



Level



Pressure



Flow



Temperature

Liquid
Analysis

Registration

Systems
Components

Services



Solutions

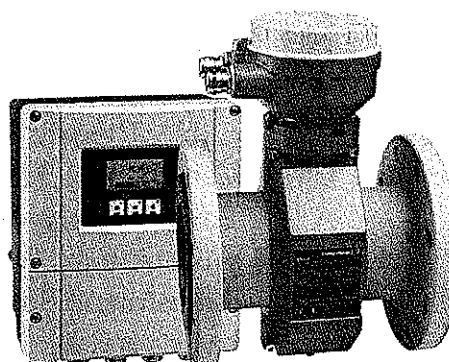
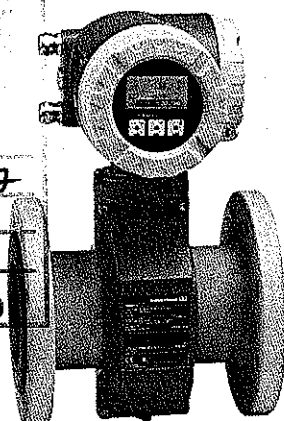
Technical Information

Proline Promag 50W, 53W

Electromagnetic Flow Measuring System

Flow measurement of liquids in water or wastewater applications

SHOP DRAWING REVIEW	
THIS DRAWING HAS BEEN REVIEWED FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT ONLY. CHECKED BY: SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR ERRORS OR OMISSIONS OR FOR THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. CONSULTING IS ASSURED FOR CORRECTIONS AND REVISIONS.	
<input checked="" type="checkbox"/> NO COMMENT	Submitted by: 22
<input type="checkbox"/> SEE COMMENTS	Project No. 08 8107
<input type="checkbox"/> AMEND & RESUBMIT	By: GS
<input type="checkbox"/> REJECTED	Date: May 21/10
DILLON CONSULTING LIMITED	



Application

Electromagnetic flowmeter for bidirectional measurement of liquids with a minimum conductivity of $\geq 5 \mu\text{S/cm}$:

- Drinking water
- Wastewater
- Sewage sludge
- Flow measurement up to 110000 m³/h (484315 gal/min)
- Fluid temperature up to +80 °C (+176 °F)
- Process pressures up to 40 bar (580 psi)
- Lengths in accordance with DVGW/ISO

Application-specific lining of the measuring pipe from polyurethane or hard rubber with the following drinking water permissions:

- KTW
- WRAS
- NSF
- ACS

Approvals for hazardous area:

- ATEX
- IECEx
- FM

- CSA
- NEPSI

Connection to process control system:

- HART
- PROFIBUS DP/PA
- FOUNDATION Fieldbus
- MODBUS RS485

Your benefits

Promag measuring devices offer you cost-effective flow measurement with a high degree of accuracy for a wide range of process conditions.

The uniform Proline transmitter concept comprises:

- Modular device and operating concept resulting in a higher degree of efficiency
- Software options for batching, electrode cleaning and for measuring pulsating flow
- High degree of reliability and measuring stability
- Uniform operating concept

The tried-and-tested Promag sensors offer:

- No pressure loss
- Not sensitive to vibrations
- Simple installation and commissioning

Taloyoak Mag Meters

3	PC	50W1H-UL0A1RA0BAAA Promag 50W1H, DN100 4" Electromagnetic flowmeter U Liner: Polyurethane L Process Connection: Cl.150, A105, flange ANSI B16.5 O Electrodes: 1.4435/316L A Calibration: 0.5% I Additional Test, certificate: w/o R Approval: FM NI Cl. I Div. 2 / CSA Cl. I Div. 2 A Housing: Compact Alu, IP67 NEMA4X O Cable, Remote Version: Not used B Cable Entry: Thread NPT 1/2 A Power Supply; Display: 85-260VAC, WEA, 2-line + push buttons, WEA= language DE+EN+FR+IT+ES+PT+NL A Adjustment; Software Feature: Factory setup; basic version A Output, Input: 4-20mA SIL HART + frequency	2
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6	PC	4200360 4",316L,150 lb grounding poly. liner
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Ordering information

NOTE: Endress+Hauser reserves the right to change or modify product, specifications, and ordering information at any time without notice. Please consult Endress+Hauser or your local representative for the most recent information.

