

## App Note: PD865 Snooper & Keller Acculevel

**Application:** Read Modbus RTU signal from Acculevel pressure sensor using the PD865 Modbus Snooper Meter

P/N: 0507.01202.020172.13  
Range: 0 - 5 PSIG  
Output: 4-20 mA  
Supply: 10 – 28 VDC  
Modbus RTU communications

### Acculevel Wiring

Black: +Vcc    White: Out/GND  
Blue: RS485A    Yellow: RS485B  
DRAIN/SHIELD

### PD865 to Acculevel Connections

PD865		Acculevel
P+	+24 VDC	Black
P-	Return	White
D+	Data +	Blue
D-	Data -	Yellow
G	Ground	NC or GND
NC	No conn.	SHIELD

### PD865 #1 Setup

Mode: Master  
Function: 03  
PV Number: 2 (number of PVs)  
Slave Id: 001 (device Modbus address to read)  
Reg. Number PV1: 40003 (Pressure)  
Reg. Number PV2: 40009 (Temperature)  
Data Type: Float  
Byte Order: 1234  
Poll Time: 1.0 sec  
Response Timeout: 5.0 sec  
Baud: 9600  
Parity: None  
Stop Bits: 1  
Byte-to-Byte Timeout: 0.01

### Master Display Programming

Display decimal point: ddddd.d  
Float decimal point: dd.dddd  
Input 1: -19.9999      Display 1: -19999.9  
Input 2: 99.9999      Display 2: 99999.9

### PD865 #2 Setup

Mode: Snooper  
Function: 03  
Slave Id: 001 (device Modbus address to read)  
Reg. Number: 40009 (Temperature)  
Data Type: Float  
Byte Order: 1234  
Poll Time: 12.0 sec  
Response Timeout: 5.0 sec  
Baud: 9600  
Parity: None  
Stop Bits: 1  
Byte-to-Byte Timeout: 0.01

### Snooper Display Programming

Display decimal point: ddddd.d  
Float decimal point: ddddd.d  
Input 1: -19999.9      Display 1: -19999.9  
Input 2: 99999.9      Display 2: 99999.9

### Operation

The Acculevel transmitter is setup to provide the pressure output in bars with 4 decimal places of resolution and the temperature in degrees Celsius with 0.1 degree resolution.

The PD865 Master is setup to request the data stored in registers 40003 (pressure) and 40009 the temperature (temperature). The PD865 Master displays the pressure in mbar with 0.1 resolution and the PD865 Snooper displays the temperature in degrees Celsius with 0.1 degree resolution.

The scaling of the PD865 can be changed to display these parameters in any engineering units. For example the pressure can be converted to level or volume by the PD865.

Multiple PD865 in Snooper mode can be connected on the RS485 bus to display the data in different formats or the same data format in another location.