

Stratos® e 2211 (X) Oxy



Display

Simultaneous display of conductivity/concentration and temperature; large unit symbols. Icons supply operating messages and signal unusual operating states. Status indicators provide information on the current operating status. Eye-catching alarm signaling by red, flashing LED.

Calibration

Reliable reminder due to integrated calibration timer. Calibration on saturation or concentration. Automatic sensor standardization with monitoring of slope and drift. Zero point calibration. Display of sensor slope and zero point each calibration. Evaluation of the electrode status with Sensoface®.

Sensocheck® sensor monitoring

Continual monitoring of the sensor for short-circuit and broken cables. Recognition of defects, indication and alarm triggering.

HART® communication

Integration in fully automatic process cycles is possible due to the remote control function via HART® communication. The device can also be fully configured via a handheld terminal or from the control room. Measured values, messages and device identification can be downloaded at any time.

Also available for hazardous area applications.

The facts

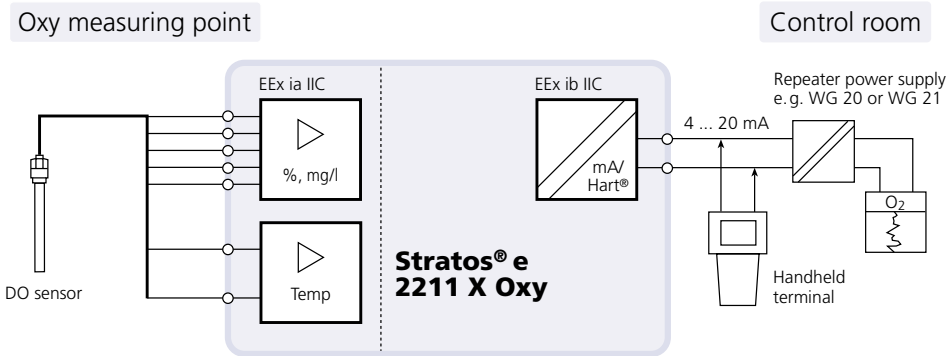
- **Robust, tightly sealed molded enclosure**
- **Wall, pipe/post or panel mounting**
- **Easy installation with pre-assembled enclosure and plug-in terminals**
- **Optical alarm signal by red LED**
- **Sensocheck® continual sensor monitoring**
- **GainCheck® automatic device self-test**
- **International user interface with icons**
- **Large, clear display**
- **°C/°F temperature scale**
- **Additional mode indicators for**
 - Measuring mode
 - Calibration mode
 - Alarm
 - Wash contact
 - Configuration
- **Cal timer**
- **Integrated current source for simple monitoring of the peripherals**
- **HART® communication**
- **Hazardous and safe area applications**
- **Low supply voltage**

**Warranty
3 years!**

Warranty

Defects occurring within 3 years from delivery date shall be remedied free of charge at our works (carriage and insurance paid by sender).

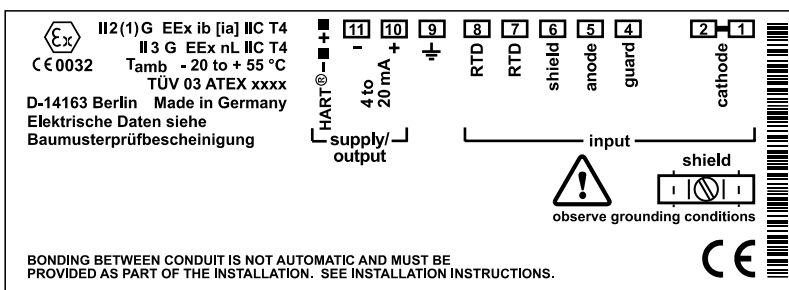
Connection



Product line

		Order No.
Stratos® e 2211 (X) Oxy	Analyzer for measurement of dissolved oxygen	2211 Oxy
	Analyzer for the measurement of dissolved oxygen in hazardous locations	2211 X Oxy
Mounting accessories	See Accessories chapter (page 121)	

