

PUMPS, CONTROLLERS & SYSTEMS

Chemical Metering Pumps
Water Quality Controllers
Transmitters
Ultrasonic Cleaners
Liquid Control Systems



Contents

Chemical Metering Pumps	03
Water Quality Controllers	11
Sensors & Systems	18

>> PUMPS

Chemical Metering Pumps

Features

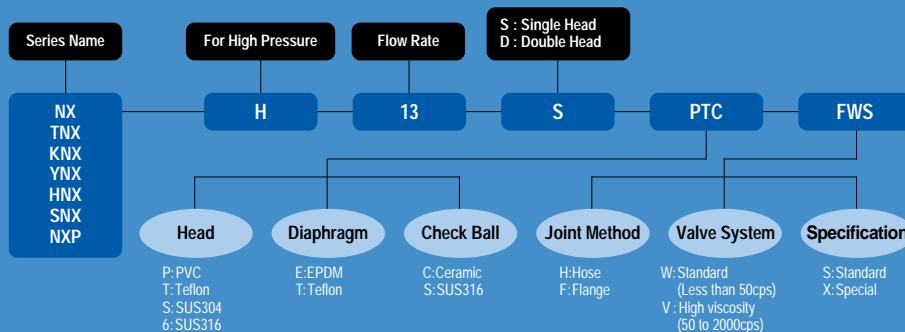
1. Advanced Quality & Lowest Prices.
2. Quick Delivery with prepared stocks of all models.
3. Easy Maintenance and lowest maintenance fees when repairing.
4. Flow-rate adjustable easily while running.
5. No noise, Excellent durable.
6. Correct flow-rate by dial.
7. Connection type is available among Flange, Hose and Union Type according to conditions of installed places.
8. Liquid-end materials can be chosen among a variety of materials ; Polyvinyl Chloride, Polypropylene, Stainless steel, PVDF, Teflon, Polyethylene according to liquid conditions to handle.



Liquid-end Materials

Parts(Name) / Liquid-end Materials	PTC	STS	6T6	TTC
Pump Head	PVC	SUS304	SUS316	Teflon
Diaphragm	PTFE+EPDM	PTFE+EPDM	PTFE+EPDM	PTFE+EPDM
Check ball	Ceramic	SUS316	SUS316	Ceramic
Ball Seat	PVC	SUS304	SUS316	PTFE
Ball Guide	PVC	SUS304	SUS316	PTFE

Model Code



Electronic Solenoid Pumps

SAMSAN

EX Series

EX Series

SOLENOID PUMPS

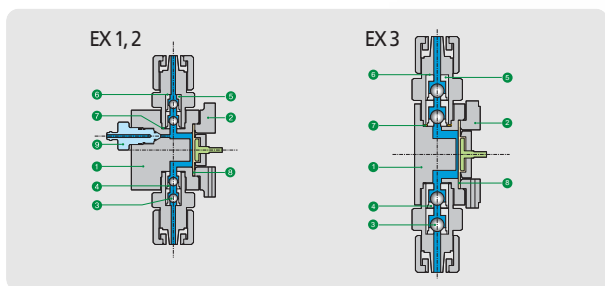
Features

- High accuracy by double check valve and control of stroke length and rate.
- A proportional control by pulse signal or DC 4 ~ 20mA.
- Simple structure and easy maintenance by reduced parts.
- High durability by various, tested and proven wet-end parts materials.
- Solenoids designed to dissipate heat for longer circuit board life.
- Superior diaphragms designed by Teflon-faced and metal reinforced.
- Compact size that's small, quiet and light.
- Attached with Air Release for improving of injection efficiency.

Applications

- Cooling water treatment.
- Boiler water treatment.
- Water clarification.
- Disinfection of drinking water.
- Taste, color and odor control.
- Swimming pools.
- Proportional injections with all kinds of controllers.
(pH, ORP, Residual Chlorine, Flow Meter, etc)
- Chemical injections for water and wastewater treatment.

Wet-end Parts Materials



Part Name	Material	Part Name	Material
① Pump Head	PVC	⑥ Gasket	PTFE
② Support-Ring	PVC	⑦ O-Ring	FKM
③ Valve	Alumina Ceramic	⑧ Diaphragm	PTFE coated EPDM
④ Valve Seat	FKM	⑨ Air Vent	PVC
⑤ Valve Guide	PP		



Model Code

EX □ 1 - PTC - HWS

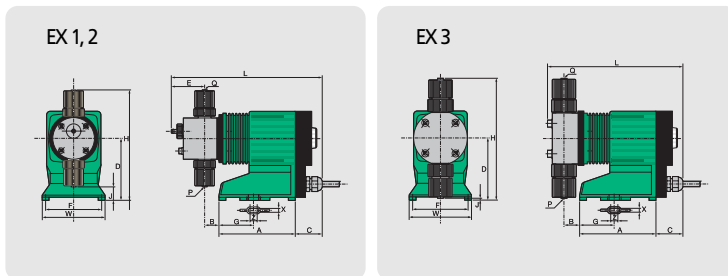
①	②	③	④
Series Name	None : Standard P : Pulse Signal M : Analog Signal (DC4~20mA)	P : PVC (pump Head) T : Teflon(Diaphragm) C : Ceramic (Check Ball) ※Please ask us for other materials	Type S : Standard X : Special (Material / Connection type / etc.)

