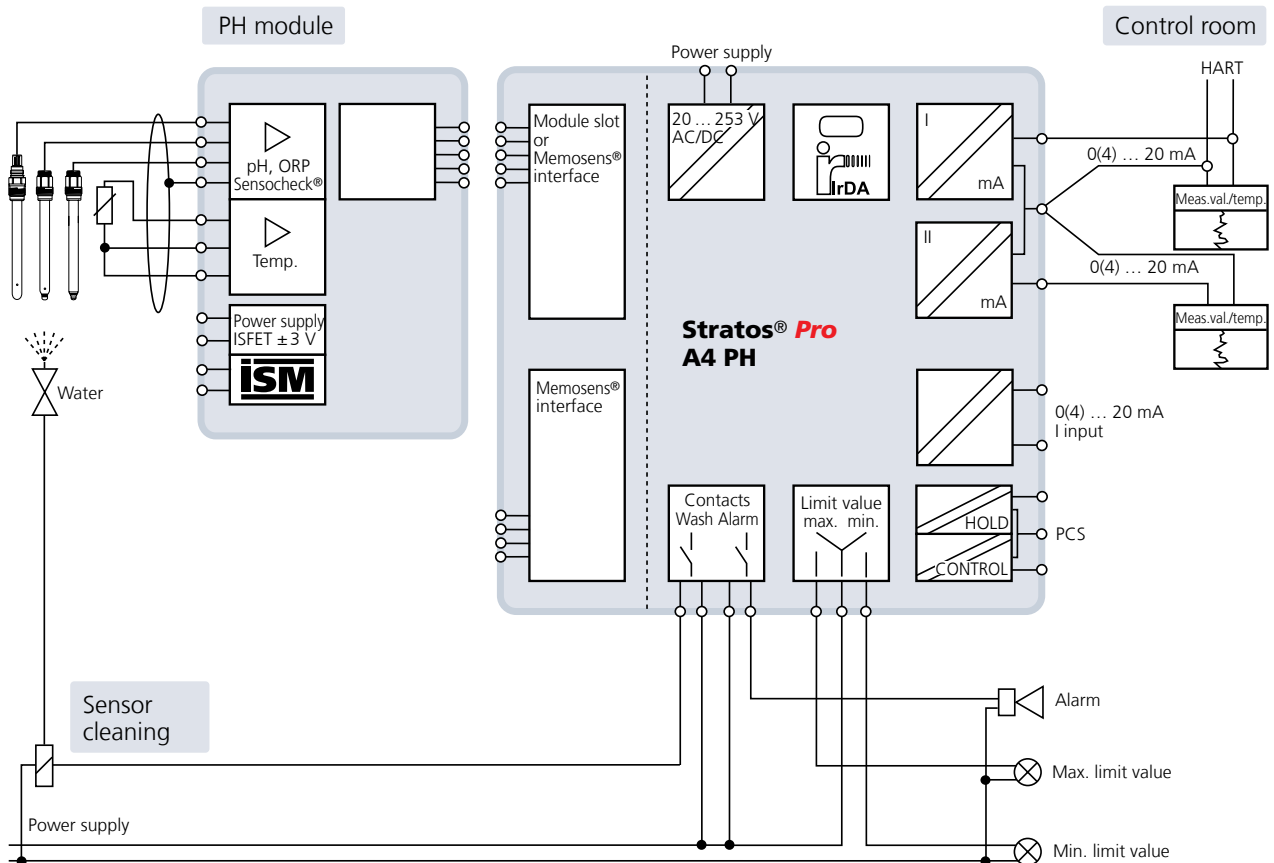


Stratos® Pro A4 PH

Connection

Connection of PH module with any desired analog sensor or with ISM or ISFET sensors. Operation of Memosens® sensors possible at the Memosens® interface.
 Model used: Stratos® Pro A401N-PH/0



Terminal Assignments of Stratos® Pro PH Module

Knick >		Module
MK-PH 015 X		PH
No. 0000000		pH / ORP / °C
Stratos Pro A...		IECEX
KEMA 08 ATEX 0100		
IECEX KEM08.0020		
see Control drawing 212.002-110		
D-14163 Berlin 00000/0000000/0726 0044		
pH Sensor		
Temp		
SHIELD	RTD	RTD (GND)
ISM (DATA)	ISM (GND)	ISM (GND)
-3 V	+3 V	SG
REF EL.	MEAS EL.	
K	I	H
G	F	E
D	C	B
A		

