



Floatless Water Level Control WLAPC-FL-PN16XX

Description

Industrial & Marine application
Model: FLREH

Measuring principle

Conductive measurement resistance from reference point to Switching electrode point

Application

These floatless level switch is design for point level detection is applicable for the following application:-

- For conductive liquid
- Float-less application
- Pump control

The probe can be use for vacuum and overpressure condition up to 21 Kg/cm². The seal material is with stand the operating temperature range of -80oC to 200oC.

Feature of benefit

- Easy for setup Commissioning and calibration
- Suitable for most of the liquid application
- No recalibration require when replacing the controller

Surge Protective Unit LP-75B

Description

Application range

LP-75B series are applied to equipotential bonding of the building low voltage main distribution boxes, providing protection against the overvoltage arising from lightning strike to the power class B or misoperation.

Main features

- Large current capacity, low residual voltage. 0/
 - Build-in temperature control and circuit breaking technology, high securityperformance.
 - Lighting off in notice window indicates normal, red indicates broken, clear and easy distinguish.
 - Optional telesignalisation monitoring interface, can realize remote monitoring. 0/
 - Realizable wiring to reduce conductor resistance.
 - Assembled combination modules such as 1P+N, 2P, 3P+N, 4P etc, applied for various electric network system.
- Main Technical Date





Monitoring Integration SPD LP - XA230BC

Description

Application Range

LP-XA230BC series triad integration SPD are applied to surge protection of power control, signal, BNC video signal or RJ45 Ethernet with characteristics of low clamping voltage, quick response etc. which can release and prevent the damage to the protected device arising from inductive surge from power and control wire or the other surge over voltage. They are widely used in the field of security monitoring system "Global E-eye" system of telecom, data room demand so on.

Main features

- Modularization DIN rail design, convenient for installation and replacement.
- Built in temperature control and circuit breaking technology and multi protection technology, strong protection ability, high reliability.
- Green light on in notice window indicates power normal, off indicates broken, clear and distinguished.
- Function of multi-protection : power, video, signal, control signal, RJ45. 0/
- Build in 4mm² elevating earthing terminal, more reliable earthing.

Signal SPD - LP - DB9 Series

Description

Application Range

LP-DB9 Series surge protective device are applied to the equipment for the surge protective with DB9 interface, which can prevent the signal equipment from the permanent damage or transient interruption arising from inductive overvoltage, overcurrent and the other transient surge voltage caused by lightning or industrial noise, etc.

Main features

- 0/ Standard DB9 interface, convenience for installation and replacement.
- Choosing the latest high-speed surge protective component quick response, low output residual voltage and super transmission performance. 0/
- Small volume, exquisite, strong applicability



Surge Protective Socket LP-CZ

Description

Application Range

LP - CZ series socket power lightning protection device are application to the front side of various terminal consumer equipment of AC not more than 220V and rated current less than 10A, providing protection against over voltage arising from lightning to the power supply line and misoperation. (option from standard IEC61643-1 and GB50343)

Main features

- High current capacity, low residual voltage.
- Modularized design, standard socket design, convenient for installation and use.
- Introducing multilayer protection technology, strong protection ability, high reliability.
- Build-in temperature fuse, safe and reliable.

- Red pilot lamp on indicate normal, off indicate invalid.

COD Wall Mounted Online Analyzer - UV202

Description

UV202

Measurement Principle

With the difference of organic component in water, the maximum absorption wavelength is not the same; there is obviously difference with UV full wave absorption spectrum and with different UV spectrum character in different type of wastewater. Fixed COD through Deuterium UV-VIS ber spectrometer system to nish the spectrum scan of full-wave band. Model neural network for each different water sample separately, and convert the COD parameter exactly by spectrum turbidity interference technology.

Application Field

Widely used in environment monitoring, water and water conservancy monitoring, city sewage pipe network, ocean water monitoring, aquaculture, industrial process monitoring. The range of application for industrial wastewater including but not limited to: sewage treatment industry, chemical industry, petrochemical industry, medical industry, brewing industry and other relative industry.





UV 201

COD Wall Mounted Online Analyzer - UV201

Description

UV201

Measurement Principle

Organic absorbs the 254nm UV by Mercury lamp, the analyzer calculates the absorbance UV 254nm by detection the rest light intensity, and through multiple LED to do turbidity interference, integrated calculate the organic content of water.

Application Field

Widely used in surface water, industrial discharged sewage, domestic sewage, animal husbandry and shery sewage continuous or real-time detection.

Online Water Analyzer

Description

Ammonia On-line Automatic Monitor Application

Industrial process water, sewage, city urban sewage and surface water, such as rivers, lakes, and seawater, etc.

Main Features:

- **Smaller reagent consumption, without the second pollution**
- **Precise Measurement System**
Low failure rate and running cost are led by Nessler's reagent spectrophotometric method, met with the requirements of national environmental monitoring standards, and high Precise measurement system combined the imported multi-channel conjoined valve with the high precision photoelectric measuring device, and piston pump without direct contact with the reagents.
- **Automatic Alarm Mechanism for reagent deletion or date exceeded etc.**
Automatic diagnosis function
The system can automatically reset to run when power on again after power off or water break suddenly.
- **Large data storage and humanized operation interface**
The large capacity storage hard disk storage, can store the historical data for five years continuously, large touch screen, with good human-computer interaction, simple operation and easy to learn.



- **Rich Communication Interfaces**

Support the 4-20mA, RS232/485, TCP/IP, GPRS



Tube Cleaning Machine

Description

Functions & Features

The LKS electrical driven tube-cleaning machine is especially design for cleaning tube, juice heater and vacuum pan tubes. This TCM model is also a economy tube cleaning machine which is an electrical type and is suitable for all type of boiler provided the tubes size is in between 1/2" to 4" internal diameter. The smallest bending radius is 250mm at 1800 degree.

Description :

The Model LKS-TCM is a machine that removal of scale from evaporator tubes can be an irksome and very tiring task, as well as being costly, but it is one which is essential for the efficient running and operation of every palm oil mill and general industries. The job needs to be done quickly and effectively, at the lowest possible cost while at the same time damage to the tube walls must be avoided. LKS tube cleaning equipment is in operation in most sugar producing countries of the world and is a popular acquisition. It is backed by more than 60 years of field experience.

