ProSeries-M®
by Blue-White Ind.

Engineering and Technical Data

MS-6 CHEMICAL FEED FLOWMETER

Low Flow Chemical Flowmeter, Patent Pending Design

4-20 mA and pulse outputs

NEMA 4X (IP66) Washdown

Process Control Features

Less than 1 PSI Pressure Drop

High Turn Down Ratio

NSF Listed Std. 61

5 Year Warranty

Large 3.5” Backlit Display

NSF NEMA 4X

Sold and serviced exclusively by highly skilled, factory authorized technicians.

Liquid applications

Multiple Patents Pending in USA and UK



Applications:

- Flow verification
- Chemical metering
- Fluid metering
- Ultra-pure water
- Polymer feed

Features:

- Inline pipe fittings for easy installation
- Lower power mode permits battery operation (limited features)
- Configurable via Blue-Central® desktop software
- Isolated 4-20 mA output - fully configurable
- 0-10000Hz Pulse output - fully configurable
- User configurable flow rate and total set-point triggers
- Flow-rate readings as low as 10 mL/min
- Included wetted end fittings allow for more than 14 inlet and outlet configurations
- True unions for ease of maintenance
- Wetted components constructed out of PVDF and PEEK
- Process control via configurable solid state relay, which can be configured to close or open trigger at a flow-rate or to flow total for batching operation
- Large 3.5” backlit LCD display.

Specifications:

General Operation

Compatible Fluid Types
Acoustically conductive fluids with less than 50,000 ppm particulates or bubbles

Pre-Calibrated Chemical Profiles
Water
Aqueous Ammonia
Ammonium Hydroxide
Ferric Chloride 40%
Sodium Bisulfite 40%
Sodium Hypochlorite 12.5%
Sodium Permanganate
Hydrofluorosilicic Acid 25%
Ammonium Sulfate 10%

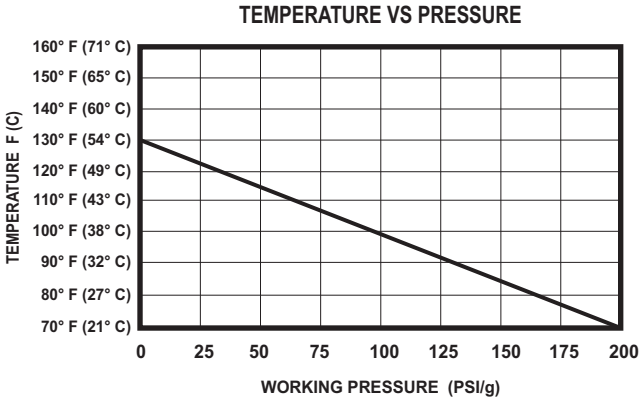
Wetted Materials

Transducer
PEEK

Body
PVDF & PEEK

O-Rings
PVDF & TFE/P
PVDF & EP

Fittings (Included)
PVDF 1/2" I.D. Barb
PVDF 1/2" I.D. Barb Elbow
PVDF 1/2" M/NPT
PVDF 1/2" M/NPT Elbow
PVC 1/2" Slip



Electronics/Hardware

SPU (Signal Processing Unit):

Enclosure
NEMA 4X (IP66) Polycarbonate, SS hardware.
Dimensions: 10.02H x Ø3.79 inches (254.5H x Ø96.1 mm)
Weight 1.5 lb. (.68 Kg.)

Power Requirements
5 VDC; 5 watts maximum

Environmental Conditions
Operating temp: 14°F to 104°F (-10°C to 40°C)
Storage: -40°F to 158°F (-40°C to 70°C)
Relative humidity: 0% - 90%

Display
Type: Liquid Crystal Display
Backlight: White LED backlight

Software Language
English

Volume Units
Independently configurable Rate and Total units in: U.S. Gallons, Liters, or Milliliters.

Time Units
Seconds, minutes, hours, days.

Flow Rate Averaging
Selectable: 1, 4, 8, 16, and 32 seconds.

Data Outputs
- Isolated 4-20 mA output - fully configurable
- 0-10000 Hz Pulse output - fully configurable

Process Control
One Solid State Relay
Load capacity: 24VDC, 100mA max (ex. supplied)
- Configure to flow rate for high/low/range rate trigger. Programmable release values enable auto release or manual latching operation.
- Configure to flow total for automatically triggered, timed batch operations for proportional feed applications.

