CoM4.Leak-Compact-06bar-01

Technical Datasheet



Illustration: the version shown is the rack enclosure with handles.

Short description

Leak measurement by the pressure decay method for variable test pressures up to 6 bar gauge. The pressure decay of the test specimen is measured against a leak-tight reference volume, which is what gives the method its high reproducibility. The measured value is available either as standard volumetric flow or as pressure decay.

Identification

Product Name	CoM4.Leak-Compact-06bar-01
Controller	CoM4.SYS
Document Status	12.11.2026
Enclosure Size	19" 4 U rack insert

Measured variables and calibrated ranges

MEASURAND	UNIT	MIN	MAX
Test pressure (gauge)	mbar	0	6000
Differential pressure	mbar	-20	+20

Resolution

Resolution of pressure decay	0.1 Pa/s

Guide value for the smallest measurable pressure decay.

Sensors

SENSOR TYPE	MEASURING RANGE	OVERLOAD	ACCURACY
PDP2 (absolute pressure)	0 to 7 bar abs.	14 bar	0.025 % of span (linearity deviation)
PDP2 (differential pressure)	-20 to +20 mbar	Common pressure -1 to 16 bar forward 16 bar, reverse 1 bar	0.025 % of span (linearity deviation)

The span is the difference between the upper and the lower range value of the sensor – for differential pressure therefore 40 mbar, corresponding to 0.01 mbar. The figure is the linearity deviation of the sensor, not the measurement uncertainty of the leak test.

Operating conditions

Test pressure	variable up to 6 bar gauge

Below 500 mbar the pressure control sometimes starts with a marked delay. This range is not suited to fast repeat testing.

Ambient conditions

Temperature	10 to 40 °C
Humidity	0 to 90 % RH, non-condensing
Pressure	atmospheric
Installation	free from vibration
Degree of protection	IP 40

Media compatibility

Permissible medium	compressed air
Purity requirements	dust-free (filtered to 5 µm), oil-free, non-condensing, non-corrosive

Standards and approvals

Directives	EMC Directive, Low Voltage Directive
Marking	CE

Certificates supplied

- DAkkS calibration certificates of the pressure sensors
- DAkkS calibration certificates of the test leaks, if ordered

Recalibration is available either as DAkkS or as factory calibration.

Mechanical and electrical data

Enclosure	19" rack insert, 4 U
Width	450 mm
Height	190 mm (desktop enclosure with feet)
Depth	550 mm
Weight	15 kg
Power supply	100 to 240 V AC

Process connections

Test specimen	G 1/8
Test leaks 1 and 2	G 1/8 each
Compressed air supply	female thread, fitting of your choice

Interfaces

Ethernet	COMM
Ethernet	TetraTec Net-IO
Operating language	English and German

Scope of functions

- Up to 95 test programs definable as type files
- Fully automatic determination of volume and leakage for unknown test specimens
- Process optimisation of the cycle time by curve set analysis
- Capability analysis of the measured value from repeat measurements
- Self-test of internal leak-tightness
- Self-test of function and leakage of the test leaks
- Two control modes for pressure control: fast or precise
- Optimisation of the pressure control at the relevant pressure points
- Prepared debug programs for fault and leak tracing on the customer-side adaptation

- Calibration program for the built-in pressure sensors

Options and variants

- Rack enclosure
- Rack enclosure with handles
- Desktop enclosure with feet and handles
- Capillary test leaks for volume determination and the self-tests – strongly recommended, both functions require them

Ordering information

The system is set up for the test task. For design and quotation we require:

- Pressure range of the test pressure
- Leakage limit
- Test specimen volume including adaptation and piping
- Maximum permissible cycle time

FURTHER DOCUMENTS

The benefits, the measuring principle and application examples are described in the product brochure **CoM4.Leak-Compact**. For the design of your measuring task, contact us at **+49 7157 5387-0** or **info@tetratec.de**.