New England - ETA Process Instrumentation

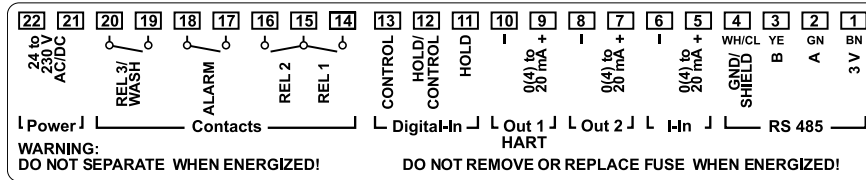
119 Foster Street, Bldg #6
 Peabody, MA 01960
 Tel: (978) 532-1330
 www.etapii.com
 sales@etapii.com

Upstate NY - Martech Controls

2000 Teall Avenue
 Syracuse, NY 13026
 Tel: (315) 876-9120
 www.martechcontrols.com
 sales@martechcontrols.com

Process Analysis Systems

Terminal Assignments of Stratos® Pro 4-Wire Devices



Specifications

Inputs

pH/mV	input for pH sensors (glass or ISFET) or ORP sensors	
Display range	pH value: -2.00 ... 16.00 ORP: -1999 ... 1999 mV	
ISM (TAN)	interface for operation with ISM (digital sensors)	
Temperature	Pt 100 / Pt 1000 / NTC 30 kohms / NTC 8.55 kohms / Balco 3 kohms	
Display range for temperature	Pt 100 / Pt 1000: -20.0 ... +200.0 °C (-4.0 ... +392.0 °F) NTC 30 kohms: -20.0 ... +150.0 °C (-4.0 ... +302.0 °F) NTC 8.55 kohms: -10.0 ... +130.0 °C (14.0 ... 266.0 °F) Balco 3 kohms: -20.0 ... +130.0 °C (-4.0 ... +266.0 °F)	
Current input (TAN)	analog, 0/4 ... 20 mA/50 ohms for external temperature signal	
HOLD input, digital	0 ... 2 V (AC/DC) 10 ... 30 V (AC/DC)	HOLD inactive HOLD active
CONTROL input, digital	parameter set selection 0 ... 2 V (AC/DC) 10 ... 30 V (AC/DC)	parameter set A parameter set B
	flow	pulse amplitude 10 ... 30 V DC pulse input for flow measurement 0 ... 100 pulses/s display: 00.00 ... 99.99 l/h message via 22 mA, alarm contact or limit contacts

Outputs

Output 1, Output 2	0/4 ... 20 mA, max. 10 V, 22 mA for error message	
Process variable*)	pH or mV value or temperature	
Characteristic	linear	
Output filter*)	PT ₁ filter, filter time constant: 0 ... 120 s	
Power output	for operating an ISFET adapter ±3 V/0.5 mA	
Contacts	alarm, wash (parameter set A/B), limits 1/2	
Contact ratings	AC < 250 V/< 3 A/< 750 VA DC < 30 V/< 3 A/< 90 W	
PID process controller	output via limit contacts 1/2	

Specifications – continued

Outputs – continued

Controller type*)	pulse length controller or pulse frequency controller
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Sensor standardization

pH	<ul style="list-style-type: none"> – calibration with Calimatic® automatic buffer recognition – manually, data entry or using the product buffer sets: Knick, Mettler Toledo, Merck/Riedel de Haen, Ciba (94), NIST, HACH, WTW, Hamilton, Reagecon, user-defined buffer table
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ISFET	operating point ± 200 mV
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ORP*)	-700 ... +700 mV
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Adaptive calibration timer	interval 0000 ... 9999 h
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Temperature compensation

Process medium	linear -19.99 ... 19.99 %/K (reference temperature 25 °C) table: 0 ... 100 °C, user-defined in 5-K steps
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Communication

HART communication (TAN)	HART version 6 digital communication by FSK modulation of output current 1 device identification, measured values, status and messages, parameter setting, calibration, records
--------------------------	---

Diagnostics/Service

Diagnostics functions	calibration data, device self-test, display test
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Sensocheck®	automatic impedance monitoring of glass and reference electrode
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Sensoface®	information on the sensor condition (zero/slope, response time, calibration interval, Sensocheck®)
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Logbook (TAN)	100 events with date and time
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Extended logbook (TAN)	Audit Trail: 200 events with date and time
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FDA CFR 21 Part 11	<ul style="list-style-type: none"> – access control by editable passcodes – logbook entry and flag via HART in the case of configuration changes – message and logbook entry when enclosure is opened
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Service functions	current source, manual controller
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Sensor monitor	display of direct sensor signals (mV/temperature/resistance, ...)
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Relay test	manual control of the 4 relay contacts
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IrDA interface	infrared service interface for firmware updates
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Approvals

