



TARGET FLOW METER NFP SERIES

DESCRIPTION

The **Niagara NFP Series ForceMeter™** is an **insertion type flow meter** that can measure water or steam. It utilizes a hermetically sealed strain-gage bridge circuit to convert flow force to a two-wire 4-20 mA output signal that is proportional to flow rate. All wetted parts are 316L stainless steel and the meter mounts to 4" and larger pipes using a 2" or 4" ANSI 150# or 300# raised face flange. The **NFP Series** comes pre-calibrated and configured based on the application parameters provided at the time of order; the meter only needs to be zeroed to adjust for installation orientation. Many different models and configuration options are available, such as retractable insertion types, inline models, and hazardous approval.



NFP Series



6

FEATURES

- *Quick response time for flow change display can be dampened in less than 1 second*
- *Rugged design includes no moving parts to wear out*
- *All welded sensor construction for durability*
- *Hermetically sealed to withstand challenging environmental conditions*
- *Maintenance-free keeps cost of ownership down*
- *Integral display for local indication of flow and totalization*

FLOW

SPECIFICATIONS

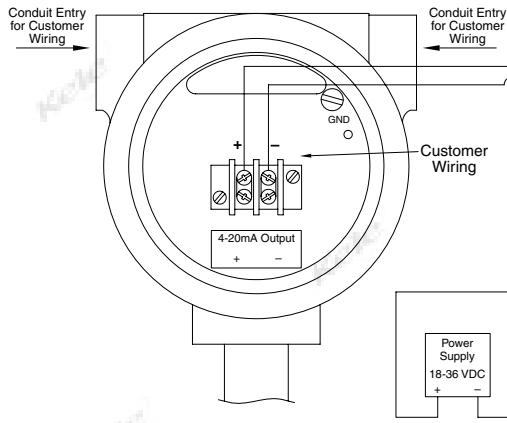
Supply Voltage	24 VDC ±10%		
Accuracy	± 1.0% of rate		
Repeatability	± 0.15% of flow rate		
Output Signal	2-wire, 4-20 mA @ 500Ω		
Response Time	0.33 mS		
Display	2-line alphanumeric with bar graph		
Wiring Terminations	Screw terminals		
Conduit Connection	3/4" FNPT		
Configuration	Factory pre-configuration required to assure application/product match: specify pipe size and material/schedule, fluid/gas type, operating pressure and temperatures, and minimum/maximum flow rates		
Flow Turndown Ratio			diameters downstream to any bend, obstruction or transition
Steam	10:1		ANSI flanges standard
Gas	15:1 application dependent		Liquid, non-volatile gases, or steam
Liquid	15:1		Media Temperature Range
Pipe Size Range	4" to 60" (100 to 1500 cm)		-65° to 425°F (-54° to 218°C), other ranges special order
Turn Down	15:1		Maximum Pressure
Installation	Install in straight pipe section with a minimum distance of 10 pipe diameters upstream and 5 pipe diameters downstream to any bend, obstruction or transition		>1000 psi (69 bar) for primary sensing elements; piping connections per applicable ANSI specs
			Materials Of Construction
			316L stainless steel wetted parts, Polyester powder coated aluminum housing
			Operating Temperature
			-4° to 170°F (-20° to 75°C)
			Enclosure Rating
			NEMA 4X
			Dimensions
			Height 10.8" (32.4 cm) from mounting flange to top of transmitter; insertion length depends on pipe size specified, force sensor locates in center of pipe
			Weight
			9 lb (4.1 Kg) maximum
			Approvals
			CE, FM
			Warranty
			2 years



WIRING

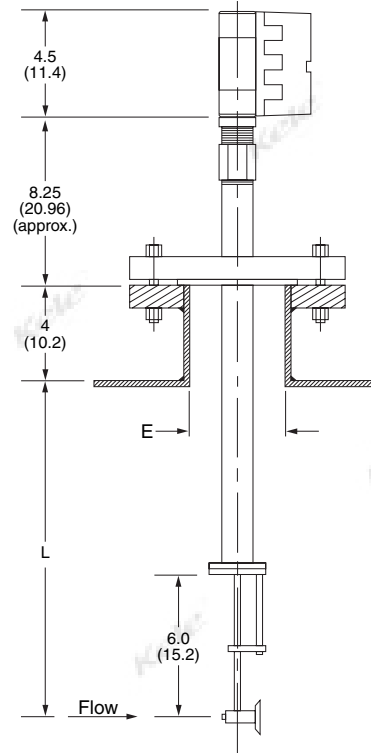
Integral Transmitter Wiring

Enclosure Mounted on Flowmeter (Backside)



DIMENSIONS

Typical Remote Enclosure



This information is required before placing an order:

1. Pipe size and schedule.
2. Type of gas or liquid or steam.
3. Operating pressure.
4. Maximum flow rate.
5. Temperature.
6. Constant or varying pressure.

ORDERING INFORMATION

MODEL	DESCRIPTION
NFP	Flow Meter
	LINE SIZE (inches) DESCRIPTION
	4, 5, 6, 8, 10, 12, etc. Select pipe size (larger insertion and smaller in-line models are available)
	MOUNTING DESCRIPTION
	M 2" raised flange
	P 4" raised flange
	FLANGE RATING DESCRIPTION
	01 150 # raised-face ANSI
	02 300 # raised-face ANSI
	BODY, ELEMENT DESCRIPTION
	Y1V1ZV SS316L Body, unidirectional Gas, Liquid or Steam G, L, or S

NFP	—	4	—	M	—	01	—	Y1V1ZV	—	G
-----	---	---	---	---	---	----	---	--------	---	---

Example: NFP-4-M-01-Y1V1ZV-G Insertion target flow meter for water, 4" pipe size, 2" RF 150 # mounting flange, 303/304 SS body, 1,000 psi, 425 DF -rating

RELATED PRODUCTS	
DCPA-1.2	Power supply, 120 VAC IN to 24 VAC/24 VDC OUT
DCP-1.5-W	Power supply, 24 VAC IN to 24 VDC OUT