

ELDRIDGE PRODUCTS, INC

GAS MASS FLOW MEASUREMENT & CONTROL INSTRUMENTATION

MASTER-TOUCH™
8000MP FAMILY OF MICROPROCESSOR-BASED
THERMAL GAS MASS FLOWMETERS



DIRECT MASS FLOW

EPI THERMAL DISPERSION
SENSOR

RATIO

(RTDs)

Forced null

RTD

RTD

가

가

EPI

가

가

Reference-Grade

RTDs

316

가

316

IN-LINE vs INSERTION

EPI

Class 1, Division, Group B, C & D
NEMA 4가

Flow-through

1.4" MNPT

4" MNPT

가

.004 SCFM

(.006 NCMH)

1300SCFM

가

.6

7

가 ,2

15SCFM(.0076NMPS)

30,000SFPM(152NMPS)

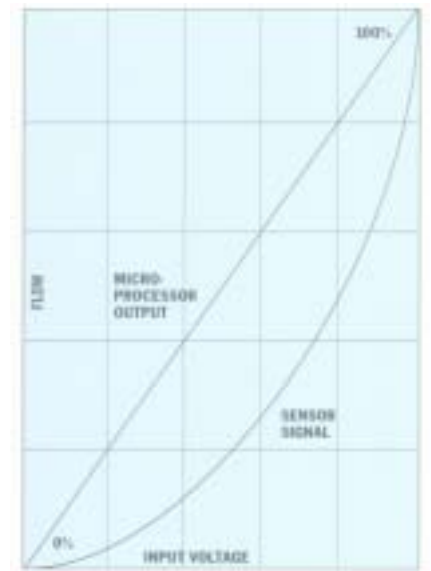
가



**SERIES 8800MP INSERTION
THERMAL MASS FLOWMETER**
(가)



**SERIES 8000MP IN-LINE THERMAL MASS FLOWMETER
(WITH FLANGE OPTION)-NO CONTROL PANEL OR DISPLAY**



EPI 100:1 TurnDown

SERIES 8600MP IN-LINE THERMAL MASS FLOWMETER WITH LCD DISPLAY

EPI

-
- 4-20 mA 0-5 VDC
- Class 1, Division 1, Group B,C D NEMA 4
- 100:1 Turn Down
- NIST(NBS)
- , ,
- (1)
-
-

AUTOMOTIVE INDUSTRY

-
- 가
- 가
- /
- (SPC)

HVAC

- , ,
-
-
-
-
-
-

LABORATORY & R&D

-
-
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-

PETROLEUM & GAS INDUSTRII

- 가 ,
- 가
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- 가

PROCESS CONTROL

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RAW MATERIAL INDUSTRIES

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TEXTILE

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-

UTILITY SERVICES

- 가 ,
- 가
- 가
-
- 가 ()
- 가
-
-
-

ELDRIDGE PRODUCTS, INC
1-800-321-FLOW(3569)

Master-Touch™ Thermal Flowmeters
8000MP Mater-Touch

EPI



Windowed Explosion-Proof Enclosure

Powerful Features & Flexibility

EPI Master-Touch
EPI

가

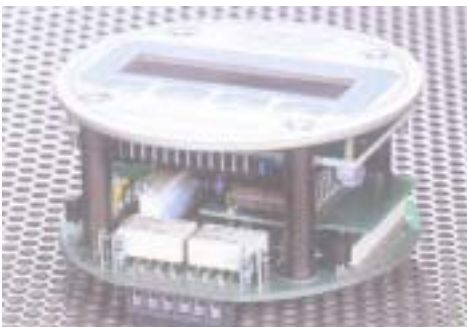
가

4

.2 ,16 /

DOS

RS-232 RS-485



MICRO-CONTROLLER, CONTROL
PANEL & DISPLAY MODULE

Enhanced Performance

가

EPI

Master-Touch

가

가

1.

2.

3.

4.

5.

EEPROM

Continuous Curve Fitting

12Bit

(4096 Increments)

9

$$Y=A+BX+CX^2+...JX$$

가

I/O Communication

4

PC

RS-232

EPI-COM™

9600 baud, 8 data bits, 1 stop bit, no parity DEC VT-100

가

The Menuing System

6가

. Meter Mode,

Utility Mode, Status Mode,
Alarm Mode, Factory Mode
Run Mode

relay

Meter Mode



Utility Mode

4

()

,가

Status Mode

:

(1-4) ,

(

.)