Power Supply (user configurable)
Includes each of the following:
- U.S. Transformer, 115VAC 60HZ / 5VDC, NEMA 5/15 plug
- Europe Transformer, 230VAC 50HZ / 5VDC, CEE 7/V11 plug
- Australia / New Zealand Transformer, 240VAC 50HZ / 5VDC, AS 3112 plug
- U.K. Transformer, 230VAC 50Z / 5VDC, BS 1363/A plug

Blue-Central® Software

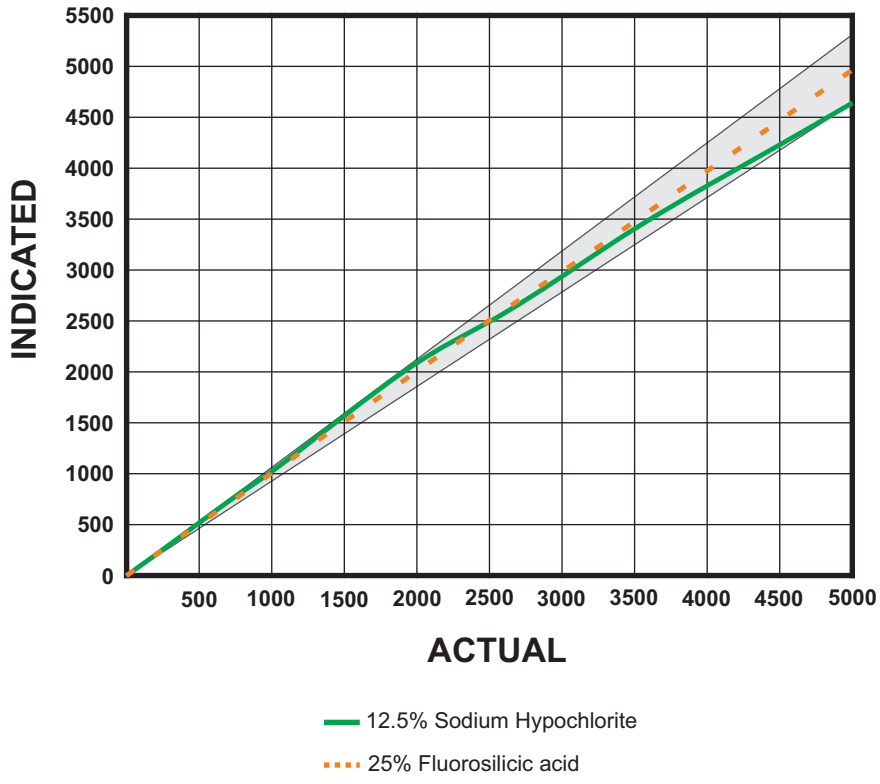
Compatible Operating Systems
Windows 7, 8, and 10
Mac (OSX 10.11/10.12/10.13)

Computer Connector
USB-C (USB-A to USB-C cable included)

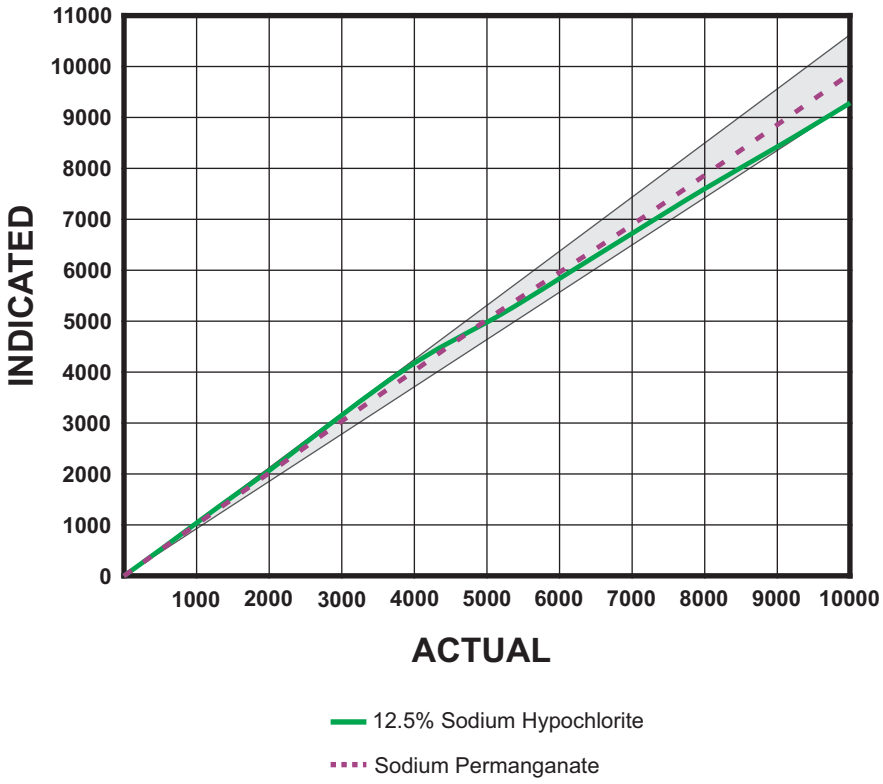
Software Features
- Configurable 4-20mA, Pulse Output, Frequency Output, Solid State Relay Set-Point
- Monitor flow rate in real time
- Monitor total volume in real time
- Monitor meter diagnostics
- Field Upgradable Firmware
- Factory Resettable

