Technical data sheet

CONCEPT 2105-3 dosing pump

Universal dosing pump without display



Concept 2105-3, 230 VAC / Concept 2105-3, 24V AC/DC

The CONCEPT 2105 is a universally deployable dosing pump without display in the CONCEPT housing. It offers a wide range of operating modes, from pulse-controlled, through conductivity-controlled, up to proportional dosing with a flow meter or filling function. In addition, the pump can be used as a slave pump in dosing systems thanks to its BUS interface.

Areas of application

- Professional dishwashers
- Textile washing
- Water treatment
- Parts cleaning

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	Concept 2105-3 230 V AC Item number: 98235	Concept 2105-3 24V AC/DC Item number: 98287
Performance data		
Dosing time:	6 to 600 seconds	
Flow rate (min.)*[1]:	0.08 ml/min. (PS 138-0.8x1.6 PH, 3.7 bar max.)	
Flow rate (max.) *[1]:	250 ml/min. (PS 136-6.4x2.4 PH, 0.5 bar max.)	
Duty cycle < 1/3 speed:	100%/h	
Duty cycle > 1/3 speed:	50%/h	
Max. back pressure:	3.7 bar	
Suction height:	1.8 m	

*[1] Flow rate depends on the respective pump tube.

Electrical data		
Operating voltage:	230 VAC +/-10%	24 VAC/DC
Mains frequency:	50/60 Hz	-
Power consumption:	16 W	20 W
Input current:	80 mA	840 mA
Protection class:	IP 65	
Minimum pulse input duration $t_{min.\ pulse}$:	400 ms	
Minimum pulse input duration $f_{min.\ pulse}$:	10 Hz	
Control signal:	2 x 230 V	2x 24 V AC/DC
Connection:	Terminal in the device	

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Mechanical data	
Dimensions (W x H x D):	93.5 x 150 x 130 mm
Weight:	1200 g
Motor:	DC motor (brush type)
Pump housing color:	Anthracite
Rotor cover color:	Anthracite

Configuration	
Device:	Buttons on the device, potentiometer, jumper
Operating modes:	• One speed • One speed with "container empty" notification • Two fixed speeds • Two runtimes, status-controlled • Two runtimes, pulse-controlled • Two runtimes, pulse-controlled, with filling function • One runtime with speed 1-25%, status-controlled • One runtime with speed 1-25%, pulse-controlled • One runtime with speed 1-25%, • pulse-controlled, with filling function • One runtime, one speed 1-25%, status-controlled • One runtime, one speed 1-25%, pulse-controlled • One runtime and one speed of 1-25%, • pulse-controlled, with filling function • Interval, runtime/pause • Proportional dosing with flow meter • Proportional dosing with frequency signal • Conductivity control with ILFS 02 / ILFD 02 • Client device in a dosing system

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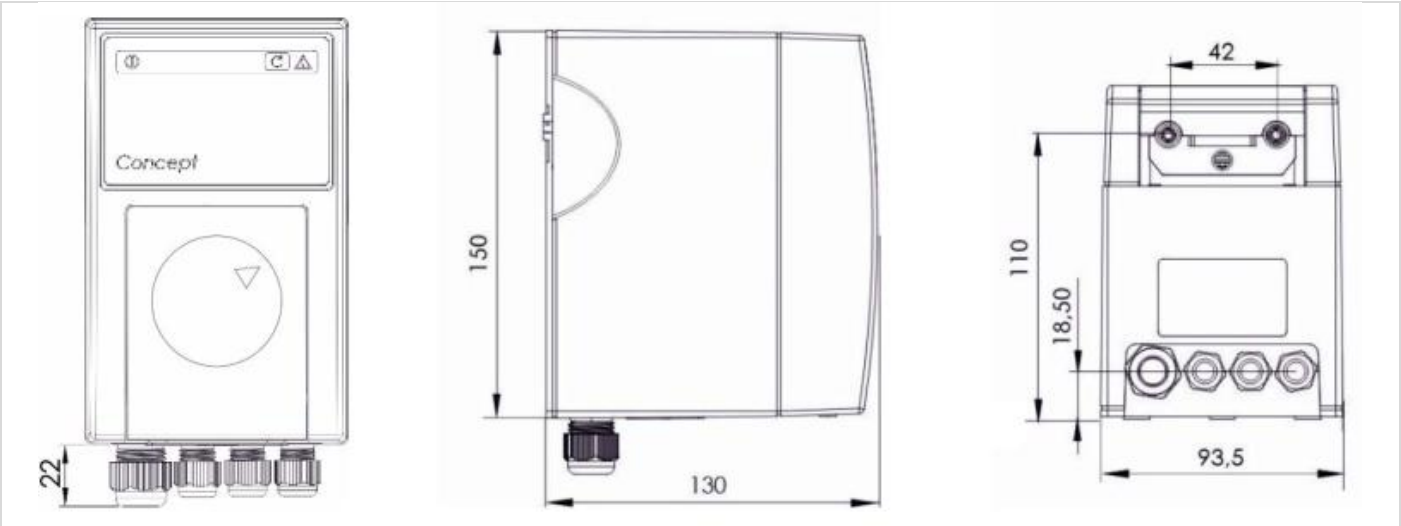
Configuration (continued)	
Adjustable flow rate ranges:	• 3.00 to 250 ml/min. • 2.00 to 150 ml/min. • 0.83 to 66 ml/min. • 0.25 to 16 ml/min. • 0.08 to 4.0 ml/min.

