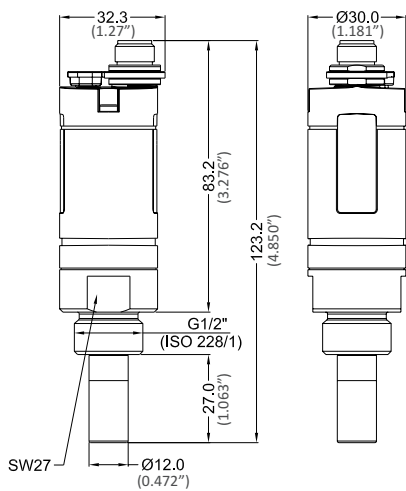
Pipe Fitting Ports 1/8" NPT Female

Dimensions Measurement Units in millimeters / (inches)

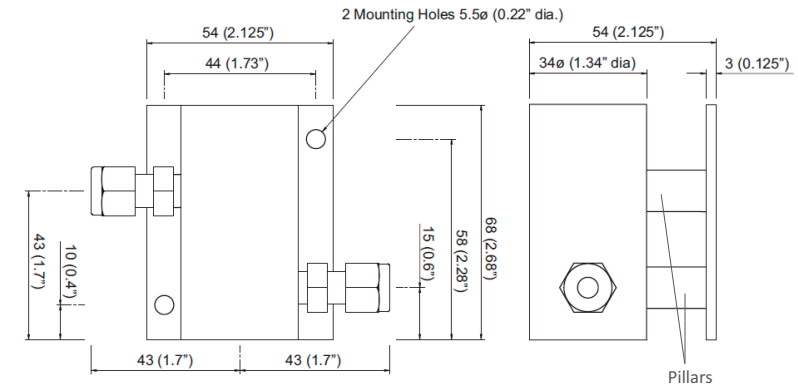
DIS030 Display



PDT Transmitter



SH-PDT Transmitter Holder



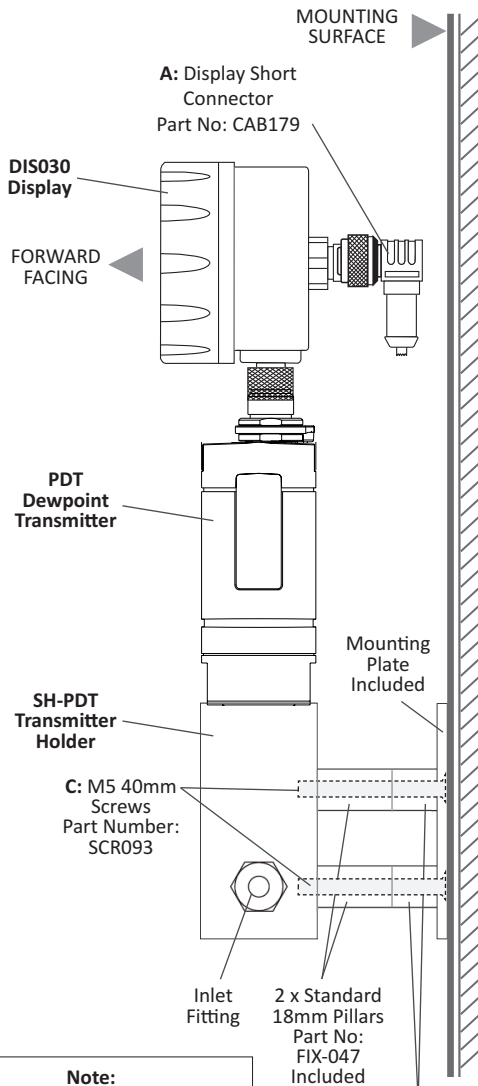
NOTE. The Assembly is shown with 1/4" OD tube fittings. The dimension across the tube fittings will vary for all other size fittings.

Applications

- Fluid bed dryers
- Refrigerant dryers
- Desiccant wheel dryers
- Rotary wheel dryers
- Turbine air intakes
- Wind tunnels
- HVAC applications
- Cool stores
- Air braking systems
- Condensation alarms
- Controlled atmosphere environments
- Precision engineering applications
- Heat treatment gases
- Environmental chambers
- Product drying
- Ambient air monitoring
- Gas turbine frost protection systems
- Switchgear monitoring and many more...

Wall Mounting and Compact Custom made Sampling System Options

Wall Mounting Illustration Example



Note:
If the installation will be wall or surface mounted, these additional parts below will be needed:

A: Display Short Connector
Part Number: **CAB179**
Quantity required = 1

B: 2 Short Pillar Extensions
Part Number **FIX-046**
Quantity required = 2

C: 2 x M5 x 40mm countersunk socket head screws
Part Number: **SCR093**
Quantity required = 2

B: 2 x Short 14mm Pillar Extensions
Part No: **FIX-046**

RECOMMENDED RELATED INSTRUMENTS:

The **AMSS Custom Sampling System Range** are easy to install and require little or no maintenance.

