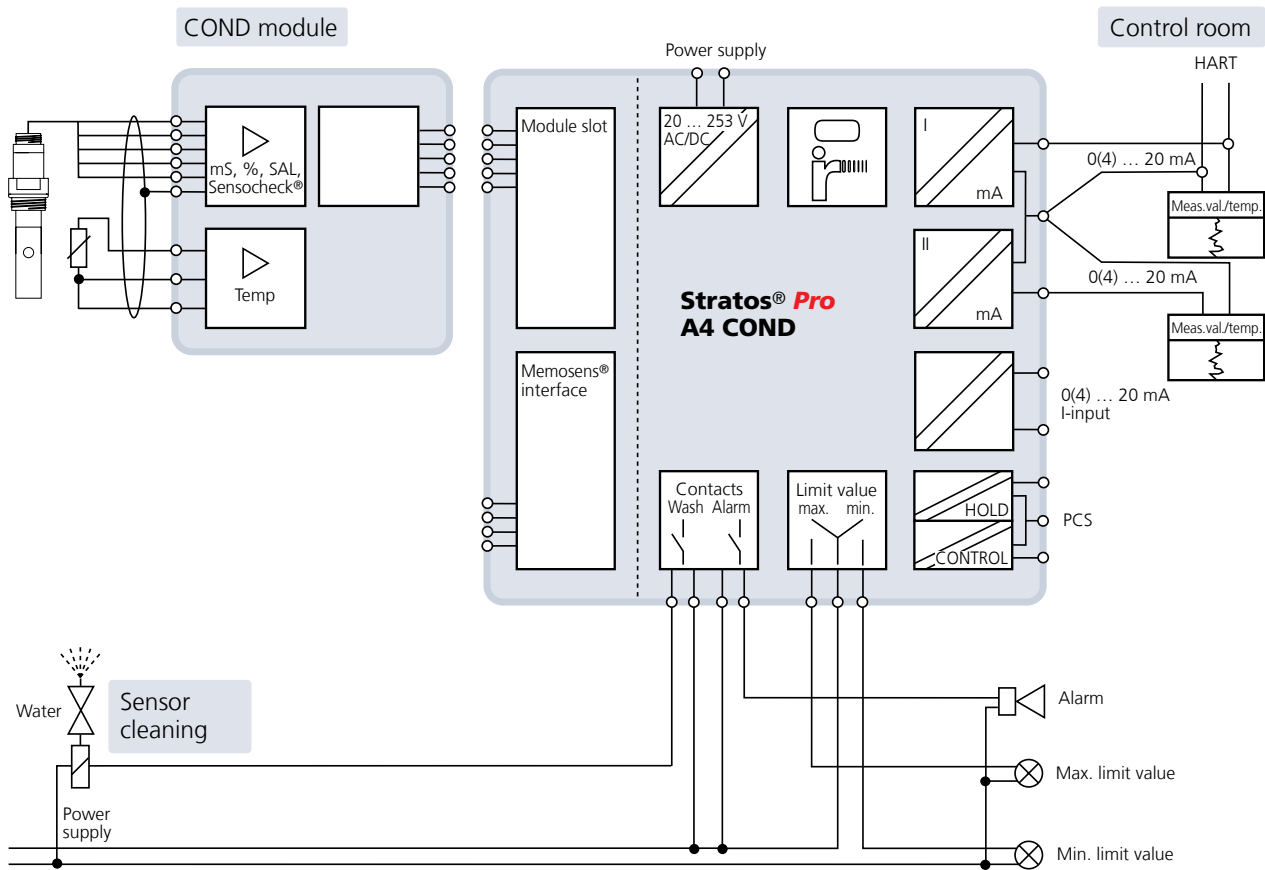


Stratos® Pro A4 COND

Connection

Connection of COND module with 2- or 4-electrode sensors. Operation of Memosens® sensors possible at the Memosens® interface.

Model used: Stratos® Pro A401N-COND/0



Terminal Assignments of Stratos® Pro COND Module

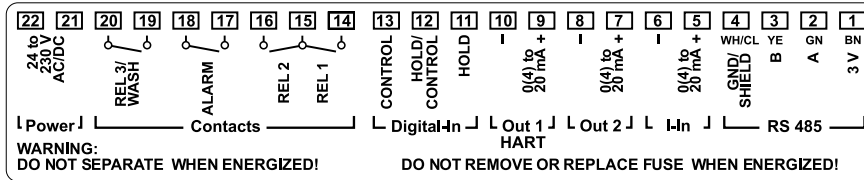
Knick >	Module
MK-COND 025 X	COND
No. 0000000	Conductivity / °C
Stratos Pro A ...	IECEX Ex
KEMA 08 ATEX 0100	
IECEX KEM08.0020	
see Control drawing 212.002-130	
D-14163 Berlin	00000/0000000/0726 0044
COND Sensor	
Temp	
S	SHIELD
R	RTD
T	RTD
D	RTD (GND)
C	
B	
A	
K	
I	
H	
G	
F	
E	
D	

