



DC DYNAMICTM
Process Equipment

Dissolved Oxygen Transmitter
SmartSense DO-2002-AD

Core Features of SmartSense Transmitters

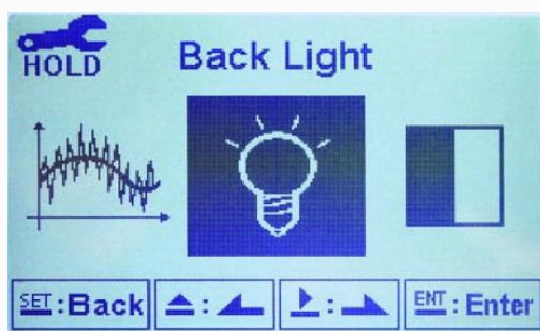
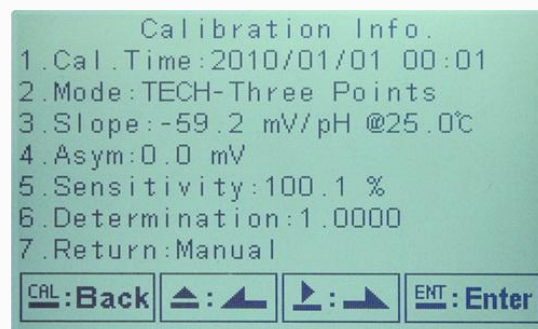


Waterproof protection

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

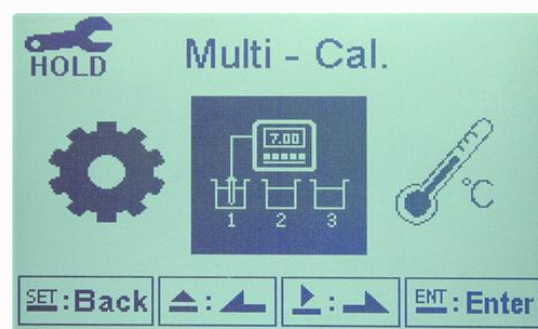


Auto-Sense Backlight Display

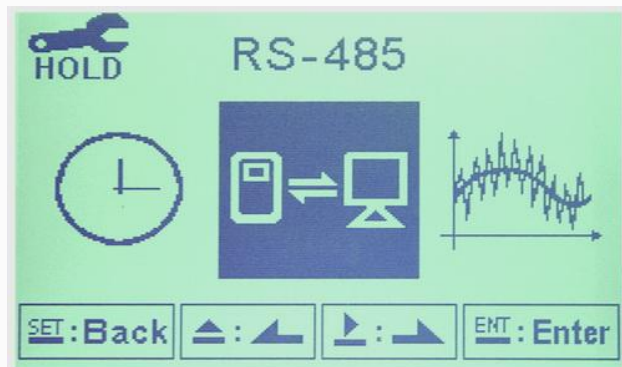
For clear reading and energy saving, it turns on the backlight automatically when the environment becomes dark.

Graphical Menu

Allows extremely intuitive & quick setting and calibration.