Tube Cleaning Machine & Tools

Description

Cleaning Tools

Cone Cutter Assemblies are designed for removing scale deposit from straight and curved tubes; Assemblies should be slightly smaller than tube I.D. The innovative design of then cones ensures a through cleaning. In water tube boilers, cone cutters are the most effective cleaning tools for all conditions

Single and Double Cone Assemble

Assemblies consisting of one or two cone elements are used for cleaning straight tubes 1.1/8" ~ 2.5/16" (29 ~ 59mm) I.D. and curved tubes 1.1/4" ~ 2.3/8" (32 ~ 60mm) I.D.

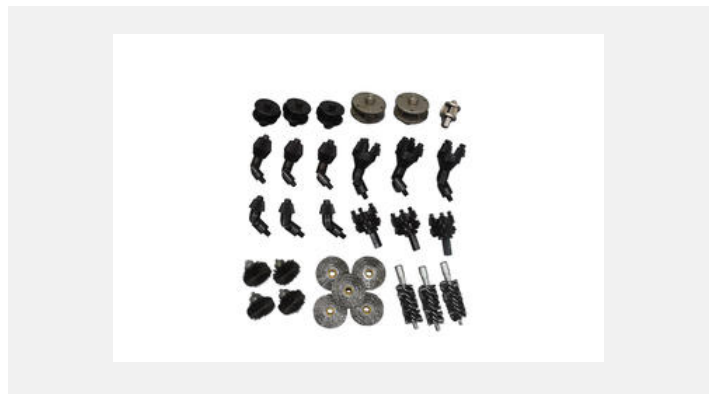
Disc Cone Assemblies

Assemblies consisting of three cone elements are used for cleaning straight tube 2.3/8" ~ 3.3/4" (60 ~ 95mm) I.D. and curved tubes 2.1/2" ~ 4" (64 ~ 102mm) I.D.

Straight Tube Wheel Brush Assemblies

Recommended for removing soft and light scale deposits in straight or ferrous tubes. Each assembly consists of four stainless steel wire wheel brush attached to a universal join. Brush should be 1/8" to 1/4" (3.2-6.4mm) smaller than tube I.D.

Curve Tube Wheel Brush Assemblies Recommended for removing soft and light scale deposits in straight or ferrous tubes. Each assembly consists of a single stainless steel wire wheel brush attached to each end of a universal join. Brush should be 1/4" to 3/8"(6.4-9.5mm) smaller than tube I.D.





TSS Analyzer - TSS 1000

Description

Function & Features

- LCD Display
- Multi-parameter unit
- 4-wire installation
- Optical Sensor
- Wide Range
- Two(2) 4-20mA Analog Output Signal • Auto Clean Function
- Configurable relays with reset button • RS485 Communication
- IP65 rated
- CE Marked By TUV

Technical Data

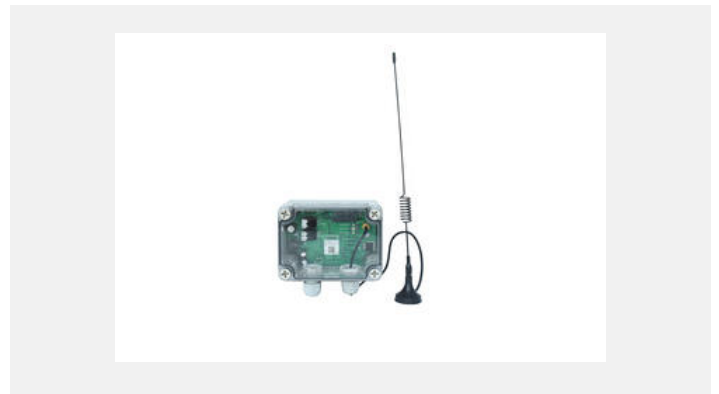
The SDM-V9 Water Analyzer controller provides digital sensor technology and covers Dissolved Oxygen, Total Suspended Solid, Liquid Density and Conductivity measurements. The ease of use and comfortable operation is performed thanks to the large display, plain text interface, quick access menu, easily accessible wiring terminals and quick setup guide. With the digital sensor technology provided by the water analyzer, installation and commissioning, configuration as well as maintenance becomes substantially easier.

Remote Monitoring Unit RMU-V8

Description

Features

- 2 Opto-Isolated Digital Inputs, 1 Relay Output
- Pre-paid or post-paid SIM Card, from any Telco
- 32-bit Cortex-M3 Microprocessor
- Support SMS to pager, fax, email and or server
- Only support Over the AIR programming, programming and configuration done via sending predefine sms to the rmu.
- Modem Specs : Quad Core or 4G



Remote Monitoring System

Description

RMU is a device installed at remote location that collects data, compile the data into a format and transmit the data back to a RMU server. RMU Server is designed to facilitate centralizer monitoring of GSM base Remote Monitoring Unit, customer can easily visualizations the status of each site. It can customizable user control, meaning customer can create own user level and set access level for each user. Unlimited user can be created and unlimited user can added into each user level.

Feature

- Cloud System Database
- Alert by SMS
- Can up to 20 Analog Input Channel
- Low cost maintenance
- Easy maintenance and calibration
- Easy to install and operate
- Can send Daily and Monthly report by mail for the desire user
- Available in 2 option connection type i) GSM ii) WIFI

Power Surge Protective Box LP - 20C/Y

Description

Application Range

LP-20C/Y are applied to equipotential bonding of the low voltage main or distribution boxes in the building, providing protection against the over voltage arising from the lightning strike to power supply or misoperation.

Main features

- Convenient wiring, standard connection components.
- 0/ Built-in temperature control and circuit breaking technology, high security performance. 0/
- Green light on indicates normal, off indicates broken, clear and easy distinguish. 0/
- Function of lightning count, capable of storage and display of lightning frequency. 0/
- Display status of normal on and off.
- Totally-enclosed metal shell, good shielding effectiveness, free maintenance.