, HI/LO

Alarm Mode

Two 1-amp Relay

.(

Factory Mode

Master-Touch™ Thermal
Flowmeter

가

가

DC AC

가

AC

가

가

Flowmeter는 분리형과 일체형 스타일 두가지 모두 이용 가능합니다. 일체형 스타일은 DC 또는 AC 파워로 이용 가능합니다. 분리형 스타일은 오오직 AC파워로만 이용 가능합니다. 프로덕트 라인의 두가지 종류는 알맞은 삽입형과 인라인 유량계에 부착된 방폭형 전자 엔클로저로 제공됩니다.

Eldridge Products, Inc
1-800-321-FLOW(3569)

Series 8600MP-IN-LINE
Flowmeter with
AC or DC Operated
Integral Electronics ▶



▶ **Series 8000MP**
Flowmeter with AC
Operated Remote
Electronics
(Flanged, In-Line)

Series 8800MP
Insertion
Flowmeter
With AC or DC
Operated Integral
Electronics
 ▼

A Variety of User Features
Features

- Reconfiguration
- Hi/Lo flow tracking
- Dual-access enclosure
- Lithium battery backup
- Real time clock/calender
- Two relay channel
- Four user-definabe curves
- RS-232/485 Communications
- Tweleve-bit hardware
- On-board Precision Reference
- Floating Demical Point
- Four Button tactile keypad
- Password protection

Benifits

- 엔지니어링 단위, 파이프 지역, 바이어스 팩터, 필터링 변경.
- 타임 스탬프, 과거의 높은 낮은 유량 값 노트. 재설정 가능.
- 모든 전자 연결이 쉽게 후면의 엔클로저 커버를 제거함으로써 접근할 수 있음.
- 파워가 중단되는 동안 카운터 값들과 적산 값을 저장해둬.
- 타임 스탬프 알람 사건. Relay출력을 생성함
- 사용자가 선택할 수 있는 알람 제동기 또는 다른 장치를 켜고 끄는 스위치
- 미리 칼리브레이트된 순간 유량 또는 가스에서의 스위치
- 거대한 컴퓨터로 부터의 모든 계기 기능의 리모트 제어
- 높고 정확한 컴퓨터 정보 판독 해결
- 최소 100:1 turndown(최대 300:1)
- 높고 정확한 컴퓨터 정보 판독
- 정밀성과 정확성
- 데이터 입력에 따른 명확한 반응
- 키패드를 통한 중요한 파라미터 보호

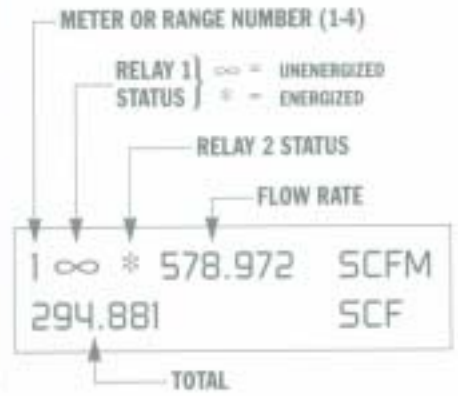


Detail Meter Display and/or PC Screen Display

PC
 LCD , PC EPI
 8000MP
 LCD RUN
 MODE
 RUN MODE
 LCD 4
 가
 (Shift, Mode, Min, Mix)
 PC/ Run Mode



SAMPLE LCD DISPLAY IN RUN MODE



SAMPLE PC/TERMINAL DISPLAY

UNIVERSAL FLOW DATA METER v3.x
 ©1997, Eldridge Products Inc.
 Serial # 96100101
 STATUS: Meter#1, Track ON, Curve Mode, SCFM Units
 RLARM: Current, Relay#1 Off On, Relay#2 Off On
 Rct Evt=Ev1, Ev1=405 Ev2=405 Ev3=405 Ev4=406
 Real-Time Readout
 S - Start/Stop Tracking
 R - Refresh Display
 C - (Clear) Totalizer
 L - (Reset) Lo = 37.011 at 10/28/96 12:53:56PM
 H - (Reset) Hi = 51.8681 at 10/28/96 01:15:42PM
 09:50:47AM
 Press space bar to return
 cur total high low RI= R2=
 50.7253 SCFM 28088.236 SCF 51.8681 37.011