Specifications

Specifications	Model	EX1	EX2	EX3
Max. Discharge Capacity	Q/hr	2.4	6	15
	m ³ /min	40	100	250
Max. Discharge pressure(Mpa/kg/cm ²)		1.0/10	0.4/4	0.2/2
Stroke Rate		0 ~ 360 spm		
Power Supply		AC220~240V, Single phase, 50Hz/60Hz Dual		
Connection(mm)		Ø6 × Ø10		Ø8 × Ø12
Option		Siphon Check Valve, Foot Valve, Hose		

Specifications

Model	A	B	C	D	E	F	G	H	J	L	W	X	Z	P&Q Tubing
EX1	110	22	39	90	48	80	50	160	20	218	90	5	10	Ø6 × Ø10
EX2	110	24	39	90	-	80	50	177	3	196	90	5	10	Ø8 × Ø12



Chemical Metering Pumps

TNX Series

TNX Series

COMPACT TYPE

Features

- High precision valve structure
- Simple discharge volume control with dial while running

Specifications

Dial Adjustment Type

Specifications	Model	TNX-50		TNX-100		TNX-150		TNX-300		TNX-600		TNX-1000	
		S	G	S	G	S	G	S	G	S	G	G	
Max. Discharge Capacity (cc/min)	50Hz		55		100		167		350		642	900	
	60Hz	50	66	100	120	150	200	300	420	600	770	1080	
Max. Discharge Pressure (MPa)		0.7	1	0.5	1	0.3	0.5	0.3	0.3	0.2	0.3	0.3	
Connection (mm)	Hose	6 φ ×10 φ										8 φ ×12 φ	
	Flange	15A (Hose Flange Type)											
Motor	SPM	50Hz	34	38	67	75	34	38	67	75	67	75	83
		60Hz	41	45	80	90	41	45	80	90	80	90	100
Approx. Weight	Single	S: 3.5kg G: 3.8kg									S: 3.7kg G: 4.0kg		4.0kg

Standard Accessories

Name	Q'ty
Siphon Check Valve	1EA
Foot Valve	1EA
Hose	3m

Name	Q'ty
Anchor Bolt / Nut	2 Sets
Manual	1 Copy

. Applicable for end-mat' ls PTC and hose type only



S type



G type

TNX Series

DOUBLE / TRIPLE HEAD

Features

- You can use multiplex pump for the injection of different liquids or for the extension of discharge volume.
- Effectual no-pulsation available.
- Proportional control with 2-3 kinds of liquids is possible.
- In case of attaching with big and small heads, Precise control of discharge volume is possible.



Specifications

Specifications	Model	TNX-50D	TNX-100D	TNX-150D	TNX-300D	TNX-600D	TNX-1000D	
		TNX-50T	TNX-100T	TNX-150T	TNX-300T	TNX-600T	TNX-1000T	
Max. Discharge Capacity (cc/min)	50Hz	55 ×2	100 ×2	167 ×2	350 ×2	642 ×2	900 ×2	
	60Hz	66 ×2	120 ×2	200 ×2	420 ×2	770 ×2	1080 ×2	
Max. Discharge Pressure (MPa)	50Hz	55 ×3	100 ×3	167 ×3	350 ×3	642 ×3	900 ×3	
	60Hz	66 ×3	120 ×3	200 ×3	420 ×3	770 ×3	1080 ×3	
Connection (mm)	15W	0.5					0.3	0.2
	25W	1.5		1		0.5	0.3	
Motor	SPM	50Hz	38	75	38	75	75	83
		60Hz	45	90	45	90	90	100
Approx. Weight	Double	AC220V / 1 φ / 50Hz,60Hz dual, Geard Motor (TESC)					5.8kg	
							6.2kg	
Approx. Weight	Triple						8.0kg	
							8.6kg	

Accessories

- Siphon Check Valve



Chemical Metering Pumps

NX / KNX Series

NX Series

NO NOISE, EXCELLENT DURABLE PUMP

Features

- For high pressure and viscosity
- Constant discharge volume with silent gear motor

Specifications

Specifications		Model	NX(H)-30	NX(H)-60	NX(H)-120	NX(H)-300	NX-600	NX-1200	NXH-1000	NX-2000
Max. Discharge Capacity (cc/min)	50Hz		29	60	135	280	510	960	820	1,650
	60Hz		36	75	170	350	640	1,200	1,020	2,050
Max. Discharge Pressure (MPa)			1(1.5)	1(1.5)	0.5(1)	0.5(1)	0.7	0.5	1	0.5
Connection (mm)	Hose		6 φ × 10 φ				8 φ × 12 φ		10 φ × 15 φ	
	Flange		15A							
Motor	SPM(50/60)		26/32	49/62	26/32	49/62	27/34	49/62	26/32	49/62
	Out-Put		15W(25W)				40W		60W	
	Standard		AC220V / 1 φ / 50Hz, 60Hz / 15W In Door				AC220V / 1 φ / 50Hz, 60Hz / 40W In Door		AC220V / 1 φ / 50Hz, 60Hz / 60W In Door	
Approx. Weight			3.7kg		3.8kg		5.0kg		14.0kg	

Standard Accessories

Name	Q'ty
Siphon Check Valve	1EA
Foot Valve	1EA
Hose	3m

Name	Q'ty
Anchor Bolt / Nut	2 Sets
Manual	1 Copy

- Applicable for end-mat 'ls PTC and hose type only



KNX Series

Easy maintenance, Suitable for water And Waste Water treatment

Features

- You can choose variable connection type
- High durable diaphragm designed by ourself

Accessories



● Relief Valve



● Back Pressure Valve



● Air Chamber

Specifications

Specifications		Model	KNX-13	KNX-23	KNX-33	KNX-53	KNX-73
Max. Discharge Capacity (cc/min)	50Hz		960	1,760	3,000	4,300	6,000
	60Hz		1,300	2,300	3,900	5,600	7,800
Max. Discharge Pressure (MPa)			1	0.8	0.5	0.3	0.3
Connection (mm)			15A Flange			25A Flange	
Motor	SPM(50/60)		46/58	92/116	46/58	70/88	92/116
	Standard		AC200V / 3 φ / 50Hz, 60Hz / 0.2kw				
Approx. Weight			14.5kg			15.0kg	