Main Technical Date



PRESSURE TRANS Model SP

Description

■ FEATURES

- Accuracy $\pm 0.25\%$, $\pm 0.5\%$, F.S.
- Thick film strain gage on ceramic and stainless steel(SUS316)
- Pressure range from -1 to 400 bar
- Response time < 5milli seconds
- Field-rangable supper voltage from 10 to 30 Vdc
- Output DC4~20mA RL(max.)- $[(Vs-9V)/0.02A]\Omega$, up to 750 ohms at 24Vdc
- Protection class NEMA4/IP65

Submersible Level Transmitter LTE100

Description

Feature

- ⊗ Gauge, Absolute, Vacuum Models Available
- ⊗ Submersible, General Purpose and Wash down Enclosures
- ⊗ High Stability Achieved by CVD Sensing Element
- ⊗ Current Output with LCD display

The LTE series features stability and accuracy in a variety of enclosure options. The LTE series extends the packaging options via an all welded stainless steel back end for demanding submersible and industrial applications. The LTE feature had proven CVD sensing technology, an ASIC (amplified units), and modular packaging to provide a sensor line that can accommodate specials while not sacrificing high performance.





SUBMERSIBLE LEVEL TRANSMITTER

Description

Industrial/ Marine Application

Model: LT

- Gauge, Absolute, Vacuum and Compound Pressure Models Available
- Submersible, General Purpose and Wash down Enclosures • High Stability Achieved by CVD Sensing Element
- Millivolt, Voltage and Current Output Models

The LT series features stability and accuracy in a variety of enclosure options. The LT series extends the packaging options via an all welded stainless steel back end for demanding submersible and industrial applications. The LT feature had proven CVD sensing technology, an ASIC (amplified units), and modular packaging to provide a sensor line that can accommodate specials while not sacrificing high performance.

SUBMERSIBLE LEVEL TRANSMITTER

Description

Industrial/ Marine Application

Model: LT10M

- Gauge, Absolute, Vacuum and Compound Pressure Models Available
- Submersible, General Purpose and Wash down Enclosures • High Stability Achieved by CVD Sensing Element
- Millivolt, Voltage and Current Output Models

The LT series features stability and accuracy in a variety of enclosure options. The LT series extends the packaging options via an all welded stainless steel back end for demanding submersible and industrial applications. The LT feature had proven CVD sensing technology, an ASIC (amplified units), and modular packaging to provide a sensor line that can accommodate specials while not sacrificing high performance.



Electrode Holder

Description

Industrial & Marine application

Model: FLREH

Measuring principle

Conductive measurement resistance from reference point to Switching electrode point

Application

These floaless level switch is design for point level detection is applicable for the following application:-

- For conductive liquid
- Float-less application
- Pump control

The probe can be use for vacuum and overpressure condition up to 21 Kg/cm². The seal material is with stand the operating temperature range of -80oC to 200oC.

Feature of benefit

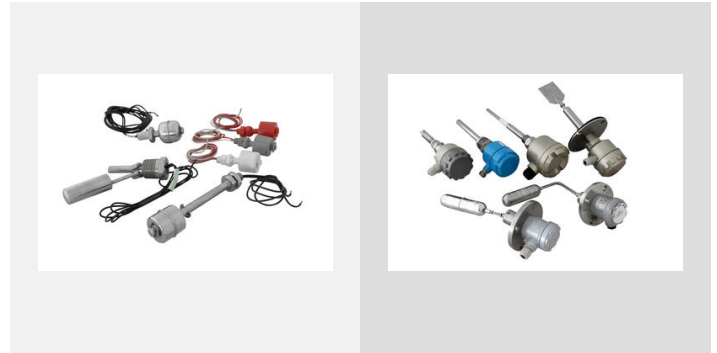
- Easy for setup Commissioning and calibration
- Suitable for most of the liquid application
- No recalibration require when replacing the controller

Float Switch

Description

Features :

Low cost, easy to install, high reliability, range adjustable, suitable for every type of liquids, non-mercury contained meets environment requirements, pressure test up to 400KPa AT 20°C, anti-reversed impervious sealing.



Bi-Color Water Level Gauge

Description

These level gauges are particularly suitable for liquids:

- Colorless
- Very Fluid
- Non-corrosive for glasses (e.g. ammoniacal solutions, trichlorethylene, water steam up to 32bar and higher pressure is upon request etc.)

Bi-colour level gauge will parallel glasses.

Working Principle:

It is a variation of transparent level gauge, however equipped with two reflex glasses and a back illuminator, fitted with suitable coloured fitters. The reading is given by the contrast between the bright colour (usually:red) of fitters in the lower part containing liquid and the colour of upper part of visible window.

The drawing shows a typical Reflex Glass Level Gauge. This instrument consists of a metal body, machined to have an internal chamber and one or more front windows (on one side only of the gauge).

On each window a special high resistance plate reflex glass is fitted with sealing joint and metal cover plates hold by bolts and nuts.

The chamber is connected to vessel with cross fittings and flanged, threaded or welded ends. Usually, between the instrument and its connecting ends, valves are fitted to consent shut-off piping and to disassemble the level gauge without to empty the vessel. Drain valves can also be fitted to cross fittings device.

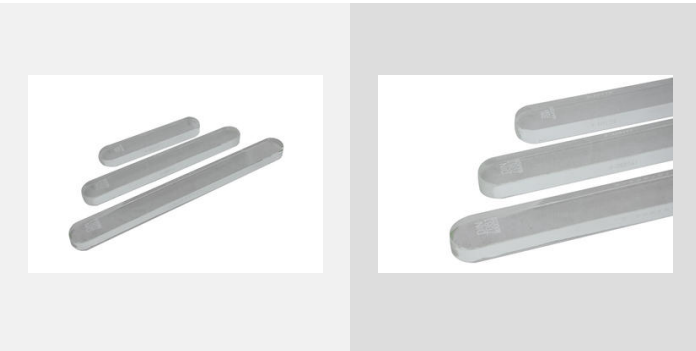
To avoid leakage in case of glass breakage, safety ball-check device can be provided.

