



### Features & Benefits

- User selectable measurement range with BACnet MS/TP or ModBus output
- IP65 Housing
- High overpressure
- 4 Field selectable ranges to cover many applications per transmitter
- MAC address set via DIP switch
- Automatically assigns device instance
- Automatic Baud rate detection (or manually via DIP switch)

### Technical Overview

The PA-6P-2-COM differential pressure transmitter is ideal for measuring filter conditions, as well as many other applications in ventilation/air conditioning systems in buildings, laboratory's and clean rooms (air and non-corrosive gases).

Featuring field-selectable output types and 4 pressure ranges, which are easily defined by user selection switches inside the rugged IP65 housing.

Along with these features the MEMS-based thermo-anemometer on a monolithic silicon chip, combined with CMOS circuitry which provides on-chip-integrated analogue-only compensation and conditioning electronics

### Product Codes

**PA-6P-2 -COM** Air DP transmitter with multi selectable ranges,  
ModBus / BACnet output  
0 -50Pa, 0 -100Pa, 0 -300Pa, 0 -500Pa

Suffixes (add to above part code)

**-LCD** Integral LCD display

#### Accessories

**DFK** Duct fixing kit

**TEE** Tee piece air pressure (pack of 10)

**PA-TUBE-8MM** PVC tube 8mm o/d x 1.5mm wall, 30m reel

A 'duct fixing kit' is supplied with the PA-6P-x, consisting of 2m of 6mm ID plastic tubing, 2 x pitot tubes and 4 x fixing screws.

### Specification

Power supply	24Vac/dc $\pm 10\%$
Power consumption	1VA
Measurement ranges	See Part Code
RS-485 (EIA-485)	Protocol selectable via DIP switch
BACnet MS/TP	6k6, 19k2, 38k4, 76k8 or auto baud detection
Modbus RTU	9k6, 19k2, 38k4 or 57k6 baud rate 8 data bits, no parity, 2 stop bits
DP Resolution	0.2% fs
Pressure non-linearity	0-20% fs = $\pm 2\%$ 20-100% = $\pm 5\%$
Overall accuracy	$\pm 3\%$ fs, 0-70°C
Long term stability	Max $\pm 5\%$ fs
Burst pressure	>5bar
Sensitivity shift over temp	$\pm 15\%$ fs, 5-50°C
Pressure connections	6mm ID tubing
Housing:	
Material	PC/GF (Halogen free, flame retardant & UV stabilized)
Dimensions	125 x 105 x 85mm
Environmental:	
Housing:	-30 to 60°C 0 to 95% non-condensing
Media:	0 to 40°C
Protection	IP65
Country of origin	UK



Please Note:

Current versions are NOT loop powered and will require a common 0V connection.

#### WEEE Directive:



At the end of the products useful life please dispose as per the local regulations.  
Do not dispose of with normal household waste.  
Do not burn.



The products referred to in this data sheet meet the requirements of EU Directive 2014/30/EU

### Installation



Antistatic precautions must be observed when handling these sensors. The PCB contains circuitry that can be damaged by static discharge.

1. If the sensor is to be mounted outside, it is recommended that the unit be mounted with the cable entry at the bottom. If the cable is fed from above then into the cable gland at the bottom, it is recommended that a rain loop be placed in the cable before entry into the sensor.
2. In a suitable location, drill two holes at 92mm  $\varnothing$  and fix the housing with appropriate screws.
3. Release the snap-fit lid by gently squeezing the locking tab and feed the cable through the waterproof gland & terminate the cores at the terminal block. Leaving some slack inside the unit, tighten the cable gland onto the cable to ensure water tightness.
4. Select the pressure range, baud rate, communication mode, pressure range, output type and MAC address according to the tables
5. Ensure the tubing is cut square and push the pressure tubing firmly over the barb and thread of the pressure ports on the unit. Ensure that the Hi and Lo ports have been correctly identified. The ports can be identified by markings on the pcb inside the lid of the transmitter.
6. Power the unit with either 24Vac/dc depending output signal type and after a stabilising period of 2-3 minutes functionality checks can be made. Snap shut the lid after the connections have been made.
7. It is recommended that screened cable be used and that the screen should be earthed at the controller only. Care should be taken not to lay control signal wiring in close proximity to power or other cables which may produce significant electromagnetic noise.



