

По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48

Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курган (3522)50-90-47
Курск (4712)77-13-04
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Ноябрьск (3496)41-32-12

Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Пермь (342)205-81-47
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саранск (8342)22-96-24
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35

Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Улан-Удэ (3012)59-97-51
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70

Казахстан +7(7172)727-132

Киргизия +996(312)96-26-47

сайт: www.honeywell.nt-rt.ru || эл. почта: hwn@nt-rt.ru

ДАТЧИКИ ДАВЛЕНИЯ

Технические характеристики

на SMV800



SMV800 SmartLine Multivariable Transmitter Specification



Introduction

The SMV800 combines sensor technologies for differential pressure, static pressure and temperature with the latest microprocessor technology to provide highly accurate data for measured variables, compensated flow and totalization over multiple communication protocols.

When paired with the other SmartLine unique features the SMV 800 delivers the highest levels of safety, reliability and efficiency available resulting into reduced project costs and start-up time while improving the productivity. The SmartLine family is also fully tested and compliant with Experion® PKS providing the highest level of compatibility assurance and integration capabilities.

Best in Class Features:

- Accuracy up to 0.0400% for Differential pressure
- Accuracy up to 0.0375% for Static pressure
- Accuracy up to 0.2 Deg C for Temperature
- Mass Flow Reference Accuracy: up to 0.6%
- Totalizer Reference Accuracy: up to 0.4%
- Automatic static pressure & temperature compensation
- Rangeability up to 400:1
- Compensated flow response time of up to 2x per second
- Multiple local display capabilities
- External zero, span, & configuration capability
- Polarity insensitive electrical connections
- Comprehensive on-board diagnostic capabilities
- Integral Dual Seal design for highest safety based on ANSI/NFPA 70-202 and ANSI/ISA 12.27.0
- World class overpressure protection
- Modular design characteristics

Communications/Output Options:

- 4-20mA DC (Analog)
- Honeywell Digitally Enhanced (DE) Single or Multivariable
- HART® (version 7.0)
- Modbus (RS-485, RTU) Half Duplex Communication

All transmitters are available with the above listed communication protocols



Figure 1 – SMV 800 Multivariable Transmitters feature field-proven piezoresistive sensor technology

Span & Range Limits:

Model	URL	LRL	Max Span	Min Span
PV1 - DP	"H ₂ O (mbar)	"H ₂ O (mbar)	"H ₂ O (mbar)	"H ₂ O (mbar)
SMA810	25 (62.50)	-25 (-62.5)	25 (62.50)	1.0 (2.5)
SMA845	400 (1000)	-400 (-1000)	400 (1000)	1.0 (2.5)
SMG870	400 (1000)	-400 (-1000)	400 (1000)	1.0 (2.5)
PV2 - SP	psiA (bara)	psiA (bara)	psiA (bara)	psiA (bar)
SMA810	100 (7.0)	0 (0)	100 (7.0)	5 (0.35)
SMA845	1500 (104)	0 (0)	1500 (104)	30 (2.1)
PV2 - SP	psig (barg)	psig (barg)	psig (barg)	psig (barg)
SMG870	4500 (310)	-14.7 (-1)	4500 (310)	60 (4.2)

Description

Honeywell's SMV 800 Smart Multivariable Flow Transmitter extends our proven "smart" technology to the measurement of three separate process variables with the ability to calculate compensated mass or volume flow rate as a fourth process variable according to industry standard methods for air, gases, steam and liquids. SMV800 HART and Modbus devices can calculate total mass or volume flow also.

Unique Indication/Display

Advanced Graphics LCD Display Features

- Modular (may be replaced in the field)
- 0, 90, 180, & 270 degree position adjustments
- Standard and custom measurement units available.
- Up to eight display screens with 3 formats are possible (Large PV with Bar Graph or PV with Trend Graph)
- Configurable screen rotation timing (3 to 30 sec)
- Display Square Root capabilities may be set separately from the 4-20mA dc output signal for HART & DE devices
- Multiple language capability. (EN, DE, FR, IT, ES, RU, TU, CH, & JP)

Diagnostics

SmartLine transmitters all offer digitally accessible diagnostics which aid in providing advanced warning of possible failure events minimizing unplanned shutdowns, providing lower overall operational costs

Configuration Tools

Integral Three Button Configuration Option

Suitable for all electrical and environmental requirements, SmartLine offers the ability to configure the transmitter and display via three externally accessible buttons except for the flow related parameters. Zero and span capabilities are also available optionally with HART and DE devices via three buttons with or without selection of a display option.

