Pressure Sensor RS485-Modbus RTU Output

- USER GUIDE FOR PRESSURE SENSOR RS485-MODBUS RTU OUTPUT

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JUN-2020

This document is applied for the following products

1. Pressure Sensor RS485-Modbus RTU Output



RS485-PPS-H1.PNG

2. Specification

Sensing Technology	Advanced PIEZO/Capacitance technology
Measuring range	Select from -1 .. + 35 bar Gage/Absolute/Sealed Gage
Over pressure protection	1.5 x Span
Accuracy	0.5% of span
Stability	< 0.3% span/year

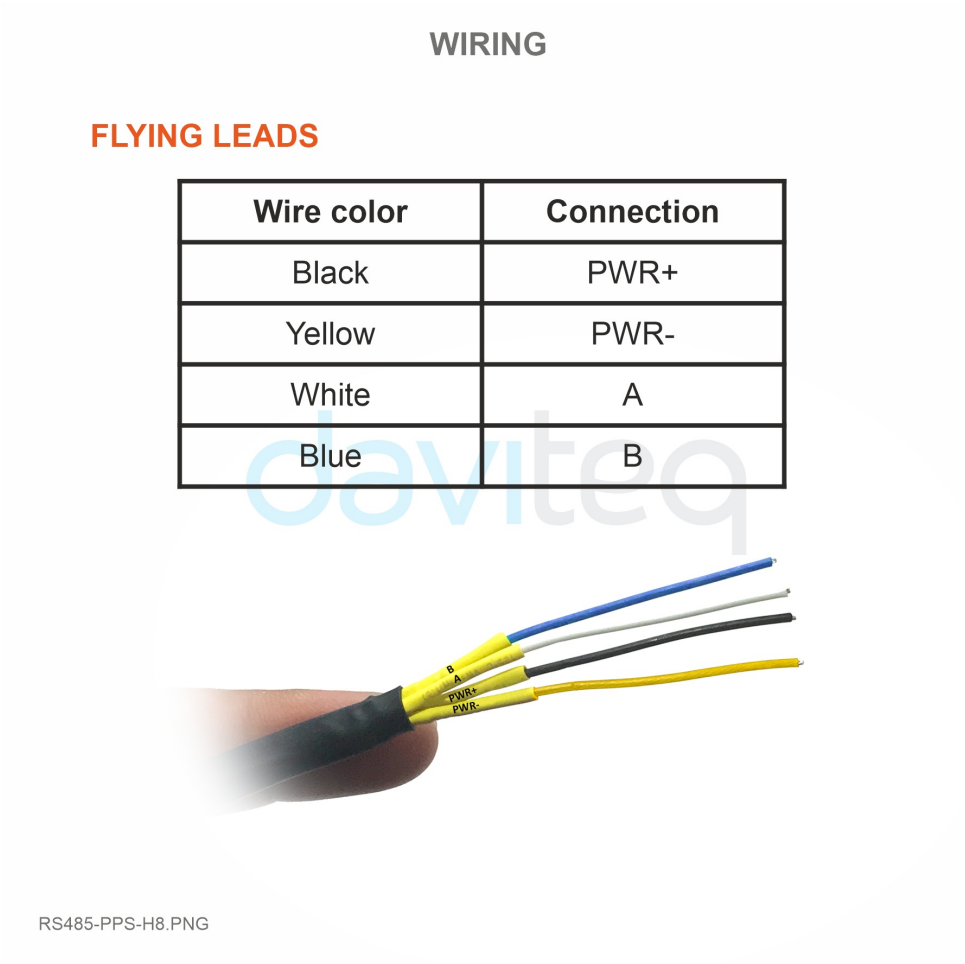
Wetted parts	304SS/316SS
Measuring Fluids	Any fluid which is workable with materials 304SS/316SS
Working temperature	-10 .. + 80 oC
Process connection	Standard G1/4 or Others (consult factory)
RS485 output	Default address: 1, baudrate: 9600, parity: none, data: 8 bit, stop bit: 1
Power supply	9..36VDC
Consumption	5mA @ 12VDC supply

