

Stratos *Eco* 2405 Oxy

Oxygen Measurement

Simultaneous temperature and measured value display; unit symbol as plain text.

Icons provide operating notes and signal unusual operating states; status displays provide information on the current operating mode.



Connectible Sensors

- Conventional amperometric sensors with (e.g., -675 mV) or without polarization voltage
- Temperature detector NTC 22 k Ω , NTC 30 k Ω

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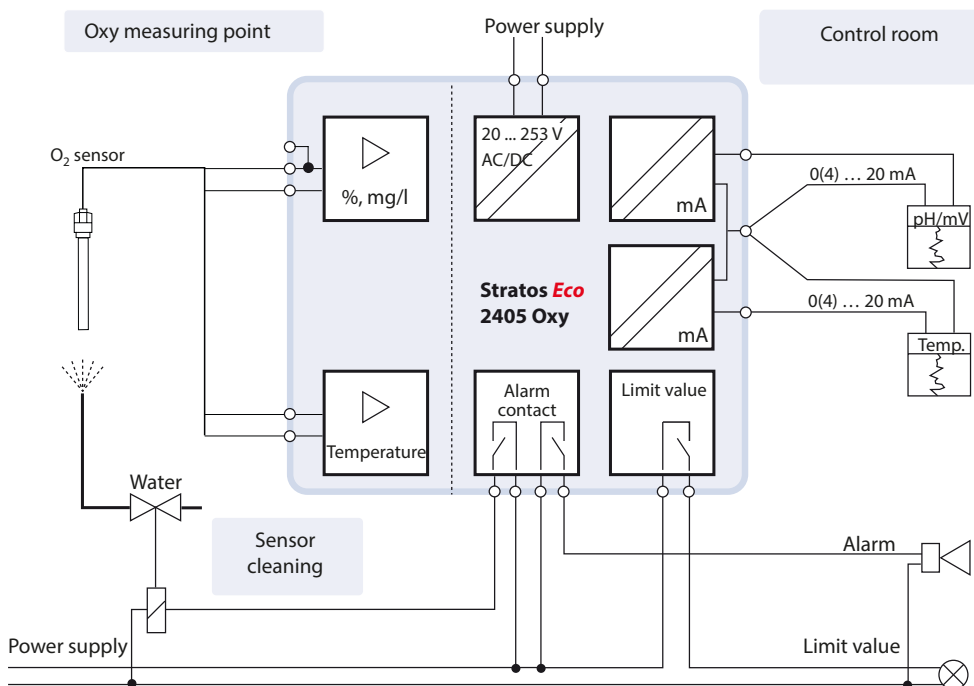
Product Range

		Order No.
Stratos Eco 2405 Oxy	Process device for measuring dissolved oxygen	2405 Oxy

Mounting Accessories

	Order No.
Pipe/post mount kit	ZU 0274
Panel mount kit	ZU 0275
Protective hood	ZU 0276

Wiring



Specifications

O₂ input

Measuring current	-2 ... 1800 nA
Resolution (at $U_{pol} \leq 800$ mV and $U_{ref} \leq 200$ mV)	0.05 nA
Saturation (-10 ... 80 °C)	0 ... 200%
Measurement error ^{1,2,3)}	0.5% meas.val. + 0.5%
Concentration (-10 ... 80 °C)	0.00 ... 20.00 mg/l 0.00 ... 20.00 ppm
Measurement error ^{1,2,3)}	0.5% meas.val. + 0.05 mg/l or 0.05 ppm
Permissible guard current	≤ 20 μ A
Polarization voltage*)	0 ... 1000 mV -1000 ... 0 mV
Process pressure*)	0.000 ... 9.999 bar (... 999.9 kPa / ... 145.0 PSI)
Salinity correction*)	00.00 ... 45.00 g/kg

Sensor standardization

Operating modes	O ₂ concentration (automatic) O ₂ saturation (automatic) Product calibration, zero point calibration
Calibration range	Zero point ± 2 nA Slope 25 ... 130 nA (at 25 °C, 1013 mbar)
Calibration timer*)	0000 ... 9999 h
Pressure correction*)	0.000 ... 9.999 bar / 999.9 kPa / 145.0 PSI

Sensocheck

Monitoring for short circuits or open circuits (can be disabled)
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Sensoface

Provides information on sensor condition (evaluation of zero point/slope, response time, calibration interval, Sensocheck)
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Temperature input*)

NTC 22 k Ω /NTC 30 k Ω	2-wire connection, adjustable
Measuring range	-20.0 ... 150.0 °C / -4 ... 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)

