The Product Introduction



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Type 1、HYPO—D2210、P1200microcontroller Facade







Type HYPO-D2210 External Dimension: 144mm×144mm×35 Mm Weight: 0.6Kg Power Supply: DC 24V Type HYPO-D3



Dimension: $144mm \times 144mm \times 31mm$

Product profile

The alarm controller uses the advanced SCM, monitoring the working status of switch alarm point 16 groups (D2100) or 12 groups (P1200) with an exquisite design, reliable performance and convenient installment. It can be applied to ship diesel engines, cabins, steering engines, generator and fire alarms. For medium and small-sized ships we adopt a host and 1-3 appurtenant machines to display in long-distance, for example to display engine alarm in drive room, chief engineer room. It only needs 4 lines to connect host and appurtenant machine(2 power supply wires, 1 receive line and dispatch wires). The display status and function of the two machines are completely the same. Main Features and Functions:

The atom points may be often-on or or other off touch point.

The indicating light flashes when alarm is on and rests when it's off. Then it and the indicating light is off when the alarm signal is removed.

3. Check and reset the horn automatically with an outspreading alarm touch point.

4. Exchange data with computer through the RS-485 COM.

5. Alarm relay time can be set according to requirement. Type D2210 chooses it between 0 and 4 seconds, Type P1200 0 and 99 seconds.

6. When the 1-8 points of model D2210 enunciator alarm, it accordingly outputs the signal of DC24V and the current no bigger than 30mA to control exterior equipments. The model HYPO-P1200 alarm with model CDZ9902 speed model guarantees the diesel engine's safety protection system with a compact structure, well-performance.

Remarks: The overall dimensions and panel collocation of two machines are the same completely.

2、Cyd2 Rudder Angle Indicator



2.1 Rudder Angle Transmitter **Overall Dimension:** 210 mm $\times 210$ Mm $\times 142$ Mm Weight: 7kg 2.2 Controller Overall Dimension: $98 \text{mm} \times 52 \text{ Mm} \times 149 \text{ Mm}$ Weight: 0.7kg 2.3 Indicator 2.3.1 Cdf120 (Inbuilt Style, Antispray) Overall Dimension: 120mm×120 Mm×164 Mm Weight: 2.4kg 2.3.2 Cdf144 (Inbuilt Style, Antispray) **Overall Dimension:** 144 mm \times 144 Mm \times 86 mm Weight: 0.5kg 2.3.3 Cdf225 (Wall-hanging style , Water-Proof) Overall Dimension: 225mm×260 Mm×12 Mm

Weight: 10kg

Product profile

CYD2 Rudder Angle Indicator's power supply may be AC220V or DC24V. It has advantages of high accuracy (≤ 0.50), low noise, convenient installment and adjustment, low price and strong load ability etc.

The instrument is composed of a rudder angle transmitter, a control box and an indicator. The power switches, zero position adjustment and full rudder adjustment are on the box.

It may be used to indicate rudder angles on ships with various sizes.

Remarks:

1. One transmitter can connect five indicators.

2. Circular three-faced indicator is under development

3. CDZ9903 Tachometer



3.1 Display

3.1.1 CDF9903 A(Inbuilt Style, Antis pray) Overall Dimension: 96mm×96 Mm×86Mm Weight: 0.5Kg

3.1.2 CDF9903B (Inbuilt Style, Antis pray) Overall Dimension: 144mm×144 Mm×86Mm Weight: 0.5Kg

Product Profile

The tachometer adopts non-contacting sensor with the measurement precision of biggest measurement frequency 1%, 6KHZ. power supply DC24V.The tachometer has two types: model CDF9903 А is used to measure unidirectional rotational speed, while model CDF9903 B is used to measure bi-directional rotational speed. The tachometer is composed of sensors. determination device of rotational speed ,non-contacting pickup (proximity switch ,hall switch), indicator(one or more)and gear of velocity measurement (measure rotational speed of thilling axle). It is mainly used in main engines on ships, generators, electronic motors to measure protational speed. CDZ9903 tachometer also used with this equipment as rotational speed relay.

©DZ9903Amodel outputs 4 rotational speed control signal at most。CDZ9903B model outputs 4 rotational speed control signal at most passive electronic contact. Rotational speed can be set artificially.

Note: Customer ought to tell diameter of trailing axle when choose gear of velocity measuring of trailing axle.

