

Dissolved-Oxygen Transmitter PHO2

- ◆ Input signal from SENSOREX, INGOLD, or compatible probes
- ◆ Temperature compensation input
- ◆ Built-in source for probe polarization voltage
- ◆ Rechargeable battery for probe polarization voltage
- ◆ Standard current or voltage output signal
- ◆ Isolated current output available
- ◆ Polarization-control front-panel switch

PHO2 is an electronic transmitter of dissolved-oxygen measurements. It transforms the signal from a standard INGOLD® or SENSOREX® probe for dissolved O₂ or a compatible one, provides the polarization voltage necessary for the INGOLD probe operation, and performs measurement temperature compensation. A built-in rechargeable battery maintains INGOLD probe polarization even in absence of power supply, while a front-panel switch enables turning the polarization voltage off. The PHO2 transducer provides a standard voltage or current output signal that allows connection of any standard control, data logging, or indication device, with its field of application including the biotechnological, chemical, food, etc. industries as well as research.



Technical specifications

Input	'A'	'B'	
Input signal	0...50 mV	0...67 nA	
Dissolved O₂ input range	0% (pure N ₂) ... 100% (normal air)	0% (pure N ₂) ... 100% (normal air)	
Temperature compensation input	internal, 0...50 °C	external NTC 22 kΩ, 0...70 °C	
Polarization voltage	-	675 mV DC	
Accuracy			
Measurement error	< ± 1% from span		
Repeatability	< ± 1% from span		
Temperature drift	0.01% from span for 1 °C		
Response time	< 30 s (at change 0...95%)		
Polarization voltage ⁽¹⁾	< ± 0.1 mV		
Output			
Transmission range	0...100%, 0...200%, or 0...300%		
Output signal	4...20 mA	0...20 mA	0...2 V
Input / output isolation (option)	1500 VAC for 1 min	none	none
Minimum output load	-	-	20 kΩ
Maximum output load	350 Ω at 20 mA	350 Ω at 20 mA	-

⁽¹⁾ With INGOLD® probes only!

Power supply

Mains supply voltage	230 VAC or 115 VAC
Isolated low voltage	12...24 V or 24 VAC
Consumption	max. 2 VA
Polarization rechargeable battery ⁽¹⁾	3.6 VDC
Rechargeable-battery service life ⁽¹⁾	min. 3 years

Operating conditions

Ambient temperature	0...55 °C
Ambient humidity	10...85 %RH

Design and materials

Case material	plastic
Mounting	in 90x42 mm panel cut-out
Wiring	plug-in terminals
Dimensions	96x48(front)x107 mm
Mounting depth	98 mm
Weight	max. 400 g
Protection, front/terminals	IP54 / IP20
Increased front IP (option)	IP65

Ordering code PHO2 - G1.G6.G11'11" - #1.#2

Code	Feature or option	Code values
G1	Power supply	A - 230 VAC, B - 115 VAC, Q - 12...24 V, isolated ⁽²⁾ , R - 24 VAC
G6	Input	A - from SENSOREX® probe, B - from INGOLD® probe, Z - from other probe (specify probe output!)
G11'	Output signal	E - 0...20 mA, F - 4...20 mA, H - 0...2 V, Z - other (specify!)
G11"	Transmission range	(RANGE) (see table above)
#1	Input / output isolation	X - none, I - isolated output ⁽³⁾
#2	Increased front protection	X - none, P - IP65 front protection

⁽²⁾ Ask for availability!

⁽³⁾ Available only for 4...20 mA output! Contact COMECO!