



DO NOT MODIFY THE SWITCH POSITION IN ANY CASE



The replacement of the Switch in case of malfunction must be carried out in a test bench at MANVIA's facilities.

SPARE PARTS



DO-TVS O-rings Kit



MANVIA THERMAL SHUT OFF VALVE TVS

INSTALLATION, OPERATION & MAINTENANCE MANUAL



CAUTION

CAUTION, indicates a hazardous situation which, if materialized, could result in material damage or a moderate injury.

DANGER

DANGER indicates a hazardous situation which, if materialized, could result in a serious injury and even in death.

SAFETY INFORMATION

Please pay attention to all Warnings and Cautions in this manual. Failure to do so could result in serious personal injury and/or equipment damage. It is mandatory to read the entire manual ununpack, install or operate this product.

⚠ DANGER: Installation, operation and maintenance must only be carried out by suitably trained personnel and in accordance with this manual. Safety precautions must be taken to avoid the possibility of an accident when operating in conditions of high pressure and/or high temperature.

TVS SPECIFICATION

TECHNICAL SPECIFICATIONS	
Wetted parts:	SS 316 and VITON
Max. Pressure	200 barg
Trip temperature:	49 °C. Check label. Other available.
Max. Temperature:	200 °C
Connections:	¼" NPTF
Cv:	0.18
Switch type (optional):	SPDT
Contact rating (optional):	10 A, 250 VAC, 6A 30 VDC
Switch protection degree:	IP67

DEGASSER SYSTEM SPARE PARTS

Part #	Name
DO-TVS	"O" Rings Kit

STANDARD WARRANTY

MANVIA warrants products manufactured and supplied by it, to be free from defects in workmanship and, to the extent materials are selected by Seller, to be free from defects in materials, for a period of twelve months from shipment.

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PRODUCT DESCRIPTION

MANVIA TVS is a thermal shut-off valve, which is used to assure that the process fluids are always below the maximum allowable temperature for instruments, specially for analyzer sample measurement.

When sample is too hot to be measured by analyzers, sample coolers are commonly used to reduce sample temperature to the acceptable limits. In the event of a loss of cooling fluid to the sample cooler, or if the desired sample temperature is exceeded the operating temperature 49°C (120°F). The thermal actuator modulates the valve to close the inlet orifice to prevent equipment damage.

INSTALLATION

⚠ CAUTION: The necessary protective equipment must be used in order to avoid knocks, cuts and entrapments during installation. Follow this procedure for correct installation:

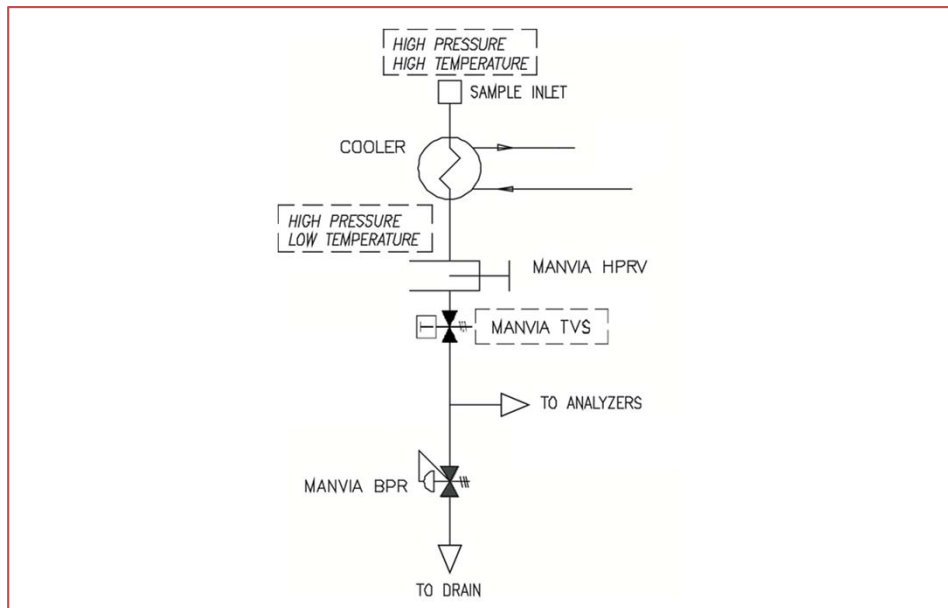
The MANVIA TVS, is preferably to be installed in according to process diagram below, after pressure reducing valve.

