

# Data Sheet

## PS1C

### Pressure Display and Switch Device



## Main Features

|                       |                                               |
|-----------------------|-----------------------------------------------|
| Displayed Value Range | -14.5 to 6000 with 27 Selectable Value Ranges |
| Power Supply          | 24 VDC                                        |
| Electrical Connection | M12 Female, 4 pin Output: M12 Male, 4 Pin     |
| Digital Output        | PNP or NPN, NO/NC Programmable                |
| Output Signal         | 4 - 20 mA                                     |
| Degree of Protection  | IP65, IP67, and IP69K                         |
| Operating Temperature | -20°C to +70°C                                |

## Description

Are you looking for an easy way to read and control pressure data when the conduit is hidden from view?

Kavlico Pressure Sensors has the answer to your needs – PS1C, the simple switch with display that can be linked to a separate pressure sensor, such as Kavlico’s PTE5000, P1E and P1A delivering a clear view of accurate pressure information even if the conduit runs in a hard to access location.

The Installation of the PS1C display and switch device is simple. It can be mounted away from the pressure sensor, using a quick-fix bracket to attach to a horizontal or vertical plane or pipe. The device can alternatively be installed directly on the pressure transmitter via the M12 connector. In addition, the body of the switch can be rotated by 360° for easy adjustment of the viewing angle.

## Benefits

### Easy to mount

- Flexible mounting options: remotely with an electrical jumper or directly on the pressure transmitter
- Quick fix brackets, for vertical (1) or horizontal (2) placement, or attachment to a pipe
- Rotating body

### Easy to set up

- Fast and intuitive configuration of just three parameters: display range, set point, reset point
- Adjustment screws compatible with standard screwdrivers

### Easy to maintain

- Display status tested at each device start up and confirmed by display light up
- Convenient replacement without interrupting the pressure in the system



1



2

#### Perfect fit for...



PTE5000



PTA5000



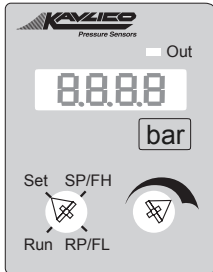
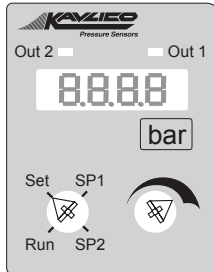
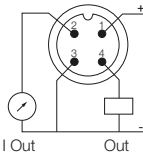
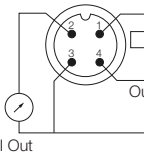
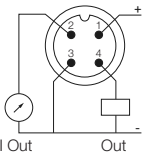
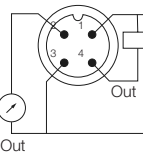
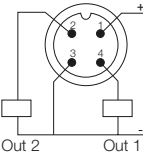
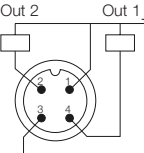
P1E



