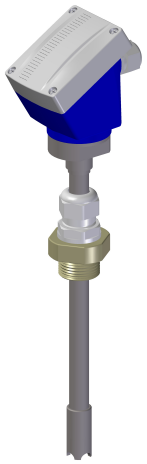
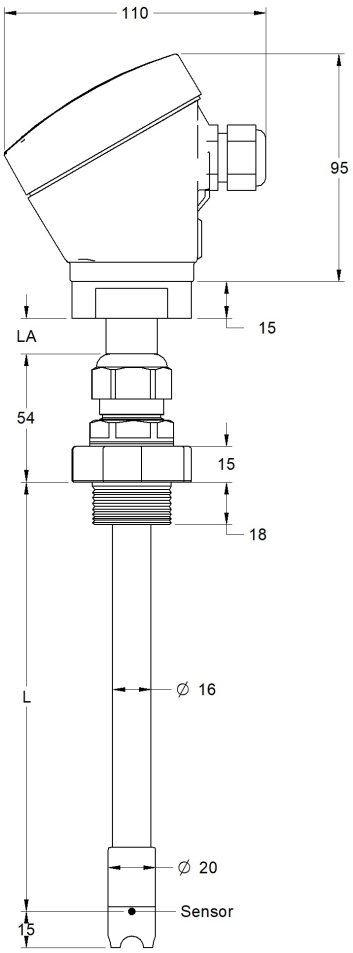
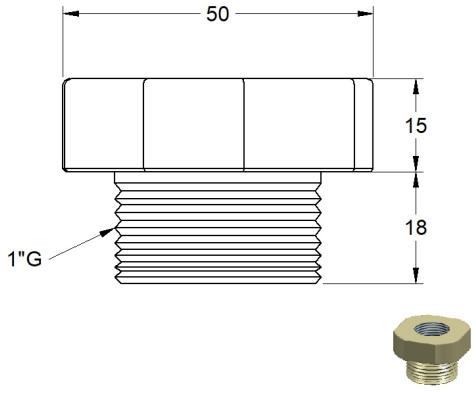
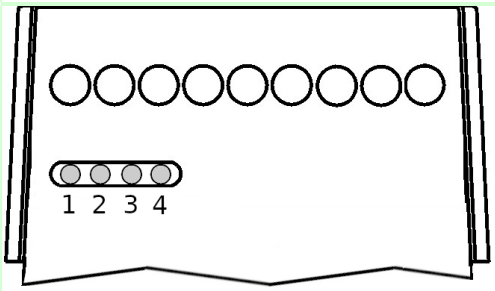
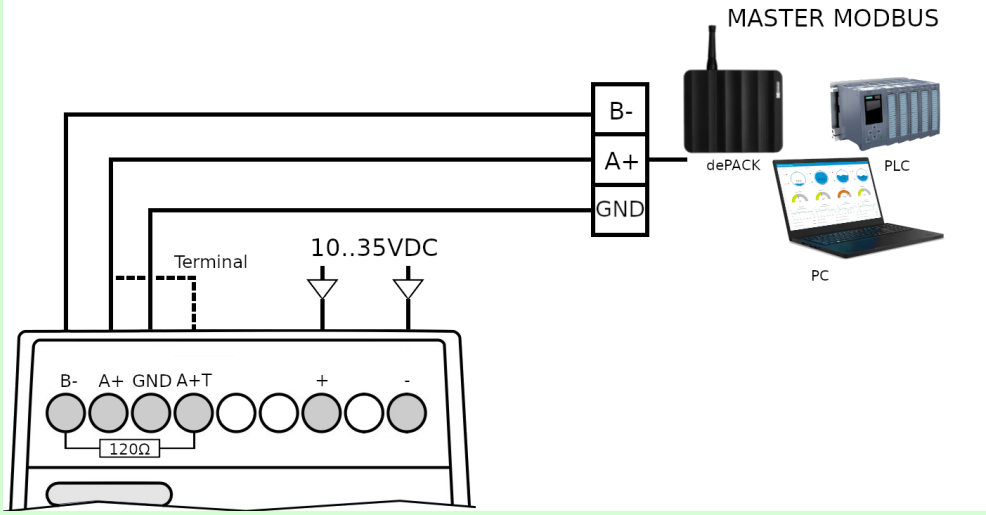
TPB 80 TAB