Measurement speed gear is hoops of two semi-structures, when installation, disassemble and tight it on the trailing axle with a bolt.

Groups Alarm



4.1 Sending Implement **Overall Dimension:** $120 \text{mm} \times 60 \text{mm} \times 190 \text{mm}$ Weight: 0.6Kg 4.1 Receiver **Overall Dimension:** $160 \text{mm} \times 80 \text{mm} \times 165 \text{mm}$ Weight: 0.6Kg

5.ADH5 LED Masthead Light

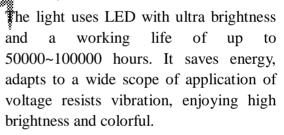


Product profile

4.CDJ9905 Single Wire Transferred 16 This alarm apparatus uses the code principle in transmitting and receiving signals, only requiring two transmission wires to transmit the on or off signal of 16 groups, It can demonstrate the light and reset to buzz alarm automatically.

> Its transmitting distance is more than 1000 meters, sending implement install in the cabin, but the receiver in the wheel house.

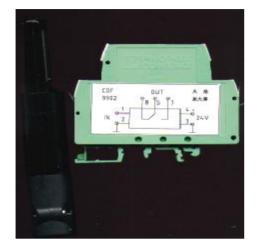
> It can be applied in the ship cabin, steering engine, generator alarm, control in distance and fire alarm. It is reliable, convenient, and cable saving.



Type ADF-1 distributes with CXH5-1. There are three working voltage: 24v, 110v, and 220v, mainly for the ferries.

Type ADF-2 distributes with CXH5-2. There are three working voltages: 24v, 110v, 220v, mainly for middle and small ships.

6.9902 Boiler Flame Detector



Product profile

The detector is composed of light sensitive cell detector and flame amplifier with advantages of high sensitivity, easy adjustment, reliable performance.

The flame amplifier voltage can be setup from 20mV to 400mV, which can satisfy most boilers.

7. D139—72G Magnify PCB Relay PCB Protection PCB



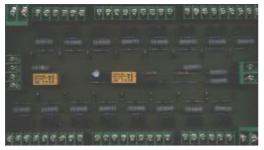
D139-72G Magnify PCB



Relay PCB Protection PCB

The circuit board and circuit board of Type D 39-72 German Anne fixes steering control system are the same. Magnify PCB, Relay PCB and the protection PCB, performance, dimension and interface function are the same as D139—72 completely, it can be fungible with each other. Now it has already successfully equipped on DaQing212 DaQing213 DaQing214 DaQing215 DaQing216 DaQing412 DaQing414 DaQing415 DaQing413

DaQing416 DaQing417 Xianghai ship, Xiachi ship. It is good in performance for many yeas. **Type** 8. Navigation Light Control PCB



16 Groups Navigation Light Control PCB



8 Groups Navigation Light Control PCB (132×129×25mm)

9、CDF9920 (Flange) Level Indicator



Technical Feature:

The instrument adopts the intermediary agent liquid ceramics sensor without mechanical movement components and it gains the long term stability, small temperature drift. When the temperature changes from −20°C to 80 °C ,the effect is small. The ability of resisted

Product profile

The control PCB adopts advanced technique with all electronic components packed on a piece of circuit board controlling 16 groups light(signal light).It is low consume power (24V, 0.8W, 220V)0.2W) and wide rang of indicator light voltage (6.3V-24V). The brightness of indicator light can be adjusted with one adjusting light device. In addition, it has alarm function if light silk breaks, automatically resets. The PCB, fuse, button switch, indicator, and buzzer make up the voyage light controller and can constitute the function good voyage light signal controller. It can substitute old sails light controller. Remarks : 8 groups Navigation light 8 groups control PCB, can control light(signal light) , and its performance is the same as 16 groups PCB.

CDF9920 level indicator assembles advanced key part of abroad, which is one kind of dyadic liquid of static pressure measure. It is composed of sensor, transmitter, and indicator tripartite. (See left picture). The adopted technology is advanced with good quality, which is used for boat and ship, chemical industry, electric power, and running water industry.

Technical Parameter:

- \triangle Rang of measuring: 0–100M
- \triangle Precision : $\pm 0.2\%$ FS or $\pm 0.5\%$ FS
- \triangle Lagging : Better than 0.1%FS
- \bigtriangleup Stability : $\pm 0.15\%$
- \triangle Operating temperature: -20-+70 °C
- \triangle Sensor material : membrane 96% alumina (ceramics sensor) input

compression is strong, may amount to several times of measuring ring.