Hand Held Configuration

SmartLine transmitters feature two-way communication and configuration capability between the operator and the transmitter. This is accomplished via Honeywell's field-rated Configuration Toolkit (MCT404).

The MCT404 is capable of field configuring HART and DE SMV devices for all parameters other than flow configuration, can be ordered for use in intrinsically safe environments. All Honeywell transmitters are designed and tested for compliance with the offered communication protocols and are designed to operate with any properly validated hand held configuration device.

Measurement Types:

SMV is capable of mass and volume flow measurements for liquids, gases, and superheated and saturated steam.

Personal Computer Configuration

Honeywell's PC Based Configuration Toolkit SCT3000 provides an easy way to configure the SMV800 DE devices. SMV800 HART Device can be configured using Device Description based DCS Hosts and Asset Management Systems. HART devices can also be configured using PC based DTMs.

Honeywell's PC based configuration tool, 'SmartLine Modbus Manager' provides an easy and fast way to configure and troubleshoot the SMV Modbus devices including flow parameters. Configuration for multi-drop communication is also possible.

SMV800 DTM and PC based applications provide enhanced features like:

- Easy to use Flow Configuration
- Units Preference: Configurable Engineering units
- Auto Calculation of Viscosity and Density Coefficients, Auto Calculation of K User, Beta Factor
- Export and Import Configurations to/from external file with predefine schema/format
- Summary Page

Primary Element Compatibility

FLOW: The SMV is compatible with wide range of flow elements and provides dynamic calculation capabilities. SMV800 supports Advanced Algorithms and ASME 1989 Algorithms which is User selectable option in the DD / DTM Tools. Advanced Algorithm option supports the following Primary Elements with SMV800 HART, DE and Modbus Protocols:

:

- Orifice Plates (ASME MFC-3M & AGA No 3/ISO 5167/GOST 8.586).
- Integral Orifice
- Small Bore Orifice (ASME MFC -14M)
- Conditional Orifice (ISO5167-2003)
- Nozzles (ASME MFC-3M/ISO 5167/GOST 8.586).
- Venturi Tubes (ASME MFC-3M/ISO 5167/GOST).
- Averaging Pitot Tubes
- V-Cone®, Wafer Cone, Wedge

ASME 1989 Algorithm Option supports the following Primary Elements with SMV800 HART, DE and Modbus protocol:

- Orifice (Flange Taps $D \geq 2.3$ inches, Flange Taps $2 \leq D \leq 2.3$, Corner Taps, Orifice D and D/2 Taps, Orifice 2.5 and 8D Taps)
- Venturi (Machined Inlet, Rough Cast Inlet, Rough Welded Sheet-Iron Inlet, Leopold, Gerand, Venturi Tube, Low-Loss Venturi Tube)
- Nozzle (Long Radius, Venturi Nozzle)
- Various Preso Ellipse Pitot Tubes with varying Pipe Sizes
- Other Pitot Tubes

Primary Element Compatibility, continued

Fixed Parameters: Fixed Cd, Y1, Viscosity, Density are supported for user to customize the flow calculation

Temperature: The SMV also has the following temperature input options:

- **RTD** (2,3,4 wires): PT25, PT100*, PT200, PT500, PT1000 (*DE models use only PT100 RTD)
- **Universal Input: RTD** PT25, PT100, PT200, PT500, PT1000 and **Thermocouple:** Type B*, E, J, K, N*, R*, S*, T.

*B, N, R, S Type inputs are only available with HART and Modbus protocols

Mass Flow Calculation

Mass Flow Compensation can be selected for Standard Compensations by user for Gas, Liquid and Steam without limitation on primary elements.

