

TDH...-40.../MS TDI...-40.../MS

Function

The flowmeters type TDH...-40.../MS and TDI...-40.../MS are turbine flowmeters.

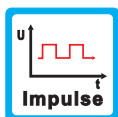
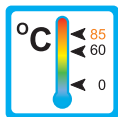


Application

The turbine flowmeters type TDH...-40.../MS and TDI...-40.../MS are employed to measure and monitor volume flow of liquids.

Areas of application:

- Research and development
- Mechanical engineering
- Plant construction



Features

The rotors of the series TDH...-40.../MS are equipped with magnets and a Hall-sensor detects the rotation of the rotor.

The rotors of the series TDI...-40.../MS are equipped with stainless steel pins and an inductive proximity switch detects the rotation. Further characteristics of both series are:

- Large measuring range
- Sapphire/PA bearings
- High accuracy
- Frequency output
- Sturdy brass construction
- Integrated strainer

Installation information

The installation of the flowmeter can be done in any orientation in the system. The flow direction must be observed.

The flowmeter must not be used as a supporting part in a pipe construction.

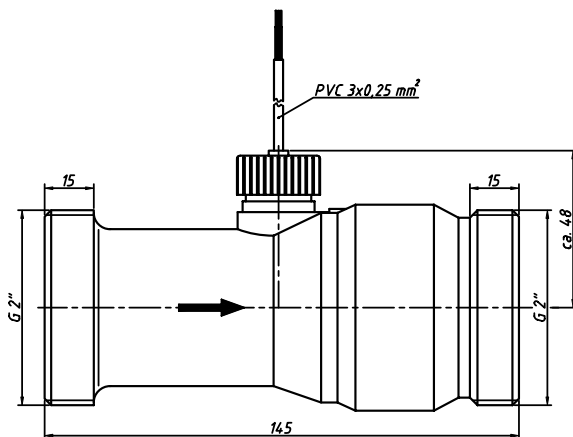
The medium must not contain any solids!

External magnetic fields influence the measurement. Keep sufficient distance to magnetic fields (e.g. electromotors).

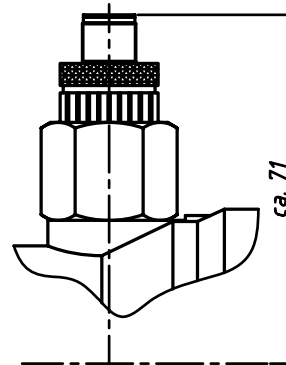
The operating instructions for TDH...-40.../MS and TDI...-40.../MS must be observed under all circumstances.



Technical data



TDHK-40I/MS



TDIS-40I/MS

Versions

Type	Sensing method		Output		
	Hall-sensor	Inductive proximity switch	Impulse output (see page 4)	Analog output	Switch output
TDHK-40I/MS	▲		▲		
TDIS-40I/MS		▲	▲		

Technical data

	Units with Hall-sensor TDH...	Units with inductive proximity switch TDI...
Process connection:	G 2" male thread	
	Additional connection fitting recommended!	
Nominal size:	DN 40	
max. medium temperature:	85 °C	60 °C
Nominal pressure:	PN 10	
Range:	6,7 - 417 l/min (0,4...25 m³/h)	
Start of signal output:	approximately 0,1 m³/h	
max. size of solids in medium:	0,5 mm	
Electric connection:		
Cable connection (TDHK...)	2 m shielded PVC-cable	—
	$T_{max} = 75 \text{ °C}$	—
Plug (TDHS... or TDIS...)	4-Pin plug M12x1	4-Pin plug M12x1
Power supply (Pulse output):	4,5...24 VDC	12...24 VDC
Ingress protection:	IP 54	
Electric output:	see page 4	
Integrated strainer:	screen strainer , screen aperture size 0,63 mm	

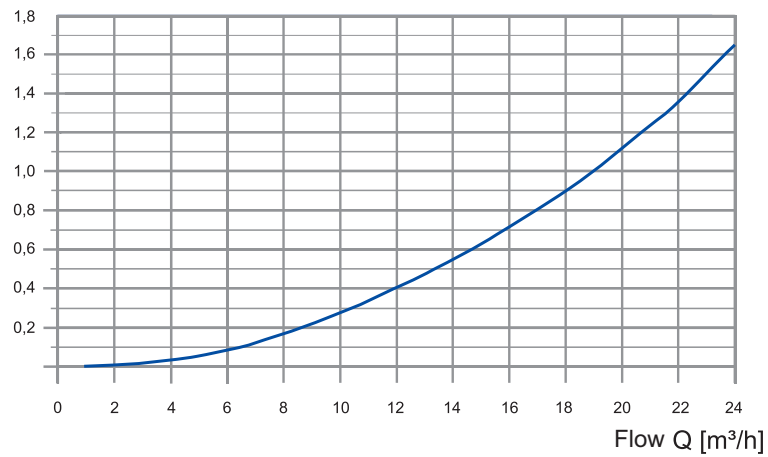
TD-40/MS 2 0002 11-11 E M



Materials, technical data

Materials			
	Wetted parts	Units with Hall-sensor TDH...	Units with inductive proximity switch TDI...
Measuring tube	yes	brass (CuZn36Pb2As)	
Turbine chamber	yes	PA Grivory HTV4X1	
Impeller	yes	PP	
Impeller magnets	yes	permanent magnets, nickel-plated Recona 28	stainless steel 1.4571
Axle	yes	stainless steel 1.4436	
Bearing	yes	saphire / PA	
Sensor bushing	yes	POM Delrin® 100 P	
O-ring	yes	72 NBR 872	
Flow straightening cone	yes	POM Celcom	
Strainer	yes	stainless steel 1.4301	
Locking ring	yes	bronze 2.1030.34	

Pressure drop Δp [bar]

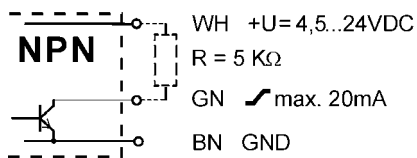


Signal output

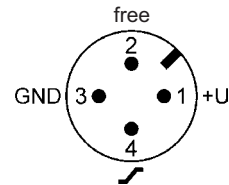
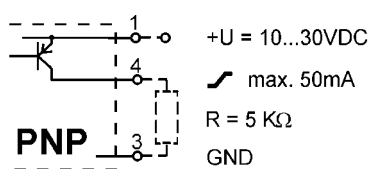
Technical data, impulse output (TDHK-40I/MS, TDIS-40I/MS)

	Units with Hall-sensor TDH...	Units with inductive proximity switch TDI...
Accuracy:		
0,4... 3 m ³ /h		± 5 % of range
3 ...25 m ³ /h		± 3 % of range
Repeatability:		± 0,5 %
Output signal:		
Pulse rate	26,6 Pulses / Liter	
Resolution	37,6 ml / Pulse	
Signal form	square wave	square wave
	NPN open collector	PNP open collector
Signal current	max. 100 mA	max. 10 mA
Connection diagram	A1 (see below)	B1 (see below)
Start of signal output:	approximately 0,1 m ³ /h	

A1: TDHK-40I/MS (Cable)



B1: TDIS-40I/MS (PNP, Plug)



WH = white
 BN = brown
 GN = green