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Specifications

Output 1	0/4 ... 20 mA, max. 10 V, floating (galvanically connected to output 2)	
	Process variable ^{*)}	O ₂ saturation / O ₂ concentration
	Overrange ^{*)}	22 mA in the case of error messages
	Output filter ^{*)}	Low-pass, filter time interval 0 ... 120 s
	Measurement error ¹⁾	< 0.3% current value + 0.05 mA
	Start/end of scale	As desired within range
	Permissible span	5 ... 200% / 0.5 ... 50 mg/l (ppm)
Output 2	0/4 ... 20 mA, max. 10 V, floating (galvanically connected to output 1)	
	Process variable ^{*)}	Temperature
	Overrange ^{*)}	22 mA for temperature error reports
	Output filter ^{*)}	Low-pass, filter time interval 0 ... 120 s
	Measurement error ¹⁾	< 0.3% current value + 0.05 mA
	Start/end of scale	-20 ... 150 °C / -4 ... 302 °F
	Permissible span	20 ... 170 K / 36 ... 306 °F
Alarm contact	Relay contact, floating	
	Contact ratings	AC < 250 V / < 3 A / < 750 VA DC < 30 V / < 3 A / < 90 W
	Contact response	N/C (fail-safe type)
	Response delay	10 s
Limit contact	"R1" relay contact, floating	
	Contact ratings	AC < 250 V / < 3 A / < 750 VA DC < 30 V / < 3 A / < 90 W
	Contact response ^{*)}	N/C or N/O
	Delay ^{*)}	0000 ... 9999 s
	Setpoints ^{*)}	Within selected range
	Hysteresis ^{*)}	0.00 ... 5.00 pH/0 ... 500 mV
Cleaning contact	"Clean" contact	
	Contact ratings	AC < 250 V / < 3 A / < 750 VA DC < 30 V / < 3 A / < 90 W
	Contact response ^{*)}	N/C or N/O
	Rinsing interval ^{*)}	(000.0 h = cleaning function disabled)
	Rinse duration ^{*)}	0000 ... 1,999 s
Display	LC display, 7-segment with icons	
	Primary display	Character height 17 mm, unit symbols 10 mm
	Secondary display	Character height 10 mm, unit symbols 7 mm
	Sensoface	3 status icons (friendly, neutral, sad)
	Status display	4 status bars "meas," "cal," "Alarm," "config" More icons for configuration and reports
	Alarm indication	Red LED in case of alarm
Keypad	5 keys: [cal] [conf]   [enter]	

Specifications

Service functions

Current source	Current specifiable for output 1 and 2 (00.00 ... 22.00 mA)
Device self-test	Automatic memory test (RAM, FLASH, EEPROM)
Display test	Display of all segments
Last error	Display of last error occurred
Sensor monitor	Display of direct, uncorrected sensor signal (sensor)

Data retention

Parameters and calibration data > 10 years (EEPROM)

Protection against electric shock

Protective separation of all extra-low-voltage circuits against mains by double insulation as per EN 61010-1

Power supply

24 (-15%) ... 230 (+10%) V AC/DC	approx. 5 VA/2.5 W AC: 45 ... 65 Hz Overvoltage category II, protection class II
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Nominal operating conditions

Ambient temperature	-20 ... 55 °C / -4 ... 131 °F
Relative humidity	10 ... 95%, non-condensing
Maximum operating height	2,000 m

Transport/Storage temperature

-20 ... 70 °C / -4 ... 158 °F

EMC

EN 61326-1, EN 61326-2-3	
Emitted interference	Class B (residential environment) Class A: for mains > 60 V DC

Immunity to interference	Industrial applications
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Explosion protection

FM	NI, Class I Div 2, Groups A, B, C & D T4, T _a = 55 °C; Type 2 NI, Class I Zone 2, Group IIC T4, T _a = 55 °C; Type 2
CSA	Class I Div 2, Groups A, B, C and D, T4 Ex nA IIC T4

Housing

Molded enclosure made of PBT (polybutylene terephthalate), glass bead reinforced	
Color	Black
Mounting	– Wall mounting – Post/pipe mounting ZU 0274 Ø 40 ... 60 mm □ 30 ... 45 mm – Panel installation ZU 0275 Cutout as per DIN 43 700, sealed against panel
Dimensions (mm)	H x W x D 144 x 144 x 105
Protection	IP 65/NEMA 4X
Cable glands	3 knockouts for M20 x 1.5 cable glands 2 knockouts for NPT ½" or rigid metallic conduit
Weight	Approx. 1 kg