Promag 50W, 1" to 24" sizes

Promag 50 W 114 - U L 0 A I R A 0 B A A A

Nominal Diameter

0	25	1"
	40	1-1/2"
	50	2"
	80	3"
1H	4"	
1F	6"	
2H	8"	
2F	10"	
3H	12"	
3F	14"	
4H	16"	
4F	18"	
5H	20"	
6H	24"	

1 Liner

- 11 Hard rubber (not available for 1", 1-1/2" or 2" sensors)
- U Polyurethane

2 Process connection

- L Class 150 ANSI B16.5 CS steel A105 flanges
- M Class 300 ANSI B16.5 CS steel A105 flanges (not for 8" and larger)
- R Class 150 ANSI B16.5 316L SS flanges
- S Class 300 ANSI B16.5 316L SS flanges (not for 8" and larger)

3 Electrodes / material

- 0 Measuring, reference and EPD electrodes / 316L SS
- 1 Measuring, reference and EPD electrodes / Alloy C22
- 2 Measuring, reference and EPD electrodes / tantalum
- 7 Measuring electrode, exchangeable / 316L SS (for hard rubber liner only, 14" and larger sensors, no EPD or reference electrodes, for safe areas only)
- G Measuring, reference and EPD electrodes, bullet nose / 316L SS
- H Measuring, reference and EPD electrodes, bullet nose / Alloy C-22

4 Calibration

- A 3-point calibration, 0.5%
- B 3-point calibration, 0.2%
- D SCS/AZLA 3-point 0.5% calibration (ISO/IEC 17025) with certificate traceable according to ISO 9000 (specify range)
- E SCS/AZLA 3-point 0.2% calibration (ISO/IEC 17025) with certificate traceable according to ISO 9000 (specify range)

5 Certificates

- 1 Standard, no certificate
- 2 3.1B material certificate for pipe and flanges
- 3 2.3 pressure test certificate (1.5 x PN, 3 minutes) for sensors up to 12" only
- 4 3.1B material and 2.3 pressure test certificate for sensors up to 12" only

6 Approvals

- A For use in non-hazardous areas
- N FM explosion proof Class I, Div. 1 / CSA Class I, Div. 1 (only for aluminum field housing, compact version, not for 14" and larger sensors)
- R FM non-incendive Class I, Div. 2 / CSA Class I, Div. 2

7 Housing

- A NEMA 4X (IP 67) compact aluminum housing
- C NEMA 4X (IP 67) remote wall-mounted (only for approvals A or R)
- G NEMA 4X (IP 67) remote aluminum field housing for non-hazardous areas
- K NEMA 6P sensor, wall-mounted housing (only for approvals A or R)
- N NEMA 6P sensor, aluminum field housing, non-hazardous
- P NEMA 4X (IP 67) compact aluminum housing, HE (harsh environment), compact and remote sensor sizes up to 12" only *
- S NEMA 4X (IP 67) remote wall-mounted housing, HE (harsh environment), remote sensor sizes 14" to 78" (only for approvals A and R) *
- 1 -40°F (-40°C) ambient temperature, NEMA 4X (IP 67), compact, aluminum field housing (only for approvals A and R)
- 3 -40°F (-40°C) ambient temperature, NEMA 4X (IP 67), compact (only for approvals A and R)
- 5 -40°F (-40°C) ambient temperature, NEMA 4X (IP 67) wall mount housing, for NEMA 6P sensor (only for approvals A and R)

8 Cable for remote

- 0 Without cable
- 1 15 foot coil and signal cable
- 2 30 foot coil and signal cable
- 5 Coil and signal cable, specify length (maximum 650 ft depending on conductivity of process material)
- 7 Coil and signal cable, flexible conduit, specify length (maximum 650 ft depending on conductivity of process material)