### CAUTION

The PA-6P-2-COM will be damaged if subjected to excessive pressure. Do NOT test the unit by blowing into the inlet ports.

### Connections

	<b>Current output:</b>	<b>Voltage output:</b>
• Terminal 1-GND	0V (common)	0V (common)
• Terminal 2-24V	24Vdc $\pm 10\%$	24Vac/dc $\pm 10\%$
• Terminal 3-PRESS.OUT	4-20mA / 0-20mA output signal	0-10Vdc/2-10Vdc output signal

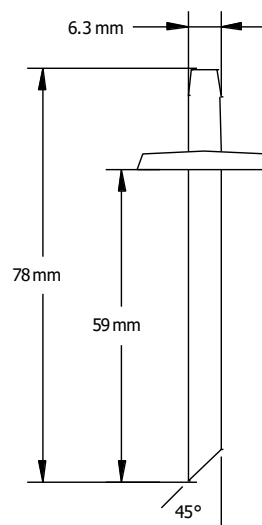
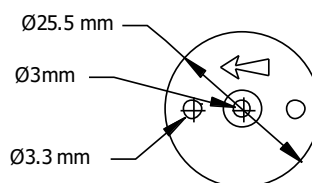
### Network Connections :

- B-
- A+

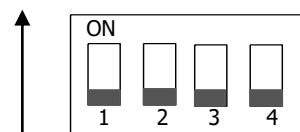
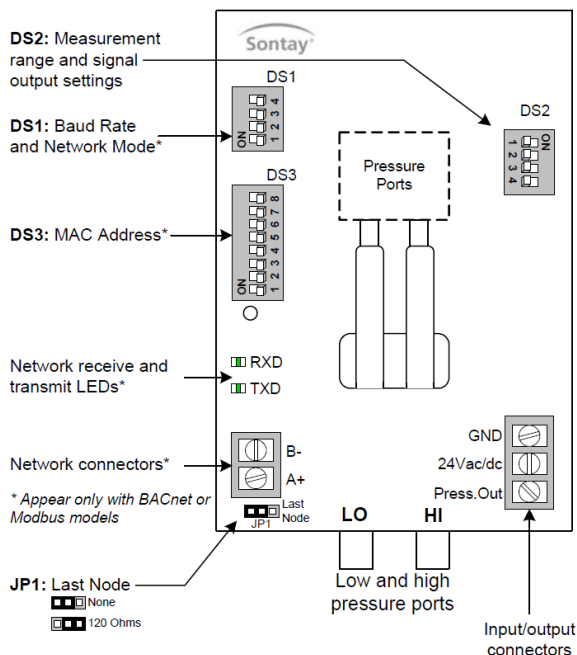
### Duct Fixing Kit

A 'duct fixing kit' is supplied with the PA-6P-2-COM, consisting of 2m of 5mm i/d plastic tubing, 2 x pitot tubes and 4 x fixing screws.

Pitot tube dimensions;



## PCB Layout & DIP-Switch Settings



**Note,** the shaded part is the raised section of the dip-switch

### DS1 (Baud Rate)

DIP switch DS1 determines the baud rate and communication mode

Baud Rate	1	2	3
9600	OFF*	OFF*	OFF*
19200	ON	OFF	OFF
38400	OFF	ON	OFF
BACnet = 76800	ON	ON	OFF
Modbus = 57600	ON	ON	OFF
Auto			ON

\* default setting

### DS4 (ModBus)

Mode	4
BACnet	OFF*
Modbus	ON

ModBus only	1	2
8 bits, no parity, 2 stop bits	OFF*	OFF*
8 bits, odd parity, 1 stop bits	OFF	ON
8 bits, even parity, 1 stop bits	ON	OFF
8 bits, no parity, 2 stop bits	ON	ON

### DS2 (Output & Range)

DIP switch DS2 determines the signal output type and the measurement range

	Dip-Switch	
	1	2
0-10Vdc	OFF*	OFF*
2-10Vdc	ON	OFF
0-20mA	OFF	ON
4-20mA	ON	ON

\* default setting

	Dip-Switch	
	3	4
0-50Pa	ON*	ON*
0-100Pa	ON	OFF
0-300Pa	OFF	ON
0-500Pa	OFF	OFF

### DS3 (MAC Address)

DIP switch DS2 determines the MAC address, each switch represents a binary value when switched ON

