Transmission Line Dehydrator

300 L 30 hPa

Manual

Date: 10/11

Figure 1 – Front view

1. Short description

The dehydrator supplies dry air. This dry air is filled into transmission lines such as waveguides of radio link systems to prevent the occurrence of humidity and condensation. The dehydrator is designed for installation in ETSI standard cabinets, in 19” racks, and for wall or floor mounting. It requires a height clearance of 3 units.

A pressure sensor in the dehydrator system automatically controls within preset limits the correct air pressure inside the waveguide. An external air distribution may be connected by hose to the ½ “ air outlet (each outlet with shut-off valve) to supply several antennas. A number of air distributors may be cascaded, if this is required.

The cartridge that will be checked by a humidity sensor is fitted with an internal heating element, which is surrounded by the desiccant. The cartridge will be regenerated cyclically.

The compressor inside the dehydrator draws air in, which passes through the solenoid valve into the drying cartridge. The desiccant inside the drying cartridge removes moisture from the air. The desiccant inside the drying cartridge removes moisture from the air. A humidity sensor monitors the desiccant (molecular sieve). If the preset humidity setting is exceeded, the pumping process will be interrupted and this will be indicated by the generation of an error. The duration of the regeneration depends on the operational time of the pump. Accordingly, the tightness and the volume of the connected line system have an influence the regeneration.

Regeneration is done:

- after 168 operating hours (1 week)
- after a certain working time of the compressor, adjustable between 1 and 1500 minutes
- after exceeding the humidity limit (maximal humidity - 10 %)
- after one week (168 hours)
- manually via the keypad
- via the USB interface

2. Specifications

Effective air output	ca. 300 l/h
Start-up pressure	20 hPa ± 10% *
Shut-off pressure	30 hPa ± 10% *
Alarm pressure	10 hPa + 1 hPa
Over pressure	Safety valve opens at ca. 30 hPa *
Ambient temperature	- 25°C to + 50°C
Ambient humidity	83 % at ambient temperature of + 23°C
Dew point reduction	>--35 K in relation to ambient temperature
Desiccant	Molecular sieve
Power supply	230 V AC/50 Hz ±10%
Signal connection	e.g. with 24 V external voltage
Power consumption at	230 V/50 Hz ca. 160 VA
Fuse protection	3.0 A automat
Air supply	Air outlet for ½“ hose
Dimensions (h x w x d)	133/440/245 mm
Weight	ca. 10 kg
Mounting options	Mounted in ETSI-/19”-rack, floor- or wall-mounting

* Other pressures on request

Friedl & Müller
Gerätebau GmbH Karl-Benz-Str. 14
85221 Dachau
Telefon 0 81 31 / 31 33 2-0 Telefax 0 81 31 / 1 55 45
http://www.friedl-mueller.de
e-mail: info@friedl-mueller.de