Mass Flow Compensation can be selected for Dynamic Compensation by the user from: ASME-MFC-3M, ISO5167, Gost-8.586, for Orifice Plate, Nozzle and Venturri, AGA3 for Orifice, and Calculation Support for Averaging Pitot Tube, VCone, Wafer Cone, Wedge and Integral Orifice and Conditional Orifice are also available. Mass Flow Calculations also support user Fixed Input Parameters for Customizing the Calculations.

System Integration

- SmartLine communications protocols all meet the most current published standards for HART, DE and Modbus
- Integration with Honeywell's Experion PKS offers the following unique advantages.
 - Messaging & Maintenance Mode Indication
 - Tamper reporting
 - FDM Plant Area Views with Health summaries
 - All SMV 800 units are Experion tested to provide the highest level of compatibility assurance

Automatic Density Compensation

Using the configuration software, the SMV can be configured with the primary element type and the physical parameters of the fluid measured. This method dynamically compensates for fluid characteristics such as discharge coefficients, gas expansion factors, density, and viscosity as well as installation issues like upstream pipe size using the above referenced algorithms.

Basic Flow Density Compensation

This conventional calculation method is based on flow factors being manually entered

Modular Design

To help contain maintenance & inventory costs, all SMV 800 transmitters are modular in design supporting the user's ability to replace meter bodies, indicators or change electronic modules without affecting overall performance or approval body certifications. Each meter body is uniquely characterized to provide in-tolerance performance over a wide range of application variations in temperature and pressure and due to the Honeywell advanced interface, electronic modules may be swapped without losing in-tolerance performance characteristics.

Modular Features

- Meter body replacement
- Replaceable electronics/comm modules*
- Add or remove integral indicators*
- Add or remove lightning protection (terminal connection) *

* Field replaceable in all electrical environments (including IS) except flameproof without violating agency approvals.

With no performance effects, Honeywell's unique modularity results in lower inventory needs and lower overall operating costs. (Not available for Modbus)

Performance Specifications

Digital Reference Accuracy ² (conformance to +/-3 Sigma)

TABLE I

	Model	URL	LRL	Min Span	Maximum Turndown Ratio	Stability (%URL/Year)	Reference Accuracy ¹ (% Span)
PV1 Differential	SMA810	25 in H ₂ O/62.5mbar	-25 in H ₂ O/-62.5mbar	1 in H ₂ O/2.5mbar	25:1	1.0	0.0400
	SMA845	400 in H ₂ O/1000mbar	-400 in H ₂ O/-1000mbar	1 in H ₂ O/2.5mbar	400:1	0.0625	
	SMG870						
PV2 Static	SMA810	100 psiA/7 bara	0 psiA/0 bara	5 psiA/0.35 bara	20:1	0.125	0.0375
	SMA845	1500 psiA/104 bara	0 psiA/0 bara	30 psiA/2.1 bara	50:1	0.008	
	SMG870	4500 psig/310 barg	-14.7 psig/-1.0 barg	60 psig/4.2 barg	75:1	0.025	

Zero and span may be set anywhere within the listed (URL/LRL) range limits

% Span per 28°C (50°F)

Digital Accuracy at Specified Span, Temperature and Static Pressure

(Combined Zero & Span, conformance to +/-3 Sigma)

TABLE II

	Model	URL	Accuracy ¹ (% of Span)			Temperature Effect % Span per 28oC (50oF)		Static Line Pressure Effect (% Span/1000psi) ³		
			For Spans Below	A	B	C	D	E	F	G
PV1 Differential	SMA810	25 in H ₂ O	1:1	0.015	0.025	25	0.100	0.1000	0.180	0.080
	SMA845	400 in H ₂ O	16:1				0.075	0.0250	0.200	0.025
	SMG870	400 in H ₂ O	16:1							
PV2 Static	SMA810	100psiA	2:1	0.0125	0.025	50	0.05	0.0500	n/a	
	SMA845	1500psiA	10:1			150	0.055	0.0200		
	SMG870	4500psig	10:1			450				
Turn Down Effect						Temp Effect		Static Effect ³		
_____						_____		_____		

Typical Calibration Frequency:

PV1 and PV2 calibration verification is recommended every four (4) years

Notes:

¹ Digital terminal based accuracy – Includes the combined effects of linearity, hysteresis and repeatability. Analog output adds 0.005% of span error.

