

T.VIS® M-20 Overview

Concept

The T.VIS® M-20 is now equipped with the same tried and tested, high-precision path measuring system as the T.VIS® A-15 to ensure automatic end position detection for each GEA valve.

The main focus of development was on the requirements and wishes of our customers in the liquid processing industries.

Particular attention was given to the standardization of the components and to the easiest and most time-saving handling possible at the highest level of reliability.

Features

Proven housing technology

The highest protection class as standard

High vibration and shock resistance

Individual connection technology

Self-learning initialization

Extremely easy commissioning

Parameters can be preset

Standardized T.VIS® visualization with diagnostic function

Standard protection class IP66

Structure

The T.VIS® M-20 is equipped with reliable and robust control electronics, containing the proven path measurement system of the T.VIS® A-15 as an on-board version.

The cable connection to the central control level is implemented by the customer, either via externally accessible M12 plugs or via direct wiring to internal spring-loaded terminals, depending on the requirements.

Parameters can be preset via DIP switches so that the actual commissioning no longer requires any further operation or configuration.

Using an internal reset button, the electronics can be reset to delivery status after a valve service, so that a new self-learning process takes place automatically when the system is restarted.

The supply air connection is equipped with a replaceable filter to protect the built-in solenoid valves.

Position detection

Path measuring system – standardized execution in all T.VIS® M, A and P systems.

Setting

Parameters such as tolerances, color switching or air support can be set using integrated DIP switches.

The actual initialization process runs automatically. The procedure only requires completed connections of the control top to the air supply and electrical system. No other tools are necessary.

Logic NOT-function

Optionally, a logic NOT-function can be integrated into the control top without additional control effort.

This provides automatic air support for the spring in the actuator in order to increase the holding force of the valve.

Visualization

LED display

- green: valve in non-actuated position
- yellow: valve in end position
- green flashing: valve moving towards non-actuated position
- yellow flashing: valve moving towards end position
- red: SETUP is activated

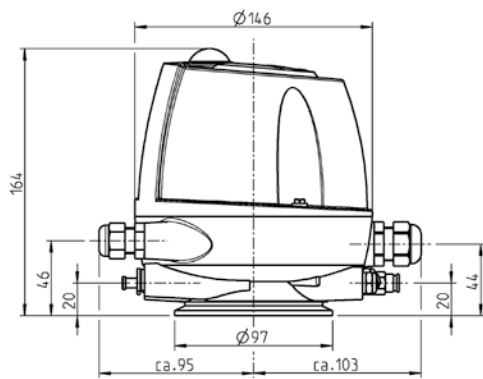
The colors green and yellow can be changed, if required, via dip switch.



Air guidance

In most process valves (VARIVENT®, D-tec®), the control air for actuating the valve is fed directly from the control top into the actuator via internal air duct. In the case of process valves that do not permit internal air flow (Aseptomag®, VESTA®), the air is supplied from the control top via external tubing.

T.VIS® M-20



Technical data of the standard version

Position detection	Path measuring system	
Housing material	PA 12/L	
Ambient temperature	-20 to +55 °C	
Air supply	Pressure range	2 to 8 bar
	Standard	acc. to ISO 8573-1:2010
	Solid content	Quality class 6
	Water content	Quality class 4
	Oil content	Quality class 3
Dimensions of air connections	Metric 6/4 mm, inch 6.35/4.31 mm (¼")	
Protection class	IP6k9k	
Sound pressure level via exhaust air throttle	Max. 72 dB	
Visualization	LED (green, yellow, red)	

Type of interface	AS-Interface bus	24 V DC, 3-wire, PNP
Supply		
Operating voltage	23-31.6 V DC	24 V DC (+/-25%)
No-load current	35 mA	30 mA
Maximum current consumption	155 mA	200 mA
Polarity reversal protection	Yes	Yes
Specification	AS-i V3.0	
Additional information	IO.ID.ID2-code: 7.A.E	
Conformity	AS-i Association	
Inputs		
Connection type		24 V DC
Maximum current carrying capacity per feedback output		100 mA
Voltage drop on the outputs		≤ 1.8 V
Feedback "start position"	Data bit DI 0	Electronic output
Feedback "end position"	Data bit DI 1	Electronic output
Outputs		
Activation voltage		21-28.8 V DC
Current consumption per input		35 mA
Activation "PV Y1"	Data bit DO 0	Electronic input
Activation "PV Y2"	Data bit DO 1	Electronic input
Activation "PV Y3"	Data bit DO 2	Electronic input