Low pressure transducer



Functionality	
Description	Transducer that allows real-time monitoring of the level of a tank/bottle/drum and the temperature of the medium to be controlled.
Operating principle	The measured pressure corresponds to that exerted by the column of liquid on the air that remains captive in the lower part of the body of the probe.
Application	
	- Level control in drums and barrels - Equipment for chemical laboratories - Equipment for agriculture (sulfatadora, ...) - Diesel tanks - Laundries, car washes - Cage deposits, IBC (works, provisional, ...) - Recycling processes - Control of mother tanks
Electrical data	
Power supply	10..35 VDC
Consumption	< 5mA
Technical data	
Measuring range	Depending on model: - 0-500 mm.w.p. - 0-1500 mm.w.p.
Temperature	-10 .. +60 ºC
Refresh time	100 ms by default, modifiable via Modbus.
Reading error (Height)	- Model of 500 mm.c.a.: +/-1.25% at scale found <=> 12.5 mm - Model of 1500 mm.c.a.: +/-1% at scale found <=> 30 mm
Reading error (Temperature)	2ºC
Mechanical data	
Material	PVC
Maximum pre-break pressure	10 psi (7,031 mwp)
Protection	IP67
Serial interface	
Type	RS-485 three threads (A+/S GND/ B-) (RX/GND/TX)
Default vale	9600 bps, 8, N, 1
Adjust mode	
	Plug & Play: No adjustment required. The equipment is configured at the factory.
Maintenance	
	If the transducer gives erroneous readings it may be because the sensor has gotten wet at the reading point. In this case, allow it to air dry without applying pressurized air.

Installation	
	- Use twisted and shielded cable for the RS485 connection. - The sensor detects very low pressures, you must pay attention not to touch or block the sensor hole with your fingers, or any other material. - While in contact with the liquid to be measured, keep the equipment vertical, avoiding wetting the sensor hole.
Dimensions	
	
L	Measure length
LA	Adjustable length
	The 15 mm between the sensor and the bottom of the probe are not considered for level measurement.
Process connection	
	

Leds	
	
Led 1	LED Power: - Green: Correct supply voltage, with correct connection to the sensor. - Red: Correct supply voltage, without connection to the sensor. - Blue: Lights up when the height of the level increases by more than 1% every 100ms (Default refresh time, as factory value, editable via Modbus). This data will be valid to verify the correct operation of the equipment, when it is introduced into the tank/bottle.
Led 2	LED Rx/Tx: - Red: Data reception via RS485 - Green: Data transmission via RS485
Led 3	LED 500 mm: - Green: Illuminates when the measured height exceeds 500 mm
Led 4	LED 1500mm: - Green: Illuminates when the measured height exceeds 1500 mm
Connection examples	
	
Termination	If the device is the last or only one on the bus, the "A+" and "A+T" pins must be bridged as shown in the example, since in this way a 120 Ohm resistor is connected as a termination.
Order code	
	TPB 80 TAB PVC 735 P06 L??? ST Where ??? can be 500 or 1500 depending on the model chosen

MODBUS TABLE

Set up

Magnitude	Register	Bytes No	Function	Remarks
Peripheral Nr.	0x00	2	3, 6, 16 (0x10)	1..255
Comm parameters	0x01	2	3, 6, 16 (0x10)	(See table)
ID_Manufacturer	0x02	4	3	Manufacturer code
ID_ProductCode	0x04	8	3	ERP code
ID_Verify	0x08	2	3	
HW_Version	0x09	2	3	
SW_Version	0x0A	2	3	
MODEL_Serie	0x0B	4	3	
SERIAL_Number	0x0D	6	3	Serial no.
Refresh	0x10	2	3, 6	Refresh
TAG	0x12	16	3, 6, 16 (0x10)	<= 16 char.
Reference	0x1A	50	3	<= 50 char.

Communication parameters

Command	bps	Bits	Parity	StopBit
0	9600	8	E	1
1	19200	8	E	1
2	9600	8	N	2
3	19200	8	N	2
4	9600	8	N	1
5	19200	8	N	1

Data

Magnitude	Register	Bytes No	Function	Remarks
Temperature	0x00	4	4	ºC (IEEE754)
Pressure	0x02	4	4	mm.w.p. (IEEE754)

Related products

dePACK

dePACK has RS-485 communication with which to extract all the necessary information from the TPB. They also have the capacity to store, process and monitor data. The equipment has a programming environment for the automation and management of the system.

Connection