836P Solid-State Pressure Sensors

Allen-Bradley

Compact, Cost-Effective and Ready for The Connected Enterprise

Features and Benefits

Display Model

- Pressure range: -1…551 bar (-14.5 to 8,000 psi)
- Embedded IO-Link communication protocol helps minimize downtime and increase productivity
- Available in various process connections to fit your application needs
- Flush mount option for viscous media
- Rotatable housing (320°) and head (330°) provide application flexibility
- IP67 enclosure rating

Flush Mount and Hygenic/Sanitary Models

- Pressure range: -1…0 bar (-14.5 to 300 psi)
- Available with a 1.5" and 2" Tri-clamp® process connection (sanitary model only)
- 3-A® compliance

Non-Display Model

- Tough, miniature form factor – one of the smallest on the market
- Available in various process connections to fit your application needs
- -1…689 bar (-30 in. Hg to 10,000 psi)
- IP67 enclosure rating

What is IO-Link?

IO-Link is a worldwide open-standard protocol that allows sensors to easily integrate into The Connected Enterprise. Benefits of IO-Link technology include:

- Reduced inventory and operating costs
- Increased uptime/productivity
- Simplified design, installation, setup and maintenance

1732 ArmorBlock®
IO-Link Master

IO-Link

Standard, Display model

Flush Mount model

Hygenic/Sanitary model

Non-Display model

Rockwell Automation knows condition sensing controls are vital components in today's control systems. High-accuracy, new technology and rigid standards are combined to manufacture these reliable world-class products. Capable of measuring pressure of liquid or gases, the new Allen-Bradley® Solid-State 836P Pressure Sensors are available in display and non-display models in rugged, compact housings with corrosion-resistant 316L solid-state sensor elements. The display model features embedded IO-Link 1.1 communications protocol, which allows for easy integration with The Connected Enterprise while delivering data directly into a control system in a very cost-efficient and easy-to-use manner when connected to an IO-Link Master and EtherNet/IP.™ For easy on-machine programming, it can be configured manually as well as through the Studio 5000 Logix Designer® software.

With a rotatable housing (320°) and head (330°), the flexible 836P display model accommodates the most space-critical applications. And for even greater adjustability, the large visual display can be rotated 180°. Additional features include pressure ranges from -1…551 bar (-14.5 psi to 8,000 psi), tactile push buttons for easy setup and an IP67 enclosure rating. These sensors have dual PNP or one PNP + one 4…20 mA output configurations and are in gauge, absolute and vacuum pressure measurement types with a large selection of process connections.

Flush mount and sanitary models are available to meet hygienic standards for the food and beverage, cosmetic and pharmaceutical industries.

The 836P non-display model offers a wide pressure range from -1…689 bar (-30 in. Hg to 10,000 psi) and has one of the the smallest footprints on the market, making it ideal for applications with limited mounting space. Non-display models have 4…20 mA analog outputs and an IP67 enclosure rating.

Allen-Bradley • Rockwell Software

Rockwell Automation

836P IO-Link Version 1.1

- IO-Link is a worldwide open-standard peer-to-peer serial communication protocol (IEC 61131-9) that allows sensors and actuators to easily integrate into The Connected Enterprise.
- The IO-Link-enabled 836P sensor – when connected to an IO-Link master – shares device identity, parameters, real-time diagnostics and process data with the control system to optimize machine setup, maintenance and troubleshooting.
- By combining simple implemenation with powerful data and diagnostics, IO-Link sensors provide simplified integration and seamless visibility of your processes to increase uptime and productivity.

IO-Link Master

836P IO-Link Benefits

- **Teaching the sensor** can be accomplished with IO-Link via the Add-On-Profile through Studio 5000 Logix Designer software or by using the tactile pushbuttons on the sensor.
- **Pressure information** in PSI eliminates the need to scale the pressure data on the PLC and saves commissioning time.
- **Application-specific name**s help the user quickly locate the sensor on the machine.
- **Locking options** are available to lock local settings when operating in IO-Link mode, and therefore any user changes will not change the settings of the sensor.

