

# CHAPTER 14

## TECHNICAL SPECIFICATIONS

### Measured variables

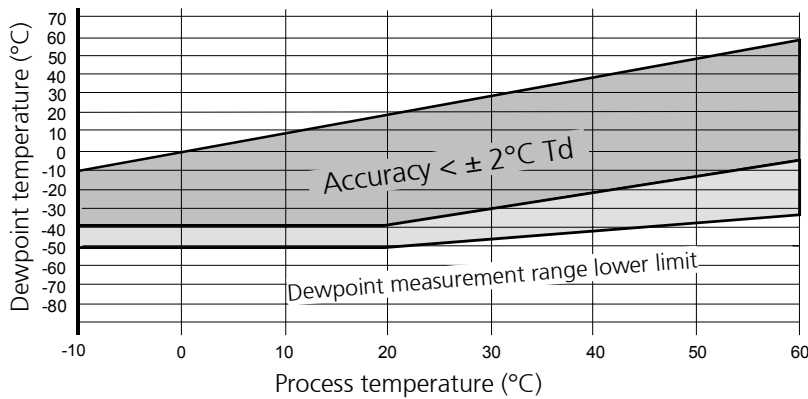
#### Dewpoint temperature

Measurement range

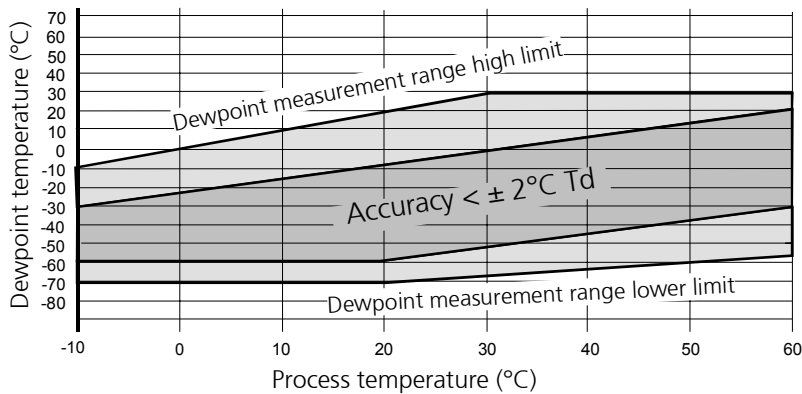
DMP74A	-50...+60 °C (-58...+140°F)
DMP74B	-70...+30 °C (-94...+86°F)

Accuracy  $\pm 2$  °C ( $\pm 3.6$  °F) see graphs below

#### DMP74A



#### DMP74B



**DMP74A**

Response time: 63 % (90 %) at flow rate 0.2 m/s,  
1 bar absolute pressure, +20 °C

0 → -40 °C T <sub>d</sub> (32 → -40 °F T <sub>d</sub> )	20 s	(120 s)
-40 → 0 °C T <sub>d</sub> (-40 → 32 °F T <sub>d</sub> )	10 s	(20 s)

**DMP74B**

Response time: 63 % (90 %) at flow rate 0.2 m/s,  
1 bar absolute pressure, +20 °C

0 → -60 °C T <sub>d</sub> (32 → -76 °F T <sub>d</sub> )	50 s	(340s)
-60 → 0 °C T <sub>d</sub> (-76 → 32 °F T <sub>d</sub> )	10 s	(20 s)

**Temperature**

Measurement range	-10...60 °C
Accuracy at +20°C	± 0.2 °C
Typical temperature dependance of electronics	± 0.005 °C /°C
Temperature sensor	Pt100 IEC751 1/3 class B

**ppm volume concentration**

Measurement range	
DMP74A	40...200 000 ppm
DMP74B	10...20 000 ppm
Accuracy at + 20 °C (+68 °F)	±(7.3 ppm + 8.3 % of reading)

**Relative humidity (DMP74A)**

Measurement range	0...100 %RH
Accuracy at +20 °C	
RH < 5 %	± (0.025 %RH + 17.5 % of reading)
RH > 5 %	± (0.8 %RH + 2 % of reading)

