

Hot Water Meter  
Heat Meter

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A leading company in measuring instruments,  
Shinhan Precision Co., Ltd.

**SHINHAN**  
Trademark and Service Registration

# HOT WATER METER HEAT METER



- Received presidential citation in invention part
- Jang Yeong Sil Science & Culture Award
- Grand prize in Excellent Small & Medium Businesses
- Vision Enterprise
- Korea's Representative Brand Company
- A company acknowledged of affiliated research institute
- KEPCO qualified registered certification



「Broadcasted in a SBS show, Small & Medium Businesses, power of Korea」



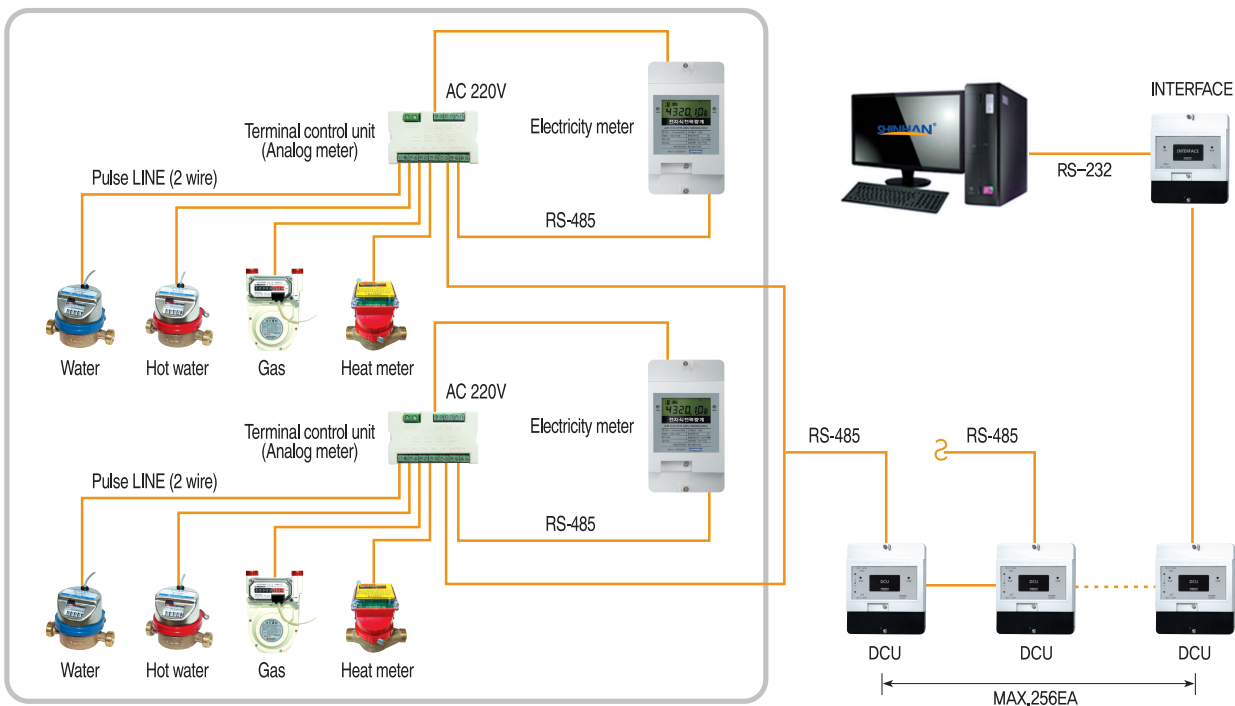
**SHINHAN**  
신한정밀주식회사

# Hot/Heat Water Meter

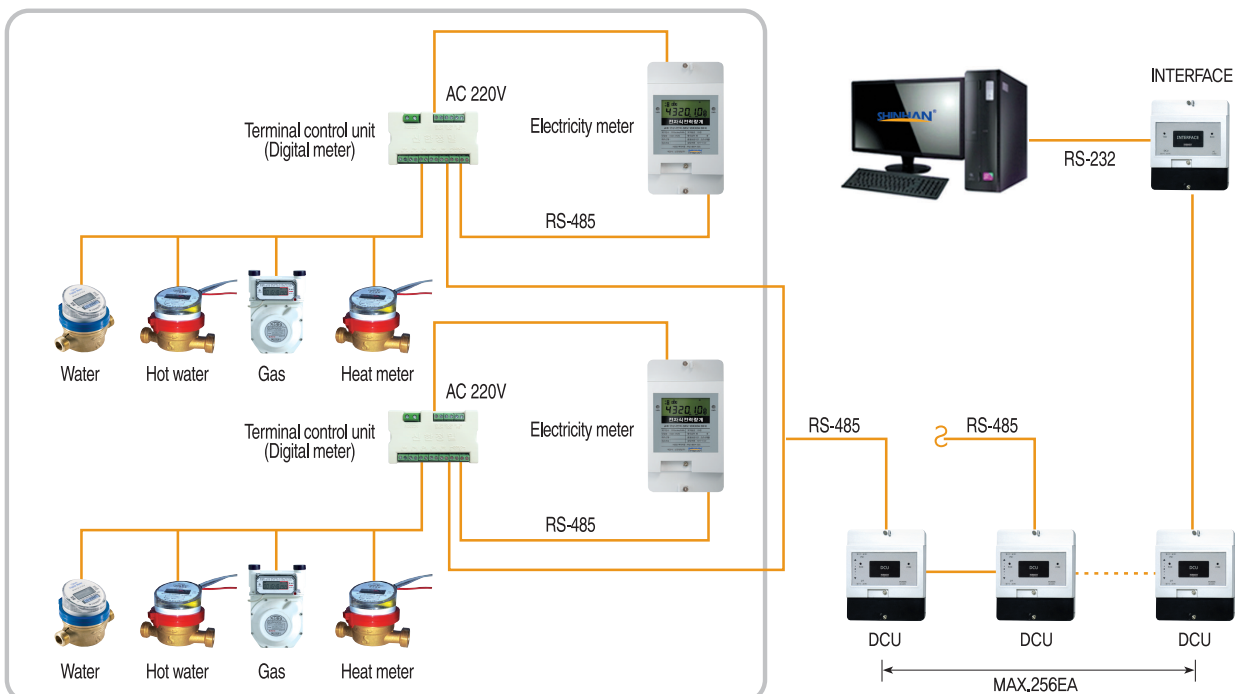
Remote meter reading by using Electricity Meter



## INTEGRATED SYSTEM DIAGRAM (PULSE)



## INTEGRATED SYSTEM DIAGRAM (DIGITAL)





# Hot Water Meter

Digital Hot Water Meter

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## Digital Single-jet Dry Type Hot Water Meter



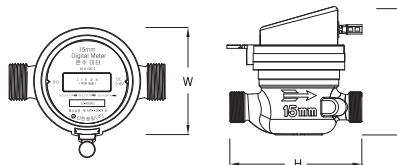
### Product Features

- Improved sensitivity at low flow rate by minimizing attachment of foreign substances to magnetic in flowing part.
- With indoor water leakage function, immediate measure can be taken when water leakage is detected.
- Indication part can be rotated, so meter reading is easy from any direction.
- D-PLC communication method is proper for remote automatic meter reading.
- External magnetic force blocking plate prevents immobility and slip even at the time of external magnetic force loading.
- No harm to human by using eco-friendly material.
- One can select between Multi-jet type and Single-jet type for Multi-jet type, one can select between long and short.
- Device number input function provides efficiency in device management when operating meter reading system.
- Efficient incline of the device, which is proper for meter reading, provides easiness in reading with eye.
- Improved sealing strength by developing one-touch system of sealing structure of flow part and calculation part. (Utility model application no. 20-2012-54650)

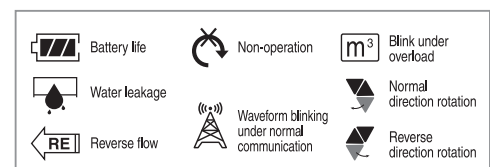
## Digital Multi-jet Dry Type Hot Water Meter