² For zero based spans and reference conditions of 25°C (77°F), 50% RH, 10 to 55% RH and 316SS barrier diaphragm.

³ Static Line Pressure effect for SMA810 is % span/25 psi

$$\pm \left[A + B \left(\frac{C}{\text{Span}} \right) + D + E \left(\frac{\text{URL}}{\text{Span}} \right) + F + G \left(\frac{\text{URL}}{\text{Span}} \right) \right]$$

Performance Specifications

Digital PV3 Temperature Reference Accuracy ² (conformance to +/-3 Sigma)

Table III

Input Type	Maximum Range Limits		Digital Accuracy (+/-) ¹	Min Span	Stability (% ULR/year)	Standards
RTD (2,3,4 wire)	° C	° F	° C	° C	%	
Pt25 ⁴	-200 to 850	-328 to 1562	1.0	1.0	0.01	IEC751:1990 ($\alpha=0.00385$)
Pt100	-200 to 850	-328 to 1562	0.20	1.0	0.01	IEC751:1990 ($\alpha=0.00385$)
Pt200 ⁴	-200 to 850	-328 to 1562	0.40	1.0	0.01	IEC751:1990 ($\alpha=0.00385$)
Pt500 ⁴	-200 to 850	-328 to 1562	0.24	1.0	0.01	IEC751:1990 ($\alpha=0.00385$)
Pt1000 ⁴	-200 to 500	-328 to 932	0.20	1.0	0.01	IEC751:1990 ($\alpha=0.00385$)
Thermocouples³	° C	° F	° C	° C	%	
B ⁴	200 to 1820	392 to 3308	2.00	1.0	0.01	ANSI/ASTM E-230 (ITS-90)
E	-200 to 1000	-328 to 1832	0.40	1.0	0.01	ANSI/ASTM E-230 (ITS-90)
J	-200 to 1200	-328 to 2192	0.50	1.0	0.01	ANSI/ASTM E-230 (ITS-90)
K	-200 to 1370	-328 to 2498	0.50	1.0	0.01	ANSI/ASTM E-230 (ITS-90)
N ⁴	-200 to 1300	-328 to 2372	0.80	1.0	0.01	ANSI/ASTM E-230 (ITS-90)
R ⁴	-50 to 1760	-58 to 3200	2.00	1.0	0.01	ANSI/ASTM E-230 (ITS-90)
S ⁴	-50 to 1760	-58 to 3200	2.00	1.0	0.01	ANSI/ASTM E-230 (ITS-90)
T	-250 to 400	-418 to 752	0.40	1.0	0.01	ANSI/ASTM E-230 (ITS-90)

Notes:

1. Digital Accuracy is accuracy of the digital value accessed by the Host system and the handheld communicator
2. Analog Output Accuracy is applicable to the 4 to 20 mA Signal output
3. For TC inputs, CJ accuracy of 0.25°C shall be added to digital accuracy to calculate the total digital accuracy
4. These input types are only available with HART and Modbus protocols

Total analog accuracy is the sum of digital accuracy and 0.005% of span.

Ambient Temperature Effect Digital Accuracy: For RTD Inputs, 0.0015°C/°C/. For T/C Inputs: 0.005°C/°C

Analog Output: 0.0005% of span/°C

PV4 Mass Flow Reference Accuracy: 0.6% of flow range, over 20:1 flow range, calculated every 500ms^{1,2}

¹ Flow performance specifications assume dynamic compensation and is applicable for SMA845 and SMG870

² Applicable standards and installations per ASME MFC 3M or ISO 5167-1 for un-calibrated orifice; Bigger than 2.8 inch Pipe Diameter; (0.2 < beta < 0.6 Orifice). DP Turn down 16:1; Reference accuracy does not include RTD sensor accuracy.

