

# Delta TM3P

PNEUMATIC MODULE FOR LEAK TESTS BY ABSOLUTE PRESSURE DECAY



MINIMAL SIZE

HIGH PERFORMANCES

COMPATIBLE WITH ALL PLCs

DESIGNED FOR MULTIPLE TESTING STATIONS

- Leak tests up to 20 bar and in vacuum
- Resolution up to 0.1 Pa (0.001 mbar)
- Pneumatic and electronic circuits completely intergrated
- Reduction of the test time
- Easy to install and use
- Digital interface for PLC
- RS485/USB communication interfaces
- 300 test tables



Further information:  
[www.tecnasrl.com/products/tm3](http://www.tecnasrl.com/products/tm3)



Tests

DELTA TM3P pneumatic modules are the ultimate achievement in traditional leak testing and the best solution to integrate a reliable and compact testing station in automated systems. The absence of display or push-

buttons has permitted the reduction of the dimensions, making it possible to fit the module in every automation, as close as possible to the product to be tested, minimising superfluous volumes and increasing the speed

and sensitivity of the tests.

DELTA TM3P pneumatic modules can be connected to and controlled by every PLC and interfaced to operator terminals.

DELTA TM3P can be interfaced with:



SOFTWARE MANAGER for TM3 modules management, data storage and statistical process control (SPC)



Traditional PLC systems



Generic HMI viewers with dedicated software to manage TM3 test modules

## SPECIFICATIONS

Power Supply	24 Vdc - 1 A max
Compressed Air Line	Dry, non-condensing, 5-micron filtered, and oil-free air, compliant with ISO8573-1, 6x4 mm hose fitting Test pressure: externally regulated Pilot pressure for internal valves: 2.5 bar min, 10 bar max
Sensor Calibration	Remote control software procedure
A/D Converter	24 bits
Pressure Regulator	External (option)
Indicators	4 LEDs: two yellow (test phases), green (passed), red (failed)
Test Counter	PASSED and FAILED totals, resettable to zero
Clock	Date and time, with supercap, 7 days back up max
Programmable parameters	300 testing tables, general testing parameters
PLC Connections	2 photocoupled inputs: START / RESET 4 photocoupled outputs: TEST RUNNING, PASSED, FAILED, ALARM
Data Interfaces	RS485 and USB communication interfaces with Modbus protocol RS232 interface to drive an external electronic pressure regulator
Staubli® Connector	Available on external connection for leak masters (option)
Housing	Unpainted aluminium

## Calibration service

Each equipment is accompanied by a calibration certificate released by Tecna srl. According to the requirements of ISO9001 standard, the calibration must be verified at specified intervals against national or international test masters. Tecna srl, through its own specialized personnel and certified instruments, offers a complete scheduled calibration service.

## ACCESSORIES:

- Pressure regulators
- External module for vacuum generation
- 3-colours indicator light with loud sound alert
- Air filters
- Fixing brackets
- Staubli® connector assembled on a T fitting to join a Leak Master



## CUSTOMIZED SOFTWARE FOR HMI TERMINAL/PC:

- Software to collect and manage the data of the tests
- Viewing and management of several testing stations
- Parameter programming and SPC analysis of test data
- Virtual Instrument for National Instruments LabVIEW™ available at request

## HMI TERMINAL:

Weintek MT8050iE operator terminal with 4.3" touchscreen display, 2 serial line interfaces RS485/232, 1 USB Host interface, 1 Ethernet interface .  
Preloaded software to manage up to 8 TM3P instruments.  
Libraries for other PLCs and HMI viewers are available upon request.



## ABSOLUTE PRESSURE DECAY

The testing cycle is based on the pressure decay measured inside of the component being tested, which must be below the set limit to pass the test.

## OPERATING PRINCIPLE

The testing cycle consists of three phases:

### FILLING (time T1):

the product being tested is filled to the programmed rated test pressure.

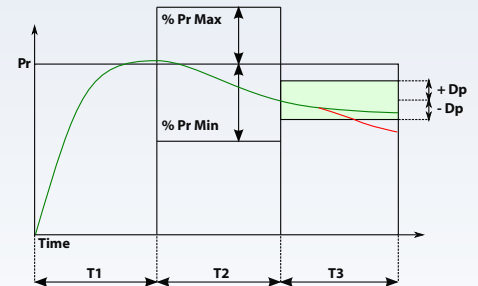
### SETTLING (time T2):

this phase is necessary for the settlement of the pressure inside the product being tested.

### LEAK MEASUREMENT (time T3):

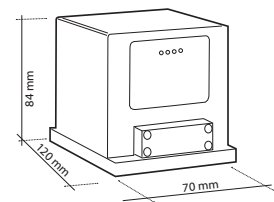
the pressure decay in the product being tested is measured.

Tests at a negative pressure (vacuum) follow the same principle.



## DIMENSIONS

Delta TM3P up to 10 bar



Delta TM3P up to 20 bar