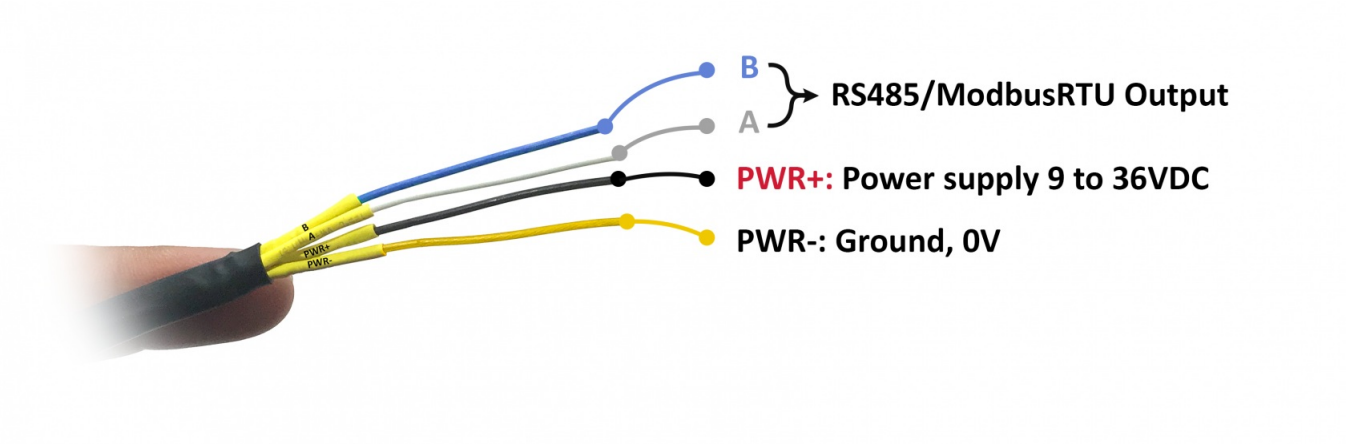
3. Product Pictures



4. Wiring

Please wiring as shown below:





Memmap resgisters:

Modbus Register (Decimal)	Modbus Register (Hex)	Function Code (Read)	Function Code (Write)	# of Registers	Range	Default	Format	Property	Comment
0	0	3		2			string	Read	
2	2	3		4			string	Read	
6	6	3		2			string	Read	

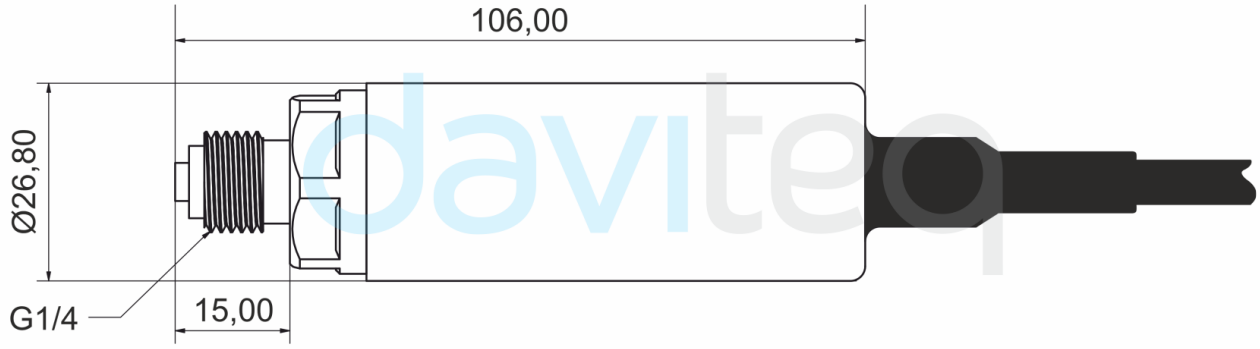
8	8	3		1	10, 30, 60, 99		uint16	Read	Battery level, only 04 levels: 10%, 30%, 60% and 99% (full). When 10% ==> should replace the battery
9	9	3		2	0..100%		float	Read	Value from pressure process sensor. This value is parameter 1 of a wireless sensor node
11	B	3		1			uint16	Read	Hi-Byte is error code, Lo-Byte is sensor type
12	C	3		2			float	Read	Value from pressure process sensor. This value is parameter 2 of a wireless sensor node
14	E	3		1			uint8	Read	Hi-Byte is Logic status of parameter 1, Lo-Byte is Logic status of parameter 2
15	F	3		2			uint32	Read	Total time when Hi-Byte of Logic status = 1
17	11	3		2			uint32	Read	Total time when Hi-Byte of Logic status = 0
19	13	3		2			uint32	Read	Counter value when Hi-Byte of Logic status changes from 0 to 1
21	15	3		2			uint32	Read	Counter value when Hi-Byte of Logic status changes from 1 to 0
23	17	3		2			uint32	Read	Total time when Lo-Byte of Logic status = 1
25	19	3		2			uint32	Read	Total time when Lo-Byte of Logic status = 0
27	1B	3		2			uint32	Read	Counter value when Lo-Byte of Logic status changes from 0 to 1
29	1D	3		2			uint32	Read	Counter value when Lo-Byte of Logic status changes from 1 to 0
256	100	3	16	1	1-247	1	uint16	Read/Write	Modbus address of device
257	101	3	16	1	0-1	0	uint16	Read/Write	Baudrate: 0: 9600, 1: 19200
258	102	3	16	1	0-2	0	uint16	Read/Write	Parity: 0: none, 1: odd, 2: even