### Outside View



### LCD display of metering instrument



### Performance

Division		15mm		20mm		25mm		32mm	40mm	50mm
		Single-jet	Multi-jet		Single-jet	Multi-jet		Multi-jet	Multi-jet	Multi-jet
			Long	Short		Long	Short			
Performance	Q <sub>max</sub>		3		4		5	8	15	25
	Q <sub>t</sub>		0.12		0.16		0.2	0.32	0.6	1
	Q <sub>min</sub>		0.03		0.04		0.05	0.08	0.1875	0.3125
	Q <sub>max</sub> /Q <sub>t</sub>		25		25		25	25	25	25
	Q <sub>max</sub> /Q <sub>min</sub>		100		100		100	100	80	80
Preciseness		Q <sub>min</sub> flow area(Q <sub>min</sub> ≤ Q < Q <sub>t</sub> ) = ±5%, Q <sub>max</sub> flow area(Q <sub>t</sub> ≤ Q < Q <sub>4</sub> ) = ±3%								

### Specification

Use	For hot water
Operating temperature	30~90℃
Operating pressure	0.3~10bar
Installation pose	horizontal installation(H)
Power supply	Lithium Primary, 3.6V, 1.20Ah
Communication method	DPLC method, Pulse output available

### Size

Division	15 mm			20 mm			25 mm			32mm	40mm	50mm
	Single-jet	Multi-jet		Single-jet	Multi-jet		Single-jet	Multi-jet		Multi-jet	Multi-jet	Multi-jet
		Long	Short		Long	Short		Long	Short			
Overall length of meter (L)	110	165	110	130	190	130	130	225	130			
Height of meter (H)	85	101	100	88	110	107	94	110	107	131	146	167
Connection pipe	PT 1/2			PT 3/4			PT 1			PT 1 1/4	PT 1 1/2	PT 2
Thread of input and output part (W)	PF 3/4			PF 1			PF 1 1/4			PT 1 1/2	PF 2	PF 2 2/1
Width of meter	79			79			79			97	117	134

# Hot Water Meter

Hot Water Meter



## Single-jet Dry Type Hot Water Meter



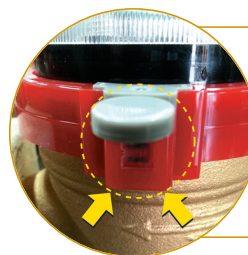
### Product Features

- Indication part can be rotated, so meter reading is easy from any direction.
- External magnetic force blocking plate prevents immobility and slip even at the time of external magnetic force loading.
- No harm to human by using eco-friendly material.
- One can select between Multi-jet type and Single-jet type for Multi-jet type, one can select between long and short.
- Improved sealing strength by developing one-touch system of sealing structure of flow part and calculation part.  
(Utility model application no. 20-2012-54650)

## Multi-jet Dry Type Hot Water Meter



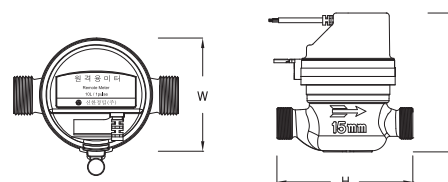
### Sealing Structure



All our hot water/heat meter adopt one-touch sealing structure.

Utility model application no. 20-2012-0006862

### Outside View



### Performance

Division		15mm		20mm		25mm		32mm	40mm	50mm
		Single-jet	Multi-jet	Single-jet	Multi-jet	Single-jet	Multi-jet	Multi-jet		
Performance	Q <sub>max</sub>	3		4		5		8	15	25
	Q <sub>t</sub>	0.12		0.16		0.2		0.32	0.6	1
	Q <sub>min</sub>	0.08		0.05		0.065		0.2	0.375	0.625
	Q <sub>max</sub> /Q <sub>t</sub>	25		25		25		25	25	25
	Q <sub>max</sub> /Q <sub>min</sub>	40		80		80		40	40	40
Preciseness		Q <sub>min</sub> flow area(Q <sub>min</sub> ≤ Q < Q <sub>t</sub> ) = ±5%, Q <sub>max</sub> flow area(Q <sub>t</sub> ≤ Q < Q <sub>4</sub> ) = ±3%								

### Specification

Use	For hot water
Operating temperature	30~90℃
Operating pressure	0.3~10bar
Installation pose	Horizontal installation(H)
Communication method	Pulse output available

### Size

Division		15mm			20mm			25mm			32mm	40mm	50mm
		Single-jet	Multi-jet		Single-jet	Multi-jet		Single-jet	Multi-jet		Multi-jet		
			Long	Short		Long	Short		Long	Short			
Overall length of meter (L)	(L)	110	165	110	130	190	130	130	225	130	230	245	305
Height of meter (H)	(H)	92	105	108	95	114	113	101	114	113	139	153	173
Connection pipe		PT 1/2			PT 3/4			PT 1			PT 1 1/4	PT 1 1/2	PT 2
Thread of input and output part (W)		PF 3/4			PF 1			PF 1 1/4			PT 1 1/2	PF 2	PF 2 2/1
Width of meter		79			79			79			97	117	134