Borosilicate Sight Glass

Description

Sight Glasses to DIN 7080

Our delivery programme includes all sizes given the DIN standard and further sizes to provide complete programme. If you cannot find your sight glass here please contact us - we can do a lot



Borosilicate Gauge Glass

Description

Gauge Glasses to DIN 7081

We manufacture two standard version of gauge glasses : reflex glasses, which allow simple and safe reading to be made at a distance; and transparent glasses, which can also be supplied in a high-pressure version for particularly high requirement. If you cannot find your gauge glass here please contact us - we can do a lot.

Opacity Analyzer Smoke Density Meter SDM V9

Description

Function & Features

- Continuous Monitoring
- Scanning Distance up to 20 Meter
- Continuously recording in percent (%)
- CE Mark by TUV
- Automatic calculation of Smoke Exceed Limit by Daily & Hourly
- Aid to Efficiency of combustion
- Meet to the department of Environment Emission standard Regulation

Specification

Control Unit

Model : SDM V9
 Screen Width : LCD 70 x 38mm
 Power : 85-260 VAC; 50/60 Hz
 Power Consumption : 20 Watt
 Ambient Temperature : -10 ~ 50 °C
 Alarm Contact : Max 5A / 240VAC - SPDT Relay
 Measuring Range : 0 - 100% (Opacity)
 Engineering Unit : Percent Obscuration (%)
 Mounting : Panel or Wall
 Panel Cut-Out Size : W137 ± 1 x H137 ± 1 x D90 (mm)
 Dimension : W150 x H150 x D110 (mm)



Weight : 1 Kg
 Sampling Time : 0.2 seconds
 Display Accuracy : $\pm 1.0\%$ F.S
 Operating Temperature : 0°C to 55°C
 Operating Humidity : 20 to 80% RH Max. (Non-condensing)
 Protection : IP65 Front Panel
 TUV Certification No. : AE50177232 001
 Report No. : 17014563 001
 Conformity : 2004 / 108 / EC
 Emission : EN 50270 : 2006 EN61000-3-2 :
 2006 EN61000-3-3 : 1955+A1+A2

Unit Overview

1. LCD display
2. Five Touch Pad Navigation Key
3. Power Supply Terminal (L,N,E)
4. Alarm Terminal (TB1-6)
5. Sensor Input Terminal (TB9-12)
6. Output Terminal 4-20mA(TB13-16)
7. RS485 Modbus (TB17-18)
8. RS232 Terminal
9. USB Interface Port



Fixed Gas Analyzer System GA-LK-1000F Series

Description

GA-LK-1000F infrared analyzer can be used for measurement of the concentration of gases in sample gases simultaneously. It is based on the single source two beams non dispersion infrared (NDIR) method been used for this analyzer by Micro-Flow NDIR technology.

LKS Analyzer is designed with 19 inch 3U rack mountable smaller physical dimensions and the simple digital pulsable infrared source and two beam systems. The general application is emission flue gas, landfill, anaerobic digestion and other fermentation processes.

Features:

- Maxchannelupto5gasesforoneslotof19"x3U • LCD display : 320x 240 (mm)
- Repeatability : $\pm 0.5\%$ FS
- Linearity : $\pm 1\%$ FS
- Zero/Span drift : $\pm 1\%$ FS per week
- H₂O in fuel gas don't effect measurement of SO₂ and NO
- Sampling flow don't affect measurement of SO₂/NO/CO/CO₂ • CO and NO₂ don't affect measuremnt of SO₂, NO
- RS-232 interface
- Analogue output : 4-20mA
- Sensor type : NDIR

Optional Parameter

- Temperature
- Static Pressure • Flow
- Moisture

Specifiction

- Accurcy : $\pm 1\%$ FS • Resolution : 0.01% • Response Time : 2s • Warmup:10Min
- Output : 4-20mA
- Power : 230VAC, 50/60Hz
- Communication : RS232/RS485/Ethernet
- Ambient Temperature : -10-100°C
- Certification .: CE Mark by TUV (AE 50211152)

Dust & Opacity Analyzer D10-DP

Description

D10-DP is a type-approved measuring device which combines the advantages of the measuring principles transmittance and scattered light forward. Therefore, it is ideal for measurement of very low to high dust concentrations. The automatic self-alignment optimized the position of the measuring beam and prevents incorrect measurement. An automatic check of zero and referencepoints as well as a contamination monitoring.

Product Overview

Dust & Opacity Analyzer

- Combination of transmittance, opacity and scattered light measurement.
- For very low to high dust concentrations.
- Automatic check of zero and reference point.
- Contamination monitoring and compensation on both sides. • Automatic self-alignment.

Application

- Solid Fuel Boiler
- Gas Fuel Boiler
- Tunnel for Visibility • Generator Emission • Diesel Car Emission • Rubbish Incinerator • Power Plant Boiler
- Furnance
- Waste Incinerator

Field Application

- Emission Monitoring of power stations and waste incinerator plants.
- Monitoring of filter facilities.
- Measurement of dust concentrations in exhaust gas and exhaust air ducts up and downstream of a filter

Benefits

- Suitable for highly fluctuating dust concentrations. • Reliable application due to redundant measurement. • Low maintenance due to self-monitoring function.
- Future-proof for decreasing limit values.

Controller Unit

- Continuous monitoring in % (Opacity) and mg/m3 (Dust).
- Alarm contact for exceeded limit.
- Aid to Efficiency of combustion.
- Meet to the Department of Environmental Emission Standard Regulation. • Acknowledge Buzzer function.
- 4-20mA Analog output for Dust and Opacity. • RS485 Modbus Communication.
- Automatic Zero and Span check.
- CE Marked by TUV.



Dust Opacity Analyzer D10

Description

D10 is a type-approved measuring device which combines the advantages of the measuring principles transmittance and scattered light forward. There- fore, it is ideal for measurement of very low to high dust concentrations. The automatic self-alignment optimized the position of the measuring beam and prevents incorrect measurement. An automatic check of zero and reference- points as well as a contamination monitoring.

Product Overview

Dust & Opacity Analyzer

- Combination of transmittance and scattered light measurement. • For very low to high dust concentrations.
- Automatic check of zero and reference point.
- Contamination monitoring and compensation on both sides.
- Automatic self-alignment.
- For medium to large dust diameters.

