

THERMAL FLOW METER

TGF600 SERIES THERMAL MASS FLOW METER

Flow Measurement
& Monitoring



FEATURES

- ✓ Direct measurement of mass flow and standard flow of various air and gases
- ✓ 100:1 turn down ratio in 5 ranges
- ✓ High temperature up to 450°C
- ✓ Large LCD screen with dual-line display and 3 setting buttons
- ✓ High accuracy and repeatability
- ✓ Easy installation and maintenance
- ✓ Self-protection design of Zener safety barrier inside
- ✓ Self-diagnose function
- ✓ Ex-proof version (optional)
- ✓ Communication via bluetooth and APP

DESCRIPTION

TGF600 Series Thermal Mass Flowmeter has the latest thermal mass technology with more rugged design to adapt to harsh industrial applications. The latest sensor filming technology and high sensitivity sensors are used to ensure a stable measurement at low flow rate down to 0.3Nm/s. Standard insertion model can fit in pipe line from DN25 to DN500; Extended model can fit in larger pipe up to DN 2000. The circuit board and a dual-line LCD display offers a powerful and user friendly operating interface. The TGF Series is designed to provide a stable and accurate measurement with reliable output.

TGF600 Series Thermal Mass Flowmeter measures the gas mass flow based on thermal diffusion theory.

TECHNICAL FEATURES

Installation type	Insertion type; In-line flange type
Medium	Air, N ₂ , O ₂ , CO ₂ , Argon, CH ₄ , natural gas, biogas and almost all dry and clean air
Diameter	DN25~2000mm (insertion type) DN25~300mm (in-line flange type)
Flow velocity range	0.3 to 30Nm/s; 0.6 to 60Nm/s; 0.9 to 90Nm/s; 1.2 to 120Nm/s; 1.5 to 150Nm/s
Accuracy	1.5% RD+ ±0.5% FS
Medium temperature	-40 to 150°C (standard) -40 to 250°C / -40 to 450°C (optional)
Medium pressure	1.6MPa (standard) 4.0Mpa (standard flange type)
Power supply	AC 85 to 264V or DC 15 to 32V
Response time	1 second
Output	Frequency as standard, pulse and RS485 (optional)
Communication	RS485 as standard, 4-20mA@HART (optional)
Ingress protection grade	IP65
Ex-proof	Ex d II C T3 Gb (NEPSI) (standard)

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MODEL SELECTION

Model	Basic model	TGF450	X	X	X	X	X	X	X	X	X	X	XXX
Process Connection	Flanged (JIS/ANSI/DIN)		F										
	Insertion (NPT Threaded)		C										
	Insertion (NPT Threaded with anti-ejection design)		D										
	Flanged Insertion		G										
Material Temperature Range	<150°C			N									
	<250°C			Q									
	<450°C (please select remote display for this option)			H									
Probe Length	290mm (DN25 to DN150)				1								
	440mm (DN25 to DN500)				2								
	690mm (DN25 to DN1000)				3								
	1000mm (DN25 to DN1500)				4								
	1500mm (DN25 to DN2000)				5								
Transmitter	Integral					T							
	Remote					R							
Material	OCr18Ni9 SS304						1						
	SS316						2						
Pressure Rating	1.6 Mpa							1					
	2.5 Mpa							2					
	4.0 Mpa							3					
	6.3 Mpa							4					
Flange Standard	JIS								A				
	DIN								B				
	ANSI								C				
	Other								Q				
Enclosure	Standard									C			
Output	Pulse/frequency + 4-20mA/HART + Bluetooth										7		
	Pulse/frequency + 4-20mA + RS485 + Bluetooth										8		
Power supply	13.5 to 42VDC											N	
	85 to 265VAC 50/60Hz											Q	
Pipe size	Please use 3 digits for pipe size (Example: DN50=050, DN300=300)											XXX	

Other information:

1. Measurement range

- Standard: 0.6 to 60Nm/s
- Option 1: 0.3 to 30Nm/s
- Option 2: 0.9 to 90Nm/s
- Option 3: 1.2 to 120Nm/s
- Option 4: 1.5 to 150Nm/s

2. Accessories available

- Anti-ejection design
- Ball valve
- Hot tapping driller
- Hot tapping holder
- Degreasing

Remarks:

1. Ball valve / hop-tap insertion tool / hot-tap hole opener / on-line data logger are accessories - optional, please remark if you need any of them.
2. Please indicate flow rate along with the model number selected
3. If you have any requirement that could not be fulfilled in this document, please refer to ISME for availability.
4. The model selected in 1st line is the standard configuration with no accessories.