Accuracy Charts:

MS-61 ACCURACY RANGE

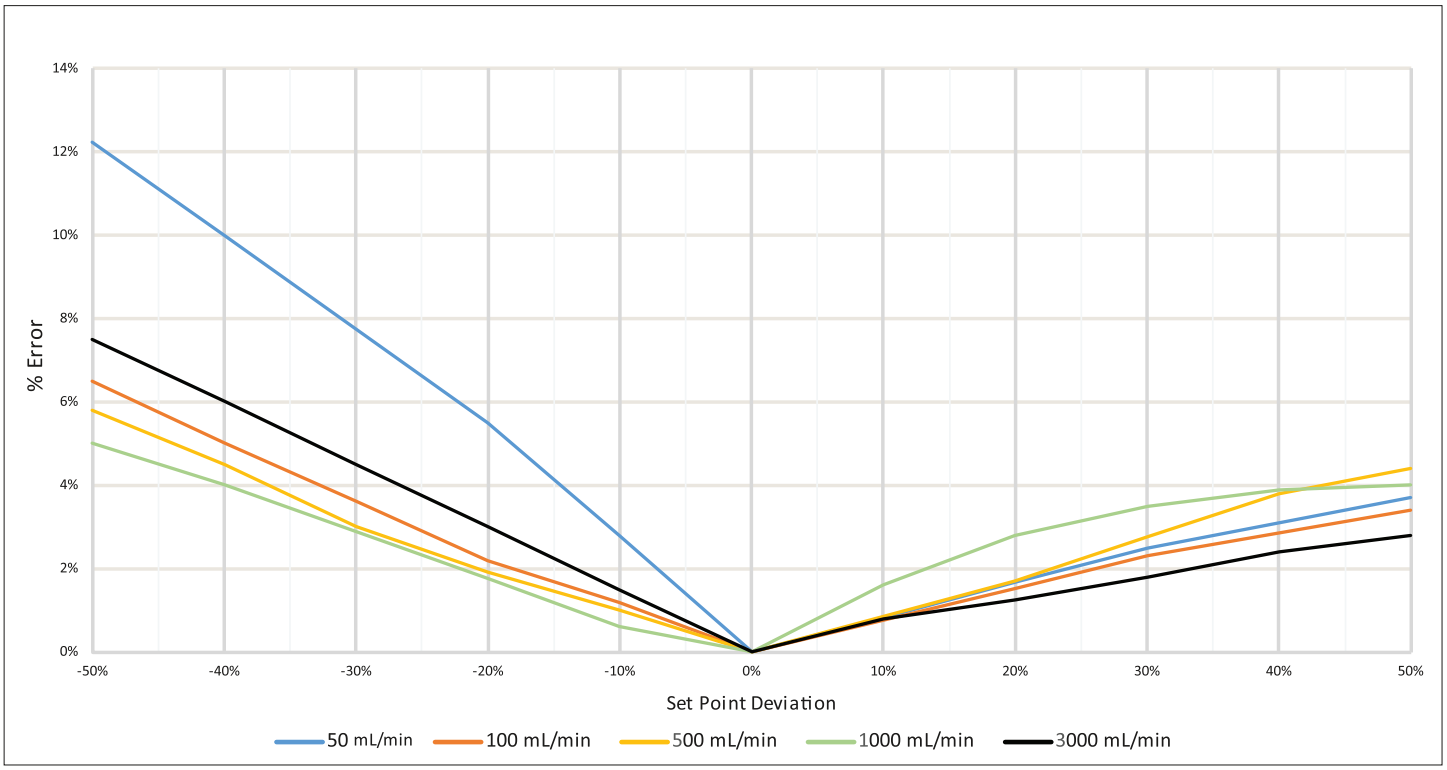