Chemical Metering Pumps

YNX Series

YNX Series

SUITABLY DESIGNED PUMP IN SMALL SPACE

Features

- Easily installation by compact design
- Popular type suitable in any purposes



Specifications

Specifications	Model	YNX-80	YNX-150	YNX-300	YNX-600	YNX-1500	YNX-13	YNX-23	YNX-33	YNX-53	YNX-73
	Max. Discharge Capacity (cc/min)	50Hz	80	170	340	650	1,540	1,100	2,160	3,200	5,050
Max. Discharge Pressure (MPa)		100	210	410	790	1,850	1,320	2,600	3,870	6,060	7,800
Connection(mm)	Hose	Soft PVC 6 φ~10 φ		Soft PVC 8 φ~12 φ		Soft PVC 10 φ~15 φ			None		
	Flange	15A Flange						25A Flange			
Motor	Standard	· AC 220V~480V · 50/60Hz Dual · 3 φ / 0.2kW									
Approx. Weight		15.5kg	16kg	16.5kg				17kg			

Chemical Metering Pumps

HNX / SNX Series

HNX Series

HORIZONTAL TYPE

Features

- Explosion proof motor (eG₃ or D₂G₄) attachable
- Solid installation as horizontal type



Specifications

Specifications		Model	HNX-13	HNX-23	HNX(H)-33	HNX(H)-73
Max. Discharge Capacity (cc/min)	50Hz		960	1,760	3,000	6,000
	60Hz		1,300	2,300	3,900	7,800
Max. Discharge Pressure (MPa)			1	0.8	0.5(1)	0.3(0.7)
Connection (mm)			15A Flange		25A Flange	
Motor	SPM(50/60)		46/58	92/116	46/58	92 / 116
	Standard		AC220V~480V / 50Hz, 60Hz Dual / 3 φ / 0.2kw			
	Option		Explosion Proof Type (eG ₃ or D ₂ G ₄), 0.4kw, 0.75kw			
Approx. Weight			30kg		33kg	

SNX Series

BIG CAPACITY PUMP

Features

- Big capacity type suitable in big process line
- Big capacity, but correct discharge volume



Specifications

Specifications		Model	SNX-14	SNX(H)-24	SNX-24D
Max. Discharge Capacity (cc/min)	50Hz		8,600	17,000	38,000
	60Hz		10,800	22,000	48,000
Max. Discharge Pressure (MPa)			0.7	0.3 (0.7)	0.2 (0.3)
Connection (mm)			40A Flange		
Motor	SPM(50/60)		46/58	92/116	92/116
	Standard		AC220V, 380V Dual / 3 φ / 60Hz / 0.75kw (1.5kw)		
	Option		Explosion Proof Type (eG ₃ or D ₂ G ₄), 50Hz		
Approx. Weight			50kg		75kg

Plunger Pumps

NXP Series

NXP Series

PLUNGER PUMP

Features

- High pressure injection to 500 kg /cm² (50MPa)
- High precision control injection less than 5cc/min
- Very simple and economical type(Applied in YNXP Series)
- Explosion proof motor(eG₃, D:G₃) attachable(Applied in HNXP Series)

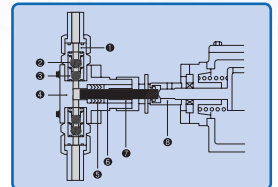
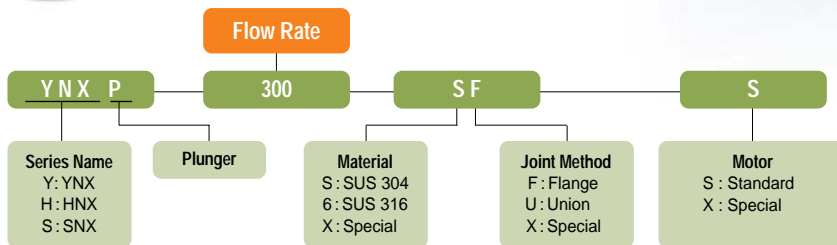
Liquid - end materials

Parts	PUMP HEAD	CHECK BALL	BALL GUIDE	BALL SEAT	UNION NUT	JOINT	PACKING	PLUNGER
Materials	SUS 304	SUS 304	SUS 304	SUS 304	SUS 304	SUS 304	PTFE	SUS 304
	SUS 316	SUS 316	SUS 316	SUS 316	SUS 316	SUS 316		SUS 316



- 1 First joint
- 2 Valve seat
- 3 Check ball
- 4 Pump head
- 5 V-packing
- 6 Plunger
- 7 Packing holder
- 8 Flexible joint

Model Code



Specifications

■ YNXP SERIES

Specifications		Model	YNXP-5	YNXP-10	YNXP-20	YNXP-70	YNXP-100	YNXP-300	YNXP-700
Max. Discharge Capacity (cc/min)	50Hz		3.9	10.5	23.6	63	93.4	291.7	656.7
	60Hz		4.7	12.6	28.3	75.6	112.1	350	788
Max. Discharge Pressure (MPa)			5	3	3	3	3	2	1
Connection (mm)			PT1 / 8" or 15A Flange				PT1 / 4"	PT 3 / 8" or 15A Flange	
Motor		Standard	50 / 60Hz Dual AC 220 ~ 480V 3 φ / 0.2kw						

Specifications

■ HNXP SERIES

Specifications		Model	HNXP-5	HNXP-10	HNXP-20	HNXP-70	HNXP-100	HNXP-300	HNXP-700	HNXP-2000
Max. Discharge Capacity (cc/min)	50Hz		3.9	10.5	23.6	63	93.4	291.7	656.7	2,190
	60Hz		4.7	12.6	28.3	75.6	112.1	350	788	2,628
Max. Discharge Pressure (MPa)			10	5	5	5	5	4	2	1.3
Connection (mm)			PT1 / 8" or 15A Flange				PT1 / 4"	15Flange or PT 3 / 8"		PT1/2" or 25A Flange
Motor		Standard	AC220V ~ 480V / 50Hz, 60Hz Dual / 3 φ / 0.2kw							
		Option	Explosion Proof (eG ₃ / D:G ₃)							

Specifications

■ SNXP SERIES

Specifications		Model	SNXP-5(H)	SNXP-300(H)	SNXP-700(H)	SNXP-1000(H)	SNXP-23(H)
Max. Discharge Capacity (cc/min)	50Hz		3.65	262.5	590.8	1,050.8	2,102.5
	60Hz		4.38	315	709	1,261	2,523
Max. Discharge Pressure (MPa)			30 (50)	10 (20)	5 (10)	3 (6)	0.7 (1.5)
Connection (mm)			PT1 / 8" or 15A Flange	PT 3 / 8" or 15A Flange			PT1/2" or 25A Flange
Motor		Standard	AC 220 / 380V Dual / 3 φ / 60Hz / 0.75kw (1.5kw)				
		Option	Explosion Proof (eG ₃ / D:G ₃)				

