電磁流量計

Electromagnetic Flowmeter

XE Series
XEM Series
WT430 0E Series
Shanghai Welltech Automation Co., Ltd. is the outstanding representative in instrumentation industry within Zijiang Group. Based on the guideline of meeting customer's requirements, it supplies its customers with complete and high quality automatic system solution, integrated with products, engineering, service and training.

Multi-vision pressure transmitter MV2000T is assembled with the core parts such as sensor and PCB that adopt complex microsilicon solid sensor technology from Hartmann & Braun Germany, and has become the focus of attention of the market because of its high accuracy and reliability.

With its own intelligent property, smart pressure transmitters WT1151/WT2000 made from digesting and absorbing overseas advanced technology, are favored by the customers for their excellent performance cost ratio. At present, WT1151/WT2000 of Welltech are the only pressure transmitters in China obtaining approval of International HART Foundation.

Welltech has been the sole enterprise at present in the world to be able to manufacture and calibrate electromagnetic flowmeters for diameters of 3-3800mm since it started the technology transfer of advanced electromagnetic flowmeter from Fischer & Porter Germany. This indicates Welltech's manufacturing ability of electromagnetic flowmeters has reached the advanced level in the world. As a result, Welltech, has attracted the attention of and taken the cooperation form of OEM with many well-known flowmeter production enterprises abroad. Welltech has gradually been becoming the production base of flow sensors.

WR series thermocouple, WZ series thermoresistance and temperature transmitter adopt shield temperature sensor and temperature transmitter module from Sensycon Germany, together with advanced equipment and technology. With many merits such as measuring accurately, structure reasonable, quality stable, dismantling conveniently etc., these products are applicable to the measurement under variety of industrial environment.

Since the establishment in 1992, Welltech has followed the enterprise philosophy of “Integrity, Loyalty, Reality and Creation” to make the management of the enterprise ceaselessly innovative and perfect. It was honored with “High-Tech Enterprise of Shanghai” continuously since 1998 and “Advanced Technology Enterprise of Shanghai” in 2000. It obtained the certificates of Quality Management System ISO 9002 and ISO 9001 in 1998 and the next year, and the certificate of International Environment Management System ISO 14001 in 2001. These have ensured the scientific and effective management of the enterprise.
XE series EMF is widely applicable to industrial process control field, such as metallurgy, papermaking, petrochemical, pharmacy, food processing, brewing, cigarette making, mineral etc., for measuring the fluid flow with conductivity no less than $5\,\mu\text{S/cm}$. The manufacture of primary adopts the technology and equipment of Fischer & Porter Germany.

XE flowmeter with features of electrical break timing and auto data reading is much applicable to data analysis of regional water supply and protecting from the measure fraud during trade accounting.

**Performances:**
- Size: DN3 ~ DN1000 (DN2200)
- Accuracy: ±0.5%, ±0.25%
- Flow velocity: 0.5 ~ 10m/s
- Housing material: casting aluminum (DN3 ~ DN300), carbon steel (DN350 ~ DN2200)
- Flange: carbon steel (galvanizing or coating), stainless steel optional
- Electrode with shielding case, signal stable
- Protection class: IP67, IP68 (immersion type)
- Media temperature: -25℃ ~ 130℃, 150℃/1h (water/steam flushing)
- Ambient temperature: -20℃ ~ 60℃
- Power supply: 85 ~ 253VAC, 16.8 ~ 26.4VAC, 16.8 ~ 31.2VDC
- Flow output: analog current signal and pulse signal output
- Control output: empty pipe detecting, forward/reverse, high alarm/low alarm etc.
- Control input: external zero return, external totalizer reset, external totalizer stop
- Pulse output: passive/active, frequency and pulse width adjustable
- Test and diagnosis: self-diagnosis, failure record, current output test, control input/output test, emulation test mode, empty pipe indication setting etc.
- Others: parameter protection, indication of sensor parameter, span adjustment, zero adjust, small signal cutting, smoothing, access to external memorizer, writing tag No. etc.

**Features:**
- Excitation current automatic compensation
- Capacitive empty pipe test technology
- Conductive rubber earthing and earthing electrode optional
- Removable EEPROM
- HART, RS485, Profibus, FF output

**Special Performance — Electrical Break Timing and Auto Data Reading**
- Record and memorize the accumulated flow and the transient flowrate periodically (per minute, hour, 4 hours, 12 hours, day, month). 120 groups of data could be memorized.
- Breaking time: the accumulated breaking time could be recorded, and also the last 16 times of breaking & electrifying time.
- The data is available via operating the buttons on panel, or download to laptop computer through RS485 (optional).
General:
Three types of explosion protection could meet various requirements:
- Remote version EMF (MAG-XE, DE46F series) converter assembled outside of explosion area
- Compact version EMF (COPA-XE, DE 47F series)
- Compact version EMF with remote version converter, the converter mounted within explosion area

Connection:
- Flanged, conforming to GB/DIN/ANSI, DN3 ~ DN1000 (1/8" ~ 40")

Features:
- Open housing is not necessary for configuration
  Within danger area, parameter setting could be changed by using “magnetic rod” without opening the housing
- Current output, pulse output and contact output in enhanced safety type “e” or intrinsic safety type “i”
- Explosion protection design with compact structure

APPROVAL
Explosion protection design conforms to NEPSI
1. Remote version (DE46):
   Ex emib IICT3 ~ T6
2. Compact design (DE47):
   Ex emdib IICT3 ~ T6
3. Remote compact design (DE48):
   Ex emib IICT3 ~ T6/Ex ed(ib)II CT6
XEM Series with High Accuracy

XEM series EMF is applicable to measurement industrial fluid flow such as metallurgy, paper making, petrochemical, electric power, irrigation works, city water supply and drain etc. There exists unique advantage in flow measurement for big size in water treatment. The conductivity of fluid is no less than 5μ S/cm. The production of primary adopts the technology and equipment from Fischer & Porter Germany.