SAMPLE MENUS FOR OTHER MODES

METER			
100*Meter*			
101-SCFM	102-SCFH	103-LB/M	104-LB/H
105-	106-	107-	108-
109-SPPM	110-SPPS	111-	112-
113-	114-	115-	116-
117-SLPM	118-SCOM	119-NCMH	120-NCMM
121-KGM	122-KGM	123-KG/S	124-
125-NMPS	126-NMPM	127-NMPH	128-
129-	130-	131-	132-
140-FScale			
160-Reset			
200*Utility*	300*Status*		
400*Alarms*	500*Run Mode*	800 *Factory*	

UTILITY	
200*Utility*	
201-DRC Set	202-DRC Time
203-DRC Filter	204-DRC Readout
205-RDC Filter	206-RDC Display
207-Diso Rate	208-Diso Set
210-Show Curve	
211-Tracking On	212-Track Hold
213-Set Meter	
214-Set Date	215-Set Time
216-Linear Mode	217-Curve Mode
218-Reset Lock	219-Unlock
220-RS485 ID	
100*Meter*	300*Status*
400*Alarms*	500*Run Mode*
	800 *Factory*

ALARM	
400*Alarms*	
401-Set Event	402-Disabled
403-Trip High	404-Trip Low
405-Max Button	406-Min Button
407-Timer	408-PropQuit
409-Total	410-Trip Delay
100*Meter*	300*Utility*
300*Status*	500*Run Mode*
	800 *Factory*

FACTORY		
800*Factory*		
801-CoeffTermA	802-CoeffTermB	803-CoeffTermC
804-CoeffTermD	805-CoeffTermE	806-CoeffTermF
807-CoeffTermG	808-CoeffTermH	809-CoeffTermI
810-CoeffTermJ	811-C Factor	812-Zero Offset
813-SetXsect		
814-Max Range		
100*Meter*	200*Utility*	300*Status*
400*Alarms*	500*Run Mode*	

, 8000MP
 Relay
 가
 (Delay
 Relay
 Relay
 8000MP 가

Descriptions and Engineering Specifications for EPI Integral DC Meters

General

• Function : , 가

• Type :

Thermal Dispersion (RTDs)

• Parts : /
with /

Performance

• Range : 0~20,000 SFPM(100NMPS)
가

• Accuracy : ±(1% + .5%)

• Repeatability :
±.2%

• 가 : -40° 392°F
(-40° 200°C)

• :
(SSS) : -40 °FDPTJ 150°F
(-40° 65°C)
(SMT) : 150° F 392°F
(65° 200°C)
(SST) : 392°F

• : 32° 122°F(0°
50°)
(ETE Option)

• 500 PSIG (35barG)
• : 1 (1), 가

Features

• ()
• , 0-5VDC 4-20 Ma
(600 ohm)

• 가
(2 Line 16)
• 가 (RAM)

• 가
• 4
가
• (4) PC
가
• ,PC

• 가 가 EPI NIST
Traceable

- / (— relay)
- 12 ()
- 가 (50mS)
- RS232 RS485
- (1 amp) realy SPDT
- 가
- "RUN" "USER CONFIGURATION"
- (:)

Electronic Enclosures

- :
(4.6"*4.6"*5.875")
- : NEMA 4 Class1, Division 1, Group B, C D
- : 24 VDC @ 250mA
- : 1/2"NPT
- : 0-5VDC,4-20mA DC (0)
-),RS232, RS485, 1-amp relay contacts

Insertion Flowmeter(8800MP)

- : 1/2" 3/4"
- : 6"
- : 316 (Hastelloy Monel)
- :

In-Line Flowmeter(8600MP/8700MP)

- 1/4"NPT * 6" 4" NPT*40" flow bodies
- : 316 (Hastelloy Monel)
- : , , , butt

Description of EPI Integral AC Meters

115VAC (AC115) 24VDC
230VAC(AC230)
. AC115 6 foot

Description of EPI Remote AC Meters

• :
• : (1) ()
(2)

• 10

(5 ohm)

Class 1, Division 1, Group B,C & D
NEMA 4

가
NEMA 4X

115VAC(220) 50/60 Hz
/

0-5 DC 4-20mA
RS232, RS485, 1-amp relay

• 4-20mA
0-600Ohms(1200 Ohms)