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Process Analysis Systems

Terminal Assignments of Stratos® Pro 4-Wire Devices



Specifications

Inputs

Conductivity	input for 2-electrode and 4-electrode sensors	
Effective ranges	2-electrode sensors	0.2 $\mu\text{S} \cdot \text{cm} \dots 200 \text{ mS} \cdot \text{cm}$
	4-electrode sensors	0.2 $\mu\text{S} \cdot \text{cm} \dots 1000 \text{ mS} \cdot \text{cm}$
Measuring ranges*)	conductivity	0.000 $\mu\text{S}/\text{cm} \dots 999.9 \text{ mS}/\text{cm}$ 0.000 ... 99.99 S/m
	resistivity	00.00 ... 99.99 Mohms $\cdot \text{cm}$
	concentration	00.00 ... 9.99 %
	salinity	0.0 ... 45.0 ‰ (0 ... 35 °C)
Temperature compensation*) (reference temperature 25 °C)	linear 00.00 ... 19.99 %/K (user-defined reference temperature) natural waters to EN 27888 NaCl from 0 (ultrapure water) to 26 % by wt (0 ... 120 °C) ultrapure water with traces of NaCl, HCl, or NH ₃ or NaOH	
Concentration determination	NaCl	0.00 ... 9.99 % by wt (0 ... 100 °C)
	HCl	0.00 ... 9.99 % by wt (-20 ... +50 °C)
	NaOH	0.00 ... 9.99 % by wt (0 ... 100 °C)
	H ₂ SO ₄	0.00 ... 9.99 % by wt (-17 ... +110 °C)
	HNO ₃	0.00 ... 9.99 % by wt (-17 ... +50 °C)
Temperature	Pt 100 / Pt 1000 / NTC 30 kohms / NTC 8.55 kohms (Betatherm) and Ni 100	
Measuring range	Pt:	-50.0 ... +250.0 °C (-58.0 ... +482.0 °F)
	NTC:	-20.0 ... +150.0 °C (-4.0 ... +302.0 °F)
	Ni:	-50.0 ... +180.0 °C (-58.0 ... +356.0 °F)
Current input (TAN)	analog, 0/4 ... 20 mA for external temperature signal	
HOLD input, digital	0 ... 2 V (AC/DC)	HOLD inactive
	10 ... 30 V (AC/DC)	HOLD active
CONTROL input, digital	parameter set selection	0 ... 2 V (AC/DC) parameter set A 10 ... 30 V (AC/DC) 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

Stratos® Pro A4 COND

Specifications – continued

Outputs

Output 1, Output 2	0/4 ... 20 mA, max. 10 V, 22 mA for error message
Process variable*)	conductivity, resistivity, concentration, salinity, or temperature
Characteristic	linear, bilinear, or logarithmic
Output filter*)	PT ₁ filter, filter time constant: 0 ... 120 s
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
Controller type*)	pulse length controller or pulse frequency controller
USP function	water monitoring in the pharmaceutical industry (USP) with additional user-defined limit value (%), output via relay contact and HART

Sensor standardization

Operating modes	<ul style="list-style-type: none"> – input of cell constant with simultaneous display of selected process variable and temperature – input of conductivity of calibration solution with simultaneous display of cell constant and temperature – product calibration – temperature probe adjustment 10 K
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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
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Diagnostics/Service

Diagnostics functions	calibration data, device self-test, display test
Sensocheck®	polarization detection and monitoring of cable capacitance
Sensoface®	provides information on the sensor condition, Sensocheck®
Logbook (TAN)	100 events with date and time
Extended logbook (TAN)	Audit Trail: 200 events with date and time
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
Service functions	current source, manual controller
Sensor monitor	direct display of measured values from sensor for validation: resistance/temperature
Relay test	manual control of the 4 relay contacts
IrDA interface	infrared service interface for firmware updates

Process Analysis Systems

Specifications – continued

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
	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)

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

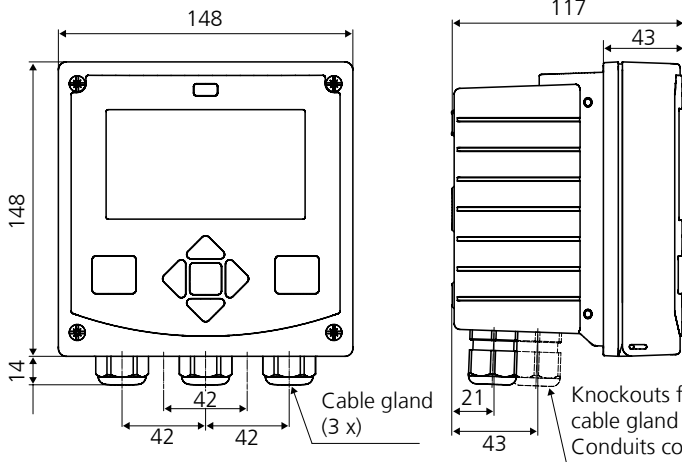
For mounting in standardized panel cutout 138 x 138 mm (DIN 43700), sealed against panel.