	1	2	3	4	5	6	7	8
MAC Address	1	2	4	8	16	32	64	128

\* All switches OFF by default

Address	DS1.1	DS1.2	DS1.3	DS1.4	DS1.5	DS1.6	DS1.7	DS1.8
0	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
19	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
20	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
21	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
22	OFF	ON	ON	OFF	ON	OFF	OFF	OFF
23	ON	ON	ON	OFF	ON	OFF	OFF	OFF
24	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
25	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
26	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
27	ON	ON	OFF	ON	ON	OFF	OFF	OFF
28	OFF	OFF	ON	ON	ON	OFF	OFF	OFF
29	ON	OFF	ON	ON	ON	OFF	OFF	OFF
30	OFF	ON	ON	ON	ON	OFF	OFF	OFF
31	ON	ON	ON	ON	ON	OFF	OFF	OFF
32	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
33	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF
34	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
35	ON	ON	OFF	OFF	OFF	ON	OFF	OFF
36	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF
37	ON	OFF	ON	OFF	OFF	ON	OFF	OFF
38	OFF	ON	ON	OFF	OFF	ON	OFF	OFF
39	ON	ON	ON	OFF	OFF	ON	OFF	OFF
40	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
41	ON	OFF	OFF	ON	OFF	ON	OFF	OFF
42	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
43	ON	ON	OFF	ON	OFF	ON	OFF	OFF
44	OFF	OFF	ON	ON	OFF	ON	OFF	OFF
45	ON	OFF	ON	ON	OFF	ON	OFF	OFF
46	OFF	ON	ON	ON	OFF	ON	OFF	OFF
47	ON	ON	ON	ON	OFF	ON	OFF	OFF
48	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
49	ON	OFF	OFF	OFF	ON	ON	OFF	OFF
50	OFF	ON	OFF	OFF	ON	ON	OFF	OFF
51	ON	ON	OFF	OFF	ON	ON	OFF	OFF
52	OFF	OFF	ON	OFF	ON	ON	OFF	OFF
53	ON	OFF	ON	OFF	ON	ON	OFF	OFF
54	OFF	ON	ON	OFF	ON	ON	OFF	OFF
55	ON	ON	ON	ON	OFF	ON	OFF	OFF
56	OFF	OFF	OFF	ON	ON	ON	OFF	OFF
57	ON	OFF	OFF	ON	ON	ON	OFF	OFF
58	OFF	ON	OFF	ON	ON	ON	OFF	OFF
59	ON	ON	OFF	ON	ON	ON	OFF	OFF
60	OFF	OFF	ON	ON	ON	ON	OFF	OFF
61	ON	OFF	ON	ON	ON	ON	OFF	OFF
62	OFF	ON	ON	ON	ON	ON	OFF	OFF
63	ON	ON	ON	ON	ON	ON	OFF	OFF