This example incorporates:

- Filter Unit
- Pressure Regulator
- Flow Indicator
- Sample Cell
- PDT Dewpoint Transmitter
- 4 Digit Red LED Display
- Rugged High Quality Polycarbonate Enclosure with Door Seal to IP67 (NEMA 6)
- Height: 300, Width: 200, Depth: 150mm.
- Certificate of Calibration



The **SS-B-DIS030-PDT Basic Sampling System Range** (without enclosure) are also easy to install and require little or no maintenance.

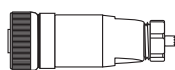
This example incorporates:

- Pressure Regulator
- Flow Meter
- Sample Cell
- PDT Dewpoint Transmitter
- 4 Digit Red LED Display (DIS030)
- Back Plate - Height: 258, Width: 160, Depth: 8mm (includes spacers).
- Certificate of Calibration

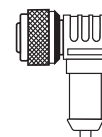


Forward Facing Example

Standard
CAB115-PDT
Connector



Alternative
CAB179
Connector



Note: Use the **CAB179** Short Connector, 14mm pillar extensions and M5 40mm mounting plate screws when the DIS030-PDT is to be installed with the display facing forward and surface mounted - See illustration above.

How to order:

1 Transmitter Range: PDT- [XX/XX]

Range in Dewpoint

-60 °C to +20 °C (-76 °F to +68 °F)	60/20
-40 °C to +30 °C (-40 °F to +86 °F)	40/30
-20 °C to +50 °C (-04 °F to +122 °F)	20/50

Example: PDT-60/20 =

-60 °C to +20 °C dewpoint, or equivalent in °F

3 Transmitter Holder with Fittings SH-PDT + [X][X]

- Comes complete with mounting plate.



INLET Pipe Fitting

No Fittings	0
1/4" - Pipe OD	4
1/8" - Pipe OD	8
6 mm - Pipe OD	6

OUTLET Pipe Fitting

No Fittings	0
1/4" - Pipe OD	4
1/8" - Pipe OD	8
6 mm - Pipe OD	6

NOTE: No Fittings Needed = Ports are 1/8" NPT Female

Example: For Transmitter Holder with 2 x 1/4" fittings
Order SH-PDT-4-4

5 Additional Components

For wall or surface mounting using DIS030

Short cable - see order point 2

Short Pillar Extensions (2 needed)	FIX046
M5 x 40mm countersunk socket head screws (2 needed)	SCR093

Custom-Compact Sampling Systems

For Custom-Compact Sampling Systems, please see datasheet #3000.

These systems are made-to-order to exact specifications required.

Fast turnaround, 12 months warranty, comes with certificate of test and calibration.



2 Cable: CAB115 + [XX]^{Length}

The PDT Transmitter comes complete with 2 metres of connecting cable and a connector plug as standard.



For a longer cable length with connecting plug, simply enter the required length after the part number above up to 10 meters maximum:

Example: CAB115 - 7 =
7 meters with connector plug.

CAB179 + [XX]

For wall or surface mounting



For a longer cable length with connecting plug, simply enter the required length after the part number above up to 10 meters maximum:

Example: CAB179 - 5 =
5 meters with connector plug.

4 Displays:



DIS030
Local Display

Alternative displays for panel mounting applications



DS1200
Standard Display



DS4000
Advanced Display with more functions and features

- These displays are perfect for continuous on-line measurements with the PDT Dewpoint Transmitter
- Fast Response
- Single channel on-line hygrometer
- Simple 2 wire connections
- 4-20 mA loop powered

For DS1200 and DS4000 Displays see separate datasheets for full specifications

Corrosive Gases: The Sensor should not be exposed to corrosive gases (or corrosive contaminants in the gas sample) as these can chemically attack the sensor, impairing calibration accuracy and/or damaging it beyond economic repair. Examples of such gases are mercury (Hg), ammonia (NH₃), chlorine (Cl₂) etc. Strong oxidising agents such as ozone (O₃) should also be prevented from coming into contact with the sensor.

2991 DIS030-PDT pd280423-Iss-2

Alpha Moisture Systems Limited.
Registered Office: Alpha House,
96 City Road, Bradford, BD8 8ES. UK.



Registered in England and Wales No. 3902302
VAT Registration No. GB607207563
WEEE Producer Registration No. WEEE/EA0067TX

Tel +44 (0) 1274 733 100

Email info@amsystems.co.uk

Website amsystems.co.uk

Product specification may be subject to change.

© Alpha Moisture Systems Ltd.

4/4