P1A

# Main Characteristics

## Output Configuration

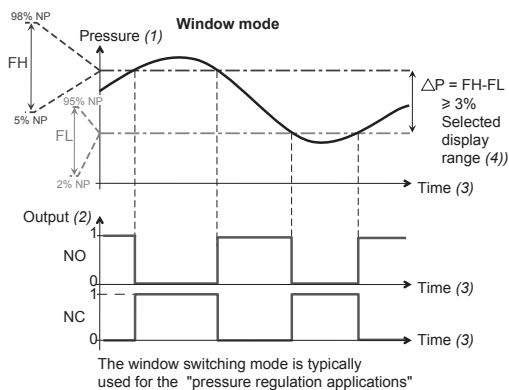
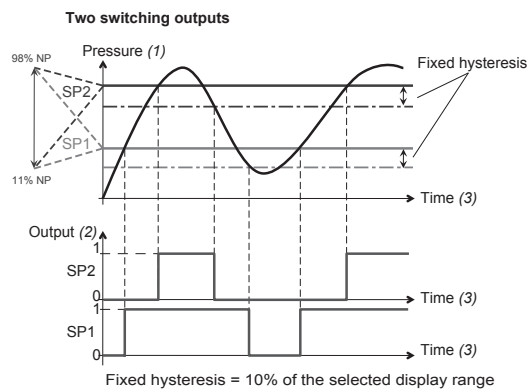
| Reference                                            | PS1C-5000-1                                                                        | PS1C-5000-2                                                                        | PS1C-5000-3                                                                        | PS1C-5000-4                                                                         | PS1C-5000-5                                                                          | PS1C-5000-6                                                                          |
|------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Front face caption                                   |   |                                                                                    |                                                                                    |                                                                                     |   |                                                                                      |
| Analogue output                                      | 4...20 mA                                                                          | 4...20 mA                                                                          | 4...20 mA                                                                          | 4...20 mA                                                                           | No / Non                                                                             | No / Non                                                                             |
| Switching output                                     | PNP                                                                                | NPN                                                                                | PNP                                                                                | NPN                                                                                 | 2 x PNP                                                                              | 2 x NPN                                                                              |
| Switching mode                                       | Hysteresis                                                                         | Hysteresis                                                                         | Window                                                                             | Window                                                                              | Hysteresis                                                                           | Hysteresis                                                                           |
| Connector wiring                                     |  |  |  |  |  |  |
| Power supply                                         | c 24 Vdc SELV or PELV(*) power supply, operating range from 17 to 33 Vdc           |                                                                                    |                                                                                    |                                                                                     |                                                                                      |                                                                                      |
| Current consumption                                  | ≤ 50mA                                                                             |                                                                                    |                                                                                    |                                                                                     |                                                                                      |                                                                                      |
| Switching outputs                                    | Switching capacity                                                                 |                                                                                    | ≤ 200 mA with short-circuit<br>& overload protection                               |                                                                                     |                                                                                      |                                                                                      |
|                                                      | Voltage drop                                                                       |                                                                                    | ≤ 2V                                                                               |                                                                                     |                                                                                      |                                                                                      |
| Analogue output                                      | 4...20 mA: load: ≤ 500 Ω (24V)<br>≤ 200 Ω (17V)                                    |                                                                                    |                                                                                    |                                                                                     |                                                                                      |                                                                                      |
| Operating temperature range                          | -25 to +70 °C ( -13 to +158 °F)                                                    |                                                                                    |                                                                                    |                                                                                     |                                                                                      |                                                                                      |
| Degree of protection                                 | IP65, IP67 conforming to EN/IEC 60529<br>IP69K conforming to DIN 40050             |                                                                                    |                                                                                    |                                                                                     |                                                                                      |                                                                                      |
| Overall accuracy (analogue, digital output, display) | < 1% of the selected display range                                                 |                                                                                    |                                                                                    |                                                                                     |                                                                                      |                                                                                      |
| Response time                                        | ≤ 5 ms                                                                             |                                                                                    |                                                                                    |                                                                                     |                                                                                      |                                                                                      |

(\*) SELV: Safety extra low voltage /  
PELV: Protected extra low voltage

Electrical equipment should be installed, operated and maintained only by qualified personnel. No responsibility is assumed by Kavlico Pressure Sensors for any consequences arising out of the use of this material.

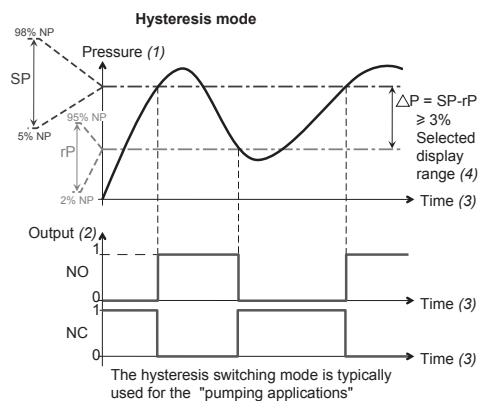
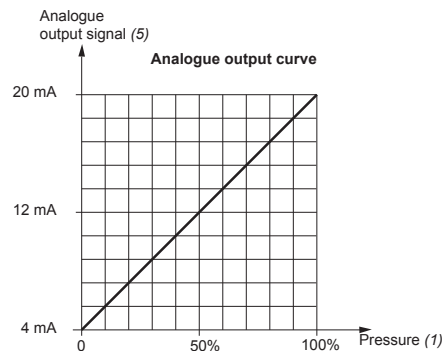
## Output Description

### Switching output

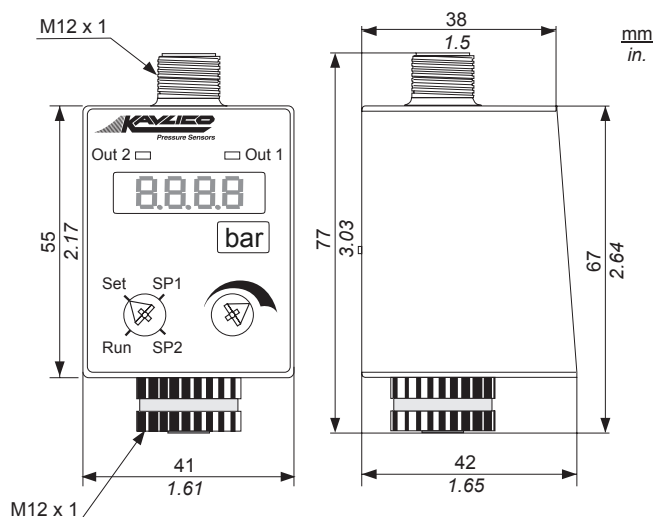


### Analogue output

The 4-20mA analogue output is strictly the image of the pressure transmitter output signal