Explosion protection (A4xxB)	IECEx Ex nA II T4 / Ex tD A22 IP5X T 85 °C ATEX II 3 G Ex nA II T4 / II 3 D Ex tD A22 IP54 T85 °C FM C/US NI/II/2/ABCD/T4 / S/II,III/2/FG/T4, Type 4X C I/2/Ex nA IIC T4 / 22/Ex tD T85 °C, Type 4X US I/2/AEx nA IIC T4 / 22/AEx tD T85 °C, Type 4X
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Process Analysis Systems

Specifications – continued

Approvals – continued

Explosion protection (A4xB)	CSA	C/US	Class I,II,III Div 2, GP A,B,C,D,E,F,G T4, Type 4X
		C	Ex nA II T4 / DIP/II,III/2/EFG, Type 4X
	US	AEx nA II T4 / II, III/22/AEx tD 22, T85 °C, Type 4X	
	NEPSI	Ex nA II T4 / DIP A22 T _A ,T6	
GOST	2ExnAII T4 / DIP A22 T _A 85 °C		

Device data

Display	LC display with colored backlighting, main display, secondary display, plain-text ticker line, icons, Sensoface®, status indication, alarm indication
Keypad	keys: meas, info, 4 cursor keys, enter
Power supply	24 (-15 %) ... 230 (+10 %) V AC, 45 ... 65 Hz, < 12 VA 20.5 ... 80 V DC, < 4 W overvoltage category II, protection class II
Real-time clock	different time and date formats selectable power reserve > 5 days
EMC	EN 61326-1 (general requirements) emitted interference: class B (residential area) immunity to interference: industry EN 61326-2-3
Electrical safety	protection against electric shock by protective separation of all low-voltage circuits against mains according to EN 61010-1, CB report

Nominal operating conditions

Ambient temperature	-20 ... +55 °C
Transport/Storage temperature	-20 ... +70 °C
Relative humidity	10 ... 95 %, not condensing
Enclosure	molded enclosure, PBT/PC, glass-reinforced
Assembly	- wall mounting - pipe mounting: Ø 40 ... 60 mm, □ 30 ... 45 mm - panel mounting
Dimensions (mm)	H x W x D: 148 x 148 x 117
Cable glands	3 knockouts for cable glands M20 x 1.5 2 knockouts for 1/2" NPT or rigid metallic conduit
Control panel cutout	138 mm x 138 mm to DIN 43700
Ingress protection	IP 67/NEMA 4X outdoor
Weight	approx. 1.2 kg (1.6 kg incl. accessories and packaging)
Connections	terminals, conductor cross section max. 2.5 mm ²

*) user-defined

Stratos® Pro

Simple Installation

- wall, post/pipe, or panel mounting
- all parts are easily accessible
- large terminal compartment
- pre-installation of rear unit possible
- also suitable for rigid metallic conduits
- replaceable screw terminals
- replacement of electronics without new cabling

ZU 0274 pipe-mount kit

For assembly on vertical or horizontal pipes or posts.



ZU 0737 protective hood

Additional protection from direct weather exposure and mechanical damage.



ZU 0738 panel-mount kit

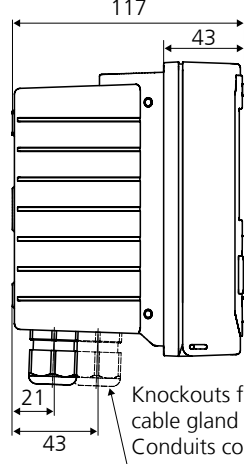
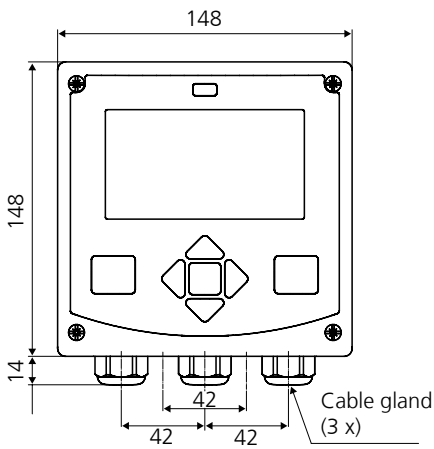
For mounting in standardized panel cutout 138 x 138 mm (DIN 43700), sealed against panel.