Address	DS1.1	DS1.2	DS1.3	DS1.4	DS1.5	DS1.6	DS1.7	DS1.8
128	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
129	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON
130	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON
131	ON	ON	OFF	OFF	OFF	OFF	OFF	ON
132	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON
133	ON	OFF	ON	OFF	OFF	OFF	OFF	ON
134	OFF	ON	ON	OFF	OFF	OFF	OFF	ON
135	ON	ON	ON	OFF	OFF	OFF	OFF	ON
136	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
137	ON	OFF	OFF	ON	OFF	OFF	OFF	ON
138	OFF	ON	OFF	ON	OFF	OFF	OFF	ON
139	ON	ON	OFF	ON	OFF	OFF	OFF	ON
140	OFF	OFF	ON	ON	OFF	OFF	OFF	ON
141	ON	OFF	ON	ON	OFF	OFF	OFF	ON
142	OFF	ON	ON	ON	OFF	OFF	OFF	ON
143	ON	ON	ON	ON	OFF	OFF	OFF	ON
144	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON
145	ON	OFF	OFF	OFF	ON	OFF	OFF	ON
146	OFF	ON	OFF	OFF	ON	OFF	OFF	ON
147	ON	ON	OFF	OFF	ON	OFF	OFF	ON
148	OFF	OFF	ON	OFF	ON	OFF	OFF	ON
149	ON	OFF	ON	OFF	ON	OFF	OFF	ON
150	OFF	ON	ON	OFF	ON	OFF	OFF	ON
151	ON	ON	ON	OFF	ON	OFF	OFF	ON
152	OFF	OFF	OFF	ON	ON	OFF	OFF	ON
153	ON	OFF	OFF	ON	ON	OFF	OFF	ON
154	OFF	ON	OFF	ON	ON	OFF	OFF	ON
155	ON	ON	OFF	ON	ON	OFF	OFF	ON
156	OFF	OFF	ON	ON	ON	OFF	OFF	ON
157	ON	OFF	ON	ON	ON	OFF	OFF	ON
158	OFF	ON	ON	ON	ON	OFF	OFF	ON
159	ON	ON	ON	ON	ON	OFF	OFF	ON
160	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON
161	ON	OFF	OFF	OFF	OFF	ON	OFF	ON
162	OFF	ON	OFF	OFF	OFF	ON	OFF	ON
163	ON	ON	OFF	OFF	OFF	ON	OFF	ON
164	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
165	ON	OFF	ON	OFF	OFF	ON	OFF	ON
166	OFF	ON	ON	OFF	OFF	ON	OFF	ON
167	ON	ON	ON	OFF	OFF	ON	OFF	ON
168	OFF	OFF	OFF	ON	OFF	ON	OFF	ON
169	ON	OFF	OFF	ON	OFF	ON	OFF	ON
170	OFF	ON	OFF	ON	OFF	ON	OFF	ON
171	ON	ON	OFF	ON	OFF	ON	OFF	ON
172	OFF	OFF	ON	ON	OFF	ON	OFF	ON
173	ON	OFF	ON	ON	OFF	ON	OFF	ON
174	OFF	ON	ON	ON	OFF	ON	OFF	ON
175	ON	ON	ON	ON	OFF	ON	OFF	ON
176	OFF	OFF	OFF	OFF	ON	ON	OFF	ON
177	ON	OFF	OFF	OFF	ON	ON	OFF	ON
178	OFF	ON	OFF	OFF	ON	ON	OFF	ON
179	ON	ON	OFF	OFF	ON	ON	OFF	ON
180	OFF	OFF	ON	OFF	ON	ON	OFF	ON
181	ON	OFF	ON	OFF	ON	ON	OFF	ON
182	OFF	ON	ON	OFF	ON	ON	OFF	ON
183	ON	ON	ON	OFF	ON	ON	OFF	ON
184	OFF	OFF	OFF	ON	ON	ON	OFF	ON
185	ON	OFF	OFF	ON	ON	ON	OFF	ON
186	OFF	ON	OFF	ON	ON	ON	OFF	ON
187	ON	ON	OFF	ON	ON	ON	OFF	ON
188	OFF	OFF	ON	ON	ON	ON	OFF	ON
189	ON	OFF	ON	ON	ON	ON	OFF	ON
190	OFF	ON	ON	ON	ON	ON	OFF	ON
191	ON	ON	ON	ON	ON	ON	OFF	ON

