Industries

- Municipal waste water
- Industrial waste water
- Drinking water
- Process water

SC 200 Digital 2-channel Controller

One controller for 40+ sensors and 14 parameters
The digital 2-channel SC 200 Controller is compatible with our complete range of digital and analogue sensors. There are 40+ sensors to choose - from Ammonium to Turbidity as well as special parameters such as Oil in Water. The one-stop-shop controller and its family of sensors monitor processes for all applications in waste-water, drinking and process water. Standardisation on one controller reduces maintenance complexity, time and costs. Plus you only have one company to call - us.

Easy to extract data
To help you analyse and further improve your processes the SC 200 offers a new solution for simple data management. All logged measuring and diagnosis data can be easily extracted in XML format from the controller via the SD Card slot.

Easy to keep firmware up to date
A new legal regulation is only one of several reasons why instrumentation firmware must always be kept up to date. Aside from legal requirements we invest heavily to add new functionality, new parameters, new sensors etc. SC 200 makes this easy via the SD card slot.

One controller for all applications
HACH LANGE is the recognized leader for water analytic solutions. With the launch of the SC 200, more than 40 different analogue and digital plug & play sensors can now be combined. Due to its rugged and robust metal enclosure, the SC 200 is suitable for industrial applications virtually anywhere.

With the communication options PROFIBUS DP and MODBUS RS232 / RS485, the controller can be easily integrated into digital networks. The modular concept (one slot for a communication card of choice and two slots for input cards) makes the SC 200 stand out in terms of capability and flexibility.

SC 200 Digital 2-channel Controller

Technical Data Basic Instrument

Display
Graphic dot matrix LCD with LED backlighting

Display size
68 mm x 48 mm

Display resolution
240 x 160 pixels

Dimensions
144 mm x 144 mm x 181 mm

Weight
1.70 kg

Power requirements
100 to 240 V AC 10 %, 50/60 Hz
24 VDC -15 %/+ 20 %

Operating temperature
-20 to 60 °C , 0 to 95% RH non-condensing

Storage temperature
-20 to 70 °C , 0 to 95 % RH non-condensing

Analogue outputs
Two 0/4 to 20 mA isolated current outputs, max 550 Ω

Analogue outputs: Operational mode
Primary or secondary measurement, calculated value (dual channel only)

Analogue outputs: Functional mode
Linear, Logarithmic, Bi-linear, PID

Security levels
2

Material enclosures
Polycarbonate
Aluminium (powder coated)
Stainless Steel

Mounting configurations
Wall, Pole and Panel Mounting

Enclosure rating
NEMA4X / IP66

Relays
Four electromechanical SPDT (Form C) contacts, 1200 W, 5 A

Relays: Operational mode
Primary or secondary measurement, calculated value (dual channel only) or timer

Relays: Functional mode
Alarm, Timer, Feeder Control, PWM or Fm Control, System Alarm

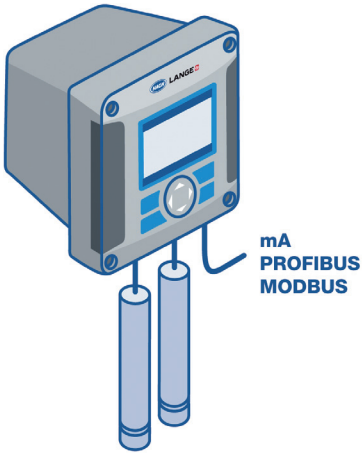
Memory backup
Flash memory

Electrical certifications
EMC - Certified CE compliant for conducted and radiated emissions (EN 50081-2) and immunity (EN 61000-6-2); General purpose - UL through ETL

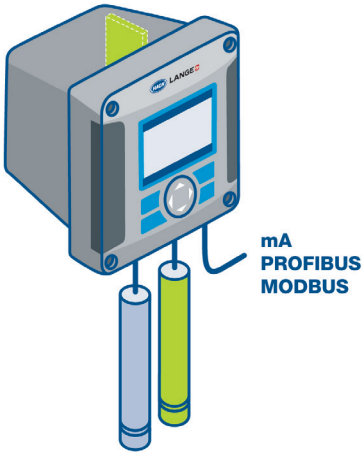
Warranty
2 years

Subject to change without notice.

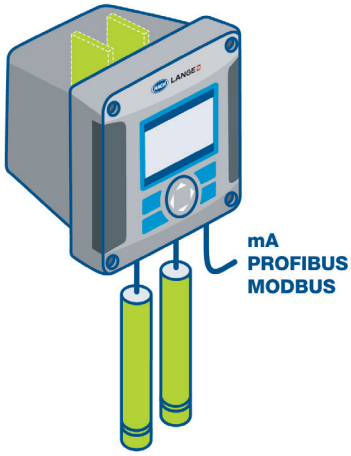
SC 200 configuration variants



Variant 1: Fully digital - for max. two SC sensors, direct plug & play



Variant 2: Combined version - one digital SC sensor and one analogue sensor with suitable sensor input card