MS-62 ACCURACY RANGE

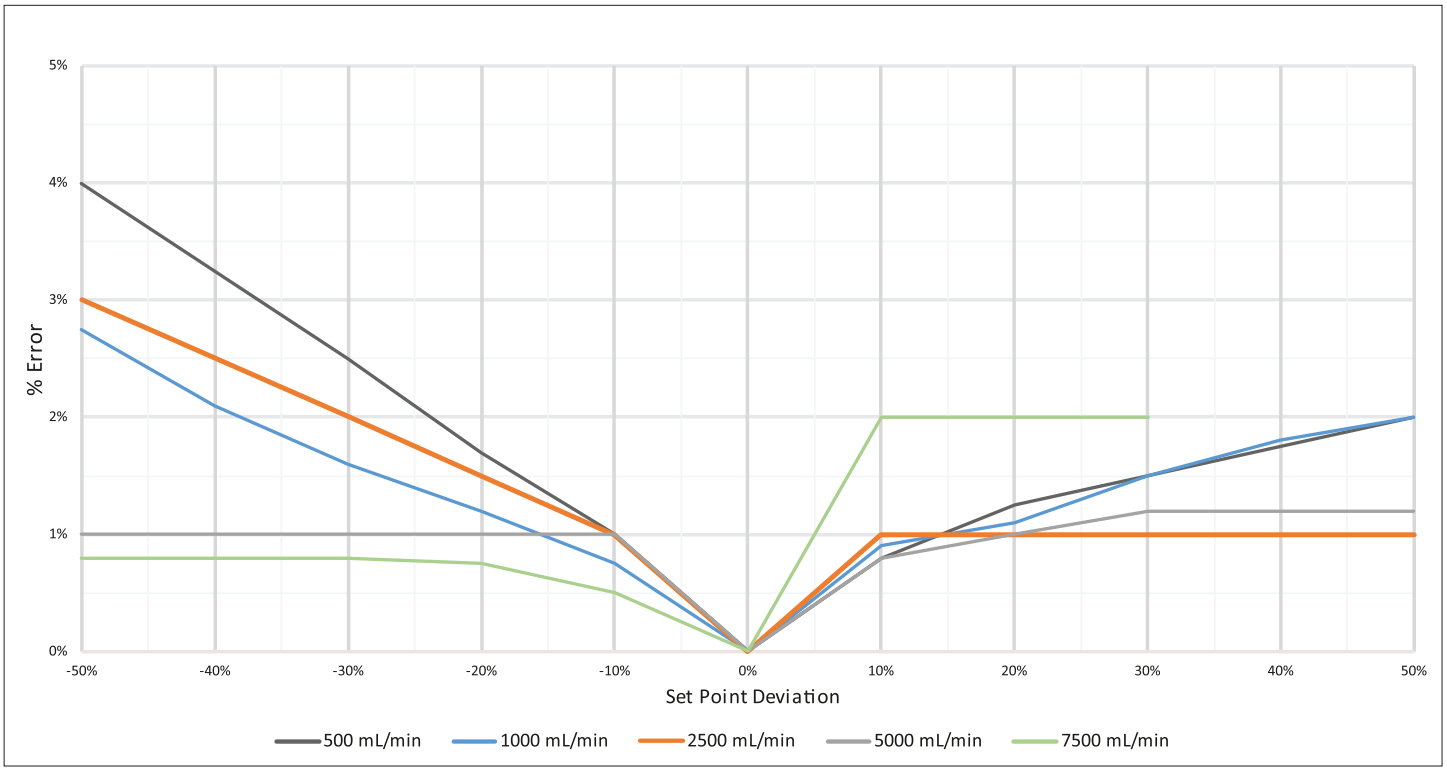


Digital Drawdown* Accuracy Charts:

MS-61 DIGITAL DRAWDOWN ACCURACY

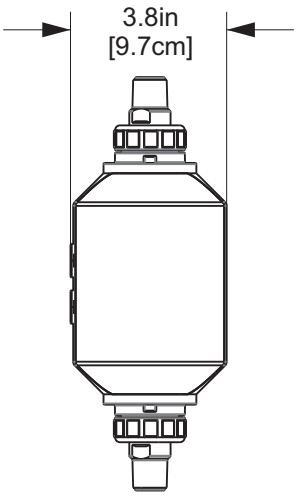


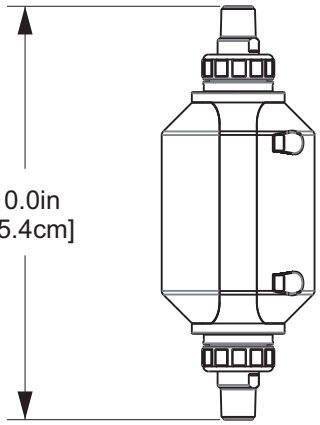
MS-62 DIGITAL DRAWDOWN ACCURACY



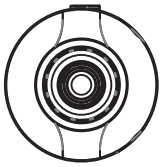
*Note: Digital Drawdown allows the user to increase the accuracy of the meter at a targeted feed rate.

Dimensions:

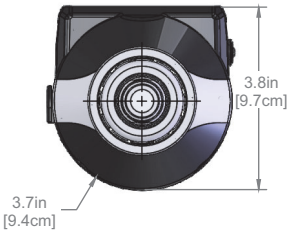




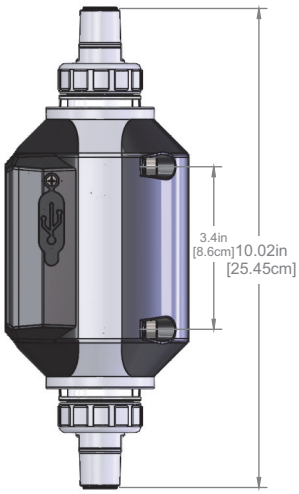
Remote Mount Display Meter Body



Meter Mount Display Meter Body







Installation Requirements:

1. Mounting Direction can cause inaccuracies!

Meter must be installed in a vertical plane with fluid flowing in an upward direction to ensure accuracy.

2. Vibration and heavy loads will damage the meter!

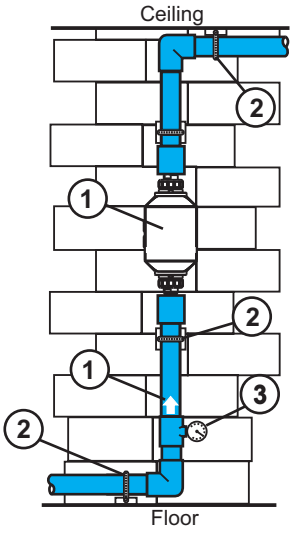
Wall, floor and ceiling mounts and supports must be carefully aligned with the meter body and sturdy enough to support the plumbing and prevent vibration. Never allow the meter to support the weight of related piping.

3. High pressures and temperatures will damage the meter!

The maximum acceptable temperature and pressure is interdependent. The maximum acceptable working pressure is dependant on the actual fluid temperature. The maximum acceptable fluid temperature is dependant on the actual working pressure. (see Temperature Vs. Pressure chart).

4. Strainer Recommended!

1/32” mesh strainer is recommended to be installed at the inlet of the meter. This will keep particles from entering the meter that could cause inaccurate readings. Blue-White mesh strainer part number: (90008-425).



Model Number Matrix:

Chemical Meter Model Number	
MS-6	MS-6 Chemical Feed Flowmeter

Flow Range	
1	10-5000 mL/min (0.158-79.2 GPH)
2	100-10000 mL/min (1.58 -158.5 GPH)

Display Options	
1	Remote Mount Display
2	Meter Mount Display

Elastomer Material (O-Rings)	
V	TFE/P & PVDF
E	EP & PVDF

Meter Fittings	
X	Standard Equipment - Includes 1/2" I.D. Barb Fittings (Straight & Elbow Adapters), 1/2" MPT Fittings (Straight and Elbow Adapters), 1/2" PVC Slip Male Adapters.

MS - 6	1	2	V	X	Sample Model Number

Display Options:



MS-6*1

Remote Mount Display



MS-6*2

Meter Mount Display