Address	DS1.1	DS1.2	DS1.3	DS1.4	DS1.5	DS1.6	DS1.7	DS1.8
64	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF
65	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF
66	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
67	ON	ON	OFF	OFF	OFF	OFF	ON	OFF
68	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF
69	ON	OFF	ON	OFF	OFF	OFF	ON	OFF
70	OFF	ON	ON	OFF	OFF	OFF	ON	OFF
71	ON	ON	ON	OFF	OFF	OFF	ON	OFF
72	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF
73	ON	OFF	OFF	ON	OFF	OFF	ON	OFF
74	OFF	ON	OFF	ON	OFF	OFF	ON	OFF
75	ON	ON	OFF	ON	OFF	OFF	ON	OFF
76	OFF	OFF	ON	ON	OFF	OFF	ON	OFF
77	ON	OFF	ON	ON	OFF	OFF	ON	OFF
78	OFF	ON	ON	ON	OFF	OFF	ON	OFF
79	ON	ON	ON	ON	OFF	OFF	ON	OFF
80	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
81	ON	OFF	OFF	OFF	ON	OFF	ON	OFF
82	OFF	ON	OFF	OFF	ON	OFF	ON	OFF
83	ON	ON	OFF	OFF	ON	OFF	ON	OFF
84	OFF	OFF	ON	OFF	ON	OFF	ON	OFF
85	ON	OFF	ON	OFF	ON	OFF	ON	OFF
86	OFF	ON	ON	OFF	ON	OFF	ON	OFF
87	ON	ON	ON	OFF	ON	OFF	ON	OFF
88	OFF	OFF	OFF	ON	ON	OFF	ON	OFF
89	ON	OFF	OFF	ON	ON	OFF	ON	OFF
90	OFF	ON	OFF	ON	ON	OFF	ON	OFF
91	ON	ON	OFF	ON	ON	OFF	ON	OFF
92	OFF	OFF	ON	ON	ON	OFF	ON	OFF
93	ON	OFF	ON	ON	ON	OFF	ON	OFF
94	OFF	ON	ON	ON	ON	OFF	ON	OFF
95	ON	ON	ON	ON	ON	OFF	ON	OFF
96	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF
97	ON	OFF	OFF	OFF	OFF	ON	ON	OFF
98	OFF	ON	OFF	OFF	OFF	ON	ON	OFF
99	ON	ON	OFF	OFF	OFF	ON	ON	OFF
100	OFF	OFF	ON	OFF	OFF	ON	ON	OFF
101	ON	OFF	ON	OFF	OFF	ON	ON	OFF
102	OFF	ON	ON	OFF	OFF	ON	ON	OFF
103	ON	ON	ON	OFF	OFF	ON	ON	OFF
104	OFF	OFF	OFF	ON	OFF	ON	ON	OFF
105	ON	OFF	OFF	ON	OFF	ON	ON	OFF
106	OFF	ON	OFF	ON	OFF	ON	ON	OFF
107	ON	ON	OFF	ON	OFF	ON	ON	OFF
108	OFF	OFF	ON	ON	OFF	ON	ON	OFF
109	ON	OFF	ON	ON	OFF	ON	ON	OFF
110	OFF	ON	ON	ON	OFF	ON	ON	OFF
111	ON	ON	ON	ON	OFF	ON	ON	OFF
112	OFF	OFF	OFF	OFF	ON	ON	ON	OFF
113	ON	OFF	OFF	OFF	ON	ON	ON	OFF
114	OFF	ON	OFF	OFF	ON	ON	ON	OFF
115	ON	ON	OFF	OFF	ON	ON	ON	OFF
116	OFF	OFF	ON	OFF	ON	ON	ON	OFF
117	ON	OFF	ON	OFF	ON	ON	ON	OFF
118	OFF	ON	ON	OFF	ON	ON	ON	OFF
119	ON	ON	ON	OFF	ON	ON	ON	OFF
120	OFF	OFF	OFF	ON	ON	ON	ON	OFF
121	ON	OFF	OFF	ON	ON	ON	ON	OFF
122	OFF	ON	OFF	ON	ON	ON	ON	OFF
123	ON	ON	OFF	ON	ON	ON	ON	OFF
124	OFF	OFF	ON	ON	ON	ON	ON	OFF
125	ON	OFF	ON	ON	ON	ON	ON	OFF
126	OFF	ON	ON	ON	ON	ON	ON	OFF
127	ON	ON	ON	ON	ON	ON	ON	OFF

