

## Microwave components for telecommunication systems

*High-Precision Machining by Lathes and CNC Centers*

### PRODUCT DATASHEET

#### MWDH-20

## MWDH-20 Automatic Dehydrator, 0.2 SCFM, 120V AC 50/60 Hz SHELF SOLUTION – 1 Output Port extendable to 8 Ports with Gas Distribution Manifold Kits

The MWDH Dehydrator is designed for reliable pressurization of waveguide, coaxial cable and rigid transmission line systems. Dry pressurized air in the distribution system ensures that condensation is avoided and optimal system performance is achieved.

The dehydrator includes a self-contained completely automated air drying system that utilizes a pressure swing moisture adsorption cycle to provide pressurized dry air while continuously purging the collected moisture to the atmosphere. This eliminates the need for replacement or manual reactivation of the desiccant and makes our MWDH dehydrators ideal for unattended operation, even at remote sites.

The dehydration system is completely automatic, with no need for periodic media replacement or reactivation. These units are capable of years of trouble-free service when properly installed, operated and maintained.

An internal check valve guarantees that the customer system stays isolated from the dehydrator's internal system when the dehydrator is not actively operating. A USB port offers the ability to enable options, update Dehydrator configurations and download operating data in the field for easy upgrade, maintenance and troubleshooting.

The alarm port consists of electrically isolated 1 Form C relay contacts that can be used for both local and/or remote monitoring/alarming. Additional standard features include a 0-103 kPa (0-15 psig) pressure gauge and indicating LED lights.

The units may be shelf mounted or placed in a 19" EIA relay rack. A Wall/Rack mount is available as an optional accessory.



### FEATURES / BENEFITS

Low Pressure Operation - Software configurable from 6.7-17.2 kPa (1-2.5 psig) in 3.4 kPa (0.5 psig) increments

High Pressure Alarm - Software configurable from 20.7-75.8 kPa (3-11 psig) in 6.9 kPa (1 psig) increments

Humidity Alarm - Software configurable from 20-50% RH in 10% RH increments

Run Time Alarm - Software configurable from 10 minutes to 4 hours in 10 minute increments

System Purge - Software configurable from 2-10 days in 2 day increments

## Technical Features

### GENERAL SPECIFICATIONS

Product		Dehydrator
Dehydrator Type		Automatic
System Capacity		Standard
Max System Volume	l (ft³)	3500 (123)
Output Capacity @ 60 Hz	NI/h (SCFM)	340 (0.2)
Output Capacity @ 50 Hz	NI/h (SCFM)	280 (0.17)
Output Dew Point	°C (°F)	Ambient dew point greater than 10°C (50°F): 50 (90) dew point reduction minimum. Ambient dew point less than 10°C (50°F): -40 (-40) dew point minimum
Field Adjustable Output Pressure (on/off)	kPa (psig)	Software configurable from 6.9 -68.9 (1-10)
Field Adjustable Output Pressure Deadband (on/off)	kPa (psig)	Software configurable from 13.8-62.1 (2-9)
High Pressure Safety Relief Valve	kPa (psig)	103.4 (15) fixed
Number of Outlets		1
Output Fitting		Quick-Connect 3/8" OD Plastic Tube (Note 3)
Maximum Continuous Operation Time, Active	Hours	4.0

### ELECTRICAL SPECIFICATIONS

Operating Voltage	V	120 +/- 10%
Frequency	Hz	47-63
Max. Standby Current	A	0.5
Max. Active Current	A	3.0

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Max. Active Power Consumption	W	320.0
Max. Apparent Power Consumption	VA	380.0
Power Factor Correction, typical	typical	0.8
Electrical Feed Circuit Configuration		Single phase, 3-Conductor (Phase/Neutral/Ground) (Note 4)
Electrical Feed Circuit Size Recommendation	A	15 (Note 5)
Electrical Inlet Connector		IEC 320 Type C 14

### MECHANICAL SPECIFICATIONS

Dimensions, H x W x D	mm (in)	242 x 343 x 242 (9.5 x 13.5 x 9.5)
Net Weight	kg (lb)	11.4 (25)

### ENVIRONMENTAL

Ambient Temperature Range	°C (°F)	0 to 40 (32 to 104 )
Ambient Humidity Range, relative	%	5-85, non-condensing (max absolute humidity 25g/m <sup>3</sup> (0.00156lb/ft <sup>3</sup> )) (Note 2)
Noise	dBA	0.0
Noise	dBA	60.0
Max.Operational Altitude @ 34.5 kPa (5 psig)	m (ft)	1980 (6500)
Max. Operational Altitude @ 68.9 kPa (10 psig)	m (ft)	1525 (5000)
Capacity derating per 305 m (1000 ft) altitude above MSL	l/h (CFM)	41 (0.024)

### ACCESSORIES

Accessory/Spare Part		Wall/rack mount
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### ALARMS

Alarm Contact Rating		1A, 30 VDC, maximum
Low Pressure Alarm		Standard configuration: Fixed at 3.4 kPa (0.5 psi) below lower operational pressure Low Pressure configuration: Fixed at 1.7 kPa (0.25 psig)
Alarm Configuration		1 Form C relay contacts, screw terminal connector

### OPTIONS

Options		<ul style="list-style-type: none"> <li>Low Pressure Operation: Software configurable from 6.9 - 17.2 kPa (1-2.5 psig) in 3.4 kPa (0.5 psig) increments (Note 6)</li> <li>High Pressure Alarm: Software configurable from 20.7- 75.9 kPa (3 -11 psig) in 6.9 kPa (1 psig) increments</li> <li>Humidity Alarm: Software configurable from 20-50% RH in 10% RH increments</li> <li>Run Time Alarm: Software configurable from 10 minutes to 4 hours in 10 minute increments</li> <li>System Purge: Software configurable from 2-10 days in 2 days increments</li> </ul>
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### COMPLIANCE

Compliance		<ul style="list-style-type: none"> <li>CE (EMC, MD, PED, RoHS)</li> <li>IEC 60529, IP20</li> </ul>
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### Notes

- 1) All specifications at 23°C (73°F) and 50% relative humidity at mean sea level (MSL) unless otherwise noted.
- 2) For indoor use only. IEC 60721-3-3 Class 3k3 (temperature-controlled locations, humidity not controlled) absolute Humidity AH 25 g/m<sup>3</sup> (0.00156 lb/ft<sup>3</sup>) @ 29.4°C (85°F) => 85 % relative humidity RH absolute Humidity AH 25 g/m<sup>3</sup> (0.00156 lb/ft<sup>3</sup>) @ 40°C (104°F) => 48.8 % relative humidity RH
- 3) Tubing used must be polyurethane (durometer 95A), polyethylene (durometer 440), or nylon (durometer 500)
- 4) Voltage source per IEC 60038 (1/N/PE)
- \*\*\* Not for use with North American 240VAC service \*\*\*
- 5) Electrical supply circuit must retain within operating voltage specifications at all times.
- 6) Lower Operating Pressure set to 3.4 kPa (0.5 psig). Low Pressure alarm set to 1.7 kPa (0.25 psig)