# Heat Meter

Digital Heat Meter

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## Digital Single-jet Heat Meter



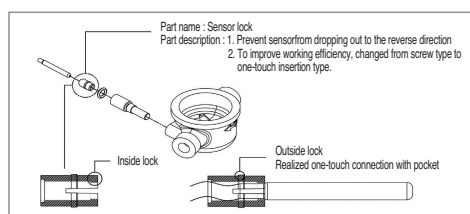
### Product Features

- LCD is used for integration indication part to realize less power consumption than mechanical products and to extend life of lithium battery inside of the part.
- When the heat meter has problems, warning is displayed on LCD to let the users know of the problems easily.
- Very low error rate and no need for separate external power supply.
- D-PLC communication method is proper for remote automatic reading.
- Passed static magnetic field test, and so, does not get affected from external magnetic force.
- No harm to human by using eco-friendly material.
- Efficient incline of the device, which is proper for meter reading, provides easiness in reading with eye.
- Improved sealing strength by developing one-touch system of sealing structure of flow part and calculation part. (Utility model application no. 20-2012-54650)
- Improved tamper-proof function by improving sealing structure of sensor part. (Utility model application no. 10-2012-0006862)

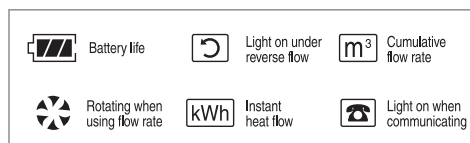
## Digital Multi-jet Heat Meter



### Introduction to Utility Model



### LCD display of Meter



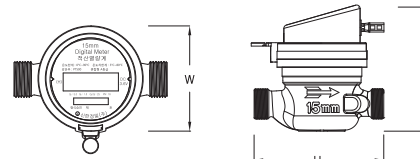
### Performance

Division		15mm		20mm		25mm	
		Single-jet	Multi-jet	Single-jet	Multi-jet	Single-jet	Multi-jet
			Long Short		Long Short		Long Short
Performance	$Q_s$		3		4		5
	$Q_p$		1.5		2		2.5
	$Q_i$		0.06		0.08		0.1
	$Q_p/Q_i$		25		25		25
	Preciseness	$Q_{min}$ flow area( $Q_{min} \leq Q < Q_i$ ) = $\pm 5\%$ , $Q_{max}$ flow area( $Q_i \leq Q < Q_4$ ) = $\pm 3\%$					

### Size

Division		15mm		20mm		25mm	
		Multi-jet		Single-jet	Multi-jet		Multi-jet
		Long	Short		Long	Short	
Overall length of meter (L)	(L)	165	110	130	190	130	225
Height of meter (H)	(H)	101	100	88	110	107	110
Connection pipe		PT 1/2		PT 3/4		PT 1	
Thread of input and output part (W)		PF 3/4		PF 1		PF 1 1/4	
Width of meter		79		79		79	

### Outside View



### Specification

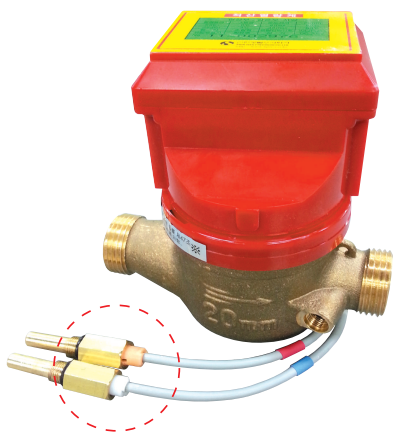
Use	Heating
Environment class	Class A
Preciseness	Level 3
Temperature limit	0 ~ 90°C
Temperature difference limit(Δ)	3 ~ 40°C
Flow input signal	10ℓ /Pulse
Temperature Sensing part	Pt500
Operating temperature	Not higher than 16bar
Installation pose	Horizontal installation
Power supply	DC 3.6V
Communication method	D-PLC Communication method