Bellows Pumps

BX Series

BX Series

BELLOWS PUMPS

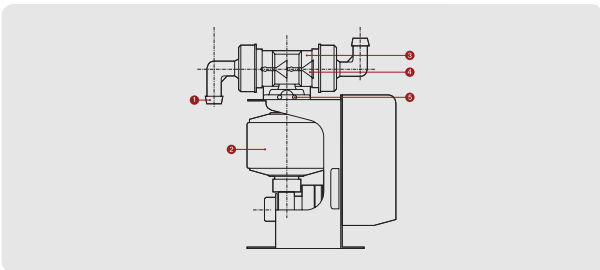
Features

- **High accuracy**
Discharge accuracy is $\pm 1.5\%$ at max. stroke length with clean water.
- **Flow rate adjustment**
Flow rate is adjustable by stroke length adjustment.
- **An instant stop is possible**
By attaching of synchronous motor, when switching off, it will be immediately stopped.
- **Long service life**
Polypropylene Bellows with excellent flexible capability provides a long life of millions of operating cycles.
- **Dry running is possible**
- **Self priming is possible**
Within 1M at 25°C, clean water.
- **Excellent corrosion resistance**
By various wet-end parts materials.
- **Handling liquid temperature**
Applicable for less than 60°C liquid temperature.

Applications

- Automatic photo developing machine for color film, x-ray film, micro film etc.
- Injection of food additives, syrups of high viscosity, etc.
- Etching & cleaning for printed circuit board.
- Acid & alkali neutralization, coagulant injection for water and wastewater treatment.
- Injection of various chemicals of Detergents, Bleaches, Dyestuffs, etc.
- Test equipments of laboratory.
- Medical instruments and equipments.

Wet-end Parts Materials



Parts Name	Material
① Nipple	P.P
② Bellows	P.P
③ Pump Head	P.P
④ Perfect Valve	P.P, EPDM
⑤ O-Ring	EPDM

Durability of parts

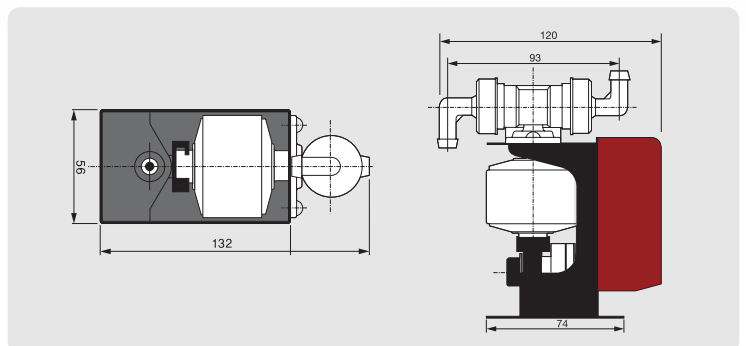
Bellows	Perfect Valve	Motor
150days	3,000hrs	3,000hrs

Specifications

Specifications	Model	BX250	
	Max. Discharge Capacity (cc/min)		208
Max. Discharge pressure (kg/cm ²)		0.1	
Connection (I.D. φ)		9	
Motor (W)		4/3.5, 50/60Hz, AC220/240V	



Specifications



>> Controller

Samsan Water Quality Controllers

Features

Advanced SAMSAN CROWN CONTROLLER with microprocessor.

Condensed in a compact DIN size (96×96mm), versatile functions provide more simplicity in operation and more efficiency in performance, in addition to accurate monitoring results.

With the appropriate sensors and accessories, SAMSAN CROWN CONTROLLER can serve as the most suitable and cost effective monitoring system to meet process, waste water and control applications.

1. With microprocessor control functions and design of one touch button, you can get more effective, reliable data and very simple setting.
2. Designed for using out-put of signal and alarm(DC 4-20mA or 1-5V and others).
3. With 3 Digit Digital Display, Reading & Setting are very simple by appearance of each message.
4. Isolator is equipped for transmission of stable data with isolated DC4-20mA, 1-5V output and you can connect with personal computer and data logger directly.
5. Designed to set high and low alarm for controlling of water quality in process, waste water and your applications.
6. Equipped with Automatic Temperature Compensation for more accurate monitoring results and appearance.
7. DIN (96 × 96mm)size for simple installation and maintenance.
8. Equipped with power switch for protection of controller by ON/OFF of power supply while setting or A/S.
9. Equipped with EEPROM, SAMSAN CONTROLLER can hold all set values of preset parameters while power is OFF and when power become ON, they can continue to measure and monitor with all values set before.



Controllers

pH / ORP Controllers

pH controllers

CRN-96PD (Digital)



Specifications

Specifications	Model	Digital
	CRN - 96 PD	
Range	0.0 ~ 14.0pH	
Sensitivity Adjustment	0.1 ~ 4.0pH (± 2.0 pH)	
Shift	± 2.0 pH	
Accuracy	0.1pH ± 1 digit	
Ambient Temp.	-5°C ~ 45°C	
Output	DC4 ~ 20mA (option : Isolation)	
Alarm	High, Low Relay (1a1b)	
Panel Cut	92 (W) \times 92 (H) mm	
Power Source	AC100 / 220V $\pm 10\%$, 50 / 60Hz	

CRN-96 PA (Analog)



Specifications

Specifications	Model	Analog
	CRN - 96 PA	
Range	0.0 ~ 14.0pH	
Sensitivity Adjustment	± 0.1 pH	
Accuracy	± 0.2 pH	
Ambient Temp.	-5°C ~ 45°C	
Output	DC4 ~ 20mA (option : Isolation)	
Alarm	High, Low Relay (1a1b)	
Panel Cut	92 (W) \times 92 (H) mm	
Power Source	AC100 / 220V $\pm 10\%$, 50 / 60Hz	

Accessories

● SUBMERSIBLE HOLDER



■ SH-10

Very suitable to use constantly and for long time due to self-filling type by atmospheric pressure

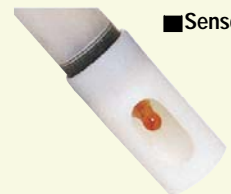
● CONNECTOR BOX



■ SCB-10

In over than 3m between the controller and the submersible holder with sensor, Install the connector box near the submersible holder and in that case surely connect with exclusive cable.

