Series Turbotron VT, options

Turbine Flow Transmitter, Turbotron AI

Type Turbotron AI

Instead of the pulse signal, an analogue current signal 4...20 mA is provided by installing an internal transducer onto the flow sensors described before.

Technical data	
Output signal	4...20 mA
Accuracy	±1.25 % of reading*
Current limit	Approx. 26 mA
Scaling	Different flow ranges, see order code flow sensor other scaling possible from 10 pieces and above
Power supply	18...30 VDC
Max. current consumption	30 mA
Max. burden	250 Ω against GND
Residual ripple	0.2 mA ss over the entire range
Type	3 wire, galvanically not separated, common GND of power supply and output signal
Electrical connection	4 pin plug connector, M12 x 1
Max. medium temperature	Dependent on the maximum temperature of the applied flow sensor, not exceeding 80 °C
Casing material	Plastic PA, brass with VTM
Order code	Please, order through selection in the order codes on pages 95, 101 and 106

* Additionally to respective accuracy of turbine flow sensor

Turbine Flow Switch with switched output, Turbotron VE

Advantages

- Very wide set point range, thus one flow switch suitable for any applications
- Fail safe (locked rotor is recognized as "water lack")
- Precise set point adjustment
- Optical signaling by 2 LEDs, yellow = flow, red = flow lack
- Safe monitoring of smallest volume flows

Type VT..15..VE

If you make exceptionally high requirements on monitoring of liquid flow, the SIKA turbine flow switch will be the correct selection.

Its areas of application: Monitoring of cooling circuits of high-quality equipment like laser installations or HF generators. It avoids costly consequential damages resulting from overheating. A great number of different applications is covered by a very simple and exact selection of the set point. As an option, a pulse signal is also available in addition to the switching output (contact). In such a case, in addition to safe monitoring, a continuous or temporary measurement of the flow (e.g. for adjustment jobs) can also be carried out.

The core of the turbine flow switch is the extremely durable flow sensor SIKA-Turbotron which for years successfully demonstrated its reliability in many mass applications. It provides a flow-proportional frequency signal which is introduced to a microprocessor. This monitors the adjusted minimum flow and activates the electrically insulated alarm contact in the case of dwindling flow.

Even a due blocking of the turbine system is clearly recognized and reliably signaled. The adjustment of the set point can be carried out very easy and precisely. By means of a 16-position rotary switch (catching), the desired set point is selected.

Technical data

Technical data	
Set point range (with decreasing flow) / accuracy	**DN 15** 0.5...29.5 l/min / ±2 % of set point + accuracy of turbine flow sensor **DN 25** 3...100 l/min / ±4 % of set point + accuracy of turbine flow sensor **DN 40** 7...275 l/min / ±6 % of set point + accuracy of turbine flow sensor
Set point adjustment	16 different set points selectable by means of a 16-position rotary switch
Output / max. contact rating	**Only switching output:** Electrically insulated contact, opens in the case of lack of flow Max. contact rating 125 VAC / DC, 100 mA **Switching output and pulse output** Switching output against power supply Max. contact rating 100 mA Pulse output: flow-proportional frequency signal NPN, max. 100 mA
Switching hysteresis	0.5 l/min (DN 15) 2...5 l/min (DN 25) 3...35 l/min (DN 40)
Power supply	12...24 VDC
Current consumption	Max. 25 mA
Degree of protection	IP54 with closed sleve and connected socket
Casing	Plastic PA, transparent
Display, internal	LED yellow = ok (flow) LED red = alarm (lack of flow)
Max. medium temperature	Dependent on the maximum temperature of the used flow sensor, not exceeding 80 °C
Electrical connection	4 pin plug connector, M12 x 1
Order code	Please order by a the corresponding selection in the order code on pages 95, 101 and 106

Set point tables

VT..15..VE (DN 15)																
Switch position	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Set point decreasing flow (l/min)*	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.5	5.5	7.5	9.5	11.5	15.5	19.5	24.5	29.5
Set point increasing flow (l/min)*	0.5 l/min over the set point decreasing flow															

VT..25..VE (DN 25)																
Switch position	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Set point decreasing flow (l/min)*	3	5	6	8	10	12	15	18	20	25	30	35	40	50	70	100
Set point increasing flow (l/min)*	5	7	8	10	12	14	17	20	22	27	33	38	44	55	75	105

VT..40..VE (DN 40)																
Switch position	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Set point decreasing flow (l/min)*	7	10	15	20	25	30	35	40	50	65	80	100	130	160	200	275
Set point increasing flow (l/min)*	10	13	19	24	30	35	40	47	58	75	90	115	150	190	230	310

* The specified values refer to operation with water at 20 °C. Monitoring of fluids with higher viscosities is possible with the effect of deviations from the mentioned values. If you order at least 25 units, individual set point tables can be implemented.