Liquid level measurement system composed by The liquid level transmitter and digital display instrument.

10.CXM Single Loop Digital Display Controller



Dimension:

80	(H)	$\times 160$	(W)	$\times 120$	(D)	Mm
Ho	le Din	nension	: 76n	$m \times 15$	2mm	

Product profile

pattern 316L

- \triangle Operating voltage: DC12-30V
- \triangle Output : 4–20MA
- \triangle Upper and limit alarm: it can be set.

This instrument adopts the advanced micro-computer technique, in which There are various temperatures sensor scale and curve datasheet. It can use on several machines, apply in the input signals, such as the thermocouple, hot electric resistance and electric current and electric voltage...etc. It is high precision, reliable performance, complete functions. The main characteristics and function are as follows:

1. It can display measured value on four figures digital tubes.

2. It can control function in up limit, upper limit, low limit and lower limit. The control value can be set in the rang of measurement.

3. A normal PID regulation time proportion control.

4. It can transmit and output analog signal of 0-10 MA, 4-20 MA, 0-5 V, 1-5 V and PID control output.

5. The input degree of cent number, measuring rang, and decimal point position are all set by key, and when power supply breaks it cannot lose data. It can communicate with various input/ output communication equipments bi-directionally with the COM, making up the net control system.

6. Each set adjusted parameters can be locked by password, preventing false operation.

Power supply: AC220V, DC24V.

11. HYPO—D2210 Diesel Engine Alarm Control System



HYPO—D2210 Display Panel



HYPO—D2210 Alarm Control Box

HYPO—D2210 diesel engine alarm control system fits on CUMMINS diesel engine and it is suitable to equip the coastal transportation ship with double main engine, the passenger ship and the Cargo vessel, it have 16 alarm point.

Alarm box is installed in engine room with D221016 groups alarm host 1 PCS, CDZ9903 rotational speed controller2 PCS (or 1PCS) and stop control panel 1PCS in the box. Display panel is installed in wheel house. There are only 6 wires connected alarm box and display panel. (2 signal wires, 2 power supply wires, 2 emergency stop wires) .1—8groups alarm points are used to alarm and stop(for example: high water temperature, low oil pressure, over speed, emergency stop), 9—16groups are used to alarm (for example: high water temperature, low oil pressure, over speed, low oil pressure of gear wheel), the control contents in 16 road groups can be set by customer.

Both alarm box and display panel can horn reset, answer and alarm to check. They display conformably and work synchronously.

Dimension Of Alarm Control Box : $300 \text{mm} \times 400 \text{mm} \times 150 \text{mm}$ Power Supply Of Alarm Control Box: Dc24v $\pm 15\%$

12. Cummins Diesel Engine Control System



Local Control Box

Cummins diesel engine control system is composed of a local control box and remote control board. It fits on Cummins diesel engine.

Local control box is installed in engine room. On the panel are tachometer, ejected air thermometer, water thermometer, oil thermometer, oil manometer, voltage manometer, calculating graph, and RUN, over speed (OS),Low Servo Pressure (LSP) ,water temperature high (HWT) ,low oil pressure (LOP) ,emergency stop(ES) indicator light ,to indicate the engine operating circumstance. In addition, power, RUN, emergency stop (ES), local/Remote switch button is assembled on the panel. There are CDZ9903 speed relay & other relative relay is assembled in the box.

Remote control board is installed in wheel house. On the remote control board there are tachometer ejected air ,water thermometer, oil thermometer, oil manometer, voltage manometer, calculate graph, and RUN, over speed (OS),Low Servo Pressure (LSP),water temperature high (HWT), low oil pressure (LOP),emergency stop(ES) indicator light to indicate the engine operating circumstance. In addition, power, emergency stop (ES), Local/Remote switch button and Dimmer (light adjustment) is assembled on the board.