Address	DS1.1	DS1.2	DS1.3	DS1.4	DS1.5	DS1.6	DS1.7	DS1.8
192	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON
193	ON	OFF	OFF	OFF	OFF	OFF	ON	ON
194	OFF	ON	OFF	OFF	OFF	OFF	ON	ON
195	ON	ON	OFF	OFF	OFF	OFF	ON	ON
196	OFF	OFF	ON	OFF	OFF	OFF	ON	ON
197	ON	OFF	ON	OFF	OFF	OFF	ON	ON
198	OFF	ON	ON	OFF	OFF	OFF	ON	ON
199	ON	ON	ON	OFF	OFF	OFF	ON	ON
200	OFF	OFF	OFF	ON	OFF	OFF	ON	ON
201	ON	OFF	OFF	ON	OFF	OFF	ON	ON
202	OFF	ON	OFF	ON	OFF	OFF	ON	ON
203	ON	ON	OFF	ON	OFF	OFF	ON	ON
204	OFF	OFF	ON	ON	OFF	OFF	ON	ON
205	ON	OFF	ON	ON	OFF	OFF	ON	ON
206	OFF	ON	ON	ON	OFF	OFF	ON	ON
207	ON	ON	ON	ON	OFF	OFF	ON	ON
208	OFF	OFF	OFF	OFF	ON	OFF	ON	ON
209	ON	OFF	OFF	OFF	ON	OFF	ON	ON
210	OFF	ON	OFF	OFF	ON	OFF	ON	ON
211	ON	ON	OFF	OFF	ON	OFF	ON	ON
212	OFF	OFF	ON	OFF	ON	OFF	ON	ON
213	ON	OFF	ON	OFF	ON	OFF	ON	ON
214	OFF	ON	ON	OFF	ON	OFF	ON	ON
215	ON	ON	ON	OFF	ON	OFF	ON	ON
216	OFF	OFF	OFF	ON	ON	OFF	ON	ON
217	ON	OFF	OFF	ON	ON	OFF	ON	ON
218	OFF	ON	OFF	ON	ON	OFF	ON	ON
219	ON	ON	OFF	ON	ON	OFF	ON	ON
220	OFF	OFF	ON	ON	ON	OFF	ON	ON
221	ON	OFF	ON	ON	ON	OFF	ON	ON
222	OFF	ON	ON	ON	ON	OFF	ON	ON
223	ON	ON	ON	ON	ON	OFF	ON	ON
224	OFF	OFF	OFF	OFF	OFF	ON	ON	ON
225	ON	OFF	OFF	OFF	OFF	ON	ON	ON
226	OFF	ON	OFF	OFF	OFF	ON	ON	ON
227	ON	ON	OFF	OFF	OFF	ON	ON	ON
228	OFF	OFF	ON	OFF	OFF	ON	ON	ON
229	ON	OFF	ON	OFF	OFF	ON	ON	ON
230	OFF	ON	ON	OFF	OFF	ON	ON	ON
231	ON	ON	ON	OFF	OFF	ON	ON	ON
232	OFF	OFF	OFF	ON	OFF	ON	ON	ON
233	ON	OFF	OFF	ON	OFF	ON	ON	ON
234	OFF	ON	OFF	ON	OFF	ON	ON	ON
235	ON	ON	OFF	ON	OFF	ON	ON	ON
236	OFF	OFF	ON	ON	OFF	ON	ON	ON
237	ON	OFF	ON	ON	OFF	ON	ON	ON
238	OFF	ON	ON	ON	OFF	ON	ON	ON
239	ON	ON	ON	ON	OFF	ON	ON	ON
240	OFF	OFF	OFF	OFF	ON	ON	ON	ON
241	ON	OFF	OFF	OFF	ON	ON	ON	ON
242	OFF	ON	OFF	OFF	ON	ON	ON	ON
243	ON	ON	OFF	OFF	ON	ON	ON	ON
244	OFF	OFF	ON	OFF	ON	ON	ON	ON
245	ON	OFF	ON	OFF	ON	ON	ON	ON
246	OFF	ON	ON	OFF	ON	ON	ON	ON
247	ON	ON	ON	OFF	ON	ON	ON	ON
248	OFF	OFF	OFF	ON	ON	ON	ON	ON
249	ON	OFF	OFF	ON	ON	ON	ON	ON
250	OFF	ON	OFF	ON	ON	ON	ON	ON
251	ON	ON	OFF	ON	ON	ON	ON	ON
252	OFF	OFF	ON	ON	ON	ON	ON	ON
253	ON	OFF	ON	ON	ON	ON	ON	ON
254	OFF	ON	ON	ON	ON	ON	ON	ON
255	ON	ON	ON	ON	ON	ON	ON	ON