● COMBINATION ELECTRODES



■ Sensors



ORP controllers

CRN-96 OD (Digital)



Specifications

Specifications	Model	Digital
		CRN - 96 OD
Range		±999mV (option 0 ~ 999mV)
Sensitivity Adjustment		1 ~ 500mV (±250mV)
Shift		±200mV
Accuracy		10mV±1Digit
Ambient Temp.		-5° ~ 45°C
Output		DC4 ~ 20mA (option : Isolation)
Alarm		High, Low Relay (1a1b)
Panel Cut		92 (W) × 92 (H) mm
Power Source		AC100 / 220V ±10%, 50 / 60Hz

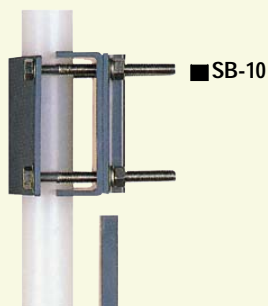
CRN-96 OA (Analog)



Specifications

Specifications	Model	Analog
		CRN - 96 OA
Range		±700mV
Sensitivity Adjustment		±10mV
Accuracy		±10mV
Ambient Temp.		-5° ~ 45°C
Output		DC4 ~ 20mA (option : Isolation)
Alarm		High, Low Relay (1a1b)
Panel Cut		92 (W) × 92 (H) mm
Power Source		AC100 / 220V ±10%, 50 / 60Hz

● BRACKET



● CABLE



■ SC-10

Exclusive cable for pH controller that can be isolated from any static inducted noises.

■ Calibration set

pH 7 powder (for 500cc) 1Pack
 pH 4 powder (for 500cc) 1Pack
 KCl powder (for 500cc) 1Pack
 In case of assembly with sensor,
 KCl solution will be filled inside the holder



Dissolved Oxygen

CRN-96D



Specifications

Specifications	Model	Digital CRN - 96 D
Range		0.0 ~ 15.0 or 0.0 ~ 20.0ppm
Sensitivity Adjustment		0.1 ~ 1.0ppm (±0.5ppm)
Shift		±2.0ppm
Accuracy		±2% Full Scale
Ambient Temp.		-5° ~ 45° C
Output		DC4 ~ 20mA (option : Isolation)
Alarm		High, Low Relay (1a1b)
Panel Cut		92 (W) × 92 (H) mm
Power Source		AC100 / 220V ± 10%, 50 / 60Hz

Accessories

● CHIP

■ 5401



● PROBE



Specifications

Specifications	Model	Chip for CRN - 96D
Type		Cartridge Change & Disposal Type
Response		90% response within 60 seconds
Measuring Liquid		Temp. : 0 ~ 40° C Pressure : 0 ~ 1.0kg/cm ² (0 ~ 0.1MPa) Possible to measure in the depth of water 10m Flow speed : over than 25cm/sec
Membrane		Mat'l : PTFE, Thickness : 25µm
Probe		SP-20

■ SP-20

1. Type : Submersible Type or Flow-through Type
2. Measuring Liquid Temp: 0 ~ 40°C
3. Liquid-end mat'l: PVC

Residual Chlorine

CRN-96R



Specifications

Specifications	Model	Digital CRN - 96 R
Range		0.0 ~ 2.0ppm (option : 0 ~ 5 / 10.0ppm)
Sensitivity Adjustment		0.1 ~ 0.6ppm (±0.3ppm)
Shift		±0.5ppm
Accuracy		±3% Full Scale
Ambient Temp.		-5° C ~ 45° C
Output		DC4 ~ 20mA (R.L.O - 500 µ), DC1 ~ 5V
Alarm		High, Low Relay (1a1b)
Panel Cut		92 (W) × 92 (H) mm
Power Source		AC100 / 220V ± 10%, 50 / 60Hz

Accessories

● SENSOR

■ RS-1K

1. No reagent type by Galvanic method
2. Measuring of extricated residual chlorine
3. Conditions of measuring liquid
 - Temperature : 0 ~ 40 °C
 - Flow : 0.5 ~ 1.0 L/min
 - pH : 6 ~ 8 pH
4. Liquid-end materials : PVC
5. Sensor's materials
 - Anode : Pt
 - Cathode : Ag · AgCl
6. Lead cable : 5 m (possible to extend by 30m with our exclusive cable)



● HOLDER

■ SRH-10

1. Flow Rate: 0.5 ~ 1.0 L/min
2. Pressure : Inside (less than 3kgf/cm²)
Outside (Atmosphere)
3. Materials : Acryl
4. Attachable with pH sensor (GR-1N) and ORP sensor (MR-1N)

Conductivity controller

CRN-96E



Specifications

Model		Digital
Specifications		CRN - 96 E
Range	2 Electrode	5, 20 (option : 100, 500, 1000) μ S/cm
	4 Electrode	1.0 / 2.0 / 10.0 / 20.0 mS/cm
Sensitivity Adjustment		Full Scale 1 ~ 20% (\pm 10%)
Shift		Full Scale \pm 10%
Accuracy		\pm 1% Full Scale
Ambient Temp.		-5° ~ 45°C
Output		DC4 ~ 20mA (option : Isolation)
Alarm		High, Low Relay (1a1b)
Panel Cut		92 (W) \times 92 (H) mm
Power Source		AC100/220V \pm 10%, 50/60Hz