Application

- Solid Fuel Boiler
- Gas Fuel Boiler
- Tunnel for Visibility • Generator Emission • Diesel Car Emission • Rubbish Incinerator • Power Plant Boiler • Furnance
- Waste Incinerator

Field Application

- Emission Monitoring of power stations and waste incinerator plants. • Monitoring of filter facilities.
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- Meet to the Department of Environmental Emission Standard Regulation. • Acknowledge Buzzer function.
- 4-20mA Analog output for Dust and Opacity. • RS485 Modbus Communication.
- Automatic Zero and Span check.
- Certification CE Mark by TUV.

Mechanical Level Indicator

Description

Feature & Function

This level indicator is assembling for indicating the Level Water Level Tank suction as Reservoir, Suction Tank and etc.
The scale and range is selectable and customize to the customer need.
The material of housing is in Mild Steel and coated either by Hot-dipped galvanize or epoxy coating.

Specification

Dial Size - 300mm, 400mm, 600mm and 900mm
Indication Unit - Meters or feet
Accuracy - 1% of full scale
Zero Stability - +/- 0.5% of full scale
Repeatability - +/- 0.5% of full scale
Working Temp - up to 80°C
Relative Humidity - 90% RH
Optional - Back Cover
And indicator dial with Luminous Marking
Level Range - 0 ~ 3, 0 ~ 4, 0 ~ 5, 0 ~ 6, 0 ~ 8, 0 ~ 10, 0 ~ 15, 0 ~ 20 & 0 ~ 30 meter



Intelligent Controller IC Serie

Description

Micro Processor PID Controllers

Industrial/ Marine Application

Model: IC-988, 888, 788, 688, 488

Features :

Soft Star, easy operation, remote setpoint, adjustable PV offset, input/output, isolated, self-diagnosis function, heat/cool bimode output, 1Ramp 1Dwell, and Dwell time, highly accurate and economical, fuzzy or PID auto-tuning function is supplied as standard, 1 alarm standard, option 3rd alarm with 17 alarm models, fully configurable for T/C, RTD or Linear input, switching power supply AC 85-265V 50/60Hz, manual/ auto switching, non-influence. PV, SV Value, re-transmitter, preventive water, dust (option)



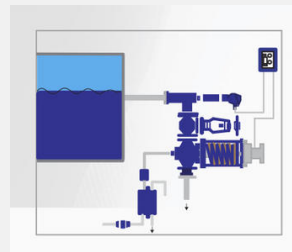
ABDC Blowdown Control System

Description

The ABDC blowdown control system is suitable for shell and water tube boilers, where the probe can be fitted in the boiler shell itself (the ideal arrangement) and can easily be linked to energy / building management systems.

There is the option to choose either the TM or the CON controller. The adjacent key features are for the TM. The CON has all the features of the TM plus the following additional benefits:

- Complete application coverage
- Compensate temperature and scale detection - Pulse probe conditioning cycle
- Switchable alarm latch
- Automatic Purge on calibration
- Isolated 0-20mA, or 4-20mA for retransmission - Large, easy to ready interface
- Error-Free Configuration



Biogas Online Analyzer BGA-1000F

Brand.....LKS (M) Sdn. Bhd.

Description

CONTENT

1. Brief
2. System flow
3. Complete set
4. Technical parameter
5. Installation
6. Operation
7. Maintenance
8. Transportation and storage
9. Quality assurance
10. Detail Internal Layout (Appendix 1)

Features

Analysis cabinet's housing is stainless steel which is adaptable to corrosive environment. Besides, cabinet is sealed to prevent from corrosive gas. Intelligent heater is built inside to ensure normal functioning of the system when inside temperature approaches 8°C. Analysis system can be programmed to realize auto-drain and auto zero calibration function. Online infrared biogas analyzer is the core part of the system. Gas molecules Like CO₂, CH₄ which are composed of different types of atoms have absorption spectrum in infrared range. Absorption intensity observes Lamber-Beer's Law. Our product is on the basis of it. In addition, electrochemical oxygen sensor measuring module can be installed internally so as H₂S Sensor. One single analyzer can measure up to 4 gas components. Our equipment can be applied to detect the concentration of landfill gas, biogas and CO₂, CH₄, H₂S, O₂ produced in the biogas generating process.

It is applicable to various kinds of environment. Through analyzing parameter change, it helps to judge and alarm in industrial process. Meantime, 4-20mA DC output and digital alarm output interface are available.

