

Electromagnetic conductivity controller **MC-70W**



Measuring system with a sensor for conductivity & concentration measurement

The IWAKI electromagnetic conductivity controller MC-70W measures solution conductivity & concentration via a sensor and operates a chemical dosing pump such as the EHN & EK series in conductivity & concentration proportional control through driving pulse output. This wall-mounted controller is now available at an affordable price.

- Highly cost effective electromagnetic conductivity controller.
- The controller can be configured to read in 4 conductivity measurement units (mS/m, S/m, and % concentration) to best suit the application.
- Conductivity measurement is extremely reliable due to the non-contacting, toroidal sensor technology used. This eliminates the contamination and calibration irregularities that can occur with direct contacting sensors.
- The wall-mounted system eases installation work and also reduces setup cost.
- Immersion and In-Line mounted sensor is selectable.

Controller



- 1 ON light**
Lights while the power is ON
- 2 Pump light**
Lights or flashes with control output
- 3 Alarm light**
Lights with alarm output
- 4 Upper field LCD**
Shows conductivity, concentration, settings at each mode
- 5 Lower field LCD**
Shows temperature and settings at each mode
- 6 Configuration field**
Shows current state
- 7 Key pads**
Used for mode setting and change of display

Controller specification

Measuring range	Conductivity	0.0mS/m-199.9S/m Preset measuring range: 0.0-199.9mS/m, 0-1999mS/m, 0.00-19.99S/m, 0.0-199.9S/m (Conductivity can be shown in %)
	Linearity	Within F.S \pm 0.5% (by dummy signal)
Control	Setting	Control mode, Calibration mode, Manual operation mode, Parameter setting mode
	Control method	Pulse proportional control, ON/OFF operation (Upper/Lower limit motion)
	Setting method	6 key pads (MODE, MEAS, CAL, ENT, ▲, ▼)
Display	Screen	Backlit LCD display 4 digits 2 lines
	Lights	ON LED, Pump LED, Alarm LED
Input	Sensor input	Electromagnetic conductivity sensor
	Temp. input	0-99.9°C (Pt1000 Ω)
	Pump stop input	No-voltage contact signal (Max applied voltage: DC5V 5mA) Pump stops when signal is inputted.
Output	Pump output	No-voltage contact: 1N/Ox1 AC240V 0.1A ON/OFF operation control (Upper/Lower limit motion): 0.0mS/m-199.9S/m Pulse proportional control: 0.0mS/m-199.9S/m between 0-360spm
	Alarm output	No-voltage contacts: 1N/Ox1 AC250V 10A Resistive load Upper/Lower limit alarm: 0.0mS/m-199.9S/m Select 2 lines between AL1-4 Hysteresis width: 0.1mS/m-199.9S/m Delay time: 0-99 seconds
	Transmission output (Conductivity)	DC0-20mA Load resistance 500 Ω or below. Isolated type (can be set between 0.0mS/m-199.9S/m arbitrarily) "Continuous out put" or "hold" excepting control mode.
	Transmission output (Temperature)	DC0-20mA Load resistance 500 Ω or below. Isolated type (can be set between 0.0°C-99.9°C arbitrarily) "Continuous out put" or "hold" excepting control mode.
Function	MAN calibration	Calibration in the air and 1 point calibration
	Measured value shift range	Temperature: \pm 50°C Concentration: \pm 50.00%
	Concentration curve selection	Preset data: NaCl(0-20%), HCl(0-15%), NaOH(0-10%), H ₂ SO ₄ (0-25%) Optional straight and curve line data can be stored 1 each.
	Error message	Out of measuring range (conductivity, concentration, or temperature)/ Wrong setting/ Error in calibration in the air.
Power source	AC90 - 240V 50/60Hz 25VA	

Sensor

GFRPP sensor:
Sensor holder is arbitrarily selectable.

MCS-GP05Y
Material: GFRPP



In-Line mounted flow cell (Option)

Used for installation of In-Line type sensor.