Terminal assignment



Specifications

DO input	Input for the sensors SE 706, SE 707, Inpro 6800, InPro 6900 (Mettler Toledo), Oxyferm (Hamilton)	
Measuring current	0 ... 1200 nA, resolution 20 pA	
Saturation (-10 ... 80 °C)	0.0 ... 199.9 % / 200 ... 500 %	
Meas. error ^{1,2,3)}	0.5 % meas. val. + 0.05 nA TC: 0.005 nA/K	
Concentration (-10 ... 80 °C)	0.00 ... 50.00 mg/l 0000 ... 9999 µg/l	0.00 ... 50.00 ppm 0000 ... 9999 ppb
Adm. guard current	≤ 20 µA	
Polarization voltage*)	(0) 400 ... 1000 mV / 10 mV steps	
Process pressure*)	0.000 ... 9.999 bars (... 999.9 kPa / ... 145.0 psi)	
Salt correction*)	00.00 ... 45.00 g/kg	
Sensor standardization		
Operating modes	O ₂ saturation (automatic) Product calibration	O ₂ concentration (automatic) Zero point calibration
Calibration range	Zero point ±2 nA	
Sensor Type A	Slope 25 ... 130 nA (at 25 °C, 1013 mbar)	
Calibration range	Zero point ±2 nA	
Sensor Type B	Slope 200 ... 550 nA (at 25 °C, 1013 mbar)	
Calibration timer *)	0000 ... 9999 h	
Pressure correction*) manual	0.000 ... 9.999 bar / 999.9 kPa / 145.0 psi	
Sensocheck®	Monitoring of membrane and electrolyte (can be disabled)	
Sensoface®	Provides information on the condition of the sensor, evaluation of zero point/slope, response time, calibration interval, Sensocheck®	
Temperature input*)	NTC 22 kOhm / NTC 30 kOhm *), 2-wire connection, adjustable	
Measurement range	-20.0 to +150.0 °C / -4 to +302 °F	
Adjustment range	10 K	
Resolution	0.1 °C / 1 °F	
Measurement error ^{1,2,3)}	<0.5 K (<1 K at 100 °C)	

*) User-defined
2) ±1 count

1) According to IEC 746 Part 1, at nominal operating conditions
3) Plus sensor error

Specifications, continued

Power supply/output	Loop current 4 ... 20 mA (22 mA), floating (3.8 ... 20.5 mA)
Characteristic	Linear
Supply voltage	12 ... 30 V. $I_{\max} = 100 \text{ mA}$, $P_{\max} = 0.8 \text{ W}$
Measured variable*)	O ₂ saturation / O ₂ concentration
Overrange*)	22 mA with error messages
Output filter*)	PT ₁ filter, filter time constant: 0 ... 120 s
Measurement error ¹⁾	<0.3 % of current value +0.05 mA
Start/end of scale*)	Configurable within the measurement range for pH or ORP
Permissible span	2 ... 500 % / 200 ... 9999 µg/l (ppb) / 0.5 ... 50 mg/l (ppm)
Display	LC display, 7 segment with symbols
Main display	Character height 17 mm, unit symbols 10 mm
Secondary display	Character height 10 mm, unit symbols 7 mm
Sensoface®	3 status indicators (friendly, neutral, sad Smiley)
Mode indication	5 mode indicators 'meas', 'cal', 'alarm', 'config' 18 further icons for configuration and messages
Alarm indication	Red LED with alarm or HOLD, user-defined
Keypad	5 keys: [cal] [conf] [▶] [▲] [enter]
Service functions	
Current source	Loop current, specifiable 3.8 ... 22 mA
Device self-test	Automatic memory testing (RAM, ROM, EEPROM)
Display test	Display of all segments
Last Error	Display of last error occurred
Sensor monitor	Display of the direct sensor signal (sensor current/temperature)
Data retention	Parameters and calibration data >10 years (EEPROM)
EMC	EN 61326 Emitted interference: Class B (residential area) Class A: for mains > 60 V DC Immunity to interference: Industry
Explosion protection	II 2 (1) G EEx ib [ia] IIC T6 FM IS, Cl.1, Div1, Group A,B,C & D T4 NI, Cl.1, Div2, Group A,B,C & D T4

*) User-defined

1) According to IEC 746 Part 1, at nominal operating conditions

Specifications, continued

Nominal operating conditions	
Ambient temperature	-20 ... +55 °C
Transport/storage temp.	-20 ... +70 °C
Relative humidity	10 ... 95 % not condensing
Supply voltage	12 ... 30 V
Enclosure	Molded enclosure made of PBT (polybutylene terephthalate)
Color	Bluish gray RAL 7031
Assembly	<ul style="list-style-type: none"> - Wall mounting - Pipe mounting: Ø 40 ... 60 mm, □ 30 ... 45 mm - Panel mounting, cutout to DIN 43 700 Sealed against panel
Dimensions	H 144 mm, W 144 mm, D 105 mm
Protection	IP 65/NEMA 4X (USA, Canada: indoor use only)
Cable glands	3 breakthroughs for cable glands M20x1.5 2 breakthroughs for NPT 1/2" or Rigid Metallic Conduit
Weight	Approx. 1 kg