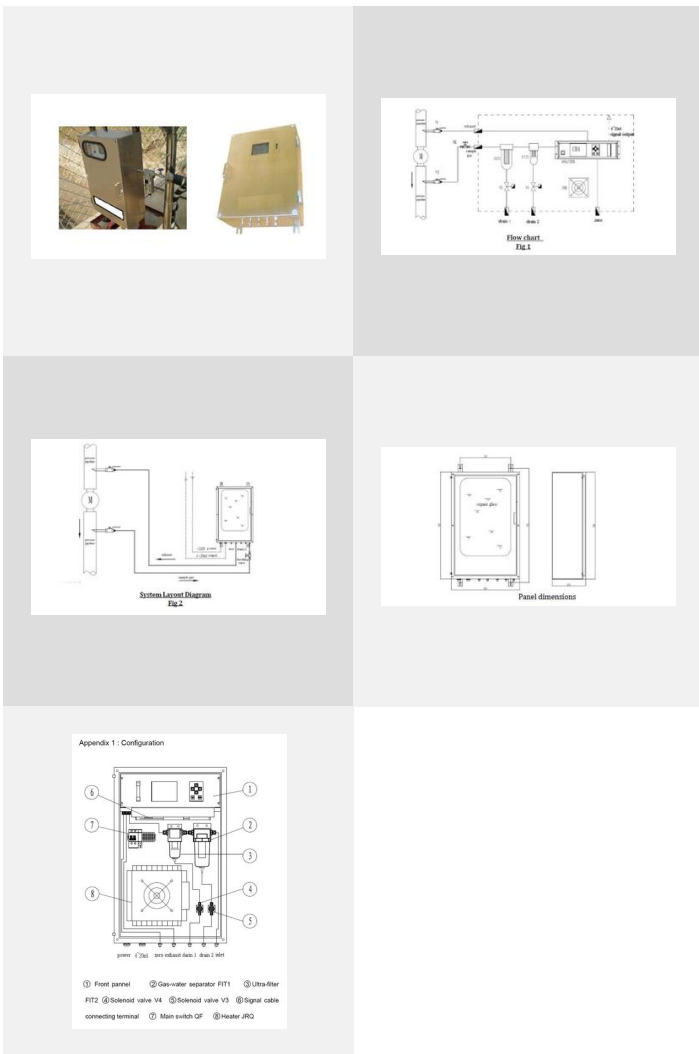
Working environment

- Power Supply : 230VAC, 50HZ to 60HZ
- Sample gas specification:-
- sampling pressure : 3 ~ 20Kpa
- exhaust pressure : 0 ~ -10Kpa
- Operating temperature : 0 ~ 80 C
- Ambient temperature : -10 C ~ 55 C

Flow Chart - Fig 1

Specification :

- **Globe valve V1,V2**
Type: Manual ball valve, stainless steel ;
Function: Cut off sampling and exhaust pipeline when doing maintenance
- **Throttling valve V5**
Type: Ø6 stainless steel needle valve, cutting sleeve connector ;
Function: adjust flow to a level of 0.7~1.2L/min
- **Gas-water separator FIT1**
Type: PTFE core, Filter size: 3um ;
Function: Separate liquid water and filter impurities of 3um
- **Ultra-filter FIT2**



Type: Fibre core, Filter size: 1um ;
Function: Filter impurities of 1um and above

• **Solenoid valve V3, V4**

Type: DC24V, normally closed ;

Function: It is programmed to regularly evacuate water automatically.

• **Heater JRQ**

Type: AC220V, 300W ;

Function: Avoid pipeline freezing and plugging when the inside temperature is below 8 C

Complete System

Equipment and accessories:

No Name

- 1) Biogas Analyzer
Model : BGA-1000F
Qty : 01 unit
- 2) Manual Ball Valve
Model : 4-way, Stainless steel
Qty : 02 unit
- 3) Reducer Union
Model : 1/2"/Ø6mm Stainless Steel
Qty : 02 unit
- 4) Sampling and Exhaust pipe
Model : 1/2"/Ø6mm PTFE
Qty : 01 meter
- 5) Insulation Pipe
Qty : 01 meter
- 6) Throttling valve
Model : Ø6mm cutting sleeve, Stainless Steel
Qty : 01 unit
- 7) Spare Part
 - 7.1) Core
Model : Ø6mm
Qty : 04 units
 - 7.2) Filter core of gas water
Model : PTFE
Qty : 01 unit
 - 7.3) Hexagon Wrench
Model : M8
Qty : 01 unit
- 8) Documents
 - 8.1) Manufacturer Certificate
Qty : 01 book
 - 8.2) Instrument manual
Qty : 01 cert

Technical data

Gas Parameter: CH4 Methane
Range : 0~100% (VOL)
Principle : NDIR
Accuracy : ±1%FS
Nonlinearity : ≤±1%FS
Zero drift : ≤± 1%FS / per week
Output : 4~20mA(maximum 750 Ω),
output 2 point

DC/alarm

Gas Parameter: CO₂ Carbon Dioxide
Range : 0~50% (VOL)
Principle : NDIR
Accuracy : ±1%FS
Nonlinearity : ≤±1%FS
Zero drift : ≤± 1%FS / per week
Output : 4~20mA(maximum 750 Ω), DC/ alarm output 2 point

Gas Parameter: H₂S Hydrogen Sulphide
Range : 0~1% (VOL)
Principle : ECD
Accuracy : 3%FS
Zero drift : ≤0.05% (VOL) /per week
Temp. drift : ≤±0.025% (VOL)
nonlinearity : ≤±0.5% full range
Output : 4~20mA(maximum 750 Ω), DC/ alarm output 2 point

Gas Parameter: O₂ Oxygen
Range : 0~25% (VOL)
Principle : ECD
Accuracy : 3%FS
Zero drift : ≤0.05% (VOL) /per week
Temp. drift : ≤±0.025% (VOL)
Nonlinearity : ≤±0.5%full range
Output : 4~20mA(maximum 750 Ω), DC/ alarm output 2 point

Sampling gas pipe installation

- To avoid mechanical damage, it's appropriate to lay the sampling pipe and exhaust pipe along the support frame or pipe chase.
- If it is difficult to recycle the exhaust to process pipeline, you can evacuate it in safe area.
- You can not apply in-site air as zero gas which is severely polluted. Collect clean air with extra pipe line if it is so.
- If it is in open area, there is no need to connect extra pipeline to drain the water.

Electrical installation

• Panel

Power Consumption: 500Watt
Power Supply: 230VAC, 50-60Hz
Power cord is led through power entrance to main switch QF up end, cable model : RVV 3*1.5mm²

• Signal cable

Apply cable model RVVP 8*0.75mm² if it is 4~20mA signal output. If it is digital alarm signal, you should choose according to alarm component.

There are 4 alarm cables in total. Connecting terminal lies under the panel inside the cabinet. Refer to instrument manual for specific wiring.

Operation

To ensure the pipeline is without leakage, check carefully after all installation work is done. Make sure that grounding work is done and power supply meets particular requirements.

Power on

Switch MCB and enter in warm-up interface, then system starts to work. Close the cabinet door and tighten it with hexagon wrench. It takes 10min's warm-up time to enter in measuring interface.

Sampling

First close V5 and then open V2, V1 in sequence, rotate V5 gently eventually till the flow is 1.0L/min. sampling gas will flow into analysis panel, it will show the gas components reading after a few seconds.

Maintenance

Instrument maintenance

Signal drift will occur if the analysis instrument is regularly used. It contains automatic zero calibration function. If you need calibrate manually, please refer to concerning chapter.

Pipeline maintenance

To ensure reliable functioning of the system, you should check the pipeline working condition regularly to make sure that there is no leakage and plugging.

