XYP 3: Low-pressure test unit


T03063

For performing functional tests and adjusting the measuring range on RLP and RLE 150 volume-flow controllers. Because the low-pressure source can be varied, this test unit can also be utilised for actual-value simulation of other low-pressure equipment. Conforms to the regulations on pressure equipment (97/23/EG Art. 3.3).
Housing of thermoplastic; front plate with adjuster knobs for setpoint and actual value, inscribed with connection diagram; compressed air connected via push-on connectors; two stepped connectors for soft plastic tubing (internal diameters 4 and 6 mm). Bracket with two pressure gauges (0...1.6 bar). Includes a bag of fitting material (containing tubing, 3 connectors Rp ⅛, 1 connector M4, 1 reduction connector).

Type	Actual-value signal x_i Low-pressure source	Setpoint signal X_S Volume flow	Weight kg
XYP 3 F001	5...500 Pa [1]	0.2...1.0 bar ≙ 20...100% $\dot{V}$	0.4
XYP 3 F002	1...160 Pa	0.2...1.0 bar ≙ 20...100% $\dot{V}$	0.4

Pressure supply [2]		1.3 bar ± 0.1	Connection diagram		A03209
Output pressure		0...1.3 bar	Dimension drawing		M297503
Air consumption	F001	48 l_n/h	Fitting instructions	F001	MV 7327
	F002	76 l_n/h		F002	MV 7339
Setting accuracy x_i [3]		5%			

Accessories
0297502 000 Bag with fitting material

1) Conversion kit (1...100 Pa) included.
2) See Section 60 on regulations concerning the quality of supply air, especially at low ambient temperature.
3) For more accurate testing, check the setting x_i with a fine-pressure meter.
The percentage stated is based on 100% volume flow.

Operation

The whole functional capability of this test unit is divided into several separate functions. These are described in the diagram on the front plate.

Actual-value simulation x_i

Using the x_i adjuster, the low-pressure signal (1...100 Pa for RLP 100 or 5...500 Pa for RLP 10, 20) can be created at the (+) connection. For accurate adjustment, a fine-pressure meter can be connected up to the (–) connection.

Setpoint simulation X_s

Using the X_s adjuster, the setpoint signal can create 20...100% of the volume flow (corresponds to 0.2...1.0 bar) at connection 6 and indicate this on the left-hand manometer.

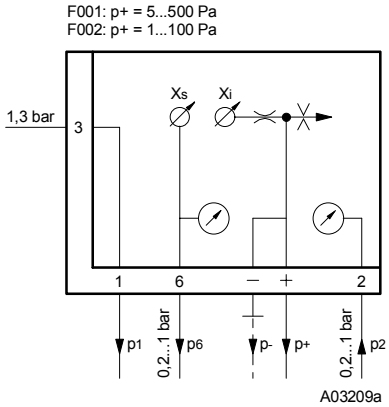
Output pressure p_2

The controller output pressure p_2 (control signal) can be indicated, via connection 2, directly on the right-hand manometer.

Supply pressure p_1

The test unit (connection 3) and the test object (connection 1) both have a supply pressure of 1.3 bar. Connection 1 must be closed off if the test object is electrical.

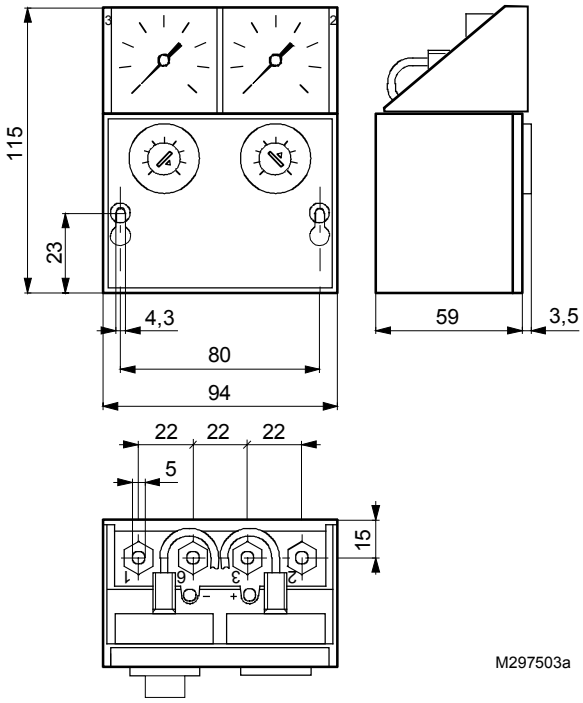
Connection diagram



3 = supply pressure 1.3 bar
1 = supply pressure to the test object
2 = output pressure from the test object
6 = setpoint X_s, 0.2...1.0 bar
– = connection for fine-pressure meter
+ = actual value x_i (low pressure)

Dimension drawing

69.720/2 XYP 3



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