**Measurement environment**

Temperature	-10...+60 °C (+14...+140 °F)
Pressure	0...20 bara (0...290 psia)
Sample flow rate	no effect for dewpoint accuracy

## Probe General

Sensor	DMP74A DMP74B	Vaisala DRYCAP® 180S Vaisala DRYCAP® 180M
Probe material (wetted parts)		Stainless steel (AISI 316L)
Sensor Protection		Sintered filter,(AISI 316L) , partno:HM47280SP
Mechanical Connection		G1/2" ISO228-1 thread with bonded seal ring (U-seal)
Housing classification		IP65 (NEMA4)
Storage temperature		-40...+70 °C
Storage humidity		0...100 %RH non condensing
Weight		350 g

## MI70 Indicator

### Indicator general

Operating temperature range	-10...+ 40 °C (+14...+104 °F)
Operating humidity	non-condensing
Menu languages	English,German, French, Finnish, Spanish, Swedish
Display	LCD with backlight Graphic trend display of any quantity Character height up to 16mm
Probe inputs	1 or 2
Power supply	Rechargeable NIMH battery pack with AC-POWER or 4 x AA size alkalines, type IEC LR6
Analog output	0...1 VDC
Output resolution	0.6 mV
Accuracy	0.2 % full scale
Temperature dependence	0.002 %/°C full scale
Minimum load resistor	10 kohm to ground
Data interface	RS232C (EIA-232)
Data logging capacity	900...2700 real time data points,
Logging interval	1 s to 12 h
Logging duration	1 min ... memory full
Alarm	Audible alarm function
Housing classification	IP54
Weight	400 g

## Battery pack

Operation times in	
continuous use	48 h typical at +20 °C
data logging use	up to 30 days
Power consumption during charge	10W max
Charging time	4 hour

## DMP74 Probe + MI70 Indicator = DM70 Hand-held Dewpoint Meter

### General

Storage temperature	-40 ...+70 °C (-40...+158 °F)
Storage humidity range	0...100 %Non Condensing
Housing material	ABS/PC-blend
Total weight	750 g

### Electromagnetic compatibility

Complies with the following standard:

EN 61326-1:1997 +Am 1:1998, Electrical equipment for measurement, control and laboratory use - EMC requirements: Generic environment.

### DSC74 sample cell adapter

Fitting	NIP08, type D
Pressure range	0...10 bar
Weight	300 g

## DSS70A sampling system

Measuring range	-60°C T <sub>d</sub> ...T <sub>amb</sub> (max T <sub>amb</sub> : + 40°C T <sub>d</sub> )
Operating gases	Air, N <sub>2</sub> , not-toxic gases, non-flammable, inert gases
Inlet/outlet connection	1/4" SWAGELOK
Operating temperature	
Ambient temperature	0...+40 °C (+32...+104 °F)
Gas temperature	max 200 °C (392 °F) with 2.0 m FEP tube at 20 °C (68°F)
Operating pressure	
with pump	0.6...1.2 bara (8.7...17.4 psia)
pump disconnected	0...20 bara (0...290 psia)
Battery operation time for pump	8 h continuous
Filter	7 µm inline filter, 1/4" SWAGELOK SS-4F-7
Wetted parts	Stainless steel
Carrying case	ABC-plastic
Weight	5.5. kg (12 lbs)
Fuse ratings	Glass tube fuse 5x20 mm T 2A/250VAC (Manufacturer: Littlefuse 218002)

## Accessories

Description	Order code
Euro AC-adapter	MI70EUROADAPTER
UK AC-adapter	MI70UKADAPTER
US AC-adapter	MI70USADAPTER
AUS AC-adapter	MI70AUSADAPTER
Measurement indicator	MI70
MI70 Link- software interface kit	MI70LINK
Analog output signal cable	27168ZZ
Sampling cell	DSC74
Connection cable for DMT242	27160ZZ
Connection cable for DMP248	27159ZZ
Carrying case	MI70CASE
Sintered filter for the probe	HM47280SP
Bonded seal ring	26230
Filter for DSS70A	210801
Rechargeable battery for DSS70A	DSS70BAT