

Delta TM3F

PNEUMATIC MODULE WITH DIRECT FLOW MEASUREMENT FOR LEAK OR FLOW RATE TESTING

**MINIMAL SIZE
HIGH PERFORMANCE
COMPATIBLE WITH ALL PLCS
DESIGNED FOR MULTIPLE TESTING STATIONS**



- Flow tests from 25 cm³/min up to 160 l/min
- Resolution up to 0.01 cm³/min
- Full scale pressure: from 500 mbar up to 10 bar
- Resolution up to 0.1 Pa
- Extremely quick testing (applications with test time < 1 second)
- Reliable pneumatic circuit, complete with valves and transducers for pressure and flow
- Easy installation
- Digital interface for PLC
- RS485/USB communication interfaces
- Up to 300 test tables



Further information:
www.tecnasrl.com/products/tm3f



Tests

TM3PF Measurements of pressure and flow in air

The instrument directly measures the pressure and flow rate through the product being tested (filters, taps, valves, ...). For leak or flow rate tests on small volumes, testing times below 1 second can be reached. Dislocated pressure reading on the tested product is available.

TM3PF-CV Measurements of pressure and flow in air for Check Valves

The instrument measures the peak pressure reached before the opening of the valve and also the pressure and the residual flow when the valve opens. Before the test starts, the testing module checks the initial conditions of pressure and free output flow. Customized test cycles are available.

TM3PQ Leak tests with direct measure of the flow rate

By using an internal volume, the instrument can measure the leak rate and also control the volume of the tested product.



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

DELTA TM3F can be interfaced with:



Traditional PLC systems



Generic HMI viewers with dedicated software to manage TM3 test modules

Delta TM3F

Rev. 01/19

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; hose fittings 4x2.5/ 6x4 / 8x6 mm Supply pressure compatible with the instrument's full scale pressure
Sensor Calibration	Remote control software procedure with external masters
A/D Converter	24 bits
Pressure Regulator	External (option)
Indicators	4 LEDs: 2 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	up to 300 testing tables, general testing parameters
PLC Connections	2 photocoupled inputs: START / RESET 4 photocoupled outputs: TEST RUNNING, PASSED, FAILED, ALARM
Data Interfaces	RS485/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 report released by Tecna srl. According to the requirements of ISO9001 standard, 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:

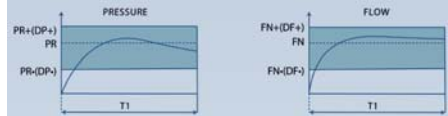
Weintek MT8050i operator terminal with 4.3" touchscreen display, 2 serial line interfaces RS485/232, 1 USB Host interface, 1 Ethernet interface.

Preloaded software to manage up to 8 TM3F instruments. Libraries for other PLCs and HMI viewers are available upon request.

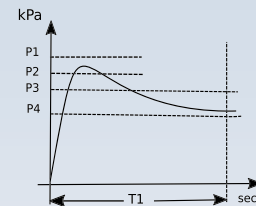
Ethernet connection to PLC and PC.



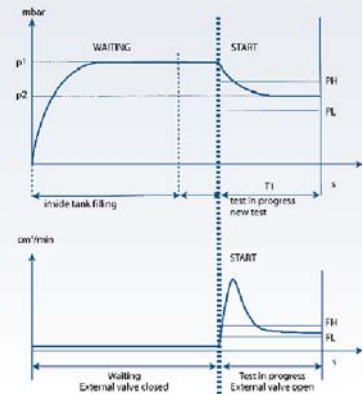
TM3PF Measurements of pressure and flow



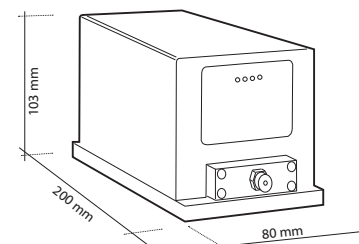
TM3PF-CV Measurements of pressure and flow for check valves



TM3PQ Leak tests with direct measure of the leak flow rate



DIMENSIONS:



products presented in this catalogue are subject to normal technical and design modifications, without prior notice and without responsibilities for the manufacturer.