Variant 3: Fully analogue - for max. two analogue sensors plus their input cards

SC 200 Digital 2-channel Controller

Sensor input cards

Product description	SC 200 Sensor input card for analogue pH / ORP sensors (9012900)	SC 200 Sensor input card for analogue contacting conductivity sensors (9013000)	SC 200 Sensor input card for analogue inductive conductivity sensors (9013000)	SC 200 Sensor input card mA IN signals (9012800)
Measuring ranges pH	-2.0 to 14.0 pH -2.00 to 14.00 pH			
Measuring range ORP	-2100 to 2100 mV			
Measuring ranges conductivity		0 to 2.000 µS/cm 0 to 20.00 µS/cm 0 to 200.0 µS/cm 0 to 2000 µS/cm 0 to 2.000 mS/cm 0 to 20.00 mS/cm 0 to 200.0 mS/cm	0 to 200.0 µS/cm 0 to 2000 µS/cm 0 to 2.000 mS/cm 0 to 20.00 mS/cm 0 to 200.0 mS/cm 0 to 2000 mS/cm 0 to 2.000 S/cm	
Measuring ranges resistivity		0 to 19.99 MΩcm 0 to 999.9 kΩcm		
Measuring ranges concentration			0 to 99.99 % 0 to 200.0 %	
Measuring ranges TDS		0 to 9999 ppm 0 to 9999 ppb	0 to 9999 ppm	
Signal range				0 to 25 mA
Repeatability	± 0.1 % of range	0 to 20 µS/cm, K=1: ± 0.02 µS/cm 20 to 200,000 µS/cm, K=1: ± 0.1 % of reading	> 500 µS/cm: ± 0.5 % of reading < 500 µS/cm: ± 2.5 µS/cm	
Response times	0.5 s	0.5 s	1 s	
Temperature ranges	PT100 / PT1000 -20 to 200°C NTC300 -20 to 110 °C Manual -25 to 400 °C	-20 to 200 °C	-20 to 200 °C	
Temperature accuracy	± 0.5 °C	± 0.5 °C	± 0.5 °C	
Temperature drifts	± 0.03 % of reading / °C	> 20 µS/cm: ± 0.02 % of reading / °C	> 500 µS/cm: ± 0.02 % of reading / °C	
Temperature compensation	Automatic from -20 to 110°C or manual	Automatic from -20 to 200 °C or manual	Automatic from -20 to 200°C or manual	
Temperature sensors	PT100 / PT1000 / NTC300	PT100 / PT1000	PT1000	
Temperature compensation curves	Nernst, Pure Water: Ammonium, Morpholine, user defined (linear)	Linear, Ammonium, Natural Water, user defined, none	Linear, Natural Water, user defined, none. Available curves depend on the selected type of measurement (Conductivity, Concentration or TDS).	
Sensor to controller distances (maximal)	pHD sensor: 914 m pH combination electrode with pre-amplifier: 300 m pH combination electrode without pre-amplifier: 30 m (depending on environment this distance is shorter)	Max. length: 91 m	Full-scale value 200 to 2,000 µS/cm max . length: 61 m Full-scale value 2,000 to 2,000,000 µS/cm max. length: 91 m	
Concentration curves			H_3PO_4: 0-40% HCl: 0-18% HCl: 22-36% NaOH: 0-16% $CaCl_2$: 0-22% HNO_3: 0-28% HNO_3: 36-96% H_2SO_4: 0-30% H_2SO_4: 40-80%	
Calibration methods	2-point buffer (pH only) 1-point buffer (pH only) 2-point sample (pH only) 1-point sample (pH and ORP)	Zero GLI DRY-CAL 1-point sample	Zero 1-point Cond (or Concentration or TDS)	

SC 200 Digital 2-channel Controller

Parameters and applicable sensors

Parameters	Digital sensors
Ammonium	AMTAX sc
	AMTAX indoor sc
	NH4D sc
Chlorine	9184 sc
	CLF10 / CLT10 sc
Chlorine dioxide	9187 sc
Conductivity	3798-S sc
Dissolved oxygen	LDO
	5740 sc
Nitrate	NITRATAX clear sc
	NITRATAX plus sc
	NITRATAX eco sc
	NO3D sc
Oil in water	FP360 sc
Organics	UVAS sc
Ozone	9185 sc
pH/ORP	pHD sc
	1200-S sc
Phosphate	PHOSPHAX sc
	PHOSPHAX indoor sc
Sludge level	SONATAX sc
Suspended solids	TSS sc
	TSS HT sc
	TSS VARI sc
	TSS XL sc
	TSS Titan 2 sc
	TSS Titan 7 sc

Parameters	Digital sensors
Suspended solids/turbidity, high resolution	SOLITAX ts-line sc
	SOLITAX t-line sc
	SOLITAX hs-line sc
	SOLITAX inline sc
	SOLITAX highline sc
Turbidity, high resolution	SS7 sc
Turbidity, low resolution	ULTRATURB sc
	ULTRATURB plus sc
	1720E
Turbidity, ultra low resolution	FT660 sc

Parameters	Analogue sensors
Conductivity	GLI 3400 series
	GLI 3700 series
	POLYMETRON 831X series
pH/ORP	pHD
	pH combination electrodes

SC 200 configuration

Power supply
- **0** Without power cord
- **2** EU power cord
- **3** UK power cord
- 4 Swiss power cord
- **7** 24 VDC

Communications Output
- **0** 2 x 0/4-20mA Outputs
- **1** MODBUS 232 & 485
- **3** PROFIBUS DP

Sensor Input 1
- **5** Digital (all SC sensors)
- **1** Analogue: pH / ORP / DO
- **2** Analogue: Conductivity
- **4** mA Input

Sensor Input 2
- **0** None
- **5** Digital (all SC sensors)
- **1** Analogue: pH / ORP / DO
- **2** Analogue: Conductivity
- **4** mA Input

Important:
"Sensor Input 1" has to be bigger than the "Sensor Input 2" ID
– Example: Correct = LXV404.99.xx501,
Wrong = LXV404.99.xx051

L	X	V	4	0	4	.	9	9	.					1

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Subject to change without notice.

German Sustainability Award

Top 3 Germany´s most sustainable Products and Services 2009

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