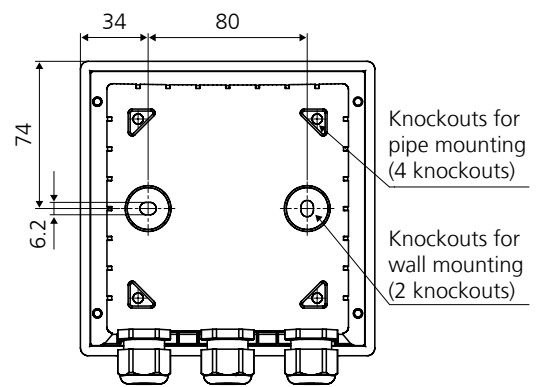
Process Analysis Systems

Dimension Drawings

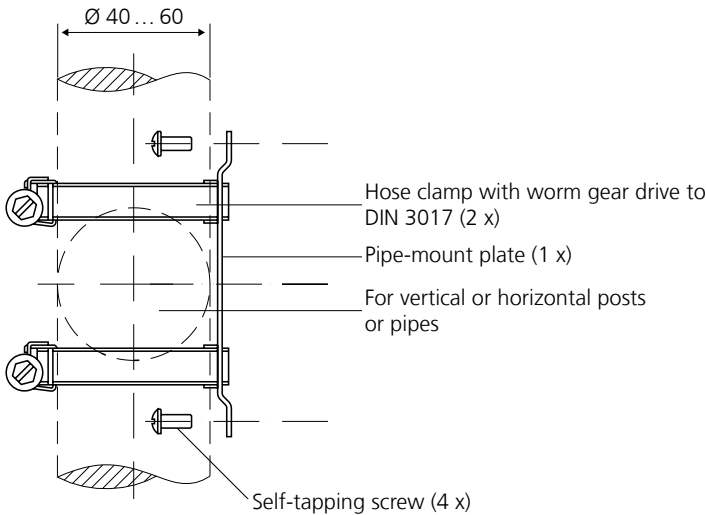
Front and side view



Rear side

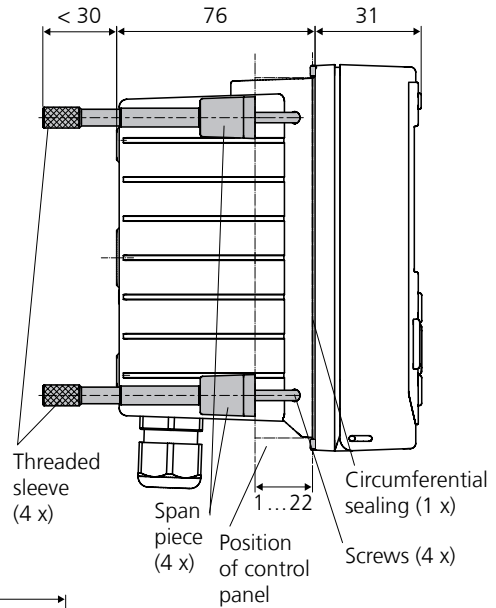


Pipe-mount kit ZU 0274

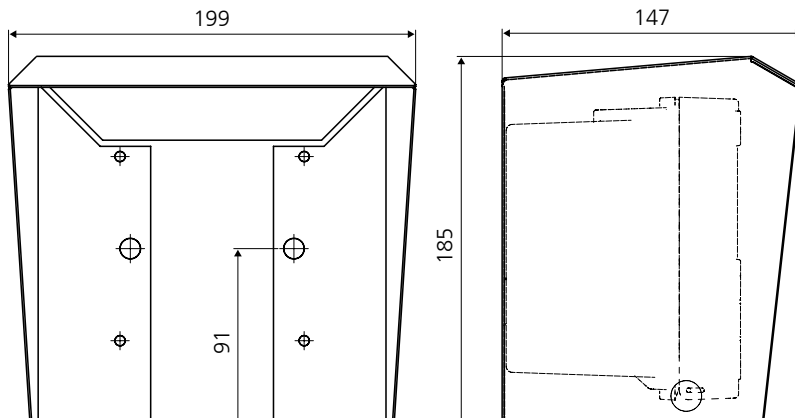


Panel-mount kit ZU 0738

Control panel cutout 138 x 138 mm (DIN 43700)



Protective hood ZU 0737



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