

# Proline Prosonic Flow 93P Ultrasonic flowmeter

Flowmeter for hazardous area installations with a wide range of analog and digital outputs



Mais informações e preço atual:

[www.br.endress.com/93P](http://www.br.endress.com/93P)

## Benefícios:

- Automatic frequency scan for maximum measuring performance
- Increased safety for chemical and petrochemical industry – international hazardous area approvals
- Long-term stable signal - maintenance-free permanent mounting from outside with coupling pads
- Process transparency – diagnostic capability
- Highest performance – extended functionality and diagnostics
- Flexible data transfer options – numerous communication types
- Automatic recovery of data for servicing

## Especificações resumidas

- **Max. measurement error** Volume flow:  $\pm 3\%$  o.r. for DN15  $\pm 2\%$  o.r. for DN25 to DN200  $\pm 2\%$  o.r. above DN200
- **Measuring range** 0.3 to 10 m/s (1 to 33 ft/s)
- **Medium temperature range** DN15 to 65 -40 to +100°C (-40 +212 °F) -40 to +150°C (-40 +302 °F) option DN50 to 4000 -40 to +80°C (-40 +276 °F) -40 to +170°C (-40 +338 °F) option
- **Max. process pressure** N/A
- **Wetted materials** Clamp on system: Sensor holder 1.4308/CF-8 Sensor housing 1.4301/304 Strapping bands 1.4301/304

**Campo de aplicação:** The Prosonic Flow P clamp-on sensor was specially designed for the process industry. Combined with the Prosonic Flow 93 transmitter with touch control, four-line display and extended functionality, Prosonic Flow 93P offers high accuracy in standard applications.

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## Características e especificações

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### Liquids

**Measuring principle**

Ultrasonic flow

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**Product headline**

Flowmeter for hazardous area installations with a wide range of analog and digital outputs.

Automatic frequency scan for maximum measuring performance.

Ideal clamp-on device for applications with chemicals, solvents, liquid hydrocarbons, acids, alkalis.

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**Sensor features**

Increased safety for chemical and petrochemical industry – international hazardous area approvals. Long-term stable signal – maintenance-free permanent mounting from outside with coupling pads. Process transparency – diagnostic capability.

Medium temperature: -40 to 170 °C (-40 to 338 °F). Wide nominal diameter range: DN 15 to 4000 (½ to 160"). Process piping unaffected by meter installation.

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**Transmitter features**

Highest performance – extended functionality and diagnostics. Flexible data transfer options – numerous communication types. Automatic recovery of data for servicing.

Aluminium transmitter housing. 4 - line backlit display with touch control. HART, PROFIBUS PA/DP, FOUNDATION Fieldbus.

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**Nominal diameter range**

Single channel, 1 or 2 paths : DN15 to 4000 (1/2 to 160")

Dual channel, 1 or 2 paths : DN15 to 4000 (1/2 to 160")

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**Wetted materials**

Clamp on system:

Sensor holder 1.4308/CF-8

Sensor housing 1.4301/304

Strapping bands 1.4301/304

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## Liquids

**Measured variables**

Volume flow channel 1&2, average volume flow, volume flow difference, sound velocity, flow velocity, totalizer

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**Max. measurement error**

Volume flow:

±3% o.r. for DN15

±2% o.r. for DN25 to DN200

±2% o.r. above DN200

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**Measuring range**

0.3 to 10 m/s (1 to 33 ft/s)

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**Max. process pressure**

N/A

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**Medium temperature range**

DN15 to 65

-40 to +100°C (-40 +212 °F)

-40 to +150°C (-40 +302 °F) option

DN50 to 4000

-40 to +80°C (-40 +276 °F)

-40 to +170°C (-40 +338 °F) option

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**Ambient temperature range**

-20 to +60 °C (-4 to +140 °F)

-40 to +60 °C (-40 to +140 °F) optional

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**Sensor housing material**

N/A

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**Transmitter housing material**

Wall-mounted housing: powder-coated die-cast aluminum

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**Degree of protection**

IP67, type 4X for transmitter

IP68 type 6P for sensors. Transmitter: IP67, type 4X enclosure

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## Liquids

**Display/Operation**

4 lines backlit display with three optical keys

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**Outputs**

1x 4-20 mA HART

1x Pulse/frequency/switch output (passive)

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**Inputs**

N/A

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**Digital communication**

HART

PROFIBUS PA

Profibus DP

FOUNDATION Fieldbus

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**Power supply**

85 to 260 V AC

20 to 55 V AC

16 to 62V DC

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**Hazardous area approvals**

ATEX, FM/CSA, NEPSI, JPN

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**Other approvals and certificates**

Flowmeter verification for DN15, 25, 40, 50 & 100 only

Marine certificate

EAC marking

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**Product safety**

EAC marking

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**Metrological approvals and certificates**

Flowmeter verification for DN15, 25, 40, 50 & 100 only

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**Marine approvals and certificates**

Marine certificate

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