



**DC DYNAMIC<sup>TM</sup>**  
Process Equipment

pH/ORP Transmitter  
**SmartSense PH-1002-AD-P**

## Core Features of SmartSense Transmitters

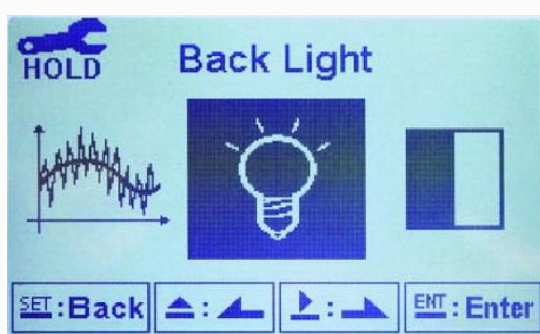
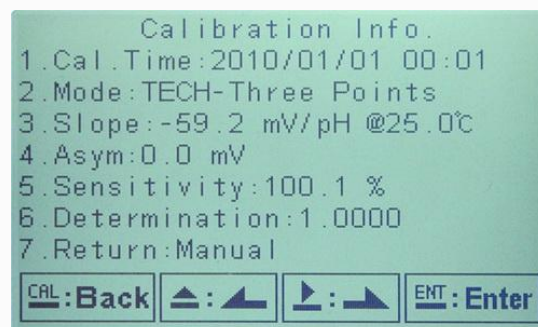


### Waterproof protection

Provides the instrument safety with IP65 waterproof protection and front flap cover design for easy installation and wiring.

### Dot-Matrix LCD

For convenience and better process safety, it reveals the last calibration records and a system setting overview

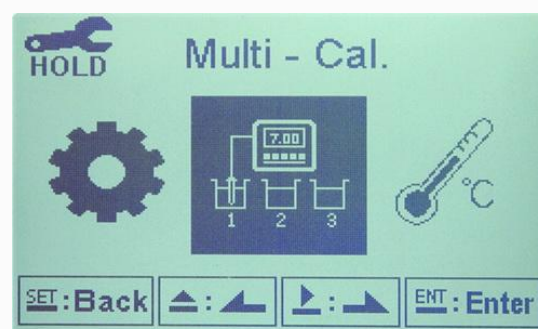


### Auto-Sense Backlight Display

For clear reading and energy saving, it turns on the backlight automatically when the environment becomes dark.

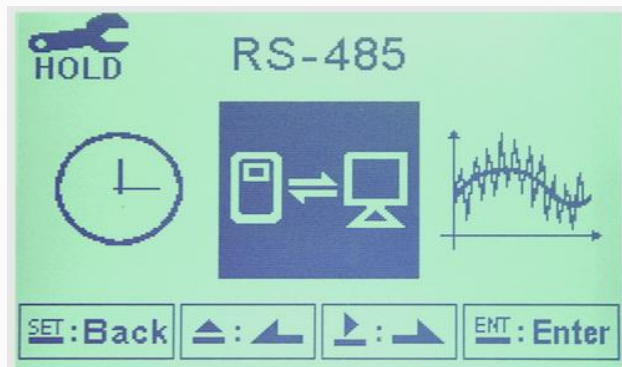
### Graphical Menu

Allows extremely intuitive & quick setting and calibration.





## Special Features of Advanced Version Transmitters

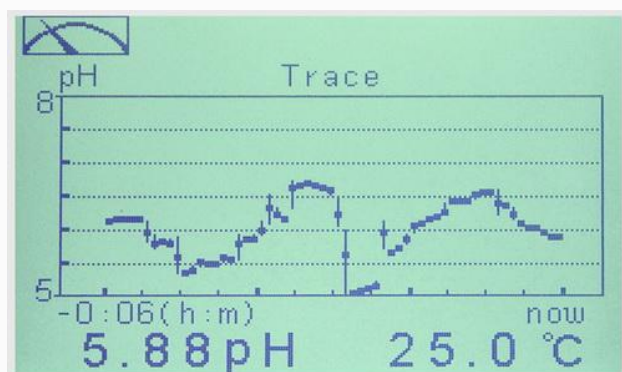


### RS-485 MODBUS protocol

Provides long-distance, multiple values and configuration info transmission and anti-electrical signal protection

### Real-time chart mode

3 minutes real-time dynamic graph to help you realize recent development in control



### Trace mode

Set up from 3 mins to four weeks duration of the measured value trend graph to help you master the process history