Accessories

SENSORS

4 Electrode



SE-30

1. Measuring liquid temperature : 0 ~ 50 °C
2. Liquid-end materials : Case (PVC)
Electrode (SUS 316)
3. Flow-through type or Screw type
4. Lead cable : 5 m (standard)

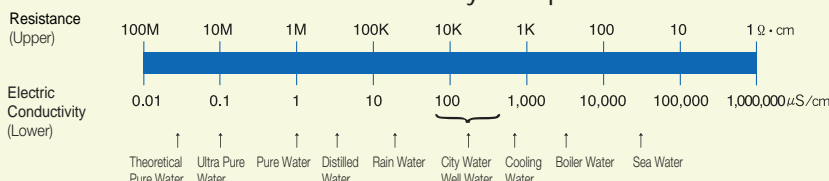
2 Electrode



SE-30P2

1. Measuring liquid temperature : 0 ~ 50 °C
2. Liquid-end materials : Case (PVC)
Electrode (SUS 316)
3. Screw type (PT $\frac{3}{8}$)
4. Lead cable : 5 m (standard)

Electric Conductivity Principle



Indicator

CRN-96E



Features

CRN - 96N P

- P : pH
- O : ORP
- D : DO
- S : Signal

Indicator

1. DIN Size 96 \times 96mm
2. Economical Meter without additional fuctions
3. Big Indicating Window of 75 \times 33mm

P/PID

CRN-96 P/PID



Features

1. Specially designed controller for water treatment system
2. Input and Output signal is isolated
3. Acid, Alkaline liquid instillation is changeable
4. Controlling by gasket is possible

Specifications

Specifications	Model	CRN-96P / PID
Target Value		0 ~ 14pH, 0 ~ 2.0ppm etc.
Display		0 ~ 100%, Range (pH, ppm, etc)
Input		DC 4 ~ 20mA
Output		DC 4 ~ 20mA (R.L 0 ~ 500 Ω)
P Band		20 ~ 500% Variable
Shift		Manual Operation 0 ~ 50%
Manual		Manual Operation 0 ~ 100%
Isolation		Photo-Isolation
Panel Cut		92 (W) \times 92 (H) mm
Power Source		AC100 / 220V \pm 10%, 50/60Hz

Controllers

Auto Calibration Controllers / Ultrasonic Cleaner

pH/ORP Controllers

OTTO CAL 96 pH



Features

1. DIN 96 ×96 size
2. Auto-calibration with one touch button
3. Auto-knowledge of no good quality sensor
4. Proportional controlling with On-off output or Time is in your choice
5. Memory back up available

Specifications

Model	OTTO CAL 96 pH
Measuring Range	pH 0 ~ 14pH division 0.01pH
Accuracy	±0.1pH ±1digit
Calibration	Automatic & Manual Calibration of pH4-7, pH 7 - 9 as one-touch Automatic Knowledge of no good quality sensor
Control Output 1	ON-OFF, High / Low Relay (1a1b) Rating : AC250V Resistive Load : Max.5A Sensitivity Adjustment : 0.1 ~ 4.0pH (±2pH) Shift : ±1.99pH
Control Output 2	Time proportional, High / Low Relay (1a1b) Rating : AC250V Resistive Load : Max.5A Proportional Band : 0.1 ~ 4.0pH Time : 5 ~ 120sec
Control Output 1, 2 Can be chosen by user	
Ambient Temp. /Humidity	Less than -5°C ~ 40°C, 85% RH
Power	AC100 / 220Vdual, 50 / 60Hz dual
Structure	Panel Mount Type, In-door Type
Mat'ls	(1) Case : SPCC (2) Panel : ABS
Panel cut	92(W) × 92(H)mm
Weight	Approx. 700g

OTTO CAL 96 ORP



Features

1. DIN 96 ×96 size
2. Auto-calibration with one touch button
3. Auto-knowledge of no good quality sensor
4. Proportional controlling with On-off output or Time is in your choice
5. Memory back up available

Specifications

Model	OTTO CAL 96 ORP
Measuring Range	±999mV / division 1mV
Accuracy	±10mV ±1 digit
Calibration	Automatic & Manual Calibration of pH4 - 7, pH 7 - 9 as one-touch Automatic Knowledge of no good quality sensor
Control Output 1	ON-OFF, High / Low Relay (1a1b) Rating : AC250V Resistive Load : Max.5A Sensitivity Adjustment : 10 ~ 400mV (±200mV) Shift : ±199mV
Control Output 2	Time, High / Low Relay (1a1b) Rating : AC250V Resistive Load : Max.5A Proportional Band : 10 ~ 400mV Time : 5 ~ 120sec
Control Output 1, 2 Can be chosen by user	
Ambient Temp. /Humidity	Less than -5°C ~ 40°C, 85% RH
Power	AC100 / 220Vdual, 50 / 60Hz dual
Structure	Panel Mount Type, In-door Type
Mat'ls	(1) Case : SPCC (2) Panel : ABS
Panel cut	92(W) × 92(H)mm
Weight	Approx. 700g

Ultrasonic Cleaner

SUC-10

SUC-10 Ultrasonic Cleaner is used on the purpose of cleaning pH/ORP sensor as Ultrasonic Oscillator type.

This cleaner makes any stains clean continuously, installing on the end of sensors, by the principle of cavitation due to continuous generating of Ultrasonic.

And SUC-10 has excellent cleaning effects against any fine stained materials by high frequency.

Easy application and management by simple installing and solid structure for any processes.