MCH-GPIV
Material: PVC
Connection bore: JIS 10K 25A flange



MCH-GPIS
Material: SUS304
Connection bore: JIS 10K 25A flange



Immersion mounted sensor holder (Option)

MCH-GPTH
Material: GFRPP

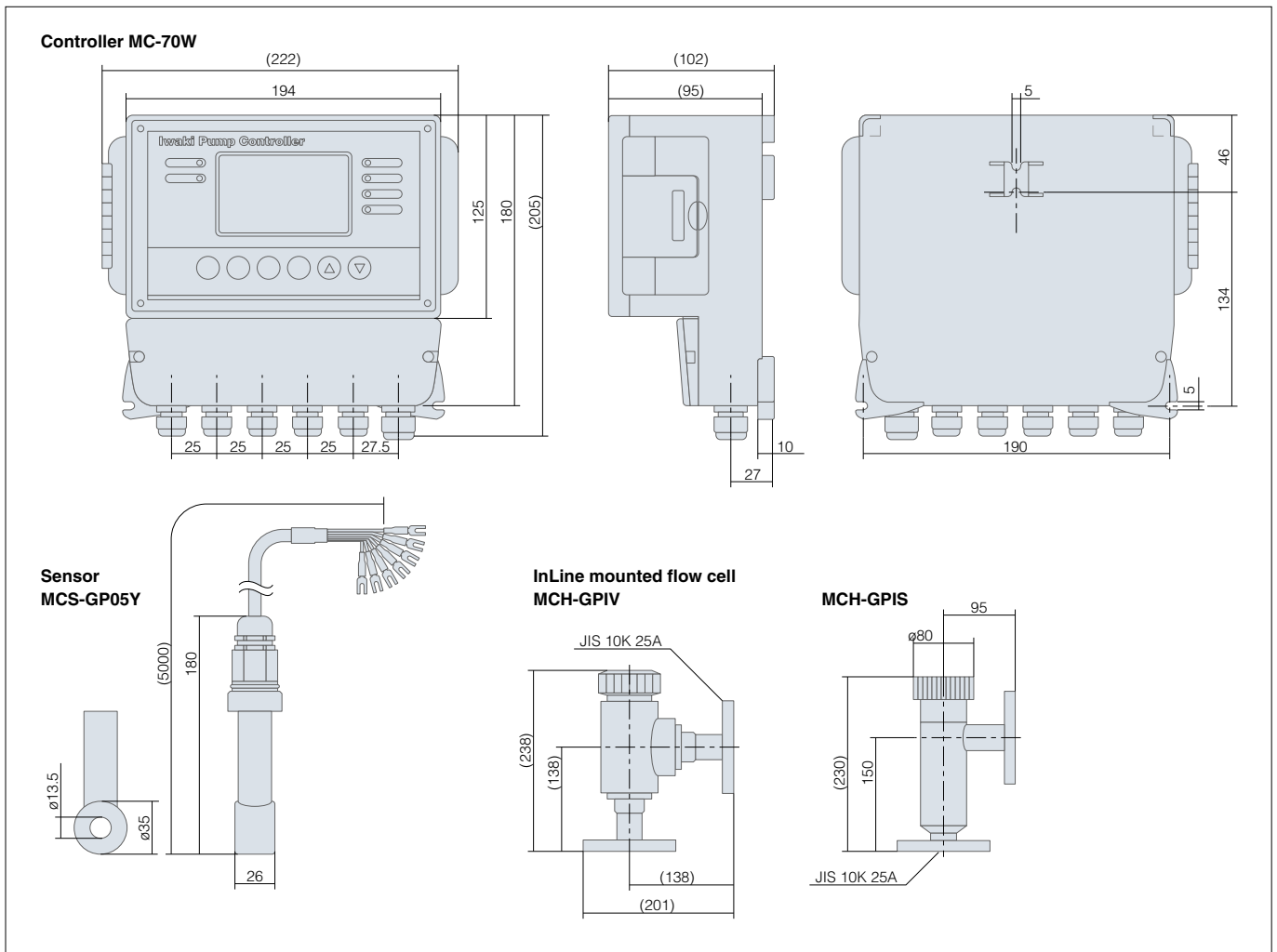


Sensor specification

Sensor type	Electromagnetic type
Mount type	Immersion/Inline mounted
Temperature sensor	Pt1000 Ω
Wet end materials	Sensor enclosure: GFRPP Cable: PVC, PSF, Nylon66
Allowable temperature range	0-60°C (Note)
Cable length	5m \pm 0.3m(cable + sensor)

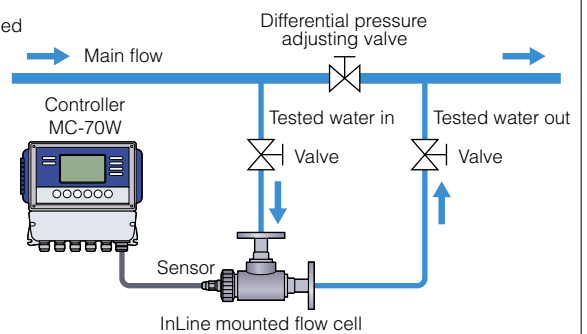
Note: Depends on chemical concentration or chemical character