You can judge the trouble through below :

- If there is tiny flow or even no flow in the flow meter, please check whether the process pipeline pressure is normal first and check whether the pipeline is choked. Special notice: This trouble will also appear if exhaust pipe is choked.
- If there is a huge discrepancy between measurement result and experience. There may be leakage occurring.

Filter core maintenance

You should replace the filter material regularly according to actual pollution condition. Cut off sample gas valve and exhaust valve before replacing. To ensure tightness, lock cabinet door after replacement.

Drain

In cold weather condition, make sure there is no frost in drain

Shipment and storage

Gas analysis system is highly sophisticated equipment. You should pack with wooden case stuffed with vibration-absorptive material so that the glass will not be pressured against. Ensure the cabinet is in upright state in the process of shipment, anti-moisture measures should be taken to protect electrical unit.

Quality Guarantee

After-sales service commitment :

- Calculated from the day when the products are inspected and accepted, warrantee period is one year.
- We will bear the freight cost and repair the products for free due to quality reasons if it is under warrantee.
- Engineer on site will be charge according to man day event the product is still under warranty.
- After warrantee period, we still assume repair responsibility, but cost and freight fee will be charged.

BI-COLOR Water Level Gauge - Model: LG - 1 to 9

Brand.....LKS (M) Sdn. Bhd.

Description

Industrial Application

These level gauges are particularly suitable for liquids :

- Colorless
- Very Fluid
- Non-corrosive for glasses (e.g. ammoniacal solutions, trichlorethylene, water steam up to 32bar, etc.)

Bicolour level gauge will parallel glasses. Working Principle :

It is a variation of transparent level gauge, however equipped with two reflex glasses and a back illuminator, fitted with suitable coloured fitters. The reading is given by the contrast between the bright colour (usually:red) of fitters in the lower part containing liquid and the colour of upper part of visible window.

The drawing shows a typical Reflex Glass Level Gauge. This instrument consists of a metal body, machined to have an internal chamber and one or more front windows (on one side only of the gauge).

On each window a special high resistance plate reflex glass is fitted with sealing joint and metal cover plates hold by bolts and nuts.

The chamber is connected to vessel with cross fittings and flanged, threaded or welded ends. Usually, between the instrument and its connecting ends, valves are fitted to consent shut-off piping and to disassemble the level gauge without to empty the vessel. Drain valves can also be fitted to cross fittings device.

To avoid leakage in case of glass breakage, safety ball-check device can be provided.

Working Principle :

Reflex level gauges working principle is based on the light refraction and reflection laws.

Reflex level gauges use glasses having the face fitted towards the chamber shaped to have prismatic grooves with section angle of 90° . When in operation, the chamber is filled with liquid in the lower zone and gases or vapors in the upper zone; the liquid level is distinguished by different brightness of the glass in the liquid and in the gas/vapor zone. The reflex level gauges do not need a specific illumination: the day environmental light is enough. Only during the night an artificial light must be provided.





Auto Sterilization System

Brand.....LKS (M) Sdn. Bhd.

Description

Feature & Function

- User programmable
- Setting of recipe
- Key-Pad version or Touch screen version
- Sterilizer interlock
- Auto or Manual process
- Data recording
- Security password protection
- Enhance steam management
- **Applicable for**
 - o Horizontal sterilizer
 - o Vertical Sterilizer
 - o Spherical Sterilizer
 - o Tilting Sterilizer
 - o Auto Clave Sterilizer
- Integrated with Back pressure receiver (option)

Operation Mode

- Auto Fully Automatic (FA):
Sterilizer Sequential Interlock System
- Auto Partial Automatic (PA):
Stand-Alone Sterilizer
- Manual Mode 1:
Selector Switch Electrode-Pneumatic System
- Manual Mode 2:
Mechanical-Pneumatic Bypass System
- Manual Mode 3:
Mechanical Handwheel or Lever System

Programming

Fully programmable for multi-peak sterilizer process by advance touch screen interface device. Each controller are loaded with 3 process programs and maximum are 16 steps of operation

Door Sensor

Proximity non-contact sensor with maintenance free type.

Sterilizer Interlock process

The interlock sequence is design to prevent sudden demand of steam.

Programmable Logic Controller (PLC)

Modular design it is capable for future expansion to steam management.

Power Supply Stabilizer & Protection

Prevent voltage unstable and lightning surge.

Automatic Blow Down Control - Model : ABDC-V4

Brand.....LKS (M) Sdn. Bhd.

Description

Functions & Features

LKS TDS automatic blow down circuit model LKS-ABDC is designed

specially for all type of water tube boiler. The function of control system is to maintain boiler Total Dissolved Solid (TDS) and to keep the boiler low maintenance with also save wastage of chemical.



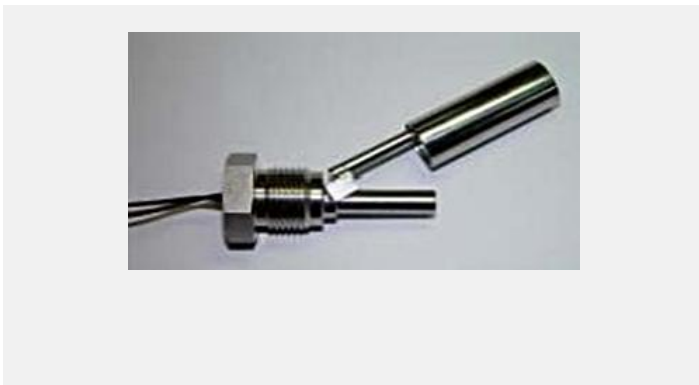
Horizontal Level Switch LY-100

Brand.....LKS (M) Sdn. Bhd.

Description

Features:

- Operating Temp: 120C
- Stainless steel Pressure up to 5 bar
- Switch: Reed switch
- NO/NCConnection: 1/2" BSP
- Contact: 1A/240VAC



Gas Analyzer LKS-1000F

Brand.....LKS (M) Sdn. Bhd.

