Stratos® PROFIBUS 2221 X pH

Display

Simultaneous display of pH value/ORP and temperature; unit symbols as plaintext. 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. Automatic electrode standardization with check of response time and drift by Knick Calimatic®. All conventional buffer sets can be selected. Alternatively, also manual calibration or direct input of zero point and slope for service purposes. Display of the electrode data after every calibration. Evaluation of the electrode status with Sensoface®.

Sensor monitoring Sensocheck®

Maximum reliability due to continual monitoring of glass and reference electrode. Recognition of electrode defects, indication and alarm triggering.

Warranty
3 years!

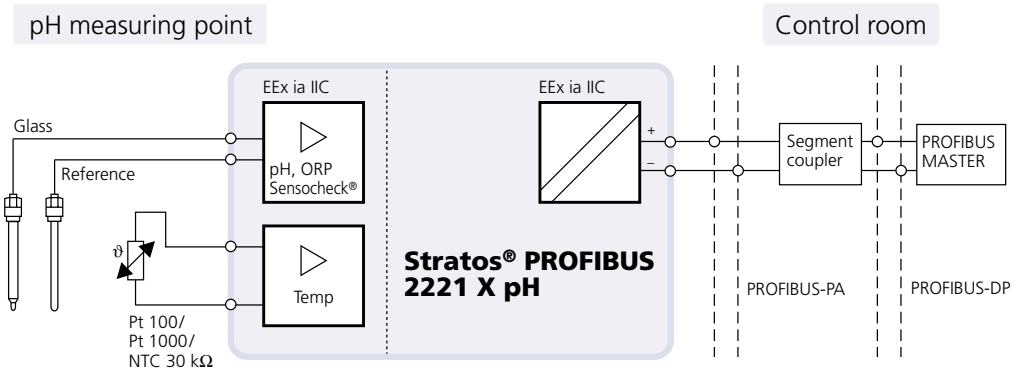
Warranty

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

The facts

- **Rugged, 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
  - Online
  - Bus communication
  - Configuration
- **Cal timer**
- **Communication according to the Profile for Analyzers Version 3.0**
- **Power supply via PROFIBUS PA**
- **Logbook**
- **Limit values, can be defined and read via PROFIBUS**

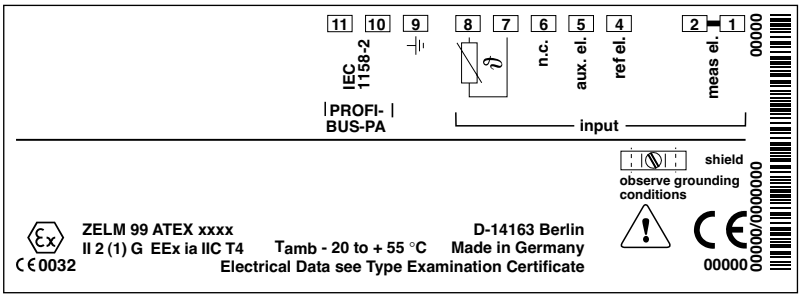
Connection



Product line

		Order No.
Stratos® PROFIBUS	Stratos® PROFIBUS 2221 X pH	**2221 X pH**
Mounting accessories	See Accessories chapter (page 121)	

Terminal assignment



Specifications

Measurement ranges	pH value	0.0 ... +14.00	
	mV value	–1500 ... +1500 mV	
	Temperature	–20.0 ... +130.0 °C	
Meas. error	pH value	<0.02	±1 count
	mV value	<1 mV	±1 count
	Temperature	<0.5 K [1)]	±1 count
Display	LC display, 7-segment		Measured value display: pH/mV value, temperature
	Red alarm LED:		Error message
Temperature input	Pt 100/Pt 1000/NTC 30 kOhm		
Sensor monitoring	Sensocheck® monitoring of glass and reference electrode		
Electrode standardization	– Automatic calibration with Calimatic®, buffer sets: -00- Knick technical buffer 2.00/4.01/7.00/9.21 -01- Mettler Toledo technical buffer 2.00/4.01/7.00/9.21 -02- Merck/Riedel de Haën 2.00/4.00/7.00/9.00/12.00 -03- Ciba (94) 2.06/4.00/7.00/10.00 -04- Mettler Toledo (USA) 4.00/7.00/10.01 -05- Standard buffer NIST 4.006/6.865/9.180 -06- HACH 4.00/7.00/10.18 -07- WTW technical buffer 2.00/4.01/7.00/10.00 – Manual input of individual buffer values (MAN) – Data input premeasured electrodes (DAT)		
Calibration timer	0 ... 9999 h		
Communication interface	Protocol:	PROFIBUS PA via segment coupler or link to SPC, PC, PLC	
	Profile:	Profile for Analyzers Version 3.0 (PNO directive)	
	Supply voltage:	FISCO	≤17.5 V (trapezoidal or rectangular characteristic) ≤ 24 V (linear characteristic)
	Current consumption:		<12.7 mA
	Physical interface:		according to EN 61158-2
	Max. current in case of fault (FDE):		<21.4 mA
Explosion protection	II 2(1)G EEx ia IIC T4		
Operating tool	Device description implemented in SIMATIC PDM		
Ambient temperature	–20 ... +55 °C		
Electromagnetic compatibility	EN 61 626 Emitted interference: Class B (residential area) Immunity to interference: Industry		
Enclosure	Material:	PBT	
	Protection:	IP 65	
	Dimensions:	see dimension drawing page 119	
Weight	Approx. 1 kg		