Comparison Chart

Features/ Product Family	Sensor Model			Pressure Range Bar (psi)			Process Connection					Pressure Type			Output Type			Connection Style
	Standard	Flush Mount	Sanitary	-1 to 20 (-14.5 to 300)	0 to 550 (0 to 8,000)	0 to 689 (0 to 10,000)	NPT (male/female)	G BSPP (male/female)	SAE (male)	GB Flush Mount	1.5" and 2" Tri-clamp	Vaccuum	Absoulute	Gauge	2 x PNP, IO -Link	1 x PNP + 1 x Analog (4...20 mA), IO-Link	Analog (4...20 mA)	4 Pin DC Micro (M12) Integral QD
Diameter: 38 mm (1.5 in.) / 92 mm (3.6 in.) (approx.)	✓			✓	✓		✓	✓	✓			✓	✓	✓	✓	✓		✓
Diameter: 38 mm (1.5 in.) / 102 mm (4.0 in.) (approx.)		✓		✓	✓					✓		✓	✓	✓	✓	✓		✓
120 mm (4.7 in.) (approx.) / Diameter: 51 mm (2.0 in.)			✓	✓							✓	✓	✓	✓	✓	✓		✓
Diameter: 29 mm (1.1 in.) / 33 mm (1.3 in.) (approx.)	✓			✓	✓	✓	✓	✓	✓			✓	✓	✓			✓	✓

Product Selection

836P- Display Model

Pressure Range Bar (psi) [1]	Pressure Type	Process Connection [1]	Output Type	Catalog No.
-1…1 (-14.5…14.5)	Gauge *	1/4" NPT female	2 x PNP	836P-D1NFGA14PP-D4 🔄
			1 x PNP + 1 analog (4…20 mA)	836P-D1NFGA14PA-D4 🔄
-1…10 (-14.5…145)		1/4" NPT female	1 x PNP + 1 analog (4…20 mA)	836P-D1NFGB14PA-D4 🔄
		1/4" NPT male	1 x PNP + 1 analog (4…20 mA)	836P-D1NMGB14PA-D4 🔄
		G 1/4" BSPP male	1 x PNP + 1 analog (4…20 mA)	836P-D1GMGB14PA-D4 🔄
0…1 (0…14.5)		1/4" NPT female	2 x PNP	836P-D2NFGA14PP-D4 🔄
			1 x PNP + 1 analog (4…20 mA)	836P-D2NFGA14PA-D4 🔄
0…2.5 (0…36.2)		1/4" NPT female	2 x PNP	836P-D2NFGA36PP-D4 🔄
			1 x PNP + 1 analog (4…20 mA)	836P-D2NFGA36PA-D4 🔄
0…25 (0…362)		1/4" NPT female	2 x PNP	836P-D2NFGB36PP-D4 🔄
			1 x PNP + 1 analog (4…20 mA)	836P-D2NFGB36PA-D4 🔄
		1/4" NPT male	1 x PNP + 1 analog (4…20 mA)	836P-D2NMGB36PA-D4 🔄
		G 1/4" BSPP female	1 x PNP + 1 analog (4…20 mA)	836P-D2GFGB36PA-D4 🔄
			2 x PNP	836P-D2GFGB36PP-D4 🔄
0…100 (0…1450)		1/4" NPT female	2 x PNP	836P-D2NFGC14PP-D4 🔄
			1 x PNP + 1 analog (4…20 mA)	836P-D2NFGC14PA-D4 🔄
0…248 (0…3600)		1/4" NPT female	2 x PNP	836P-D2NFGC36PP-D4 🔄
			1 x PNP + 1 analog (4…20 mA)	836P-D2NFGC36PA-D4 🔄
0…400 (0…5800)		1/4" NPT female	2 x PNP	836P-D2NFGC58PP-D4 🔄
			1 x PNP + 1 analog (4…20 mA)	836P-D2NFGC58PA-D4 🔄
		SAE 7/16-20 UNF female	2 x PNP	836P-D2SFGC58PP-D4 🔄

836PF Flush Mount Model

Pressure Range Bar (psi) [1]	Pressure Type	Process Connection [1]	Output Type	Catalog No.
-1…6.89 (-14.5 to 100)	Gauge *	GB	2 x PNP	836PF-D1GBGB10PP-D4 🔄
-1…20.68 (-14.5 to 300)			2 x PNP	836PF-D1GBGB30PP-D4 🔄
			1 x PNP + 1 analog (4…20 mA)	836PF-D1GBGB30PA-D4 🔄
0…4.13 (0 to 60)			2 x PNP	836PF-D2GBGA60PP-D4 🔄
			1 x PNP + 1 analog (4…20 mA)	836PF-D2GBGA60PA-D4 🔄
0…6.89 (0 to 100)			2 x PNP	836PF-D2GBGB10PP-D4 🔄
0…20.68 (0 to 300)			2 x PNP	836PF-D2GBGB30PP-D4 🔄
0…34.47 (0 to 500)			2 x PNP	836PF-D2GBGB50PP-D4 🔄
0…137.89 (0 to 2000)			2 x PNP	836PF-D2GBGC20PP-D4 🔄
0…551.58 (0 to 8000)			2 x PNP	836PF-D2GBGC80PP-D4 🔄