## BACnet Device Object

Property	Value	R/W
Object_Identifier	Programmable where the Instance part of the Object_Identifier is in the range of 0-4194302. The device Instance must be unique system-wide.	R
Object_Name	Programmable up to 32 characters. The device name must be unique system-wide. The default value is Model_Name	R
Object_Type	Device	R
System_Status	Always OPERATIONAL (0)	R
Vendor_Identifier	662	R
Vendor_Name	Sontay	R
Model_Name	SPDB-020-S04	R
Firmware_Revision	currently, 2.01(07)	R
Application_Software_Version	currently, 2.01(08)	R
Protocol_Version	Always 1	R
Protocol_Revision	Always 14	R
DataBase_Revision	2	R
Max_APDU_Length_Accepted	491	R
Segmentation_Supported	(3) - No Segmentation	R
APDU_Timeout	60,000	R
Number_of_APDU_Retries	Always 0	R
Protocol_Services_Supported	Always 0x00, 0x0B, 0xC0, 0x0D, 0x6D (a bitstring in BACnet order) WriteProperty, readProperty WritePropertyMultiple, readPropertyMultiple DeviceCommunicationControl Who-Is, who-Has	R
Protocol_Object_Types_Supported	Always 0x20, 0x84, 0x0D (a bitstring in BACnet order) Analog-value, multi-state Input	R
Object_List	Per the standard. Because of restrictions on the size of the transmit buffers, the entire Object_List cannot be returned at once, rather the Object_List must be read, one-at-a-time.	R
Device_Address_Binding	Always empty	R
Max_Master	Programmable in the range of 1-127 (Default value=127)	RW
Max_Info_Frames	Always 1	R

## BACnet Objects

ID	Name	Description	R/W	Notes
AV-1	FeedbackOutput	Actual feedback output value	R	0-10000 mV or 0-20mA, Resolution 1 mV or 0.002mA
AV-2	ReadingPa	Actual pressure range in Pa	R	0-2500 Pa, Resolution 0.1 Pa
AV-3	Reading(InchWC)	Actual pressure range in "Wc	R	0-10 "Wc, Resolution 0.001 "Wc
AV-4	PressureScale	Sensor pressure scale/range	R	1" = 25, 50, 150, or 250 Pa 2" = 50, 100, 300 or 500 Pa 5" = 125, 250, 750 or 1250 Pa 10" = 250, 500, 1500 or 2500 Pa
MSI-1	FeedbackConfig	Signal output range	R	1 = 4-20 mA 2 = 0-20 mA 3 = 2-10 Vdc 4 = 0-10 Vdc

## Modbus Registers

Register number	Register Address	Name	Data Type	MSB/LSB		Units	R/W
40001	40000	MSB - Product Type Constant / LSB - MAC Address	2 x u8	0x13 (19)	[1..255]		RW
40002	40001	Serial # (1st and 2nd digit)	2 x char	char1	char2		R
40003	40002	Serial # (3rd and 4th digit)	2 x char	char3	char4		R
40004	40003	Serial # (5th and 6th digit)	2 x char	char5	char6		R
40005	40004	Serial # (7th and 8th digit)	2 x char	char7	char8		R
40006	40005	Application Software Version (1st and 2nd digit)	2 x char	char1	char2		R
40007	40006	Application Software Version (3rd and 4th digit)	2 x char	char3	char4		R
40008	40007	Firmware Revision (1st and 2nd digit)	2 x char	char1	char2		R
40009	40008	Firmware Revision (3rd and 4th digit)	2 x char	char3	char4		R
40010	40009	Sens or Pressure Scale	u16	[0..65535]		Pa	R
40011	40010	Feedback Configuration	enum	[1..4]	1 - 4-20mA		R
					2 - 0-20mA		
					3 - 2-10Vdc		
					4 - 0-10Vdc		
40012	40011	Network Communication	enum	[0..3]	0 - Lost		R
					1 - Bad		
					2 - Good		
					3 - Very Good		
40013	40012	Pressure Reading (Pascal)	u16	[0..25000]		Pa x 10	R
40014	40013	Pressure Reading (Inch WC)	u16	[0..10000]		Inch WC * 1000	R
Future Use							
40015	40014	Raw Reading Value	u16	[-32768..32767]		Raw ADC	R
40016	40015	Feedback Output	u16	[0..10000]		mV	R
40017	40016	Backlight Duty	u16	[0..10000]		%*100	RW
40018	40017	LCD Contrast	u16	[0..99]		%	RW

Whilst every effort has been made to ensure the accuracy of this specification, Sontay cannot accept responsibility for damage, injury, loss or expense from errors or omissions. In the interest of technical improvement, this specification may be altered without notice.