1) With Pt 100: 1 K

EC Type Examination Certificates

Prüf- und Zertifizierungsstelle
ZELM Ex

EC-TYPE-EXAMINATION CERTIFICATE
(Translation)

ZELM 99 ATEX 0016

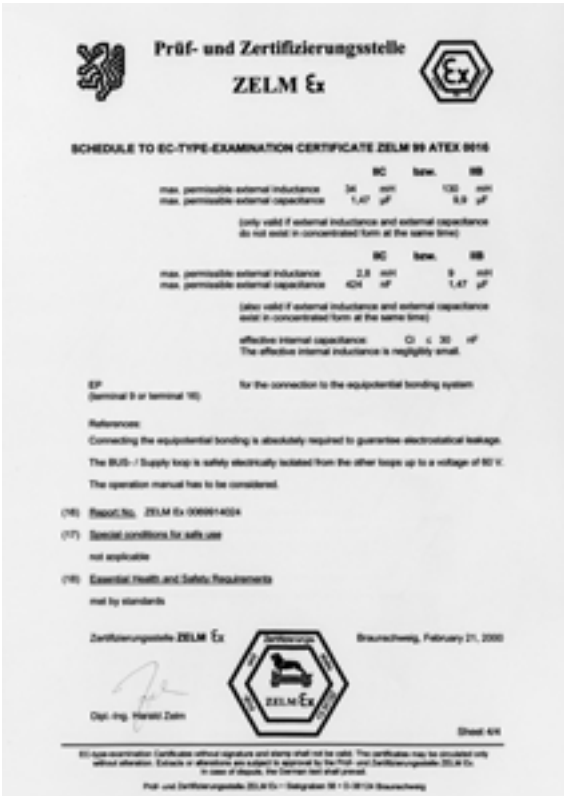
Prüf- und Zertifizierungsstelle
ZELM Ex

SCHEDULE

EC-TYPE-EXAMINATION CERTIFICATE ZELM 99 ATEX 0016

Prüf- und Zertifizierungsstelle
ZELM Ex

SCHEDULE TO EC-TYPE-EXAMINATION CERTIFICATE ZELM 99 ATEX 0016



Prüf- und Zertifizierungsstelle
ZELM Ex

SCHEDULE TO EC-TYPE-EXAMINATION CERTIFICATE ZELM 99 ATEX 0016

Certificate

Certificate

PROFIBUS Nutzerorganisation e.V. grants to

Knick Elektronische Meßgeräte GmbH & Co.
Beuckestraße 22, D-14163 Berlin
the Certificate No.: **Z00675** for the following product:

Name: **Stratos 2221 X pH**
Model: **pH-Wert Messung**
Revision: **1.0; Stack: 1.3 (09.12.98); SW: Version 2.0**
GSD: **PA139750.gsd**
KN0C7533.gsd

This certificate confirms that the device has successfully passed the conformance tests for PROFIBUS-DP Slave devices. Furthermore, the device fulfills the requirements of the PROFIBUS-PA Profile for Process Control Devices, Version 3.0.

The tests were executed in accordance with "PI-Richtlinie für Feldgeräte entsprechend PROFIBUS PA Profile for Process Control Devices, Version 3.0", April 2000, and the "Test Specifications for PROFIBUS DP Slaves, Version 2.0", Februar 2000, based on EN 50170-2, at ifak in Magdeburg which is an authorized test laboratory of PROFIBUS Nutzerorganisation. The detailed test procedure and the test results are recorded in the inspection report 319-01.

This certificate is granted according to the PNO guideline for testing and certification (PRZ) dated August 1, 1999 and is valid for 3 years, i.e. until July 31, 2004.

Karlsruhe, November 20, 2002 (Official in Charge)

Board of PROFIBUS Nutzerorganisation e. V.

(E. Kästler) (K.-P. Lingner)