Professional Quality with Unique Performance:
- Conductive rubber earthing and earthing electrode, earthing ring or earthing flange is not necessary.
  Patent technology, patent No. ZL200420021696.8, ZL200420021698.7
- External power driving unit is not necessary for big size
- Dismountable electrode (optional)
- Excitation current automatic compensation assures the long-term accuracy
- Capacitive empty pipe signal detecting, quick response and high accuracy
- Removable EEPROM

Performances:
- Size: DN3 ~ DN3800
- Accuracy: ±0.4%, ±0.2%
- Flow velocity: 0.4 ~ 15m/s
- Housing material: casting aluminum (DN3 ~ DN300), carbon steel (DN350 ~DN3800)
- Flange: carbon steel (galvanized or coating), stainless steel optional
- Flow output: analog current signal and pulse signal output, RS485, HART, Profibus-DP etc. optional
- Protection class: IP67, IP68 (immersion type)
- Media temperature: -25℃ ~ 130℃, -25℃ ~ 180℃ (optional)
- Ambient temperature: -20℃ ~ 60℃
- Power supply: 220VAC, 24VAC, 24VDC
- Forward/reverse flow could be measured
- Cable between primary and converter for remote version up to 200m without effect of fluid conductivity
WT4300E series EMF is widely applicable to industrial process control field, such as metallurgy, paper making, petrochemical, pharmacy, food processing, breweage, cigarette and mineral etc. for measuring the fluid flow with conductivity no less than 5μS/cm.

- **Excitation current automatic compensation**
- **Conductive rubber earthing and earthing electrode (optional)**
- **Removable EEPROM**

**Specifications:**
- **Size:** DN10 ~ DN1000
- **Accuracy:** ±0.5%
- **Flow velocity:** 0.5 ~ 10m/s
- **Housing material:** casting aluminum (DN10 ~ DN300), carbon steel (DN350 ~ DN1000)
- **Flange:** carbon steel (galvanized or coating), stainless steel optional
- **Electrode with shielding case, signal stable**
- **Protection class:** IP67, IP68 (immersion type)
- **Media temperature:** -25°C ~ 130°C, 150°C/1h (water/steam flushing)
- **Ambient temperature:** -20°C ~ 60°C
- **Power supply:** 85~253VAC, 16.8~26.4VAC, 16.8~31.2VDC
- **Output signal:** 4~20mA analog current signal and pulse signal output

**Powerful Functions, Convenient Application and Maintenance**
- **Flow output:** analog current signal and pulse signal output
- **Control output:** forward/reverse, high alarm/low alarm etc.
- **Control input:** external zero return, external totalizer reset, external totalizer stop
- **Pulse output:** active/passive, frequency and pulse width adjustable
- **Test and diagnosis:** self-diagnosis, failure record, current output test, control input/output test, emulation test mode etc.
- **Others:** parameter protection, indication of sensor parameter, span adjustment, zero adjust, small signal cutting, smoothing, access to external memorizer, writing tag No. etc.
Shanghai Welltech Flow Testing Laboratory was established in June of 2002 with investment tens million RMB and area of 4000m². The laboratory was equipped with 4 sets of flow standard devices with total 8 pipelines, among which 3 sets of flow standard devices with variable head dynamic volumetric method and 4 calibrating pipelines, the maximal flowrate up to 25000m³/h, and the total uncertainty of the system is superior to 0.037%, and has applied for invention patent; 1 set of flowrate standard device with high potential tank steady head static weighing method and 4 calibrating pipelines, and the total uncertainty of the system is superior to 0.015%. The fluid flowmeter with size of DN3 ~ DN3800 could be calibrated, such as EMF, mass flowmeter etc. At present, the device is the water flowrate device with maximum size be calibrated, the highest automatization and the highest accuracy among the kindred devices.

Shanghai Welltech Flow Testing Laboratory has established quality manual and procedure documentation in compliance with 《Laboratory Accreditation Standard》 stipulated by CNAL (China National Accreditation Board for Laboratory), and obtained the approval of CNAL to be authorized as National Level Flow Testing Center. Welltech will provide excellent service to all the customers under the guideline of “Justness, Objectiveness and Exactness”.

Besides, Shanghai Welltech Flow Testing Laboratory is also the Mass Flow Measurement Joint Laboratory with Shanghai Institute of Measurement and Testing Technology.
생산 및 영업증목

1. 유량측정시스템
   - Flow Metering system
   - Proving system
   - Injection system

2. 유량계
   - OVAL Flowmeter (기름, 물, 화학액계용)
   - Turbine Flowmeter (기름, 물, 화학액계용)
   - Vortex Flowmeter (스팀, 기체, 액체용)
   - Magnetic Flowmeter
   - Mass Flowmeter
   - Gas Turbine Flowmeter (기체, 액체)

3. VALVE
   - Diaphragm Valve
   - Ball Valve, Butterfly Valve 등

4. VALVE ACTUATOR
   - Air Operated Valve Actuator (AOV)

5. 유량검사기계
   (Pipe Prover, Small Volume Prover, 기준Tank, Master Meter 등)

6. 전자기계

7. 국가정밀검사업무 (공인기관)

본 Catalog의 규격은 끊임없이 연구개발에 의해 예고없이 변경될 수 있으므로 양해 바랍니다.

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