Overall Dimension of Alarm Control Box: 400mmx500 Mm 200 Mm Overall Dimension of Remote Control Board: 400mmx500 Mm 200 Mm

13.HYPO-M1200 Itinerantly Supervising And Alarm Instrument



Dimension: $144 \times 144 \times 55$ mm³ Hole Dimension: 139×139 mm² Weight: 700g Power Supply: DC24V

The Connects I	Line Diagram in the Back	

A01	B01	C01	\mathbf{V} +
A02	B02	C02	V-
A03	B03	C03	
A04	B04	C04	HIGH
A05	B05	C05	RELAY
A06	B06	C06	LOW
A07	B07	C07	RELAY
A08	B08	C08	SIREN
A09	B09	C09	RELAY
A10	B10	C10	
A11	B11	C11	DECEM
A12	B12	C12	RESET
A13	B13	C13	GND
A14	B14	C14	B-485
A15	B15	C15	A-485
A16	B16	C16	

Product profile

HYPO-M1200 itinerantly supervising and alarm instrument (16groups analog) is the most new generation of intelligent digital itinerantly supervising instrument presently. The instrument is designed and manufactured according to characteristic and requirement of ship instrument, which adopted high-performance SCM as the core, the square metal shell. It works stably and reliably with the compact structure, the complete function. It is especially applied to display and alarm temperature engine the of room synthetically, liquid level of the pump room in all kinds of ships. It also is suitable to measure, and demonstrate temperature pressure & the current of production process in chemical industry, metallurgy, thermal power, light industry, etc.

Main Features and functions:

1.It is high measurement accuracy, can emendate the signal nonlinear inputted by thermocouple ,thermometer resistance and remote transmission resistance.

2.Upper limit: red light flash, L, ALM relay output $_{\circ}$

Lower limit: yellow light flash, L, ALM relay output $_{\circ}$

3. It can setup upper and lower limit alarm value independently in every passage.

4. Every monitor loops can choose on or off according to actual situation .when the loop is off, it alarms to output and doesn't display the measuring value.

5. When power is off, parameters can be preserved reliably for a long time.

6. It have the switch function between itinerantly monitor and pointing monitor. When monitor one point, it still monitor the other points. If beyond up and low limit, relevant point alarm.

7. It can communicate the epigenous

Product profile

machine, and centrally monitor the locale data and control the instrument.

8. It can set the parameters flexibly on the panel, every parameter can lock with each other and set up and low limit.

9. It can set the liquid density, and fill various liquid, it will display the actual deepness just to input the liquid density. 10.Input signal

Thermocouple: The B, S, E, K, T, J, R, N resistance thermometer sensor: Pt100 Cu50 Cu100

Standard signal: 0-10mA, 4-20mA, DC 0-5V DC1-5V

14. CDF9928A Navigation Light Controller



Overall Dimension: 144mm×144mm×60mm Hole Dimension: 139mm×139mm Weight: 0.8Kg Power Supply: 1.AC220V,DC24V 2.DC24V CDF99 A navigation light controller use touch button key and inbuilt structure. It can control 8 groups' navigation lights (power not more than 80W) on or off directly. It can depart into two types: A, B. depending on power supply. The power supply of model CDF9928A is DC24V. The power supply of model CDF9928B is AC220V.

Main Features:

1、 Low consume power Type A<8W (All light shine on 8 groups (24V60W)) Type B<5W (All light shine on 8 groups (220V60W))

- It has lots of function, such as try a light, eliminate a sound, adjust light, can connect external alarm trumpet.
- 3, There are 16 fuses on the back.
- 4. Convenient installment. Customers only need to connect into power supply and sail light.

Product profile

15 CDF9928B Navigation Light Controller

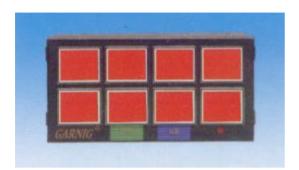


CDF9928B controller can control 16 groups navigation light(signal light), which combined with two part, Up 8 groups and down 8 groups work independently. Customer can choose actual power supply voltage depends on actual situation.



Overall Dimension: $160 \times 282 \times 64 \text{ Mm}^3$ Hole Dimension: $136 \times 268 \text{mm}^2$ Weight: 1.5 Kg Power Supply: 1, AC220V, DC24V 2, DC24V

16.CDF9910 8 Groups Flashlight Annunciator



Dimension: $160 \times 80 \times 60$ mm³ Weight: 0.2 Kg

Product profile

CDF9910 8 groups flashlight annuncicator control with SCM. adopt LED flat panel indicator .Input signal can be continued opening or continued closure(jump line on inner part), it also can be high level or low level. It apply scope wide ,high in reliability, low price.