9 Cable entries

- B 1/2" NPT
- L 1/2" NPT fieldbus connector (only for approval A and R)

10 Power supply / display

- 7 85 to 260 VAC, without display, remote configuration only (not for wall mount or SS housing)
- 8 20 to 55 VAC / 16 to 62 VDC, without display, remote configuration only (not for wall mount or SS housing)
- A 85 to 260 VAC, with display, push button operation (language: EN, ES, FR, IT, NL, PT, DE)
- B 20 to 55 VAC / 16 to 62 VDC, with display, push button operation (language: EN, ES, FR, IT, NL, PT, DE)
- X Sensor only (without transmitter, only available up to 8")

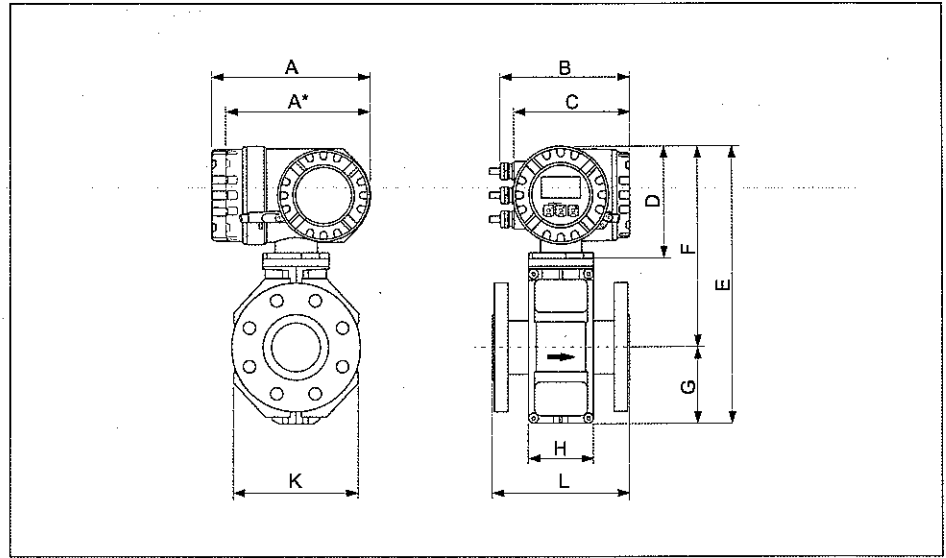
11 Software

- A Standard software
- X Sensor only (up to 8" only)

12 Outputs / inputs

- A Current HART, frequency
- D Current HART, frequency, status output, status input
- H PROFIBUS-PA (approvals A and R only)
- J PROFIBUS-DP (approvals A and R only)
- S Current HART, frequency; active I.S. (not for approvals A and R)
- T Current HART, frequency; passive I.S. (not for approvals A and R)
- W Current HART
- X Sensor only

* Harsh environment (HE) option is available for process conditions where cool process temperatures in tropical (high humidity) environments or process fluids which undergo large cyclical temperature variations which can cause high amounts of moisture that could condense onto the measurement tube.

Compact version DN ≤ 300 (12")


A0905423

Dimensions (SI units)

DN	L ¹⁾	A	A*	B	C	D	E	F	G	H	K
EN (DIN) / JIS / AS ²⁾											
25	200	227	207	187	168	160	341	257	84	94	120
32	200						341	257	84	94	120
40	200						341	257	84	94	120
50	200						341	257	84	94	120
65	200						391	282	109	94	180
80	200						391	282	109	94	180
100	250						391	282	109	94	180
125	250						472	322	150	140	260
150	300						472	322	150	140	260
200	350						527	347	180	156	324
250	450	227	207	187	168	160	577	372	205	166	400
300	500						627	397	230	166	460

¹⁾ The length is regardless of the pressure rating selected. Fitting length to DVGW.

²⁾ For flanges to AS, only the nominal diameters DN 80, 100 and 150 to 300 are available.

All dimensions in [mm]