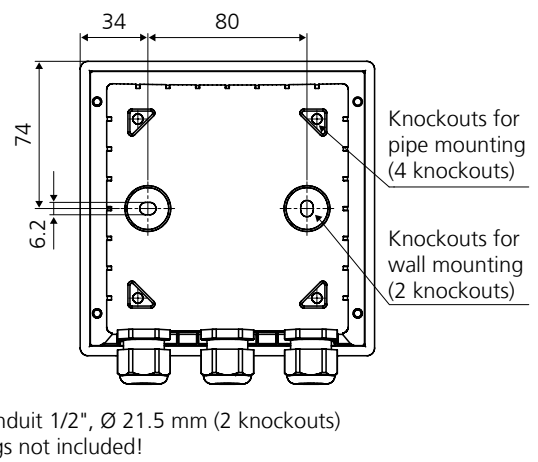
Process Analysis Systems

Dimension Drawings

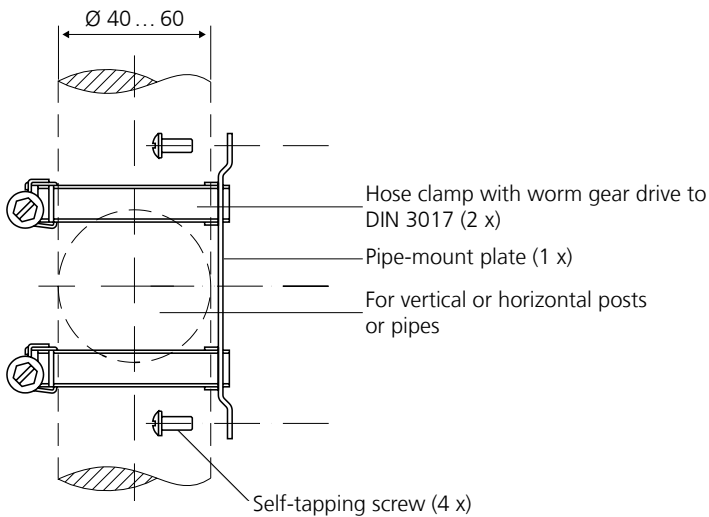
Front and side view



Rear side

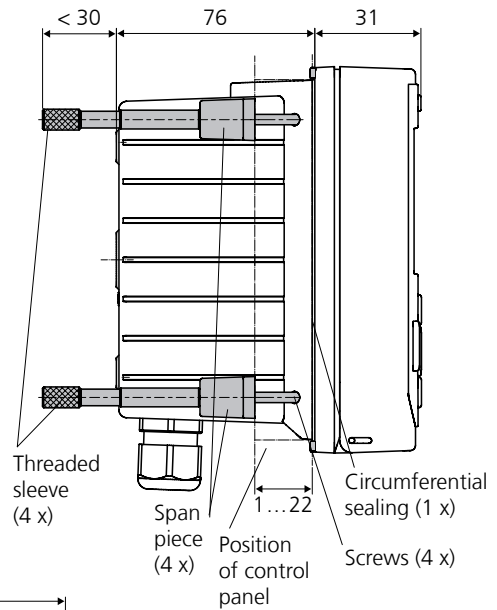


Pipe-mount kit ZU 0274

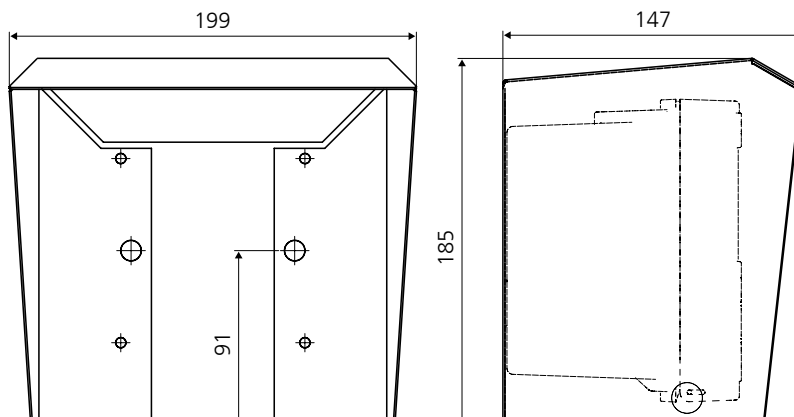


Panel-mount kit ZU 0738

Control panel cutout 138 x 138 mm (DIN 43700)



Protective hood ZU 0737



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