259	103	3	16	21					
280	118	3	16	2		1	float	Read/Write	Scale value of parameter_1 = (a1 * Raw sensor value of parameter_1) + b1. For sensor value scale
282	11A	3	16	2		0	float	Read/Write	Scale value of parameter_1 = (a1 * Raw sensor value of parameter_1) + b1. For sensor value scale
284	11C	3	16	2		1	float	Read/Write	Scale value of parameter_2 = (a2 * Raw sensor value of parameter_2) + b2. For sensor value scale
286	11E	3	16	2		0	float	Read/Write	Scale value of parameter_2 = (a2 * Raw sensor value of parameter_2) + b2. For sensor value scale
288	120	3	16	2			float	Read/Write	
290	122	3	16	2			float	Read/Write	High threshold value for parameter 1
292	124	3	16	2			float	Read/Write	Low threshold value for parameter 1
294	126	3	16	2			float	Read/Write	High threshold value for parameter 2
296	128	3	16	2			float	Read/Write	Low threshold value for parameter 2

5. Dimensions

DIMENSION DRAWINGS

Unit(mm)



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6. Applications

PRESSURE SENSOR RS485-MODBUS RTU OUTPUT
RS485-PPS

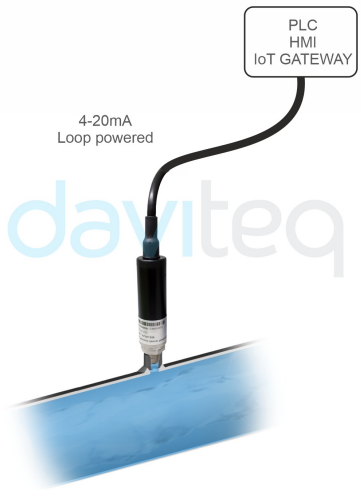


GAUGE PRESSURE
ABSOLUTE PRESSURE

RANGE	: -1 .. + 35 BARG
OVER PRESSURE	: 1.5X
ACCURACY	: 0.5% OF SPAN
WORKING TEMPERATURE	: -10 .. +80 oC

RS485-PPS-H1.PNG

PRESSURE MEASUREMENT IN WATER PIPE ...



RS485-PPS-H2.PNG

CONNECT WITH IoT GATEWAY



RS485-PPS-H3.PNG

CONNECT WITH WIRELESS TRANSMITTER



RS485-PPS-H4.PNG

7. Support contacts

Manufacturer
Daviteq Technologies Inc

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