^{*)} User-defined

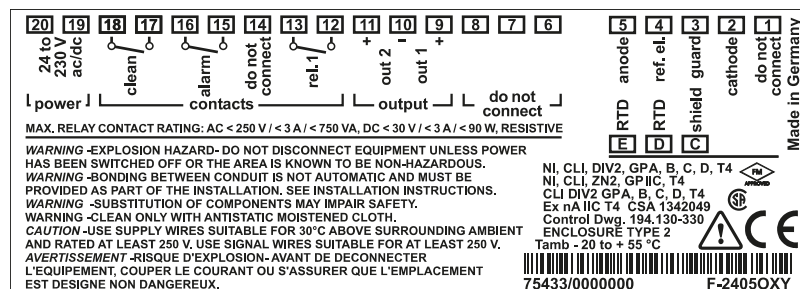
¹⁾ At nominal operating conditions

²⁾ ±1 digit

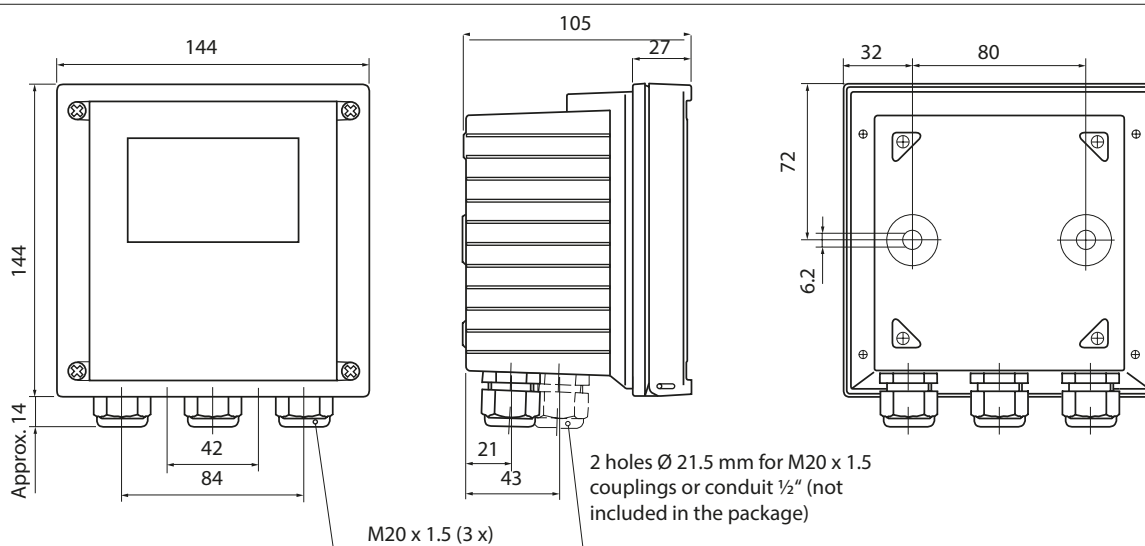
³⁾ Plus sensor error

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Terminal Assignments



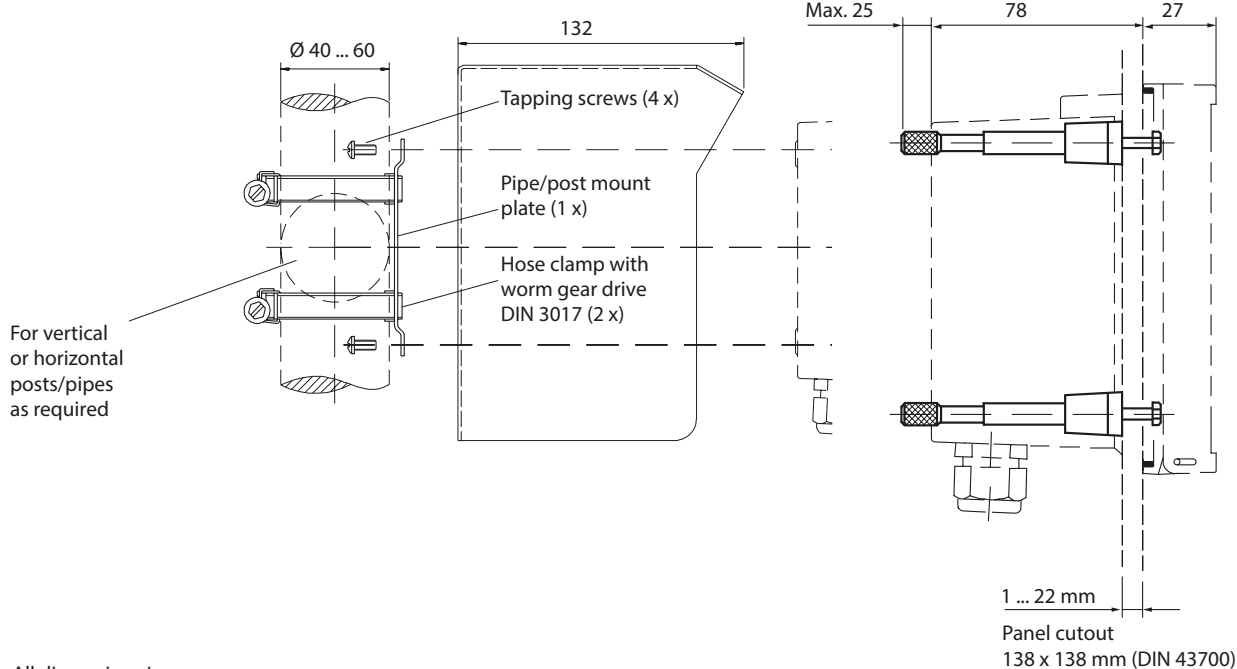
Dimension Drawing



Pipe/post mount kit ZU 0274

Protective hood ZU 0276

Panel mount kit ZU 0275



All dimensions in mm.