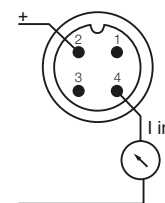


## Dimensions and Tightening Torques



## Wiring Diagram

Input M12 4-pin female connector



## Caution

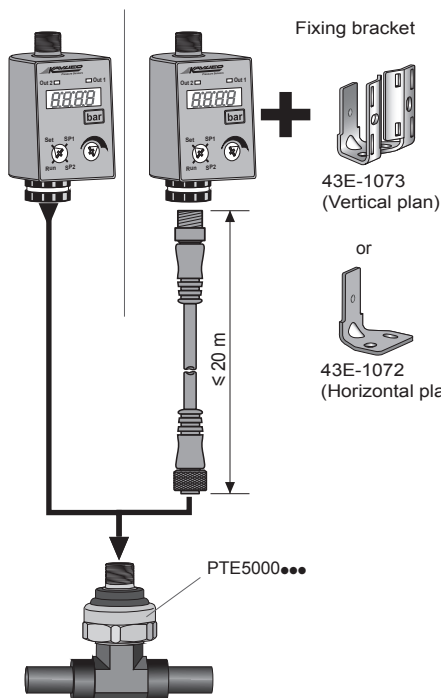


### UNINTENDED EQUIPMENT OPERATION

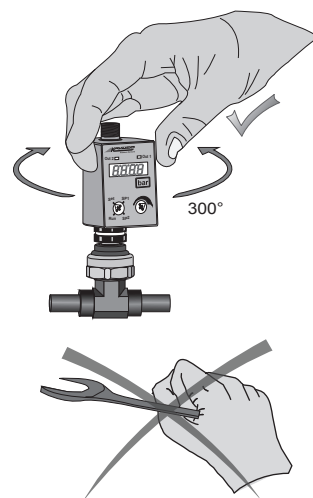
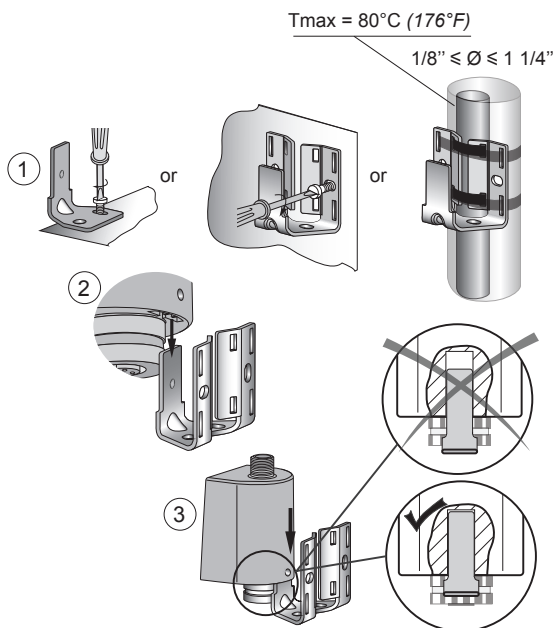
- Only connect a 4-20mA pressure transmitter, directly or thanks to M12-M12 4-pin electrical jumper.
- Make sure the pressure transmitter pin out and analogue signal is compatible with PS1C if it is not a Kavlico one.

**Failure to follow these instructions can result injury or equipment damage.**

## Mounting Possibility



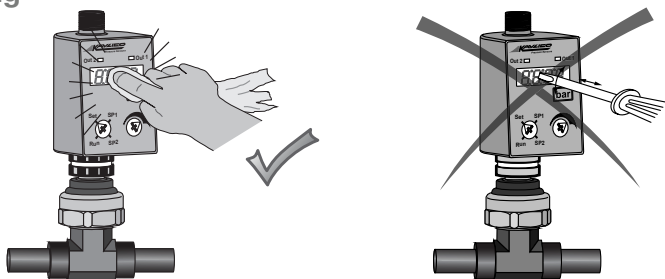
## Usage Precautions



## Maintenance

At each power on, all the display segments are simultaneously lit up briefly. This allows the operator to check that all segments are well operating.

### Cleaning



## How to Order

| Output 1                | Output 2                  | Switching mode        |             |
|-------------------------|---------------------------|-----------------------|-------------|
| -                       | -                         | Hysteresis            | Windows     |
| 4... 20 mA              | PNP                       | PS1C-5000-1           | PS1C-5000-2 |
| 4... 20 mA              | NPN                       | PS1C-5000-3           | PS1C-5000-4 |
| PNP                     | PNP                       | PS1C-5000-5           | -           |
| NPN                     | NPN                       | PS1C-5000-6           | -           |
| Vertical surface fixing | Horizontal surface fixing | M12 Jumper cable 1.5m |             |
| 43E-1073                | 43E-1072                  | 12E-1027              |             |



Before installation and operation, ensure that the appropriate pressure sensor has been selected in terms of pressure range, design and specific measuring conditions. Non-compliance can result in serious injury and/or damage to the equipment.

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