Special Features of Advanced Version Transmitters

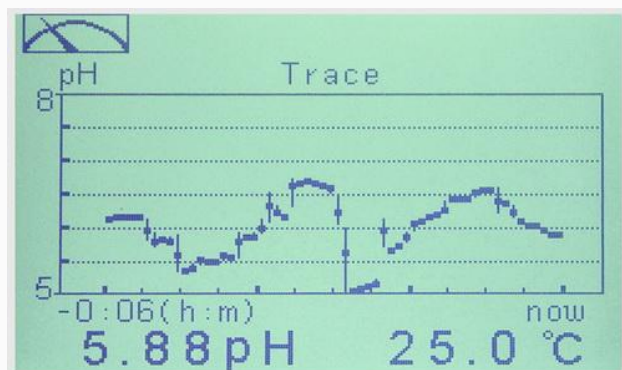


RS-485 MODBUS protocol

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

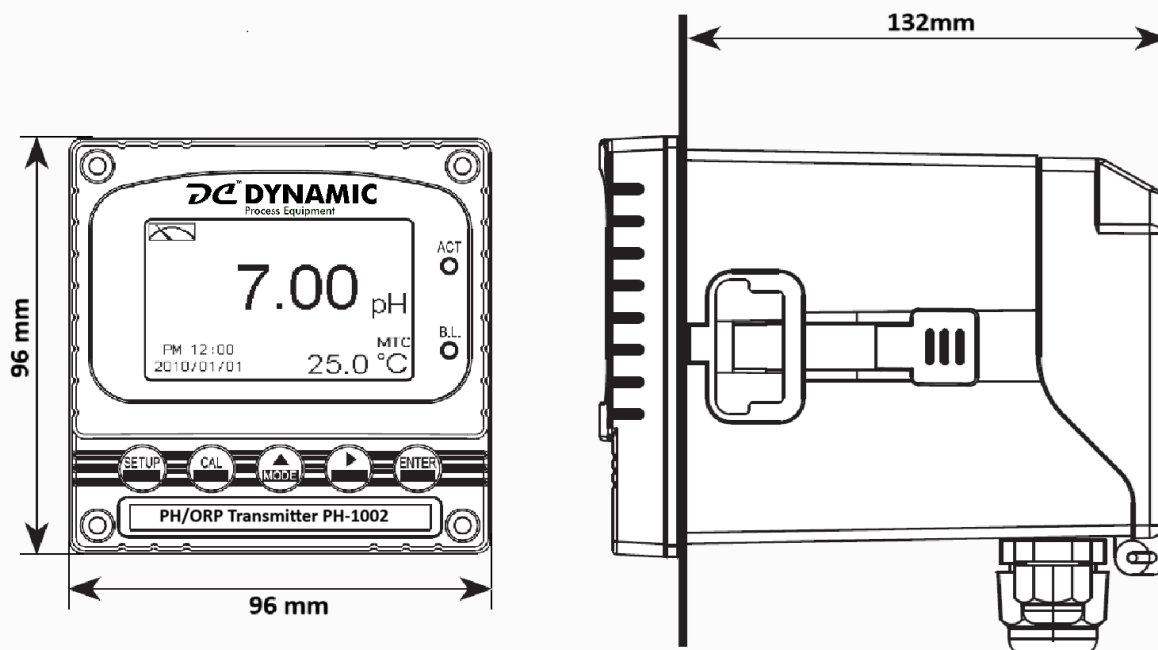
Events logbook

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 ▲: ▼:

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:

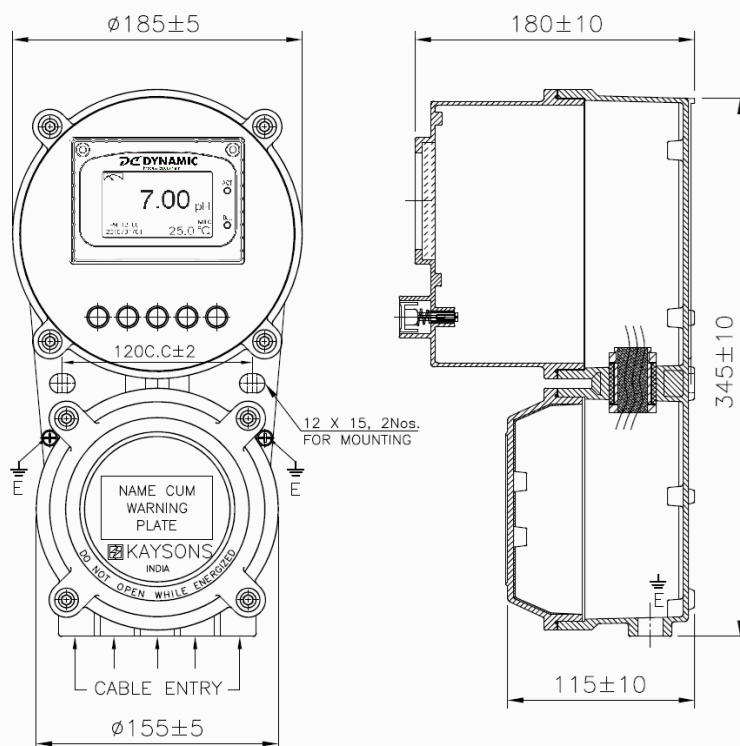
IP-66 AS PER IS/IEC 60529:2001 (REAFFIRMED 2014)

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 Dissolved Oxygen Transmitter

DO-2002-AD



The SmartSense DO-2002-AD series transmitter is compatible with wide range applications of oxygen measurement. The graphical menu driven operation with setting and calibration information in full text pages provide the extreme ease of use in all functions. It integrates the advantage of advanced version, with features that include graphical trace curve, events logbook and RS-485 interface.

Applications

- Industrial Process
- Water & Wastewater Treatment
- Effluent Treatment
- Fish ponds
- Fermentation

Features

- Waterproof and dustproof design
- Compatible with polarographic analogue sensors
- User-friendly operation with text and graphic illustration, clear signs and easy to understand
- 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
- Sensor slope status indicator for pre-amplifier sensor
- Salinity correction & atmospheric pressure correction
- Automatic sensor clean function with programmable time interval
- LED indicated alarm or washing status signal
- IP 65 (NEMA 4X)

Specification:

Dissolved Oxygen Transmitter SmartSense DO-2002-AD		
Model		DO-2002-AD
Measurement Range	% Saturation	0.0 to 600.0%, (Depends on the sensor), $\pm 0.5\%$ of reading (± 1 Digit)
	mg/L, ppm	0.0 to 60.00 mg/l (ppm), (Depends on the sensor), $\pm 0.5\%$ of reading (± 1 Digit)
	$\mu\text{g/l}$, ppb	0.0 to 9999.9 $\mu\text{g/l}$ (ppb), (Depends on the sensor), $\pm 0.5\%$ of reading (± 1 Digit)
	O ₂ % Gas	0.00 to 120.0% O ₂ , (Depends on the sensor), $\pm 0.5\%$ of reading (± 1 Digit)
	Temperature	0.0 to 140.0°C (Depends on the sensor), $\pm 0.2^\circ\text{C}$ (± 1 Digit)
Temperature Compensation		NTC 30K or NTC 22K automatic compensation or manual adjustment
Compensation	Salinity	0.0 to 45.0 ppt Manual Input
	Pressure	0.500 to 2.500 bar or 7.25 to 36.25 psi Manual Input
Display		Large LCD with auto-sense backlight and contrast adjustment
		Text, Chart or Trace Mode (Selectable)
Analog Output	DO	Isolated DC 0/4 to 20 mA corresponding to measurement, max load 500 Ω
Serial Communication		RS-485
Calibration		One Point OR Two Point calibration
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
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.
Installation		Wall mounting, Pipe mounting, Panel mounting
Dimensions	Enclosure	H: 96 mm W: 96 mm D: 132 mm (1/2 DIN)
	Panel Cut out	93 mm x 93 mm
Weight		~ 500 Grams
Protection		IP 65 (NEMA 4X), Flameproof (Optional)

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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...



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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.