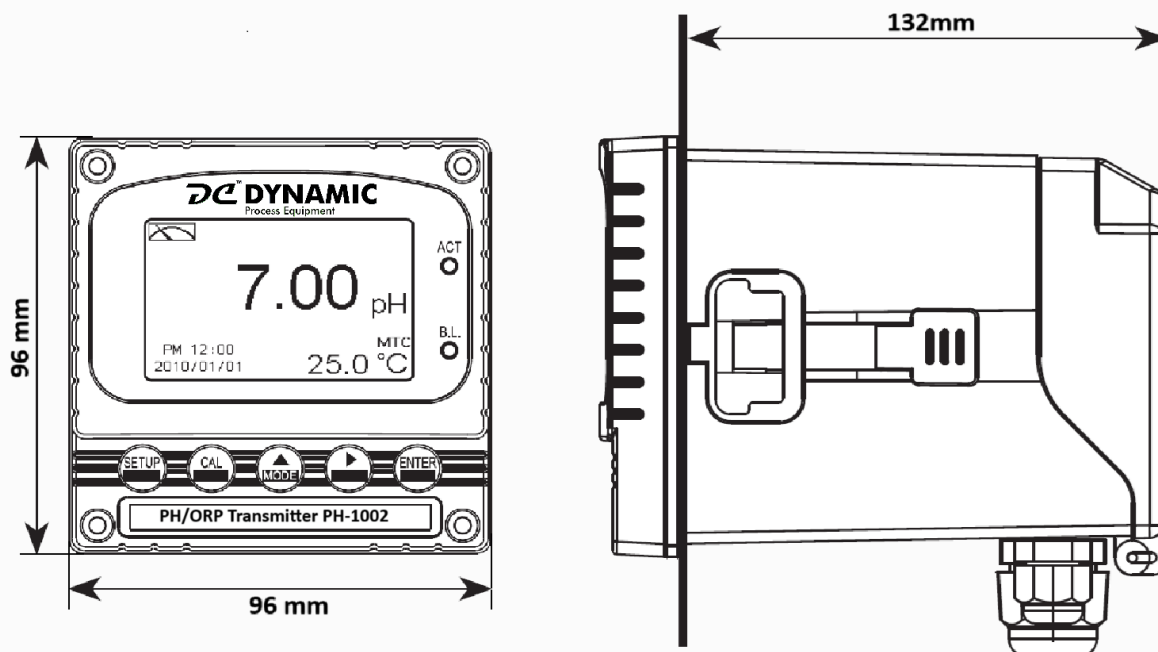
### Events logbook

Actions, current output out of range, power outages and error records, no need for standby and record them anymore

| Page 1   |          |          |
|----------|----------|----------|
| 11/06/29 | 15:33:56 | Set mode |
| 11/06/29 | 15:33:49 | Mea mode |
| 11/06/29 | 15:33:47 | Set mode |
| 11/06/29 | 15:31:22 | Mea mode |
| 11/06/29 | 15:30:58 | Set mode |
| 11/06/29 | 15:30:26 | Mea mode |
| 11/06/29 | 15:29:59 | Set mode |

SET:Back    ▲:    ▼:    ENT:Enter

## Transmitter Dimension DIN ¼, 96 x 96:



## Flameproof Transmitter Specification:

**Transmitter Type:** DIN1/4 (96 x 96mm)

### Flameproof protection:

EX-d AS PER IS/IEC 60079-1:2014 SUITABLE FOR INSTALLATION IN HAZARDOUS LOCATION OF GAS GROUP IIA & IIB, ZONE 1 & 2.

### Ingress protection:

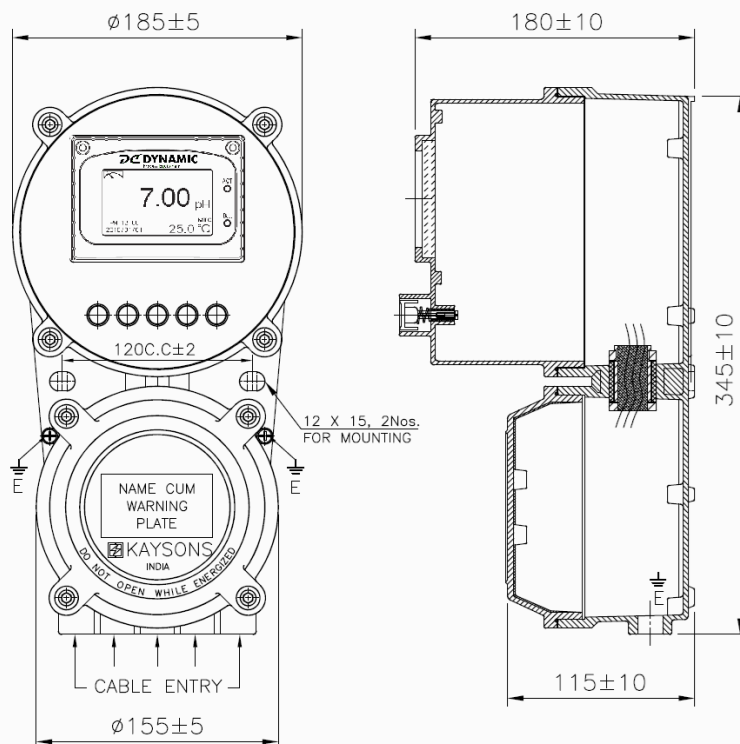
IP-66 AS PER IS/IEC 60529:2001 (REAFFIRMED 2014)

### DUST IGNITION PROTECTION:

(Ex 'db' IIB Gb) (Ex tb IIIC Db) AS PER IS/IEC 60079-31:2013

**Temperature class:** T6

**Material of construction:** DIE CAST AL. ALLOY LM-6.



## SmartSense pH/ORP Transmitter

### PH-1002-AD-P



Intelligent SmartSense pH/ORP Transmitter with robust protection, the PH-1002 series pH/ORP transmitters have rugged IP65 DIN1/4 96 x 96mm enclosure and outstanding EMC protection ability. The graphical menu driven operation with setting and calibration information in full text pages provide the extremely ease of use in all functions.