Main technical features:

Power supply: DC24v or AC 220v

Setup the indicator color: All lights are red in 8groups.

History memory: It can take this function if note in the order.



17.CDF2002 Magnetic Compass Autopilot



Host Dimension: $310 \times 170 \times 60 \text{ Mm}^3$



CDF2002 magnetic compass autopilot supplies autopilot for ship which hadn't assemble E- compass. It is cheap ,good in performance ,easy to assemble. It is suitable for medium and small-sized ship and hooker.

Including : 130 magnetic compass (included sensor) 1PC

Host 1 PC

Rundle angle transmitter 1 PC

Tele-control box 1 PC

AC/DC24V Power supplies:1 PC

Main technical features:

- (1) Magnetic compass *precisions ± 1 (few $\pm 2^{\circ}$)
 - (2) Keep direction accuracy
 1-2class sea condition 1°
 4-5class sea condition 2-3°
 - (3) output DC24V 1.2A(biggest)
 - (4) input power AC220V \pm 15% DC24V \pm 20%
 - (5) operating temperature:-10-50 $^\circ\!\mathrm{C}$

18.CDF9916 Level 、 Temperature 、 Pressure 、 High Level Supervising & Alarm Units



Host Panel Dimension : $L \times W \times H$ 480mm×440mm×110mm



Product profile

The supervising and alarm units is applied to the chemicals ship, oil ship and other liquid cargo ship to monitor levels high level and alarm.

We can provide the whole integer device, also provide monotype. For example, model CDF9916T(temperature) can be used in oil pump, load pump, sweeping cabin pump in the pump house to supervise temperature and alarm.

The supervising &alarm unit is composed of level, temperature , pressure, high level transmitter, safety bar, 16 groups supervising instrument, 16 groups annunciator and power supply, switch, horn reset, test, lamp reset button. It has 3 kinds of invallation style cabinet style, box style, board style, asembled in wheel house control console usually.

Technical Specification:

%Main performance: rang of supervising level: 0-30m temperature: -199℃~600℃ pressure: -0.01~5Mpa high level: 95% 、98% precision: 1% ×operating temperature main engine (supervisor annunicator, safety bar ,etc) -10°C-50°C level transmitter: -20°C~80°C temperature transmitter : -199 ℃ ~600°C pressure transmitter: -20°C~70°C high level transmitter: -30° C ~ 80° C \therefore power supply: AC220V⁺⁶₋₁₀% $DC24V \pm 10\%$ * system consume power80W (12cargo cabin, 48points) [™]substantial safe model

[™]protection model

式认可证书 SHATES 广州市中城自动化研究所

main engine: IP22 sensor: IP67

%explosion proof: Exia II CT3-CT6

X It has enact density function in measuring liquid.

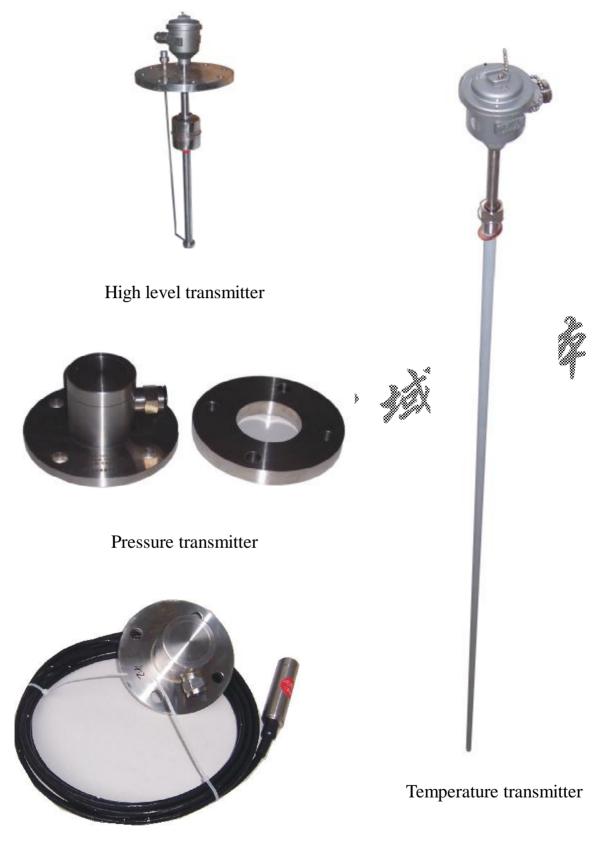
X Demonstrated when fixed-point examines, others examine as usual, for example, it alarms if beyond upper and low limit.