Operating Conditions – All Models

Parameter	Reference Condition		Rated Condition		Operative Limits		Transportation and Storage	
	°C	°F	°C	°F	°C	°F	°C	°F
Ambient Temperature¹ SMA810, SMA845, SMG870	25±1	77±2	-40 to 85	-40 to 185	-40 to 85	-40 to 185	-55 to 120	-67 to 248
Meter Body Temperature² SMA810, SMA845, SMG870	25±1	77±2	-40 to 110 ¹	-40 to 230 ¹	-40 to 125	-40 to 257	-55 to 120	-67 to 248
Humidity %RH	10 to 55		0 to 100		0 to 100		0 to 100	
Vac. Region – Min. Pressure mmHg absolute inH₂O absolute	Atmospheric		25 13		2 (short term) ³ 1 (short term) ³			
Supply Voltage Load Resistance	HART Models: 10.8 to 42.4 Vdc at terminals (IS version limited to 30v) 0 to 1440 ohm (as shown in Figure 2) DE Models: 15V to 42.4 Vdc at terminals (IS version limited to 30V, XP and Non Sparking/ Non Incentive, 42 Volts.) 0 to 900 ohm (as shown in Figure 2) Modbus (RS-485) Models: 9.5 to 30 Vdc at terminals							
Maximum Allowable Working Pressure (MAWP)^{4,5} (SMV 800 products are rated to Maximum Allowable Working Pressure. MAWP depends on Approval Agency and transmitter materials of construction.)	Standard: SMA810 = 100 psiA, 7.0 BarA ⁶ SMA845 = 3000 psiA, 207 BarA ⁶ SMG870 = 4500 psiG, 310 BarG ⁶							

¹ LCD Display operating temperature -20 °C to +70 °C (-4 °F to 158 °F) . Storage temperature -30 °C to 80 °C (-22 °F to 176 °F).

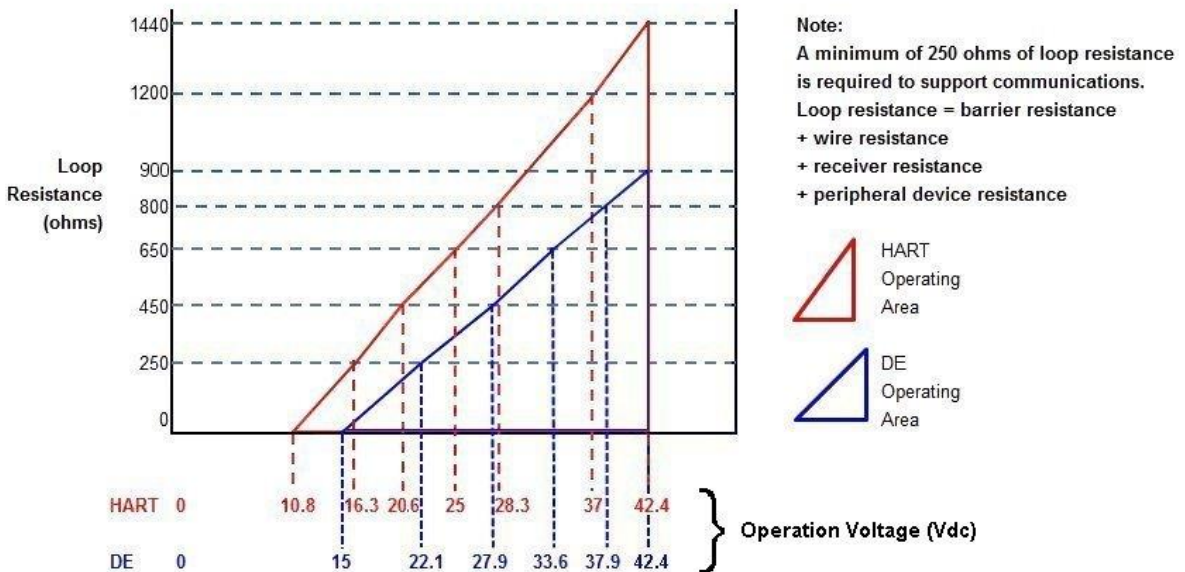
² For CTFE fill fluid, the rating is -15 to 110 °C (5 to 230 °F)

³ Short term equals 2 hours at 70 °C (158°F)

⁴ MAWP applies for temperatures -40 °C to 125 °C (-40 °F to 257 °F). Static Pressure Limit is de-rated to 3,000 psi (207 BarA) for -26°C to -40°C (-14.8 °F to -40 °F). Use of graphite o-rings de-rates transmitter to 3,625 psi. Use of ½" - process adaptors with graphite o-rings de-rates transmitter to 3,000 psi.

