electrochemical control equipment



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Carbon-Dioxide Transmitter PHG

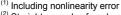
- ♦ Low cost
- ♦ Dual NDIR sensor built-in
- For HVAC and food processing applications
- Good accuracy, sensitivity and selectivity
- Low humidity and temperature dependence
- Duct mounting variant
- Local indicator available
- ♦ RS232 interface option

PHG transmitter measures CO₂ concentration in in-door atmospheres and converts it into standard current or voltage signal. PHG model uses dual non-dispersive infrared (NDIR) carbon-dioxide sensor providing improved accuracy and sensitivity as well as low temperature and humidity dependence. The transmitter can be equipped with local 4-digit LED display and RS232 serial interface. PHG mounting variants include free or duct installation with top or bottom mounted connector.

PHG application area includes indoor air control, ventilation, air-conditioning, mushroom control, etc.

Technical specifications

Input				
Input type	Non-dispersive Infrared CO ₂ cell			
Measurement range	03000/5000/10000 ppm			
Accuracy				
Measurement error (1)	± 2 ppm (03000 ppm) at 1050 °C			
Temperature dependence	10 ppm for 1 °C			
Warm-up time	max. 90 s (at 25 °C)			
Response time (080%)	max. 30 s (w/o sintered filter)			
Output				
Output signal	0(4)20 mA	010 V		
Output update	2 s	2 s		
Minimum output load	-	1 ΜΩ		
Maximum output load	350 Ω at 20 mA	-		
Over-scale limit	35 ± 2 mA	17 ± 2 V		
Interface				
Interface type	RS232, 9600 bps			
Function	CO2 data transmission			
Protocol	ASCII, free			
Power supply				
Supply voltage		1532 VDC		
Admissible variations		1 Vp-p at 50 Hz		
Consumption	max. 90 mA (150 mA w/ indicator)			
(1) Including poplinggrift/ error		·		



⁽²⁾ Straight or angles female part included

Ordering code PHG - G0.G6.G9.G11.G15 - #1.#2

Code	Feature or option		Code values
G0	Case —	free mounting	B - bottom connector, T - top connector
		duct mounting	DB - bottom mounted connector, DT - top mounted connector
G6	Input range		03 - 03000 ppm, 05 - 05000 ppm, 10 - 010000 ppm
G9	Serial interface		X - none, A - RS232
G11	1 Output signal E -		E - 020 mA, F - 420 mA, K - 010 V, Z - other (specify!)
G15	15 Connector C1A - angled M12 cor		C1A - angled M12 connector, C1S - straight M12 connector
#1	Sintered filter		X - none, S - sintered filter mounted
#2	Local indicator		X - none, A - local indicator mounted

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Digital display Display resolution	4 LED indicators, 14 mm		
Display refresh	1 ppm 1 s		
Accuracy	0.2% from span		
Temperature drift	0.01% from span for 1 °C		
Operating conditions			
Operating temperature	050 °C		
Operating humidity	085 %RH, non-condensing		
Storage temperature	-1060 °C		
Design and materials			
Case material	ABS/PC plastic		
Inlet material	POM plastic		
Housing dimensions (no connector)	80x80x70 mm		
Wiring	4-pin M12 connector (2)		
Sensor protection	plastic cap with polyester filter		
Sintered filter (option)	stainless steel, 75 μm		
Protection class	IP65 (excluding gas inlet)		
Mounting	free (3)	duct	
Process connection	none	movable flange (4)	
Gas inlet length	30 mm	130 mm	
Weight	max. 250 g	max. 350 g	

⁽³⁾ Radial and axial mounting accessories can be ordered separately (see 'Accessories')

⁽⁴⁾ Small POM flange DN16.5.