836PH Sanitary Model

Pressure Range Bar (psi) [1]	Pressure Type	Process Connection [1]	Output Type	Catalog No.
-1…6.89 (-14.5 to 100)	Gauge *	1.5" Sanitary Tri-clamp	1 x PNP + 1 analog (4…20 mA)	836PH-D1T1GB10PA-D4 🔄
-1…20.68 (-14.5 to 300)			1 x PNP + 1 analog (4…20 mA)	836PH-D1T1GB30PA-D4 🔄
0…6.89 (0 to 100)			1 x PNP + 1 analog (4…20 mA)	836PH-D2T1GB10PA-D4 🔄
0…20.68 (0 to 300)			1 x PNP + 1 analog (4…20 mA)	836PH-D2T1GB30PA-D4 🔄
-1…6.89 (-14.5 to 100)		2" Sanitary Tri-clamp	1 x PNP + 1 analog (4…20 mA)	836PH-D1T2GB10PA-D4 🔄
-1…20.68 (-14.5 to 300)			1 x PNP + 1 analog (4…20 mA)	836PH-D1T2GB30PA-D4 🔄
0…6.89 (0 to 100)			1 x PNP + 1 analog (4…20 mA)	836PH-D2T2GB10PA-D4 🔄
0…20.68 (0 to 300)			1 x PNP + 1 analog (4…20 mA)	836PH-D2T2GB30PA-D4 🔄

🔄 IO-Link enabled

* Absolute pressure models also available

[1] Additional pressure ranges and process connections are available and can be configured on our website

Product Selection

836P- Non-Display Model					
	Pressure Range Bar (psi) [1]	Pressure Type	Process Connection [1]	Output Type	Catalog No.
	-1.01…10 (-30 in. Hg…145)	Gauge *	1/4" NPT male	Analog (4…20mA)	836P-N3NMGB14A-D4
			1/4" NPT female		836P-N3NFGB14A-D4
	0…1 (0…14.5)		1/4" NPT male		836P-N2NMGA14A-D4
	0…2 (0…30)		1/4" NPT male		836P-N2NMGA30A-D4
			1/4" NPT female		836P-N2NFGA30A-D4
	0…6.89 (0…100)		1/4" NPT male		836P-N2NMGB10A-D4
			1/4" NPT female		836P-N2NFGB10A-D4
	0…10 (0…145)		1/4" NPT male		836P-N2NMGB14A-D4
			1/4" NPT female		836P-N2NFGB14A-D4
	0…34 (0…500)		1/4" NPT male		836P-N2NMGB50A-D4
	0…68 (0…1000)		1/4" NPT male		836P-N2NMGC10A-D4
	0…206 (0…3000)		1/4" NPT male		836P-N2NMGC30A-D4
	0…344 (0…5000)		1/4" NPT male		836P-N2NMGC50A-D4

* Absolute pressure models also available
[1] Additional pressure ranges and process connections are available and can be configured on our website

836P- Pressure Sensor Accessories

Description	Catalog No.
DC Micro (M12) QD cordset, straight, 4-pin, 2 m (6.5 ft)	889D-F4AC-2
DC Micro (M12) QD cordset, right angle, 4-pin, 2 m (6.5 ft)	889D-R4AC-2
IO-Link Master Module for POINT I/O™	1734-4IOL
ArmorBlock IP67 IO-Link Master	1732E-8IOLM12R

Typical Applications

Skids	Balers	Filter Press Machines	Wastewater

CIP Machines	Hydraulic Power Units	Automotive	Tank Level Detection

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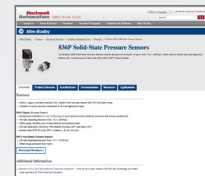www.rockwellautomation.com/go/lit/ce

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