⁵ Consult factory for MAWP of SMV 800 transmitters with CRN approval.

⁶ The MAWP is intended as a pressure safety limit. Honeywell does not recommend use above the PV 2 Upper Range Limit.



For DE, $R_{max} = 35 * (\text{Power Supply Voltage} - 15)$
 For HART, $R_{max} = 45.6 * (\text{Power Supply Voltage} - 10.8)$

Figure 2 - Supply voltage and loop resistance chart & calculations (HART/DE Protocols)

Performance Under Rated Conditions – All Models

Parameter	Description									
Analog Output Digital Communications:	Two-wire, 4 to 20 mA (HART & DE Transmitters only) Honeywell DE, HART 7 and Modbus protocol Modbus Model: RS-485 Half duplex communication interface. All transmitters, irrespective of protocol have polarity insensitive connection.									
Output Failure Modes (DE and HART only)	<table border="0"> <tr> <td>Compliance:</td> <td>Honeywell Standard:</td> <td>NAMUR NE 43</td> </tr> <tr> <td>Normal Limits:</td> <td>3.8 – 20.8 mA</td> <td>3.8 – 20.5 mA</td> </tr> <tr> <td>Failure Mode:</td> <td>≤ 3.6 mA and ≥ 21.0 mA</td> <td>≤ 3.6 mA and ≥ 21.0 mA</td> </tr> </table>	Compliance:	Honeywell Standard:	NAMUR NE 43	Normal Limits:	3.8 – 20.8 mA	3.8 – 20.5 mA	Failure Mode:	≤ 3.6 mA and ≥ 21.0 mA	≤ 3.6 mA and ≥ 21.0 mA
Compliance:	Honeywell Standard:	NAMUR NE 43								
Normal Limits:	3.8 – 20.8 mA	3.8 – 20.5 mA								
Failure Mode:	≤ 3.6 mA and ≥ 21.0 mA	≤ 3.6 mA and ≥ 21.0 mA								
Supply Voltage Effect	0.005% span per volt.									
Transmitter Turn on Time (includes power up & test algorithms)	HART, DE and Modbus: 5.0 sec.									
Response Time (DP) (delay + time constant)	DE/HART Analog Output: 144mS Modbus.Turnaround delay time: 0-250 ms (default 50 ms)									
Damping Time Constant	Modbus/HART DP/SP: Adjustable from 0 to 32 seconds in 0.1 increments. Default: 0.50 seconds Modbus/HART Temperature: Damping limit is 0 to 102 Modbus/HART FLOW: Damping limit is 0 to 100 DE DP/SP: 0, 0.16, 0.32, 0.48, 1, 2, 4, 8, 16, 32 seconds. Default: 0.48 seconds DE for Temperature PV: Damping time 0, 0.3, 0.7, 1.5, 3.1, 6.3, 12.7, 25.5, 51.1, 102.3 DE for Flow PV: Damping time 0, 0.50,1, 2, 3, 4, 5 ,10, 50, 100									
Vibration Effect SMA845, SMG870	Less than +/- 0.1% of URL w/o damping Per IEC60770-1 field or pipeline, high vibration level (10-2000Hz: 0.21 displacement/3g max acceleration)									
Electromagnetic Compatibility	EU EMC Directive 2014/30/EU (EN 61326-1)									
Pressure Equipment Directive	EU PED 2014/68 EU									
Isolation	DE/HART: 2000 Vdc (1400Vrms) Galvanic Isolation between inputs and outputs Modbus: 1000 Vdc Galvanic Isolation between Temperature Sensor inputs & RS485 outputs									
Maximum Lead Wire Resistance	Thermocouples: 50 ohms/leg Pt100, Pt200, Pt500 and Pt1000 RTDs: 50 ohms/leg Pt25 RTD: 10 ohms per leg									
Ambient Temperature Effect	Digital Accuracy: For RTD Inputs, 0.0015°C/°C For T/C Inputs: 0.005°C/°C									
Temperature Sensor Burnout	DE/HART: Burnout detection is user selectable. Upscale or down scale with critical status message. For RTD type inputs; broken wire/wires will be indicated. Modbus: Critical status message indication is available.									
Lightning Protection Option	Leakage Current: 10uA max @ 42.4VDC 93C Impulse rating: 8/20uS 5000A (>10 strikes) 10000A (1 strike min.) 10/1000uS 200A (> 300 strikes)									