Dimensions in mm



CAUTION! (In-Line mounted flow cell)

- Do not allow air to be trapped in the flow cell. Accurate measured value can not be obtained if the air is trapped in piping.
- Install stop valves on both discharge and suction pipe.
- The allowable pressure to the flow cell is 0.5MPa. Do not apply any higher pressure.
- Accurate conductivity value may not be obtained if the flow exceeds 30L/min.
- Secure installation space wide enough for maintenance and inspection works.



www.iwakipumps.jp

IWAKI CO.,LTD. 6-6 Kanda-Sudacho 2-chome Chiyoda-ku Tokyo 101-8558 Japan TEL : (81)3 3254 2935 FAX : 3 3252 8892

EUROPE / U.S.A.

European office : IWAKI Europe GmbH	TEL: (49)2154 9254 0	FAX: 2154 9254 48
Austria : IWAKI (Austria) GmbH	TEL: (41)26 674 93 00	FAX: 26 674 93 02
Belgium : IWAKI Belgium N.V.	TEL: (32)13 67 02 00	FAX: 13 67 20 30
Denmark : IWAKI Nordic A/S	TEL: (45)48 24 2345	FAX: 48 24 2346
Finland : IWAKI Suomi Oy	TEL: (358)9 2745810	FAX: 9 2742715
France : IWAKI France S.A.	TEL: (33)1 69 63 33 70	FAX: 1 64 49 92 73
Germany : IWAKI Europe GmbH	TEL: (49)2154 9254 50	FAX: 2154 9254 55
Holland : IWAKI Holland B.V.	TEL: (31)297 241121	FAX: 297 273902
Italy : IWAKI Italia S.R.L.	TEL: (39)02 990 3931	FAX: 02 990 42888
Norway : IWAKI Norge AS	TEL: (47)66 81 16 60	FAX: 66 81 16 61
Spain : IWAKI Iberica Pumps, S.A.	TEL: (34)943 630030	FAX: 943 628799
Sweden : IWAKI Sverige AB	TEL: (46)8 511 72900	FAX: 8 511 72922
Switzerland : IWAKI (Schweiz) AG	TEL: (41)26 674 93 00	FAX: 26 674 93 02
U.K. : IWAKI Pumps (UK) Ltd.	TEL: (44)1743 231363	FAX: 1743 366507
U.S.A. : IWAKI America Inc.	TEL: (1)508 429 1440	FAX: 508 429 1386

ASIA / OCEANIA

Australia : IWAKI Pumps Australia Pty Ltd.	TEL: (61)2 9899 2411	FAX: 2 9899 2421
China		
Hong Kong : IWAKI Pumps Co., Ltd.	TEL: (852)2607 1168	FAX: 2607 1000
Shanghai : IWAKI Pumps (Shanghai) Co., Ltd.	TEL: (86)21 6272 7502	FAX: 21 6272 6929
Guangzhou : GFTZ IWAKI Engineering & Trading Co., Ltd.	TEL: (86)20 8435 0603	FAX: 20 8435 9181
Beijing : GFTZ Iwaki Engineering & Trading Co., Ltd. (Beijing office)	TEL: (86)10 6442 7713	FAX: 10 6442 7712
Korea : IWAKI Korea Co., Ltd.	TEL: (82)2 2630 4800	FAX: 2 2630 4801
Malaysia : IWAKI Sdn. Bhd.	TEL: (60)3 7803 8807	FAX: 3 7803 4800
Singapore : IWAKI Singapore Pte Ltd.	TEL: (65)6316 2028	FAX: 6316 3221
Indonesia : IWAKI Singapore (Indonesia Branch)	TEL: (62)21 6906606	FAX: 21 6906612
Taiwan : IWAKI Pumps Taiwan Co., Ltd.	TEL: (886)2 8227 6900	FAX: 2 8227 6818
Thailand : IWAKI (Thailand) Co., Ltd.	TEL: (66)2 322 2471	FAX: 2 322 2477
Vietnam : IWAKI Pumps Vietnam Co., Ltd.	TEL: (84)613 933456	FAX: 613 933399

()Country codes

Caution for safety use: Before use of pump, read instruction manual carefully to use the product correctly. Actual pumps may differ from the photos. Specifications and dimensions are subject to change without prior notice. For further details please contact us.