MANVIA TVS, can be installed in any position required, vertical or o horizontal and with the desired orientation. It not requires any kind of supporting, is supported by means of its process connections, due to its reduced weight.

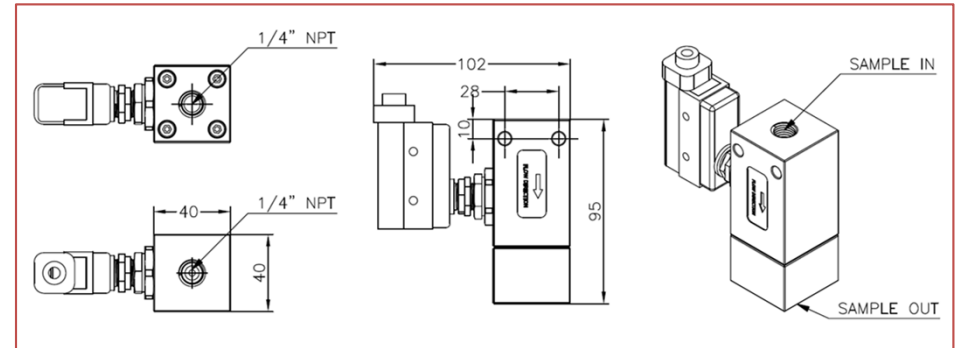
Is only important to respect outlet and inlet connection which are identified and must be correctly connected in order to get a correct working of the valve.

⚠ Before start the installation of TVS, be sure that there is no high pressure or high temperature fluid inside the tubing to connect the TVS:

✓ It is advisable the use of corrosion resistant pipework suitable for the fluid being sampled in order to connect TVS to sampling stream.



DIMENSIONAL AND CONNECTION DRAWING



OPERATION BASIS

In the normal mode of operation, while temperature is below the adjusting point (49 °C as usual), valve remains in open position. When temperature reach adjusting point, valve closes fully in a few seconds, blocking sample stream and remains in this position up to temperature lowers up to the reset point (45 °C as usual). The reset is performed automatically, manual reset is not required.

MAINTENANCE

Maintenance of the TVS only consists on frequently cleaning and/or replacement of the o-rings and switch when malfunction is detected. Follow the instructions below to disassemble and reassemble the TVS in order to do maintenance:

DISASSEMBLY AND REASSEMBLY OF TVS

For o-rings replacement:

1. Disconnect the valve from process by using an adequate key and ensuring there is no pressure neither temperature in sample stream before to do it.
2. It is advisable to use a bench in order to fix the TVS and avoid unexpected movements or turns that can difficult the operation.
3. Remove the four M4 screws, in the four corners of the outlet connection cover and remove it. In order to remove the screws it will be necessary to use an Allen key.
4. Remove the sensor capsule from inside the valve body.
5. Withdraw the push piston from inside the valve body by pushing it by means of a fine screwdriver or similar, through inlet connection. Removing the spring in the bottom of the body is not required. (this operation is not required for TVS-A)
6. Remove the two o-rings around the piston and the o-ring in the outside of the cover, and replace it for new ones (for TVS-A only cover o-ring replacement is required)
7. Insert the piston inside valve body, with plug pointing to the bottom. Then place the sensor capsule above the piston.
8. Close the valve body with the cover and insert the four M4 screws. Tighten the screws by using an suitable Allen key.
9. Reconnect the valve to process by using an adequate key.