Materials Specifications

(See model selection guide for availability/restrictions with various models)

Parameter	Description
Barrier Diaphragms Material	316L SS, Hastelloy® C-276 ² , Monel® 400 ³ , Tantalum, Gold-plated 316L SS, Gold-plated Hastelloy® C-276, Gold-plated Monel® 400
Process Head Material	316 SS ⁴ , Carbon Steel (Zinc-plated) ⁵ , Hastelloy C-276 ⁶ , Monel 400 ⁷
Vent/Drain Valves & Plugs ¹	316 SS ⁴ , Hastelloy C-276 ² , Monel 400 ⁷
Head Gaskets	Glass-filled PTFE standard. Viton® and graphite are optional.
Meter Body Bolting	Carbon Steel (Zinc plated) standard. Options include 316 SS, NACE A286 SS bolts, Monel K500, Super Duplex and B7M.
Optional Adapter Flange and Bolts	Adapter Flange materials include 316 SS, Hastelloy C-276 and Monel 400. Bolt material for flanges is dependent on process head bolts material chosen. Standard adaptor o-ring material is glass-filled PTFE. Viton and graphite are optional.
Mounting Bracket	Carbon Steel (Zinc-plated) , 304 Stainless Steel or 316 Stainless Steel
Fill Fluid	Silicone Oil DC200, Silicone Oil 704, NEOBEE® M-20 or CTFE (Chlorotrifluoroethylene).
Electronic Housing	Pure Polyester Powder Coated Low Copper (<0.4%)-Aluminum. Meets Type 4X, IP66, & IP67. All stainless-steel housing is optional.
Mounting	Can be mounted in virtually any position using the standard mounting bracket. Bracket is designed to mount on 2-inch (50 mm) vertical or horizontal pipe. See Figure 4 .
Process Connections	¼"- NPT or ½"- NPT with adapter (meets DIN requirements)
Wiring	Accepts up to 16 AWG (1.5 mm diameter). For RS-485 connection, 24 AWG shielded twisted pair cable with nominal characteristic impedance of 120 ohm is recommended.
Dimensions	See Figure 5 .
Net Weight	8.3 pounds (3.8 Kg). With Aluminum Housing

¹ Vent/Drains are sealed with Teflon®

² Hastelloy C-276 or UNS N10276

³ Monel 400 or UNS N04400

⁴ Supplied as 316 SS or as Grade CF8M, the casting equivalent of 316 SS.

⁵ Carbon Steel heads are zinc-plated and not recommended for water service due to hydrogen migration. For that service, use 316 stainless steel wetted Process Heads.

⁶ Hastelloy C-276 or UNS N10276. Supplied as indicated or as Grade CW12MW, the casting equivalent of Hastelloy C-276

⁷ Monel 400 or UNS N04400. Supplied as indicated or as Grade M30C, the casting equivalent of Monel 400

По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48

Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курган (3522)50-90-47
Курск (4712)77-13-04
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Ноябрьск (3496)41-32-12

Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Пермь (342)205-81-47
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саранск (8342)22-96-24
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35

Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Улан-Удэ (3012)59-97-51
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70

Казахстан +7(7172)727-132

Киргизия +996(312)96-26-47

сайт: www.honeywell.nt-rt.ru || эл. почта: hwn@nt-rt.ru