Ambient conditions	
Ambient temperature range:	+10 °C to +50 °C
Environmental stress:	Conforms to DIN EN 60068-2-38
Certified in accordance with	DIN EN ISO 9001:2015

Process connections & media routing (standard)	
Connection tube inner dia./outer dia.:	6 / - mm
Pump tube inner dia.:	4.8 x 2.4 mm
Tube connection:	Nozzle
Tube kit item number:	1000469
Tube material:	Ph
Tube holder color, material:	Saffron, PP
Rotor item number:	43044
Rotor:	ROT8811, yellow

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Dimensions of CONCEPT 2105-3



Product variants	
98235	Concept 2105-3 dosing pump, 230 VAC, with yellow 8811 rotor and PS 136-4.8x2.4 PH
98287	Concept 2105-3 dosing pump, 24V AC/DC, with yellow 8811 rotor and PS 136-4.8x2.4 PH
1098235	Concept 2105mcs dosing pump, 230 VAC, without rotor or tube kit

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Tube kits

Possible flow rate*1 (ml/min.)	Operating pressure (max.)	Rotor Item no.	Rotor	Pump tube Material	Pump tube Connection	Tube kit Item no.	Tube kit
3.00 to 250	0.5 bar	43086	Rotor 45-11, saffron	Si	8 mm (nozzle)	1000488	SK9911/6.4-8, 136-6.4x2.4, si, saffron
				Ph	6 (nozzle)	1002056	SK9911/6.4-6 136-6.4x2.4, ph, saffron
2.00 to 150*2	**2.0 bar**	**43044**	**Rotor 8811, yellow**	**Ph**	**6 (nozzle)**	**1000469**	**SK 9911/4.8-6 136-4.8x2.4, ph, saffron**
2.00 to 150	1.5 bar	43044	Rotor 8811, yellow	Si	6 (nozzle)	1000505	SK9911/4.8-6 138-4.8x1.6, si, saffron
				Vi	6 (nozzle)	1000468	SK9911/4.8-6 140-4.8x1.6, vi, saffron
0.83 to 66	2.0 bar	43061	Rotor 47-13, blue	Ph	4x1 (terminals)	43300	SK9911/4.8-4x1 140-4.8x1.6, ph, blue
				Ph	4x1 (terminals)	43301	SK9911/3.2-4x1 138-3.2x1.6, ph, blue
				Vt	4x1 (terminals)	43307	SK9911/3.2-4x1 178-3.2x1.6, vt, saffron
0.25 to 16	3.0 bar	1002463	Rotor 1511, blue FR 0.8 to 2.4, chlorine resistant	Ph	4x1 (terminals)	43302	SK9911/1.6-4x1 138-1.6x1.6, ph, blue
				Ph	4x1 (terminals)	43303	SK9911/0.8-4x1 138-0.8x1.6, ph, blue
0.08 to 4.0	3.7 bar			Ph	4x1 (terminals)	43304	SK9911/2.4-4x1 138-2.4x1.6, ph, blue
				TGG	4x1 (terminals)	1000458	SK9911/2.4-4x1 138-2.4x1.6, TGG, blue

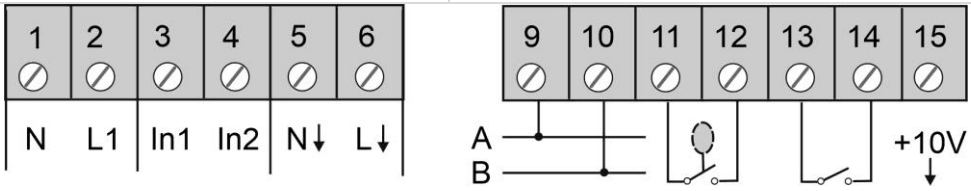
*1 Duty cycle 50%/ h at more than 1/3 of the max. flow rate in relation to the respective pump tube.