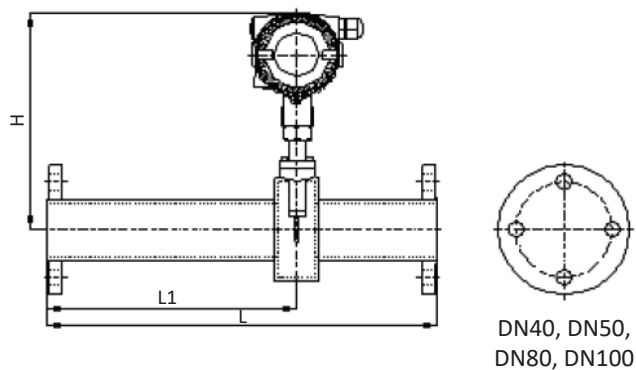
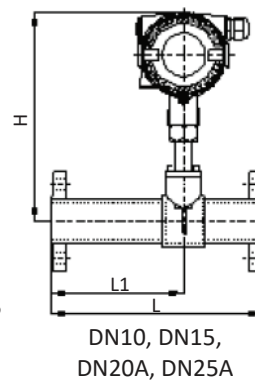
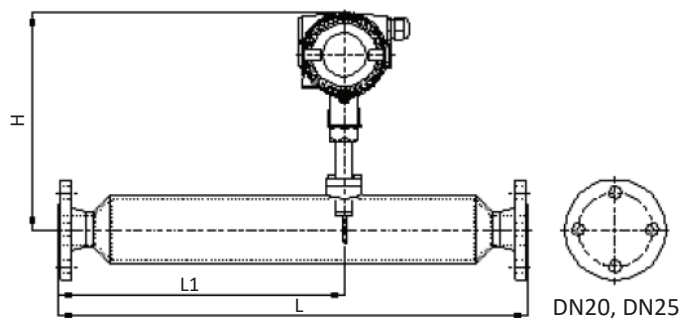
CODES AND REFERENCES

Pipe size (mm)	Pipe size (inch)	Option 1 (0.3-30 Nm/s)		Standard (0.6-60 Nm/s)	
		Min (Nm ³ /min)	Max (Nm ³ /min)	Min (Nm ³ /min)	Max (Nm ³ /min)
25 mm	1"	0.53	53.00	1.05	105.90
32 mm	1 1/4"	0.87	86.70	1.73	173.50
40 mm	1 1/2"	1.36	135.60	2.71	271.10
50 mm	2"	2.12	211.90	4.23	423.70
65 mm	2 1/2"	3.58	358.10	7.10	716.10
80 mm	3"	5.42	542.30	10.80	1084.70
100 mm	4"	8.47	847.50	16.90	1694.90
125 mm	5"	13.20	1324.20	26.40	2648.30
150 mm	6"	19.10	1906.80	38.10	3813.50
200 mm	8"	33.90	3389.80	67.70	6779.60
250 mm	10"	53.00	5296.60	105.90	10593.20
300 mm	12"	76.30	7627.10	152.50	15254.20

Pipe size (mm)	Pipe size (inch)	Option 2 (0.9-90 Nm/s)		Option 3 (1.2-120 Nm/s)	
		Min (Nm ³ /min)	Max (Nm ³ /min)	Min (Nm ³ /min)	Max (Nm ³ /min)
25 mm	1"	1.58	158.80	2.11	211.80
32 mm	1 1/4"	2.60	260.30	3.47	347.10
40 mm	1 1/2"	4.06	406.70	5.42	542.30
50 mm	2"	6.35	635.50	8.47	847.40
65 mm	2 1/2"	10.70	1074.10	14.30	1432.20
80 mm	3"	16.20	1627.10	21.60	2169.40
100 mm	4"	25.40	2542.30	33.80	3389.80
125 mm	5"	39.70	3972.40	52.90	5296.60
150 mm	6"	57.20	5720.30	76.20	7627.10
200 mm	8"	101.60	10169.40	135.50	13559.30
250 mm	10"	158.80	15889.80	211.80	21186.40
300 mm	12"	228.80	22881.30	305.00	30508.40



DIMENSION/DRAWING



DN	10	15	20	20A	25	25A	40	50	80	100
H	240	240	250	240	250	240	220	230	250	260
L	240	240	535	240	535	240	445	445	405	405
L1	150	150	326	150	326	150	285	288	240	250

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