Basic Procedure to Order

가 , , ,

Integral In-Line		Remote In-line		MIN F.S.	MAX F.F.(2)	MIN F.S.	MAX F.F.(2)
(24VDC	AC	(AC)	(SCFM)	(SCFM)	(NCMH)	(NCMH)
MODEL	MODEL	MNPT * L"					
8636MP-SSS-133	8036MP-SSS-133	1/4 * 6		0.35	3.5	0.6	6
8649MP-SSS-133	8049MP-SSS-133	3/8 * 6		0.60	6.0	1.0	10
8659MP-SSS-133	8059MP-SSS-133	1/2 * 7		1.30	13.0	2.2	22
8669MP-SSS-133	8069MP-SSS-133	3/4 * 7		6.00	60.0	10.0	100
8689MP-SSS-133	8089MP-SSS-133	1 * 8		9.00	90.0	15.0	150
8710MP-SSS-133	8110MP-SSS-133	1-1/4 * 10		15.00	150.0	25.0	250
8712MP-SSS-133	8112MP-SSS-133	1-1/2 * 15		20.00	200.0	34.0	340
8716MP-SSS-133	8116MP-SSS-133	2 * 20		35.00	350.0	59.5	595
8720MP-SSS-133	8120MP-SSS-133	2-1/2 * 25		50.00	500.0	85.0	850
8724MP-SSS-133	8124MP-SSS-133	3 * 30		75.00	750.0	127.0	1270
8728MP-SSS-133	8128MP-SSS-133	3-1/2 * 35		100.00	1000.0	170.0	1700
8732MP-SSS-133	8132MP-SSS-133	4 * 40		135.00	1350.0	229.0	2290

Integral Insertion		Remote Insertion		PSIG MAX	BarG MAX
MODEL	MODEL	SIZE(3)			
8840MP-SSS-133	8240MP-SSS-133	1/2" OD up to 36" Long		500	35.0
8860MP-SSS-133	8260MP-SSS-133	3/4" OD up to 84" Long		500	35.0

NOTES:

(1) Specify DC24, AC115, AC230 ()

(2) 가 , MAX F.S.(Full Scale) .. F.S

(3) , AC ,)

8840MP-SSS-133-DC24-12"-AIR
(, ,24 DC ,12" ,)

8240MP-SSS-133-AC115-12"-AIR
(AC .)

8710MP-SSS-133-AC115-H2
(1-1/4"MNPT * 10" , , , AC ,)



MODEL	Description & Size	PSIG	BarG
BVR0812	1/2" Bore * 3/4 NPT * 8" Long	125	8.6
Bbvr1216	3/4" Bore * 1 NPT * 10" Long	55	3.8

Note : 25 lb 가 .

MODEL	Description & Size	PSIG	BarG
TPM0808T	1/2" Tube * 1/2" Male Pipe Bored Thru Fitting	25	1.7
TPM1212T	3/4" Tube * 1/2" Male Pipe Bored Thru Fitting	25	1.7
TPMXXXXS	Stainless Steel Ferrule	225	16

General Specification

: 0-5 VDC & 4-20mA (15 WATTS 115VAC 50/60 Hz

: (Ref. : 21°C) : ±<1% of Reading +(0.5% of Full Scale + .02%/°C)> (220VAC : 24VDC)

: .2% F.S. : Rated Class1, Division1, Group B, C,D NEMA 4

: One Second : NEMA 4X,

Turn Down Ratio : 100 :1 (300:1) size, 8" * 10" * 4" flanged,

: 32-112° F(0-50° C) 6" * 10-3/4" & 1/4" bolting

() : 316 SS(Hastelloy Monel)

가 : -40° 392° F(-40° 200° C) (STP) 70° F(21.1° C) & 29.92"Hg

: 500 PSIG () (760mmHg)

: .8 6 Watts NIST(NBS)Traceable Calibration : 가

Specification Notice

Limited Warranty
Eldridge Products, Inc. (EPI)

1
EPI
, EPI
EPI

Related Products
Series 8000,8100,8200 AC Thermal Mass Flowmeters
Series 6000,8700,8800 DC Thermal Mass Flowmeters
Series 7000,7100,7200 DC Thermal Mass Flow Switch
Series 900 Multi-Point Mass Flowmeters
Series 8600NH,8700NH,8800NH Thermal Mass Flowmeters for Non-Hazardous Areas

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