*2 Standard hose kit (delivery condition).

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Concept 2105-3, 230 VAC, electrical connection

230V~ mains voltage	Safety Extra Low Voltage



Terminal	Description	Use
1	Neutral conductor N	Operating voltage 230 V~
2	Live L1	
3	In1	Control input 1, 230V~, **in phase with L1**!
4	In2	Control input 2, 230V~, **in phase with L1**!
5	Neutral conductor N	Connection of an external 230 V~ warning device (Warning signal SWB 8009-LED, SWBH-LED)
6	L	
9	A	SD bus connection
10	B	
11	GND	Suction lance float switch connection, floating *1
12	SLN	
13	GND	Connection of sensors and N/O contacts (see below)
14	Sens.	
15	10V	Output voltage approx. +10 V DC

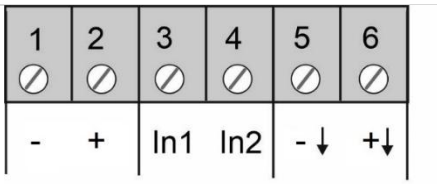
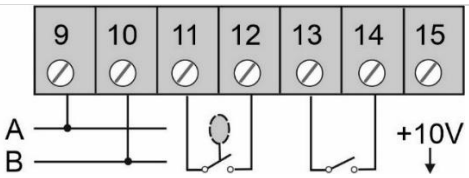
*1 When delivered, terminals 11 and 12 are jumpered. Do not remove the jumper when operating without a suction lance!

Terminals 13, 14, and 15 must be connected as follows:

Component	Terminals	Info
Floating N/O contact	13 & 14	
Frequency signal	13 & 14	Terminal 15 is used to supply power to connected sensors (e.g. ILFS02) or supplementary devices (e.g. CtLog2013)
Flow meter	13 & 14	
Conductivity sensor ILFS 02	13 & 14	

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Concept 2105-3, 24V AC/DC, electrical connection

24V mains voltage	Safety extra low voltage
	

Terminal	Description	Use
1	Minus ⊖ / ~	Operating voltage 24 V AC/DC
2	Plus ⊕ / ~	
3	In1	Control input 1, 24V, same potential as terminal 2
4	In2	Control input 2, 24V, same potential as terminal 2
5	Minus ⊖ / ~	Connection of an external warning device, 24 V AC/DC
6	Plus ⊕ / ~	(Warning signal SWB 8009-LED, SWBH-LED)
9	A	SD bus connection
10	B	
11	GND	Suction lance float switch connection, floating [1)]
12	SLN	
13	GND	Connection of sensors and N/O contacts (see below)
14	Sens.	
15	10V	Output voltage approx. +10 V DC

Terminals 13, 14, and 15 must be connected as follows:

Component	Terminals	Info
Floating N/O contact	13 & 14	
Frequency signal	13 & 14	Terminal 15 is used to supply power
Flow meter	13 & 14	To connected sensors (e.g. ILFS02)
Conductivity sensor ILFS 02	13 & 14	Or supplementary devices (e.g. CtLog2013)

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Accessories

Item no.	Description	Details
45001	Product inlet 6mm	Tank inlet nozzle TEST M 10
996026	Product inlet 90° PE 4/6mm	TEST M 10/90-4x1, blue
1002632	Non-return valve suitable for alkalis	NRV EG-6 AG-G1/8, PVDF
45034	Non-return valve	NRV EG-4x1 AG-G1/8, V2, EP380
18036	Suction lance with float switch	SLNS9608-500mm
18046	Suction lance	SLNS9608-600mm
18021	Suction lance	SLNS9608-1000mm
1000705	Inductive conductivity sensor	ILFS 02 - Data mode, 5 m cable, S
1002247	PVC tube	Tube 5x1.5, 1m, PVC, transp. 100m roll
1004717	PVC tube	PVC fabric tube, 8x3, 50m roll
1003858	Cable set 5x0.5-7.5m	KABS-A 5x0.5-7.5m BEH sw vfertig
1002530	Control cable	Connection cable, 7x0.75 LiYY
45007	Tube clip	Tube clip 08-12 mm (1 pc.)
45008	Tube clip	Tube clip 10-16 mm (1 pc.)
1002619	Flow meter	DFM flow meter R3/4
95027	Flashing warning light	SWBH LED 230V
996005	Intake weight	Intake weight 4x1, compression fitting
20026	Intake weight	Intake weight, internal 6mm

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