# Heat Meter

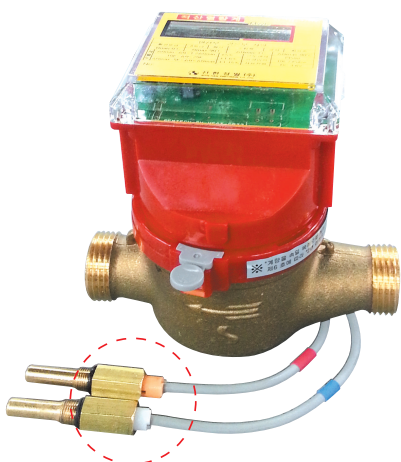
Pulse Type Heat Meter



## Seperate Pulse-type Heat Meter



## Integral Pulse-type Heat Meter



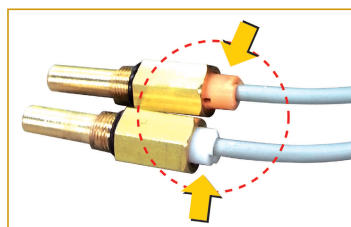
### Product Features

- Flow rate part is semi-permanent with excellent durability.
- Pulse type heat meter can be used of remote reading being linked with D-PLC method.
- Passed static magnetic field test, and so, does not get affected from external magnetic force.
- No harm to human by using eco-friendly material.
- Improved sealing strength by developing one-touch system of sealing structure of flow part and calculation part. (Utility model application no. 20-2012-54650)
- Improved tamper-proof function by improving sealing structure of sensor part. (Utility model application no. 10-2012-0006862)

### Problems of Single-jet Heat Meter

- When installed indoor, it has more noise than multi-jet.
- Low preciseness due to high effect of error value according to the change of flow speed.
- Heat meter of single-jet structure should have separate sensor pocket.

### Sensor pocket



Utility model  
application no.  
10-2012-0006862

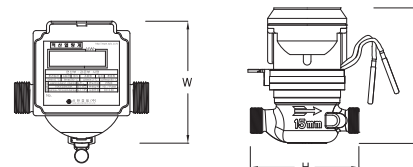
### Performance

Division		15mm		20mm		25mm		32mm	40mm
		Single-jet	Multi-jet	Single-jet	Multi-jet	Single-jet	Multi-jet	Multi-jet	
			Long Short		Long Short		Long Short		
Performance	$Q_s$		3		5		5	8	16
	$Q_p$		1.5		2		2.5	4	8
	$Q_i$		0.06		0.08		0.1	0.16	0.32
	$Q_p/Q_i$		25		25		25	25	25
Preciseness		$Q_{min}$ flow area( $Q_{min} \leq Q < Q_i$ ) = $\pm 5\%$ , $Q_{max}$ flow area( $Q_i \leq Q < Q_4$ ) = $\pm 3\%$							

### Size

Division		15mm		20mm		25mm		32mm	40mm
		Multi-jet		Multi-jet		Multi-jet		Multi-jet	
		Long	Short	Long	Short	Long	Short		
Overall length of meter (L)	(L)	165	110	190	130	225	130	230	245
Height of meter (H)	(H)	134	133	139	138	139	138	164	178
Connection pipe		PT 1 1/2		PT 3/4		PT 1		PT 1 1/4	PT 1 1/2
Thread of input and output part(W)		PF 3/4		PF 1		PF 1 1/4		PF 1 1/2	PF 2
Width of meter		105		105		105		105	117

### Outside View



### Specification

Use	Heating
Environment class	Class A
Preciseness	Level 3
Temperature limit	0 ~ 90°C
Temperature difference limit( $\Delta$ )	3 ~ 80°C
Flow input signal	10ℓ / Pulse
Temperature Sensing part	PT500
Operating temperature	Not higher than 16bar
Installation pose	Horizontal installation
Power supply	DC 3.0V ~ 3.6V
Communication method	D-PLC Communication method



# Automatic Meter Reading System

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## Pulse type and integrated reading display part



Flushed pulse type  
display part(DIS00A)



Exposed pulse type  
display part(DIS00B)



Integrated type remote  
display part(DIS00C)



Integrated type remote  
Electricity Meter(DIS00C)

Design Registration application  
(No. 30-2009-0005100)

## Product Features

- Current amount of use is always saved with no erasing of measured number even in the power cut from battery or external power supply.
- One can choose between flush type and exposed type for pulse type display.