Specifications

Model	SUC - 10
Oscillator Frequency	75KHz sign wave
Ambient Temp.	-10 ~ 50°C
Construction	Water-proof
Case Mat' ls	Oscillator : Aluminum Guide Pipe : Stainless Steel
Mounting Power Source	50mm Station or Wall Mounting Type AC100, 50 / 60Hz AC220V, 60Hz

Applications

For sensor's cleaning

1. In chemical plant process line
2. In food process line
3. In neutralizing installation of waste water treatment
4. In drinking water and sewage treatment
5. In plating treatment installation
6. In other water controls

Features

1. Water-Proof and Dust-Proof
- Applicable for severe conditions as solid structure designed with die casting
2. High power cleaning
- Continuous cleaning with 75KHz Ultrasonic oscillator
3. Easy assembly and disassembly
- Easy maintenance and sensor calibration due to easy assembly and disassembly
4. Strong body structure against corrosive chemical
5. One body structure
- Simple installing and easy wiring due to one body structure of holder and oscillator



pH / ORP / Dissolved Oxygen Transmitter

Specifications

Specifications	General
Measuring Object	Hydrogen Ion Concentration (pH) Oxidation Reduction Potential (ORP)
Measuring Object	0~14.00pH, $\pm 999mV$
Measuring Conditions	Flow Rate : Submersion Max. 2m/sec Flow-through 3 ~ 11 g/min Operating Temp. : Max. 120°C Operating Pressure : Max. 7kg/cm ²

Specifications	pH(ORP) Transmitter
Model	CRN-92 pH, (CRN-92ORP)
Measuring Range	0 ~ 14.00pH ($\pm 999mV$)
Display	LCD Display
Transmission Signal	2 Wire Isolation Output DC 4 ~ 20mA (Load 750 Ω Max.)
Power Source	AC100 / 220V / DC24V
Ambient Temperature	-10 ~ 50°C
Construction	Water-Proof
Mounting	50mm Station or Wall Mounting Type
Functional Specifications	Temp. Compensation : -5 ~ 100°C ZERO Adjustment : pH 7~ $\pm 1.5pH$ SPAN Adjustment : pH4~ $\pm 1.5pH$ Accuracy : $\pm 0.02pH$ Repeatability : 0.02pH Response : 90% within 10 seconds

Specifications

Specifications	General
Measuring Object	Dissolved Oxygen
Measuring Principal	Galvanic Electrode Method Polarograph Electrode Method
Measuring Range	0~15.00 ppm & Other Range Available
Measuring Conditions	Flow Rate : over than 25cm/sec Operating Temp. : 0 ~ 45°C & 0 ~ 130°C Operating Pressure : 0 ~ 3kg/cm ²

Specifications	Dissolved Oxygen Transmitters
Model	CRN-92DO (DO-125T)
Measuring Range	0 ~ 15.0ppm
Display	LCD Display
Transmission Signal	2 Wire Isolated Output DC 4 ~ 20mA (Load 750 Ω Max.)
Power Source	AC100 / 220V / DC24V
Ambient Temperature	-10 ~ 50°C
Construction	Water-Proof
Mounting	50mm Station or Wall Mounting Type
Functional Specifications	Temp. Compensation : -5 ~ 100°C ZERO Adjustment : $\pm 2.0ppm$ at 0 ppm SPAN Adjustment : $\pm 3.5ppm$ at 15 ppm Accuracy : $\pm 0.05ppm$ Repeatability : 0.05ppm Response : 90% within 50 seconds

Applications

1. Chemical plant line
2. Food process line
3. Neutralizing installation in waste water treatment
4. Liquid cultivation plant
5. Drinking water plant & fish farm
6. Plating treatment line
7. Long distance transmission
8. Other water controls



CRN-92pH (ORP)/DO



pH(ORP)/DO-125T

Applications

1. Watching oxygen concentration in aeration tank of waste water treatment
2. Watching of dissolved oxygen in the pipe for preserving from any decay
3. Drinking & industrial water treatment
4. Long distance transmission
5. Other water controls

Combination Electrodes

pH GR SERIES



ORP MR SERIES



CONDUCTIVITY COND SERIES

FLAT TYPE pH COMBINATION ELECTRODE



• Model : PS-1

GR-3 SERIES



• Flow-through Type



• pH Sensors

- GR-3NG Standard (90° C)
- GR-3NH For High Temperature (100° C)
- GR-3NS For Pure water (80° C)

• ORP Sensors MR-3N Series (80° C)



• Submersible type

Biotech Sensors

pH SENSORS



• GT-DJ



• GT-DJ-Gen III



• Spectra



• Spectra-Pls-Thr

DO SENSORS



• DO2-12mm

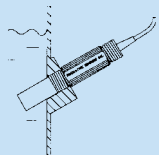


• DO2-Flange

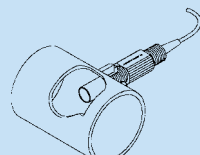


• DO2-Thread

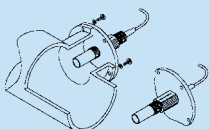
Installation Guide



View 1 Side-of-Tank Installation



View 2 Pipeline Installation with Reducer



View 3 Pipeline Installation with Flange

Specifications

Product	Features	pH Range	Temperature Range	Pressure Range(psig)	Reference Cell	Wetted Materials	Cable & Connector
GT - DJ		0 to 14pH	-5° C to + 135° C	500psig* @25° C	Double Junction KNO ₃ & KCl / AgCl	Teflon [®] , Glass membrane, Glass outer body, EPR	10' BNC
GT-DJ-GEN III		0 to 14pH	-5° C to + 135° C	500psig* @25° C	Triple Junction 3MKNO ₃ & KCl / AgCl	Teflon [®] , Glass membrane, PPS (Ryton [®]), EPR	10' BNC
SPECTRA		0 to 14pH	-5° C to + 135° C	500psig* @25° C	Double Junction 3MKNO ₃ & KCl / AgCl	Teflon [®] , Glass membrane, Polymer outer body, EPR	10' BNC
SPECTRA - PLUS - THREAD		0 to 14pH	-5° C to + 135° C	100psig* @25° C	Double Junction KNO ₃ & KCl / AgCl	Semi-Crystalline Resin, 316 Stainless Steel, Teflon [®] , EPR, Glass	20' BNC
SPECTRA - PLUS - FLANGE		0 to 14pH	-5° C to + 135° C	100psig* @25° C	Double Junction KNO ₃ & KCl / AgCl	Semi-Crystalline Resin, 316 Stainless Steel, Teflon [®] , EPR, Glass	20' BNC
LG - TJ		0 to 14pH	-5° C to + 135° C	100psig* @25° C	Triple Junction 3MKCl + KCl / AgCl	Teflon [®] , Glass membrane, Glass outer body, EPR	10' BNC
PRESSURIZABLE		0 to 14pH	-5° C to + 135° C	100psig* @25° C	Single Junction KCl / AgCl	Ceramic, Glass membrane, Glass outer body	5' BNC
SPECTRA - T		0 to 14pH	-5° C to + 135° C	150psig* @25° C	Double Junction KNO ₃ & KCl / AgCl	Teflon [®] , Glass membrane, PPS (Ryton [®]), EPR	10' BNC