Description

Features:

- Max channel up to 5 gases for one slot of 19"x3ULCD
- Display: 320 x 240 (mm)
- Repeatability: ±0.5% FSLinearity: ±1% FSZero/Span drift: ±2%FSH2O in fuel gas don't affect measurement of SO2 and NO
- Sampling flow don't affect measurement of SO2/NO/CO/CO2CO and NO2 don't affect measurement of SO2 ,NORS-232 interface
- Analogue output: 4-20mA
- Sensor type: NDIR and Electrochemical,
- Certification: CE mark by TUV (AE 50211152)





Portable Combustion Gas Analyzer GA-LK1000P

Brand.....LKS (M) Sdn. Bhd.
 Measurement range.....CO₂, CO, O₂, NO, NO₂, SO₂
 Resolution.....0.01%
 Zero/Span Drift.....+/- 2%FS
 Output.....RS232

Description

GA-LK-1000P infra-red combustion gas analyzer can be used for measurement of the concentration of O₂, CO₂, CO, NO, NO₂, NO_x and SO₂ in sample gases simultaneously. It based on single source two beams non-dispersion infra-red (NDIR) method for CO, CO₂, NO, SO₂ and fuel cell method (ECD) for O₂.

Application for Combustion, Stack Sampling, R&D & Government Environmental Enforcement used.

Features:

- NDIR Technology
- Analysis for fuel gas from combustion of coal, gas, fuel oil from boiler
- Simple construction with pulsable infrared
- Li-ion battery inside
- Sampling pump inside
- Calculate the excess air factor in real time
- Enhance the combustion efficiency
- Cloud System (Optional)

CEMS

Brand.....LKS (M) Sdn. Bhd.

Description

- TESTING 1234
- Continuous Emission Monitoring System: TUV/M-Cert/US-EPA
- Approved Product 100% Online to DOE
- Maintenance Service Contract
- Supply, Installation, Testing & Commissioning, Service Contract
- Gas Analyzer, Opacity and Dust Analyzer is available
- Certification: CE mark by TUV



Pressure Transmitter P-250

Brand.....LKS (M) Sdn. Bhd.

Description

Features:

- Output: 4-20mA (2 wire) Range: 1~-1/1000kg/cm²
- Elec. Connect: DIN connector Cable, Bayonet Accuracy: ±0.2%, ±0.25%
- Zero & Span adjusted
- Diaphragm sensing type
- Direct mounting
- Operating Temperature range: -40oc to +125oc Long term stability: ±0.25%
- Electromagnetic Interference [EMI] Protection
- Housing protection: IP65

Total Suspended Solid Analyzer

Brand.....LKS (M) Sdn. Bhd.

Description

- LCD Display with Touch Screen Function
- Auto Cleaning Function on Optional
- Trending Graph
- Memory Function 8GB USB Flash Card
- RS232 communication for downloading function



Float Switch

Brand.....LKS (M) Sdn. Bhd.

Description

Features:

- Low Cost Easy to install
- High reliability
- Range adjustable
- Suitable for every type of liquids
- Non-mercury contained meets environmental requirements
- Pressure test up to 400KPa at 200oC
- Anti reversed impervious sealing



NDIR Multi Gas Analyzer

Brand.....LKS (M) Sdn. Bhd.

Price.....MYR 280,000.00

Description

Analysis System for Continuous Flue Gas Monitoring System is Tailor make to suit your requirement.

GA-LK-1000F Series Fixed Gas Analyzer System

Description:

GA-LK-1000F infrared analyzer can be used for measurement of the concentration of gases in sample gases simultaneously. It is based on the single source two beams non dispersion infrared (NDIR) method been used for this analyzer by Micro-Flow NDIR technology. LKS analyzer is designed with 19 inches 3U rack mountable smaller physical dimensions and the simple digital pulsable infrared source and two beam systems. The general application is emission flue gas, landfill, anaerobic digestion and other fermentation Processes.

Features:

- ☒ Max channel up to 5 gases for one slot of 19"x3U
- ☒ LCD Display: 320 x 240 (mm)
- ☒ Repeatability: $\pm 0.5\%$ FS
- ☒ Linearity: $\pm 1\%$ FS
- ☒ Zero/Span drift: $\pm 1\%$ FS per week
- ☒ H2O in fuel gas don't affect measurement of SO2 and NO
- ☒ Sampling flow don't affect measurement of SO2/NO/CO/CO2
- ☒ CO and NO2 don't affect measurement of SO2 ,NO
- ☒ RS-232 interface
- ☒ Analogue output: 4-20mA☒ Sensor type: NDIR

Optional Parameter:

- ☒ Temperature
- ☒ Static Pressure
- ☒ Flow
- ☒ Moisture

Specification:

Accuracy: +/- 1% FS

Resolution: 0.01%

Response time: 2s

Warm up: 10 Min

Output: 4-20mA

Power: 230VAC, 50/60Hz

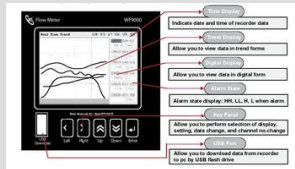
Communication: RS232/RS485/Ethernet

Ambient Temperature:-10-100°C

Standard: CE mark by TUV

Certification No: AE 50211152





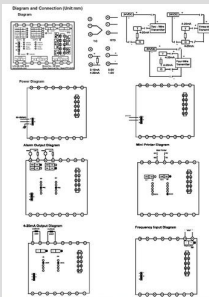
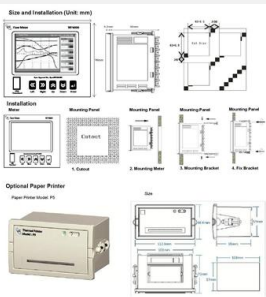
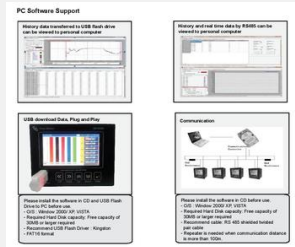
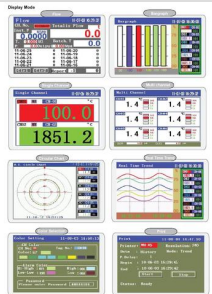
Flow Meter + Data Logger WF9000

Brand.....LKS (M) Sdn. Bhd.

Description

Memory Flash Drive Data Saving

Provides flexibility and variety in the handling of record data



LKS GROUP of Company

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