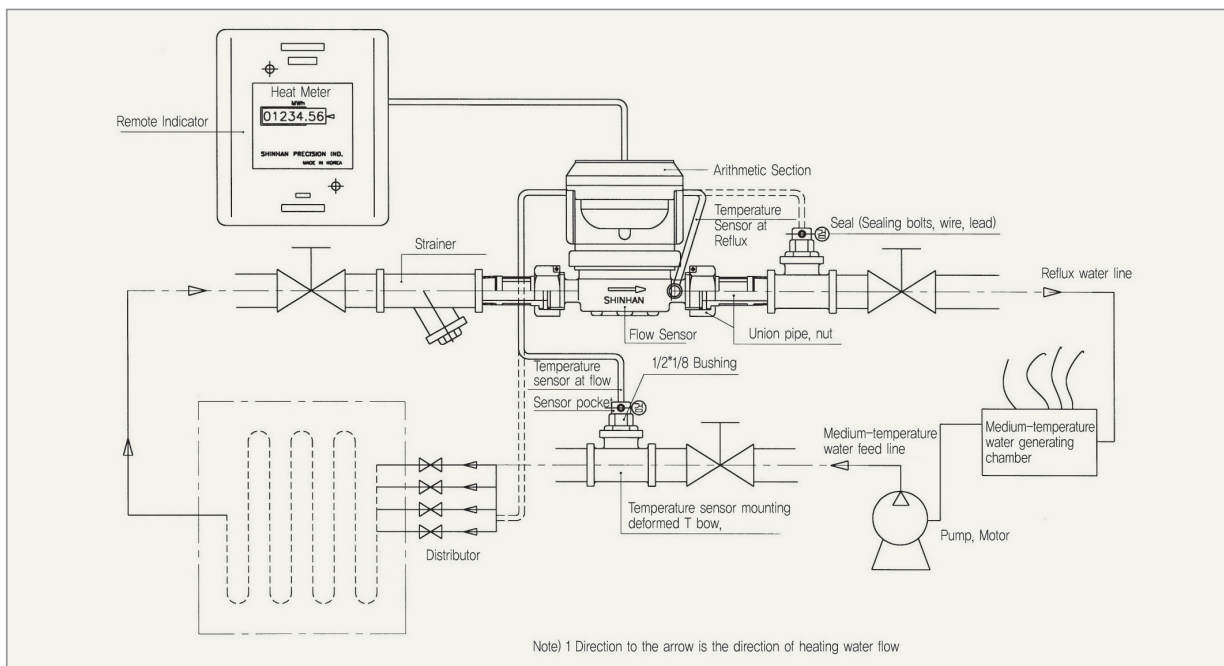
### Indicator (pulse type) Specification

Item	Specification
Power supply	DC 3.6V (Lithium)
Ambient temperature	-20℃ ~ 70℃
Max. display volume	99999.99 m³
Min. display volume	10ℓ / Pulse(100ℓ /Pulse)
Length of transmission cable	1m (Order specification)

### Size of Indicator

Item	Overall length(mm)	Height(mm)	Width(mm)
Remote display part (flush type)	82.6	72.7	31.2
Heater meter display part (flush type)	82.6	72.7	42
Stainless steel flush type display part cover	120	140	22
Remote display part (Exposed type)	106	170	32
Integrated type remote display part	75	137	51

## Heat Meter Standard Piping Diagram



# HOT WATER METER HEAT METER

A leading company in measuring instruments, "Shinhan Precision Co., Ltd."