 $\% It has mutual horn reset <math display="inline">\$ lamp reset, test key.

It has functions , included alarming flash lamp reset horn auto reset.



level transmitter, temperature transmitter, pressure transmitter, high level transmitter



Level transmitter



中国船级社 证书格式号/Form: T01.00-HQ0020 CHINA CLASSIFICATION SOCIETY

HQ002019

型式认可证书 CERTIFICATE OF TYPE APPROVAL

证书编号/Certificate No. GZ06T00020

兹证明本证书所述制造厂生产的下列产品能够满足下面列明认可标准的要求。 This is to certify that the following products produced by the manufacturer stated in the certificate can meet the requirements of the approval standards listed below.

认可产品/Product Approved

监测报警装置

Supervising and Alarm Units

能造厂/Manufacturer

广州市中域自动化研究所

GUANGZHOU SINOCON AUTOMATICAL INSTITUTE

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Floor 2, No.6, Guanyu Road, Tangdong, Zhongshan Avenue, Tianhe District, Guangzhou City, China

认可标准/Approval Standard

1.中国船级社《银质海船入级规范》(2006)第4篇 Part 4 of CCS Rules for the Classification of Sea-going Steel Ships 2006

2.中国船级社批准的图纸 Drawings Approved by CCS

证书有效期	至/ This Certificate is valid until	2010年6月5日 / 」	Jun. 5, 2010
发证机构 Issued by	中国船级社广州分社 CCS Guangzhou Branch CO	船级 彩发日期 41 Date _	2006年6月6日 Jun. 6. 2006
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19, MCT-1 Magnetic compass convector

Hagnetic transmitter

Magnetic compass

MC-1 Magnetic Compass Converter

Product profile

MCT-1 Magnetic compass convector is a kind of high-performance digital instrument used in ship, which can change compass navigation signal into standard IEC61162/NEMA0183 signal, and signal transfer to other equipment, such as AIS, GPS, Radar, etc. It also indicates the compass navigation value. The convector can set parameter and brightness through button on operation panel. We can put magnetic sensor on the central of Magnetic compass. Then rotate magnetic sensor, while the value displayed on the convector is the same as magnetic compass, and cement sensor with glue All set equipment is composed of main ensure and magnetic convector, also equip magnetic compass according the request of customer.

Host technical specification:

- \times power supply: DC24V (18~36V)
- [∞] consume power: <8W
- [★] operating temperature: 0-60°C
- [∞] resolution ratio: 1degree
- % precision: ± 1 degree (few ± 2 degree)
- X output form: TTL, RS422/485
- * form: IEC61162/NEMA0183
- ※ Overall dimension: convector: 180X16X66 mm3 transmitter: φ58X19 mm

20. MODEL XOC-01 OIL CONTENT METER

Product Feature: model XOC-01 oil content meter use the international general survey technology, it suitable to apply to oil waste water on-line detection in the chemical industry, environment protection, petroleum, electrical power, shipping and other areas. The instrument accords with IMO Resolution MEPC60(33).

Technical Specification:

Rang Of Measurement :0~80PPM Measure Precision: ±5 PPM Alarm Point: 15 PPM Alarm Relay Work Load Capacity:5A/250v Output Analog Signals:4~20MA OR0~10Vdc Weight: 12.5kg Power Supply: AC220v AC220v 50hz/60hz Consume Power: 15w



21.MODEL XOC-01 Cabin Bottom Water Alarm Instrument

Product Feature: model XOC-01 Cabin bottom water alarm instrument developed according to the International Maritime Organization Resolution, is a kind of new product adopted survey technology technique and digital electric circuit. It can be applied to monitor of oil waste water on-line at the bottom of ships cabin, have function of signal memory, print .And it can link with computer, supervised in long-distance. The instrument accords with IMO Resolution MEPC107(49), certificated first by China Classification Society in china .

Technical Specification:

Rang Of Measuring :0~30PPM Measure Precison: ±5 PPM Alarm Point: 15 PPM Alarm Relay Work Load Capacity: 5A/250v Output Analog Signals:4~20MA OR0~10Vdc Weight :13.5kg Power Supply :AC220v AC220v 50hz/60hz Consume Power:20w