#### Applications

- Industrial Process
- Scrubber
- Chemical Process
- Water & Wastewater Treatment
- Biochemistry

#### Features

- Waterproof and dustproof design
- Solution-ground design eliminating interference of ground potential
- User-friendly operation with text and graphic illustration, clear signs and easy to understand
- 5-point calibration and the last calibration data displayable
- TECH, NIST Standard Buffers auto detection
- Chart mode, Trace Mode for graphical data interpretation
- RS-485 MODBUS RTU Digital Output
- With password and multi-key design-security protection enhancement
- Hi/Lo, Hi/Hi, Lo/Lo selectable two limited contact outputs with programmable set-points and hysteresis
- Gradually continuous sample measurements average function to enhance stability
- Automatic sensor clean function with programmable time interval
- LED indicated alarm or washing status signal
- IP 65 (NEMA 4X)
- PH-1002-AD-P is equipped with PID Control function

## Specification:

| pH/ORP Transmitter SmartSense PH-1002-AD-P |               |                                                                      |
|--------------------------------------------|---------------|----------------------------------------------------------------------|
| Model                                      |               | PH-1002-AD-P                                                         |
| Measurement Range                          | pH            | -2.00 to 16.00 pH, $\pm 0.01$ ( $\pm 1$ Digit)                       |
|                                            | ORP           | -1999 to 1999 mV, $\pm 0.1\%$ ( $\pm 1$ Digit)                       |
|                                            | Temperature   | -30.0 to 130.0°C, $\pm 0.2^\circ\text{C}$ ( $\pm 1$ Digit)           |
| Temperature Compensation                   |               | Automatic (Pt-1000 or NTC 30K) OR Manual Input                       |
| Input Impedance                            |               | $>10^{12} \Omega$                                                    |
| Display                                    |               | Large LCD with auto-sense backlight and contrast adjustment          |
|                                            |               | Text, Chart or Trace Mode (Selectable)                               |
| Analog Output                              | pH/ORP        | Isolated DC 0/4~20 mA corresponding to pH/ORP, max load 500 $\Omega$ |
| Serial Communication                       |               | RS-485 (MODBUS RTU or ASCII)                                         |
| Calibration                                |               | 5 Point                                                              |
| Event Log                                  |               | Last 50 Events                                                       |
| Output Relay                               | Rating        | 240 VAC, 0.5A max. (recommended)                                     |
|                                            | Set Point     | Hi/Lo, Hi/Hi, Lo/Lo selectable two limited programmable, ON/OFF      |
|                                            |               | PID Control                                                          |
| Wash Relay                                 | Rating        | 240 VAC, 0.5A max. (recommended)                                     |
|                                            | Time          | On: 0-99min. 59sec, Off: 0-999hr 59min.                              |
| Ambient Temperature                        |               | 0 to 50°C                                                            |
| Storage Temperature                        |               | -20 to 70°C                                                          |
| Power Supply                               | AC Version    | 100V to 240V AC $\pm 10\%$ , 50/60Hz, 8W Max.                        |
|                                            | DC Version    | 12V to 36V DC, 8W Max. (Not available for PID Version)               |
| Installation                               |               | Wall mounting, Pipe mounting, Panel mounting                         |
| Dimensions                                 | Enclosure     | H: 96 mm W: 96mm D:132 mm (1/4 DIN)                                  |
|                                            | Panel Cut out | 93 mm x 93 mm                                                        |
| Weight                                     |               | ~ 500 Grams                                                          |
| Protection                                 |               | IP 65 (NEMA 4X), Flameproof (Optional)                               |

Also check out our range of **Retractable Housings** for Liquid Analytics...



#### SmartDip 405M

SmartDip 405M is a retractable electrode housing with pneumatically operated drive Unit. This metal body model can be implemented in harsh chemical applications through flan...



#### SmartDip 220M

SmartDip 220M is a compact retractable electrode housing with manual drive Unit. This metal body model can be implemented in different chemical applications including ferment...



#### SmartDip 405P

SmartDip 405P is a retractable electrode housing with pneumatically operated drive Unit. This plastic body model can be implemented in harsh chemical applications through flan...



#### SmartDip 250M

SmartDip 250M is a manually operated Retractable electrode housing with long Immersion lengths and ball valve for isolation. It can fit 120mm long Sensor.



#### SmartDip 420M

SmartDip 420M is a compact retractable electrode housing with pneumatically operated drive Unit. This metal body model can be implemented in different chemical applicatio...



#### SmartDip 240M

SmartDip 240M is a compact retractable electrode housing. This version can fit 120mm long sensor. It comes with 1" NPT, Triclover connection.



#### SmartDip 450M

SmartDip 450M is a pneumatically operated retractable electrode housing with long immersion length and isolation ball valve. This unique model can fit 120mm long sensor.