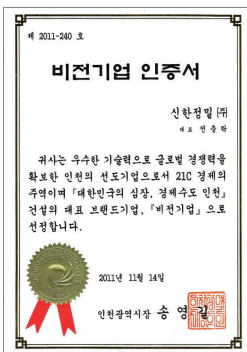
<http://www.spic.co.kr>

KEPCO qualified registered certification	
<p><b>신한정밀(주)</b></p> <p>대표이사: 김대환</p> <p>등록번호: 100111-103402</p> <p>주 소: 인천광역시 남동구 신항동 133-1 (신항동) 131호</p> <p>출발: 2013.08.13</p>	<p><b>신한정밀(주)의 인증</b></p> <p>1. 본회로부터 인증받은 제품(서비스)에 대하여 1년 이내의 보증 기간을 부여하며, 보증 기간 동안에 발생하는 고장(불량)에 대하여는 보증 기간 동안에 무료로 수리(교환)을 실시한다.</p> <p>2. 본회로부터 인증받은 제품(서비스)에 대하여 1년 이내의 보증 기간을 부여하며, 보증 기간 동안에 발생하는 고장(불량)에 대하여는 보증 기간 동안에 무료로 수리(교환)을 실시한다.</p> <p>3. 본회로부터 인증받은 제품(서비스)에 대하여 1년 이내의 보증 기간을 부여하며, 보증 기간 동안에 발생하는 고장(불량)에 대하여는 보증 기간 동안에 무료로 수리(교환)을 실시한다.</p> <p>4. 본회로부터 인증받은 제품(서비스)에 대하여 1년 이내의 보증 기간을 부여하며, 보증 기간 동안에 발생하는 고장(불량)에 대하여는 보증 기간 동안에 무료로 수리(교환)을 실시한다.</p> <p>5. 본회로부터 인증받은 제품(서비스)에 대하여 1년 이내의 보증 기간을 부여하며, 보증 기간 동안에 발생하는 고장(불량)에 대하여는 보증 기간 동안에 무료로 수리(교환)을 실시한다.</p> <p>6. 본회로부터 인증받은 제품(서비스)에 대하여 1년 이내의 보증 기간을 부여하며, 보증 기간 동안에 발생하는 고장(불량)에 대하여는 보증 기간 동안에 무료로 수리(교환)을 실시한다.</p> <p>7. 본회로부터 인증받은 제품(서비스)에 대하여 1년 이내의 보증 기간을 부여하며, 보증 기간 동안에 발생하는 고장(불량)에 대하여는 보증 기간 동안에 무료로 수리(교환)을 실시한다.</p> <p>8. 본회로부터 인증받은 제품(서비스)에 대하여 1년 이내의 보증 기간을 부여하며, 보증 기간 동안에 발생하는 고장(불량)에 대하여는 보증 기간 동안에 무료로 수리(교환)을 실시한다.</p> <p>9. 본회로부터 인증받은 제품(서비스)에 대하여 1년 이내의 보증 기간을 부여하며, 보증 기간 동안에 발생하는 고장(불량)에 대하여는 보증 기간 동안에 무료로 수리(교환)을 실시한다.</p> <p>10. 본회로부터 인증받은 제품(서비스)에 대하여 1년 이내의 보증 기간을 부여하며, 보증 기간 동안에 발생하는 고장(불량)에 대하여는 보증 기간 동안에 무료로 수리(교환)을 실시한다.</p>

Products
Watt-hour meter remote meter reading system
Digital water meter / Water meter
Digital hot water meter / Hot water meter
Digital gas meter / Gas meter
Digital large size water meter / Large size water meter
Heat meter(meter for digital and for heating)
Pressure reducing valve for water supply
Wired • wireless remote meter reading system
Measuring control system

Certification Status
KS product certification (Water, hot water meter)
ISO 9001 certification
ISO 14001 certification
Selected as a INNO-BIZ Company
Selected as a Promising Exporting Company
Selected as a Technology Innovation Small & Medium Business
Selected as a Incheon Vision Company
Selected as a Promising Small & Medium Business

Prize Award Record
Presidential citation in the part of new product development and invention
Grand prize (Jang Young Sil Award) in Invention part of Science and Culture Award
Silver prize in International Invention Show
Grand prize of Excellent Small & Medium Businesses
Broadcasted in SBS show, Small and Medium Business, Power of Korea
Korea's Representative Brand Company



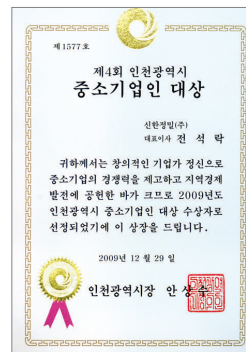
Vision Company Certification



Presidential Citation in Invention Part



Jang Young Sil Science and Culture Award



Grand prize of Excellent Small & Medium Businesses



Korea's Representative Brand

**신한정밀주식회사**  
SHIN HAN PRECISION CO., LTD.

## Head Office · Factory

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E-mail: [spic@spic.co.kr](mailto:spic@spic.co.kr)

## Certification mark