* When mounted in an ISI Gland fitting

Product	Features	Operating Range	Temperature Range	Pressure Range(psig)	Output	Wetted Materials	Cable & Connector
DO ₂ - 12mm		0 to 40% Oxygen	-5° C to + 135° C	0 to 50psig	15µA in air @ 25° C	Glass, Silicone, Teflon [®] , Viton [®]	10' BNC
DO ₂ - FLANGE		0 to 40% Oxygen	-5° C to + 135° C	0 to 50psig	15µA in air @ 25° C	Semi-Crystalline Resin, 316 Stainless Steel	20' BNC
DO ₂ - THREAD		0 to 40% Oxygen	-5° C to + 135° C	0 to 50psig	15µA in air @ 25° C	Teflon [®] , Viton [®] , Semi-Crystalline Resin, 316 Stainless Steel	20' BNC

Swimming pool Water Control Systems

Systems

SWIMMING POOL WATER CONTROL SYSTEM

● WATER QUALITY MONITOR

■ CRN-1000

Water Quality Monitor indicates and controls residual chlorine, pH, Oxidation and reduction of ozone by continuous sampling of swimming pool water and it has multi-functions system to keep optimum water quality by automatic controlling with chemical metering pumps and ozone generator.



● METERING PUMPS



● TNX-Series



● NX-Series

● WATER QUALITY CONTROLLERS



● CRN-96OD
Range : 0 ~ 999mV
Alarm : High, Low Relay
Output : DC4 ~ 20mA



● CRN-96PD
Range : 0.0 ~ 14.0pH
Alarm : High, Low Relay
Output : DC4 ~ 20mA

● PORTABLE TYPE pH(ORP) / EC Temp.



● PD-501
pH Range : 0 ~ 14.00pH
ORP Range : ± 1500 mV
Temp. Range: 0 ~ 60°C
EC Range : 0.0 ~ 1,999 μ S/cm



● TS-1
pH Range : 0 ~ 14.00pH

● OZONE GENERATOR



- Excellent sterilization and stable generating of Ozone by applying with UL marked Ozone Lamp
- Very economical by reducing of chemical consumption
- keeping good inside environment by reducing of chemical odor



● CRN-96R
Range : 0.0 ~ 2.0ppm
Alarm : High, Low Relay
Output : DC4 ~ 20mA

● SENSORS



● CL SENSOR (RS-1K)



● pH SENSOR (GR-1N)



● ORP SENSOR (MR-1N)

Nutrition Control Systems

Systems

NUTRITION CONTROL SYSTEM FOR CULTIVATION IN WATER

Control of Liquid Nutrition

Target value setting of pH, EC, Temperature with the function of high and low setting is available

Mixture of Liquid Nutrition by Metering Pump

Possible to supply with same quantity of 2 kinds of liquid nutrition by metering pump.

Stable Supply of Liquid Nutrition

Correct control is possible by setting of target value. If actual value comes out of target value, by the stop of liquid supply or the alarm function, stable supply of liquid nutrition is possible.

Preserving of all data while electric out

While electric out, all data is preserved.

● PORTABLE TYPE

■ pH(ORP) / EC / Temp.



● PD-501
pH Range : 0 ~ 14.00pH
ORP Range : ± 1500 mV
Temp. Range : 0 ~ 60°C
EC Range : 0.0 ~ 19.9mS/cm

■ pH/EC/Temp.



● 5011-pH Range : 0 ~ 14.0pH
● 5021-EC Range : 10 ~ 9990 μ S/cm
● 5051-Temp. Range : 0 ~ 100.0°C

● METERING PUMPS



● TNX-Series

● SENSORS



● EC Sensor (SE-30)



● pH Sensor (GR-1N)

● WATER QUALITY CONTROLLER



● CRN-96E
Range : 0.0 ~ 5.0 mS/cm
Alarm : High, Low Relay
Output : DC4 ~ 20mA



● CRN-96PD
Range : 0.0 ~ 14.0pH
Alarm : High, Low Relay
Output : DC4 ~ 20mA

● Sterilization by Ozone



● PZ II-1
Max. Ozone capacity : 12g / Day
● PZ II-2
Max. Ozone capacity : 24g / Day

Samsan offers the optimum solution for professional Fluid Management.

Chemical metering pumps

Samsan chemical metering pumps with their versatility help to provide a complete solution to your fluid management needs.

High standards of quality and safety ensure reliable performance for handling aggressive, corrosive liquids.



Water quality controllers

Condensed in a compact DIN size (96 x 96mm), versatile functions provide more simplicity in operation and more efficiency in performance, in addition to accurate monitoring results. With microprocessor control functions and design of one touch button, you can get more effective, reliable data and very simple setting. pH, ORP, Dissolved Oxygen, Residual Chlorine, Conductivity and P/PID controllers are available for any requirements.

Plunger pumps

All specifications required by you could be delivered within maximum pressure 500kg/cm², maximum capacity 25,000 cc/min



Transmitters

Samsan Transnet transmits reliable, correct signals by high sensible sensor's circuit and transmission circuit. Especially, In case that measuring point is long distance (within max. 1km), Samsan Transnet is possible to transmit the directed measuring value by excellent functions.



삼산코리아 (주)
SAMSAN KOREA, LTD.



#C-3107, Dongil-Technotown, 889-1,
Kwanyang-Dong, Dongan-Ku,
Anyang-City, 431-716, Korea
TEL : 82-(0)31-423-7723
FAX : 82-(0)31-423-7727

www.samsankorea.com
e-mail : samsan@samsankorea.com